

# **EPA 2005 SULFUR IN DIESEL FUEL ROUND ROBIN TEST PLAN AND DATA ANALYSIS**

**Final Report  
EPA Contract EP-C-05-018  
Work Assignment No. 0-2  
SwRI<sup>®</sup> Project No. 03.11382.02**

**Prepared for:**

**U.S. Environmental Protection Agency  
National Vehicle and Fuels Emissions Laboratory  
2000 Traverwood Dr.  
Ann Arbor, Michigan 48105**

**Prepared by:**

**Robert L. Mason, Ph.D.  
Janet P. Buckingham**

**December 2005**

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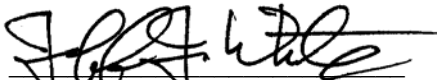
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Results and discussion given in this report relate only to the test items described in this report.

## FOREWORD

This project was conducted by Southwest Research Institute® (SwRI®) for the Environmental Protection Agency (EPA) under Work Assignment No. 0-2 of Contract EP-C-05-018. The assignment was titled “EPA 2006 Sulfur in Diesel Fuel Round-Robin Test Plan and Data Analysis”. The project was based on SwRI Proposal No. 08.42495 and was identified within SwRI as Project 03.11382.02. The EPA Project Officer was Mr. Robert Johnson, and the EPA Work Assignment Manager was Mr. Chris Laroo. Dr. Lawrence Smith was the SwRI Administrative and Project Manager, and Dr. Robert L. Mason was the Principal Investigator. Ms. Janet P. Buckingham assisted in the data processing and data analysis activities.

## EXECUTIVE SUMMARY

The 2007 Highway Heavy-Duty Diesel Rule of the Environmental Protection Agency (EPA) requires that 80% of the highway diesel fuel sold after June 1, 2006 contain 15 ppm sulfur or less. This regulation allows for a 2 ppm downstream test tolerance at the point of sale. Recent evaluations of the reproducibility of sulfur measurement test methods on a lab-to-lab basis have cast doubt on the 2 ppm downstream test tolerances. This concern caused EPA to construct a Round-Robin program to make an accurate determination of reproducibility. This Work Assignment addressed the data collected in this study and its analysis. The assignment focused on two separate tasks.

Task 1 involved reviewing EPA's test plan and data processing plan, and determining which statistical methods were better in identifying outliers. Recommendations were given on alternate techniques for excluding outliers and a detailed summary was provided on the merits of each technique.

Task 2 involved processing the data obtained from the EPA 2005 Ultra-Low Sulfur Diesel Fuel (ULSD) Round-Robin test plan and statistically analyzing the resultant data. The test plan included collecting sulfur measurements on five fuel samples for each of two months with measurements made in triplicate. The data were collected using two separate calibration methods (In-House and NIST). Statistical analysis of the sulfur data included two outlier deletion methods (robust and gravimetric) and two analysis techniques for computing reproducibility and repeatability (ASTM and ANOVA). For data collected on four different test instruments (D 5453, D 7039, D 2622, and EDXRF) and their composite, calculations were made of the mean, standard deviation, repeatability ( $r$ ) and reproducibility ( $R$ ) for each of the fuel samples and each of the calibration, outlier and analysis methods. The  $R$ -results were compared to the ASTM Interlaboratory Crosscheck Program (ILCP)  $R$ -values determined in 2004 and 2005.

There were three unique aspects of this round-robin test program compared to the 2005 ASTM ILCP. The first is that all of the labs that participated in this program were required to qualify their measurement method with EPA per 40 CFR 80.584.<sup>1</sup> The second unique aspect of the program is that two different outlier deletion methods, robust and gravimetric, were used. Even if a lab qualified a measurement method for a subset of the analysis, EPA further screened the labs based on whether they continued to meet the qualification criteria as determined through their ability to accurately measure a blind gravimetric standard. This gravimetric screening process can be analogous to the use of a calibration check standard, a widespread industry practice in many aspects of analytical analysis and one that is recommended by ASTM in their Crosscheck (CC) program.<sup>2,3</sup> Using the gravimetric outlier deletion method, the results of a lab were deleted if, for whatever reason, the lab could not demonstrate it had attained a level of accuracy that was similar to what was required during the initial qualification. The third unique aspect of the program is that, for a subset of the testing, labs were required to recalibrate their instruments using NIST standard reference materials (SRMs) that had recently been made available for use in the measurement of sulfur in ULSD fuel. Use of NIST SRMs and NIST traceable calibration standards is a common industry practice in many parts of analytical analysis, in order to reduce laboratory bias.

Overall trends in reproducibility noted from examining the data are given below.

- The gravimetric outlier deletion method produced lower R-values than the robust outlier deletion method.
- The R-values using NIST SRMs for instrument calibration were lower than the R-results using In-House standards for instrument calibration.
- The R-values for D 5453 and D 7039 were superior to those for D 2622 and EDXRF, although the EDXRF values may have been affected by the small sample size.
- The ANOVA method more often produced similar or slightly lower R-values than the ASTM method for D 7039, D 2622, and EDXRF, regardless of the calibration, but the results were mixed for D 5453 with the ASTM method being superior when combined with the NIST calibration.

Based on regression fits to the R-data and predictions at 15 ppm sulfur, lower predicted R-values occurred with the EPA Round-Robin (RR) results relative to the 2004 and 2005 ASTM ILCP results. The EPA RR predicted values were lower for D 5453 and D 2622, and the predicted values were comparable for D 7039. The reproducibility data also supported the following conclusions:

- Of the labs that originally agreed to participate in the EPA RR program, 29% failed to qualify their measurement methods.
- Limiting the RR participation to labs that qualified their methods under 40 CFR 80.584 had a favorable impact on lowering reproducibility.
- Using the identical NIST calibration curve across the participating labs reduced curve bias contributions to reproducibility.
- A reduction in predicted R (at 15 ppm sulfur) for the EPA RR data over the predicted R-values obtained using the 2004 and 2005 CC data was apparent in all cases when using the NIST calibration curves. The magnitude of the reduction in predicted R (ASTM R, at 15 ppm) from In-House to NIST under robust deletion was 0.73 ppm on average for D 5453 and D 7039 (excluding D 2622).
- Several labs had problems calibrating their instruments using the NIST SRMs.
- Using the gravimetric outlier deletion method further improved reproducibility. Use of this method is analogous to periodic use of a calibration check standard. This is a common industry practice wherein, if a lab fails to properly measure the calibration check standard, testing is halted until the cause of the failure is corrected.
- Of the labs that initially qualified their measurement methods, 22% of the labs in July and 19% of the labs in August failed the gravimetric outlier determination check on their qualification.
- Some of the newer test methods produced results with lower R (D 5453 and especially D 7039).

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## LIST OF ABBREVIATIONS

ANOVA	Analysis of Variance
ARV	Accepted Reference Value
ASTM	American Society for Testing and Materials
AVG	Average
CARB	California Air Resources Board
CC	Crosscheck
CFR	Code of Federal Regulations
CL	Confidence Limit
EPA	Environmental Protection Agency
GSU	Gravimetric Standard Uncertainty
ILCP	Interlaboratory Crosscheck Program
NIST	National Institute of Standards and Technology
QA/QC	Quality Assurance/Quality Control
r	Repeatability
R	Reproducibility
RBM	Robust Mean
RBSD	Robust Standard Deviation
RM	Reference Material
RR	Round-Robin
ppm	Parts Per Million
S	Sulfur
SRM	Standard Reference Material
STD. DEV.	Standard Deviation
SwRI	Southwest Research Institute
ULSD	Ultra-Low Sulfur Diesel

## 1.0 INTRODUCTION

The Environmental Protection Agency (EPA) issued Work Assignment No. 0-2 of Contract EP-C-05-018 to Southwest Research Institute (SwRI<sup>®</sup>) in March 2005. The objectives of the work assignment were as follows:

- Review and comment on EPA's test plan, proposed data processing, and proposed methods of calculating reproducibility for its 2005 Ultra-Low Sulfur Diesel (ULSD) Round-Robin (RR) test program;
- Receive and process the sulfur diesel data to be collected by the participating labs and create an electronic file of the results; and
- Perform statistical analyses on the submitted lab data, including calculating reproducibility values using the recommended procedures identified after the analysis review.

Details of the Work Assignment are provided in Appendices A.1 and A.2. Included in Appendix A.1 is a copy of the original Work Assignment. Included in Appendix A.2 are copies of Amendment No. 1, added to allow for the inclusion of more labs, additional calibrations, and expanded data analysis after the initial work assignment was approved; and Amendment No. 2, added to include more tables and plots in the Final Report.

## 2.0 DATA COLLECTION AND PROCESSING

### 2.1 Test Design

All laboratories participating in this round-robin program were required to qualify their sulfur measurement methods with EPA. This meant that the labs had to meet the precision and accuracy requirements given in 40 CFR 80.584 for each individual test method that it wanted to use on a lab-specific basis. The round-robin program was designed to accommodate ten fuel samples, five of which were sent to the labs participating in July 2005 and five of which were sent to the labs participating in August 2005. In addition, the labs were required to use two different calibration curves when measuring the sulfur concentration of the fuels.

### 2.2 Lab Selection and Participation

At the start of the RR program, 161 labs and 207 instruments were registered with EPA. Some of these labs were unable to meet the qualification criteria with their existing instruments and, as a result, several purchased new equipment. A list of the number of instruments and labs that eventually qualified and participated in the program during the two-month study period, as well as a list of the number of those that dropped out of the program is given in Table 1. In July, 129 labs participated and they used 149 qualified instruments. In August, 125 labs participated and they used 143 qualified instruments. Some labs that participated in July were not able to participate in August due to disruptions caused by Hurricane Katrina. A complete list of the labs that participated in the study is given in Appendix A.3.

**Table 1. Instrument and Lab Count by Test Method and Study Month**

Test Method	July 2005	August 2005	Dropped Out
D 5453	98	93	27
D 2622	25	24	23
D 7039	16	16	3
EDXRF	6	6	1
D 3120*	3	3	3
D 7041**	1	1	0
D 4294	0	0	2
Total Instruments	149	143	59
Total Labs	129	125	32

\* Only used in the Composite calculations.

\*\* Not used in any of the analyses.

### 2.3 Test Methods

The participating labs qualified their instruments on one or more test methods, including D 5453, D 2622, D 7039, EDXRF, D 3120, and D 7041 (i.e., see Table 1). Since at least six different labs needed to participate for a specific test method in order to meet the criteria for a round-robin study, the counts on D 3120 and D 7041 were too small to qualify them as separate

test methods. In addition, since only one lab used D 7041, its data was excluded from all analyses. However, the data from D 3120 was sufficient to include it in the composite results. Thus, statistical analyses data were available from four separate test methods (D 5453, D 2622, D 7039 and EDXRF) as well as from the composite consisting of the data from these four methods and method D 3120.

## 2.4 Fuel Types

EPA targeted blending 10 diesel fuels in the 7-15 ppm sulfur range though the estimated sulfur concentrations were in the 7-21 ppm range. The fuels were blended on a mass basis from three different diesel fuels: a nominal 0 ppm S fuel, a nominal 9 ppm S fuel, and a nominal 350 ppm S fuel. Each sample was blended and bottled in a single batch, and the sample was constantly stirred during the process.

A list of the target fuel samples and the corresponding estimated concentrations based on the measured lab composite means are given in Table 2. Five blind fuel samples were sent to the labs in the months of July and August. The samples were not submitted for independent analysis to measure the actual sulfur concentration. One blend, Sample No. 5, was sent out both months to allow for a direct month-to-month comparison of the lab results. A natural-matrix gravimetric fuel sample, whose sulfur content was determined by Isotope Dilution Thermal Ionization Mass Spectrometry, was also sent out each month; it was labeled as Sample No. 4. The other eight fuel samples varied in sulfur content according to the range given in Table 2.

The gravimetric fuel sample consisted of the NIST Standard Reference Material (SRM) 1616b that measured 8.41 +/-0.12 ppm sulfur in kerosene. The sample was dyed yellow (it was initially clear) with Oil Yellow B to disguise it, allowing it to look similar to the other fuel samples. Oil Yellow B was analyzed for sulfur and was found to contain 67 mg/kg (thus the sulfur was more of a contaminant in the dye rather than a main component). A total of 80.3 mg of dye was added to 12 liters of SRM 1616b to dye the sample. Based on this, it was calculated that the sulfur contribution of the dye to the sulfur content of the dyed SRM 1616b was 0.000517 ppm, or essentially zero.

The gravimetric fuel sample was to be used in implementing the gravimetric outlier deletion method, a surrogate to a calibration check standard. The sample was a refined ultra-low-sulfur-in-kerosene standard, and was one of the NIST SRMs provided to the labs for generation of the NIST SRM calibration curve. It was expected that, if the instrument was calibrated with the same blind gravimetric standard that was used as a check standard, the lab should be able to accurately measure it as a blind fuel sample within the range for which it had been required to qualify. Note that the gravimetric outlier deletion procedure used in this program is not a statistical determination of whether a lab is an outlier, but rather a test to determine if a lab is still performing at approximately the same level of accuracy that the lab stated when it qualified.

It is important to note that EPA's lab qualification procedure does not guarantee that all labs can measure a known gravimetric standard accurately. Variation in the calibration standards used during calibration can lead to variation in results across different labs. By moving to the use of NIST SRMs and NIST traceable calibration standards, lab bias due to inaccuracies in

current in-house calibration curves can be limited. This is a standard industry practice in many other aspects of analytical analysis.

**Table 2. Targeted and Estimated Sulfur Concentrations (ppm) for Fuel Samples by Month**

Fuel No.	July Blend Target	July Composite Mean*	August Blend Target	August Composite Mean*
1	7	7.31	9	10.05
2	11	10.71	13	14.42
3	16	20.86	17	17.8
4	8.41	8.32	8.41	8.32
5	15	14.69	15	14.76

\* Average of the two composite robust means taken from the In-House and NIST calibration data.

## 2.5 Calibration Methods

Labs were required to measure the blind fuel samples in triplicate using two different calibration methods. The first method consisted of using the lab’s existing “In-House” calibration curve. The second method was based on generating a four-point calibration curve using four NIST SRMs provided by EPA. The SRMs used in the generation of the curve are as follows:

- RM 8771      $0.07 \pm 0.014$  ppm S in diesel fuel
- SRM 1616b    $8.41 \pm 0.12$  ppm S in kerosene
- SRM 2723a    $11.0 \pm 1.1$  ppm S in diesel fuel
- SRM 2770     $41.57 \pm 0.39$  ppm S in diesel fuel

NIST SRMs were used to determine the contribution of calibration-standard bias to reproducibility. Poor choice in calibration standards across labs can cause labs to report differing and incorrect sulfur values for the same sample. A recent review of the 2004 ASTM ILCP has reported that site precision contributed 52.9% to reproducibility variance for D 2622 and 54.6% for D 5453, while lab bias contributed 30.6% to reproducibility variance for D 2622 and 33.8% for D 5453. The reasons cited for lab-specific bias were as follows: the test method instrument calibration was not correct; the source of gravimetric standards was inconsistent; the check standard was outside the range of analysis; the check standard had aged; and the incorrect check standard with respect to matrix effects was used.<sup>4</sup> Based on this analysis, one large source of lab-specific bias can be attributed to the selection of the calibration standard.

In any testing regime where accuracy is important, standard industry recommendations are that labs use the most accurate calibration standards that are available to them. NIST SRMs provide a highly accurate means of generating a calibration curve. The sulfur levels in the natural matrix SRMs used in this program are determined using Isotope Dilution Thermal Ionization Mass Spectrometry.<sup>5</sup> This is an isotope-based mass analysis and is highly accurate. Quality control checks of instrument stability, precision, and bias are also part of the guidelines established in ASTM D 6299-02 “Standard Practice for Applying Statistical Quality Assurance



Techniques to Evaluate Analytical Measurement System Performance”.<sup>6</sup> In the paper on “ASTM D02 Interlaboratory Cross-Check Program Aids-To-The Analyst”, it is recommended that, when choosing calibration curve and QA/QC check standards, labs should purchase a set of NIST sulfur-in-diesel-fuel-oil SRMs. The document states that the standards should be used to assist in the development of calibration curves and for checking secondary standards.<sup>2</sup> Use of NIST calibration check standards is also recommend by the ASTM ILCP for use in their ULSD ILCP as of April 2004.<sup>3</sup>

## **2.6 Data Processing**

Individual labs submitted their data by e-mail directly to SwRI using an Excel data sheet provided by EPA. Labs were assigned unique identification code numbers to keep their true identities confidential. The entire list of the lab data, which includes 8,760 sulfur measurements and the corresponding deletions, is given in Appendix B.

### 3.0 OUTLIER AND REPEAT DELETIONS

Figure 1 contains the data analysis flowchart used in this study for the data collected for each month, fuel sample, and calibration method. Notice that its first steps are to delete either outlier values or outlier labs. To accomplish this objective two methods of outlier deletion were used in this program: robust outlier deletion and gravimetric outlier deletion. The robust outlier deletion method is currently in use in the ASTM ILCP. It involves deleting an individual sulfur measurement, and it does not require known fuel sulfur values for any of the fuel samples.

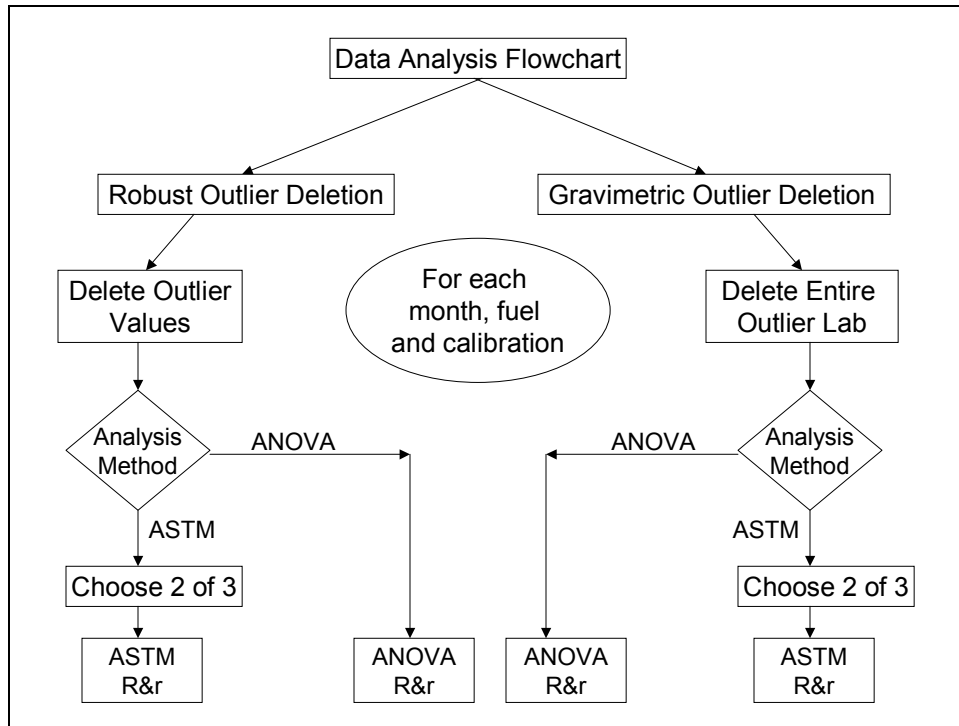
The gravimetric outlier deletion method is an alternative approach proposed by EPA. It involves deleting all the sulfur data collected by a lab for a given month if it failed a calibration check standards test intended to ensure that labs were still performing as required when they qualified their test method. It is a possible approach when known gravimetric fuel standards exist, as in this case. It can be seen as a surrogate to a calibration check standard. If the instrument, after being calibrated, can no longer measure one of the calibration standards accurately, then this indicates a problem with the instrument, the calibration curve, or the fuel samples (contamination). Subsequently data taken around the time that this check standard failure is noticed should be deleted and the instrument fault corrected before testing resumes (standard industry practice). The use of the calibration check standard should be periodic, but more frequent as the need for accuracy increases. If labs passed this test, all of their data was kept, regardless of whether individual test points may have been deemed outliers using the ASTM robust outlier deletion procedure.

#### 3.1 Robust Outlier Deletion Method

The robust outlier deletion method is described in the Work Statements in Appendices A.1 and A.2. It requires computing the robust mean, RBM, and the robust standard deviation, RBSD, for each combination of fuel sample, test method and calibration curve using a procedure that limits the influence of unusually large or small values. As used in the ASTM ILCP, the calculation only uses two repeat measurements. For this round robin, samples were measured in triplicate; thus one of the three results was randomly deleted. Inclusion of the third repeat in the calculation might have further improved reproducibility. In this method, an individual lab repeat value, Y, is classified as an outlier and deleted from consideration if the following condition is met:

$$|Y - \text{RBM}| > 3 * \text{RBSD}.$$

Stated more simply, if Y is outside the limits of (RBM +/- 3\*RBSD), then Y is classified as an outlier and deleted from the analysis. Note that the use of an error of +/-3\*RBSD is standard ASTM practice. A number smaller than 3 would exclude more data and result in improved R.



**Figure 1. Data Analysis Flowchart**

### 3.2 Gravimetric Outlier Deletion Method

The gravimetric outlier deletion method is described in the Work Statements in Appendices A.1 and A.2. It involves computing the average, AVG, of the three repeat tests taken on the gravimetric standard fuel sample for a given month by a given lab. The gravimetric standard fuel sample in this program is either the July or August Fuel No. 4 (i.e., see Table 2 for a listing of the fuel samples). In this method, the data collected on all five fuel samples for a given month by a given lab are classified as outliers and the entire set of lab data is deleted if:

$$|AVG - ARV| > 0.90,$$

where the accepted reference value (ARV) of the gravimetric standard fuel is 8.41 ppm. Stated more simply, if AVG is outside the limits of 8.41 +/- 0.90, which equate to the interval 7.51 to 9.31, all the lab data for the given month is deleted from the analysis. The 0.90 ppm limit for three repeat measurements was intended to be analogous to the 0.54 ppm limit for ten repeat measurements as outlined in the qualification accuracy requirements. The 0.90 ppm value takes into consideration the 0.54 ppm accuracy requirement, the 95% two-sided confidence limits (CL) for three repeat measurements, as well as real bias and gravimetric standard uncertainty (GSU). The calculation of the limit is given below:

$$\begin{aligned}
 \text{Limit} &= 0.54 - (95\% \text{ CL})^{10-1} + (95\% \text{ CL})^{3-1} + \text{GSU} \\
 &= (0.54 - 0.298 + 0.543 + 0.12) \\
 &= 0.905
 \end{aligned}$$

where the 95% CL calculations assume infinite degrees of freedom and use 0.48 as the standard deviation, and the GSU is 0.12. Infinite degrees of freedom are used because the exact number of labs that participated in the 2002 ASTM round robin with D 3120 and the number of results that went into the standard deviation determination was not known at the time this calculation was derived (in reality the number of labs was eight). The value 0.48 is the standard deviation given in D 3120 at 15 ppm, which is used in 40 CFR 80.584 in the determination of the precision and accuracy requirements.

### 3.3 Outlier Deletion Comparisons

Tables 3 and 4 contain an example comparison of the effects of the robust deletion method on the robust mean and robust standard deviations for the composite July fuel sample sulfur measurements for both the In-House and NIST calibration methods. Given in each table are the means or standard deviations for all the sulfur data in the specified data subset (i.e., all three repeat fuel measurements from each lab) as well as the robust means (std. devs.) computed both before and after the identified outliers have been deleted from the specified sulfur data subset. To compute the “robust mean before robust outlier deletion”, the ASTM ILCP calculations were used to estimate the robust mean during the first-stage before any outliers were deleted. After the ILCP identified the outliers (see Section 3.1), they were removed and the robust mean was recomputed during the second-stage of the ILCP calculations. This mean is labeled the “robust mean after robust outlier deletion” in Table 3. The last column of the table lists the total number of outliers deleted in the above process.

**Table 3. Sulfur Means for Composite July Data Using Robust Deletion Method**

<b>Calib. Method</b>	<b>Fuel No.</b>	<b>Mean of All Data</b>	<b>Robust Mean Before Robust Outlier Deletion</b>	<b>Robust Mean After Robust Outlier Deletion</b>	<b>No. of Outlier Data Points Deleted</b>
<b>In-House</b>	1	7.26	7.25	7.24	9
	2	10.66	10.66	10.65	8
	3	20.77	20.80	20.80	9
	4	8.29	8.26	8.25	7
	5	14.68	14.65	14.63	12
<b>NIST</b>	1	7.44	7.38	7.36	13
	2	10.89	10.83	10.80	18
	3	21.15	20.97	20.90	24
	4	8.50	8.42	8.38	31
	5	14.95	14.83	14.79	27

In Table 3, after deleting outliers and using a robust procedure to compute the fuel sample means, the resulting robust sulfur means are slightly smaller than the means based on all the data in all but one case for the five July fuels. This result holds regardless of the calibration

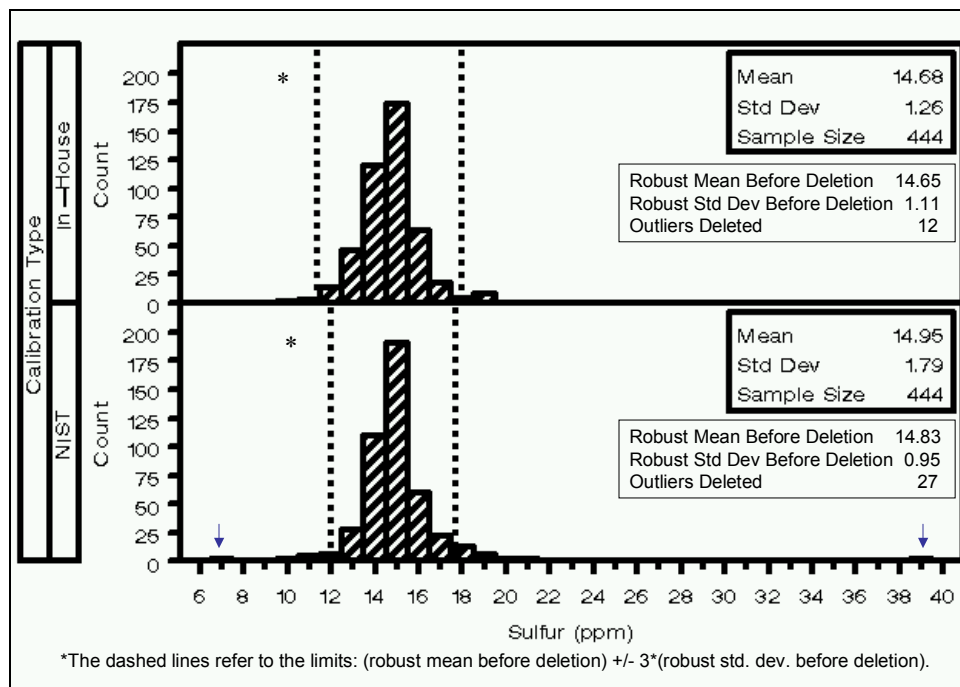
method. The exception is for the July In-House Fuel No. 3 where the robust mean had a slight increase.

In Table 4, after deleting the outliers and using a robust procedure to compute the fuel sample standard deviations, the resulting robust sulfur standard deviations are smaller than the standard deviations based on all the data, for all five July fuels and both calibration methods. Further, the NIST data has smaller robust standard deviations, both before and after outlier deletion, than the In-House data.

**Table 4. Sulfur Std. Deviations for Composite July Data Using Robust Deletion Method**

<b>Calib. Method</b>	<b>Fuel No.</b>	<b>Std. Dev. of all Data</b>	<b>Robust Std. Dev. Before Robust Outlier Deletion</b>	<b>Robust Std. Dev. After Robust Outlier Deletion</b>	<b>No. of Outlier Data Points Deleted</b>
<b>In-House</b>	1	0.87	0.73	0.71	9
	2	1.01	0.89	0.86	8
	3	1.64	1.41	1.36	9
	4	0.75	0.69	0.67	7
	5	1.26	1.11	1.05	12
<b>NIST</b>	1	0.98	0.72	0.66	13
	2	1.03	0.80	0.73	18
	3	1.68	1.05	0.95	24
	4	0.92	0.62	0.52	31
	5	1.79	0.95	0.83	27

Figure 2 contains a histogram of the composite data for the July Fuel No. 5 having a target of 15 ppm. Note that the standard deviation for the entire sulfur data subset is larger with the NIST than with the In-House calibration, but, after using a robust procedure to compute the standard deviation, the resulting robust standard deviation is smaller with the NIST than with the In-House calibration. This result creates narrower deletion limits for the NIST data versus the In-House data, and thus more outlier deletions occur with the NIST data. (i.e., 27 with NIST and 12 with In-House).



**Figure 2. Histograms for In-House and NIST Data for Composite July Fuel No. 5**

Tables 5 and 6 contain an example comparison of the effects of the gravimetric deletion method on the robust mean and robust standard deviations for the composite July fuel sample sulfur measurements for both the In-House and NIST calibration methods. Given in each table are the means (or std. devs.) for all the sulfur data in the specified data subset as well as the robust means (or std. devs.) computed both before and after the identified outliers have been deleted from the specified sulfur data subset. The last column of the table lists the number of outlier values as well as the number of labs deleted in this process.

**Table 5. Sulfur Means for Composite July Data Using Gravimetric Deletion Method**

<b>Calib. Method</b>	<b>Fuel No.</b>	<b>Mean of All Data</b>	<b>Robust Mean Before Gravimetric Outlier Deletion</b>	<b>Robust Mean After Gravimetric Outlier Deletion</b>	<b>No. of Outlier Data Points (Labs) Deleted</b>
<b>In-House</b>	1	7.26	7.25	7.29	96 (32)
	2	10.66	10.66	10.75	96 (32)
	3	20.77	20.80	20.91	96 (32)
	4	8.29	8.26	8.33	96 (32)
	5	14.68	14.65	14.75	96 (32)
<b>NIST</b>	1	7.44	7.38	7.30	81 (27)
	2	10.89	10.83	10.77	81 (27)
	3	21.15	20.97	20.89	81 (27)
	4	8.50	8.42	8.34	81 (27)
	5	14.95	14.83	14.78	81 (27)

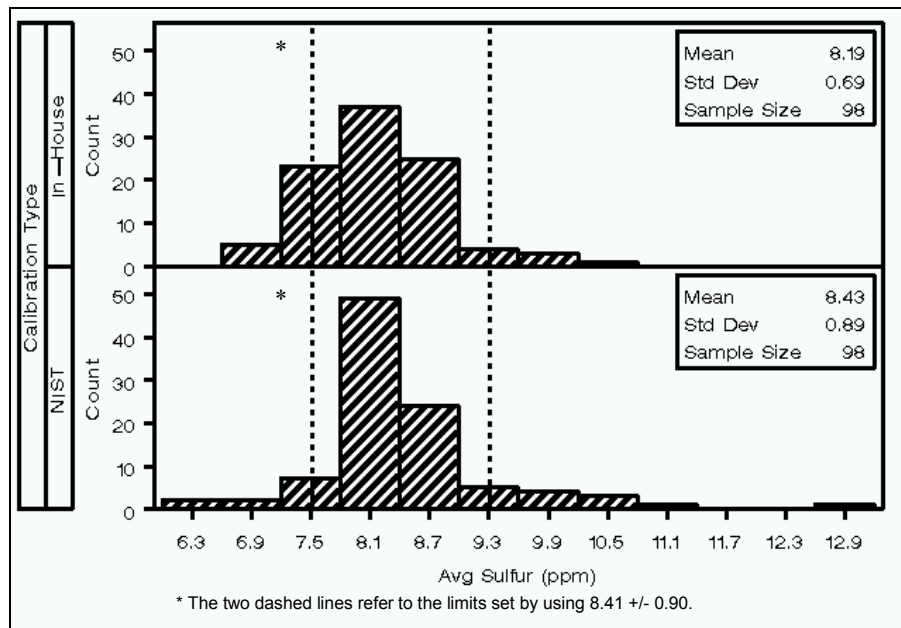
In Table 5, after deleting outlier laboratories gravimetrically and using a robust procedure to compute the fuel sample means, the resulting robust sulfur means are slightly larger than the means based on all the data for the five July fuels with the In-House calibration, and slightly smaller with the NIST calibration. The larger number of outliers when compared to the robust outlier determination for the NIST calibration curve is important in that it indicates that a large number of labs that had just calibrated using the four SRMs, including the SRM that is Fuel No. 4, could not measure Fuel No. 4 to within  $\pm 0.90$  ppm of the ARV. This is despite having previously qualified themselves to measure within this range.

In Table 6, after deleting the outliers and using a robust procedure to compute the fuel sample standard deviations, the robust sulfur standard deviations are smaller than the standard deviations based on all the data, for all five July fuels and both calibration methods. Further, the NIST data has smaller robust standard deviations than the In-House data.

**Table 6. Sulfur Std. Deviations for Composite July Data Using Gravimetric Deletion Method**

Calib. Method	Fuel No.	Std. Dev. of all Data	Robust Std. Dev. Before Gravimetric Outlier Deletion	Robust Std. Dev. After Gravimetric Outlier Deletion	No. of Outliers (Labs) Deleted
<b>In-House</b>	1	0.87	0.73	0.63	96 (32)
	2	1.01	0.89	0.72	96 (32)
	3	1.64	1.41	1.07	96 (32)
	4	0.75	0.69	0.48	96 (32)
	5	1.26	1.11	0.83	96 (32)
<b>NIST</b>	1	0.98	0.72	0.51	81 (27)
	2	1.03	0.80	0.62	81 (27)
	3	1.68	1.05	0.86	81 (27)
	4	0.92	0.62	0.42	81 (27)
	5	1.79	0.95	0.72	81 (27)

Figure 3 contains a histogram of the D 5453 data for July Fuel No. 4 with a target of 8.41 ppm. Note that the deletion limits are the same for both sets of calibration data. Since the mean of all the sulfur data is shifted to the left of the standard value of 8.41 for the In-House calibration and is nearly identical to 8.41 for the NIST original data, the number of outlier deletions is increased when using the In-House data. This result caused more outlier deletions for the In-House data in the plot despite its smaller standard deviation. The lower mean for the in-house curve versus the NIST curve can also be an indication of a downward bias in the in-house calibration curves.



**Figure 3. Histograms for In-House and NIST Data for D 5453 July Fuel No. 4**



### 3.4 Deletion of Extra Repeat Data

In preparing the data for the computation of reproducibility (R) and repeatability (r) using the ASTM Crosscheck method described in Section 4.0, it is first necessary to reduce the number of lab repeats from 3 to 2 when no outliers have been deleted. This is indicated in the data flowchart given in Figure 1. The method for doing this is described as follows. If all three repeats were determined to be valid data, the RANDBETWEEN function in Excel was used to randomly generate a data value (1, 2 or 3). If a “1” was randomly generated then the first repeat measurement was eliminated. If a “2” was generated then the second repeat was eliminated, and a “3” eliminated the third repeat.

Tables 7 and 8 contain a list of the number of outliers and the number of repeat values deleted when using either the robust deletion method or the gravimetric deletion method. The data are categorized by deletion method, test method, and calibration method.

**Table 7. Outlier and Repeat Deletion Counts for July Fuel No. 5 With Robust Deletion**

	Test Method	Total Count	In-House Calibration		NIST Calibration	
			Outliers Deleted	Repeats Deleted	Outliers Deleted	Repeats Deleted
<b>Robust Deletion</b>	<b>D 5453</b>	294	10	94	29	87
	<b>D 2622</b>	75	0	25	1	24
	<b>D 7039</b>	48	0	16	2	14
	<b>EDXRF</b>	18	0	6	0	6
	<b>Composite</b>	444	12	143	27	141

**Table 8. Outlier and Repeat Deletion Counts for July Fuel No. 5 With Gravimetric Deletion**

	Test Method	Total Count	In-House Calibration		NIST Calibration	
			Outliers Deleted	Repeats Deleted	Outliers Deleted	Repeats Deleted
<b>Robust Deletion</b>	<b>D 5453</b>	294	69	75	45	83
	<b>D 2622</b>	75	15	20	27	16
	<b>D 7039</b>	48	6	14	3	15
	<b>EDXRF</b>	18	0	6	3	5
	<b>Composite</b>	444	96	116	81	121

Using robust deletion, the results in Table 7 indicate that more outliers were removed with the NIST data than with the In-House data, though a similar number of repeat runs were deleted for the two calibration methods. This is a result of narrower limits and a smaller robust standard deviation after outlier deletion for the NIST data.

Using gravimetric deletion, the results in Table 8 indicate that more outliers were removed with the In-House data than with the NIST data, though a similar number of repeat runs were deleted for the two calibration methods. This is a result of the increased bias in the mean of the In-House data and the use of the same deletion limits for both sets of data.

Comparing the results of Table 8 with Table 7, it is seen that more values were deleted using the gravimetric deletion method versus using the robust deletion method. This is a result of the entire lab data for a given month being deleted if an outlier occurs in the gravimetric standard fuel values.

## 4.0 ANALYSIS METHODS

Two different analysis methods were used in computing reproducibility (R) and repeatability (r): the ASTM Method and the ANOVA Method. Two major differences exist between these procedures. The first is that the ASTM method is applied to only two repeat sulfur values from a lab while the ANOVA method is applied to all three repeat values obtained by a lab on a given fuel sample. The second is that the ASTM procedure uses robust estimates of the mean and standard deviation in its computations while the ANOVA procedure uses unadjusted estimates of the mean and standard deviation.

As shown in Figure 1, both analysis methods were applied to the data using robust and gravimetric outlier techniques. Additionally, both the ASTM and ANOVA methods were applied to the In-House and NIST calibrations data.

### 4.1 ASTM Method

This method requires further data deletion (after outlier deletion) to reduce the lab repeat count from 3 to 2 per fuel sample, when it occurs, as shown in the “Repeats Deleted” column in Tables 7 and 8. This was done in a random selection process for each test method analysis. The ASTM method uses the ILCP two-stage robust iterative algorithm to compute a robust mean and robust standard deviation with the remaining data. It then computes R and r using the above robust estimates.

### 4.2 ANOVA Method

This method uses all available data after outlier deletion. It applies a one-factor random effects analysis of variance (ANOVA) technique and uses lab as the single factor. It estimates R and r using variance component estimates of lab (reproducibility) and of error (repeatability).

## 5.0 ANALYSIS RESULTS

A variety of tables and plots were utilized in analyzing the sulfur data along with the analysis methods described in Section 4.0. Although several of these results are presented in this section, more can be found in Appendices C-F.

### 5.1 Descriptive Statistics

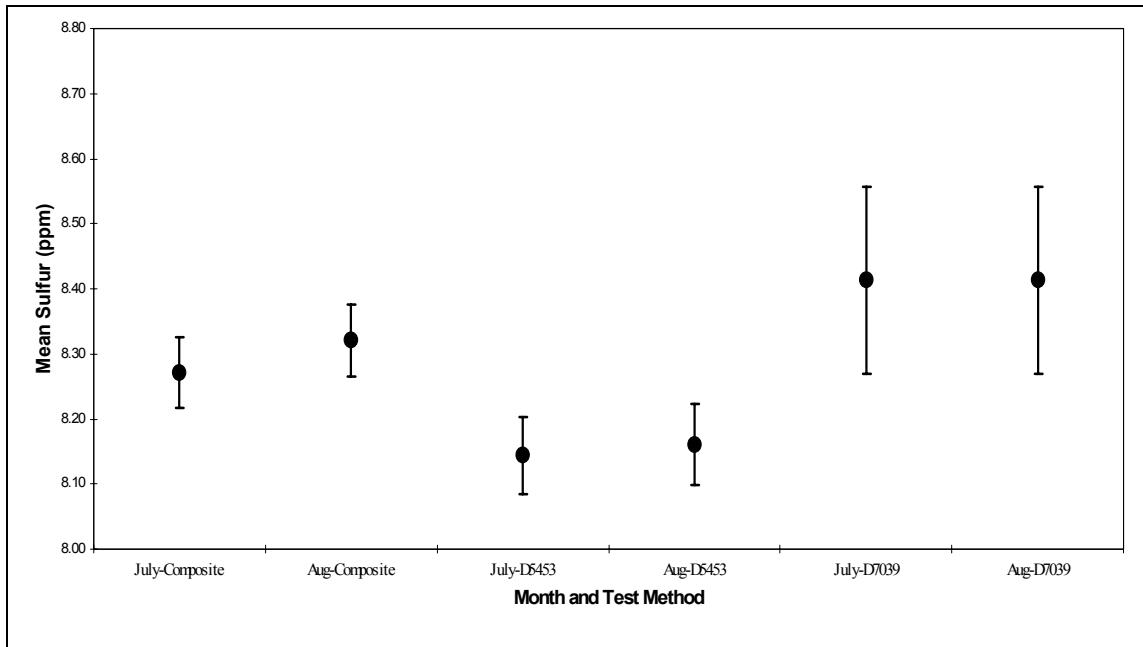
Appendix C contains a series of summary statistics (mean, standard deviation, and sample size) for the sulfur data. These are categorized by test method, calibration type, month, and fuel sample within month. Three tables are provided. Table C.1 contains the descriptive statistics for the data from all labs prior to any deletions. Table C.2 provides descriptive statistics for the data from all labs after deleting the outliers identified using the robust deletion method. Table C.3 provides similar statistics for the data from all labs after deleting the outliers identified using the gravimetric deletion method.

### 5.2 Mean Comparisons

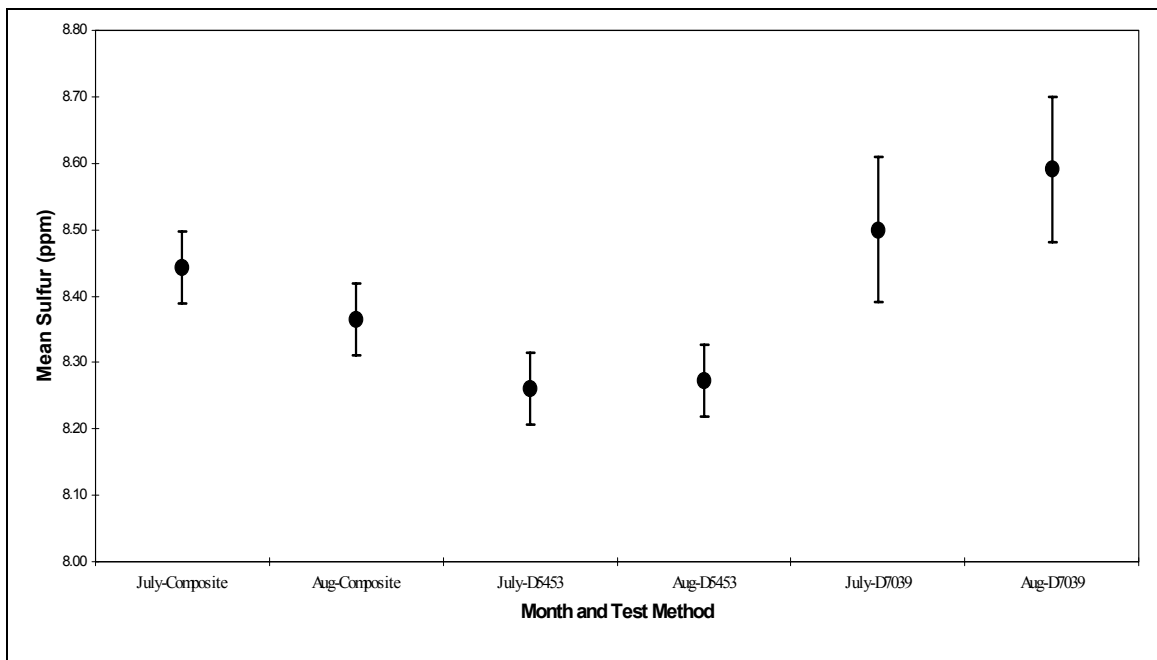
As reported in Section 2.0, test Fuels No. 4 and No. 5 were sent to every lab for both July and August. Therefore, it was possible to determine if the labs reported, on the average, similar results across the two months. Figures 4-7 provide plots of the July and August sulfur means for the Fuels No. 4 and No. 5 and the same test method. The data plotted are after the deletion of outliers using the robust deletion method, and after deleting the extra repeat values. Also included are 95% Tukey intervals around each mean. These intervals are constructed in such a way that if the two means are the same, the two intervals will overlap 95% of the time. Thus, if the two intervals for the July and August means being compared overlap, they indicate no significant difference between the two means being compared. If the two intervals do not overlap, the means are significantly different (at the 5% level of significance).

The means for the July Fuel No. 4 and August Fuel No. 4 samples are plotted together in Figures 4 and 5 using the composite, D 5453, and D 7039 test methods. These two fuel samples were chosen because they represent the gravimetric standard fuel having a sulfur target value of 8.41 ppm. Figure 4 contains the means for the In-House calibration and Figure 5 contains the means for the NIST calibration.

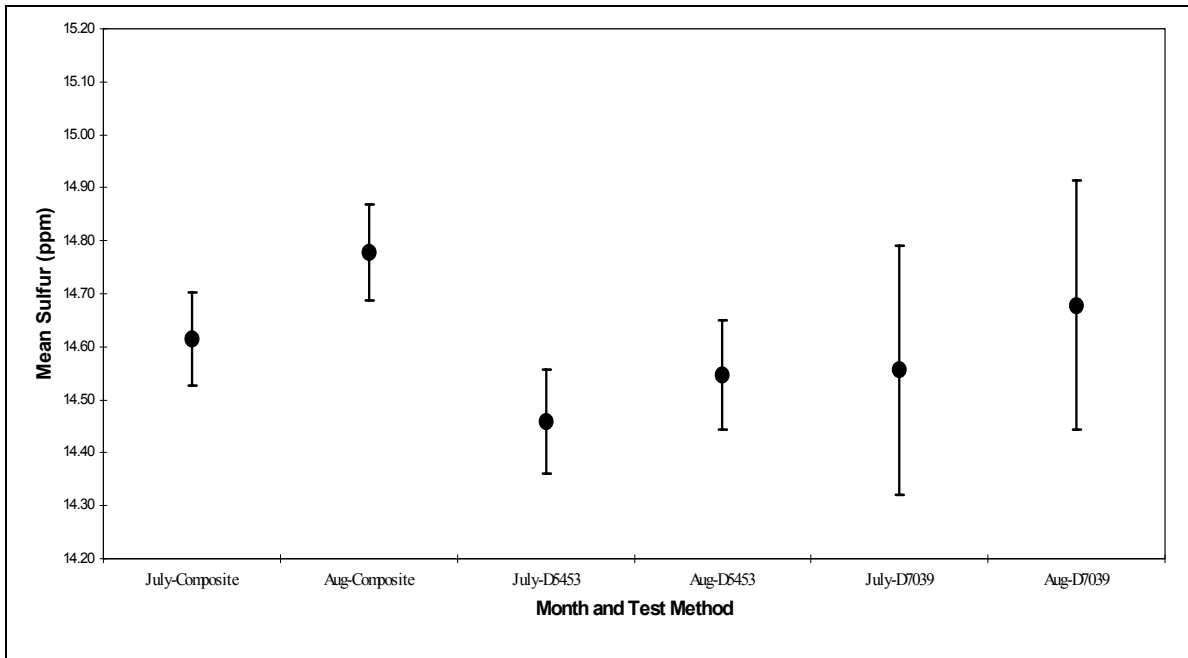
Similarly, the means for the July Fuel No. 5 and August Fuel No. 5 samples are plotted together in Figures 6 and 7. These two fuel samples were chosen because both have a sulfur target value of 15 ppm, which is the fuel sulfur level at which most of the reproducibility interest is aimed. Figure 6 contains the means for the In-House calibration and Figure 7 contains the means for the NIST calibration.



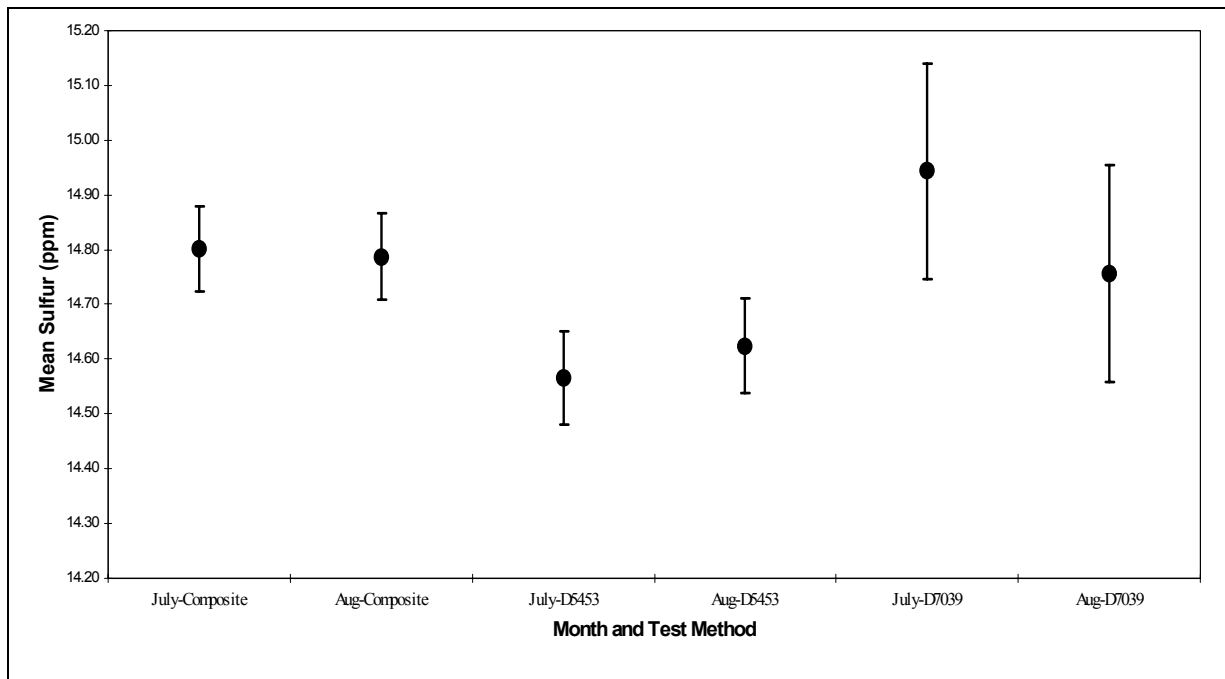
**Figure 4. Means and 95% Tukey Intervals for July and August Fuel No. 4 Data With Robust Outlier Deletion and In-House Calibration**



**Figure 5. Means and 95% Tukey Intervals for July and August Fuel No. 4 Data With Robust Outlier Deletion and NIST Calibration**



**Figure 6. Means and 95% Tukey Intervals for July and August Fuel No. 5 Data With Robust Outlier Deletion and In-House Calibration**



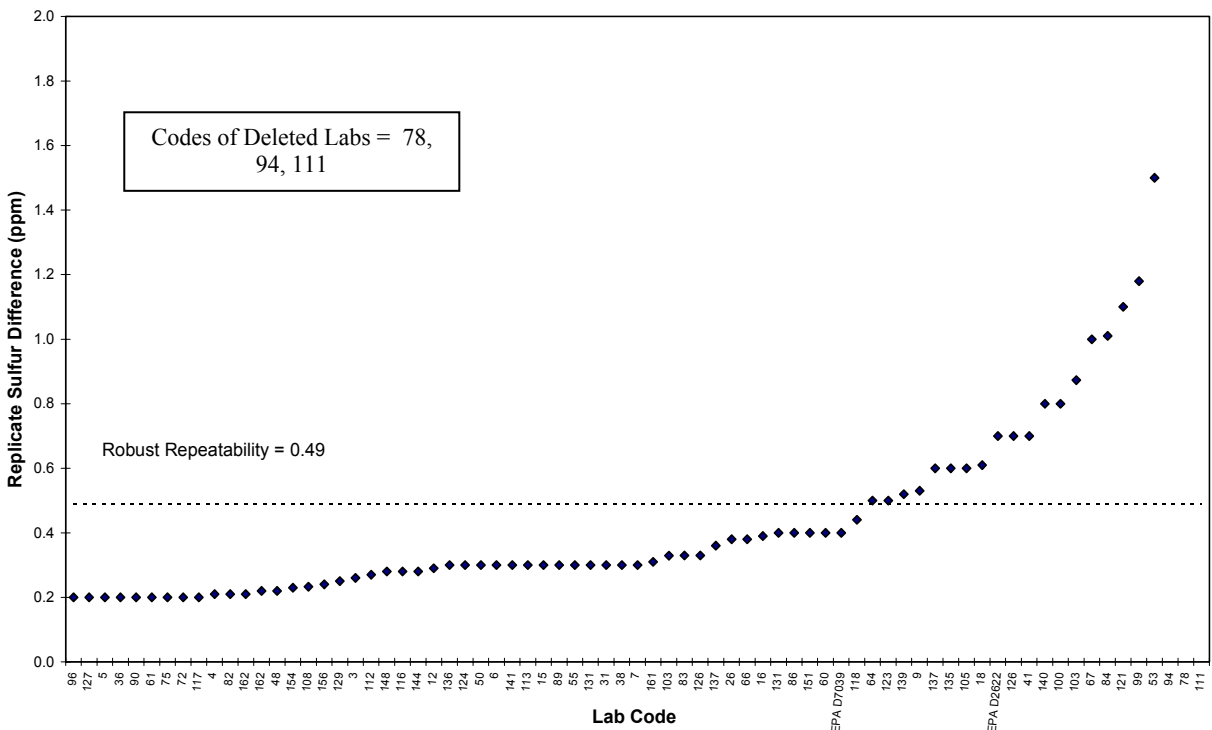
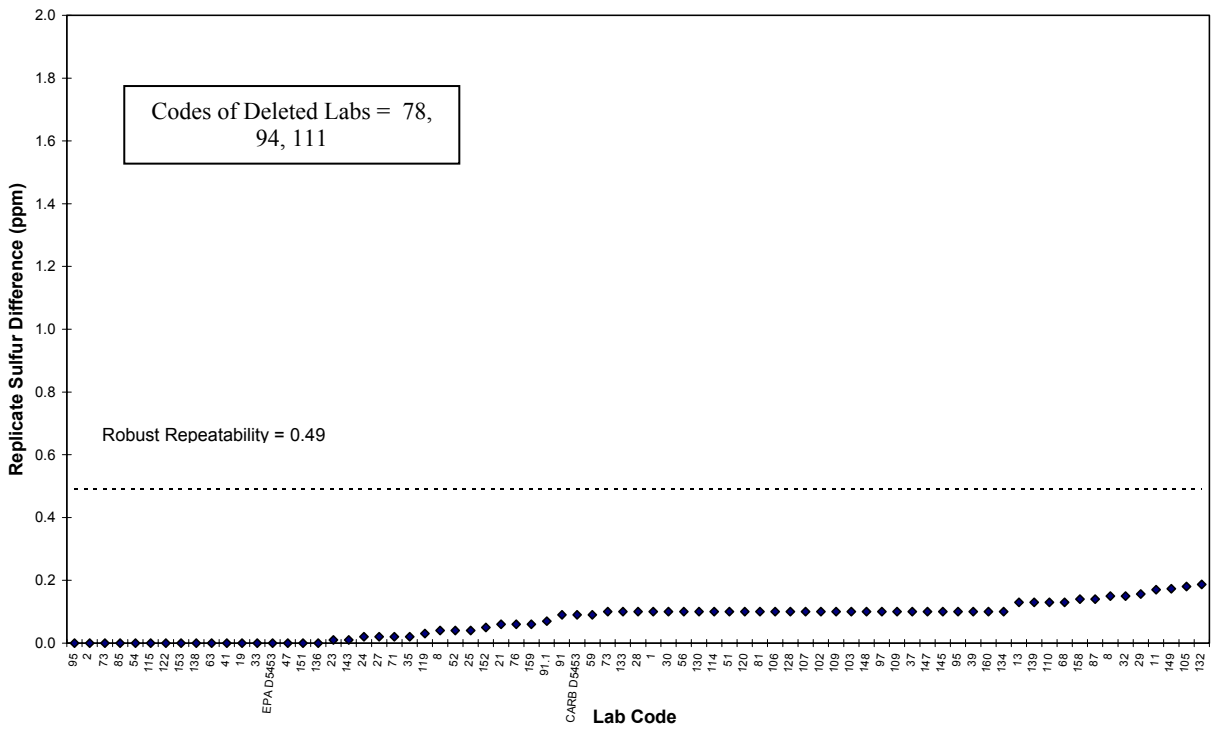
**Figure 7. Means and 95% Tukey Intervals for July and August Fuel No. 5 Data With Robust Outlier Deletion and NIST Calibration**

The means of the data, after all deletions (robust deletion and extra repeat deletion), for the July Fuel No. 4 and the August Fuel No. 4 were not significantly different using a 95% confidence interval with either calibration method. The same result holds for the mean comparisons for the July Fuel No. 5 and August Fuel No. 5 data. This was demonstrated separately for the composite, and for the D 5453 and D 7039 test methods. The results provide evidence that the sulfur means for the July and August samples of the same fuel did not differ significantly.

### **5.3 Comparisons of Lab ASTM Repeatability**

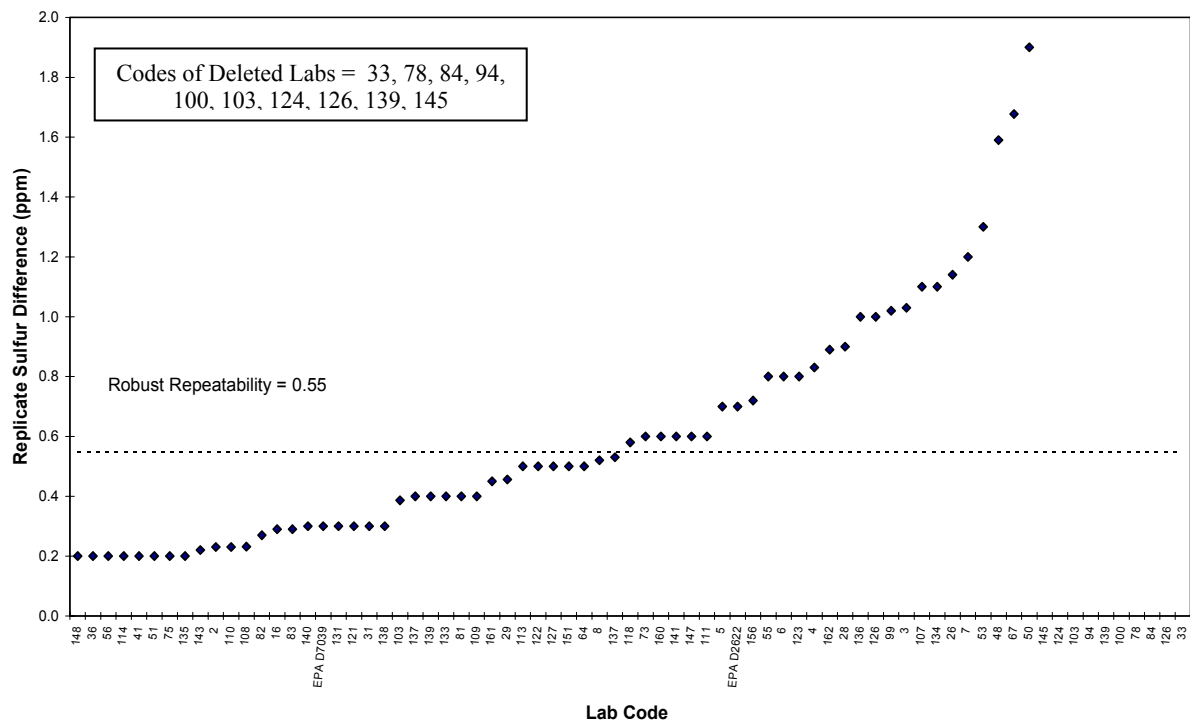
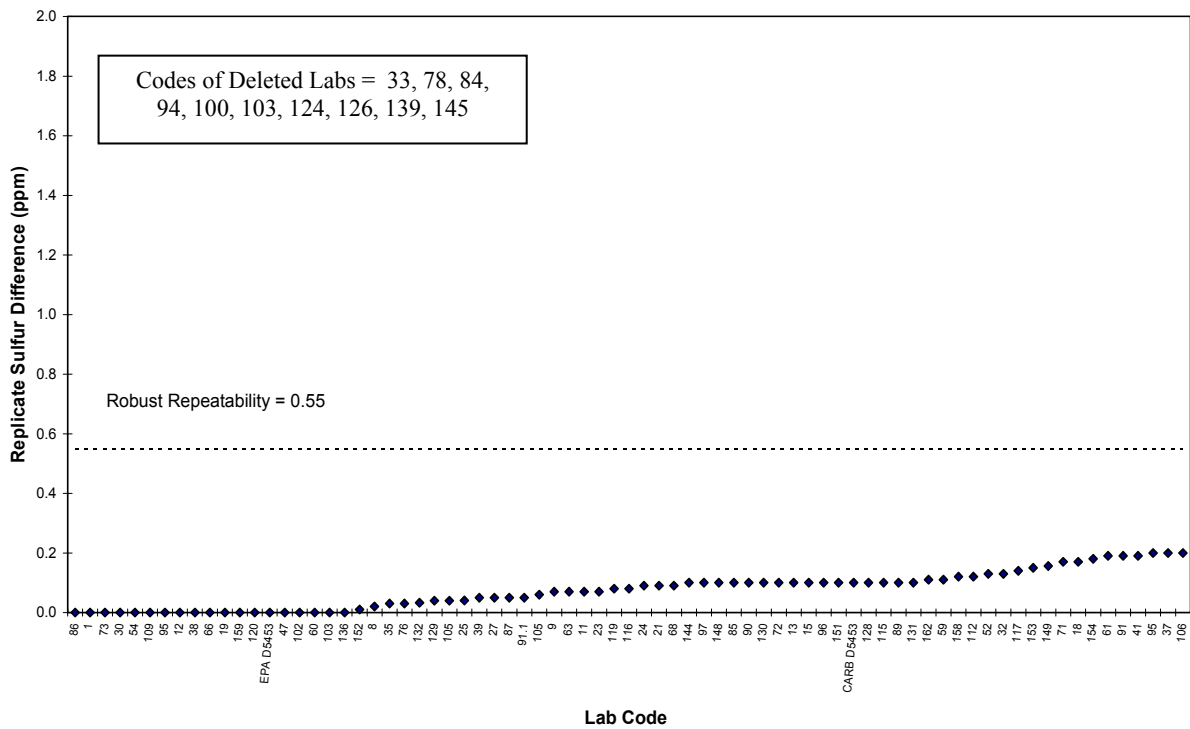
Figures 8-11 contain plots of the composite ASTM lab repeatability values computed with the robust outlier deletion technique and ASTM analysis. July Fuel No. 4 and August Fuel No. 5 data are represented for both the in-house and NIST calibration methods.

The differences between the two repeats are plotted against the lab code numbers, and the repeatability value for the composite data is included on each plot. This allows one to compare each lab repeat difference to the composite lab repeatability value. Differences that exceed the computed robust repeatability are readily identified. In addition, the code numbers of the labs that were deleted in the outlier and repeat deletion checks are listed in the figure. Note also that the code numbers for the EPA and CARB (California Air Resources Board) labs have been replaced with their abbreviated titles, namely EPA (used three independent instruments) and CARB, along with the corresponding test method number. Also note that some lab codes may occur multiple times, if they qualified multiple instruments.

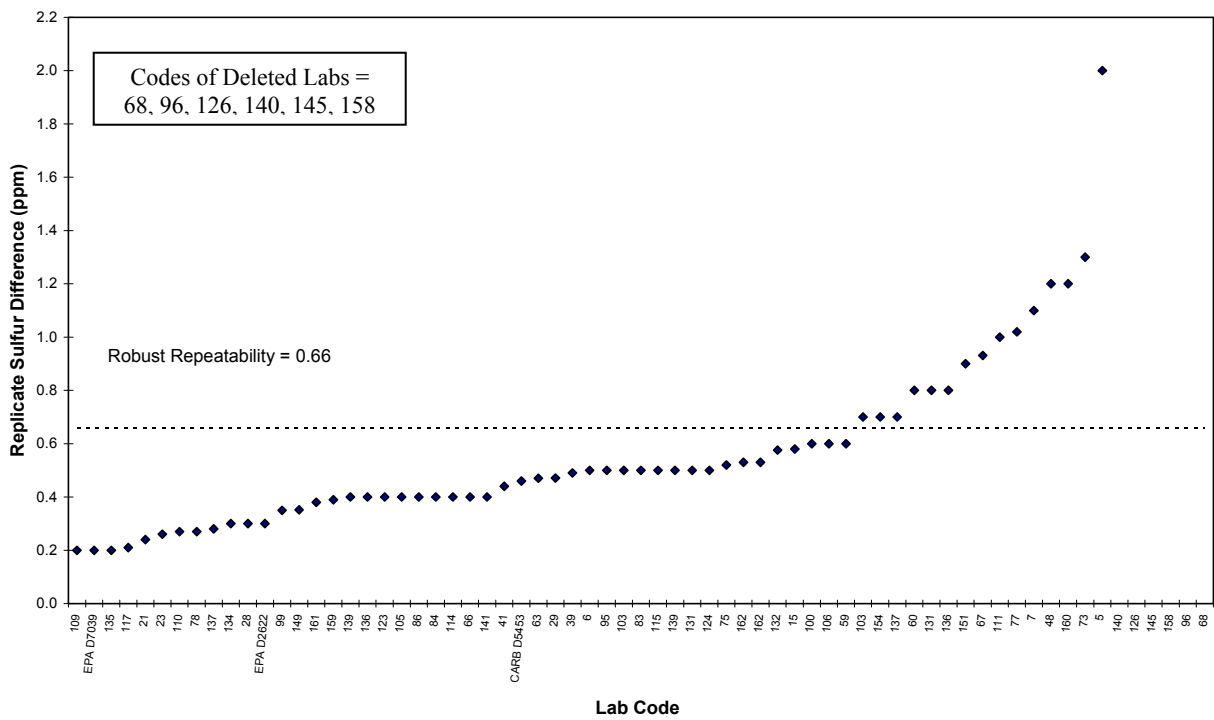
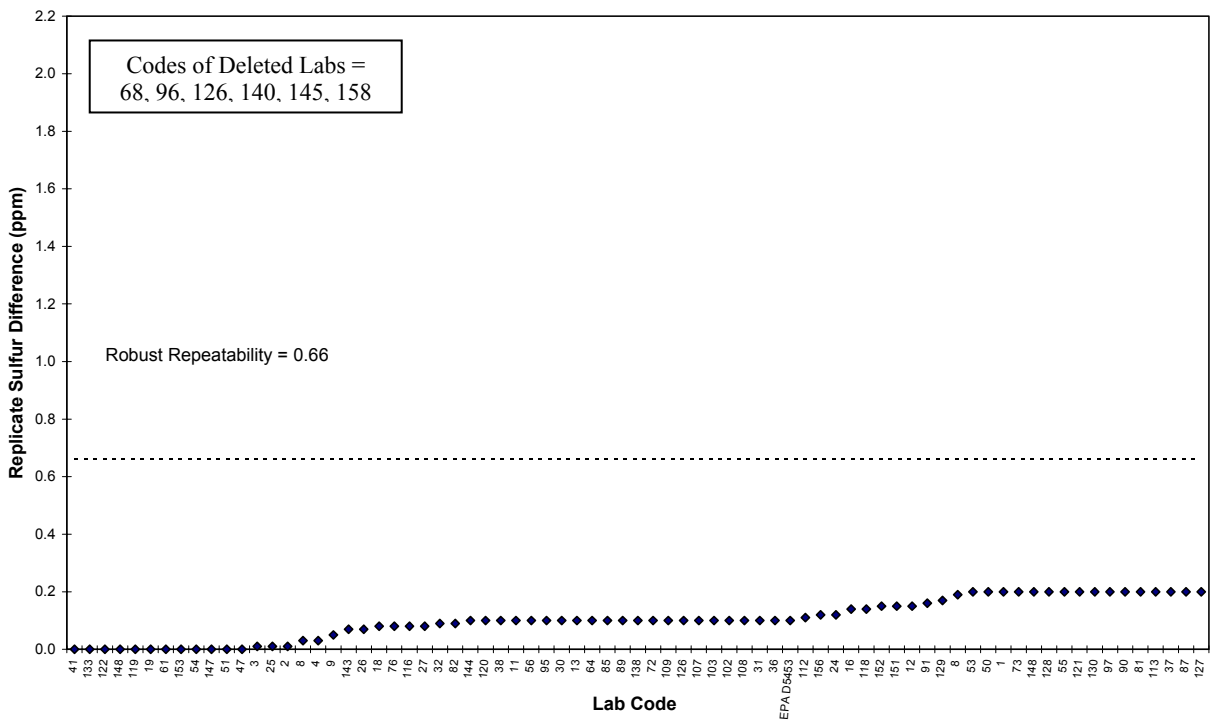


**Figure 8. Plot of Lab Replicate Difference vs. Lab Code for Composite Data for July Fuel No. 4 With Robust Outlier Deletion, In-House Calibration, and ASTM Analysis**

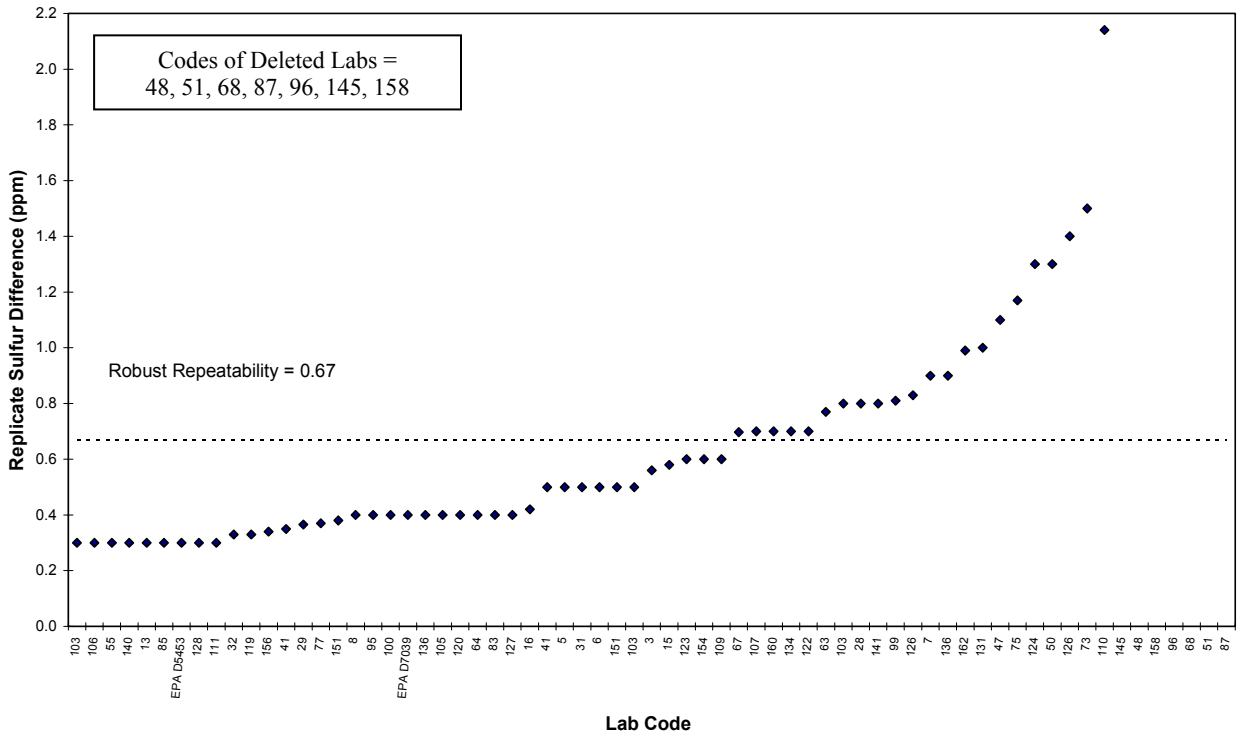
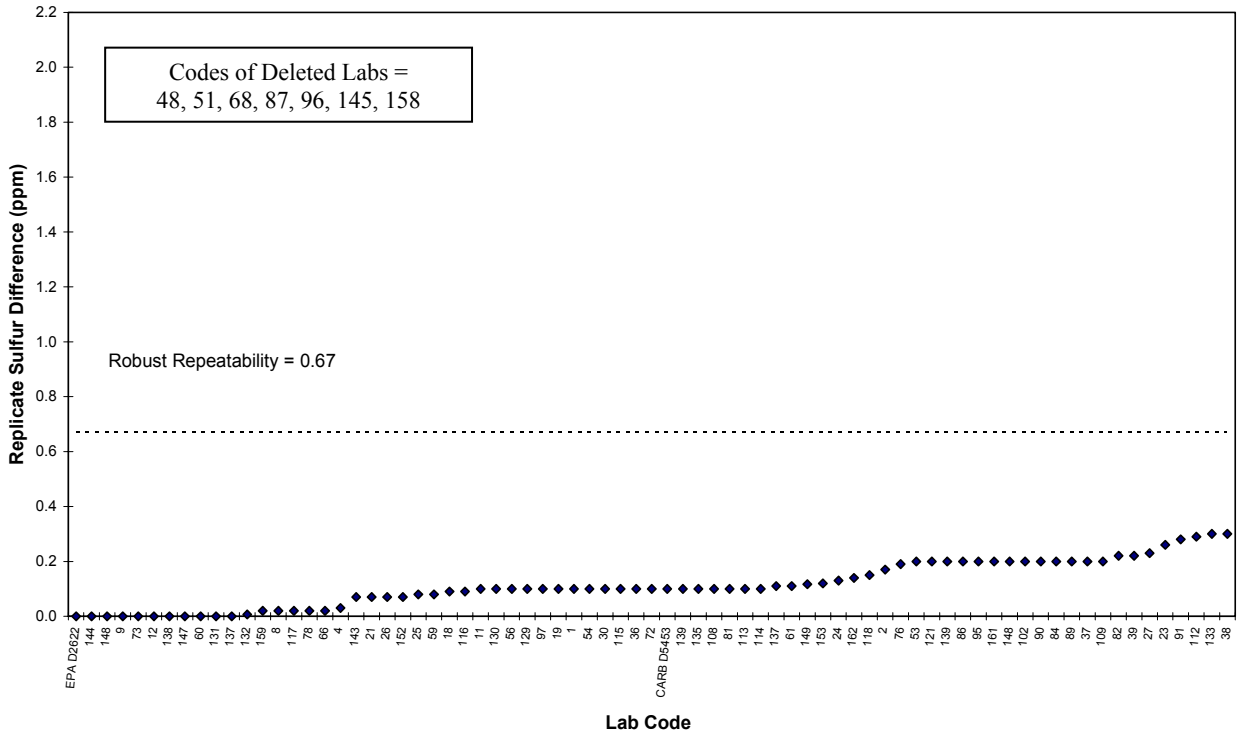




**Figure 9. Plot of Lab Replicate Difference vs. Lab Code for Composite Data for July Fuel No. 4 With Robust Outlier Deletion, NIST Calibration, and ASTM Analysis**



**Figure 10. Plot of Lab Replicate Difference vs. Lab Code for Composite Data for August Fuel No. 5 With Robust Outlier Deletion, In-House Calibration, and ASTM Analysis**



**Figure 11. Plot of Lab Replicate Difference vs. Lab Code for Composite Data for August Fuel No. 5 With Robust Outlier Deletion, NIST Calibration, and ASTM Analysis**

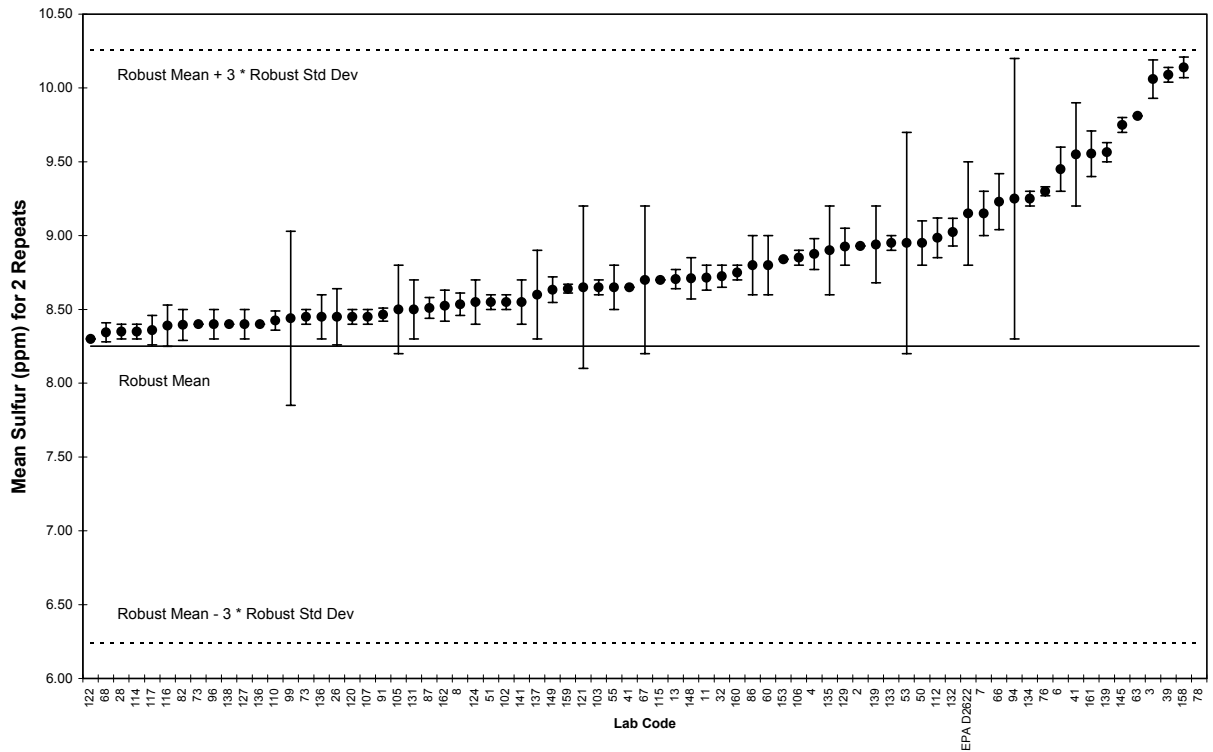
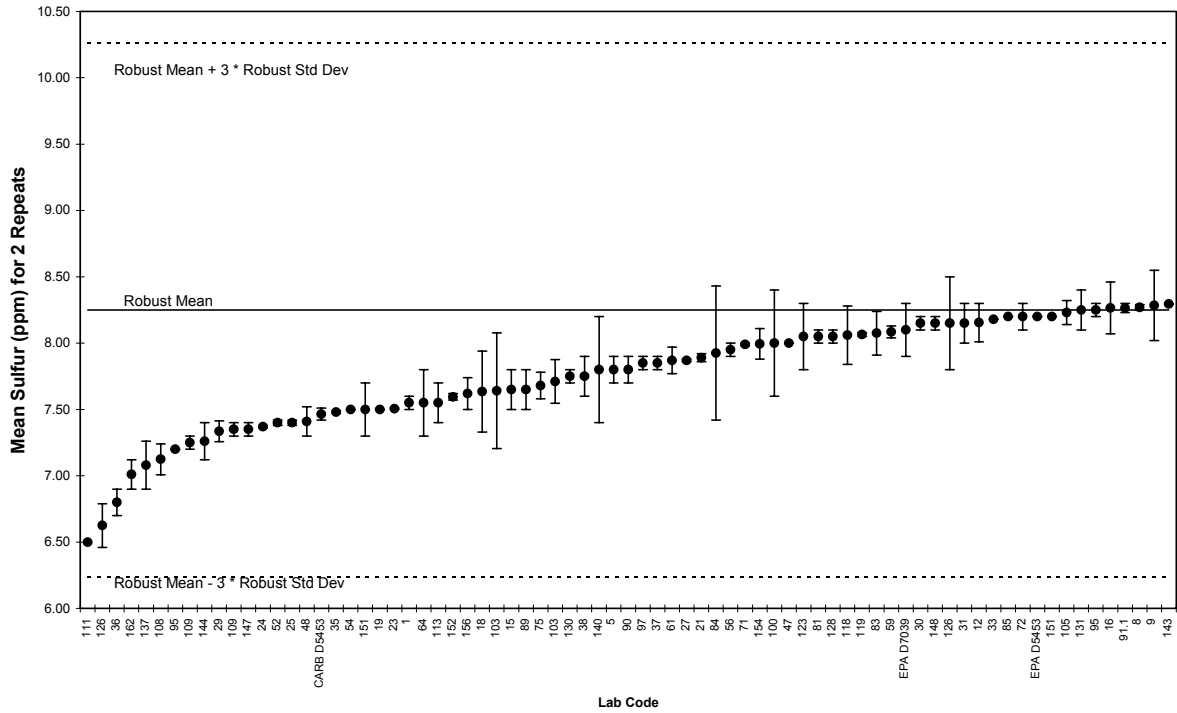
For the July Fuel No. 4 data in Figures 8 and 9, 19 labs had differences in their two sulfur repeat values that exceeded the composite ASTM repeatability value using the In-House calibration. This compares to 27 labs when using the NIST calibration. In addition, the July Fuel No. 4 data for three labs using the In-House method and ten labs using the NIST method were excluded due to having all three repeat values meet the outlier deletion criteria.

For the August Fuel No. 5 in Figures 10 and 11, 15 labs had differences in their two sulfur repeat values that exceeded the composite ASTM repeatability value using the In-House calibration. This compares to 22 labs when using the NIST calibration. In addition, the August Fuel No. 5 data for six labs using the In-House method and seven labs using the NIST method were excluded due to having all three repeat values meet the outlier deletion criteria.

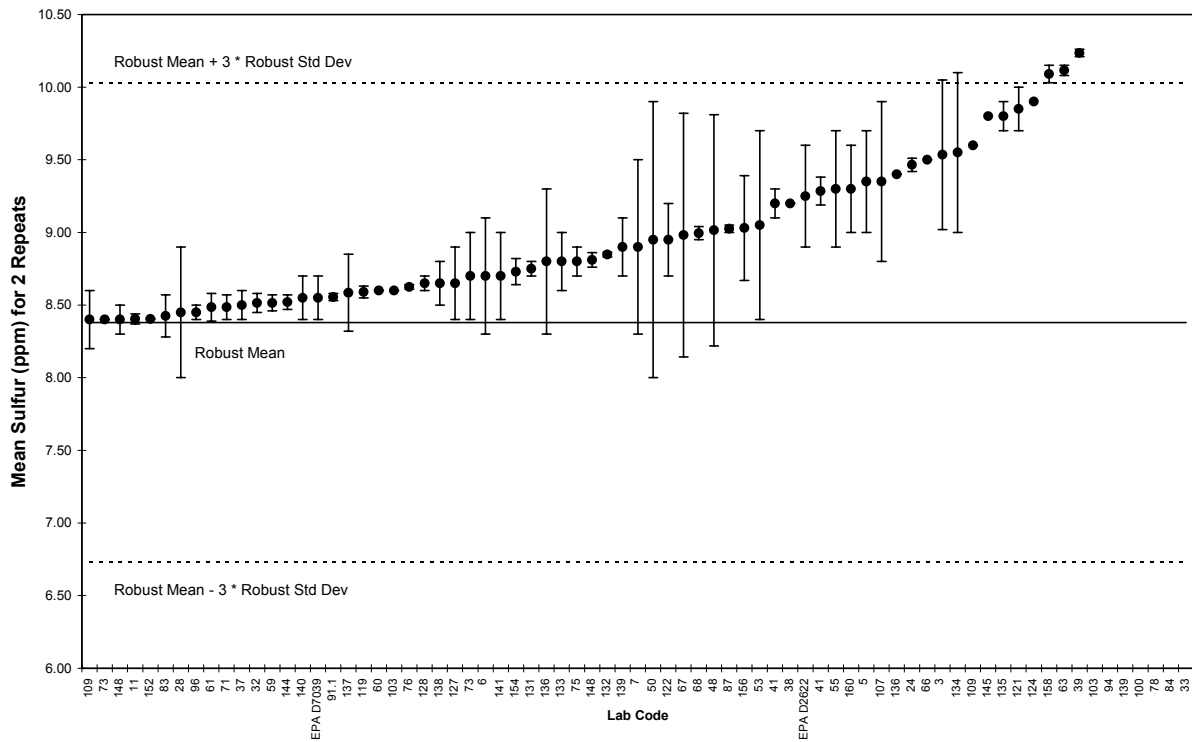
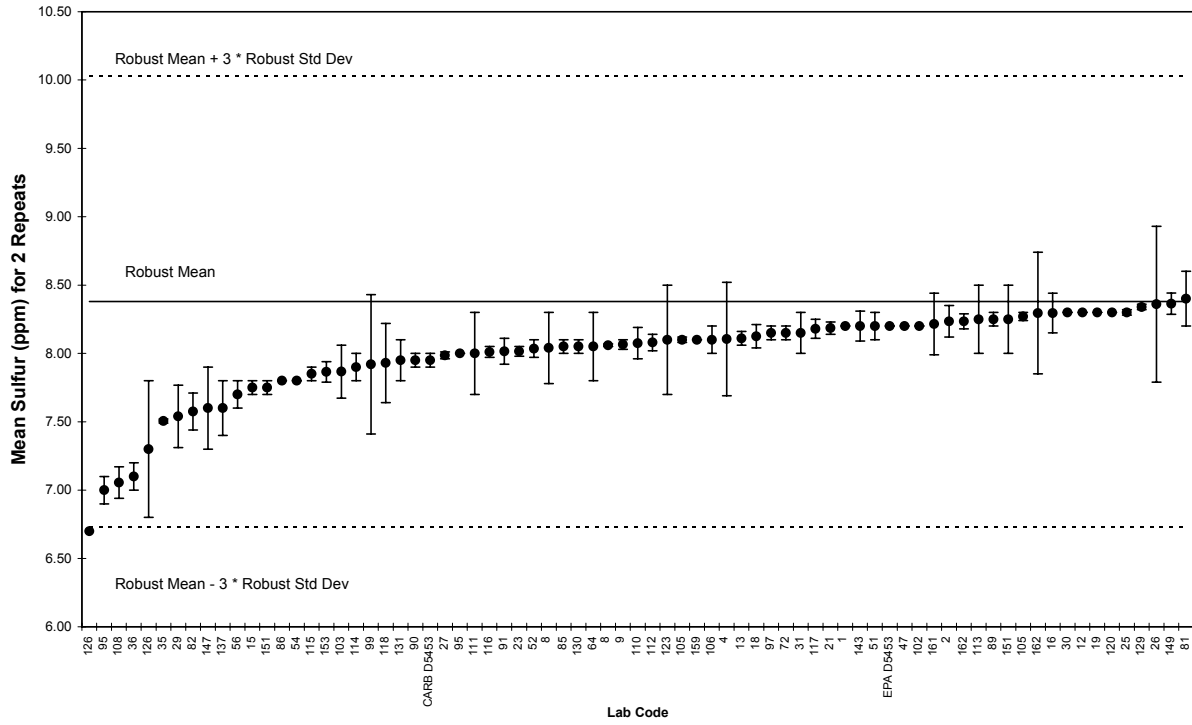
#### **5.4 Comparisons of Lab ASTM Reproducibility**

Figures 12-15 contain plots of composite ASTM lab reproducibility values computed with the robust outlier deletion techniques and ASTM analysis. July Fuel No. 4 and August Fuel No. 5 data are represented for both the in-house and NIST calibration methods.

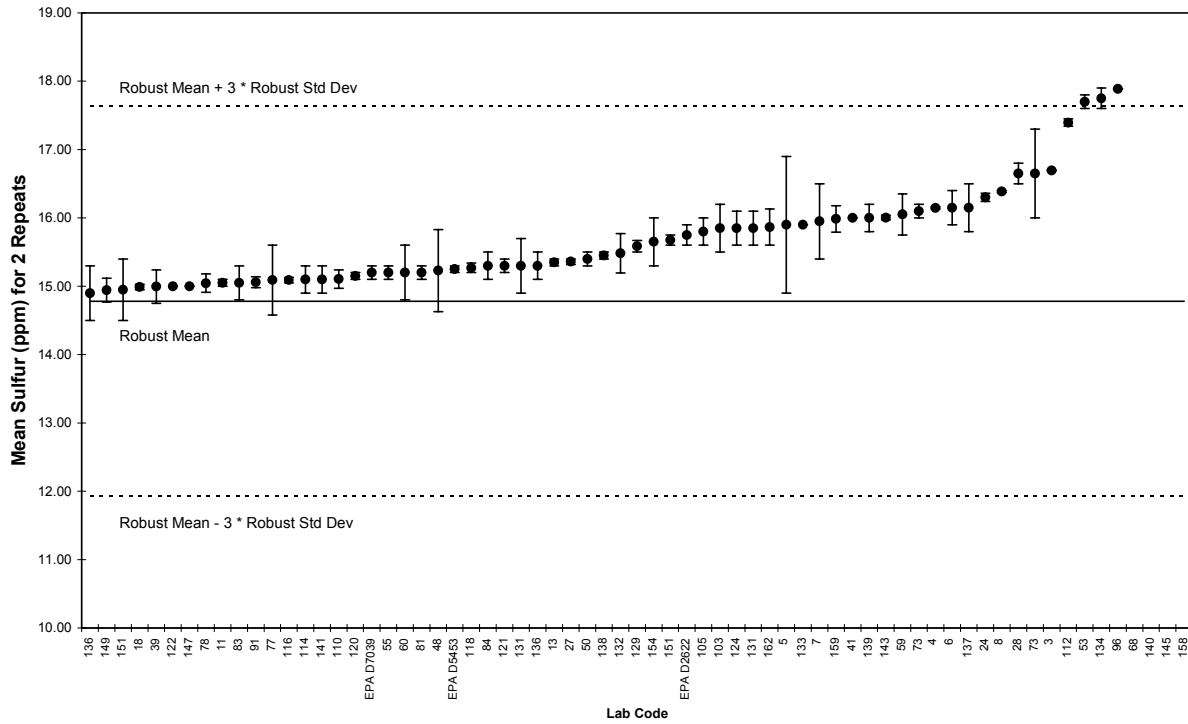
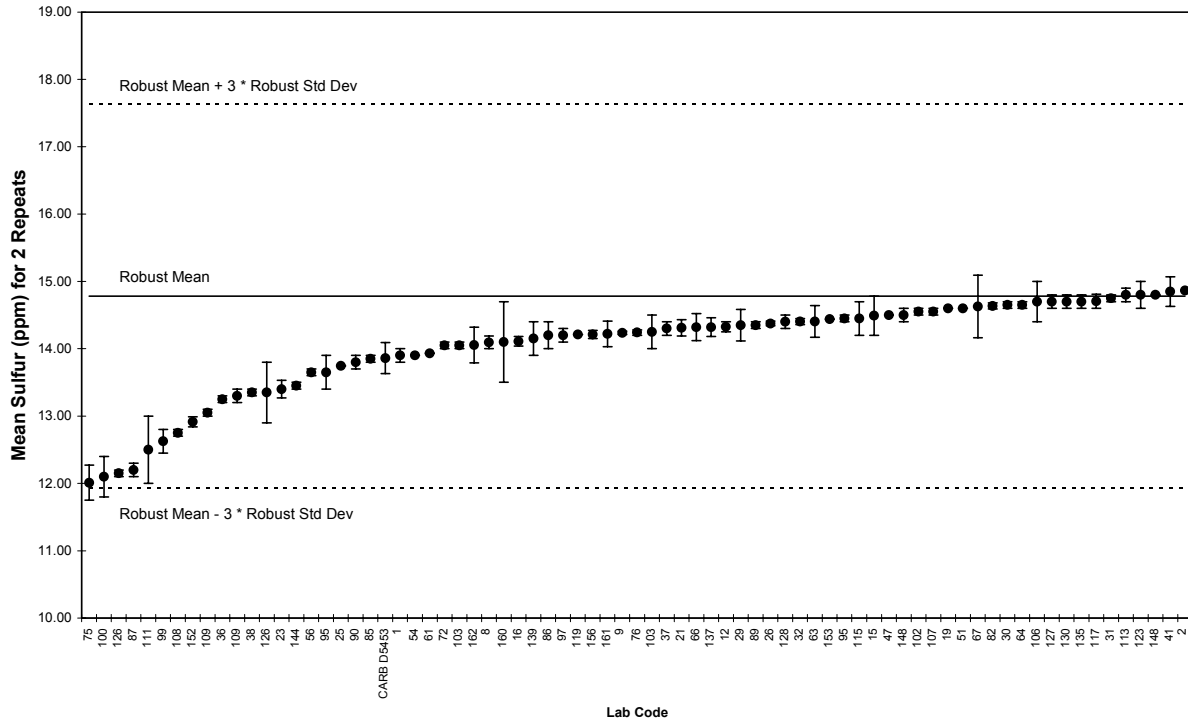
The means of the lab repeat values (including lines extending to the lab repeat min and max values) are plotted against the lab code numbers. Included on the plot is a solid line at the robust mean for the composite data and the dashed lines are the limits at (robust mean)  $\pm 3 \times$  (robust standard deviation). The plot allows one to compare the deviation between the lab mean and the robust mean to the upper and lower limits. Lab means that exceed the limits are readily identified. In addition, the code numbers of the labs that were deleted in the outlier checks are listed in the figure. Note also that the code numbers for the EPA and CARB labs have been replaced with their abbreviated titles, namely EPA and CARB along with the corresponding test number. Some lab codes may occur multiple times, if they qualified multiple instruments.



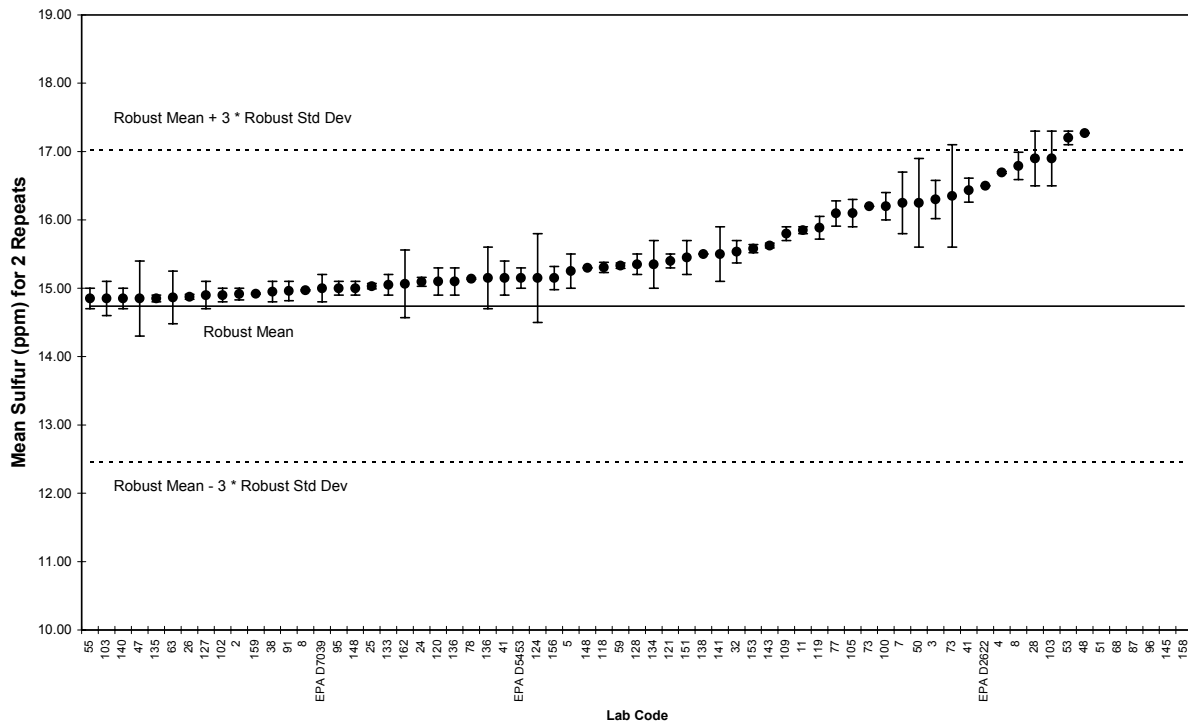
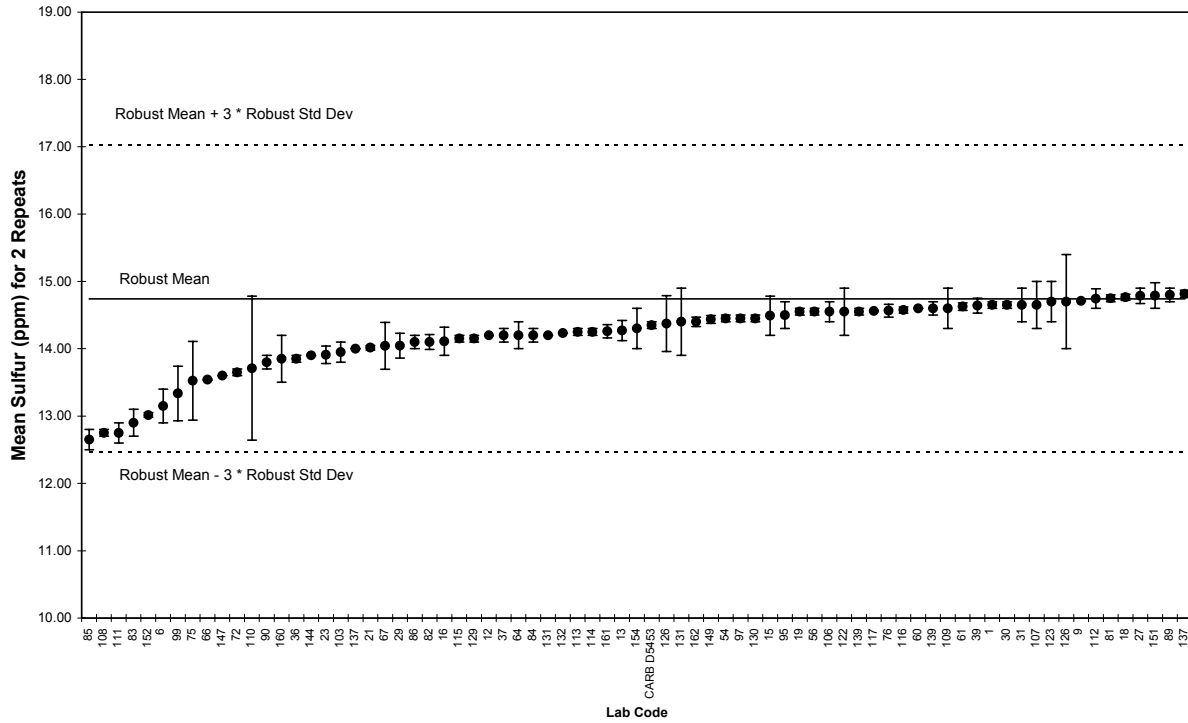
**Figure 12. Plot of Lab Mean vs. Lab Code for Composite Data for July Fuel No. 4 With Robust Outlier Deletion, In-House Calibration, and ASTM Analysis**



**Figure 13. Plot of Lab Mean vs. Lab Code for Composite Data for July Fuel No. 4 With Robust Outlier Deletion, NIST Calibration, and ASTM Analysis**



**Figure 14. Plot of Lab Mean vs. Lab Code for Composite Data for August Fuel No. 5 With Robust Outlier Deletion, In-House Calibration, and ASTM Analysis**



**Figure 15. Plot of Lab Mean vs. Lab Code for Composite Data for August Fuel No. 5 With Robust Outlier Deletion, NIST Calibration, and ASTM Analysis**



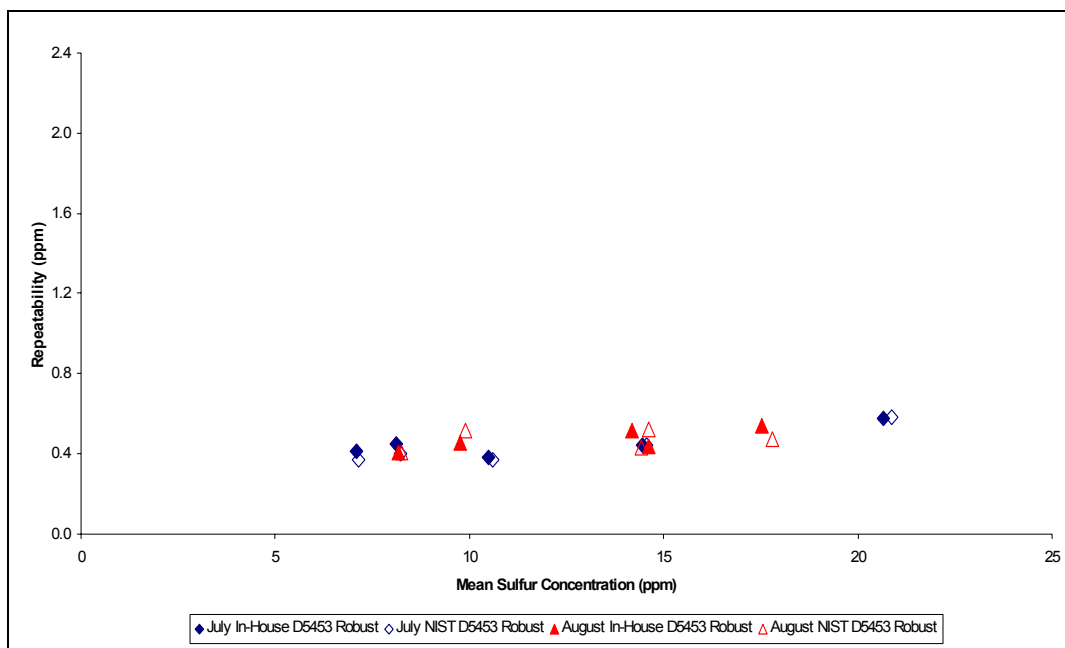
For the July Fuel No. 4 data in Figures 12 and 13, no labs had means of their two sulfur repeat values that exceeded the robust mean limits using the In-House calibration. This compares to four labs exceeding the limits when using the NIST calibration. In addition, the July Fuel No. 4 data for one lab using the In-House method and seven labs using the NIST method were excluded due to having all three repeat values meet the outlier deletion criteria.

For the August Fuel No. 5 data in Figures 14 and 15, three labs had means of their two sulfur repeat values that exceeded the robust mean limits using the In-House calibration. This compares to two labs exceeding the limits when using the NIST calibration. In addition, the August Fuel No. 5 data for four labs using the In-House method and six labs using the NIST method were excluded due to having all three repeat values meet the outlier deletion criteria.

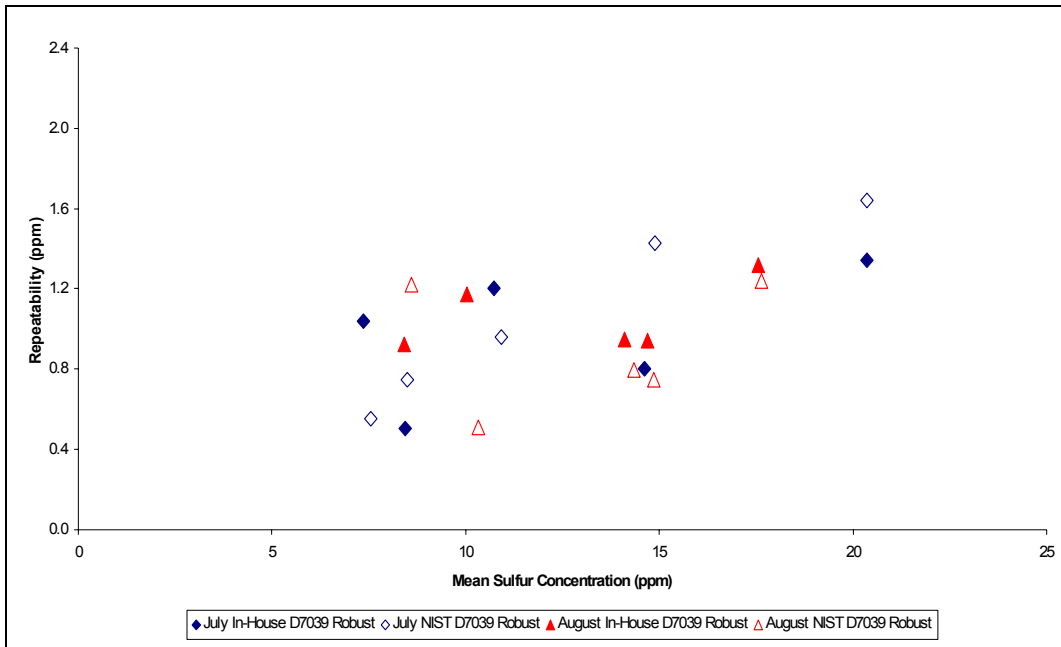
Additional plots of lab reproducibility are contained in Appendix D. Included are plots for the July No. 4 and August No. 5 test fuels for the composite test methods by deletion method, calibration type, and analysis method.

### 5.5 Comparisons of Overall ASTM Repeatability by Test Method

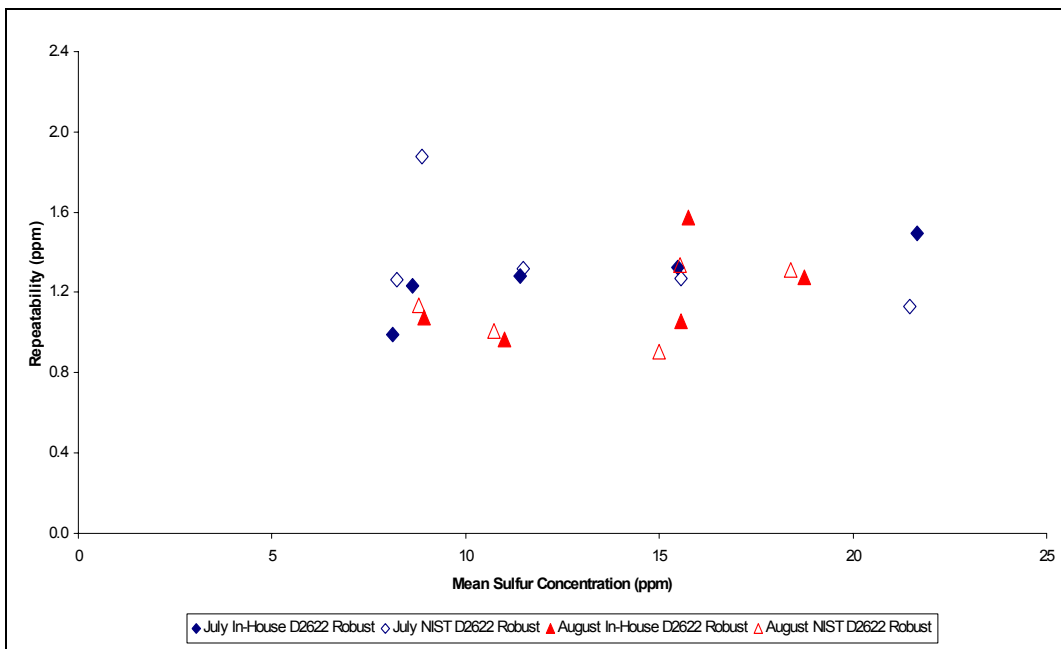
Figures 16-20 contain plots of the ASTM repeatability values against the mean sulfur data for all ten fuels with the robust outlier deletion method and categorized by the In-House and NIST calibration methods. The plots are listed by test method: D 5453 in Figure 16, D 7039 in Figure 17, D 2622 in Figure 18, EDXRF in Figure 19, and the Composite in Figure 20. Figures 21-23 contain similar plots of the repeatability values for D 5453, D 2622 and D 7039, but include for comparison the 2004-05 ASTM Crosscheck repeatability values.



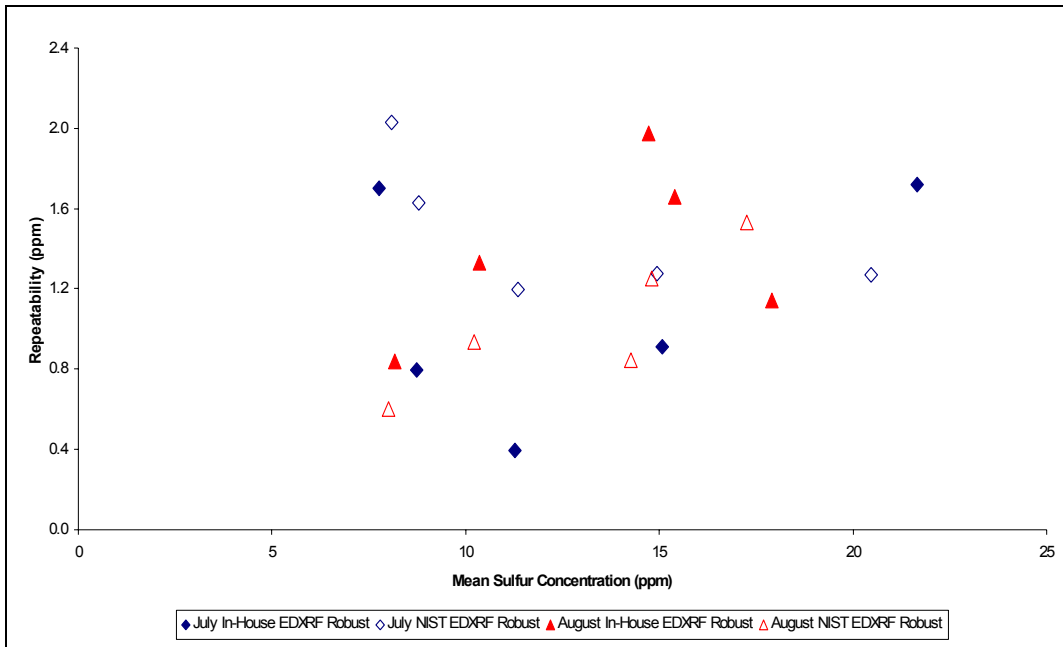
**Figure 16. Plot of ASTM Repeatability vs. Mean Sulfur for D 5453 Data With Robust Outlier Deletion, and Categorized by In-House and NIST Calibration**



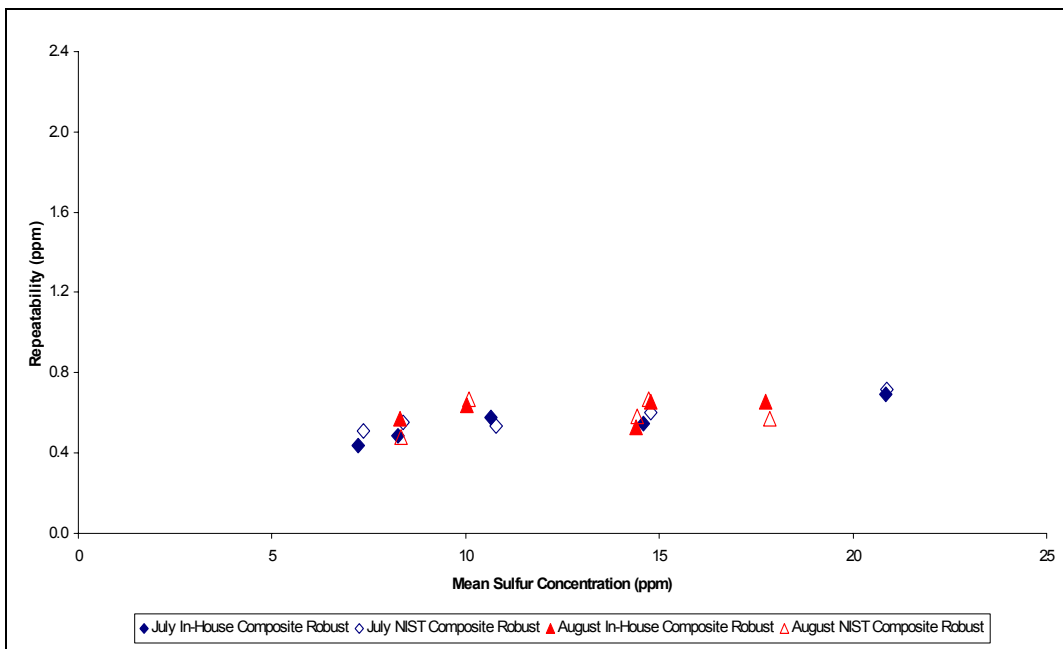
**Figure 17. Plot of ASTM Repeatability vs. Mean Sulfur for D 7039 Data With Robust Outlier Deletion, and Categorized by In-House and NIST Calibration**



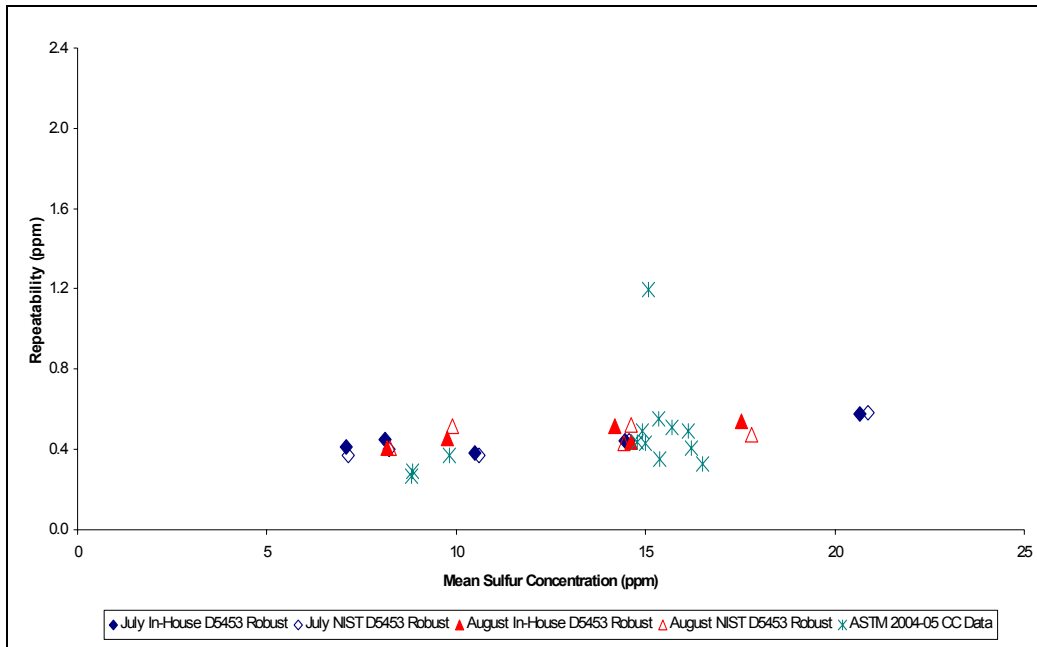
**Figure 18. Plot of ASTM Repeatability vs. Mean Sulfur for D 2622 Data With Robust Outlier Deletion, and Categorized by In-House and NIST Calibration**



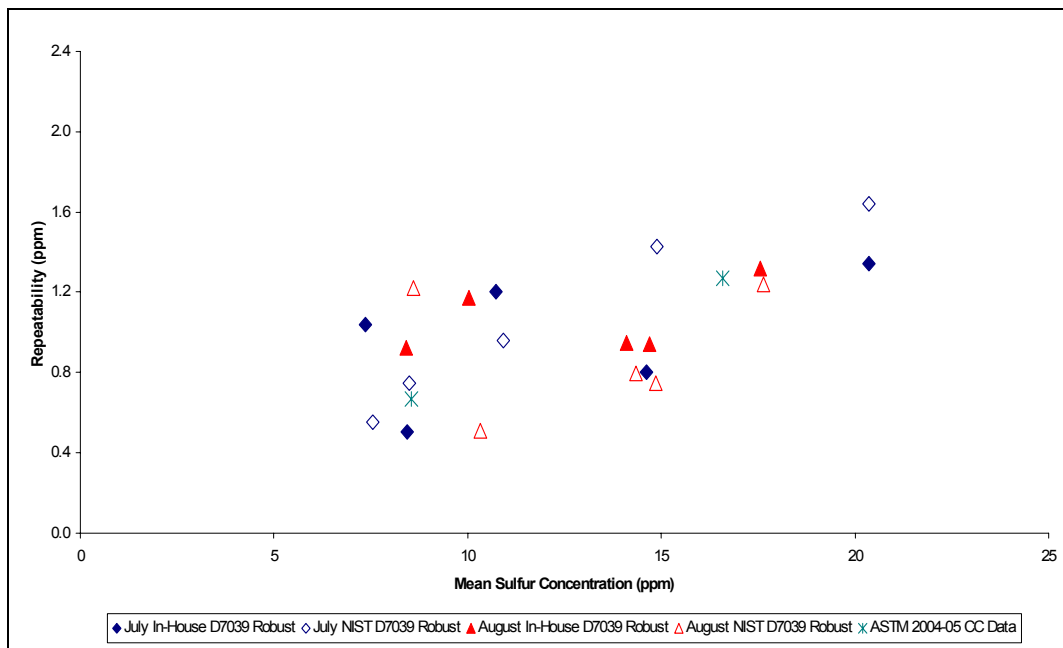
**Figure 19. Plot of ASTM Repeatability vs. Mean Sulfur for EDXRF Data With Robust Outlier Deletion, and Categorized by In-House and NIST Calibration**



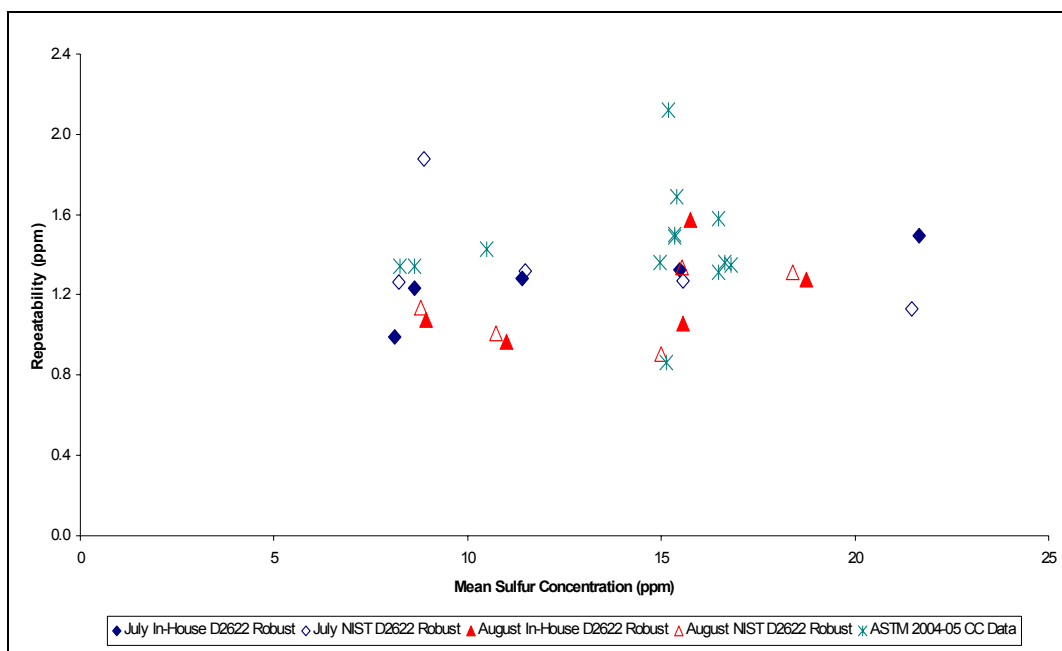
**Figure 20. Plot of ASTM Repeatability vs. Mean Sulfur for Composite Data With Robust Outlier Deletion, and Categorized by In-House and NIST Calibration**



**Figure 21. Plot of ASTM Repeatability vs. Mean Sulfur for D 5453 Data With Robust Outlier Deletion, and Categorized by In-House and NIST Calibration – Added ASTM 2004-05 Crosscheck Data**



**Figure 22. Plot of ASTM Repeatability vs. Mean Sulfur for D 7039 Data With Robust Outlier Deletion, and Categorized by In-House and NIST Calibration – Added ASTM 2004-05 Crosscheck Data**



**Figure 23. Plot of ASTM Repeatability vs. Mean Sulfur for D 2622 Data With Robust Outlier Deletion, and Categorized by In-House and NIST Calibration – Added ASTM 2004-05 Crosscheck Data**

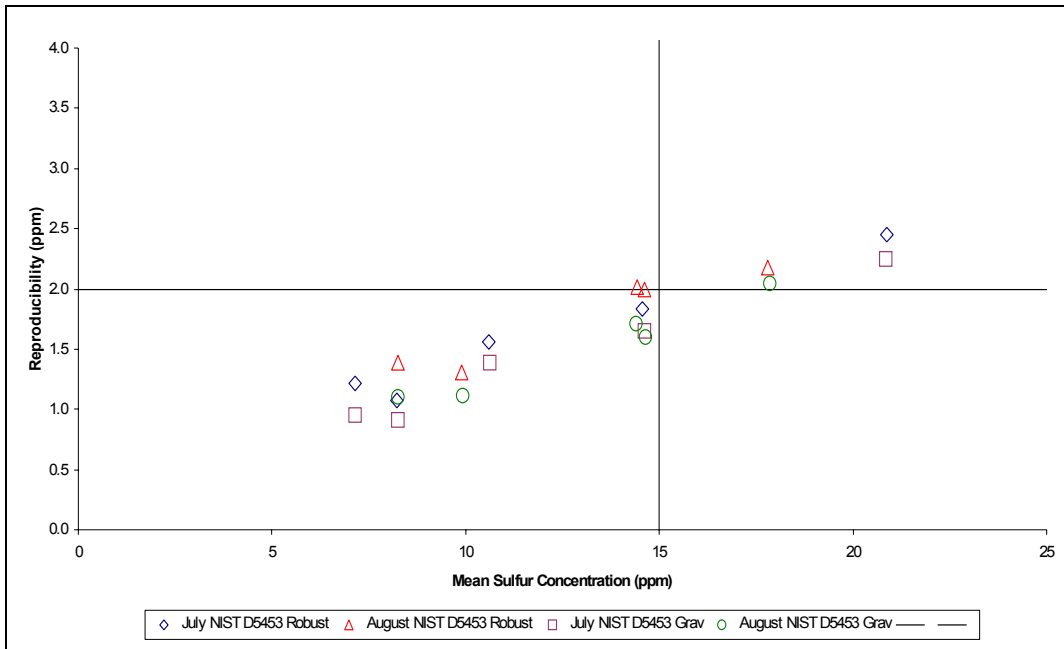
There were no noticeable differences among the repeatability values in Figures 16-20 across the two calibration methods. The smallest r-values and the smallest variation occurred in Figure 16 when using D 5453. The D 7039 and D 2622 values were in the middle with the D 7039 values in Figure 17 being slightly smaller and less variable than the D 2622 values in Figure 18, but larger than the D 5453 values in Figure 16. The largest r-values and largest variation occurred using EDXRF in Figure 19. This variation is possibly a result of the small number of labs (six) using this procedure. The 2004-05 ASTM CC r-values were generally in agreement with these results except for one larger CC r-value that occurred in comparisons using D 5453 in Figure 21, and one larger value that occurred in comparisons using D 2622 in Figure 23.

Additional plots of lab repeatability are contained in Appendix E. Included are plots for the ASTM analysis for each test method, calibration method, and outlier deletion method.

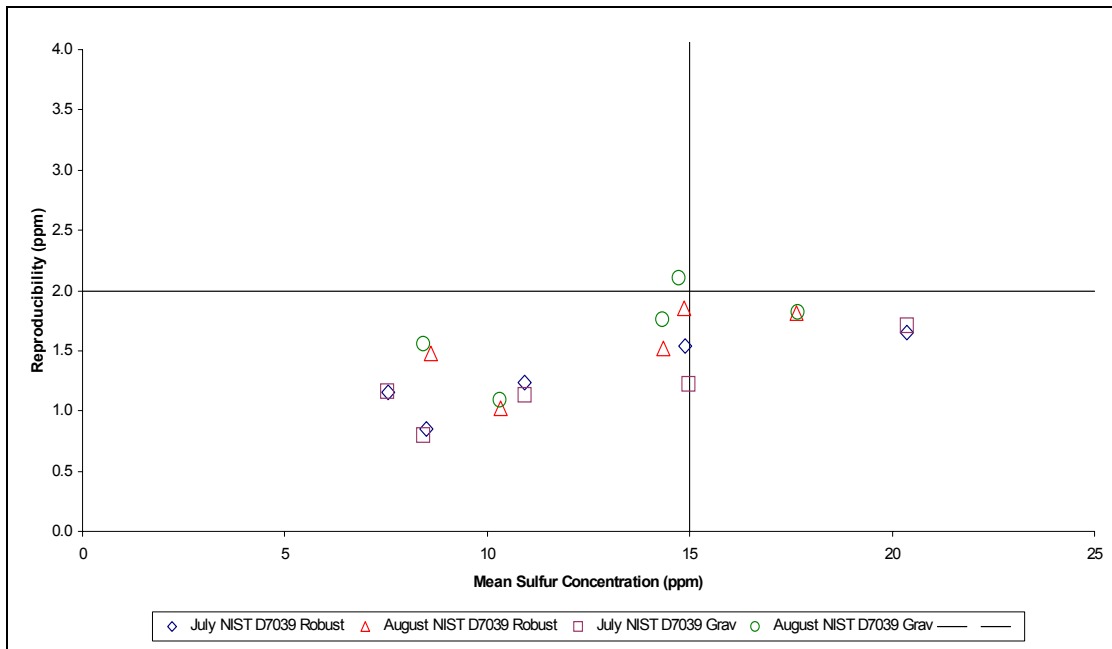
## 5.6 Comparisons of Overall Reproducibility by Test Method

### 5.6.1 Robust vs. Gravimetric Deletion

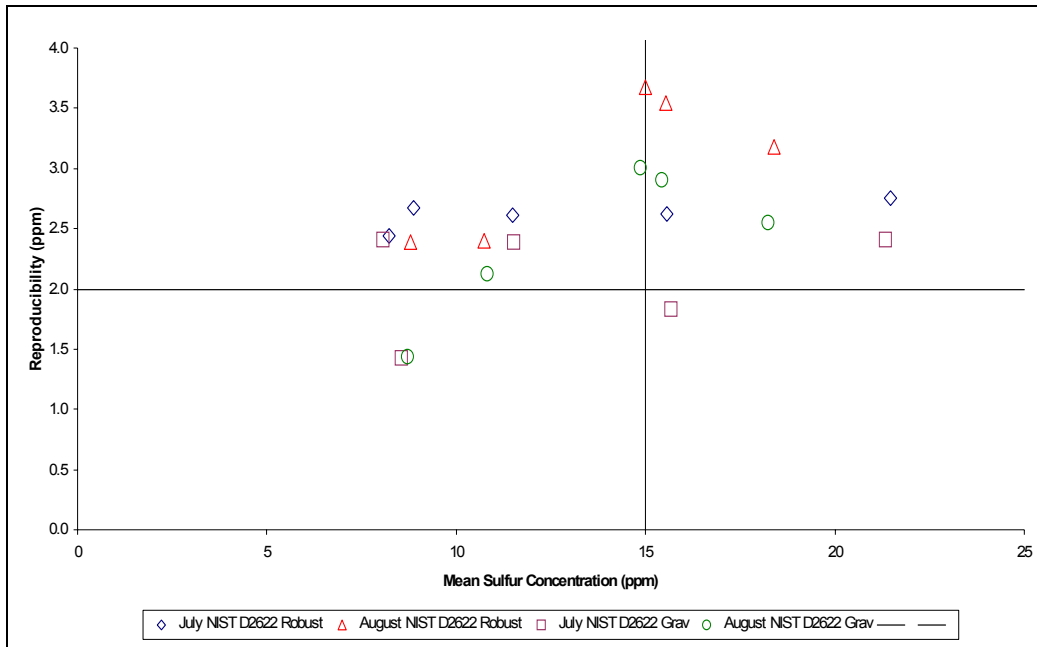
Figures 24-28 contain plots of ASTM reproducibility values versus the mean sulfur for all ten fuels with the NIST calibration and categorized by the robust and gravimetric outlier deletion methods. The figures are listed in order by test method: D 5453, D 7039, D 2622, EDXRF and Composite.



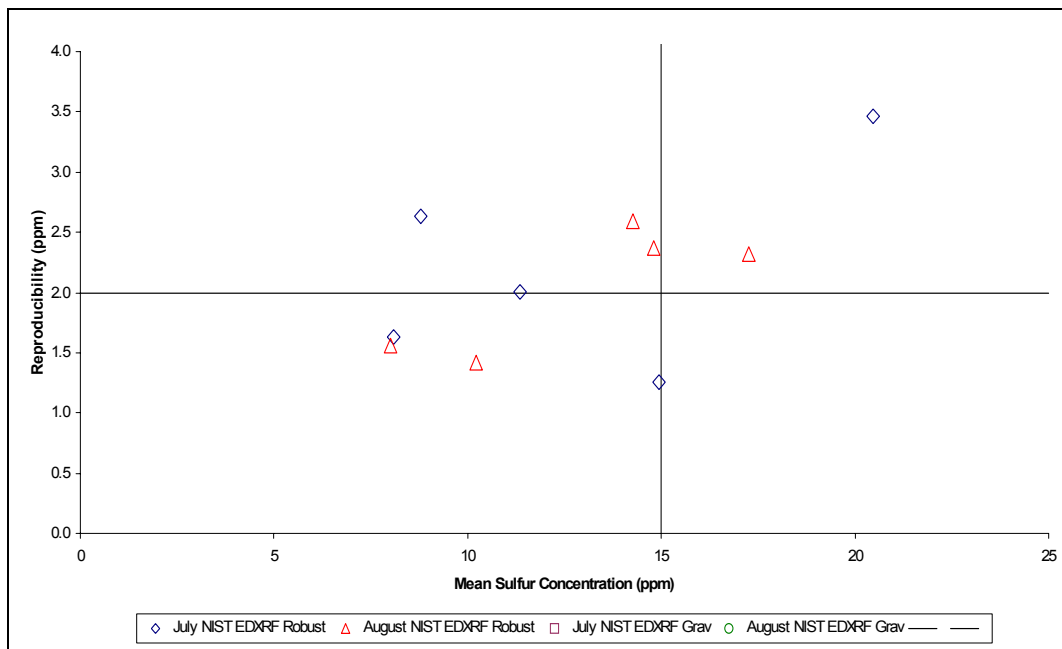
**Figure 24. Plot of ASTM Reproducibility vs. Mean Sulfur for D 5453 Data With NIST Calibration, and Categorized by Robust and Gravimetric Outlier Deletion**



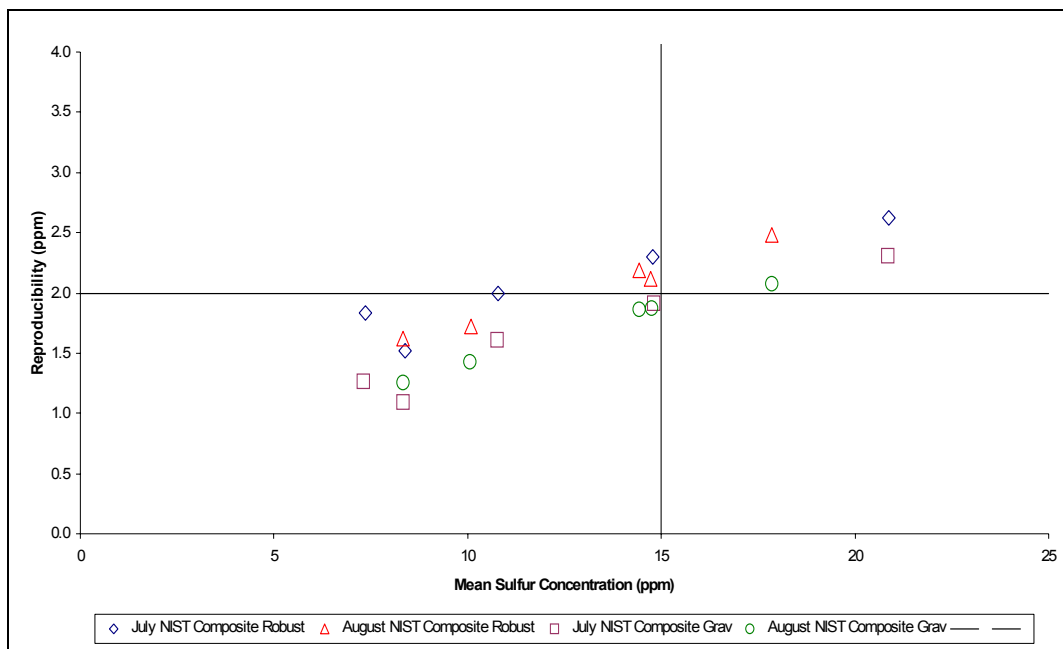
**Figure 25. Plot of ASTM Reproducibility vs. Mean Sulfur for D 7039 Data With NIST Calibration, and Categorized by Robust and Gravimetric Outlier Deletion**



**Figure 26. Plot of ASTM Reproducibility vs. Mean Sulfur for D 2622 Data With NIST Calibration, and Categorized by Robust and Gravimetric Outlier Deletion**



**Figure 27. Plot of ASTM Reproducibility vs. Mean Sulfur for EDXRF Data With NIST Calibration, and Categorized by Robust and Gravimetric Outlier Deletion**



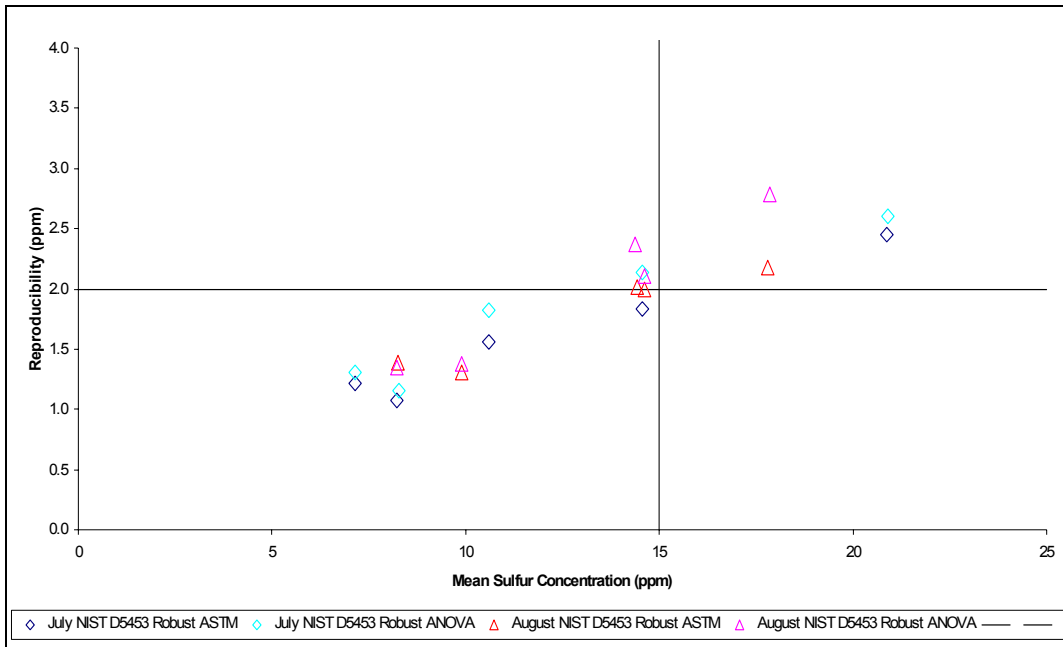
**Figure 28. Plot of ASTM Reproducibility vs. Mean Sulfur for Composite Data With NIST Calibration, and Categorized by Robust and Gravimetric Outlier Deletion**

For both D 5453 and D 7039, when using the NIST calibration, the R-values for gravimetric outlier deletion are smaller than those for robust outlier deletion. The R-values for D 2622 and EDXRF have more scatter and no clear trends.

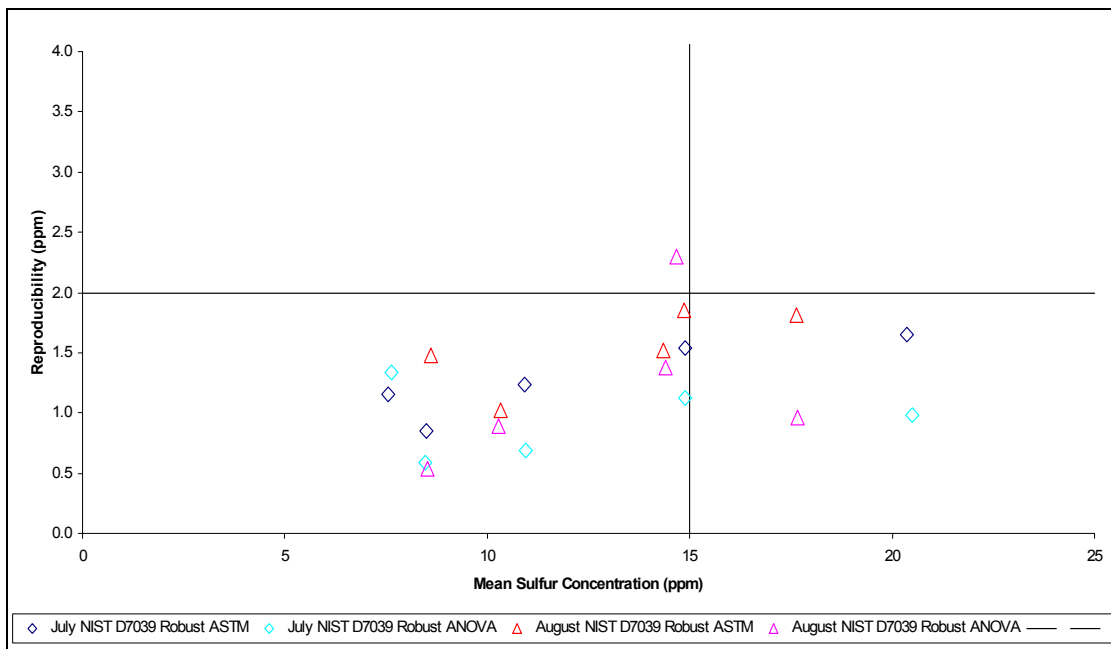
### 5.6.2 ASTM vs. ANOVA Using NIST Calibration

Figures 29-33 contain plots of overall reproducibility values versus the mean sulfur for all ten fuels, with the NIST calibration and robust outlier deletion, and categorized by the ASTM and ANOVA methods. The figures are listed in order by test method: D 5453, D 7039, D 2622, EDXRF and Composite.

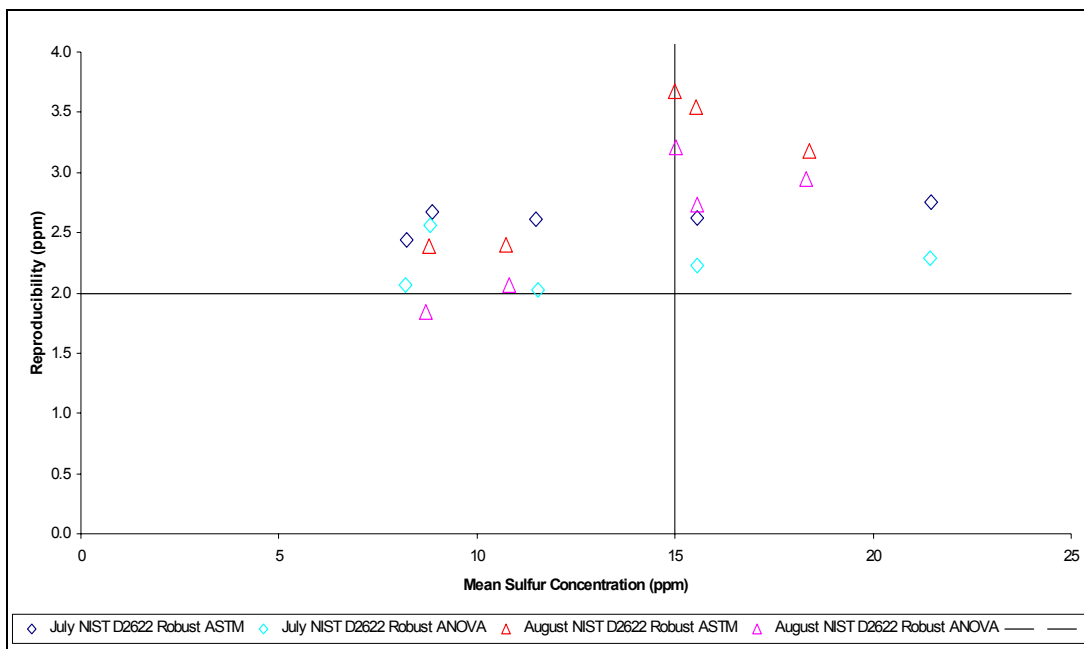




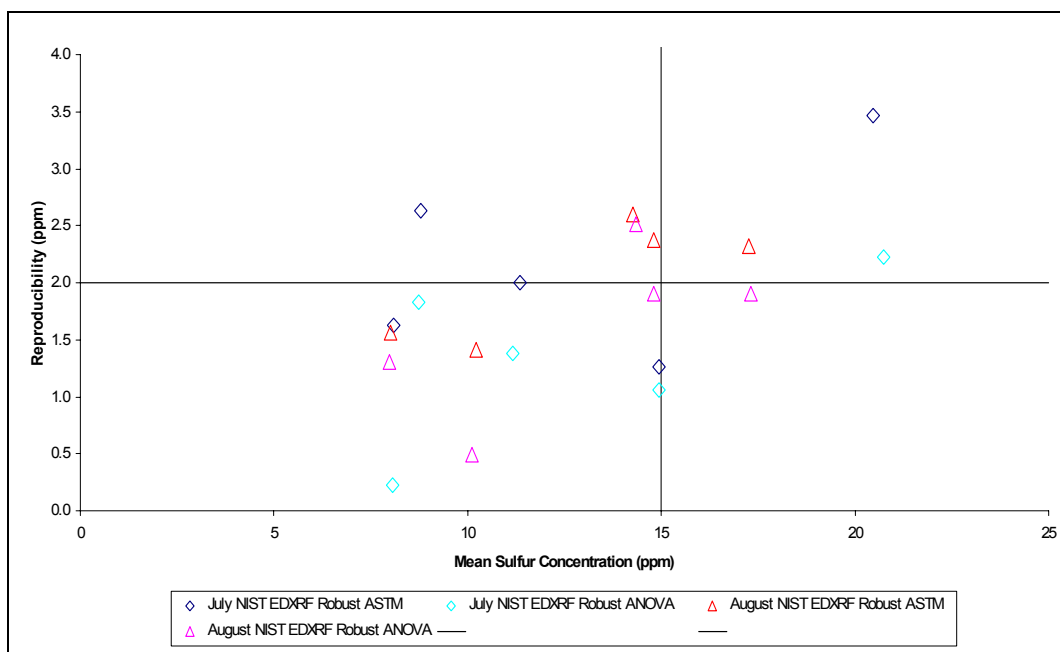
**Figure 29. Plot of Reproducibility vs. Mean Sulfur for D 5453 Data With NIST Calibration and Robust Outlier Deletion, and Categorized by ASTM and ANOVA Analysis Methods**



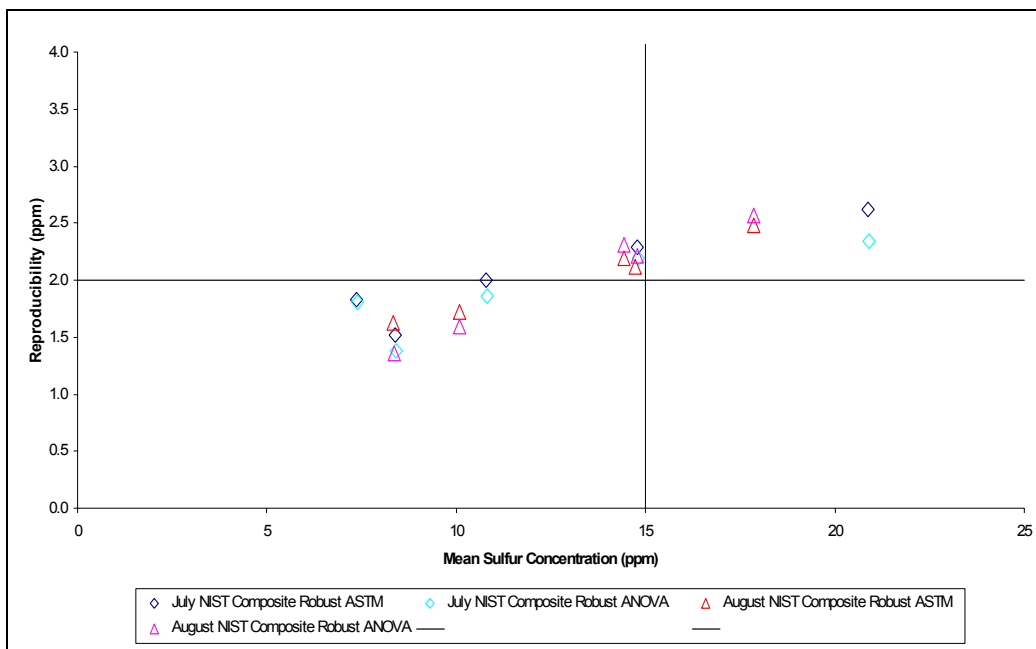
**Figure 30. Plot of Reproducibility vs. Mean Sulfur for D 7039 Data With NIST Calibration and Robust Outlier Deletion, and Categorized by ASTM and ANOVA Analysis Methods**



**Figure 31. Plot of Reproducibility vs. Mean Sulfur for D 2622 Data With NIST Calibration and Robust Outlier Deletion, and Categorized by ASTM and ANOVA Analysis Methods**



**Figure 32. Plot of Reproducibility vs. Mean Sulfur for EDXRF Data With NIST Calibration and Robust Outlier Deletion, and Categorized by ASTM and ANOVA Analysis Methods**

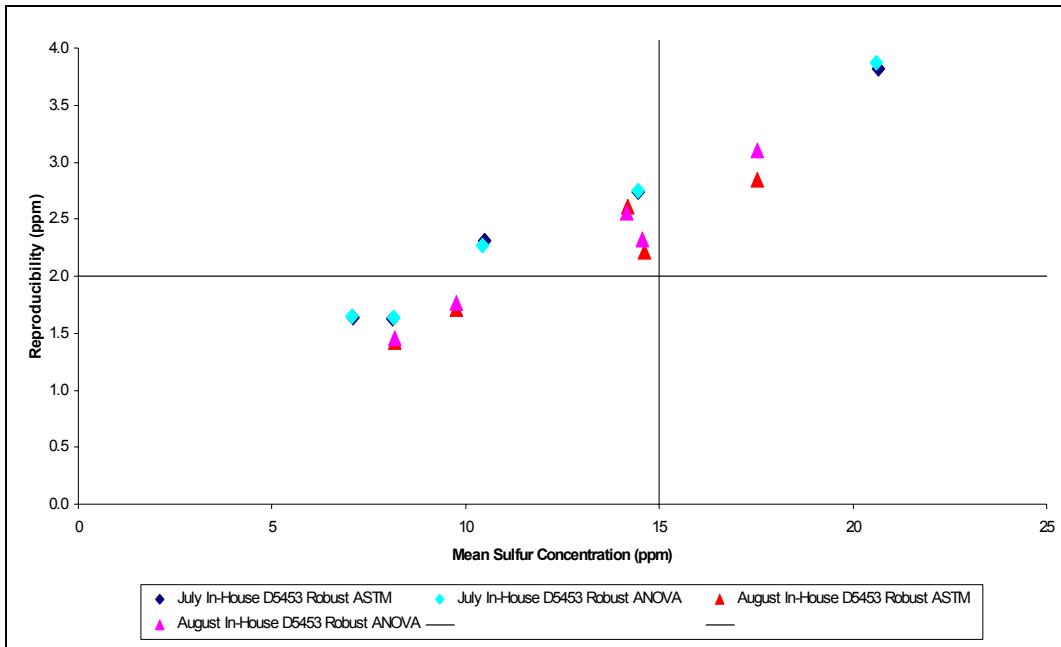


**Figure 33. Plot of Reproducibility vs. Mean Sulfur for Composite Data With NIST Calibration and Robust Outlier Deletion, and Categorized by ASTM and ANOVA Analysis Methods**

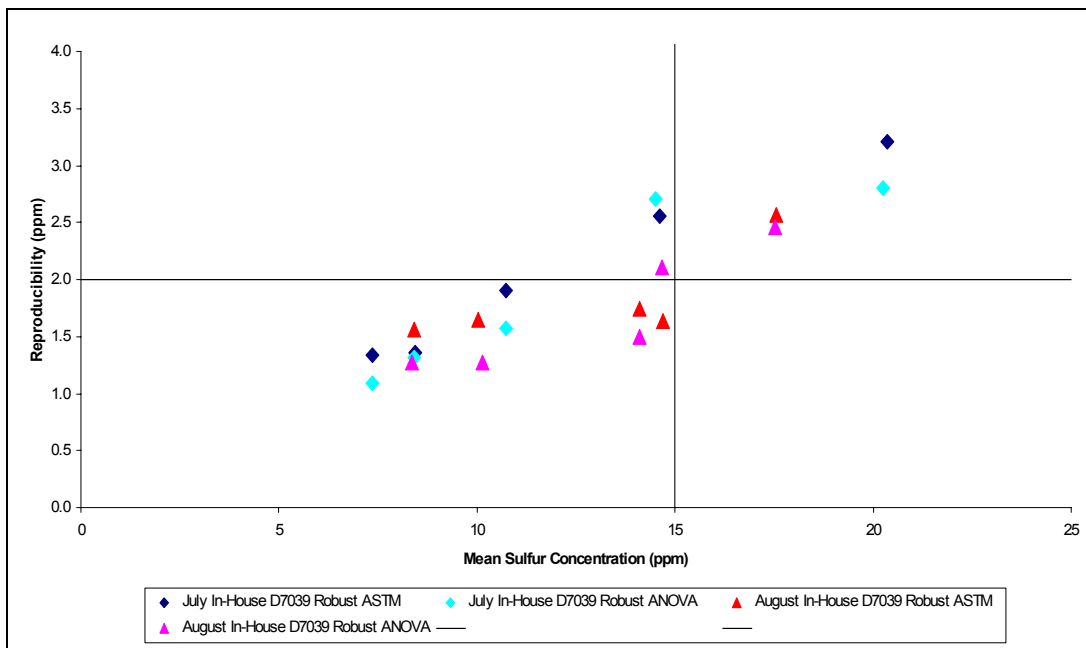
For D 5453 in Figure 29, the R-values for the ASTM method are equal to or smaller than the R-values for the ANOVA method with the NIST calibration. In contrast, for D 7039, D 2622, and EDXRF in Figures 30-32 the R-values for the ANOVA method are generally smaller than the R-values for the ASTM method when using the NIST calibration.

### 5.6.3 ASTM vs. ANOVA Using In-House Calibration

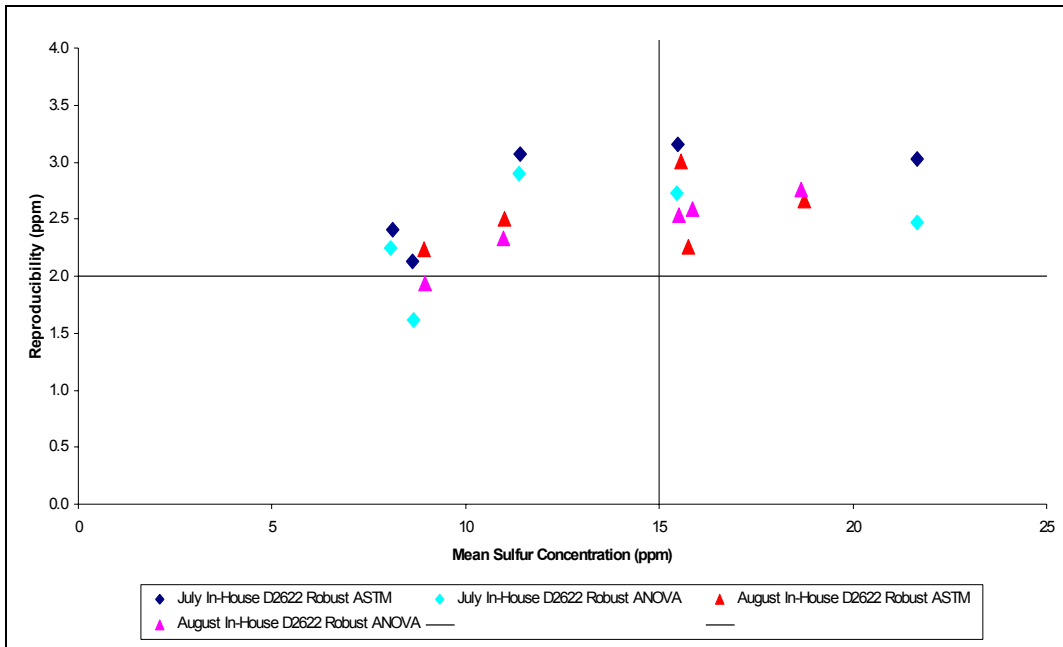
Figures 34-38 contain plots of overall reproducibility values versus the mean sulfur for all ten fuels, with the In-House calibration and robust outlier deletion, and categorized by the ASTM and ANOVA methods. The figures are listed in order by test method: D 5453, D 7039, D 2622, EDXRF and Composite.



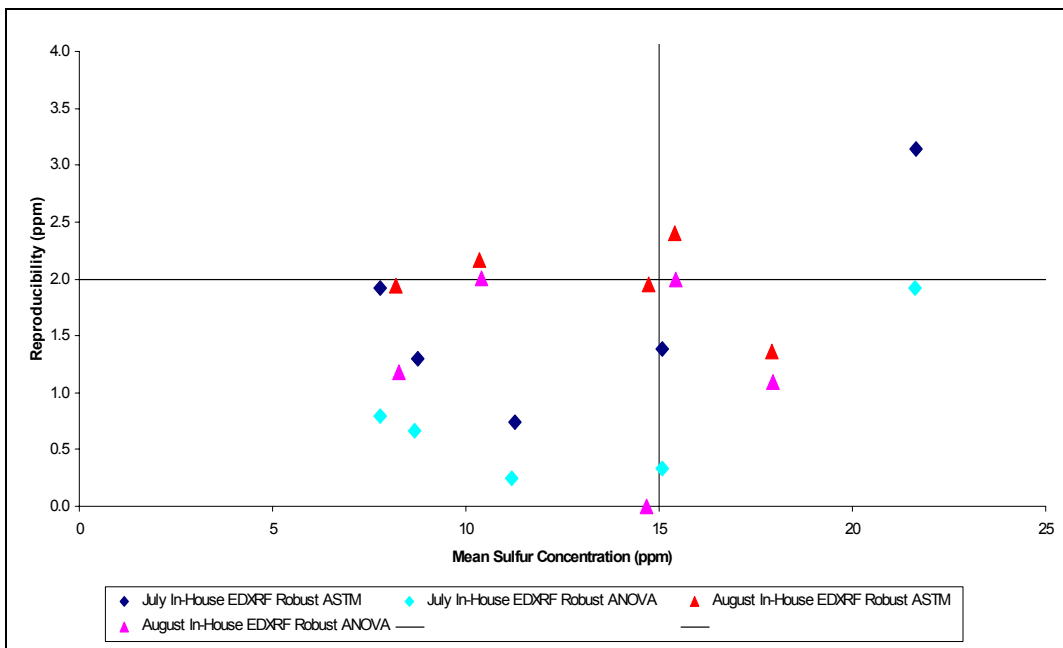
**Figure 34. Plot of Reproducibility vs. Mean Sulfur for D 5453 Data With In-House Calibration and Robust Outlier Deletion, and Categorized by ASTM and ANOVA Analysis Methods**



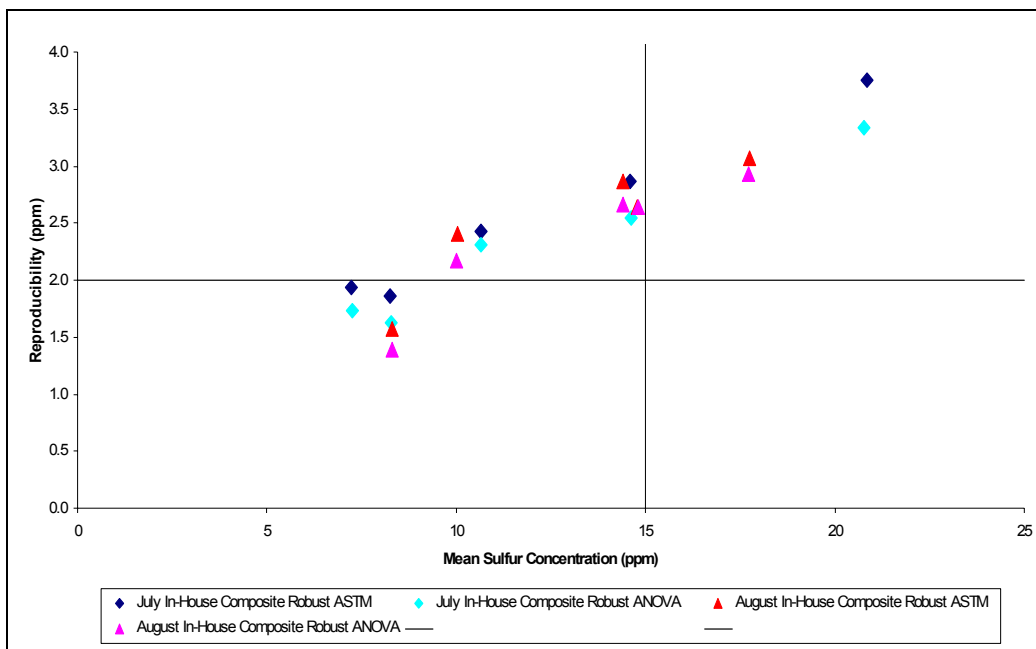
**Figure 35. Plot of Reproducibility vs. Mean Sulfur for D 7039 Data With In-House Calibration and Robust Outlier Deletion, and Categorized by ASTM and ANOVA Analysis Methods**



**Figure 36. Plot of Reproducibility vs. Mean Sulfur for D 2622 Data With In-House Calibration and Robust Outlier Deletion, and Categorized by ASTM and ANOVA Analysis Methods**



**Figure 37. Plot of Reproducibility vs. Mean Sulfur for EDXRF Data With In-House Calibration and Robust Outlier Deletion, and Categorized by ASTM and ANOVA Analysis Methods**

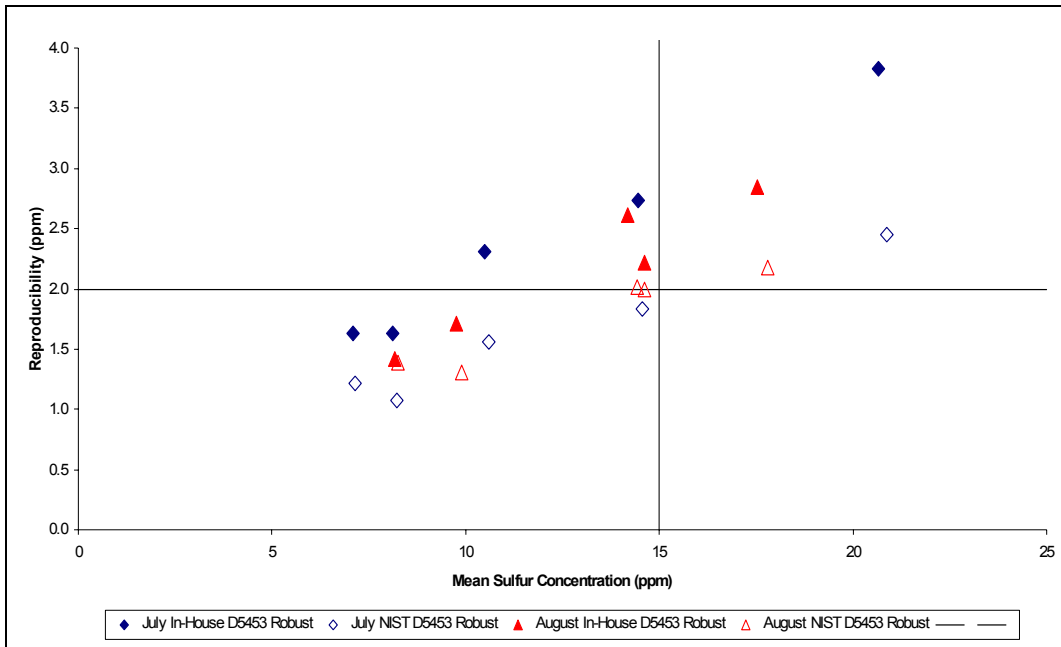


**Figure 38. Plot of Reproducibility vs. Mean Sulfur for Composite Data With In-House Calibration and Robust Outlier Deletion, and Categorized by ASTM and ANOVA Analysis Methods**

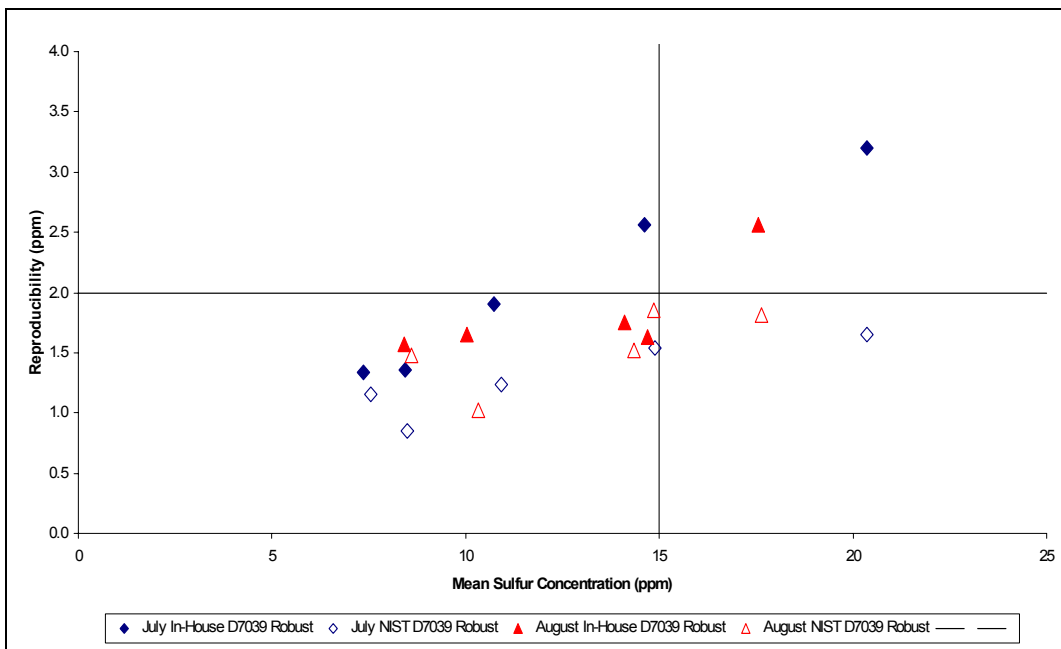
For D 5453 in Figure 34, there is no clear advantage between the R-values for the ASTM and ANOVA methods with the In-House calibration. In contrast, for D 7039, D 2622, and EDXRF in Figures 35-37 the R-values for the ANOVA method are generally smaller than the R-values for the ASTM method with the In-House calibration.

#### 5.6.4 In-House vs. NIST Calibration

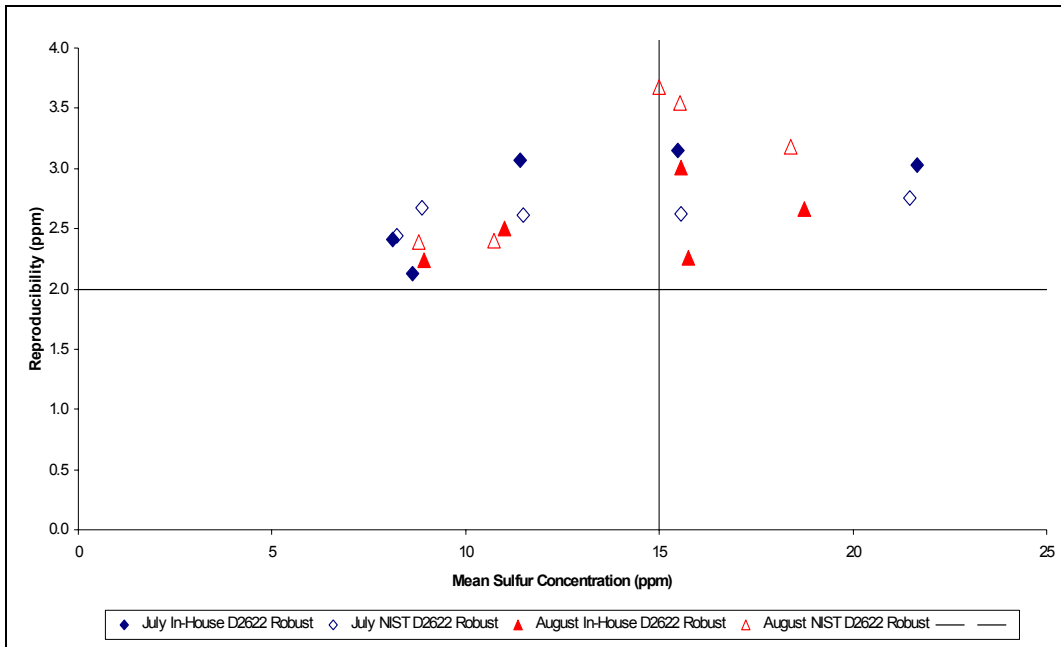
Figures 39-43 contain plots of the ASTM reproducibility values against the mean sulfur data for all ten fuels, with the robust outlier deletion method and categorized by the In-House and NIST calibration methods. The figures are listed in order by test method: D 5453, D 7039, D 2622, EDXRF and Composite. Figures 44-46 contain similar plots of the reproducibility values for D 5453, D 2622 and D 7039, but include for comparison the 2004-05 ASTM CC reproducibility values.



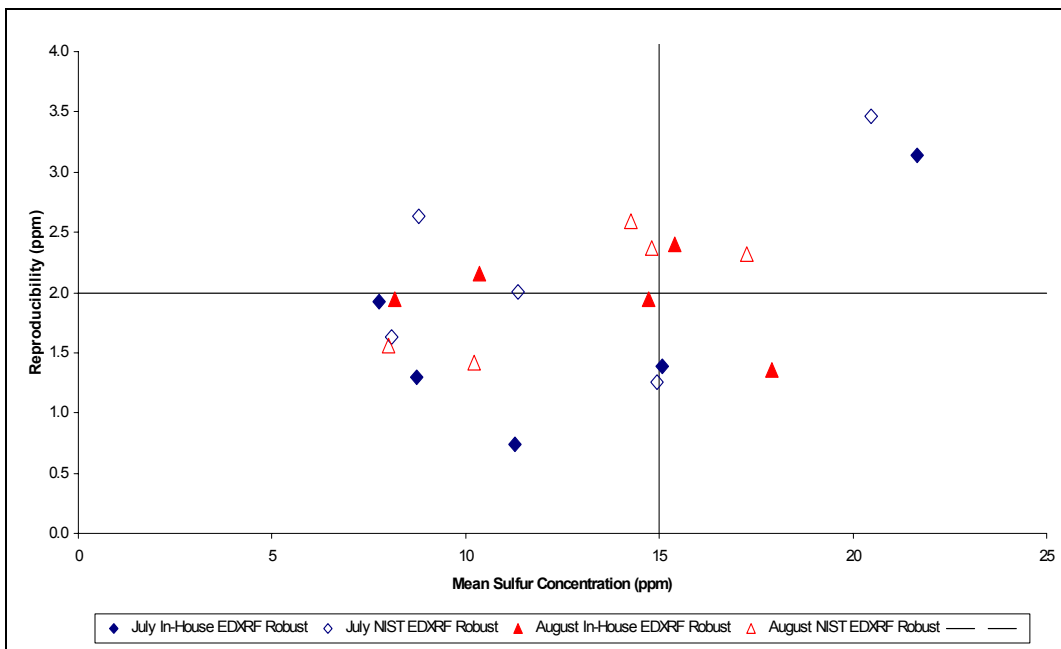
**Figure 39. Plot of ASTM Reproducibility vs. Mean Sulfur for D 5453 Data With Robust Outlier Deletion, and Categorized by In-House and NIST Calibration**



**Figure 40. Plot of ASTM Reproducibility vs. Mean Sulfur for D 7039 With Robust Outlier Deletion, and Categorized by In-House and NIST Calibration**

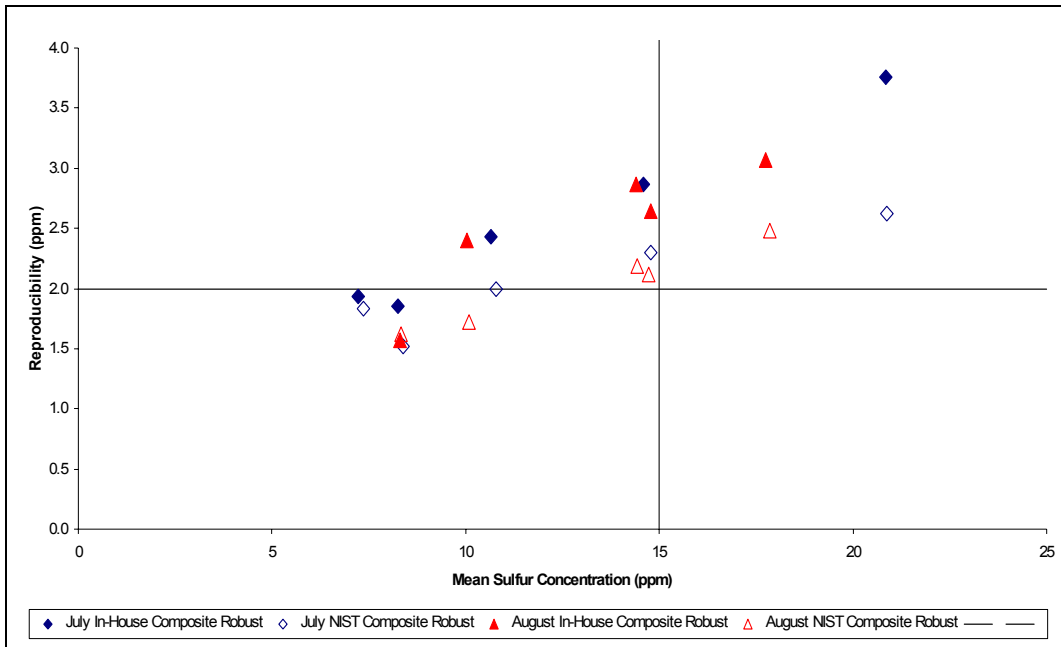


**Figure 41. Plot of ASTM Reproducibility vs. Mean Sulfur for D 2622 With Robust Outlier Deletion, and Categorized by In-House and NIST Calibration**

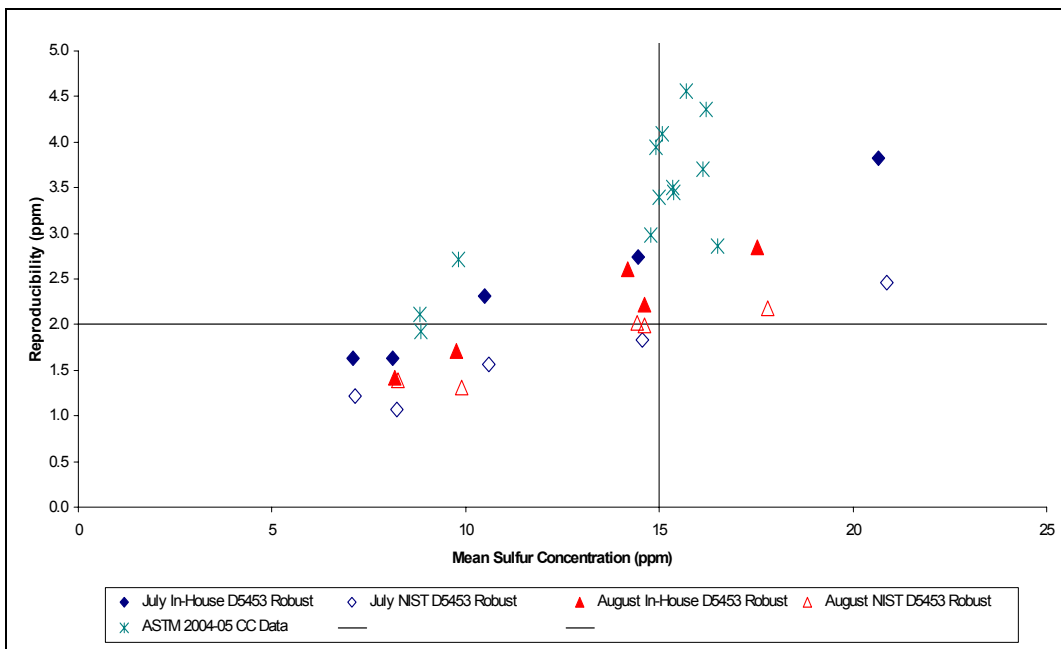


**Figure 42. Plot of ASTM Reproducibility vs. Mean Sulfur for EDXRF Data With Robust Outlier Deletion, and Categorized by In-House and NIST Calibration**

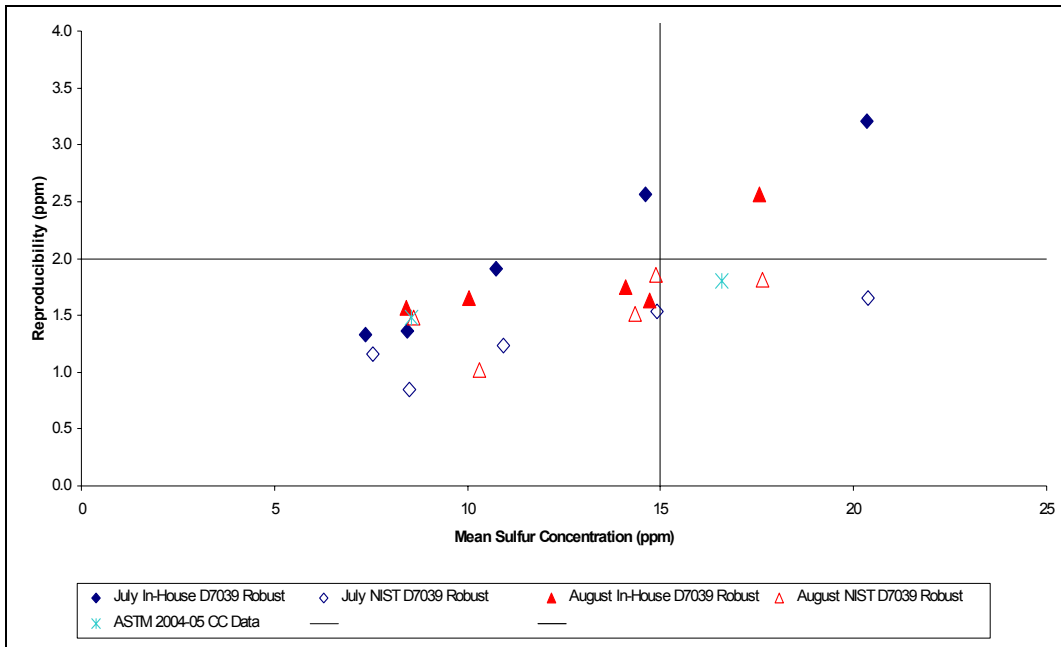




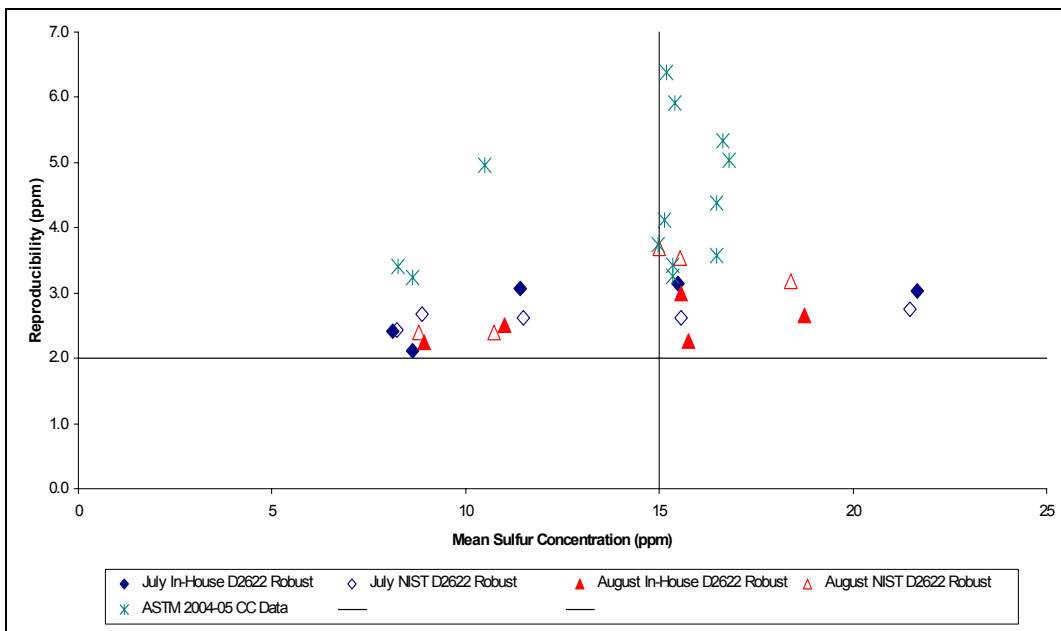
**Figure 43. Plot of ASTM Reproducibility vs. Mean Sulfur for Composite Data With Robust Outlier Deletion, and Categorized by In-House and NIST Calibration**



**Figure 44. Plot of ASTM Reproducibility vs. Mean Sulfur for D 5453 Data With Robust Outlier Deletion, and Categorized by In-House and NIST Calibration - Added ASTM 2004-05 Crosscheck Data**



**Figure 45. Plot of ASTM Reproducibility vs. Mean Sulfur for D 7039 Data With Robust Outlier Deletion, and Categorized by In-House and NIST Calibration - Added ASTM 2004-05 Crosscheck Data**



**Figure 46. Plot of ASTM Reproducibility vs. Mean Sulfur for D 2622 Data With Robust Outlier Deletion, and Categorized by In-House and NIST Calibration - Added ASTM 2004-05 Crosscheck Data**

Test method D 7039 has the lowest R-values followed closely by D 5453. Both have lower R-values with the NIST calibrations than with the In-House calibrations. The R-values for D 2622 are the largest and have much scatter with neither calibration method being better. The R-values for EDXRF have the largest scatter and demonstrate no clear preferences for a calibration method. The R-values are smaller relative to the 2004-05 ASTM CC data for D 5453 and D 2622 data, but similar for D 7039 data. This holds true for both calibration methods.

#### 5.6.5 Overall Reproducibility

Some overall trends in reproducibility noted from examining Figures 24-46 are given below.

- The gravimetric deletion method produces lower R-values than the ASTM robust deletion method.
- The R-values obtained using NIST calibrations are lower than the R-values obtained using In-House calibrations.
- The R-values for D 5453 and D 7039 are superior to those for D 2622 and EDXRF, though the EDXRF values may be affected by the small sample size.
- The ANOVA method more often produces similar or slightly lower R-values than the ASTM method for D 7039, D 2622, and EDXRF, regardless of the calibration, but the results are mixed for D 5453 with the ASTM method having lower R-values when combined with the NIST calibration.

A more extensive list of plots of overall reproducibility is contained in Appendix E. Included are plots for each test method, calibration method, deletion method, and analysis method.

Appendix G contains a summary of the reproducibility and repeatability values by test method, calibration type, outlier deletion method, and analysis method for each of the ten test fuels. Included in the tables are the number of valid results, robust mean, robust standard deviation, reproducibility and repeatability.

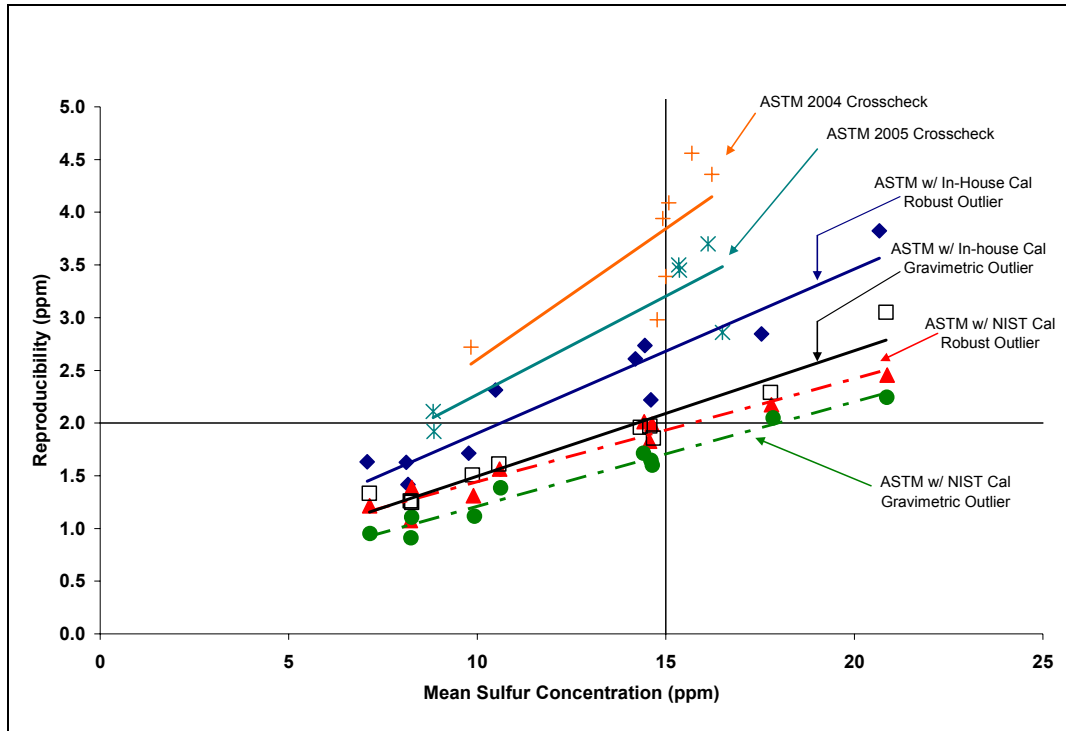
### 5.7 Regression Fits to Reproducibility

The ASTM CC R-values for 2004 and 2005 were compared to the ASTM and ANOVA R-values with both calibration types and outlier deletion methods obtained in this EPA Round-Robin (RR) program. The ASTM CC data are valid for sulfur concentrations greater than 8 ppm, so the lower range on the sulfur concentration is comparable to the fuel range of the EPA RR study. Also, the ASTM CC R-values were computed using the ASTM method.

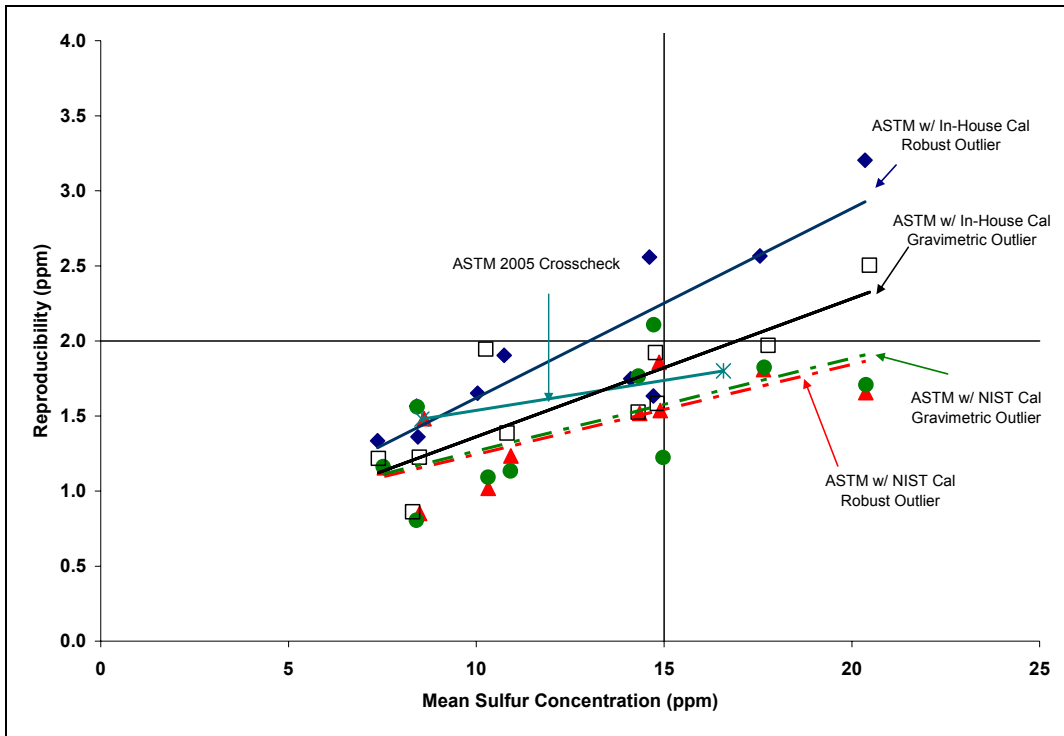
The comparison was achieved by fitting straight-line regression models having the following form:

$$\text{Reproducibility} = \text{Intercept} + (\text{Coefficient}) * (\text{Mean Sulfur}).$$

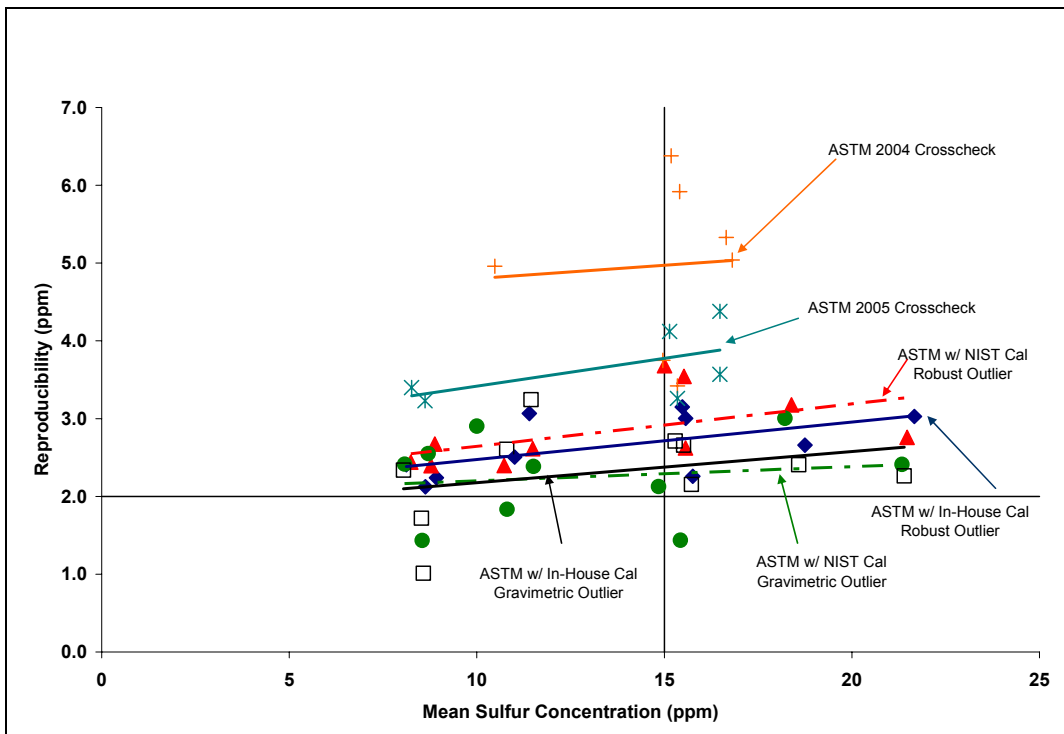
The resulting regression models were then used to predict and compare the R-values when the mean sulfur was set at 15 ppm. The data and fitted regression models are illustrated in the plots in Figures 47-52. Table 9 contains a list of the predicted R-values at a mean sulfur of 15 ppm for both the ASTM CC and the EPA RR categories used in the regression fits.



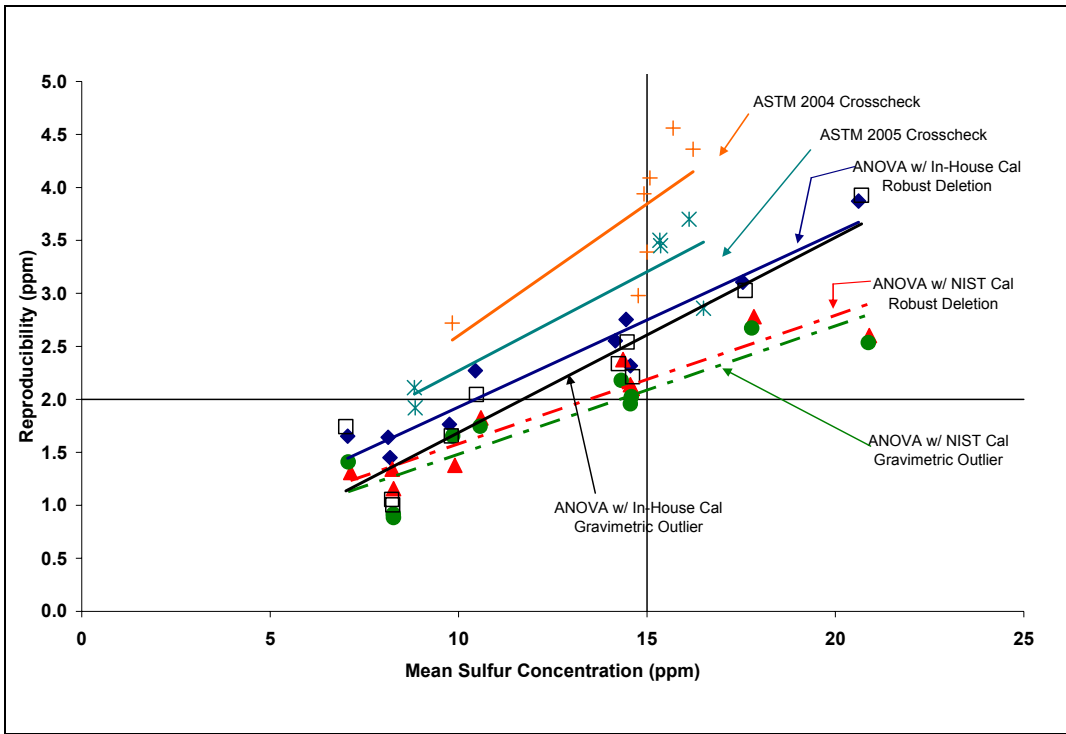
**Figure 47. Plot and Regressions of ASTM Reproducibility vs. Mean Sulfur for D 5453 Data Categorized by ASTM Crosscheck and ASTM EPA Round-Robin Results**



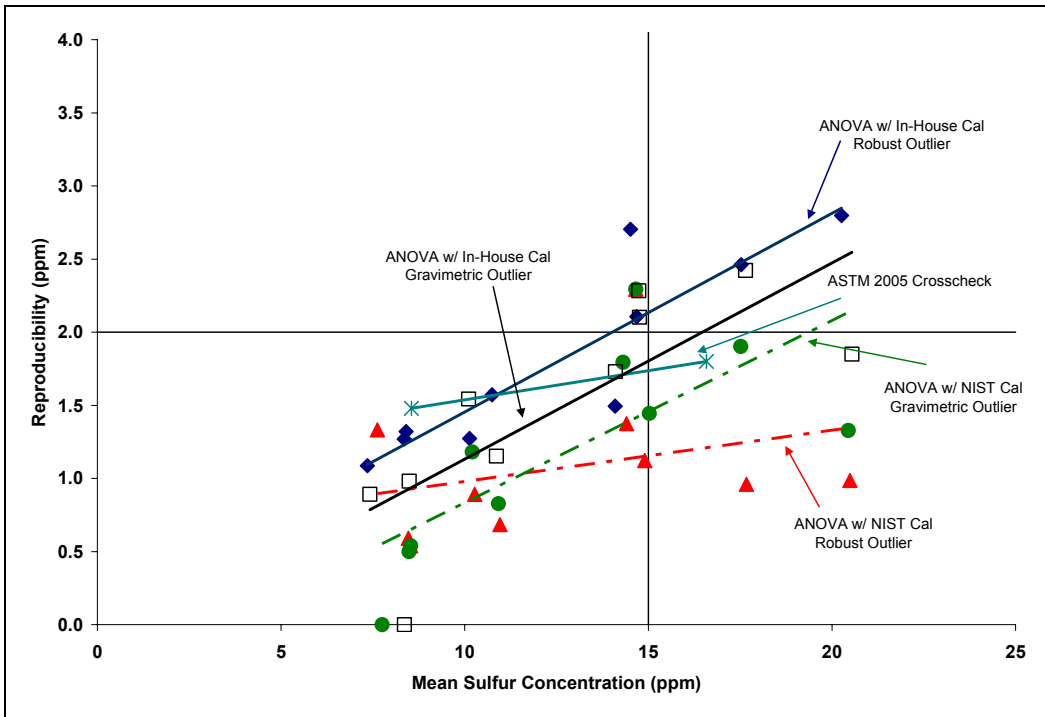
**Figure 48. Plot and Regressions of ASTM Reproducibility vs. Mean Sulfur for D 7039 Data Categorized by ASTM Crosscheck and ASTM EPA Round-Robin Results**



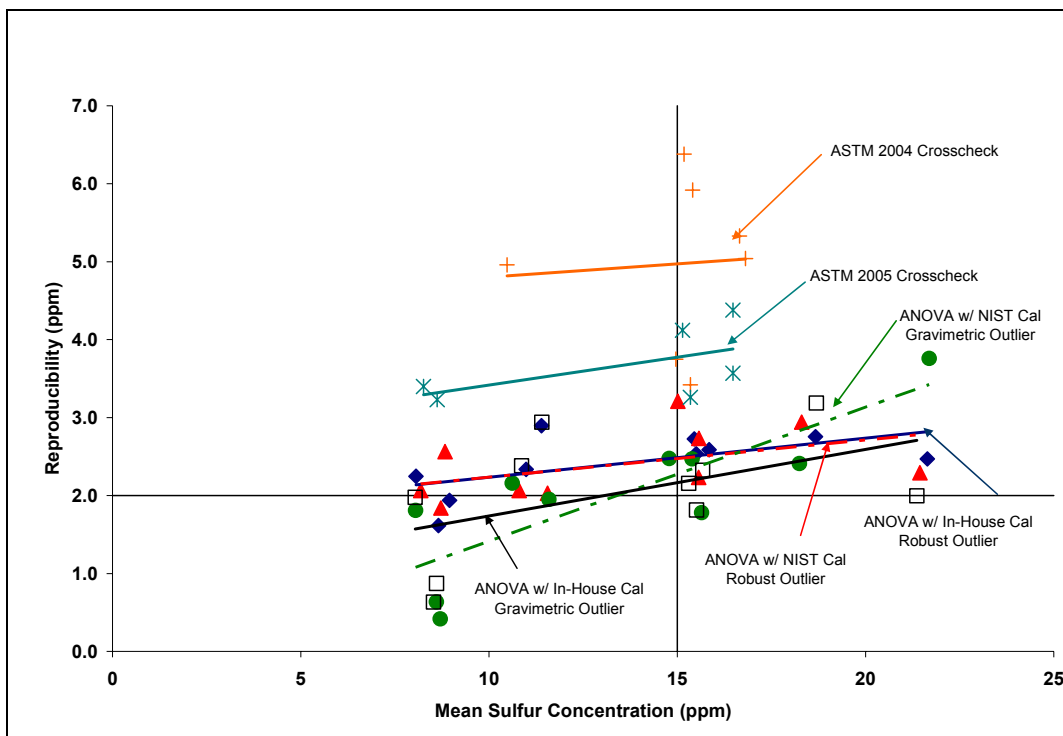
**Figure 49. Plot and Regressions of ASTM Reproducibility vs. Mean Sulfur for D 2622 Data Categorized by ASTM Crosscheck and ASTM EPA Round-Robin Results**



**Figure 50. Plot and Regressions of ASTM Reproducibility vs. Mean Sulfur for D 5453 Data Categorized by ASTM Crosscheck and ANOVA EPA Round-Robin Results**



**Figure 51. Plot and Regressions of ASTM Reproducibility vs. Mean Sulfur for D 7039 Data Categorized by ASTM Crosscheck and ANOVA EPA Round-Robin Results**



**Figure 52. Plot and Regressions of ASTM Reproducibility vs. Mean Sulfur for D 2622 Data Categorized by ASTM Crosscheck and ANOVA EPA Round-Robin Results**

**Table 9. Predicted R-Values at 15 ppm Sulfur for the ASTM CC and EPA RR Data**

Approach	Test Method	ASTM Reproducibility	ANOVA Reproducibility
ASTM 2004 CC	D 2622	4.97	
	D 5453	3.84	
ASTM 2005 CC	D 2622	3.78	
	D 5453	3.20	
	D 7039	1.74	
NIST Calibration Gravimetric Deletion	Composite	1.87	1.96
	D 2622	2.29	2.27
	D 5453	1.71	2.09
	D 7039	1.58	1.46
NIST Calibration Robust Deletion	Composite	2.21	2.15
	D 2622	2.91	2.47
	D 5453	1.93	2.19
	D 7039	1.54	1.15
In-House Calibration Gravimetric Deletion	Composite	2.22	2.23
	D 2622	2.38	2.16
	D 5453	2.09	2.61
	D 7039	1.82	1.80
In-House Calibration Robust Deletion	Composite	2.86	2.64
	D 2622	2.71	2.49
	D 5453	2.68	2.75
	D 7039	2.25	2.13

Based on the results listed in Table 9, the regression equations produced lower predicted R-values (at 15 ppm sulfur) for the EPA RR results relative to the 2004 and 2005 ASTM CC results. The EPA RR predicted values are lower for D 5453 and D 2622, and the predicted values are comparable for D 7039.

The reproducibility data in the table and the previous graphs support several conclusions:

- Limiting the RR participation to labs that have qualified their methods under 40 CFR 80.584 had a favorable impact on lowering reproducibility.
- Using the identical NIST calibration curves across the participating labs reduced curve bias contributions to reproducibility.
- A reduction in predicted R (at 15 ppm sulfur) for the EPA RR data over the predicted R-values obtained using the 2004 and 2005 CC data was apparent in all cases when using the NIST calibration curves. The magnitude of the reduction in predicted R (ASTM R, at 15 ppm) from In-House to NIST under robust deletion was 0.73 ppm on average for D 5453 and D 7039 (excluding D 2622).
- Using gravimetric outlier deletion further improved reproducibility. Use of this method can be analogous to a calibration check standard.
- The newer test methods produced results with lower R (D 5453 and especially D 7039).



- Results show that there is still opportunity for further improvement with respect to reduction in lab-to-lab variability. This is evidenced by
  - the difficulty some labs had in accurately measuring the blind gravimetric calibration check standard.
  - the inability of some labs to qualify their instruments and the wide range in results for those that did qualify.
  - the difficulty some labs had in re-calibrating their instrument using the NIST SRMs.

## REFERENCES

1. Code of Federal Regulations; Title 40; Part 80; U.S. Environmental Protection Agency, U.S. Government Printing Office: Washington, DC, July 1, 2005.
2. Nadkarni, K. “ASTM D02 Interlaboratory Cross-Check Program Aids-To-The Analyst”. Handout at the ASTM D02 Conference, Tampa, FL, 2004.
3. ASTM. “Ultra-Low Sulfur Diesel Interlaboratory Crosscheck Program”. April 2004.
4. Schaefer, R. “Insights Obtained from ASTM ULSD Inter-Lab Crosscheck Program”. Presented at the API ULSD Implementation Workshop, Phoenix, AZ, November 2005.
5. Kelly, R. W.; Paulsen, P. J.; Murphy, K. E.; Vocke, R. D.; Chen, L. “Determination of Sulfur in Fossil Fuels by Isotope Dilution Thermal Ionization Mass Spectrometry”. *Anal. Chem.* **1994**, *66*, 2505.
6. ASTM D 6299. *Annu. Book ASTM Stand.* **2002**, Section 5, Part 3.

## **APPENDIX A**

- A1 ORIGINAL WORK ASSIGNMENT**
- A2 AMENDMENTS NO. 1 AND NO. 2 TO WORK  
ASSIGNMENT**
- A3 LIST OF PARTICIPATING LABS FOR ROUND  
ROBIN STUDY**

# **APPENDIX A1**

## **ORIGINAL WORK ASSIGNMENT**

## STATEMENT OF WORK

### WORK ASSIGNMENT 0-2

EPA Contract EP-C-05-018

#### A. Issuing Office:

Environmental Protection Agency  
2000 Traverwood Dr.  
Ann Arbor, Michigan 48105

#### B. Contractor:

Southwest Research Institute  
6220 Culebra Rd.  
PO Box 28510  
San Antonio, TX 78228-0510

#### C. Statement of Work:

EPA 2006 Sulfur in Diesel Fuel Round Robin Test Plan  
and Data Analysis

### C. Statement of Work:

### BACKGROUND

The Environmental Protection Agency's (EPA) 2007 Highway Heavy-Duty Diesel Rule requires 80% of the highway diesel fuel sold after June 1, 2006 to contain 15 ppm sulfur or less. This regulation allows for a 2 ppm downstream test tolerance at the point of sale, thus affording a maximum measured sulfur level of 17 ppm. Recent evaluations of the reproducibility of sulfur measurement test methods on a lab-to-lab basis has called the 2 ppm downstream test tolerance in to question.

Results of the ASTM 2002 ULSD Round Robin and 2004 ULSD Interlaboratory Cross Check Program (ILCP) have revealed that the lab-to-lab reproducibility of current sulfur test methods is greater than 2 ppm. EPA is concerned that the reproducibility has been biased high in these programs due to a number of factors not limited to the following:

1. Insufficient/inappropriate instrument calibration at low sulfur concentrations.
2. Inaccurate calibration standards.
3. Insufficient quality assurance when testing at low sulfur levels.
4. Lax statistical processing for the elimination of outliers from the reproducibility calculation.

This concern has driven EPA to construct a Round Robin program of its own to make a determination of reproducibility.

### NATURE OF THE WORK ASSIGNMENT

This work assignment focuses on reviewing EPA's test plan and data processing plan for its 2005 ULSD Round Robin test program. Based on this investigation, a recommendation will be requested

for the statistical determination and treatment of outliers in EPA's 2005 ULSD Round Robin Program taking into consideration the criteria for laboratories to qualify their sulfur test methods via the Performance Based Measurement System (PBMS) as described in 40 CFR 80.580 - 80.585. EPA will also ask that the contractor process the data from the EPA Round Robin program using the method recommended.

### STATEMENT OF WORK

The contractor shall submit a detailed work plan to EPA for approval. The work plan shall include a detailed description of how the tasks described below are to be performed. The work plan shall include suggested alternates for any of the required tasks if they are thought necessary together with justifications for these recommendations. The costs for the work plan shall be broken down by task.

#### Materials

The contractor shall use data provided via laboratories participating in the 2005 US EPA ULSD Round Robin. All materials purchased using government funds shall be considered the property of the U.S. Government and shall be returned to EPA after completion of the Work Assignment.

#### Task 1

##### **Objective:**

Review EPA's test plan and proposed methods for calculation of reproducibility in it's 2005 ULSD Round Robin test program. Make a determination on which method is better for statistical handling of outliers and comment on the test plan. The goal of the test plan is to provide a procedure to determine a realistic reproducibility value among labs with respect to their ability to measure sulfur in ULSD fuel. The results would be a prediction of what reproducibility can be achieved in the future after all labs are testing ULSD fuel samples on a routine basis pursuant to the provisions in the regulations.

##### **Task Description:**

The EPA 2005 ULSD Round Robin test plan shall be reviewed in its entirety. EPA would like to use the results of this data to determine whether or not its 2 ppm downstream test tolerance for ULSD fuel is adequate for measurement of ULSD fuel or if the test tolerance needs to be adjusted. The goal of the test plan is to determine the lab-to-lab reproducibility of labs that have qualified their sulfur measurement method with EPA as stated in 40 CFR 80.580. The test plan has been designed to minimize variability. Two options for the elimination of outliers is proposed. The first method is identical to the method that ASTM uses to determine reproducibility in its Round Robin and ILCP. This method will used to calculate reproducibility to act as a direct comparison to the ASTM programs. The second method compares the standard deviation of three repeat measurements of a blind SRM with an accuracy requirement of a maximum standard deviation of 0.90 ppm. This is based on a variation of the test method qualification under 40 CFR 80.584. This variation takes into account the lower number of repeat measurements then is required in 40 CFR 80.584, as well as the

gravimetric standard uncertainty. There is concern that the ASTM method does not do an adequate job of excluding outliers whose values significantly vary from the average. EPA requests that the contractor investigate this and report back to EPA on the merits of each method and its recommendation for which method (s) to utilize. The contractor may also recommend alternate techniques for excluding outlier data and should include a detailed summary on the merits of these techniques.

## Task 2

### **Objective:**

Perform statistical analysis of the data submitted by the labs, as stated in the 2005 ULSD Round Robin test plan, using the procedure(s) agreed upon in Task 1. This analysis will include analysis of the data using the ASTM procedure and any others as recommended as an outcome of the Task 1 evaluation.

### **Task Description:**

The contractor shall calculate the mean, standard deviation, repeatability, and reproducibility for each of the five monthly samples using the calculations as stated in the test plan and determined in Task 1. EPA anticipates a minimum of 20 and a maximum of 80 labs participating in this test program. Five samples will be sent out each month and run in triplicate. The attached test plan should be used as guidance for the overall scope of the program. Examples of the ASTM calculations are available in excel format and will be provided by EPA (see attached files: ULSD Computations.xls and ULSD Draft Data Table.xls). The data shall be graphed and organized in a manner that allows ease of interpretation. All equations used in the calculations shall be made known and their variables explained.

### **D. Deliverables:**

The contractor shall provide 3 copies of all reports to EPA (excluding weekly reports).

#### 1. Work Plan *and Quality Assurance Project Plan*

The contractor shall submit a detailed work plan to EPA for approval as described above. The work plan shall include a cost estimate for each task described in the statement of work.

#### 2. Weekly Reports

The contractor shall provide 30-60 minute phone conference reports every week that summarize progress to date.

#### 3. Draft Final Report

The contractor shall provide a draft report summarizing the results of the work assignment as described in Tasks 1 and 2 above.

#### 4. Final Report

The contractor shall provide a final, citable report for use by EPA. The final report shall incorporate comments from the work assignment regarding the draft final report. The final report shall include all the data submitted from the test labs and data analysis techniques. The material must be in hardcopy form as well as in an electronic format agreed upon in advance. Microsoft Excel, Word, or Adobe portable document files (\*.pdf) are acceptable.

#### 5. Test Data

All test data collected while performing the work detailed in this Statement of Work shall become the property of the EPA. Data shall be submitted electronically in ASCII format or other agreed upon electronic file such as Microsoft Excel.

Deliverables shall be submitted as follows:

Deliverable:	Proposed Completion Date
Task 1:	April 15, 2005
Complete Task 2 Data Analysis:	August 15, 2005
Complete draft report:	August 31, 2005
Complete final report:	15 days after receiving comments from EPA

#### E. Task Completion

The contractor shall provide an opportunity for EPA to receive a short weekly status report via phone conference during the Work Assignment period. The oral report shall indicate the progress achieved in the concluded weeks, technical problems encountered, solutions to those problems (proposed and attempted), and projected activity for the upcoming weeks. This report shall include an estimate of the percentage of the level of effort expended and a percent of task completed to date. The Work Assignment Manager or his/her designated alternate shall participate in these phone conferences.

#### F. Work Assignment Manager

Chris Laroo  
Phone: (734) 214-4937  
Fax: (734) 214-4050  
Email: laroo.chris@epa.gov  
US EPA  
Mail Code: ASD1  
2000 Traverwood Drive  
Ann Arbor, MI 48105

**DRAFT – Do Not Circulate****TEST PLAN****2005 US EPA ULSD Round Robin****INTRODUCTION**

The US EPA Office of Transportation and Air Quality will be organizing an Ultra Low Sulfur Diesel (ULSD) Round Robin (RR) in the months of June and July 2005. This document describes the requirements laboratories must meet to participate in the RR, as well as the overall test plan.

**REGISTRATION REQUIREMENTS**

Labs that wish to participate in the RR must register with EPA by May 20, 2005. To register, please send your companies name, contact, mailing address, contact phone number, and contact's e-mail address to the following:

Chris Laroo  
US EPA  
Office of Transportation and Air Quality  
Assessment and Standards Divisions  
2000 Traverwood Dr.  
Ann Arbor, MI 48105  
laroo.chris@epa.gov

All labs will be identified by name with their results thus results will not be held confidential. By registering for this program, you agree to these terms. Registration will be limited to 80 labs.

**LABORATORY REQUIREMENTS**

Only laboratories that have had their sulfur measurement methods qualified by EPA via the Performance based Measurement System (PBMS) as described under 40 CFR 80.580 - 80.585 will be allowed to participate in the RR. Thus this RR is open to all sulfur test methods as qualified under 40 CFR 80.584 and 80.585. While official approval by EPA is not required, the laboratory must have written documentation from EPA stating that the qualification data was acceptable as received. EPA will review each registered lab against its lab qualification database to insure conformity.

**TEST PLAN**

Samples will be sent out for analysis at the beginning June and July. A form will accompany each month's sample set describing how the samples shall be analyzed, results recorded, and where the results are to be sent. A submission deadline for the results will also be given.



**DRAFT - Do Not Circulate****Calibration Method**

Laboratories will be required to generate a four point calibration curve using calibration standards provided each month by EPA. These calibration standards will consist of National Institute of Standards and Technology (NIST) Standard Reference Materials (SRMs). The SRMs that will be used, with their concentration and uncertainty, are as follows:

SRM #	Certified Value	Uncertainty (ppm)
2771*	0.2	±0.2
1616b	8.41	±0.12
2723a	11	±1.1
2770	41.57	±0.39

Please note that at this time the certified value and uncertainty for SRM 2771 is preliminary and should be final by the time the RR begins. SRM 1616b is sulfur in kerosene and it is anticipated that matrix effects due to the difference in the hydrogen to carbon ratio should be minimal.

EPA will ask that each lab calibrate their instrument using these SRMs before beginning analysis of the fuel samples. Three 10 ml ampoules of each SRM will be provided each month.

**Test Materials**

A total of 10 fuel samples (80 ml each) will be sent out over the course of the two month program. Five samples will be sent out with a set of SRMs on the first of each month. All five of the samples sent out each month will be blind. Of the five samples, one may be a gravimetric standard. The target sample sulfur concentrations will be in the range of 4 to 20 ppm.

Laboratories will be asked to make three repeat measurements on each of the fuel samples. Sulfur values shall be reported out to the nearest tenth of a ppm.

**DATA ANALYSIS**

Data shall be submitted directly to Southwest Research Institute as they have been contracted to perform the data analysis. A data sheet will accompany the monthly samples with instructions on how to fill out the sheet as well as where to send it.

Results will be reported on both a composite (all data grouped together regardless of method) and method specific basis (where enough labs have run the specific method for statistical analysis). Data analysis will include calculation of mean, standard deviation, repeatability, and reproducibility.

Outliers will be determined using a two-stage robust procedure and is outlined in the next paragraph. EPA is also considering potential screening for outliers based on the

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measurement results of the blind gravimetric standard. For this determination, the arithmetic average of the three repeat tests performed on the blind gravimetric sample shall not differ from the accepted standard reference value of the standard by more than 0.90 ppm. The value takes into consideration the 95% two-sided confidence interval for three repeat measurements, as well as real bias and gravimetric standard uncertainty. This will, in effect, hold the laboratories measurement capability in line with that of the PBMS method qualification criteria for accuracy as stated in 40 CFR 80.584. EPA is also asking SwRI to offer suggestions on other means of data calculation and outlier determination.

The means and standard deviations will be computed using a two-stage robust procedure which is designed to limit the influence of unusually large or small results, while eliminating only the most egregious among them. Data will be subjected to the robust computations twice. After the first stage, results which differ from the (first stage) robust mean by more than three times the (first stage) robust standard deviation are noted as outliers and excluded from the second-round robust computation. The robust mean and standard deviation are then recalculated using the second-stage computation (there is no second stage exclusion in this calculation). As the second-stage robust standard deviation is generally smaller than that of the first stage, some non-excluded results may differ from the robust mean by more than three robust standard deviations.

A description of an iterative algorithm for computing robust means and standard deviations is provided in the next section. The process is tedious, but the estimates do have the following property which can easily be verified. If  $n$  results are included in the computation, and if all the results which differ from the robust mean by more than  $1.5\sqrt{(n-1)/n}$  times the robust standard deviation are replaced by the robust mean,  $\pm 1.5\sqrt{(n-1)/n}$  robust standard deviations, as appropriate. The mean of these "trimmed" results will equal the robust mean, and the standard deviation of the trimmed results will be .882 times the robust standard deviation.

**Calculation of Robust Mean and Robust Standard Deviation**

The Robust Mean and Robust Standard Deviation of a collection of  $n$  results are calculated by first finding the median of all test results and then finding each result's absolute deviation from this median. An initial standard deviation for the reported results is determined by dividing the median of the absolute deviations by 0.6745. This value is multiplied by a cutoff value ( $1.5\sqrt{(n-1)/n}$ ) and the result is added and subtracted from the median of the test results to arrive at initial upper and lower limits.

For calculation purposes, test results that fall within these limits are retained, and other results are adjusted to the nearest limit. A robust mean and robust standard deviation are calculated using this new set of values (Robust Mean = average of trimmed results; Robust Standard Deviation = standard deviation of results divided by 0.882). The robust standard deviation is compared to the initial standard deviation estimates determined above. If they are equal then record the values as the robust mean and robust standard

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deviation. If the standard deviations are not equal, then a loop process begins by utilizing the robust average and standard deviation to calculate a new set of upper and lower limits. This looping process continues until the robust standard deviation stabilizes from one iteration to the next. The resulting values are the Robust Mean and Robust Standard Deviation. The number of digits carried out in the loop process is one digit more than the reporting resolution of the test values.

**Calculating Repeatability (r) and Reproducibility (R)**

The results from all labs are entered into the robust routine. After the first pass, a number of outliers may be identified. Let  $N_R$  be the number of valid results,  $m_R$  is the robust mean,  $s_R$  is the robust standard deviation, and  $M_R$  is the number of labs for which both of the replicate measurements were valid.

For example, D 2622 data from the October, 2004 ULSD exchange, 50 labs contributed 2 numerical results each. Nine of these 100 results were flagged as outliers on the first pass of the robust routine, so  $N_R = 91$ ,  $m_R = 16.8088$  and  $s_R = 1.8090$ . Of the 50 contributing labs, 4 had both results flagged and one had one result flagged. Thus  $M_R = 50 - 4 - 1 = 45$ .

Next, calculate the difference between results for each lab that contributed valid results. For this calculation the second and third results from each sample will be used. Compute both the positive and negative difference for each lab. Dump these  $2M_R$  differences into the robust routine. The robust mean will be zero, and the number of outliers flagged on the first pass will always be even (if a result is flagged, then its negative will be, too). Let  $N_r$  be the number of differences remaining after outlier selection, and  $M_r = N_r / 2$  the number of labs contributing valid differences. Let  $s_r$  be the robust standard deviation. In our example, 45 pairs of differences, or 90 total, were taken to the robust routine. 6 differences (3 pairs) were flagged as outliers, so  $N_r = 90 - 6 = 84$  and  $M_r = 45 - 3 = 42$ .  $s_r = 0.69256$ .

Next, calculate the repeatability estimate:

$$r = 1.9600 \sqrt{\frac{2M_r - 1}{2M_r}} s_r$$

Then calculate the reproducibility estimate:

$$R = \sqrt{\frac{N_R(N_R - 1)(2.7718s_R)^2 - 2M_R r^2}{N_R(N_R - 1) - 2M_R}}$$

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**Reporting of Data**

Data reports may be sent to all of the participating test labs within 30 days of the conclusion of the test program. The reports will also be made available on-line.

## **APPENDIX A2**

**AMENDMENT NO. 1 TO WORK ASSIGNMENT**

**AMENDMENT NO. 2 TO WORK ASSIGNMENT**

## 2005 US EPA ULSD Round Robin Test Plan

### INTRODUCTION

The US EPA Office of Transportation and Air Quality will be organizing an Ultra Low Sulfur Diesel (ULSD) Round Robin (RR) in the months of July and August 2005. This document describes the requirements laboratories must meet to participate in the RR, as well as the overall test plan.

### REGISTRATION REQUIREMENTS

Labs that wish to participate in the RR must have register with EPA by May 27, 2005. Registration is now closed. Laboratories do not have to have their qualification data submitted to register for the program. However, we ask that all registered participants submit their qualification data no later than June 27, 2005. EPA will allow an extension of this date on a case-by-case basis and will make every attempt to insure that each registered lab is able to participate. Please contact Chris Laroo if you have any concerns regarding qualification. His contact information is as follows:

Chris Laroo  
US EPA  
Office of Transportation and Air Quality  
Assessment and Standards Divisions  
2000 Traverwood Dr.  
Ann Arbor, MI 48105  
(734) 214-4937  
laroo.chris@epa.gov

A list of all participating labs will be published in the final report. All data will be coded and the laboratories identification will be known only to EPA. Therefore, the labs will not be directly linked to their results. Laboratories will be given a numerical code to represent their data. By registering for this program, you agree to these terms. Registration is currently limited to 120 labs.

### LABORATORY REQUIREMENTS

Laboratories that meet the Performance based Measurement System (PBMS) qualification criteria as described under 40 CFR 80.580 - 80.585 will be allowed to participate in the RR. Thus this RR is open to all sulfur test methods as qualified under 40 CFR 80.584 and 80.585. While official approval by EPA is not required, the laboratory must have received notice from EPA stating that the qualification data was acceptable as received. This notice will be sent out via e-mail. EPA will review each registered lab against its lab qualification database to insure conformity.

### TEST PLAN

Samples will be sent out for analysis at the beginning of July and August. A form will accompany each month's sample set describing how the samples shall be analyzed, results recorded, and where the results are to be sent. You will be asked to e-mail your results to an e-mail address at Southwest Research Institute that will be provided. An excel data submission template will be sent out via e-mail to all participants on the day that the samples are shipped. A submission deadline for the results will also be given.

#### Calibration Method

Laboratories will be asked to analyze five blind fuel samples per month using both their instrument's existing "in-house" calibration curve as well as a four point calibration curve that is generated using calibration standards provided each month by EPA.

Laboratories will be asked to provide the following information regarding their "in-house" calibration standards: The number of calibration standards used to generate the calibration curve, the name of the calibration standard source, the Accepted Reference Value (ARV) of each standard, the expanded uncertainty (95% confidence interval for the true value) of the standards, and the matrix with which the standard is composed of (for example, sulfur in diesel fuel is considered a natural matrix). EPA will also ask that the labs provide the same information for any check standard that is used to verify the calibration curve as well as what the lab's test result was for the check standard.

The calibration standards provided by EPA to generate the calibration curve will consist of National Institute of Standards and Technology (NIST) Standard Reference Materials (SRMs). The SRMs that will be used, with their concentration and uncertainty, are as follows:

SRM #	Certified Value	Uncertainty (ppm)
2771	0.2	±0.2
1616b	8.41	±0.12
2723a	11	±1.1
2770	41.57	±0.39

Please note that at this time the certified value and uncertainty for SRM 2771 is preliminary and should be final by the time the RR begins. SRM 1616b is sulfur in kerosene and it is anticipated that matrix effects due to the difference in the hydrogen to carbon ratio should be minimal.

All calibration standard bottles will be clearly marked with NIST labeling. EPA will ask that each lab calibrate their instrument using these SRMs after analyzing the blind fuel samples with the existing instrument calibration. Thus the instrument will be set up with an approximate 0 to 42 ppm range. The labs will then be instructed to reanalyze the fuel samples with this new calibration.

The purpose of the analysis using multiple calibration curves is to provide a real world analysis of the blind fuel samples using methods that are qualified to EPA's Performance Based Measurement System as well as determining the effect of the use of highly accurate universal calibration standards on lab-to-lab variability.

Three 10 ml ampoules of SRM 2723a and 2770 will be provided each month. SRMs 2771 and 1616h are packaged by NIST in 100 ml amberlite bottles. For these SRMs, one 100 ml bottle of each will be sent out during the first month of the program. Laboratories will be instructed to save these SRMs after use for use in the second month of the program where we will ask them to generate another calibration curve before the second measurement of the fuel samples. Please note that use of this calibration curve, which in most cases will be different from the calibration curve used to qualify your lab's sulfur measurement method, does not require you to requalify your method with the new curve. It is anticipated that laboratories will use their standard in-house procedures to validate the calibration curve.

If your laboratory has registered and qualified more than one sulfur measurement method, you will still only receive the same quantity of SRMs as a normal lab. When determining the volume of SRMs that were to be sent out to a lab for this program for calibration, excess volume was built in. It is anticipated that this excess will be sufficient for labs to calibrate more than one method per month if needed.

#### Test Materials

A total of 10 fuel samples (80 ml each) will be sent out over the course of the two month program. Five samples will be sent out with a set of SRMs on the first of each month. All five of the samples sent out each month will be blind. Of the five samples, one may be a gravimetric standard. The target sample sulfur concentrations will be in the range of 7 to 17 ppm. All blind fuel sample bottles will be clearly labeled for identification (ex. EPA Low Sulfur Diesel Round Robin July Sample #1).

Laboratories will be asked to make three repeat measurements on each of the fuel samples for each of the calibration curves. The labs should run these three samples back-to-back-to-back using the same operator and same lab equipment. The instrument shall not be recalibrated using the NIST SRMs until all of the fuel samples have been analyzed on the initial "in-house" calibration curve. Following the recalibration, the fuel samples are to be analyzed in triplicate again. Sulfur values shall be reported out to the nearest tenth of a ppm.

For methods like D 5453 that require that a sample be analyzed three times and then average to obtain one data point, operators should analyze the sample nine times as required and then report the three average values taken from the average of each grouping of three measurements.



If your laboratory has registered and qualified more than one sulfur measurement method, you will still only receive the same quantity of blind fuel samples as a normal lab. It is anticipated that the volume supplied should be sufficient for analysis by laboratories running more than one sulfur measurement method.

## **DATA ANALYSIS**

### **Data Collection**

Data shall be submitted directly to Southwest Research Institute via e-mail as they have been contracted to perform the data analysis. A data sheet will be e-mailed to all participants on the day that the monthly samples are shipped. Instructions on how to fill out the sheet as well as where to send it will be included in the e-mail as well as shipped with the samples.

### **Descriptive Statistics**

Results will be reported on both a composite (all data grouped together regardless of method) and test method specific basis (where enough labs have run the specific method for statistical analysis) for the measurement results generated from analysis using both the lab's "in-house" calibration curve as well as the calibration curve generated using the NIST SRMs. Descriptive statistics (sample size, mean and standard deviation) from all sulfur data received from the participating labs will be computed before and after any outliers are identified on both the composite and test method specific basis. This will be done for each of the fuel samples using the calculations as stated in the test plan. For method specific groupings, at least 6 labs with valid sulfur measurements from each test method for all fuels (i.e., after outlier checks have been performed) will be required to make a final statement about the reproducibility. Data analysis for the composite and method specific groupings will also include repeatability and reproducibility. An attempt will be made to fit a curve to the reproducibility results on both a composite and test method specific basis. The purpose will be to provide a means to determine reproducibility based on fuel sulfur level. While the range of sulfur levels in the blind fuel samples is broad enough support the generation of those curve fits, the ability to generate the fits will be dependant on the variability of the data and the decision to go forth will be made during the data analysis.

### **Outliers**

Outliers will be determined using two different methods. In the first method, outliers will be determined using a two-stage robust procedure, identical to that used in the 2004 ASTM ILCP. Since EPA is requiring that the blind fuel samples be measured in triplicate, a random selection of two of the three test results for each fuel sample will be made for computing the repeatability and reproducibility. In the case where two of the three test results are valid, no selection is necessary. In the case where only one test result is valid, the lab would be eliminated for that fuel in that particular month.

EPA is also considering potential screening for outliers based on the measurement results of the blind gravimetric standard. For this determination, the arithmetic average of the three repeat tests performed on the blind gravimetric sample shall not differ from the accepted standard reference value (ARV) of the standard by more than 0.90 ppm. The value takes into consideration the 95% two-sided confidence interval for three repeat measurements, as well as real bias and gravimetric standard uncertainty. This will, in effect, hold the laboratories measurement capability in line with that of the PBMS method qualification criteria for accuracy as stated in 40 CFR 80.584. If a laboratory's arithmetic average of the three repeat tests on the gravimetric sample differs from the ARV of the standard by more than 0.90 ppm, all of the laboratory's data for all fuel measurements for that month will be thrown out. If a laboratory's ARV is 0.90 ppm or less, all of the laboratory's data will be processed using the two-stage robust procedure as discussed below.

The outlier detection procedures will be applied to sulfur results obtained by similar test methods and as a composite of all test methods. The means and standard deviations will be computed using a two-stage robust procedure which is designed to limit the influence of unusually large or small results, while eliminating only the most egregious among them. Data will be subjected to the robust computations twice. After the first stage, results which differ from the (first stage) robust mean by more than three times the (first stage) robust standard deviation are noted as outliers and excluded from the second-round robust computation. If any individual sulfur measurement falls outside this interval then it is identified as an outlier. After this identification step, EPA will be provided a list of the outliers so that they can review them and possibly consult with the individual labs about related transcription errors, data entry errors, etc. The robust mean and standard deviation will then be recalculated using the second-stage computation (there is no second stage exclusion in this calculation). As the second-stage robust standard deviation is generally smaller than that of the first stage, some non-excluded results may differ from the robust mean by more than three robust standard deviations.

After the results are checked for outliers on a per test method basis, the resulting valid measurements from all the test methods will be merged together and the descriptive statistics as described above will be recomputed.

A description of an iterative algorithm for computing robust means and standard deviations is provided in the next section. If  $n$  results are included in the computation, and if all the results which differ from the robust mean by more than  $1.5\sqrt{(n-1)/n}$  times the robust standard deviation are replaced by the robust mean,  $\pm 1.5\sqrt{(n-1)/n}$  robust standard deviations, as appropriate. The mean of these "trimmed" results will equal the robust mean, and the standard deviation of the trimmed results will be .882 times the robust standard deviation.

#### Calculation of Robust Mean and Robust Standard Deviation

The Robust Mean and Robust Standard Deviation of a collection of  $n$  results are calculated by first finding the median of all test results and then finding each result's absolute

deviation from this median. An initial standard deviation for the reported results is determined by dividing the median of the absolute deviations by 0.6745. This value is multiplied by a cutoff value  $(1.5\sqrt{(n-1)/n})$  and the result is added and subtracted from the median of the test results to arrive at initial upper and lower limits.

For calculation purposes, test results that fall within these limits are retained, and other results are adjusted to the nearest limit. A robust mean and robust standard deviation are calculated using this new set of values (Robust Mean = average of trimmed results; Robust Standard Deviation = standard deviation of results divided by 0.882). The robust standard deviation is compared to the initial standard deviation estimates determined above. If they are equal then record the values as the robust mean and robust standard deviation. If the standard deviations are not equal, then a loop process begins by utilizing the robust average and standard deviation to calculate a new set of upper and lower limits. This looping process continues until the robust standard deviation stabilizes from one iteration to the next. The resulting values are the Robust Mean and Robust Standard Deviation. The number of digits carried out in the loop process is one digit more than the reporting resolution of the test values.

#### Calculating Repeatability (r) and Reproducibility (R)

The results from all labs are entered into the robust routine. After the first pass, a number of outliers may be identified. Let  $N_r$  be the number of valid results,  $m_r$  is the robust mean,  $s_r$  is the robust standard deviation, and  $M_r$  is the number of labs for which both of the replicate measurements were valid.

For example, D 2622 data from the October, 2004 ULSD exchange, 50 labs contributed 2 numerical results each. Nine of these 100 results were flagged as outliers on the first pass of the robust routine, so  $N_r = 91$ ,  $m_r = 16.8088$  and  $s_r = 1.8090$ . Of the 50 contributing labs, 4 had both results flagged and one had one result flagged. Thus  $M_r = 50 - 4 - 1 = 45$ .

Next, calculate the difference between results for each lab that contributed valid results. For this calculation the second and third results from each sample will be used. Compute both the positive and negative difference for each lab. Dump these  $2M_r$  differences into the robust routine. The robust mean will be zero, and the number of outliers flagged on the first pass will always be even (if a result is flagged, then its negative will be, too). Let  $N_r$  be the number of differences remaining after outlier selection, and  $M_r = N_r / 2$  the number of labs contributing valid differences. Let  $s_r$  be the robust standard deviation. In our example, 45 pairs of differences, or 90 total, were taken to the robust routine. 6 differences (3 pairs) were flagged as outliers, so  $N_r = 90 - 6 = 84$  and  $M_r = 45 - 3 = 42$ .  $s_r = 0.69256$ .

Next, calculate the repeatability estimate:

$$r = 1.9600 \sqrt{\frac{2M_r - 1}{2M_r}} s_r$$

Then calculate the reproducibility estimate:<sup>2</sup>

$$R = \sqrt{\frac{N_R(N_R - 1)(2.7718s_R)^2 - 2M_R r^2}{N_R(N_R - 1) - 2M_R}}$$

#### Alternative Method for Calculation of Repeatability and Reproducibility

As an alternative to the ILCP computations, an analysis of variance (ANOVA) method will be used to compute repeatability and reproducibility for data where outliers were determined using the two-stage robust procedure only. In this situation, all labs with two or three valid sulfur tests per fuel per month would be included. Labs with a single valid sulfur test result per month per fuel would not be included in the computation of repeatability and reproducibility.

#### Total Number of Data Sets

From the different calculation methods for determination of outliers, repeatability, and reproducibility as described above, the following data sets will be generated for comparison purposes from the results of the blind fuel sample analysis for both the "in-house" and NIST SRM calibration curves:

1. Determination of outliers, repeatability, and reproducibility using the two-stage robust test procedure for sulfur measurement methods on an individual basis.
2. Determination of outliers, repeatability, and reproducibility using the two-stage robust test procedure for sulfur measurement methods on a composite basis.
3. Screening of outlier labs based on the measurement results of the blind gravimetric standard. Remaining data from laboratories' whose data is not thrown out will then be subjected to further outlier, repeatability, and reproducibility determination using the two-stage robust test procedure for sulfur measurement methods on an individual basis.
4. Screening of outlier labs based on the measurement results of the blind gravimetric standard. Remaining data from laboratories' whose data is not thrown out will then be subjected to further outlier, repeatability, and reproducibility determination using the two-stage robust test procedure for sulfur measurement methods on a composite basis.
5. Determination of outliers using the two-stage robust test procedure. Determination of repeatability and reproducibility using the ANOVA method for sulfur measurement methods on an individual basis.

6. Determination of outliers using the two-stage robust test procedure. Determination of repeatability and reproducibility using the ANOVA method for sulfur measurement methods on a composite basis.
7. If deemed necessary, processing of the data resulting from the blind gravimetric screening process for outliers will be performed using the two-stage robust test procedure and ANOVA method as described in points 5 and 6.

#### Reporting of Data

Data reports may be sent to all of the participating test labs within 45 days of the conclusion of the test program. The reports will also be made available on-line. A meeting may be scheduled where SwRI will present the data results.

#### REFERENCES

1. ASTM D 6300, "Determination of Precision and Bias Data for Use in Test Methods for Petroleum Products and Lubricants."
2. 2004 ASTM Inter-Laboratory Cross Check Program.

Amendment 2, Work Assignment 0-2  
EPA Contract EP-C-05-018

This amendment requires that 2 changes be made to the content of the round robin final report:

The contractor's final report shall provide 80 additional tables, which are needed to show method-specific test results for robust outlier determination. Currently only composite results are shown. The plots shall show the results for the 10 fuels using 4 methods per fuel and 2 calibration curves per method. This will allow the participating labs to see how they performed on a method-specific basis.

In addition, EPA is requesting changes to the plots in Appendix D to require relabeling of some of the data points. The changes to the plots require adding the test method used to the labeling for all of the ARB and EPA data points. These are the only changes that need to be made to the plots, and this will allow participating laboratories to see how EPA and ARB performed with which test method.

## **APPENDIX A3**

### **LIST OF PARTICIPATING LABS FOR ROUND ROBIN STUDY**

**Table A3. List of Participating Labs for Round Robin Study**

<b>Laboratory</b>	<b>Location</b>	<b>City, State, Zip</b>
Murphy Oil USA		Meraux, LA 70075
CHS Inc.	Laurel Refinery	Laurel, MT 59044
Lion Oil Co.		El Dorado, AR 71730
Shell		Anacortes, WA 98221
Flint Hills Resources	Corpus Christi Lab	Corpus Christi, TX 78409
Flint Hills Resources		Eules, TX 76040
Flint Hills Resources	Milwaukee Terminal	Milwaukee, WI 53224
Flint Hills Resources	Pine Bend Lab	Rosemount, MN 55068
Flint Hills Resources	Analytical Services	Wichita, KS 67220
Hunt Refining		Tuscaloosa, AL 35401
Sunoco Refining		Marcus Hook, PA 19601
Valero		Ardmore, OK 73401
Valero		Benicia, CA 94510
Valero		Corpus Christi, TX 78407
Valero		Houston, TX 77012
Valero		Quebec, Canada G6W 5M4
Valero		Sunray, TX 79086
Valero		Norco, LA 70047
Valero		Texas City, TX 77590
Valero		Three Rivers, TX 78071
Valero		Wilmington, CA 90744
Total Petrochemicals USA, Inc.		Port Arthur, TX 77640
Countrymark Cooperative		Mt. Vernon, IN 47620
Wyoming Refining Company		Newcastle, WY 82701
Suncor Energy USA		Commerce City, CO 80022
U.S. Oil & Refining Co.		Tacoma, WA 98421
Motiva Port Arthur Refinery		Port Arthur, TX 77640
Motiva Convent Refinery		Convent, LA 70723
Motiva Norco Refinery		Norco, LA 70079
Deer Park Refining L.P.		Deer Park, TX 77536
Shell Los Angeles Refinery		Wilmington, CA 90744
Shell Martinez Refinery		Martinez, CA 94553
Shell Global Solutions Inc		Houston, TX 77082
Shell Chemical Yabucoa, Inc.		Yabucoa, Puerto Rico 00767
Shell Chemical LP		East Saraland, AL 36571
Hovensa, LLC		Christiansted, U.S.V.I. 00820-5652
US EPA NVFEL		Ann Arbor, MI 48105
National Cooperative Refinery Association		McPherson, KS 67460
Kaneb Pipeline Company LLP		El Dorado, KS 67042
ERGON West Virginia, Inc.		Newell, WV 26050
Marathon Ashland Petroleum LLC		St. Paul Park, MN 55071



<b>Laboratory</b>	<b>Location</b>	<b>City, State, Zip</b>
Marathon Ashland Petroleum LLC		Catlettsburg, KY 41129
Marathon Ashland Petroleum LLC		Robinson, IL 62454
Marathon Ashland Petroleum LLC		Garyville, LA 70051
Marathon Ashland Petroleum LLC		Canton, OH 44706
Sinclair Casper Refinery		Casper, WY 82609
California Air Resources Board		El Monte, CA 91731
SGS Laboratories		Bayonne, NJ 07002
SGS Laboratories		Bridgeport, NJ 08014
SGS Laboratories		Deer Park, TX 77536
SGS Laboratories		Beaumont, TX 77705
SGS Laboratories		Corpus Christi, TX 78409
SGS Laboratories		St. Rose, LA 70087
Tesoro Corporation Golden Eagle Refinery		Martinez, CA 94553
Inspectorate America Corporation		Linden, NJ 07036
Intertek Caleb Brett		Chelsea, MA 02150
Intertek Caleb Brett		Bridgeview, IL 60455
Intertek Caleb Brett		Gonzales, LA 70737
Intertek Caleb Brett		Deer Park, TX 77536
Intertek Caleb Brett		West Memphis, AR 72301
Intertek Caleb Brett		North Nederland, TX 77627
Intertek Caleb Brett		New Haven, CT 06512
Intertek Caleb Brett		St. Rose, LA 70087
Intertek Caleb Brett		Carteret, NJ 07008
Intertek Caleb Brett		Essington, PA 19029
Intertek Caleb Brett		Fort Lauderdale, FL 33316
Intertek Caleb Brett		Benecia, CA 94510
Intertek Caleb Brett		Hamilton, Ontario Canada L8L J5
Intertek Caleb Brett		Saint John, NB Canada E2L 4H6
Saybolt LP		LaPlace, LA 70068
Core Laboratories, LP		Houston, TX 77075
CITGO Petroleum Corporation		Lake Charles, LA 70602
PAC		Houston, TX 77090
ConocoPhillips	Sweeny Complex Laboratory	Old Ocean, TX 77463
CITGO Petroleum Product Technology Laboratory		Tulsa, OK 74134
XOS		Greenbush, NY 12061
ExxonMobil		Annandale, NJ 08801
ExxonMobil Research and Engineering	Paulsboro Technical Center	Paulsboro, NJ 08066
ExxonMobil	Beaumont Refinery Laboratory	Beaumont, TX 77704
ExxonMobil Refining and Supply		Baton Rouge, LA 70805

<b>Laboratory</b>	<b>Location</b>	<b>City, State, Zip</b>
Camin Cargo Control, Inc.		Linden, NJ 07036
Fuels & Lubricants Group Alberta Research Council		Edmonton, Alberta Canada T6N 1E4
ConocoPhillips	Billings Refinery Central Laboratory	Billings, MT 59101
ExxonMobil Refining and Supply	Baytown Complex Laboratory	Baytown, TX 77520
Tesoro Refining and Marketing Co.		Mandan, ND 58554
Colonial Pipeline	Houston Station	Pasadena, TX 77506
Colonial Pipeline	Hebert Station	Beaumont, TX 77705
Colonial Pipeline	Lake Charles Station	Sulphur, LA 70665
Colonial Pipeline	Baton Rouge Junction	Jackson, LA 70748
Colonial Pipeline	Collins Injection	Collins, MS 39428
Colonial Pipeline	Atlanta Junction	Austell, GA 30106
ConocoPhillips Refinery Laboratory		Westlake, LA 70669
ConocoPhillips Analytical Laboratory		Wilmington, CA 90744
ConocoPhillips	Bayway Refinery Laboratory	Linden, NJ 07036
ConocoPhillips	Rodeo Refinery Laboratory	Rodeo, CA 94572-1354
ConocoPhillips	Trainer Refinery Laboratory	Trainer, PA 19061
ConocoPhillips	Ponca City Refinery Laboratory	Ponca City, OK 74601
ConocoPhillips	Borger Refinery & NGL Center	Borger, TX 79008-0271
United Refining Company		Warren, PA 16365
Horiba Instruments, Inc.		Irvine, CA 92614
Research Laboratories, Inc.		Fort Wayne, IN 46818
Flint Hills Resources, LP		North Pole, AK 99705-7879
American Refining Group		Bradford, PA 16701
Wynnewood Refining Company		Wynnewood, OK 73098
ConocoPhillips	Analytical Services Laboratory	Bartlesville, OK 74004
The Premcor Refining Group, Inc.	Memphis Refinery	Memphis, TN 38109
Detroit Diesel Chemical Technology Lab		Detroit, MI 48239-4001
Oxford Instruments Analytical		HP12 3SE ENGLAND
The Premcor Refining Group, Inc.	Lima Refinery	Lima, OH 45806
BP Whiting Laboratory		Whiting, IN 46394

<b>Laboratory</b>	<b>Location</b>	<b>City, State, Zip</b>
Premcor Refinery		Port Arthur, TX 77640
Placid Refining Co. LLC		Port Allen, LA 70767
Oxford Instruments Analytical Inc.		Elk Grove Village, IL 60007
Kern Oil & Refining Co.		Bakersfield, CA 93307-9210
Inspectorate America Corp.		Pasadena, TX 77506
Western Refining Co.		El Paso, TX 79905
Paramount Petroleum		Paramount, CA 90723
Chevron Salt Lake Refinery Laboratory		Salt Lake City, UT 84116
Holly Refining & Marketing	Woods Cross Refinery	Woods Cross, UT 84087
ExxonMobil Joliet Refinery		Channahon, IL 60410
Chevron El Segundo Refinery		El Segundo, CA 90245
Chevron Products Co.	Pascagoula Refinery Laboratory	Pascagoula, MS 39581
Chevron Products Co.	Richmond Refinery Laboratory	Richmond CA, 94802
Magellan Kansas City Laboratory	1090A Sunshine Road	Kansas City, KS 66115
Southwest Research Institute		San Antonio, TX 78228
COSA Instruments		Houston, TX 77028
ConocoPhillips	Tremley Point Terminal	Linden, NJ 07036
Am Spec Services LLC		Linden, NJ 07036
Am Spec Services LLC		Galena Park, TX 77015

**APPENDIX B**  
**LAB DATA AND DATA DELETIONS**

## Appendix B. Lab Data and Data Deletions

### Description of Table Headings

Each table in Appendix B is comprised of all available lab data for the composite test methods by fuel and calibration type. Data are sorted by lab code. Included in the columns of each table is the following information:

1. Calibration – Calibration type (In-House or NIST)
2. Test Method – D2622, D5453, D3120, D7039 and EDXRF.
3. Run Date – The date each sample was run.
4. Sample # - The fuel sample number for each month.
5. Lab Code
6. Original Lab Data Robust Outlier Deletion in Shaded Box, Measure #1, Measure #2, Measure #3 – All three repeat measurements submitted by each lab. Any measurement identified by the robust outlier deletion method is shaded.
7. Density
8. After Robust Outlier Deletion Random Selection of 2 Obs – If no measurements are deleted due to the robust outlier deletion method, one measurement was randomly deleted and the remaining two observations are listed.
9. After Gravimetric Deletion Random Selection of 2 Obs – If a lab has not been deleted due to the gravimetric outlier method, one measurement was randomly deleted and the remaining two measurements are listed. Labs deleted are identified with shaded boxes.

There are four analyses performed with two different deletion methods and two different analysis methods. The data used in each of these four analyses can be found in the tables in Appendix B. These data sets are as follows:

1. Robust Outlier Method and ASTM Analysis  
Column #1 and #2 under “After Robust Outlier Deletion Random Selection of 2 Obs”.
2. Robust Outlier Method and ANOVA Analysis  
Measure #1, Measure #2, Measure #3 under “Original Lab Data Robust Outlier Deletion in Shaded Box”. Only use the data in the unshaded boxes.
3. Gravimetric Outlier Method and ASTM Analysis  
Column #1 and Column #2 under “After Gravimetric Deletion Random Selection of 2 Obs”. Note that deleted labs are shaded and their observations are deleted.
4. Gravimetric Outlier Method and ANOVA Analysis  
Measure #1, Measure #2, Measure #3 under “Original Lab Data Robust Outlier Deletion in Shaded Box”. Use all the data (shaded and unshaded) in these three columns except those where the labs were deleted by the gravimetric outlier method (if boxes are shaded under “After Gravimetric Deletion” columns).

**Table B.1. July Fuel #1 Lab Data and Deletions Based on Composite Test Methods for In-House Calibration**

Calibration	Test Method	Run Date	July Sample #	Lab Code	Original Lab Data Robust Outlier Deletion in Shaded Box			Density	After Robust Outlier Deletion Random Selection of 2 Obs		After Gravimetric Deletion Random Selection of 2 Obs	
					Measure #1	Measure #2	Measure #3		#1	#2	#1	#2
In-House	D5453	07/13/05	1	1	6.5000	6.5000	6.6000	0.8359	6.5000	6.6000	6.5000	6.6000
In-House	D5453	07/12/05	1	2	8.4200	7.9100	7.5400	0.8359	8.4200	7.5400	8.4200	7.9100
In-House	D2622	07/13/05	1	3	10.5400	10.4100	10.8400	0.8359				
In-House	D5453	07/21/05	1	4	7.7200	7.8400	8.0100	0.8359	7.8400	8.0100	7.7200	7.8400
In-House	D2622	07/15/05	1	5	6.9000	6.4000	6.7000	0.8359	6.9000	6.7000	6.9000	6.4000
In-House	D7039	07/27/05	1	6	7.5000	7.9000	8.2000	0.8359	7.5000	7.9000	7.5000	7.9000
In-House	D7039	07/21/05	1	7	7.6000	7.3000	7.6000	0.8359	7.6000	7.6000	7.6000	7.3000
In-House	D2622	07/13/05	1	8	8.1800	9.4000	9.0500	0.8359	8.1800	9.0500	9.4000	9.0500
In-House	D5453	07/13/05	1	8	7.5300	7.5100	7.5200	0.8359	7.5100	7.5200	7.5300	7.5100
In-House	D5453	07/15/05	1	9	6.7500	6.9200	6.9800	0.8359	6.7500	6.9800	6.9200	6.9800
In-House	D5453	07/28/05	1	11	7.6000	7.6600	7.5600	0.8359	7.6000	7.5600	7.6600	7.5600
In-House	D5453	07/27/05	1	12	6.9600	7.0300	7.1000	0.8359	7.0300	7.1000	7.0300	7.1000
In-House	D5453	07/20/05	1	13	7.6900	7.5600	7.7500	0.8359	7.6900	7.5600	7.5600	7.7500
In-House	D5453	07/26/05	1	15	7.0000	7.2000	7.0000	0.8359	7.0000	7.2000	7.2000	7.0000
In-House	D5453	07/19/05	1	16	6.9850	6.7300	6.9900	0.8359	6.9850	6.9900	6.9850	6.9900
In-House	D5453	07/20/05	1	18	6.9600	7.1700	6.5800	0.8359	7.1700	6.5800	7.1700	6.5800
In-House	D5453	08/03/05	1	19	6.7000	6.8000	6.7000	0.8359	6.7000	6.7000	6.8000	6.7000
In-House	D5453	08/02/05	1	21	6.6600	6.6500	6.5800	0.8359	6.6600	6.5800	6.6600	6.5800
In-House	D5453	08/10/05	1	23	6.7200	6.6300	6.5700	0.8359	6.6300	6.5700		
In-House	D5453	07/13/05	1	24	6.9600	6.9900	6.8200	0.8359	6.9600	6.8200		
In-House	D5453	08/30/05	1	25	6.9500	6.8500	6.7500	0.8359	6.9500	6.7500		
In-House	D5453	07/19/05	1	26	7.4600	7.2100	7.3400	0.8359	7.2100	7.3400	7.4600	7.2100
In-House	D5453	07/25/05	1	27	7.0700	7.1400	7.0300	0.8359	7.0700	7.0300	7.1400	7.0300
In-House	D2622	07/22/05	1	28	8.5000	8.4000	8.7000	0.8359	8.5000	8.4000	8.5000	8.7000
In-House	D5453	07/19/05	1	29	6.5070	6.4010	6.6630	0.8359	6.4010	6.6630		
In-House	D5453	07/12/05	1	30	7.3000	7.4000	7.3000	0.8359	7.3000	7.3000	7.3000	7.4000
In-House	D5453	07/13/05	1	31	7.1000	7.1000	7.1000	0.8359	7.1000	7.1000	7.1000	7.1000
In-House	D5453	07/25/05	1	32	7.6500	7.5500	7.4900	0.8359	7.6500	7.5500	7.5500	7.4900
In-House	D5453	08/19/05	1	33	7.3200	7.1800	7.2300	0.8359	7.1800	7.2300	7.3200	7.2300
In-House	D5453	07/26/05	1	35	6.8500	6.7600	6.6000	0.8523	6.7600	6.6000		
In-House	D5453	07/15/05	1	36	5.7000	6.3000	6.2000	0.8359	6.3000	6.2000		
In-House	D5453	07/15/05	1	37	6.6000	6.7600	6.7600	0.8359	6.6000	6.7600	6.6000	6.7600
In-House	D5453	07/25/05	1	38	7.0000	7.0000	6.6000	0.8359	7.0000	7.0000	7.0000	7.0000
In-House	D5453	07/28/05	1	39	8.2600	8.4800	8.2400	0.8359	8.2600	8.4800		
In-House	D2622	08/02/05	1	41	7.9000	8.8000	9.1000	0.8359	8.8000	9.1000		
In-House	D5453	08/03/05	1	41	6.8300	7.0500	7.3800	0.8359	6.8300	7.3800	6.8300	7.3800
In-House	D2622	08/31/05	1	EPA	9.2000	8.8000	8.4000	0.8359	9.2000	8.8000	8.8000	8.4000
In-House	D5453	08/30/05	1	EPA	7.5000	7.5000	7.5000	0.8359	7.5000	7.5000	7.5000	7.5000
In-House	D7039	08/02/05	1	EPA	6.8000	7.2000	7.9000	0.8359	6.8000	7.2000	6.8000	7.2000

**Table B.1. July Fuel #1 Lab Data and Deletions Based on Composite Test Methods for In-House Calibration**

Calibration	Test Method	Run Date	July Sample #	Lab Code	Original Lab Data			Density	After Robust Outlier Deletion		After Gravimetric Deletion	
					Measure #1	Measure #2	Measure #3		Random Selection of 2 Obs		Random Selection of 2 Obs	
In-House	D7039	07/21/05	1	47	6.8000	7.1000	7.0000	0.8359	7.1000	7.0000	6.8000	7.0000
In-House	D5453	07/19/05	1	48	7.0500	7.1600	7.4300	0.8359	7.0500	7.4300	7.1600	7.4300
In-House	D2622	08/10/05	1	50	7.1000	7.2000	8.1000	0.8359	7.1000	8.1000	7.1000	8.1000
In-House	D5453	07/25/05	1	51	7.6000	7.7000	7.6000	0.8359	7.7000	7.6000	7.7000	7.6000
In-House	D5453	07/27/05	1	52	6.4200	6.4900	6.5900	0.8359	6.4200	6.4900		
In-House	D2622	07/26/05	1	53	8.1000	8.3000	8.2000	0.8359	8.3000	8.2000	8.1000	8.2000
In-House	D5453	07/19/05	1	54	6.7000	6.7000	6.6000	0.8359	6.7000	6.6000		
In-House	D2622	07/21/05	1	55	7.6000	7.9000	7.8000	0.8359	7.9000	7.8000	7.6000	7.9000
In-House	D5453	07/21/05	1	56	7.2000	7.0000	7.0000	0.8359	7.2000	7.0000	7.0000	7.0000
In-House	D5453	07/26/05	1	59	6.7400	6.9300	7.0300	0.8240	6.7400	6.9300	6.9300	7.0300
In-House	D7039	07/28/05	1	60	8.1000	7.7000	7.8000	0.8359	8.1000	7.8000	8.1000	7.7000
In-House	D5453	07/27/05	1	61	6.8200	7.0100	6.9200	0.8359	6.8200	7.0100	7.0100	6.9200
In-House	D5453	08/30/05	1	CARB	6.4700	6.5400	6.6600	0.8359	6.5400	6.6600		
In-House	D5453	07/29/05	1	63	8.4600	8.8000	9.3400	0.8359	8.8000	9.3400		
In-House	D5453	08/02/05	1	64	6.4000	6.7000	6.7000	0.8359	6.4000	6.7000	6.4000	6.7000
In-House	D5453	08/01/05	1	66	7.1500	7.1800	7.6600	0.8359	7.1500	7.1800		
In-House	D2622	07/18/05	1	67	8.4000	8.4000	8.2000	0.8359	8.4000	8.2000	8.4000	8.4000
In-House	D5453	07/15/05	1	68	5.1400	4.9500	4.9000	0.8359	5.1400		4.9500	4.9000
In-House	D5453	07/29/05	1	71	6.9800	6.9800	6.9800	0.8359	6.9800	6.9800	6.9800	6.9800
In-House	D5453	07/19/05	1	72	7.0000	7.2000	7.3000	0.8359	7.0000	7.3000	7.0000	7.2000
In-House	D2622	07/13/05	1	73	7.2000	7.4000	7.5000	0.8359	7.4000	7.5000	7.4000	7.5000
In-House	D5453	07/14/05	1	73	7.0000	7.0000	7.1000	0.8359	7.0000	7.1000	7.0000	7.0000
In-House	D5453	07/13/05	1	75	5.7000	6.1600	6.2700	0.8359	6.1600	6.2700	5.7000	6.1600
In-House	D5453	07/15/05	1	76	7.1600	7.4100	7.4300	0.8359	7.1600	7.4100	7.4100	7.4300
In-House	D5453	07/25/05	1	78	7.5000	7.8700	7.8000	0.8359	7.5000	7.8700		
In-House	D5453	08/09/05	1	81	6.4000	6.3000	6.5000	0.8359	6.4000	6.5000	6.4000	6.5000
In-House	D5453	07/19/05	1	82	6.4400	6.3600	6.6100	0.8359	6.4400	6.6100	6.4400	6.6100
In-House	D5453	07/14/05	1	83	6.5400	6.1200	6.3800	0.8359	6.1200	6.3800	6.5400	6.1200
In-House	D5453	07/22/05	1	84	7.0700	6.4300	6.6000	0.8359	7.0700	6.6000	7.0700	6.6000
In-House	D5453	07/20/05	1	85	6.0000	6.2000	6.2000	0.8359	6.0000	6.2000	6.0000	6.2000
In-House	D3120	07/19/05	1	86	7.2000	7.1000	7.1000	0.8359	7.2000	7.1000	7.2000	7.1000
In-House	D5453	07/27/05	1	87	6.8700	6.9800	7.2000	0.8359	6.9800	7.2000	6.8700	6.9800
In-House	D5453	07/30/05	1	89	6.8000	6.8000	7.0000	0.8359	6.8000	7.0000	6.8000	7.0000
In-House	D5453	07/14/05	1	90	6.3000	5.7000	6.1000	0.8359	5.7000	6.1000	6.3000	5.7000
In-House	D5453	07/27/05	1	91	7.5200	7.3800	7.5100	0.8359	7.5200	7.3800	7.3800	7.5100
In-House	D5453	07/25/05	1	91.1	7.3600	7.3100	7.3200	0.8359	7.3100	7.3200	7.3600	7.3100
In-House	D2622	08/02/05	1	94	6.5000	6.4000	8.4000	0.8359	6.5000	6.4000		
In-House	D3120	07/25/05	1	95	6.3000	6.4000	6.4000	0.8359	6.4000	6.4000		
In-House	D5453	07/25/05	1	95	5.1000	5.2000	5.1000	0.8359	5.1000	5.2000	5.2000	5.1000

**Table B.1. July Fuel #1 Lab Data and Deletions Based on Composite Test Methods for In-House Calibration**

Calibration	Test Method	Run Date	July Sample #	Lab Code	Original Lab Data Robust Outlier Deletion in Shaded Box				After Robust Outlier Deletion Random Selection of 2 Obs		After Gravimetric Deletion Random Selection of 2 Obs	
					Measure #1	Measure #2	Measure #3	Density	#1	#2	#1	#2
In-House	D5453	07/21/05	1	96	7.2000	7.8000	7.6000	0.8359	7.2000	7.6000	7.2000	7.6000
In-House	D5453	07/18/05	1	97	6.8000	6.8000	6.7000	0.8359	6.8000	6.7000	6.8000	6.7000
In-House	D5453	08/15/05	1	99	5.6700	5.7000	5.4000	0.8359	5.6700	5.4000	5.6700	5.7000
In-House	D5453	07/18/05	1	100	5.4000	6.0000	6.1000	0.8359	6.0000	6.1000	5.4000	6.0000
In-House	D7039	07/26/05	1	102	7.5000	7.5000	7.5000	0.8359	7.5000	7.5000	7.5000	7.5000
In-House	D2622	07/26/05	1	103	9.0550	8.6820	9.0920	0.8359	9.0550	9.0920	9.0550	9.0920
In-House	D5453	07/26/05	1	103	6.3311	6.3943	5.8317	0.8359	6.3943	5.8317	6.3311	6.3943
In-House	D7039	07/25/05	1	103	7.2000	7.3000	7.1000	0.8359	7.2000	7.1000	7.3000	7.1000
In-House	D2622	07/12/05	1	105	8.3000	7.9000	8.4000	0.8359	8.3000	7.9000	8.3000	7.9000
In-House	D5453	08/01/05	1	105	7.4900	7.5200	7.3100	0.8359	7.4900	7.5200	7.4900	7.3100
In-House	D7039	07/26/05	1	106	8.0000	7.0000	7.0000	0.8359	8.0000	7.0000	8.0000	7.0000
In-House	D7039	07/20/05	1	107	7.5000	6.9000	7.1000	0.8359	6.9000	7.1000	7.5000	7.1000
In-House	D5453	07/15/05	1	108	6.2990	6.0120	6.1890	0.8359	6.2990	6.1890		
In-House	D5453	07/19/05	1	109	7.0000	7.0000	7.0000	0.8359	7.0000	7.0000		
In-House	D7039	07/18/05	1	109	7.0000	6.8000	6.8000	0.8359	7.0000	6.8000		
In-House	D5453	07/28/05	1	110	7.4000	7.1000	7.3700	0.8359	7.1000	7.3700	7.4000	7.3700
In-House	D7039	08/02/05	1	111	6.0000	11.6000	5.0000	0.8359	6.0000			
In-House	D5453	07/29/05	1	112	8.0100	7.7800	7.9000	0.8523	7.7800	7.9000	8.0100	7.7800
In-House	D5453	07/21/05	1	113	6.6000	6.4000	6.6000	0.8359	6.6000	6.4000		
In-House	D5453	07/25/05	1	114	7.4000	7.5000	7.4000	0.8359	7.5000	7.4000	7.4000	7.5000
In-House	D5453	07/25/05	1	115	7.9000	7.8000	7.7000	0.8359	7.8000	7.7000	7.9000	7.8000
In-House	D5453	07/16/05	1	116	6.9300	7.1600	7.1800	0.8359	7.1600	7.1800	7.1600	7.1800
In-House	D5453	07/19/05	1	117	7.3100	7.3600	7.4200	0.8359	7.3100	7.3600	7.3100	7.3600
In-House	D5453	07/25/05	1	118	7.1400	7.2500	8.0900	0.8359	7.2500	8.0900	7.2500	8.0900
In-House	D5453	07/25/05	1	119	6.9000	6.9900	7.0300	0.8359	6.9000	7.0300	6.9900	7.0300
In-House	D5453	08/08/05	1	120	7.5000	7.4000	7.3000	0.8359	7.5000	7.3000	7.4000	7.3000
In-House	D2622	07/19/05	1	121	7.8000	7.9000	8.1000	0.8359	7.8000	8.1000	7.8000	7.9000
In-House	D5453	07/27/05	1	122	6.9000	7.2000	7.1000	0.8359	6.9000	7.1000	7.2000	7.1000
In-House	D2622	07/25/05	1	123	7.3000	7.4000	7.3000	0.8359	7.4000	7.3000	7.3000	7.3000
In-House	D2622	07/13/05	1	124	7.7000	8.5000	7.5000	0.8359	8.5000	7.5000	7.7000	7.5000
In-House	D2622	07/28/05	1	126	7.3000	7.7000	8.4000	0.8359	7.3000	7.7000	7.3000	8.4000
In-House	D5453	07/28/05	1	126	5.6000	5.3800	5.1000	0.8359	5.3800	5.1000		
In-House	D7039	07/15/05	1	127	6.9000	7.5000	7.0000	0.8359	6.9000	7.0000	7.5000	7.0000
In-House	D7039	07/25/05	1	128	7.8000	7.1000	7.6000	0.8359	7.8000	7.6000	7.8000	7.1000
In-House	D5453	07/21/05	1	129	7.0600	7.0400	6.9500	0.8359	7.0600	7.0400	7.0600	7.0400
In-House	D5453	07/22/05	1	130	7.1000	6.9000	6.7000	0.8359	6.9000	6.7000	7.1000	6.9000
In-House	D2622	07/22/05	1	131	8.3000	7.8000	7.7000	0.8359	8.3000	7.7000	8.3000	7.7000
In-House	EDXRF	07/22/05	1	131	7.0000	7.2000	7.9000	0.8359	7.0000	7.9000	7.0000	7.2000
In-House	D5453	08/25/05	1	132	7.5190	7.5010	7.2610	0.8359	7.5190	7.5010	7.5190	7.2610



**Table B.1. July Fuel #1 Lab Data and Deletions Based on Composite Test Methods for In-House Calibration**

Calibration	Test Method	Run Date	July Sample #	Lab Code	Original Lab Data Robust Outlier Deletion in Shaded Box				After Robust Outlier Deletion Random Selection of 2 Obs		After Gravimetric Deletion Random Selection of 2 Obs	
					Measure #1	Measure #2	Measure #3	Density	#1	#2	#1	#2
In-House	D2622	07/19/05	1	133	9.2200	8.9000	8.7000	0.8359	8.9000	8.7000	9.2200	8.7000
In-House	EDXRF	08/30/05	1	134	8.0000	8.0000	8.7000	0.8359	8.0000	8.0000	8.0000	8.0000
In-House	EDXRF	08/04/05	1	135	8.3000	7.9000	8.1000	0.8359	8.3000	7.9000	7.9000	8.1000
In-House	D2622	07/19/05	1	136	8.1000	7.3000	8.3000	0.8359	8.1000	7.3000	8.1000	7.3000
In-House	EDXRF	07/15/05	1	136	7.2000	7.2000	7.2000	0.8359	7.2000	7.2000	7.2000	7.2000
In-House	D5453	07/15/05	1	137	6.7700	6.8500	6.7900	0.8359	6.7700	6.8500		
In-House	EDXRF	07/15/05	1	137	8.1000	7.2000	7.9000	0.8359	7.2000	7.9000	8.1000	7.2000
In-House	D5453	07/22/05	1	138	7.5000	7.2000	7.5000	0.8359	7.5000	7.5000	7.5000	7.2000
In-House	D2622	07/13/05	1	139	9.9400	9.1300	9.0700	0.8359	9.1300	9.0700	9.1300	9.0700
In-House	D5453	07/13/05	1	139	8.1600	8.1600	8.4400	0.8359	8.1600	8.4400		
In-House	D2622	07/19/05	1	140	5.8000	6.6000	7.3000	0.8359	5.8000	7.3000	5.8000	6.6000
In-House	EDXRF	08/09/05	1	141	8.1000	9.1000	7.0000	0.8359	9.1000	7.0000	9.1000	7.0000
In-House	D5453	07/14/05	1	143	6.8300	6.9400	7.0500	0.8359	6.9400	7.0500	6.9400	7.0500
In-House	D3120	07/25/05	1	144	8.1600	7.4600	7.0400	0.8359	7.4600	7.0400		
In-House	D2622	07/24/05	1	145	8.3000	8.2000	8.8000	0.8523	8.3000	8.2000		
In-House	D5453	08/16/05	1	147	6.0000	6.1000	6.3000	0.8359	6.0000	6.1000		
In-House	D5453	07/15/05	1	148	7.7900	7.5900	7.7800	0.8359	7.7900	7.5900	7.5900	7.7800
In-House	D7039	08/08/05	1	148	7.5000	7.6000	7.5000	0.8359	7.6000	7.5000	7.6000	7.5000
In-House	D5453	07/27/05	1	149	7.3630	7.2010	7.1200	0.8359	7.2010	7.1200	7.2010	7.1200
In-House	D5453	08/01/05	1	151	7.3000	7.0000	6.7000	0.8359	7.3000	6.7000	7.0000	6.7000
In-House	D7039	07/28/05	1	151	6.4000	7.1000	6.9000	0.8523	6.4000	6.9000	6.4000	7.1000
In-House	D5453	07/22/05	1	152	4.6400	5.2700	5.4300	0.8359	5.2700	5.4300	5.2700	5.4300
In-House	D5453	07/14/05	1	153	7.8400	7.9000	7.9400	0.8359	7.9000	7.9400	7.9000	7.9400
In-House	D5453	07/26/05	1	154	7.4900	7.8000	7.9200	0.8359	7.8000	7.9200	7.8000	7.9200
In-House	D5453	07/28/05	1	156	6.7000	6.9400	6.9400	0.8359	6.7000	6.9400		
In-House	D5453	07/20/05	1	158	8.5700	8.4500	8.5100	0.8359	8.4500	8.5100		
In-House	D5453	08/08/05	1	159	7.8900	7.9800	7.7600	0.8359	7.9800	7.7600	7.8900	7.9800
In-House	D7039	08/03/05	1	160	7.8000	8.2000	8.5000	0.8359	7.8000	8.5000	7.8000	8.5000
In-House	D5453	07/24/05	1	161	7.6100	7.9900	7.8500	0.8359	7.6100	7.9900		
In-House	D2622	07/31/05	1	162	6.9700	7.4000	6.3200	0.8359	6.9700	7.4000		
In-House	D5453	07/29/05	1	162	7.0300	7.4700	7.4300	0.8359	7.0300	7.4700	7.4700	7.4300

**Table B.2. July Fuel #1 Lab Data and Deletions Based On Composite Test Methods for NIST Calibration**

Calibration	Test Method	Run Date	July Sample #	Lab Code	Original Lab Data Robust Outlier Deletion in Shaded Box				After Robust Outlier Deletion Random Selection of 2 Obs		After Gravimetric Deletion Random Selection of 2 Obs	
					Measure #1	Measure #2	Measure #3	Density	#1	#2	#1	#2
NIST	D5453	07/13/05	1	1	7.2000	7.1200	7.2000	0.8359	7.2000	7.1200	7.2000	7.1200
NIST	D5453	07/12/05	1	2	7.0900	7.0700	6.9300	0.8359	7.0900	6.9300	7.0900	6.9300
NIST	D2622	07/13/05	1	3	8.7500	9.3700	9.6100	0.8359	8.7500	9.3700		
NIST	D5453	07/21/05	1	4	6.9800	6.7400	7.2900	0.8359	6.9800	6.7400	6.9800	7.2900
NIST	D2622	07/15/05	1	5	8.7000	8.2000	8.5000	0.8359	8.7000	8.2000		
NIST	D7039	07/27/05	1	6	7.3000	7.4000	7.4000	0.8359	7.3000	7.4000	7.3000	7.4000
NIST	D7039	07/21/05	1	7	8.5000	8.9000	8.7000	0.8359	8.5000	8.7000	8.9000	8.7000
NIST	D2622	07/13/05	1	8	8.5300	8.1000	7.8700	0.8359	8.5300	7.8700	8.5300	8.1000
NIST	D5453	07/13/05	1	8	7.1100	7.1000	7.0400	0.8359	7.1000	7.0400	7.1100	7.1000
NIST	D5453	07/18/05	1	9	6.6400	6.8300	6.7200	0.8359	6.8300	6.7200	6.6400	6.8300
NIST	D5453	07/29/05	1	11	6.9800	7.1100	7.2800	0.8359	7.1100	7.2800	6.9800	7.1100
NIST	D5453	07/28/05	1	12	7.2000	7.0000	7.0000	0.8359	7.2000	7.0000	7.2000	7.0000
NIST	D5453	07/21/05	1	13	7.0300	6.9100	7.3000	0.8359	6.9100	7.3000	7.0300	6.9100
NIST	D5453	07/28/05	1	15	7.3000	7.3000	7.3000	0.8359	7.3000	7.3000	7.3000	7.3000
NIST	D5453	07/21/05	1	16	6.5300	6.1000	6.5500	0.8359	6.5300	6.1000	6.1000	6.5500
NIST	D5453	07/20/05	1	18	7.3700	7.2700	7.1300	0.8359	7.3700	7.2700	7.3700	7.1300
NIST	D5453	08/05/05	1	19	7.5000	7.5000	7.5000	0.8359	7.5000	7.5000	7.5000	7.5000
NIST	D5453	08/03/05	1	21	6.8800	6.8100	6.8000	0.8359	6.8800	6.8000	6.8800	6.8100
NIST	D5453	08/11/05	1	23	7.1800	7.2100	7.1200	0.8359	7.2100	7.1200	7.1800	7.1200
NIST	D5453	07/13/05	1	24	8.4100	8.6000	8.3000	0.8359	8.4100	8.6000	8.4100	8.6000
NIST	D5453	08/31/05	1	25	7.2900	7.2900	7.2700	0.8359	7.2900	7.2700	7.2900	7.2700
NIST	D5453	07/21/05	1	26	7.3200	7.2000	7.5500	0.8359	7.2000	7.5500	7.2000	7.5500
NIST	D5453	07/25/05	1	27	7.0900	7.0400	7.1000	0.8359	7.0900	7.0400	7.0900	7.0400
NIST	D2622	07/14/05	1	28	8.7000	8.7000	8.7000	0.8359	8.7000	8.7000	8.7000	8.7000
NIST	D5453	07/20/05	1	29	6.8180	6.3940	6.9000	0.8359	6.8180	6.9000		
NIST	D5453	07/13/05	1	30	7.5000	7.5000	7.7000	0.8359	7.5000	7.5000	7.5000	7.7000
NIST	D5453	07/13/05	1	31	7.2000	7.2000	7.3000	0.8359	7.2000	7.3000	7.2000	7.3000
NIST	D5453	07/26/05	1	32	7.3900	7.4000	7.5100	0.8359	7.4000	7.5100	7.3900	7.5100
NIST	D5453	08/22/05	1	33	9.4400	8.8500	8.8600	0.8359	8.8500	8.8600		
NIST	D5453	07/20/05	1	35	7.0300	7.0900	7.0300	0.8523	7.0300	7.0300	7.0900	7.0300
NIST	D5453	07/15/05	1	36	6.3000	6.0000	6.0000	0.8359	6.3000	6.0000		
NIST	D5453	07/21/05	1	37	7.3000	7.5000	7.3000	0.8359	7.3000	7.5000	7.5000	7.3000
NIST	D5453	07/26/05	1	38	8.0000	8.0000	8.1000	0.8359	8.0000	8.0000	8.0000	8.0000
NIST	D5453	07/28/05	1	39	9.1300	9.1100	8.7300	0.8359	9.1100	8.7300		
NIST	D2622	08/02/05	1	41	8.0000	8.1000	8.9000	0.8359	8.0000	8.9000	8.1000	8.9000
NIST	D5453	08/04/05	1	41	7.2900	7.2500	7.6800	0.8359	7.2900	7.2500	7.2900	7.2500
NIST	D2622	09/01/05	1	EPA	9.0000	9.0000	9.0000	0.8359	9.0000	9.0000		
NIST	D5453	08/30/05	1	EPA	7.5000	7.6000	7.6000	0.8359	7.6000	7.6000	7.5000	7.6000
NIST	D7039	08/03/05	1	EPA	7.1000	7.4000	7.6000	0.8359	7.1000	7.6000	7.4000	7.6000
NIST	D7039	07/22/05	1	47	6.9000	7.2000	7.8000	0.8359	7.2000	7.8000	6.9000	7.8000

**Table B.2. July Fuel #1 Lab Data and Deletions Based On Composite Test Methods for NIST Calibration**

Calibration	Test Method	Run Date	July Sample #	Lab Code	Original Lab Data				After Robust Outlier Deletion		After Gravimetric Deletion	
					Robust Outlier Deletion in Shaded Box				Random Selection of 2 Obs		Random Selection of 2 Obs	
					Measure #1	Measure #2	Measure #3	Density	#1	#2	#1	#2
NIST	D5453	07/19/05	1	48	6.3800	5.8100	6.3700	0.8359	5.8100	6.3700		
NIST	D2622	08/10/05	1	50	7.8000	6.8000	6.6000	0.8359	7.8000	6.8000	7.8000	6.8000
NIST	D5453	07/26/05	1	51	7.2000	7.3000	7.4000	0.8359	7.3000	7.4000	7.2000	7.3000
NIST	D5453	07/28/05	1	52	6.0600	6.2600	6.1700	0.8359	6.0600	6.1700	6.2600	6.1700
NIST	D2622	07/28/05	1	53	7.3000	7.5000	7.7000	0.8359	7.3000	7.7000	7.3000	7.5000
NIST	D5453	07/21/05	1	54	6.9000	6.9000	6.9000	0.8359	6.9000	6.9000	6.9000	6.9000
NIST	D2622	07/23/05	1	55	7.6000	7.4000	6.7000	0.8359	7.4000	6.7000	7.4000	6.7000
NIST	D5453	07/22/05	1	56	6.8700	6.8000	6.8000	0.8359	6.8700	6.8000	6.8700	6.8000
NIST	D5453	08/31/05	1	59	7.4200	7.7300	7.4400	0.8240	7.7300	7.4400	7.4200	7.7300
NIST	D7039	07/29/05	1	60	7.6000	7.2000	7.4000	0.8359	7.6000	7.2000	7.2000	7.4000
NIST	D5453	07/27/05	1	61	7.2500	7.4300	7.2100	0.8359	7.4300	7.2100	7.4300	7.2100
NIST	D5453	08/31/05	1	CARB	6.8000	6.6000	6.8000	0.8359	6.6000	6.8000	6.8000	6.8000
NIST	D5453	07/29/05	1	63	9.2000	8.8800	8.6600	0.8359	8.8800	8.6600		
NIST	D5453	07/18/05	1	64	7.0000	6.8000	6.9000	0.8359	7.0000	6.9000	7.0000	6.9000
NIST	D5453	08/01/05	1	66	7.4000	7.5000	7.6000	0.8359	7.4000	7.6000		
NIST	D2622	07/25/05	1	67	8.8920	7.7400	8.8270	0.8359	8.8920	7.7400	8.8920	8.8270
NIST	D5453	07/15/05	1	68	6.9200	7.4000	7.2300	0.8359	6.9200	7.2300	6.9200	7.2300
NIST	D5453	07/30/05	1	71	7.0900	7.1100	7.0200	0.8359	7.0900	7.1100	7.0900	7.1100
NIST	D5453	07/19/05	1	72	7.2000	7.1000	7.0000	0.8359	7.2000	7.1000	7.2000	7.0000
NIST	D2622	07/13/05	1	73	8.1000	7.8000	7.4000	0.8359	8.1000	7.4000	7.8000	7.4000
NIST	D5453	07/14/05	1	73	7.1000	7.0000	7.4000	0.8359	7.1000	7.0000	7.1000	7.4000
NIST	D5453	08/02/05	1	75	6.9100	7.1000	7.8000	0.8359	6.9100	7.1000	7.1000	7.8000
NIST	D5453	07/19/05	1	76	6.5700	6.5900	6.3700	0.8359	6.5900	6.3700	6.5700	6.3700
NIST	D5453	07/25/05	1	78	7.9700	7.7900	7.5200	0.8359	7.9700	7.7900		
NIST	D5453	08/10/05	1	81	6.6000	6.4000	6.7000	0.8359	6.4000	6.7000	6.4000	6.7000
NIST	D5453	07/26/05	1	82	6.6600	6.4300	6.3800	0.8359	6.6600	6.4300	6.6600	6.3800
NIST	D5453	07/14/05	1	83	7.4500	7.4300	7.7800	0.8359	7.4500	7.4300	7.4300	7.7800
NIST	D5453	07/25/05	1	84	7.6400	6.3000	7.7400	0.8359	7.6400	7.7400		
NIST	D5453	07/21/05	1	85	5.7000	6.0000	6.1000	0.8359	6.0000	6.1000	6.0000	6.1000
NIST	D3120	07/25/06	1	86	7.3000	7.2000	7.2000	0.8359	7.3000	7.2000	7.3000	7.2000
NIST	D5453	07/27/05	1	87	6.4100	6.4000	6.3700	0.8359	6.4100	6.4000	6.4100	6.4000
NIST	D5453	07/30/05	1	89	7.3000	7.4000	7.2000	0.8359	7.3000	7.4000	7.3000	7.2000
NIST	D5453	07/14/05	1	90	5.5000	6.3000	6.3000	0.8359	6.3000	6.3000	5.5000	6.3000
NIST	D5453	07/28/05	1	91	7.2700	7.3300	7.2200	0.8359	7.3300	7.2200	7.3300	7.2200
NIST	D5453	07/29/05	1	91.1	7.4500	7.3600	7.3300	0.8359	7.4500	7.3600	7.3600	7.3300
NIST	D2622	07/18/05	1	94	9.7000	8.0000	10.2000	0.8359		8.0000		
NIST	D3120	07/27/05	1	95	6.6000	6.5000	6.5000	0.8359	6.6000	6.5000		
NIST	D5453	07/21/05	1	95	5.7000	6.4000	6.1000	0.8359	6.4000	6.1000	5.7000	6.4000
NIST	D5453	07/22/05	1	96	7.4000	7.4000	7.1000	0.8359	7.4000	7.1000	7.4000	7.4000
NIST	D5453	07/18/05	1	97	7.2000	7.1000	7.2000	0.8359	7.1000	7.2000	7.1000	7.2000

**Table B.2. July Fuel #1 Lab Data and Deletions Based On Composite Test Methods for NIST Calibration**

Calibration	Test Method	Run Date	July Sample #	Lab Code	Original Lab Data				After Robust Outlier Deletion		After Gravimetric Deletion	
					Robust Outlier Deletion in Shaded Box				Random Selection of 2 Obs		Random Selection of 2 Obs	
					Measure #1	Measure #2	Measure #3	Density	#1	#2	#1	#2
NIST	D5453	08/12/05	1	99	5.3000	4.6900	4.9200	0.8359	5.3000		5.3000	4.6900
NIST	D5453	07/21/05	1	100	6.5000	7.1000	7.4000	0.8359	6.5000	7.4000		
NIST	D7039	07/26/05	1	102	7.6000	7.6000	7.6000	0.8359	7.6000	7.6000		7.6000
NIST	D2622	07/28/05	1	103	7.1000	7.4000	6.6000	0.8359	7.1000	7.4000		
NIST	D5453	07/27/05	1	103	5.9878	6.4913	6.1320	0.8359	5.9878	6.4913		5.9878
NIST	D7039	07/26/05	1	103	7.0000	7.1000	7.2000	0.8359	7.0000	7.1000		7.0000
NIST	D2622	07/12/05	1	105	8.8400	8.2700	8.2700	0.8359	8.2700	8.2700		8.8400
NIST	D5453	08/03/05	1	105	7.8100	7.2100	7.0400	0.8359	7.8100	7.2100		7.8100
NIST	D7039	07/26/05	1	106	7.7000	7.3000	8.1000	0.8359	7.3000	8.1000		7.7000
NIST	D7039	07/25/05	1	107	7.4000	8.1000	7.9000	0.8359	8.1000	7.9000		8.1000
NIST	D5453	07/15/05	1	108	6.3300	6.1400	6.1600	0.8359	6.3300	6.1600		
NIST	D5453	07/27/05	1	109	8.4000	8.3000	8.4000	0.8359	8.3000	8.4000		
NIST	D7039	07/19/05	1	109	7.9000	7.7000	7.8000	0.8359	7.7000	7.8000		7.7000
NIST	D5453	07/29/05	1	110	7.5500	7.5300	7.3400	0.8359	7.5500	7.5300		7.5500
NIST	D7039	08/03/05	1	111	6.6000	16.9000	6.9000	0.8359	6.6000	6.9000		6.6000
NIST	D5453	07/29/05	1	112	7.2100	7.2300	7.2400	0.8523	7.2100	7.2300		7.2300
NIST	D5453	07/23/05	1	113	7.1000	6.7000	7.2000	0.8359	7.1000	7.2000		7.1000
NIST	D5453	07/27/05	1	114	7.1000	7.2000	7.0000	0.8359	7.1000	7.2000		7.2000
NIST	D5453	07/26/05	1	115	7.0000	7.0000	6.8000	0.8359	7.0000	6.8000		7.0000
NIST	D5453	07/17/05	1	116	6.7600	6.8000	6.9400	0.8359	6.8000	6.9400		6.8000
NIST	D5453	07/19/05	1	117	7.5000	7.3000	7.0600	0.8359	7.3000	7.0600		7.3000
NIST	D5453	07/26/05	1	118	7.5900	7.7100	7.1800	0.8359	7.5900	7.1800		7.5900
NIST	D5453	07/25/05	1	119	7.4600	7.4400	7.3500	0.8359	7.4600	7.4400		7.4400
NIST	D5453	08/09/05	1	120	7.2000	7.3000	7.3000	0.8359	7.2000	7.3000		7.3000
NIST	D2622	07/19/05	1	121	8.5000	8.6000	8.7000	0.8359	8.5000	8.6000		
NIST	D5453	07/28/05	1	122	7.2000	7.6000	7.5000	0.8359	7.2000	7.6000		7.2000
NIST	D2622	07/26/05	1	123	7.0000	7.5000	8.1000	0.8359	7.5000	8.1000		7.0000
NIST	D2622	07/21/05	1	124	8.4000	9.9000	8.5000	0.8359	8.4000	8.5000		
NIST	D2622	07/28/05	1	126	6.5000	6.1000	7.4000	0.8359	6.5000	6.1000		
NIST	D5453	07/28/05	1	126	5.1900	5.2900	5.4000	0.8359	5.2900	5.4000		
NIST	D7039	07/15/05	1	127	7.8000	7.2000	7.7000	0.8359	7.2000	7.7000		7.8000
NIST	D7039	07/26/05	1	128	7.6000	7.8000	7.4000	0.8359	7.6000	7.4000		7.6000
NIST	D5453	07/27/05	1	129	6.9200	7.0000	6.9500	0.8359	7.0000	6.9500		6.9200
NIST	D5453	07/25/05	1	130	7.2000	7.3000	7.2000	0.8359	7.2000	7.2000		7.2000
NIST	D2622	07/27/05	1	131	7.3000	7.3000	7.6000	0.8359	7.3000	7.6000		7.3000
NIST	EDXRF	07/27/05	1	131	8.7000	7.8000	8.0000	0.8359	8.7000	7.8000		8.7000
NIST	D5453	08/25/05	1	132	7.7045	7.0070	6.9710	0.8359	7.0070	6.9710		7.0070
NIST	D2622	07/19/05	1	133	8.9000	8.9000	9.1000	0.8359	8.9000	9.1000		8.9000
NIST	EDXRF	08/29/05	1	134	7.8000	7.8000	9.0000	0.8359	7.8000	9.0000		7.8000
NIST	EDXRF	08/04/05	1	135	7.7000	8.0000	7.9000	0.8359	7.7000	8.0000		8.0000

**Table B.2. July Fuel #1 Lab Data and Deletions Based On Composite Test Methods for NIST Calibration**

Calibration	Test Method	Run Date	July Sample #	Lab Code	Original Lab Data				After Robust Outlier Deletion		After Gravimetric Deletion	
					Robust Outlier Deletion in Shaded Box				Random Selection of 2 Obs		Random Selection of 2 Obs	
					Measure #1	Measure #2	Measure #3	Density	#1	#2	#1	#2
NIST	D2622	07/19/05	1	136	8.2000	7.4000	8.4000	0.8359	7.4000	8.4000	7.4000	8.4000
NIST	EDXRF	07/15/05	1	136	7.4000	7.9000	8.3000	0.8359	7.4000	7.9000	7.9000	8.3000
NIST	D5453	07/18/05	1	137	7.4400	7.5600	7.3200	0.8359	7.5600	7.3200	7.4400	7.3200
NIST	EDXRF	07/15/05	1	137	7.0000	8.2000	7.8000	0.8359	8.2000	7.8000		
NIST	D5453	07/22/05	1	138	7.4000	7.3000	7.5000	0.8359	7.4000	7.5000	7.4000	7.3000
NIST	D2622	07/15/05	1	139	9.0000	9.0000	9.8000	0.8359	9.0000	9.0000	9.0000	9.8000
NIST	D5453	07/20/05	1	139	11.0100	11.4000	10.2000	0.8359				
NIST	D2622	07/20/05	1	140	7.6000	7.2000	6.6000	0.8359	7.6000	7.2000	7.6000	6.6000
NIST	EDXRF	08/12/05	1	141	7.9000	8.5000	9.4000	0.8359	7.9000	9.4000	7.9000	8.5000
NIST	D5453	07/14/05	1	143	7.4900	7.2600	7.2600	0.8359	7.4900	7.2600	7.4900	7.2600
NIST	D3120	07/25/05	1	144	7.5800	7.9000	7.3000	0.8359	7.5800	7.9000	7.5800	7.9000
NIST	D2622	07/24/05	1	145	8.8000	8.8000	8.2000	0.8523	8.8000	8.8000		
NIST	D5453	08/16/05	1	147	7.1000	7.4000	7.4000	0.8359	7.1000	7.4000	7.1000	7.4000
NIST	D5453	07/15/05	1	148	7.7100	7.5000	7.7000	0.8359	7.7100	7.5000	7.7100	7.5000
NIST	D7039	08/10/05	1	148	7.9000	7.7000	6.9000	0.8359	7.9000	6.9000	7.9000	7.7000
NIST	D5453	07/20/05	1	149	7.5760	7.4310	7.2150	0.8359	7.5760	7.4310	7.5760	7.4310
NIST	D5453	08/01/05	1	151	6.8000	6.6000	6.5000	0.8359	6.8000	6.6000	6.8000	6.5000
NIST	D7039	07/28/05	1	151	7.3000	7.6000	7.1000	0.8523	7.6000	7.1000	7.3000	7.1000
NIST	D5453	07/27/05	1	152	5.1200	5.3600	5.5700	0.8359	5.3600	5.5700	5.1200	5.5700
NIST	D5453	07/15/05	1	153	7.4200	7.3000	7.2500	0.8359	7.3000	7.2500	7.4200	7.3000
NIST	D5453	07/04/05	1	154	7.7700	7.5600	7.4400	0.8359	7.7700	7.4400	7.5600	7.4400
NIST	D5453	07/28/05	1	156	6.8400	7.5700	7.2500	0.8359	7.5700	7.2500	6.8400	7.5700
NIST	D5453	07/21/05	1	158	8.5500	8.5100	8.2100	0.8359	8.5100	8.2100		
NIST	D5453	08/08/05	1	159	6.8800	6.2500	6.5200	0.8359	6.2500	6.5200	6.8800	6.2500
NIST	D7039	08/04/05	1	160	8.6000	9.0000	8.8000	0.8359	9.0000	8.8000		
NIST	D5453	07/24/05	1	161	7.2900	7.6500	6.9800	0.8359	7.2900	6.9800	7.2900	7.6500
NIST	D2622	07/31/05	1	162	9.1000	8.6700	8.5600	0.8359	9.1000	8.5600	8.6700	8.5600
NIST	D5453	07/30/05	1	162	7.3100	7.2100	7.2300	0.8359	7.2100	7.2300	7.3100	7.2100

**Table B.3. July Fuel #2 Lab Data and Deletions Based on Composite Test Methods for In-House Calibration**

Calibration	Test Method	Run Date	July Sample #	Lab Code	Original Lab Data Robust Outlier Deletion in Shaded Box				After Robust Outlier Deletion Random Selection of 2 Obs		After Gravimetric Deletion Random Selection of 2 Obs	
					Measure #1	Measure #2	Measure #3	Density	#1	#2	#1	#2
In-House	D5453	07/13/05	2	1	10.2000	10.1000	10.0000	0.8371	10.1000	10.0000	10.2000	10.0000
In-House	D5453	07/12/05	2	2	11.0900	10.9000	11.2300	0.8371	11.0900	10.9000	10.9000	11.2300
In-House	D2622	07/13/05	2	3	12.5300	12.6900	13.0300	0.8371	12.5300	13.0300		
In-House	D5453	07/21/05	2	4	11.5600	11.6000	11.1100	0.8371	11.6000	11.1100	11.6000	11.1100
In-House	D2622	07/15/05	2	5	9.5000	9.0000	10.1000	0.8371	9.0000	10.1000	9.5000	10.1000
In-House	D7039	07/27/05	2	6	11.1000	11.9000	11.6000	0.8371	11.9000	11.6000	11.1000	11.9000
In-House	D7039	07/21/05	2	7	12.0000	11.5000	12.0000	0.8371	11.5000	12.0000	11.5000	12.0000
In-House	D2622	07/13/05	2	8	12.8700	12.6600	13.1300	0.8371	12.6600	13.1300	12.6600	13.1300
In-House	D5453	07/13/05	2	8	10.9800	11.0200	11.1800	0.8371	11.0200	11.1800	10.9800	11.1800
In-House	D5453	07/15/05	2	9	10.2800	10.0400	10.3400	0.8371	10.0400	10.3400	10.2800	10.3400
In-House	D5453	07/28/05	2	11	10.5000	11.1800	10.8800	0.8371	11.1800	10.8800	10.5000	11.1800
In-House	D5453	07/27/05	2	12	10.3900	10.4800	10.3100	0.8371	10.3900	10.3100	10.3900	10.3100
In-House	D5453	07/20/05	2	13	11.1200	11.3300	11.5000	0.8371	11.1200	11.5000	11.1200	11.5000
In-House	D5453	07/26/05	2	15	10.4000	10.7000	10.6000	0.8371	10.4000	10.7000	10.7000	10.6000
In-House	D5453	07/19/05	2	16	10.8400	11.1700	11.0000	0.8371	10.8400	11.1700	10.8400	11.1700
In-House	D5453	07/20/05	2	18	11.2800	10.6200	9.9200	0.8371	10.6200	9.9200	10.6200	9.9200
In-House	D5453	08/03/05	2	19	10.0000	9.9000	9.9000	0.8371	9.9000	9.9000	10.0000	9.9000
In-House	D5453	08/02/05	2	21	10.1500	9.9500	10.1100	0.8371	10.1500	9.9500	10.1500	10.1100
In-House	D5453	08/10/05	2	23	9.7000	10.0700	10.2900	0.8371	9.7000	10.0700		
In-House	D5453	07/13/05	2	24	10.3600	9.7100	11.7800	0.8371	10.3600	11.7800		
In-House	D5453	08/30/05	2	25	10.2600	10.1200	10.1600	0.8371	10.2600	10.1200		
In-House	D5453	07/19/05	2	26	11.3200	10.8200	10.6800	0.8371	11.3200	10.6800	11.3200	10.6800
In-House	D5453	07/25/05	2	27	10.7200	10.5200	10.4000	0.8371	10.7200	10.5200	10.5200	10.4000
In-House	D2622	07/22/05	2	28	12.2000	12.2000	13.0000	0.8371	12.2000	13.0000	12.2000	13.0000
In-House	D5453	07/19/05	2	29	9.7100	9.6660	9.7320	0.8371	9.7100	9.6660		
In-House	D5453	07/12/05	2	30	11.0000	11.1000	10.9000	0.8371	11.0000	11.1000	11.0000	11.1000
In-House	D5453	07/13/05	2	31	10.7000	10.4000	10.6000	0.8371	10.7000	10.6000	10.7000	10.6000
In-House	D5453	07/25/05	2	32	11.2500	11.2200	11.1500	0.8371	11.2500	11.2200	11.2200	11.1500
In-House	D5453	08/19/05	2	33	10.3900	10.5000	10.5400	0.8371	10.3900	10.5400	10.3900	10.5000
In-House	D5453	07/26/05	2	35	9.7600	9.6400	9.6500	0.8695	9.6400	9.6500		
In-House	D5453	07/15/05	2	36	8.9000	8.2000	8.5000	0.8371	8.2000	8.5000		
In-House	D5453	07/15/05	2	37	10.4000	10.3000	10.1000	0.8371	10.4000	10.1000	10.3000	10.1000
In-House	D5453	07/25/05	2	38	9.8000	10.0000	10.2000	0.8371	9.8000	10.2000	9.8000	10.0000
In-House	D5453	07/28/05	2	39	12.8800	12.1900	11.0100	0.8371	12.1900	11.0100		
In-House	D2622	08/02/05	2	41	11.7000	13.4000	12.2000	0.8371	11.7000	12.2000		
In-House	D5453	08/03/05	2	41	10.4000	10.1300	10.9400	0.8371	10.1300	10.9400	10.4000	10.1300
In-House	D2622	08/31/05	2	EPA	12.1000	12.6000	14.0000	0.8371	12.1000	12.6000	12.1000	14.0000
In-House	D5453	08/30/05	2	EPA	11.0000	11.0000	11.2000	0.8371	11.0000	11.0000	11.0000	11.0000
In-House	D7039	08/02/05	2	EPA	10.4000	10.2000	10.6000	0.8371	10.4000	10.6000	10.2000	10.6000
In-House	D7039	07/21/05	2	47	10.4000	10.4000	10.1000	0.8371	10.4000	10.1000	10.4000	10.1000
In-House	D5453	07/19/05	2	48	10.0300	11.4900	10.1600	0.8371	10.0300	10.1600	10.0300	10.1600
In-House	D2622	08/10/05	2	50	9.5000	10.8000	11.2000	0.8371	10.8000	11.2000	9.5000	10.8000
In-House	D5453	07/25/05	2	51	10.9000	10.9000	11.0000	0.8371	10.9000	10.9000	10.9000	11.0000
In-House	D5453	07/27/05	2	52	9.5000	9.3200	9.0700	0.8371	9.3200	9.0700		
In-House	D2622	07/26/05	2	53	11.2000	11.7000	11.9000	0.8371	11.2000	11.9000	11.2000	11.9000
In-House	D5453	07/19/05	2	54	10.0000	9.9000	10.0000	0.8371	9.9000	10.0000		
In-House	D2622	07/21/05	2	55	10.6000	10.9000	10.4000	0.8371	10.9000	10.4000	10.6000	10.4000

**Table B.3. July Fuel #2 Lab Data and Deletions Based on Composite Test Methods for In-House Calibration**

Calibration	Test Method	Run Date	July Sample #	Lab Code	Original Lab Data Robust Outlier Deletion in Shaded Box				After Robust Outlier Deletion Random Selection of 2 Obs		After Gravimetric Deletion Random Selection of 2 Obs	
					Measure #1	Measure #2	Measure #3	Density	#1	#2	#1	#2
In-House	D5453	07/21/05	2	56	10.0000	10.0000	10.2000	0.8371	10.0000	10.2000	10.0000	10.2000
In-House	D5453	07/26/05	2	59	10.4700	10.5400	10.4300	0.8371	10.4700	10.4300	10.5400	10.4300
In-House	D7039	07/28/05	2	60	11.3000	11.5000	11.2000	0.8371	11.5000	11.2000	11.5000	11.2000
In-House	D5453	07/27/05	2	61	10.0600	9.8700	9.8700	0.8371	10.0600	9.8700	9.8700	9.8700
In-House	D5453	08/30/05	2	CARB	9.8700	9.7500	9.6700	0.8371	9.8700	9.7500		
In-House	D5453	07/29/05	2	63	12.6900	12.1900	12.7800	0.8371	12.6900	12.1900		
In-House	D5453	08/02/05	2	64	10.1000	10.0000	9.4000	0.8371	10.1000	10.0000	10.0000	9.4000
In-House	D5453	08/01/05	2	66	11.4300	11.4100	11.4800	0.8371	11.4100	11.4800		
In-House	D2622	07/18/05	2	67	12.1000	12.8000	12.4000	0.8371	12.1000	12.4000	12.8000	12.4000
In-House	D5453	07/15/05	2	68	8.3600	7.9400	8.4000	0.8371	8.3600	8.4000	8.3600	8.4000
In-House	D5453	07/29/05	2	71	10.4200	10.3200	10.3700	0.8371	10.3200	10.3700	10.3200	10.3700
In-House	D5453	07/19/05	2	72	10.6000	10.7000	10.4000	0.8371	10.6000	10.7000	10.6000	10.4000
In-House	D2622	07/13/05	2	73	10.9000	11.0000	11.6000	0.8371	10.9000	11.0000	10.9000	11.6000
In-House	D5453	07/14/05	2	73	10.5000	10.4000	10.4000	0.8371	10.5000	10.4000	10.4000	10.4000
In-House	D5453	07/13/05	2	75	9.7200	9.6200	8.9000	0.8371	9.7200	8.9000	9.6200	8.9000
In-House	D5453	07/15/05	2	76	11.2000	11.5300	11.5000	0.8371	11.2000	11.5300	11.5300	11.5000
In-House	D5453	07/25/05	2	78	11.5400	11.4100	11.0000	0.8371	11.5400	11.4100		
In-House	D5453	08/09/05	2	81	8.1000	8.3000	8.4000	0.8371	8.1000	8.3000	8.1000	8.4000
In-House	D5453	07/19/05	2	82	10.0800	10.1700	10.0500	0.8371	10.1700	10.0500	10.0800	10.0500
In-House	D5453	07/14/05	2	83	10.7700	10.5600	10.7000	0.8371	10.7700	10.7000	10.5600	10.7000
In-House	D5453	07/22/05	2	84	8.9400	9.3500	9.4600	0.8371	8.9400	9.3500	9.3500	9.4600
In-House	D5453	07/20/05	2	85	9.9000	9.8000	10.0000	0.8371	9.9000	9.8000	9.9000	10.0000
In-House	D3120	07/19/05	2	86	10.7000	10.6000	10.9000	0.8371	10.7000	10.6000	10.6000	10.9000
In-House	D5453	07/27/05	2	87	9.5700	9.8600	9.3800	0.8371	9.5700	9.8600	9.8600	9.3800
In-House	D5453	07/30/05	2	89	10.3000	10.5000	10.5000	0.8371	10.3000	10.5000	10.3000	10.5000
In-House	D5453	07/14/05	2	90	9.1000	9.2000	9.2000	0.8371	9.2000	9.2000	9.1000	9.2000
In-House	D5453	07/27/05	2	91	10.8100	10.8600	10.7900	0.8371	10.8600	10.7900	10.8100	10.8600
In-House	D5453	07/25/05	2	91.1	10.7100	10.5100	10.6000	0.8371	10.7100	10.5100	10.7100	10.6000
In-House	D2622	08/02/05	2	94	10.7000	10.6000	9.7000	0.8371	10.7000	9.7000		
In-House	D3120	07/25/05	2	95	9.4000	9.0000	9.1000	0.8371	9.0000	9.1000		
In-House	D5453	07/25/05	2	95	8.4000	8.2000	8.8000	0.8371	8.4000	8.2000	8.2000	8.8000
In-House	D5453	07/21/05	2	96	10.9000	11.6000	10.4000	0.8371	10.9000	10.4000	10.9000	10.4000
In-House	D5453	07/18/05	2	97	10.3000	10.2000	10.2000	0.8371	10.2000	10.2000	10.2000	10.2000
In-House	D5453	08/15/05	2	99	8.7900	8.6400	8.4200	0.8371	8.7900	8.4200	8.6400	8.4200
In-House	D5453	07/18/05	2	100	10.0000	9.9000	10.2000	0.8371	10.0000	9.9000	10.0000	10.2000
In-House	D7039	07/26/05	2	102	10.7000	10.8000	11.3000	0.8371	10.7000	11.3000	10.8000	11.3000
In-House	D2622	07/26/05	2	103	12.5720	12.2160	11.6590	0.8371	12.5720	11.6590	12.2160	11.6590
In-House	D5453	07/26/05	2	103	9.8751	10.0287	9.4474	0.8371	9.8751	9.4474	10.0287	9.4474
In-House	D7039	07/25/05	2	103	11.6000	10.7000	10.7000	0.8371	11.6000	10.7000	10.7000	10.7000
In-House	D2622	07/12/05	2	105	12.3000	11.9000	12.2000	0.8371	12.3000	12.2000	12.3000	12.2000
In-House	D5453	08/01/05	2	105	10.6100	10.7300	10.6900	0.8371	10.6100	10.7300	10.7300	10.6900
In-House	D7039	07/26/05	2	106	10.7000	11.3000	11.0000	0.8371	10.7000	11.0000	10.7000	11.3000
In-House	D7039	07/20/05	2	107	10.1000	10.8000	11.0000	0.8371	10.1000	11.0000	10.8000	11.0000
In-House	D5453	07/15/05	2	108	9.3450	9.4950	9.2150	0.8371	9.3450	9.2150		
In-House	D5453	07/19/05	2	109	9.6000	9.7000	9.8000	0.8371	9.7000	9.8000		
In-House	D7039	07/18/05	2	109	9.8000	9.9000	9.6000	0.8371	9.8000	9.6000		
In-House	D5453	07/28/05	2	110	11.1800	10.8500	10.9900	0.8371	10.8500	10.9900	10.8500	10.9900

**Table B.3. July Fuel #2 Lab Data and Deletions Based on Composite Test Methods for In-House Calibration**

Calibration	Test Method	Run Date	July Sample #	Lab Code	Original Lab Data Robust Outlier Deletion in Shaded Box				After Robust Outlier Deletion Random Selection of 2 Obs			After Gravimetric Deletion Random Selection of 2 Obs	
					Measure #1	Measure #2	Measure #3	Density	#1	#2	#3	#1	#2
In-House	D7039	08/02/05	2	111	8.6000	7.9000	8.8000	0.8371	8.6000	8.8000			
In-House	D5453	07/29/05	2	112	11.5000	11.9000	11.8000	0.8695	11.9000	11.8000		11.5000	11.8000
In-House	D5453	07/21/05	2	113	9.8000	9.9000	9.8000	0.8371	9.8000	9.8000			
In-House	D5453	07/25/05	2	114	11.0000	10.8000	10.9000	0.8371	11.0000	10.8000		10.8000	10.9000
In-House	D5453	07/25/05	2	115	11.5000	11.3000	11.5000	0.8371	11.5000	11.3000		11.3000	11.5000
In-House	D5453	07/16/05	2	116	10.8700	10.9200	11.1200	0.8371	10.8700	10.9200		10.8700	10.9200
In-House	D5453	07/19/05	2	117	10.8500	10.8600	10.6800	0.8371	10.8500	10.6800		10.8500	10.6800
In-House	D5453	07/25/05	2	118	11.3600	11.2000	10.5900	0.8371	11.3600	10.5900		11.3600	11.2000
In-House	D5453	07/25/05	2	119	10.3800	10.3100	10.2500	0.8371	10.3100	10.2500		10.3800	10.3100
In-House	D5453	08/08/05	2	120	10.7000	10.7000	10.8000	0.8371	10.7000	10.8000		10.7000	10.8000
In-House	D2622	07/19/05	2	121	11.3000	11.0000	11.2000	0.8371	11.3000	11.2000		11.0000	11.2000
In-House	D5453	07/27/05	2	122	10.8000	10.7000	10.5000	0.8371	10.7000	10.5000		10.8000	10.7000
In-House	D2622	07/25/05	2	123	10.9000	10.8000	10.9000	0.8371	10.8000	10.9000		10.9000	10.8000
In-House	D2622	07/13/05	2	124	11.9000	11.8000	11.0000	0.8371	11.9000	11.8000		11.8000	11.0000
In-House	D2622	07/28/05	2	126	8.6000	9.3000	8.3000	0.8371	9.3000	8.3000		8.6000	9.3000
In-House	D5453	07/28/05	2	126	8.2700	8.3300	6.8800	0.8371	8.2700	8.3300			
In-House	D7039	07/15/05	2	127	11.4000	10.8000	10.5000	0.8371	10.8000	10.5000		10.8000	10.5000
In-House	D7039	07/25/05	2	128	10.8000	11.0000	10.7000	0.8371	10.8000	10.7000		11.0000	10.7000
In-House	D5453	07/21/05	2	129	10.9800	11.0700	11.0400	0.8371	10.9800	11.0700		11.0700	11.0400
In-House	D5453	07/22/05	2	130	10.4000	10.6000	10.5000	0.8371	10.6000	10.5000		10.4000	10.5000
In-House	D2622	07/22/05	2	131	11.3000	10.9000	10.8000	0.8371	11.3000	10.8000		11.3000	10.9000
In-House	EDXRF	07/22/05	2	131	10.4000	11.2000	11.0000	0.8371	10.4000	11.2000		11.2000	11.0000
In-House	D5453	08/25/05	2	132	10.5070	10.8520	10.6610	0.8371	10.8520	10.6610		10.5070	10.6610
In-House	D2622	07/19/05	2	133	11.8000	12.0000	12.1000	0.8371	12.0000	12.1000		11.8000	12.0000
In-House	EDXRF	08/30/05	2	134	11.5000	11.3000	11.6000	0.8371	11.5000	11.6000		11.5000	11.3000
In-House	EDXRF	08/04/05	2	135	11.0000	11.2000	11.1000	0.8371	11.0000	11.1000		11.0000	11.2000
In-House	D2622	07/19/05	2	136	10.9000	10.2000	10.4000	0.8371	10.2000	10.4000		10.2000	10.4000
In-House	EDXRF	07/15/05	2	136	11.4000	11.3000	11.3000	0.8371	11.4000	11.3000		11.4000	11.3000
In-House	D5453	07/15/05	2	137	10.4800	10.3900	9.5900	0.8371	10.4800	10.3900			
In-House	EDXRF	07/15/05	2	137	11.6000	10.5000	11.6000	0.8371	11.6000	10.5000		11.6000	10.5000
In-House	D5453	07/22/05	2	138	11.0000	10.7000	11.0000	0.8371	10.7000	11.0000		11.0000	11.0000
In-House	D2622	07/13/05	2	139	13.1300	12.5800	11.8000	0.8371	13.1300	11.8000		13.1300	12.5800
In-House	D5453	07/13/05	2	139	12.0800	11.9700	12.1300	0.8371	12.0800	11.9700			
In-House	D2622	07/19/05	2	140	11.7000	11.4000	11.1000	0.8371	11.4000	11.1000		11.4000	11.1000
In-House	EDXRF	08/09/05	2	141	10.8000	11.1000	11.3000	0.8371	10.8000	11.1000		11.1000	11.3000
In-House	D5453	07/14/05	2	143	10.6600	10.6600	10.9400	0.8371	10.6600	10.6600		10.6600	10.9400
In-House	D3120	07/25/05	2	144	11.0000	10.3000	10.4400	0.8371	11.0000	10.4400			
In-House	D2622	07/24/05	2	145	10.8000	10.9000	10.6000	0.8695	10.8000	10.9000			
In-House	D5453	08/16/05	2	147	9.8000	9.8000	9.8000	0.8371	9.8000	9.8000			
In-House	D5453	07/15/05	2	148	11.1600	11.4500	11.2900	0.8371	11.4500	11.2900		11.4500	11.2900
In-House	D7039	08/08/05	2	148	10.8000	10.0000	10.3000	0.8371	10.8000	10.0000		10.8000	10.0000
In-House	D5453	07/27/05	2	149	10.8160	10.7800	10.5970	0.8371	10.8160	10.7800		10.7800	10.5970
In-House	D5453	08/01/05	2	151	10.8000	10.5000	10.2000	0.8371	10.5000	10.2000		10.8000	10.5000
In-House	D7039	07/28/05	2	151	10.7000	10.7000	10.0000	0.8695	10.7000	10.0000		10.7000	10.0000
In-House	D5453	07/22/05	2	152	9.1500	9.3500	9.1900	0.8371	9.1500	9.1900		9.1500	9.1900
In-House	D5453	07/14/05	2	153	12.1400	11.9900	11.9500	0.8371	12.1400	11.9900		11.9900	11.9500
In-House	D5453	07/26/05	2	154	11.2000	10.8500	10.8460	0.8371	11.2000	10.8460		10.8500	10.8460



**Table B.3. July Fuel #2 Lab Data and Deletions Based on Composite Test Methods for In-House Calibration**

Calibration	Test Method	Run Date	July Sample #	Lab Code	Original Lab Data Robust Outlier Deletion in Shaded Box				After Robust Outlier Deletion Random Selection of 2 Obs		After Gravimetric Deletion Random Selection of 2 Obs	
					Measure #1	Measure #2	Measure #3	Density	#1	#2	#1	#2
In-House	D5453	07/28/05	2	156	9.8000	9.6800	9.9200	0.8371	9.6800	9.9200		
In-House	D5453	07/20/05	2	158	13.7100	13.5500	13.3900	0.8371				
In-House	D5453	08/08/05	2	159	11.5600	11.4700	11.2700	0.8371	11.5600	11.4700	11.5600	11.2700
In-House	D7039	08/03/05	2	160	10.3000	10.7000	10.6000	0.8371	10.7000	10.6000	10.7000	10.6000
In-House	D5453	07/24/05	2	161	12.2500	11.9100	11.5900	0.8371	11.9100	11.5900		
In-House	D2622	07/31/05	2	162	10.4700	10.0500	10.8800	0.8371	10.0500	10.8800		
In-House	D5453	07/29/05	2	162	10.7100	10.8200	10.9600	0.8371	10.8200	10.9600	10.7100	10.8200

**Table B.4. July Fuel #2 Lab Data and Deletions Based on Composite Test Methods for NIST Calibration**

Calibration	Test Method	Run Date	July Sample #	Lab Code	Original Lab Data Robust Outlier Deletion in Shaded Box				After Robust Outlier Deletion Random Selection of 2 Obs		After Gravimetric Deletion Random Selection of 2 Obs	
					Measure #1	Measure #2	4.0000	Density	#1	#2	#1	#2
NIST	D5453	07/13/05	2	1	10.6000	10.6000	10.5000	0.8371	10.6000	10.6000	10.6000	10.6000
NIST	D5453	07/12/05	2	2	10.7800	10.5900	10.7100	0.8371	10.7800	10.7100	10.7800	10.7100
NIST	D2622	07/13/05	2	3	12.4700	12.4500	11.9600	0.8371	12.4500	11.9600		
NIST	D5453	07/21/05	2	4	9.9800	9.3900	8.6100	0.8371	9.3900	8.6100	9.9800	8.6100
NIST	D2622	07/15/05	2	5	11.4000	10.9000	12.1000	0.8371	11.4000	12.1000		
NIST	D7039	07/27/05	2	6	10.7000	11.0000	10.8000	0.8371	11.0000	10.8000	10.7000	10.8000
NIST	D7039	07/21/05	2	7	11.4000	10.9000	10.8000	0.8371	11.4000	10.9000	11.4000	10.9000
NIST	D2622	07/13/05	2	8	12.3000	11.9000	11.6000	0.8371	12.3000	11.6000	12.3000	11.6000
NIST	D5453	07/13/05	2	8	10.3900	10.5000	10.4000	0.8371	10.5000	10.4000	10.3900	10.5000
NIST	D5453	07/18/05	2	9	10.2100	10.2200	10.2300	0.8371	10.2100	10.2200	10.2200	10.2300
NIST	D5453	07/29/05	2	11	10.4800	10.5000	10.5200	0.8371	10.4800	10.5000	10.5000	10.5200
NIST	D5453	07/28/05	2	12	10.7000	10.6000	10.2000	0.8371	10.7000	10.6000	10.7000	10.6000
NIST	D5453	07/21/05	2	13	10.5600	10.5300	10.6500	0.8371	10.5600	10.5300	10.5600	10.5300
NIST	D5453	07/28/05	2	15	10.6000	10.3000	10.5000	0.8371	10.3000	10.5000	10.3000	10.5000
NIST	D5453	07/21/05	2	16	9.9300	9.8500	10.0400	0.8371	9.8500	10.0400	9.9300	10.0400
NIST	D5453	07/20/05	2	18	10.7300	11.0400	10.6500	0.8371	11.0400	10.6500	11.0400	10.6500
NIST	D5453	08/05/05	2	19	10.7000	10.7000	10.9000	0.8371	10.7000	10.7000	10.7000	10.9000
NIST	D5453	08/03/05	2	21	10.3900	10.2400	10.2300	0.8371	10.2400	10.2300	10.3900	10.2400
NIST	D5453	08/11/05	2	23	10.6700	10.7300	10.7200	0.8371	10.6700	10.7200	10.6700	10.7200
NIST	D5453	07/13/05	2	24	10.4900	10.2200	12.0200	0.8371	10.4900	10.2200	10.4900	12.0200
NIST	D5453	08/31/05	2	25	10.8100	10.8800	10.8400	0.8371	10.8100	10.8400	10.8100	10.8400
NIST	D5453	07/21/05	2	26	11.0700	11.1200	10.8700	0.8371	11.1200	10.8700	11.1200	10.8700
NIST	D5453	07/25/05	2	27	10.3500	10.4300	10.3100	0.8371	10.3500	10.3100	10.3500	10.4300
NIST	D2622	07/14/05	2	28	12.0000	12.1000	12.9000	0.8371	12.0000	12.9000	12.1000	12.9000
NIST	D5453	07/20/05	2	29	9.8840	9.7710	9.7010	0.8371	9.7710	9.7010		
NIST	D5453	07/13/05	2	30	11.1000	11.2000	11.1000	0.8371	11.1000	11.1000	11.1000	11.2000
NIST	D5453	07/13/05	2	31	10.6000	10.5000	10.6000	0.8371	10.6000	10.5000	10.6000	10.6000
NIST	D5453	07/26/05	2	32	11.4600	11.1800	11.2200	0.8371	11.1800	11.2200	11.4600	11.1800
NIST	D5453	08/22/05	2	33	14.2500	14.0300	13.8700	0.8371				
NIST	D5453	07/20/05	2	35	10.1400	10.4800	10.2800	0.8695	10.1400	10.2800	10.1400	10.4800
NIST	D5453	07/15/05	2	36	9.5000	9.2000	9.1000	0.8371	9.5000	9.1000		
NIST	D5453	07/21/05	2	37	11.1000	11.5000	11.8000	0.8371	11.1000	11.8000	11.5000	11.8000
NIST	D5453	07/26/05	2	38	10.4000	10.7000	10.8000	0.8371	10.4000	10.8000	10.4000	10.7000
NIST	D5453	07/28/05	2	39	13.0500	12.8600	12.5100	0.8371	13.0500	12.5100		
NIST	D2622	08/02/05	2	41	11.7000	12.7000	12.5000	0.8371	11.7000	12.7000	11.7000	12.7000
NIST	D5453	08/04/05	2	41	11.9900	12.1600	11.5100	0.8371	11.9900	11.5100	11.9900	12.1600
NIST	D2622	09/01/05	2	EPA	12.7000	12.8000	12.7000	0.8371	12.7000	12.8000		
NIST	D5453	08/30/05	2	EPA	10.9000	11.1000	11.1000	0.8371	10.9000	11.1000	11.1000	11.1000
NIST	D7039	08/03/05	2	EPA	10.6000	10.0000	10.8000	0.8371	10.0000	10.8000	10.6000	10.8000
NIST	D7039	07/22/05	2	47	10.8000	10.6000	10.7000	0.8371	10.8000	10.7000	10.8000	10.7000
NIST	D5453	07/19/05	2	48	9.2600	9.8300	9.1700	0.8371	9.2600	9.1700		
NIST	D2622	08/10/05	2	50	9.9000	11.6000	11.4000	0.8371	9.9000	11.4000	9.9000	11.4000
NIST	D5453	07/26/05	2	51	10.8000	10.6000	10.7000	0.8371	10.8000	10.7000	10.8000	10.7000
NIST	D5453	07/28/05	2	52	9.7900	9.6200	9.5900	0.8371	9.7900	9.6200	9.7900	9.5900
NIST	D2622	07/28/05	2	53	11.4000	11.4000	11.2000	0.8371	11.4000	11.4000	11.4000	11.2000
NIST	D5453	07/21/05	2	54	10.4000	10.4000	10.4000	0.8371	10.4000	10.4000	10.4000	10.4000
NIST	D2622	07/23/05	2	55	11.5000	10.5000	10.8000	0.8371	11.5000	10.5000	11.5000	10.8000

**Table B.4. July Fuel #2 Lab Data and Deletions Based on Composite Test Methods for NIST Calibration**

Calibration	Test Method	Run Date	July Sample #	Lab Code	Original Lab Data Robust Outlier Deletion in Shaded Box				After Robust Outlier Deletion Random Selection of 2 Obs		After Gravimetric Deletion Random Selection of 2 Obs	
					Measure #1	Measure #2	4.0000	Density	#1	#2	#1	#2
NIST	D5453	07/22/05	2	56	10.0000	10.1000	10.0000	0.8371	10.0000	10.1000	10.0000	10.0000
NIST	D5453	08/31/05	2	59	11.6500	11.7000	11.2700	0.8371	11.6500	11.7000	11.6500	11.2700
NIST	D7039	07/29/05	2	60	10.7000	10.7000	10.8000	0.8371	10.7000	10.7000	10.7000	10.7000
NIST	D5453	07/27/05	2	61	10.7900	10.5700	10.6700	0.8371	10.7900	10.5700	10.5700	10.6700
NIST	D5453	08/31/05	2	CARB	9.9000	10.1000	9.9000	0.8371	9.9000	10.1000	9.9000	9.9000
NIST	D5453	07/29/05	2	63	13.4000	13.2700	12.6600	0.8371				
NIST	D5453	07/18/05	2	64	10.7000	10.2000	10.3000	0.8371	10.7000	10.2000	10.2000	10.3000
NIST	D5453	08/01/05	2	66	11.6000	11.6000	11.6000	0.8371	11.6000	11.6000		
NIST	D2622	07/25/05	2	67	11.7290	11.1000	11.4130	0.8371	11.7290	11.1000	11.7290	11.4130
NIST	D5453	07/15/05	2	68	11.0300	10.8200	10.9100	0.8371	11.0300	10.8200	11.0300	10.8200
NIST	D5453	07/30/05	2	71	10.6000	10.6000	10.5800	0.8371	10.6000	10.5800	10.6000	10.6000
NIST	D5453	07/19/05	2	72	10.7000	10.5000	10.6000	0.8371	10.7000	10.6000	10.7000	10.5000
NIST	D2622	07/13/05	2	73	11.0000	10.9000	11.4000	0.8371	11.0000	10.9000	11.0000	10.9000
NIST	D5453	07/14/05	2	73	10.3000	10.6000	10.6000	0.8371	10.3000	10.6000	10.3000	10.6000
NIST	D5453	08/02/05	2	75	12.6000	10.8000	14.1000	0.8371	12.6000	10.8000	12.6000	10.8000
NIST	D5453	07/19/05	2	76	10.5000	10.7400	10.6800	0.8371	10.7400	10.6800	10.5000	10.7400
NIST	D5453	07/25/05	2	78	11.0000	10.7700	10.9300	0.8371	10.7700	10.9300		
NIST	D5453	08/10/05	2	81	9.2000	8.8000	9.2000	0.8371	9.2000	8.8000	8.8000	9.2000
NIST	D5453	07/26/05	2	82	9.7200	9.6500	9.5800	0.8371	9.7200	9.5800	9.7200	9.6500
NIST	D5453	07/14/05	2	83	11.3000	11.3000	11.0100	0.8371	11.3000	11.0100	11.3000	11.3000
NIST	D5453	07/25/05	2	84	10.8000	9.9600	10.0700	0.8371	10.8000	10.0700		
NIST	D5453	07/21/05	2	85	9.8000	9.7000	9.7000	0.8371	9.8000	9.7000	9.7000	9.7000
NIST	D3120	07/25/06	2	86	10.5000	10.3000	10.2000	0.8371	10.5000	10.2000	10.3000	10.2000
NIST	D5453	07/27/05	2	87	10.2000	10.1700	10.1200	0.8371	10.2000	10.1700	10.2000	10.1200
NIST	D5453	07/30/05	2	89	10.9000	10.8000	11.0000	0.8371	10.9000	11.0000	10.8000	11.0000
NIST	D5453	07/14/05	2	90	9.1000	8.9000	9.0000	0.8371	8.9000	9.0000	9.1000	8.9000
NIST	D5453	07/28/05	2	91	10.7400	10.6400	10.3800	0.8371	10.7400	10.6400	10.7400	10.3800
NIST	D5453	07/29/05	2	91.1	10.9000	10.9400	10.8800	0.8371	10.9000	10.9400	10.9000	10.8800
NIST	D2622	07/18/05	2	94	10.7000	12.2000	9.5000	0.8371	10.7000	12.2000		
NIST	D3120	07/27/05	2	95	9.3000	9.4000	9.3000	0.8371	9.3000	9.3000		
NIST	D5453	07/21/05	2	95	9.7000	10.0000	9.9000	0.8371	9.7000	10.0000	10.0000	9.9000
NIST	D5453	07/22/05	2	96	10.8000	11.2000	11.3000	0.8371	10.8000	11.3000	10.8000	11.2000
NIST	D5453	07/18/05	2	97	10.6000	10.5000	10.4000	0.8371	10.5000	10.4000	10.5000	10.4000
NIST	D5453	08/12/05	2	99	8.2300	7.7400	8.2700	0.8371			8.2300	7.7400
NIST	D5453	07/21/05	2	100	11.4000	11.7000	12.5000	0.8371	11.4000	12.5000		
NIST	D7039	07/26/05	2	102	10.9000	10.8000	11.5000	0.8371	10.9000	10.8000	10.9000	10.8000
NIST	D2622	07/28/05	2	103	10.2000	11.1000	11.9000	0.8371	10.2000	11.1000		
NIST	D5453	07/27/05	2	103	10.1106	9.9054	9.6090	0.8371	10.1106	9.9054	9.9054	9.6090
NIST	D7039	07/26/05	2	103	10.7000	10.8000	10.5000	0.8371	10.7000	10.8000	10.8000	10.5000
NIST	D2622	07/12/05	2	105	12.2600	12.0300	11.9000	0.8371	12.0300	11.9000	12.0300	11.9000
NIST	D5453	08/04/05	2	105	10.6800	10.5000	10.4200	0.8371	10.6800	10.4200	10.6800	10.4200
NIST	D7039	07/26/05	2	106	11.0000	11.2000	11.2000	0.8371	11.0000	11.2000	11.0000	11.2000
NIST	D7039	07/25/05	2	107	11.7000	11.5000	10.3000	0.8371	11.7000	10.3000	11.7000	10.3000
NIST	D5453	07/15/05	2	108	9.4130	9.5380	9.3000	0.8371	9.4130	9.3000		
NIST	D5453	07/27/05	2	109	12.5000	12.5000	12.4000	0.8371	12.5000	12.4000		
NIST	D7039	07/19/05	2	109	11.6000	11.5000	11.3000	0.8371	11.5000	11.3000	11.5000	11.3000
NIST	D5453	07/29/05	2	110	10.9100	11.0700	10.7900	0.8371	11.0700	10.7900	10.9100	11.0700

**Table B.4. July Fuel #2 Lab Data and Deletions Based on Composite Test Methods for NIST Calibration**

Calibration	Test Method	Run Date	July Sample #	Lab Code	Original Lab Data Robust Outlier Deletion in Shaded Box				After Robust Outlier Deletion Random Selection of 2 Obs		After Gravimetric Deletion Random Selection of 2 Obs	
					Measure #1	Measure #2	4.0000	Density	#1	#2	#1	#2
NIST	D7039	08/03/05	2	111	9.6000	10.7000	10.4000	0.8371	9.6000	10.4000	10.7000	10.4000
NIST	D5453	07/29/05	2	112	10.8400	10.7400	10.8500	0.8695	10.8400	10.7400	10.8400	10.7400
NIST	D5453	07/23/05	2	113	10.1000	10.4000	10.8000	0.8371	10.1000	10.4000	10.1000	10.8000
NIST	D5453	07/27/05	2	114	10.3000	10.0000	10.3000	0.8371	10.0000	10.3000	10.0000	10.3000
NIST	D5453	07/26/05	2	115	10.2000	10.1000	10.1000	0.8371	10.2000	10.1000	10.2000	10.1000
NIST	D5453	07/17/05	2	116	10.5400	10.6800	10.6500	0.8371	10.5400	10.6500	10.5400	10.6800
NIST	D5453	07/19/05	2	117	10.6000	10.6800	10.6600	0.8371	10.6000	10.6600	10.6000	10.6600
NIST	D5453	07/26/05	2	118	10.4100	10.8300	10.0800	0.8371	10.8300	10.0800	10.4100	10.0800
NIST	D5453	07/25/05	2	119	11.3500	11.3700	11.3600	0.8371	11.3500	11.3600	11.3500	11.3600
NIST	D5453	08/09/05	2	120	10.8000	10.7000	10.5000	0.8371	10.8000	10.5000	10.7000	10.5000
NIST	D2622	07/19/05	2	121	11.8000	11.5000	11.7000	0.8371	11.5000	11.7000		
NIST	D5453	07/28/05	2	122	11.6000	11.3000	11.6000	0.8371	11.6000	11.6000	11.3000	11.6000
NIST	D2622	07/26/05	2	123	10.7000	10.2000	11.2000	0.8371	10.7000	10.2000	10.7000	11.2000
NIST	D2622	07/21/05	2	124	13.1000	11.9000	12.1000	0.8371	13.1000	11.9000		
NIST	D2622	07/28/05	2	126	9.5000	10.0000	9.9000	0.8371	10.0000	9.9000		
NIST	D5453	07/28/05	2	126	8.5000	8.4000	8.6000	0.8371	8.5000	8.6000		
NIST	D7039	07/15/05	2	127	11.3000	11.7000	11.1000	0.8371	11.3000	11.1000	11.3000	11.1000
NIST	D7039	07/26/05	2	128	11.3000	11.5000	11.2000	0.8371	11.5000	11.2000	11.3000	11.5000
NIST	D5453	07/27/05	2	129	10.3800	10.3500	10.3600	0.8371	10.3500	10.3600	10.3800	10.3600
NIST	D5453	07/25/05	2	130	10.6000	10.6000	10.5000	0.8371	10.6000	10.5000	10.6000	10.5000
NIST	D2622	07/27/05	2	131	10.6000	11.2000	11.2000	0.8371	10.6000	11.2000	10.6000	11.2000
NIST	EDXRF	07/27/05	2	131	11.2000	10.9000	11.2000	0.8371	10.9000	11.2000	10.9000	11.2000
NIST	D5453	08/25/05	2	132	10.2560	9.9880	10.1160	0.8371	9.9880	10.1160	9.9880	10.1160
NIST	D2622	07/19/05	2	133	12.7000	12.3000	12.2000	0.8371	12.3000	12.2000	12.3000	12.2000
NIST	EDXRF	08/29/05	2	134	11.7000	10.8000	11.4000	0.8371	11.7000	11.4000	11.7000	11.4000
NIST	EDXRF	08/04/05	2	135	10.4000	10.3000	10.0000	0.8371	10.3000	10.0000	10.3000	10.0000
NIST	D2622	07/19/05	2	136	10.9000	10.3000	10.4000	0.8371	10.9000	10.3000	10.3000	10.4000
NIST	EDXRF	07/15/05	2	136	10.8000	11.7000	12.1000	0.8371	10.8000	12.1000	11.7000	12.1000
NIST	D5453	07/18/05	2	137	10.5900	11.4200	11.5000	0.8371	11.4200	11.5000	10.5900	11.4200
NIST	EDXRF	07/15/05	2	137	11.2000	11.7000	9.4000	0.8371	11.7000	9.4000		
NIST	D5453	07/22/05	2	138	11.0000	11.2000	10.9000	0.8371	11.0000	11.2000	11.0000	11.2000
NIST	D2622	07/15/05	2	139	11.6000	12.4000	12.9000	0.8371	11.6000	12.4000	11.6000	12.4000
NIST	D5453	07/20/05	2	139	16.1300	15.6900	15.3200	0.8371				
NIST	D2622	07/20/05	2	140	11.3000	10.3000	11.5000	0.8371	11.3000	11.5000	11.3000	10.3000
NIST	EDXRF	08/12/05	2	141	12.0000	12.3000	11.7000	0.8371	12.0000	11.7000	12.3000	11.7000
NIST	D5453	07/14/05	2	143	11.0300	10.8100	10.7600	0.8371	11.0300	10.8100	11.0300	10.7600
NIST	D3120	07/25/05	2	144	11.3200	11.1000	11.2000	0.8371	11.1000	11.2000	11.3200	11.1000
NIST	D2622	07/24/05	2	145	11.7000	11.0000	10.9000	0.8695	11.0000	10.9000		
NIST	D5453	08/16/05	2	147	11.2000	10.8000	10.9000	0.8371	11.2000	10.9000	11.2000	10.8000
NIST	D5453	07/15/05	2	148	11.3400	11.6500	11.4800	0.8371	11.3400	11.6500	11.3400	11.4800
NIST	D7039	08/10/05	2	148	11.4000	10.9000	10.7000	0.8371	11.4000	10.7000	11.4000	10.7000
NIST	D5453	07/20/05	2	149	10.9170	10.5810	10.6430	0.8371	10.9170	10.5810	10.9170	10.5810
NIST	D5453	08/01/05	2	151	10.7000	10.2000	9.8000	0.8371	10.2000	9.8000	10.7000	10.2000
NIST	D7039	07/28/05	2	151	10.7000	10.4000	10.6000	0.8695	10.7000	10.4000	10.4000	10.6000
NIST	D5453	07/27/05	2	152	9.1600	9.1400	9.1500	0.8371	9.1600	9.1400	9.1400	9.1500
NIST	D5453	07/15/05	2	153	10.8700	10.9100	10.8300	0.8371	10.8700	10.8300	10.8700	10.8300
NIST	D5453	07/04/05	2	154	11.2000	11.8000	11.3000	0.8371	11.8000	11.3000	11.2000	11.3000

**Table B.4. July Fuel #2 Lab Data and Deletions Based on Composite Test Methods for NIST Calibration**

Calibration	Test Method	Run Date	July Sample #	Lab Code	Original Lab Data Robust Outlier Deletion in Shaded Box				After Robust Outlier Deletion Random Selection of 2 Obs		After Gravimetric Deletion Random Selection of 2 Obs	
					Measure #1	Measure #2	4.0000	Density	#1	#2	#1	#2
NIST	D5453	07/28/05	2	156	11.2300	11.4200	11.0300	0.8371	11.2300	11.0300	11.4200	11.0300
NIST	D5453	07/21/05	2	158	13.3900	13.4000	13.5700	0.8371				
NIST	D5453	08/08/05	2	159	10.9100	10.5400	10.8300	0.8371	10.9100	10.8300	10.9100	10.8300
NIST	D7039	08/04/05	2	160	10.9000	10.8000	11.6000	0.8371	10.8000	11.6000		
NIST	D5453	07/24/05	2	161	10.7100	10.6400	10.8300	0.8371	10.7100	10.6400	10.7100	10.8300
NIST	D2622	07/31/05	2	162	12.4200	13.5500	13.3600	0.8371	12.4200	13.5500	12.4200	13.3600
NIST	D5453	07/30/05	2	162	10.6000	10.4800	10.6100	0.8371	10.6000	10.4800	10.4800	10.6100

**Table B.5. July Fuel #3 Lab Data and Deletions Based on Composite Test Methods for In-House Calibration**

Calibration	Test Method	Run Date	July Sample #	Lab Code	Original Lab Data Robust Outlier Deletion in Shaded Box				After Robust Outlier Deletion Random Selection of 2 Obs			After Gravimetric Deletion Random Selection of 2 Obs	
					Measure #1	Measure #2	Measure #3	Density	#1	#2	#3	#1	#2
In-House	D5453	07/13/05	3	1	19.8000	19.9000	19.9000	0.8372	19.8000	19.9000		19.8000	19.9000
In-House	D5453	07/12/05	3	2	21.1500	21.2400	21.1000	0.8372	21.1500	21.2400		21.1500	21.2400
In-House	D2622	07/13/05	3	3	22.3500	22.9000	22.3100	0.8372	22.9000	22.3100			
In-House	D5453	07/21/05	3	4	23.1000	23.0000	22.7900	0.8372	23.1000	23.0000		23.1000	23.0000
In-House	D2622	07/15/05	3	5	19.0000	19.4000	20.3000	0.8372	19.0000	20.3000		19.4000	20.3000
In-House	D7039	07/27/05	3	6	21.7000	21.2000	21.0000	0.8372	21.2000	21.0000		21.2000	21.0000
In-House	D7039	07/21/05	3	7	21.8000	20.5000	21.0000	0.8372	21.8000	21.0000		21.8000	20.5000
In-House	D2622	07/13/05	3	8	22.2200	21.7500	22.3500	0.8372	22.2200	22.3500		21.7500	22.3500
In-House	D5453	07/13/05	3	8	21.1700	21.3600	21.9900	0.8372	21.1700	21.9900		21.3600	21.9900
In-House	D5453	07/15/05	3	9	20.2400	19.9100	20.2000	0.8372	19.9100	20.2000		19.9100	20.2000
In-House	D5453	07/28/05	3	11	20.1000	20.8700	20.5000	0.8372	20.1000	20.5000		20.8700	20.5000
In-House	D5453	07/27/05	3	12	20.3400	20.1300	20.3300	0.8372	20.1300	20.3300		20.1300	20.3300
In-House	D5453	07/20/05	3	13	22.6400	22.3300	22.4400	0.8372	22.6400	22.3300		22.3300	22.4400
In-House	D5453	07/26/05	3	15	20.6000	21.1000	21.0000	0.8372	21.1000	21.0000		21.1000	21.0000
In-House	D5453	07/19/05	3	16	21.1100	21.0400	20.5900	0.8372	21.1100	20.5900		21.1100	20.5900
In-House	D5453	07/20/05	3	18	21.4200	22.2100	20.3500	0.8372	21.4200	22.2100		21.4200	22.2100
In-House	D5453	08/03/05	3	19	20.3000	20.2000	20.2000	0.8372	20.3000	20.2000		20.3000	20.2000
In-House	D5453	08/02/05	3	21	20.1500	20.3800	20.0800	0.8372	20.1500	20.0800		20.1500	20.3800
In-House	D5453	08/10/05	3	23	20.0400	19.6600	20.0400	0.8372	20.0400	20.0400			
In-House	D5453	07/13/05	3	24	20.9700	18.9500	19.0000	0.8372	20.9700	19.0000			
In-House	D5453	08/30/05	3	25	17.6900	17.8900	17.9900	0.8372	17.6900	17.9900			
In-House	D5453	07/19/05	3	26	21.2300	21.4300	21.3800	0.8372	21.2300	21.3800		21.2300	21.4300
In-House	D5453	07/25/05	3	27	21.0900	21.3700	20.9100	0.8372	21.0900	20.9100		21.0900	21.3700
In-House	D2622	07/22/05	3	28	22.0000	22.3000	21.4000	0.8372	22.0000	22.3000		22.0000	21.4000
In-House	D5453	07/19/05	3	29	19.9130	20.2290	19.7040	0.8372	19.9130	19.7040			
In-House	D5453	07/12/05	3	30	21.3000	21.4000	21.2000	0.8372	21.3000	21.2000		21.3000	21.2000
In-House	D5453	07/13/05	3	31	20.7000	20.5000	20.7000	0.8372	20.7000	20.7000		20.7000	20.7000
In-House	D5453	07/25/05	3	32	21.4300	21.6000	21.6400	0.8372	21.4300	21.6000		21.6000	21.6400
In-House	D5453	08/19/05	3	33	20.1000	20.3500	20.4800	0.8372	20.1000	20.3500		20.1000	20.3500
In-House	D5453	07/26/05	3	35	18.6100	18.8300	18.8300	0.8745	18.6100	18.8300			
In-House	D5453	07/15/05	3	36	16.7000		16.4000	0.8372	16.7000				
In-House	D5453	07/15/05	3	37	20.2000	20.5000	20.1000	0.8372	20.5000	20.1000		20.2000	20.1000
In-House	D5453	07/25/05	3	38	19.1000	19.5000	19.2000	0.8372	19.5000	19.2000		19.1000	19.5000
In-House	D5453	07/28/05	3	39	26.3700	23.8800	24.5100	0.8372	23.8800	24.5100			
In-House	D2622	08/02/05	3	41	24.0000	23.2000	24.1000	0.8372	23.2000	24.1000			
In-House	D5453	08/03/05	3	41	21.7000	20.8300	20.9200	0.8372	21.7000	20.8300		20.8300	20.9200
In-House	D2622	08/31/05	3	EPA	22.4000	21.2000	21.3000	0.8372	22.4000	21.2000		22.4000	21.3000
In-House	D5453	08/30/05	3	EPA	21.2000	21.1000	21.0000	0.8372	21.2000	21.0000		21.1000	21.0000
In-House	D7039	08/02/05	3	EPA	21.3000	21.3000	21.2000	0.8372	21.3000	21.3000		21.3000	21.3000
In-House	D7039	07/21/05	3	47	18.7000	19.5000	19.0000	0.8372	18.7000	19.0000		18.7000	19.5000
In-House	D5453	07/19/05	3	48	21.2900	21.2500	21.4800	0.8372	21.2500	21.4800		21.2900	21.2500
In-House	D2622	08/10/05	3	50	20.4000	22.7000	22.8000	0.8372	20.4000	22.8000		20.4000	22.8000
In-House	D5453	07/25/05	3	51	21.1000	21.6000	21.0000	0.8372	21.1000	21.0000		21.1000	21.0000
In-House	D5453	07/27/05	3	52	18.2500	18.0700	17.9900	0.8372	18.2500	18.0700			
In-House	D2622	07/26/05	3	53	21.4000	21.7000	21.0000	0.8372	21.7000	21.0000		21.4000	21.7000
In-House	D5453	07/19/05	3	54	20.3000	20.3000	20.3000	0.8372	20.3000	20.3000			
In-House	D2622	07/21/05	3	55	19.5000	20.1000	19.5000	0.8372	19.5000	19.5000		20.1000	19.5000

**Table B.5. July Fuel #3 Lab Data and Deletions Based on Composite Test Methods for In-House Calibration**

Calibration	Test Method	Run Date	July Sample #	Lab Code	Original Lab Data Robust Outlier Deletion in Shaded Box				After Robust Outlier Deletion Random Selection of 2 Obs			After Gravimetric Deletion Random Selection of 2 Obs	
					Measure #1	Measure #2	Measure #3	Density	#1	#2	#3	#1	#2
In-House	D5453	07/21/05	3	56	19.4000	19.4000	19.4000	0.8372	19.4000	19.4000		19.4000	19.4000
In-House	D5453	07/26/05	3	59	20.0500	19.8300	19.9800	0.8372	20.0500	19.8300		20.0500	19.9800
In-House	D7039	07/28/05	3	60	21.2000	20.6000	21.1000	0.8372	20.6000	21.1000		21.2000	20.6000
In-House	D5453	07/27/05	3	61	19.3400	19.1300	19.4700	0.8372	19.1300	19.4700		19.3400	19.4700
In-House	D5453	08/30/05	3	CARB	19.2800	19.5900	19.3000	0.8372	19.5900	19.3000			
In-House	D5453	07/29/05	3	63	25.3700	23.6500	23.6500	0.8372	23.6500	23.6500			
In-House	D5453	08/02/05	3	64	19.4000	20.0000	19.5000	0.8372	19.4000	20.0000		19.4000	19.5000
In-House	D5453	08/01/05	3	66	22.4100	22.6200	22.6200	0.8372	22.4100	22.6200			
In-House	D2622	07/18/05	3	67	20.5000	21.9000	21.3000	0.8372	21.9000	21.3000		21.9000	21.3000
In-House	D5453	07/15/05	3	68	13.1300	13.5800	13.4000	0.8372				13.1300	13.4000
In-House	D5453	07/29/05	3	71	20.0200	20.3600	20.2400	0.8372	20.3600	20.2400		20.0200	20.2400
In-House	D5453	07/19/05	3	72	21.3000	21.5000	21.0000	0.8372	21.3000	21.5000		21.3000	21.5000
In-House	D2622	07/13/05	3	73	21.1000	21.4000	21.2000	0.8372	21.4000	21.2000		21.4000	21.2000
In-House	D5453	07/14/05	3	73	20.9000	20.7000	21.0000	0.8372	20.9000	20.7000		20.9000	20.7000
In-House	D5453	07/13/05	3	75	19.9100	20.4200	19.3300	0.8372	19.9100	20.4200		20.4200	19.3300
In-House	D5453	07/15/05	3	76	22.6900	23.0700	22.6800	0.8372	22.6900	22.6800		22.6900	22.6800
In-House	D5453	07/25/05	3	78	21.5300	21.7700	21.8100	0.8372	21.7700	21.8100			
In-House	D5453	08/09/05	3	81	19.8000	20.1000	20.3000	0.8372	20.1000	20.3000		19.8000	20.3000
In-House	D5453	07/19/05	3	82	20.5600	20.7800	20.5600	0.8372	20.7800	20.5600		20.5600	20.7800
In-House	D5453	07/14/05	3	83	20.8900	20.8900	20.4300	0.8372	20.8900	20.8900		20.8900	20.4300
In-House	D5453	07/22/05	3	84	18.1900	18.1800	17.8100	0.8372	18.1900	18.1800		18.1800	17.8100
In-House	D5453	07/20/05	3	85	20.3000	20.0000	19.9000	0.8372	20.3000	20.0000		20.3000	19.9000
In-House	D3120	07/19/05	3	86	20.3000	20.4000	20.2000	0.8372	20.3000	20.4000		20.3000	20.2000
In-House	D5453	07/27/05	3	87	22.4700	23.1300	22.0900	0.8372	22.4700	23.1300		22.4700	23.1300
In-House	D5453	07/30/05	3	89	21.1000	21.0000	20.9000	0.8372	21.1000	20.9000		21.1000	20.9000
In-House	D5453	07/14/05	3	90	18.6000	19.1000	18.7000	0.8372	18.6000	19.1000		18.6000	19.1000
In-House	D5453	07/27/05	3	91	20.8500	20.9000	20.8800	0.8372	20.8500	20.8800		20.8500	20.9000
In-House	D5453	07/25/05	3	91.1	20.3800	20.2400	20.1800	0.8372	20.3800	20.2400		20.3800	20.2400
In-House	D2622	08/02/05	3	94	23.3000	21.8000	18.3000	0.8372	21.8000	18.3000			
In-House	D3120	07/25/05	3	95	18.5000	18.5000	18.5000	0.8372	18.5000	18.5000			
In-House	D5453	07/25/05	3	95	18.9000	18.7000	18.4000	0.8372	18.9000	18.4000		18.9000	18.4000
In-House	D5453	07/21/05	3	96	20.7000	20.8000	20.4000	0.8372	20.8000	20.4000		20.7000	20.8000
In-House	D5453	07/18/05	3	97	20.2000	20.1000	20.1000	0.8372	20.2000	20.1000		20.2000	20.1000
In-House	D5453	08/15/05	3	99	18.8800	18.0800	18.0500	0.8372	18.0800	18.0500		18.0800	18.0500
In-House	D5453	07/18/05	3	100	17.4000	17.5000	17.5000	0.8372	17.4000	17.5000		17.5000	17.5000
In-House	D7039	07/26/05	3	102	20.4000	21.3000	21.7000	0.8372	20.4000	21.7000		20.4000	21.3000
In-House	D2622	07/26/05	3	103	22.3590	22.6930	22.4230	0.8372	22.3590	22.6930		22.3590	22.4230
In-House	D5453	07/26/05	3	103	19.8891	19.9451	19.4953	0.8372	19.9451	19.4953		19.8891	19.4953
In-House	D7039	07/25/05	3	103	20.3000	21.4000	20.3000	0.8372	20.3000	21.4000		20.3000	20.3000
In-House	D2622	07/12/05	3	105	21.5000	21.2000	21.9000	0.8372	21.5000	21.9000		21.2000	21.9000
In-House	D5453	08/01/05	3	105	22.0200	22.2600	22.1700	0.8372	22.2600	22.1700		22.2600	22.1700
In-House	D7039	07/26/05	3	106	21.2000	19.3000	20.3000	0.8372	21.2000	20.3000		19.3000	20.3000
In-House	D7039	07/20/05	3	107	20.8000	22.2000	20.7000	0.8372	20.8000	22.2000		20.8000	22.2000
In-House	D5453	07/15/05	3	108	18.2540	18.1630	18.1190	0.8372	18.1630	18.1190			
In-House	D5453	07/19/05	3	109	19.0000	19.2000	19.2000	0.8372	19.2000	19.2000			
In-House	D7039	07/18/05	3	109	18.7000	18.8000	18.6000	0.8372	18.7000	18.8000			
In-House	D5453	07/28/05	3	110	21.7500	22.0200	21.3500	0.8372	22.0200	21.3500		21.7500	21.3500

**Table B.5. July Fuel #3 Lab Data and Deletions Based on Composite Test Methods for In-House Calibration**

Calibration	Test Method	Run Date	July Sample #	Lab Code	Original Lab Data Robust Outlier Deletion in Shaded Box				After Robust Outlier Deletion Random Selection of 2 Obs		After Gravimetric Deletion Random Selection of 2 Obs	
					Measure #1	Measure #2	Measure #3	Density	#1	#2	#1	#2
In-House	D7039	08/02/05	3	111	18.3000	17.1000	18.0000	0.8372	18.3000	18.0000		
In-House	D5453	07/29/05	3	112	23.2600	23.8800	23.0400	0.8745	23.2600	23.0400	23.2600	23.8800
In-House	D5453	07/21/05	3	113	20.4000	20.9000	20.8000	0.8372	20.4000	20.8000		
In-House	D5453	07/25/05	3	114	20.9000	21.1000	21.0000	0.8372	20.9000	21.1000	20.9000	21.0000
In-House	D5453	07/25/05	3	115	21.9000	21.7000	21.7000	0.8372	21.9000	21.7000	21.9000	21.7000
In-House	D5453	07/16/05	3	116	21.3800	21.5300	21.2500	0.8372	21.3800	21.5300	21.5300	21.2500
In-House	D5453	07/19/05	3	117	21.4300	21.4700	21.7600	0.8372	21.4700	21.7600	21.4700	21.7600
In-House	D5453	07/25/05	3	118	21.9800	21.3900	21.9900	0.8372	21.9800	21.9900	21.9800	21.9900
In-House	D5453	07/25/05	3	119	19.7900	20.0200	19.7500	0.8372	19.7900	19.7500	19.7900	19.7500
In-House	D5453	08/08/05	3	120	21.0000	21.2000	21.1000	0.8372	21.0000	21.2000	21.0000	21.1000
In-House	D2622	07/19/05	3	121	21.5000	20.9000	21.6000	0.8372	21.5000	21.6000	21.5000	21.6000
In-House	D5453	07/27/05	3	122	21.4000	21.5000	21.9000	0.8372	21.4000	21.9000	21.4000	21.9000
In-House	D2622	07/25/05	3	123	20.5000	20.7000	20.6000	0.8372	20.5000	20.7000	20.7000	20.6000
In-House	D2622	07/13/05	3	124	21.7000	21.1000	21.3000	0.8372	21.1000	21.3000	21.7000	21.1000
In-House	D2622	07/28/05	3	126	20.9000	22.5000	23.5000	0.8372	20.9000	22.5000	20.9000	22.5000
In-House	D5453	07/28/05	3	126	17.0900	17.3100	17.0000	0.8372	17.0900	17.0000		
In-House	D7039	07/15/05	3	127	20.1000	20.9000	20.6000	0.8372	20.9000	20.6000	20.1000	20.9000
In-House	D7039	07/25/05	3	128	20.5000	21.1000	20.5000	0.8372	21.1000	20.5000	21.1000	20.5000
In-House	D5453	07/21/05	3	129	22.4000	22.6000	22.3000	0.8372	22.4000	22.6000	22.6000	22.3000
In-House	D5453	07/22/05	3	130	21.4000	21.2000	21.3000	0.8372	21.4000	21.2000	21.4000	21.3000
In-House	D2622	07/22/05	3	131	21.6000	21.7000	21.7000	0.8372	21.6000	21.7000	21.6000	21.7000
In-House	EDXRF	07/22/05	3	131	21.9000	22.0000	20.6000	0.8372	22.0000	20.6000	21.9000	22.0000
In-House	D5453	08/25/05	3	132	21.8210	21.5810	21.3580	0.8372	21.8210	21.3580	21.8210	21.3580
In-House	D2622	07/19/05	3	133	21.1000	21.6000	22.4000	0.8372	21.6000	22.4000	21.1000	21.6000
In-House	EDXRF	08/30/05	3	134	21.7000	21.9000	22.3000	0.8372	21.7000	21.9000	21.7000	22.3000
In-House	EDXRF	08/04/05	3	135	22.0000	23.0000	23.2000	0.8372	23.0000	23.2000	22.0000	23.0000
In-House	D2622	07/19/05	3	136	21.0000	19.9000	21.5000	0.8372	19.9000	21.5000	21.0000	21.5000
In-House	EDXRF	07/15/05	3	136	21.0000	20.7000	20.9000	0.8372	21.0000	20.7000	21.0000	20.9000
In-House	D5453	07/15/05	3	137	18.5100	19.0200	18.7300	0.8372	18.5100	18.7300		
In-House	EDXRF	07/15/05	3	137	22.1000	22.4000	21.4000	0.8372	22.1000	21.4000	22.1000	21.4000
In-House	D5453	07/22/05	3	138	20.9000	20.9000	21.0000	0.8372	20.9000	20.9000	20.9000	20.9000
In-House	D2622	07/13/05	3	139	22.1300	22.2100	22.6900	0.8372	22.1300	22.2100	22.1300	22.2100
In-House	D5453	07/13/05	3	139	23.1900	23.1700	23.3800	0.8372	23.1900	23.1700		
In-House	D2622	07/19/05	3	140	19.3000	21.5000	20.4000	0.8372	19.3000	20.4000	19.3000	20.4000
In-House	EDXRF	08/09/05	3	141	20.8000	21.3000	20.0000	0.8372	21.3000	20.0000	20.8000	21.3000
In-House	D5453	07/14/05	3	143	20.8900	20.3400	20.5100	0.8372	20.8900	20.5100	20.8900	20.5100
In-House	D3120	07/25/05	3	144	19.5100	18.0400	19.3000	0.8372	19.5100	19.3000		
In-House	D2622	07/24/05	3	145	23.1000	23.2000	22.1000	0.8745	23.2000	22.1000		
In-House	D5453	08/16/05	3	147	19.5000	19.9000	19.9000	0.8372	19.9000	19.9000		
In-House	D5453	07/15/05	3	148	20.7800	20.8500	21.2900	0.8372	20.7800	20.8500	20.7800	21.2900
In-House	D7039	08/08/05	3	148	20.4000	19.2000	19.9000	0.8372	20.4000	19.9000	19.2000	19.9000
In-House	D5453	07/27/05	3	149	22.0580	22.1110	22.0140	0.8372	22.1110	22.0140	22.0580	22.0140
In-House	D5453	08/01/05	3	151	21.6000	20.9000	20.4000	0.8372	21.6000	20.9000	21.6000	20.4000
In-House	D7039	07/28/05	3	151	20.2000	20.2000	20.7000	0.8745	20.2000	20.7000	20.2000	20.7000
In-House	D5453	07/22/05	3	152	18.4100	19.0300	19.3300	0.8372	18.4100	19.3300	18.4100	19.0300
In-House	D5453	07/14/05	3	153	22.9600	22.9400	22.8500	0.8372	22.9400	22.8500	22.9400	22.8500
In-House	D5453	07/26/05	3	154	21.8300	22.3100	21.6600	0.8372	22.3100	21.6600	21.8300	22.3100



**Table B.5. July Fuel #3 Lab Data and Deletions Based on Composite Test Methods for In-House Calibration**

Calibration	Test Method	Run Date	July Sample #	Lab Code	Original Lab Data Robust Outlier Deletion in Shaded Box				After Robust Outlier Deletion Random Selection of 2 Obs		After Gravimetric Deletion Random Selection of 2 Obs	
					Measure #1	Measure #2	Measure #3	Density	#1	#2	#1	#2
In-House	D5453	07/28/05	3	156	19.3500	19.2300	19.2300	0.8372	19.2300	19.2300		
In-House	D5453	07/20/05	3	158	27.0600	27.2200	27.0600	0.8372				
In-House	D5453	08/08/05	3	159	21.5300	21.6400	21.7800	0.8372	21.5300	21.6400	21.5300	21.6400
In-House	D7039	08/03/05	3	160	19.0000	19.2000	19.4000	0.8372	19.0000	19.4000	19.0000	19.4000
In-House	D5453	07/24/05	3	161	22.1500	22.7800	22.1400	0.8372	22.1500	22.1400		
In-House	D2622	07/31/05	3	162	22.7600	22.6200	22.1400	0.8372	22.6200	22.1400		
In-House	D5453	07/29/05	3	162	20.7300	20.6900	20.7300	0.8372	20.7300	20.6900	20.7300	20.6900

**Table B.6. July Fuel #3 Lab Data and Deletions Based on Composite Test Methods for NIST Calibration**

Calibration	Test Method	Run Date	July Sample #	Lab Code	Original Lab Data Robust Outlier Deletion in Shaded Box				After Robust Outlier Deletion Random Selection of 2 Obs		After Gravimetric Deletion Random Selection of 2 Obs	
					Measure #1	Measure #2	Measure #3	Density	#1	#2	#1	#2
NIST	D5453	07/13/05	3	1	20.3000	20.5000	20.5000	0.8372	20.5000	20.5000	20.3000	20.5000
NIST	D5453	07/12/05	3	2	20.8900	20.8500	21.0800	0.8372	20.8900	21.0800	20.8900	20.8500
NIST	D2622	07/13/05	3	3	22.1200	20.5300	21.9300	0.8372	22.1200	20.5300		
NIST	D5453	07/21/05	3	4	20.7600	20.5300	20.0700	0.8372	20.7600	20.0700	20.7600	20.0700
NIST	D2622	07/15/05	3	5	21.3000	21.7000	22.6000	0.8372	21.3000	21.7000		
NIST	D7039	07/27/05	3	6	19.4000	19.9000	20.5000	0.8372	19.9000	20.5000	19.4000	20.5000
NIST	D7039	07/21/05	3	7	19.5000	20.5000	21.1000	0.8372	19.5000	20.5000	19.5000	20.5000
NIST	D2622	07/13/05	3	8	21.6500	20.8900	20.6700	0.8372	21.6500	20.6700	20.8900	20.6700
NIST	D5453	07/13/05	3	8	20.2000	19.9900	19.9200	0.8372	19.9900	19.9200	20.2000	19.9200
NIST	D5453	07/18/05	3	9	20.4000	20.2600	20.2300	0.8372	20.4000	20.2600	20.4000	20.2600
NIST	D5453	07/29/05	3	11	19.6700	20.4200	20.6300	0.8372	19.6700	20.4200	19.6700	20.4200
NIST	D5453	07/28/05	3	12	20.4000	20.5000	20.8000	0.8372	20.5000	20.8000	20.4000	20.8000
NIST	D5453	07/21/05	3	13	20.9200	20.8600	21.0600	0.8372	20.9200	21.0600	20.9200	21.0600
NIST	D5453	07/28/05	3	15	20.8000	20.9000	20.5000	0.8372	20.9000	20.5000	20.9000	20.5000
NIST	D5453	07/21/05	3	16	20.0000	19.5600	20.6200	0.8372	20.0000	19.5600	20.0000	20.6200
NIST	D5453	07/20/05	3	18	21.0900	20.7800	20.9200	0.8372	20.7800	20.9200	21.0900	20.9200
NIST	D5453	08/05/05	3	19	21.7000	21.7000	21.7000	0.8372	21.7000	21.7000	21.7000	21.7000
NIST	D5453	08/03/05	3	21	20.5300	20.3000	20.5900	0.8372	20.5300	20.3000	20.5300	20.3000
NIST	D5453	08/11/05	3	23	21.9300	21.6900	21.8700	0.8372	21.9300	21.6900	21.9300	21.6900
NIST	D5453	07/13/05	3	24	22.6900	19.4300	19.9800	0.8372	22.6900	19.9800	19.4300	19.9800
NIST	D5453	08/31/05	3	25	21.3900	21.3900	21.5500	0.8372	21.3900	21.5500	21.3900	21.5500
NIST	D5453	07/21/05	3	26	21.3700	21.7800	21.0300	0.8372	21.3700	21.7800	21.3700	21.0300
NIST	D5453	07/25/05	3	27	20.0000	19.7800	19.7700	0.8372	19.7800	19.7700	20.0000	19.7700
NIST	D2622	07/14/05	3	28	22.0000	22.2000	21.5000	0.8372	22.0000	21.5000	22.2000	21.5000
NIST	D5453	07/20/05	3	29	20.5970	19.4380	19.5120	0.8372	19.4380	19.5120		
NIST	D5453	07/13/05	3	30	21.5000	21.5000	21.5000	0.8372	21.5000	21.5000	21.5000	21.5000
NIST	D5453	07/13/05	3	31	20.6000	20.6000	21.1000	0.8372	20.6000	21.1000	20.6000	20.6000
NIST	D5453	07/26/05	3	32	21.4800	21.4100	21.5900	0.8372	21.4800	21.5900	21.4800	21.5900
NIST	D5453	08/22/05	3	33	28.2100	28.2900	28.3700	0.8372				
NIST	D5453	07/20/05	3	35	20.2800	20.0300	20.1600	0.8745	20.0300	20.1600	20.0300	20.1600
NIST	D5453	07/15/05	3	36	18.8000	19.1000	19.3000	0.8372	18.8000	19.3000		
NIST	D5453	07/21/05	3	37	22.4000	22.9000	22.7000	0.8372	22.9000	22.7000	22.4000	22.9000
NIST	D5453	07/26/05	3	38	22.0000	22.0000	22.2000	0.8372	22.0000	22.0000	22.0000	22.2000
NIST	D5453	07/28/05	3	39	25.2600	25.5700	25.3200	0.8372				
NIST	D2622	08/02/05	3	41	20.6000	21.7000	22.0000	0.8372	20.6000	21.7000	20.6000	22.0000
NIST	D5453	08/04/05	3	41	23.1200	22.8700	22.8500	0.8372	23.1200	22.8700	22.8700	22.8500
NIST	D2622	09/01/05	3	EPA	22.2000	24.0000	22.5000	0.8372	24.0000	22.5000		
NIST	D5453	08/30/05	3	EPA	20.6000	21.0000	20.8000	0.8372	21.0000	20.8000	21.0000	20.8000
NIST	D7039	08/03/05	3	EPA	21.0000	20.4000	20.8000	0.8372	21.0000	20.8000	20.4000	20.8000
NIST	D7039	07/22/05	3	47	20.1000	19.9000	20.1000	0.8372	19.9000	20.1000	20.1000	19.9000
NIST	D5453	07/19/05	3	48	20.5100	21.1400	21.8500	0.8372	20.5100	21.1400		
NIST	D2622	08/10/05	3	50	22.1000	27.8000	29.3000	0.8372	22.1000		22.1000	29.3000
NIST	D5453	07/26/05	3	51	20.9000	20.6000	20.7000	0.8372	20.6000	20.7000	20.6000	20.7000
NIST	D5453	07/28/05	3	52	18.7600	19.6000	19.0900	0.8372	18.7600	19.0900	19.6000	19.0900
NIST	D2622	07/28/05	3	53	21.0000	20.6000	21.1000	0.8372	20.6000	21.1000	20.6000	21.1000
NIST	D5453	07/21/05	3	54	21.4000	21.4000	21.3000	0.8372	21.4000	21.3000	21.4000	21.3000
NIST	D2622	07/23/05	3	55	20.8000	20.3000	20.8000	0.8372	20.8000	20.8000	20.8000	20.8000

**Table B.6. July Fuel #3 Lab Data and Deletions Based on Composite Test Methods for NIST Calibration**

Calibration	Test Method	Run Date	July Sample #	Lab Code	Original Lab Data Robust Outlier Deletion in Shaded Box				After Robust Outlier Deletion Random Selection of 2 Obs		After Gravimetric Deletion Random Selection of 2 Obs	
					Measure #1	Measure #2	Measure #3	Density	#1	#2	#1	#2
NIST	D5453	07/22/05	3	56	20.4000	20.4000	20.6000	0.8372	20.4000	20.6000	20.4000	20.6000
NIST	D5453	08/31/05	3	59	21.5000	21.4900	21.4100	0.8372	21.4900	21.4100	21.4900	21.4100
NIST	D7039	07/29/05	3	60	21.5000	21.1000	20.4000	0.8372	21.5000	20.4000	21.1000	20.4000
NIST	D5453	07/27/05	3	61	21.0900	20.9200	20.6400	0.8372	21.0900	20.9200	20.9200	20.6400
NIST	D5453	08/31/05	3	CARB	20.6000	20.3000	20.9000	0.8372	20.6000	20.9000	20.6000	20.9000
NIST	D5453	07/29/05	3	63	24.8600	24.7400	24.5600	0.8372				
NIST	D5453	07/18/05	3	64	22.4000	21.4000	20.2000	0.8372	21.4000	20.2000	21.4000	20.2000
NIST	D5453	08/01/05	3	66	23.2000	23.3000	23.7000	0.8372	23.3000	23.7000		
NIST	D2622	07/25/05	3	67	20.9190	22.2160	22.4770	0.8372	20.9190	22.2160	22.2160	22.4770
NIST	D5453	07/15/05	3	68	23.3700	23.2400	23.7300	0.8372	23.2400	23.7300	23.2400	23.7300
NIST	D5453	07/30/05	3	71	20.3000	20.4800	20.2300	0.8372	20.3000	20.2300	20.3000	20.4800
NIST	D5453	07/19/05	3	72	21.3000	21.2000	21.1000	0.8372	21.3000	21.2000	21.3000	21.1000
NIST	D2622	07/13/05	3	73	21.2000	20.9000	21.0000	0.8372	20.9000	21.0000	21.2000	20.9000
NIST	D5453	07/14/05	3	73	21.0000	21.2000	21.0000	0.8372	21.0000	21.2000	21.0000	21.2000
NIST	D5453	08/02/05	3	75	21.7400	20.3400	21.1000	0.8372	21.7400	21.1000	20.3400	21.1000
NIST	D5453	07/19/05	3	76	21.4000	22.2700	21.3400	0.8372	22.2700	21.3400	21.4000	22.2700
NIST	D5453	07/25/05	3	78	20.9300	21.0700	20.9600	0.8372	20.9300	21.0700		
NIST	D5453	08/10/05	3	81	20.9000	20.8000	21.3000	0.8372	20.9000	21.3000	20.9000	20.8000
NIST	D5453	07/26/05	3	82	19.6600	19.8400	19.7500	0.8372	19.6600	19.7500	19.8400	19.7500
NIST	D5453	07/14/05	3	83	21.7000	21.7000	21.6900	0.8372	21.7000	21.6900	21.7000	21.6900
NIST	D5453	07/25/05	3	84	19.8600	20.8900	19.3000	0.8372	20.8900	19.3000		
NIST	D5453	07/21/05	3	85	19.9000	19.8000	19.9000	0.8372	19.9000	19.8000	19.9000	19.8000
NIST	D3120	07/25/06	3	86	20.1000	20.1000	20.0000	0.8372	20.1000	20.0000	20.1000	20.1000
NIST	D5453	07/27/05	3	87	21.5000	21.7500	21.5600	0.8372	21.7500	21.5600	21.5000	21.5600
NIST	D5453	07/30/05	3	89	21.5000	21.9000	21.8000	0.8372	21.9000	21.8000	21.9000	21.8000
NIST	D5453	07/14/05	3	90	18.8000	18.8000	19.2000	0.8372	18.8000	19.2000	18.8000	19.2000
NIST	D5453	07/28/05	3	91	20.5900	20.4200	20.2800	0.8372	20.5900	20.2800	20.5900	20.2800
NIST	D5453	07/29/05	3	91.1	21.1400	21.1900	21.3700	0.8372	21.1400	21.3700	21.1400	21.3700
NIST	D2622	07/18/05	3	94	19.9000	17.8000	19.3000	0.8372	19.9000	19.3000		
NIST	D3120	07/27/05	3	95	18.3000	18.5000	18.4000	0.8372	18.5000	18.4000		
NIST	D5453	07/21/05	3	95	20.3000	20.0000	20.0000	0.8372	20.0000	20.0000	20.3000	20.0000
NIST	D5453	07/22/05	3	96	20.9000	20.8000	20.8000	0.8372	20.8000	20.8000	20.9000	20.8000
NIST	D5453	07/18/05	3	97	20.5000	20.3000	20.3000	0.8372	20.5000	20.3000	20.5000	20.3000
NIST	D5453	08/12/05	3	99	17.2000	16.9200	16.9800	0.8372			16.9200	16.9800
NIST	D5453	07/21/05	3	100	22.8000	23.9000	23.7000	0.8372	22.8000	23.9000		
NIST	D7039	07/26/05	3	102	20.7000	20.4000	20.8000	0.8372	20.7000	20.8000	20.7000	20.4000
NIST	D2622	07/28/05	3	103	21.1000	20.2000	21.1000	0.8372	20.2000	21.1000		
NIST	D5453	07/27/05	3	103	20.4045	19.8562	19.5548	0.8372	20.4045	19.8562	19.8562	19.5548
NIST	D7039	07/26/05	3	103	20.3000	20.8000	20.1000	0.8372	20.3000	20.8000	20.3000	20.1000
NIST	D2622	07/12/05	3	105	21.5600	21.5000	21.1700	0.8372	21.5000	21.1700	21.5000	21.1700
NIST	D5453	08/04/05	3	105	21.7000	21.8600	21.8000	0.8372	21.7000	21.8000	21.7000	21.8600
NIST	D7039	07/26/05	3	106	20.4000	21.1000	20.1000	0.8372	20.4000	21.1000	21.1000	20.1000
NIST	D7039	07/25/05	3	107	20.9000	20.6000	20.1000	0.8372	20.9000	20.6000	20.9000	20.1000
NIST	D5453	07/15/05	3	108	18.0520	18.1190	18.1000	0.8372	18.0520	18.1000		
NIST	D5453	07/27/05	3	109	25.7000	25.6000	25.8000	0.8372				
NIST	D7039	07/19/05	3	109	21.6000	21.4000	20.9000	0.8372	21.6000	21.4000	21.6000	20.9000
NIST	D5453	07/29/05	3	110	21.2000	20.9900	20.4500	0.8372	20.9900	20.4500	21.2000	20.4500

**Table B.6. July Fuel #3 Lab Data and Deletions Based on Composite Test Methods for NIST Calibration**

Calibration	Test Method	Run Date	July Sample #	Lab Code	Original Lab Data Robust Outlier Deletion in Shaded Box				After Robust Outlier Deletion Random Selection of 2 Obs		After Gravimetric Deletion Random Selection of 2 Obs	
					Measure #1	Measure #2	Measure #3	Density	#1	#2	#1	#2
NIST	D7039	08/03/05	3	111	20.0000	18.5000	18.6000	0.8372	18.5000	18.6000	20.0000	18.6000
NIST	D5453	07/29/05	3	112	21.1700	21.0800	20.7600	0.8745	21.1700	21.0800	21.1700	21.0800
NIST	D5453	07/23/05	3	113	21.2000	20.9000	21.0000	0.8372	21.2000	21.0000	20.9000	21.0000
NIST	D5453	07/27/05	3	114	19.9000	19.9000	19.8000	0.8372	19.9000	19.8000	19.9000	19.8000
NIST	D5453	07/26/05	3	115	19.8000	19.6000	19.7000	0.8372	19.8000	19.7000	19.6000	19.7000
NIST	D5453	07/17/05	3	116	20.4900	20.3700	20.7300	0.8372	20.3700	20.7300	20.4900	20.7300
NIST	D5453	07/19/05	3	117	21.6100	21.4300	21.4100	0.8372	21.4300	21.4100	21.6100	21.4100
NIST	D5453	07/26/05	3	118	20.0600	20.2300	20.2000	0.8372	20.0600	20.2300	20.0600	20.2300
NIST	D5453	07/25/05	3	119	22.0800	22.1200	22.0000	0.8372	22.1200	22.0000	22.0800	22.1200
NIST	D5453	08/09/05	3	120	20.4000	20.5000	20.4000	0.8372	20.4000	20.4000	20.4000	20.4000
NIST	D2622	07/19/05	3	121	21.9000	21.3000	21.9000	0.8372	21.9000	21.9000		
NIST	D5453	07/28/05	3	122	23.0000	22.7000	23.4000	0.8372	23.0000	22.7000	23.0000	23.4000
NIST	D2622	07/26/05	3	123	21.1000	20.5000	20.6000	0.8372	21.1000	20.5000	20.5000	20.6000
NIST	D2622	07/21/05	3	124	22.5000	22.5000	22.4000	0.8372	22.5000	22.4000		
NIST	D2622	07/28/05	3	126	19.0000	21.3000	19.9000	0.8372	19.0000	19.9000		
NIST	D5453	07/28/05	3	126	19.2000	21.0000	20.5000	0.8372	19.2000	21.0000		
NIST	D7039	07/15/05	3	127	20.7000	19.7000	20.0000	0.8372	20.7000	20.0000	19.7000	20.0000
NIST	D7039	07/26/05	3	128	20.9000	21.1000	21.4000	0.8372	20.9000	21.4000	21.1000	21.4000
NIST	D5453	07/27/05	3	129	20.5000	20.5000	20.3000	0.8372	20.5000	20.3000	20.5000	20.5000
NIST	D5453	07/25/05	3	130	20.7000	20.7000	20.7000	0.8372	20.7000	20.7000	20.7000	20.7000
NIST	D2622	07/27/05	3	131	21.0000	21.2000	21.2000	0.8372	21.2000	21.2000	21.2000	21.2000
NIST	EDXRF	07/27/05	3	131	19.9000	20.2000	20.4000	0.8372	20.2000	20.4000	19.9000	20.2000
NIST	D5453	08/25/05	3	132	21.8660	21.2560	20.8060	0.8372	21.2560	20.8060	21.8660	20.8060
NIST	D2622	07/19/05	3	133	22.3000	22.5000	22.6000	0.8372	22.5000	22.6000	22.3000	22.5000
NIST	EDXRF	08/29/05	3	134	21.2000	20.3000	20.8000	0.8372	21.2000	20.8000	21.2000	20.8000
NIST	EDXRF	08/04/05	3	135	20.1000	19.4000	20.2000	0.8372	19.4000	20.2000	20.1000	20.2000
NIST	D2622	07/19/05	3	136	20.9000	19.8000	21.4000	0.8372	19.8000	21.4000	19.8000	21.4000
NIST	EDXRF	07/15/05	3	136	21.6000	22.0000	21.9000	0.8372	21.6000	21.9000	21.6000	22.0000
NIST	D5453	07/18/05	3	137	22.1300	22.0600	22.2400	0.8372	22.1300	22.2400	22.1300	22.0600
NIST	EDXRF	07/15/05	3	137	21.3000	19.3000	18.9000	0.8372	21.3000	19.3000		
NIST	D5453	07/22/05	3	138	21.6000	21.7000	21.8000	0.8372	21.6000	21.8000	21.7000	21.8000
NIST	D2622	07/15/05	3	139	22.3000	21.8000	21.7000	0.8372	22.3000	21.8000	21.8000	21.7000
NIST	D5453	07/20/05	3	139	28.1300	29.9400	29.5400	0.8372				
NIST	D2622	07/20/05	3	140	20.4000	20.6000	19.2000	0.8372	20.4000	19.2000	20.4000	19.2000
NIST	EDXRF	08/12/05	3	141	21.9000	20.5000	23.2000	0.8372	21.9000	23.2000	21.9000	20.5000
NIST	D5453	07/14/05	3	143	20.9400	21.0300	21.2700	0.8372	20.9400	21.0300	20.9400	21.2700
NIST	D3120	07/25/05	3	144	22.2000	20.4000	21.2000	0.8372	22.2000	20.4000	22.2000	20.4000
NIST	D2622	07/24/05	3	145	22.1000	22.2000	22.3000	0.8745	22.1000	22.3000		
NIST	D5453	08/16/05	3	147	21.4000	21.3000	21.3000	0.8372	21.4000	21.3000	21.3000	21.3000
NIST	D5453	07/15/05	3	148	21.1900	21.2600	21.6900	0.8372	21.1900	21.2600	21.2600	21.6900
NIST	D7039	08/10/05	3	148	19.8000	20.0000	20.8000	0.8372	19.8000	20.0000	19.8000	20.0000
NIST	D5453	07/20/05	3	149	20.9890	20.9430	21.0220	0.8372	20.9890	21.0220	20.9430	21.0220
NIST	D5453	08/01/05	3	151	20.4000	20.0000	19.5000	0.8372	20.0000	19.5000	20.4000	20.0000
NIST	D7039	07/28/05	3	151	20.4000	20.8000	20.9000	0.8745	20.4000	20.9000	20.4000	20.9000
NIST	D5453	07/27/05	3	152	19.5300	19.5500	19.2800	0.8372	19.5300	19.2800	19.5300	19.5500
NIST	D5453	07/15/05	3	153	20.6800	20.8500	20.7900	0.8372	20.8500	20.7900	20.6800	20.8500
NIST	D5453	07/04/05	3	154	21.6400	21.9000	21.7000	0.8372	21.6400	21.9000	21.9000	21.7000

**Table B.6. July Fuel #3 Lab Data and Deletions Based on Composite Test Methods for NIST Calibration**

Calibration	Test Method	Run Date	July Sample #	Lab Code	Original Lab Data Robust Outlier Deletion in Shaded Box				After Robust Outlier Deletion Random Selection of 2 Obs		After Gravimetric Deletion Random Selection of 2 Obs	
					Measure #1	Measure #2	Measure #3	Density	#1	#2	#1	#2
NIST	D5453	07/28/05	3	156	21.9500	21.0400	21.8000	0.8372	21.9500	21.8000	21.0400	21.8000
NIST	D5453	07/21/05	3	158	27.0200	27.2900	26.7900	0.8372				
NIST	D5453	08/08/05	3	159	20.4300	20.0000	19.7100	0.8372	20.4300	19.7100	20.4300	19.7100
NIST	D7039	08/04/05	3	160	21.4000	20.3000	19.7000	0.8372	21.4000	20.3000		
NIST	D5453	07/24/05	3	161	20.6400	20.5400	20.4600	0.8372	20.6400	20.4600	20.6400	20.5400
NIST	D2622	07/31/05	3	162	22.4100	23.9800	23.7800	0.8372	22.4100	23.9800	22.4100	23.7800
NIST	D5453	07/30/05	3	162	21.1100	20.7400	20.8700	0.8372	20.7400	20.8700	21.1100	20.8700

**Table B.7. July Fuel #4 Lab Data and Deletions Based on Composite Test Methods for In-House Calibration**

Calibration	Test Method	Run Date	July Sample #	Lab Code	Original Lab Data Robust Outlier Deletion in Shaded Box				After Robust Outlier Deletion Random Selection of 2 Obs		After Gravimetric Deletion Random Selection of 2 Obs	
					Measure #1	Measure #2	Measure #3	Density	#1	#2	#1	#2
In-House	D5453	07/13/05	4	1	7.6000	7.7000	7.5000	0.8264	7.6000	7.5000	7.6000	7.5000
In-House	D5453	07/12/05	4	2	8.9300	8.6700	8.9300	0.8264	8.9300	8.9300	8.9300	8.9300
In-House	D2622	07/13/05	4	3	10.1900	9.9300	9.7800	0.8264	10.1900	9.9300		
In-House	D5453	07/21/05	4	4	8.9800	8.5900	8.7700	0.8264	8.9800	8.7700	8.5900	8.7700
In-House	D2622	07/15/05	4	5	7.7000	7.9000	7.1000	0.8264	7.7000	7.9000	7.7000	7.1000
In-House	D7039	07/27/05	4	6	8.9000	9.3000	9.6000	0.8264	9.3000	9.6000	8.9000	9.6000
In-House	D7039	07/21/05	4	7	9.3000	8.3000	9.0000	0.8264	9.3000	9.0000	9.3000	9.0000
In-House	D2622	07/13/05	4	8	8.8300	8.2900	8.2500	0.8264	8.2900	8.2500	8.8300	8.2900
In-House	D5453	07/13/05	4	8	8.9100	8.6100	8.4600	0.8264	8.6100	8.4600	8.6100	8.4600
In-House	D5453	07/15/05	4	9	7.9200	8.5500	8.0200	0.8264	8.5500	8.0200	8.5500	8.0200
In-House	D5453	07/28/05	4	11	8.9000	8.6300	8.8000	0.8264	8.6300	8.8000	8.9000	8.8000
In-House	D5453	07/27/05	4	12	7.9600	8.3000	8.0100	0.8264	8.3000	8.0100	8.3000	8.0100
In-House	D5453	07/20/05	4	13	8.7700	8.6400	8.5200	0.8264	8.7700	8.6400	8.7700	8.5200
In-House	D5453	07/26/05	4	15	7.4000	7.5000	7.8000	0.8264	7.5000	7.8000	7.4000	7.5000
In-House	D5453	07/19/05	4	16	7.7100	8.4600	8.0700	0.8264	8.4600	8.0700	7.7100	8.4600
In-House	D5453	07/20/05	4	18	8.1700	7.9400	7.3300	0.8264	7.9400	7.3300	8.1700	7.9400
In-House	D5453	08/03/05	4	19	7.6000	7.5000	7.5000	0.8264	7.5000	7.5000	7.5000	7.5000
In-House	D5453	08/02/05	4	21	7.8600	7.9200	7.8800	0.8264	7.8600	7.9200	7.9200	7.8800
In-House	D5453	08/10/05	4	23	7.5100	7.2000	7.5000	0.8264	7.5100	7.5000		
In-House	D5453	07/13/05	4	24	7.3800	7.3100	7.3600	0.8264	7.3800	7.3600		
In-House	D5453	08/30/05	4	25	7.4500	7.4200	7.3800	0.8264	7.4200	7.3800		
In-House	D5453	07/19/05	4	26	8.7500	8.6400	8.2600	0.8264	8.6400	8.2600	8.6400	8.2600
In-House	D5453	07/25/05	4	27	8.1200	7.8800	7.8600	0.8264	7.8800	7.8600	8.1200	7.8600
In-House	D2622	07/22/05	4	28	8.4000	8.4000	8.3000	0.8264	8.4000	8.3000	8.4000	8.4000
In-House	D5453	07/19/05	4	29	7.2580	7.4140	6.8340	0.8264	7.2580	7.4140		
In-House	D5453	07/12/05	4	30	8.1000	8.1000	8.2000	0.8264	8.1000	8.2000	8.1000	8.2000
In-House	D5453	07/13/05	4	31	8.0000	8.1000	8.3000	0.8264	8.0000	8.3000	8.0000	8.3000
In-House	D5453	07/25/05	4	32	8.8000	8.6500	8.4900	0.8264	8.8000	8.6500	8.8000	8.4900
In-House	D5453	08/19/05	4	33	8.1800	8.1800	8.1400	0.8264	8.1800	8.1800	8.1800	8.1400
In-House	D5453	07/26/05	4	35	7.5100	7.4700	7.4900	0.8956	7.4700	7.4900		
In-House	D5453	07/15/05	4	36	6.7000	6.9000	6.6000	0.8264	6.7000	6.9000		
In-House	D5453	07/15/05	4	37	7.8000	7.9000	7.7000	0.8264	7.8000	7.9000	7.9000	7.7000
In-House	D5453	07/25/05	4	38	7.9000	7.6000	7.9000	0.8264	7.9000	7.6000	7.9000	7.6000
In-House	D5453	07/28/05	4	39	9.9700	10.0400	10.1400	0.8264	10.0400	10.1400		
In-House	D2622	08/02/05	4	41	9.9000	9.2000	9.2000	0.8264	9.9000	9.2000		
In-House	D5453	08/03/05	4	41	8.2600	8.6500	8.6500	0.8264	8.6500	8.6500	8.2600	8.6500
In-House	D2622	08/31/05	4	EPA	9.5000	9.0000	8.8000	0.8264	9.5000	8.8000	9.0000	8.8000
In-House	D5453	08/30/05	4	EPA	8.2000	8.2000	8.2000	0.8264	8.2000	8.2000	8.2000	8.2000
In-House	D7039	08/02/05	4	EPA	8.3000	8.2000	7.9000	0.8264	8.3000	7.9000	8.2000	7.9000
In-House	D7039	07/21/05	4	47	8.0000	8.0000	7.5000	0.8264	8.0000	8.0000	8.0000	7.5000
In-House	D5453	07/19/05	4	48	7.5200	7.3000	8.1200	0.8264	7.5200	7.3000	7.5200	8.1200
In-House	D2622	08/10/05	4	50	9.1000	8.8000	7.7000	0.8264	9.1000	8.8000	8.8000	7.7000
In-House	D5453	07/25/05	4	51	8.6000	8.6000	8.5000	0.8264	8.6000	8.5000	8.6000	8.5000
In-House	D5453	07/27/05	4	52	7.5800	7.4200	7.3800	0.8264	7.4200	7.3800		
In-House	D2622	07/26/05	4	53	8.2000	9.0000	9.7000	0.8264	8.2000	9.7000	8.2000	9.7000
In-House	D5453	07/19/05	4	54	7.5000	7.5000	7.4000	0.8264	7.5000	7.5000		
In-House	D2622	07/21/05	4	55	8.8000	8.5000	8.2000	0.8264	8.8000	8.5000	8.8000	8.5000

**Table B.7. July Fuel #4 Lab Data and Deletions Based on Composite Test Methods for In-House Calibration**

Calibration	Test Method	Run Date	July Sample #	Lab Code	Original Lab Data Robust Outlier Deletion in Shaded Box				After Robust Outlier Deletion Random Selection of 2 Obs		After Gravimetric Deletion Random Selection of 2 Obs	
					Measure #1	Measure #2	Measure #3	Density	#1	#2	#1	#2
In-House	D5453	07/21/05	4	56	7.9000	8.0000	7.9000	0.8264	8.0000	7.9000	7.9000	8.0000
In-House	D5453	07/26/05	4	59	8.1300	7.9100	8.0400	0.8264	8.1300	8.0400	7.9100	8.0400
In-House	D7039	07/28/05	4	60	8.6000	9.0000	9.0000	0.8264	8.6000	9.0000	9.0000	9.0000
In-House	D5453	07/27/05	4	61	7.9700	7.8300	7.7700	0.8264	7.9700	7.7700	7.9700	7.8300
In-House	D5453	08/30/05	4	CARB	7.4200	7.5100	7.5600	0.8264	7.4200	7.5100		
In-House	D5453	07/29/05	4	63	10.5800	9.8100	9.8100	0.8264	9.8100	9.8100		
In-House	D5453	08/02/05	4	64	7.6000	7.3000	7.8000	0.8264	7.3000	7.8000	7.3000	7.8000
In-House	D5453	08/01/05	4	66	9.5900	9.4200	9.0400	0.8264	9.4200	9.0400		
In-House	D2622	07/18/05	4	67	9.2000	9.2000	8.2000	0.8264	9.2000	8.2000	9.2000	8.2000
In-House	D5453	07/15/05	4	68	8.4100	8.2800	8.2000	0.8264	8.4100	8.2800	8.4100	8.2800
In-House	D5453	07/29/05	4	71	8.0000	7.9900	7.9800	0.8264	8.0000	7.9800	7.9900	7.9800
In-House	D5453	07/19/05	4	72	8.1000	8.4000	8.3000	0.8264	8.1000	8.3000	8.1000	8.4000
In-House	D2622	07/13/05	4	73	8.5000	8.4000	9.1000	0.8264	8.5000	8.4000	8.5000	9.1000
In-House	D5453	07/14/05	4	73	8.4000	8.5000	8.4000	0.8264	8.4000	8.4000	8.4000	8.4000
In-House	D5453	07/13/05	4	75	7.5800	7.7800	7.8700	0.8264	7.5800	7.7800	7.5800	7.8700
In-House	D5453	07/15/05	4	76	9.3300	9.1700	9.2700	0.8264	9.3300	9.2700	9.3300	9.1700
In-House	D5453	07/25/05	4	78	10.4000	10.5000	10.5000	0.8264				
In-House	D5453	08/09/05	4	81	8.1000	8.0000	8.3000	0.8264	8.1000	8.0000	8.1000	8.3000
In-House	D5453	07/19/05	4	82	8.5000	8.2900	8.0500	0.8264	8.5000	8.2900	8.5000	8.2900
In-House	D5453	07/14/05	4	83	8.0400	8.2400	7.9100	0.8264	8.2400	7.9100	8.0400	8.2400
In-House	D5453	07/22/05	4	84	8.4300	7.5400	7.4200	0.8264	8.4300	7.4200	8.4300	7.5400
In-House	D5453	07/20/05	4	85	8.2000	8.2000	8.2000	0.8264	8.2000	8.2000	8.2000	8.2000
In-House	D3120	07/19/05	4	86	8.6000	8.6000	9.0000	0.8264	8.6000	9.0000	8.6000	9.0000
In-House	D5453	07/27/05	4	87	8.5800	8.4400	8.5200	0.8264	8.5800	8.4400	8.5800	8.4400
In-House	D5453	07/30/05	4	89	7.8000	7.7000	7.5000	0.8264	7.8000	7.5000	7.7000	7.5000
In-House	D5453	07/14/05	4	90	7.9000	7.7000	7.5000	0.8264	7.9000	7.7000	7.9000	7.5000
In-House	D5453	07/27/05	4	91	8.4700	8.4200	8.5100	0.8264	8.4200	8.5100	8.4200	8.5100
In-House	D5453	07/25/05	4	91.1	8.3000	8.3700	8.2300	0.8264	8.3000	8.2300	8.3700	8.2300
In-House	D2622	08/02/05	4	94	10.5000	10.2000	8.3000	0.8264	10.2000	8.3000		
In-House	D3120	07/25/05	4	95	7.2000	7.2000	6.9000	0.8264	7.2000	7.2000		
In-House	D5453	07/25/05	4	95	8.2000	8.3000	8.1000	0.8264	8.2000	8.3000	8.2000	8.1000
In-House	D5453	07/21/05	4	96	8.5000	8.3000	8.5000	0.8264	8.5000	8.3000	8.3000	8.5000
In-House	D5453	07/18/05	4	97	7.9000	7.9000	7.8000	0.8264	7.9000	7.8000	7.9000	7.8000
In-House	D5453	08/15/05	4	99	9.0300	8.5800	7.8500	0.8264	9.0300	7.8500	9.0300	7.8500
In-House	D5453	07/18/05	4	100	8.4000	8.2000	7.6000	0.8264	8.4000	7.6000	8.2000	7.6000
In-House	D7039	07/26/05	4	102	8.6000	8.9000	8.5000	0.8264	8.6000	8.5000	8.6000	8.5000
In-House	D2622	07/26/05	4	103	9.5260	8.0770	7.2040	0.8264	8.0770	7.2040	9.5260	7.2040
In-House	D5453	07/26/05	4	103	7.8748	7.5459	7.5822	0.8264	7.8748	7.5459	7.8748	7.5459
In-House	D7039	07/25/05	4	103	8.6000	8.6000	8.7000	0.8264	8.6000	8.7000	8.6000	8.7000
In-House	D2622	07/12/05	4	105	8.2000	8.5000	8.8000	0.8264	8.2000	8.8000	8.2000	8.8000
In-House	D5453	08/01/05	4	105	8.3000	8.3200	8.1400	0.8264	8.3200	8.1400	8.3000	8.1400
In-House	D7039	07/26/05	4	106	8.9000	8.8000	8.3000	0.8264	8.9000	8.8000	8.8000	8.3000
In-House	D7039	07/20/05	4	107	8.4000	8.6000	8.5000	0.8264	8.4000	8.5000	8.4000	8.5000
In-House	D5453	07/15/05	4	108	7.0080	7.2750	7.2410	0.8264	7.0080	7.2410		
In-House	D5453	07/19/05	4	109	7.4000	7.3000	7.5000	0.8264	7.4000	7.3000		
In-House	D7039	07/18/05	4	109	7.1000	7.3000	7.2000	0.8264	7.3000	7.2000		
In-House	D5453	07/28/05	4	110	8.3600	8.4900	8.3000	0.8264	8.3600	8.4900	8.3600	8.3000

**Table B.7. July Fuel #4 Lab Data and Deletions Based on Composite Test Methods for In-House Calibration**

Calibration	Test Method	Run Date	July Sample #	Lab Code	Original Lab Data Robust Outlier Deletion in Shaded Box				After Robust Outlier Deletion Random Selection of 2 Obs		After Gravimetric Deletion Random Selection of 2 Obs		
					Measure #1	Measure #2	Measure #3	Density	#1	#2	#1	#2	
In-House	D7039	08/02/05	4	111	6.5000	6.0000	6.1000	0.8264	6.5000				
In-House	D5453	07/29/05	4	112	9.1200	8.8500	8.6600	0.8956	9.1200	8.8500		9.1200	8.8500
In-House	D5453	07/21/05	4	113	7.4000	7.2000	7.7000	0.8264	7.4000	7.7000			
In-House	D5453	07/25/05	4	114	8.4000	8.3000	8.6000	0.8264	8.4000	8.3000		8.4000	8.6000
In-House	D5453	07/25/05	4	115	8.7000	8.7000	8.7000	0.8264	8.7000	8.7000		8.7000	8.7000
In-House	D5453	07/16/05	4	116	8.5300	8.3000	8.2500	0.8264	8.5300	8.2500		8.5300	8.3000
In-House	D5453	07/19/05	4	117	8.4600	8.3400	8.2600	0.8264	8.4600	8.2600		8.4600	8.2600
In-House	D5453	07/25/05	4	118	7.8400	8.1800	8.2800	0.8264	7.8400	8.2800		7.8400	8.2800
In-House	D5453	07/25/05	4	119	8.0800	8.0500	8.0000	0.8264	8.0800	8.0500		8.0800	8.0500
In-House	D5453	08/08/05	4	120	8.4000	8.5000	8.4000	0.8264	8.5000	8.4000		8.4000	8.5000
In-House	D2622	07/19/05	4	121	9.2000	9.5000	8.1000	0.8264	9.2000	8.1000		9.2000	9.5000
In-House	D5453	07/27/05	4	122	8.4000	8.3000	8.3000	0.8264	8.3000	8.3000		8.3000	8.3000
In-House	D2622	07/25/05	4	123	7.8000	8.1000	8.3000	0.8264	7.8000	8.3000		7.8000	8.1000
In-House	D2622	07/13/05	4	124	8.7000	8.4000	9.5000	0.8264	8.7000	8.4000		8.7000	8.4000
In-House	D2622	07/28/05	4	126	8.8000	8.5000	7.8000	0.8264	8.5000	7.8000		8.5000	7.8000
In-House	D5453	07/28/05	4	126	6.7300	6.7900	6.4600	0.8264	6.7900	6.4600			
In-House	D7039	07/15/05	4	127	8.5000	8.3000	7.8000	0.8264	8.5000	8.3000		8.5000	7.8000
In-House	D7039	07/25/05	4	128	8.5000	8.1000	8.0000	0.8264	8.1000	8.0000		8.5000	8.1000
In-House	D5453	07/21/05	4	129	9.0600	9.0500	8.8000	0.8264	9.0500	8.8000		9.0600	8.8000
In-House	D5453	07/22/05	4	130	7.8000	7.7000	7.9000	0.8264	7.8000	7.7000		7.8000	7.7000
In-House	D2622	07/22/05	4	131	8.4000	8.1000	8.4000	0.8264	8.4000	8.1000		8.1000	8.4000
In-House	EDXRF	07/22/05	4	131	8.3000	8.7000	8.2000	0.8264	8.3000	8.7000		8.7000	8.2000
In-House	D5453	08/25/05	4	132	9.1170	8.8830	8.9300	0.8264	9.1170	8.9300		9.1170	8.8830
In-House	D2622	07/19/05	4	133	8.1000	8.9000	9.0000	0.8264	8.9000	9.0000		8.9000	9.0000
In-House	EDXRF	08/30/05	4	134	9.1000	9.3000	9.2000	0.8264	9.3000	9.2000		9.3000	9.2000
In-House	EDXRF	08/04/05	4	135	9.2000	8.2000	8.6000	0.8264	9.2000	8.6000		9.2000	8.2000
In-House	D2622	07/19/05	4	136	9.2000	8.3000	8.6000	0.8264	8.3000	8.6000		9.2000	8.3000
In-House	EDXRF	07/15/05	4	136	8.5000	8.4000	8.4000	0.8264	8.4000	8.4000		8.5000	8.4000
In-House	D5453	07/15/05	4	137	7.2900	6.9000	7.2600	0.8264	6.9000	7.2600			
In-House	EDXRF	07/15/05	4	137	9.3000	8.9000	8.3000	0.8264	8.9000	8.3000		9.3000	8.3000
In-House	D5453	07/22/05	4	138	8.4000	8.5000	8.4000	0.8264	8.4000	8.4000		8.4000	8.5000
In-House	D2622	07/13/05	4	139	8.6800	8.8000	9.2000	0.8264	8.6800	9.2000		8.6800	9.2000
In-House	D5453	07/13/05	4	139	9.6300	9.5000	9.4000	0.8264	9.6300	9.5000			
In-House	D2622	07/19/05	4	140	8.3000	8.2000	7.4000	0.8264	8.2000	7.4000		8.2000	7.4000
In-House	EDXRF	08/09/05	4	141	8.4000	8.7000	8.5000	0.8264	8.4000	8.7000		8.4000	8.5000
In-House	D5453	07/14/05	4	143	8.2900	8.4200	8.3000	0.8264	8.2900	8.3000		8.2900	8.3000
In-House	D3120	07/25/05	4	144	7.4000	7.2600	7.1200	0.8264	7.4000	7.1200			
In-House	D2622	07/24/05	4	145	9.7000	9.8000	9.9000	0.8956	9.7000	9.8000			
In-House	D5453	08/16/05	4	147	7.3000	7.4000	7.3000	0.8264	7.3000	7.4000			
In-House	D5453	07/15/05	4	148	8.8500	8.5700	8.7700	0.8264	8.8500	8.5700		8.8500	8.5700
In-House	D7039	08/08/05	4	148	8.0000	8.1000	8.2000	0.8264	8.1000	8.2000		8.1000	8.2000
In-House	D5453	07/27/05	4	149	8.7200	8.6580	8.5470	0.8264	8.7200	8.5470		8.7200	8.6580
In-House	D5453	08/01/05	4	151	8.3000	7.7000	7.3000	0.8264	7.7000	7.3000		8.3000	7.7000
In-House	D7039	07/28/05	4	151	8.4000	8.2000	8.2000	0.8956	8.2000	8.2000		8.4000	8.2000
In-House	D5453	07/22/05	4	152	7.5700	7.5300	7.6200	0.8264	7.5700	7.6200		7.5700	7.5300
In-House	D5453	07/14/05	4	153	8.8400	8.8400	8.8300	0.8264	8.8400	8.8400		8.8400	8.8300
In-House	D5453	07/26/05	4	154	7.8800	7.8460	8.1100	0.8264	7.8800	8.1100		7.8800	7.8460



**Table B.7. July Fuel #4 Lab Data and Deletions Based on Composite Test Methods for In-House Calibration**

Calibration	Test Method	Run Date	July Sample #	Lab Code	Original Lab Data Robust Outlier Deletion in Shaded Box				After Robust Outlier Deletion Random Selection of 2 Obs		After Gravimetric Deletion Random Selection of 2 Obs	
					Measure #1	Measure #2	Measure #3	Density	#1	#2	#1	#2
In-House	D5453	07/28/05	4	156	7.7400	7.5000	7.2600	0.8264	7.7400	7.5000		
In-House	D5453	07/20/05	4	158	9.9700	10.2100	10.0700	0.8264	10.2100	10.0700		
In-House	D5453	08/08/05	4	159	7.7500	8.6100	8.6700	0.8264	8.6100	8.6700	7.7500	8.6700
In-House	D7039	08/03/05	4	160	8.7000	8.8000	8.5000	0.8264	8.7000	8.8000	8.7000	8.5000
In-House	D5453	07/24/05	4	161	9.7100	9.5500	9.4000	0.8264	9.7100	9.4000		
In-House	D2622	07/31/05	4	162	6.9900	6.9000	7.1200	0.8264	6.9000	7.1200		
In-House	D5453	07/29/05	4	162	8.6300	8.7000	8.4200	0.8264	8.6300	8.4200	8.6300	8.4200

**Table B.8. July Fuel #4 Lab Data and Deletions Based on Composite Test Methods for NIST Calibration**

Calibration	Test Method	Run Date	July Sample #	Lab Code	Original Lab Data Robust Outlier Deletion in Shaded Box				After Robust Outlier Deletion Random Selection of 2 Obs		After Gravimetric Deletion Random Selection of 2 Obs	
					Measure #1	Measure #2	Measure #3	Density	#1	#2	#1	#2
NIST	D5453	07/13/05	4	1	8.2000	8.2000	8.1000	0.8264	8.2000	8.2000	8.2000	8.2000
NIST	D5453	07/12/05	4	2	8.1200	8.3500	8.0700	0.8264	8.1200	8.3500	8.1200	8.3500
NIST	D2622	07/13/05	4	3	10.0500	9.1400	9.0200	0.8264	10.0500	9.0200		
NIST	D5453	07/21/05	4	4	7.6900	8.5200	6.8300	0.8264	7.6900	8.5200	7.6900	8.5200
NIST	D2622	07/15/05	4	5	9.6000	9.7000	9.0000	0.8264	9.7000	9.0000		
NIST	D7039	07/27/05	4	6	8.3000	9.1000	8.3000	0.8264	8.3000	9.1000	9.1000	8.3000
NIST	D7039	07/21/05	4	7	8.4000	8.3000	9.5000	0.8264	8.3000	9.5000	8.4000	8.3000
NIST	D2622	07/13/05	4	8	8.9600	8.3000	7.7800	0.8264	8.3000	7.7800	8.9600	7.7800
NIST	D5453	07/13/05	4	8	8.0700	8.0500	8.0400	0.8264	8.0700	8.0500	8.0700	8.0400
NIST	D5453	07/18/05	4	9	8.0300	8.1400	8.1000	0.8264	8.0300	8.1000	8.0300	8.1400
NIST	D5453	07/29/05	4	11	8.4400	8.3700	8.2300	0.8264	8.4400	8.3700	8.4400	8.2300
NIST	D5453	07/28/05	4	12	8.3000	8.3000	8.2000	0.8264	8.3000	8.3000	8.3000	8.2000
NIST	D5453	07/21/05	4	13	8.0600	8.1500	8.1600	0.8264	8.0600	8.1600	8.0600	8.1500
NIST	D5453	07/28/05	4	15	8.2000	7.8000	7.7000	0.8264	7.8000	7.7000	8.2000	7.8000
NIST	D5453	07/21/05	4	16	8.4400	8.1500	8.6400	0.8264	8.4400	8.1500	8.4400	8.1500
NIST	D5453	07/20/05	4	18	8.1500	8.0400	8.2100	0.8264	8.0400	8.2100	8.0400	8.2100
NIST	D5453	08/05/05	4	19	8.3000	8.3000	8.4000	0.8264	8.3000	8.3000	8.3000	8.4000
NIST	D5453	08/03/05	4	21	8.2500	8.2300	8.1400	0.8264	8.2300	8.1400	8.2500	8.1400
NIST	D5453	08/11/05	4	23	8.0500	7.9800	8.0200	0.8264	8.0500	7.9800	8.0500	7.9800
NIST	D5453	07/13/05	4	24	9.5100	9.4200	7.7800	0.8264	9.5100	9.4200	9.5100	9.4200
NIST	D5453	08/31/05	4	25	8.2800	8.3200	8.2900	0.8264	8.2800	8.3200	8.2800	8.2900
NIST	D5453	07/21/05	4	26	8.9300	8.5900	7.7900	0.8264	8.9300	7.7900	8.5900	7.7900
NIST	D5453	07/25/05	4	27	7.9900	8.0100	7.9600	0.8264	8.0100	7.9600	7.9900	7.9600
NIST	D2622	07/14/05	4	28	8.0000	8.9000	8.1000	0.8264	8.0000	8.9000	8.9000	8.1000
NIST	D5453	07/20/05	4	29	7.7680	7.3120	7.3120	0.8264	7.7680	7.3120		
NIST	D5453	07/13/05	4	30	8.3000	8.3000	8.0000	0.8264	8.3000	8.3000	8.3000	8.0000
NIST	D5453	07/13/05	4	31	8.4000	8.3000	8.0000	0.8264	8.3000	8.0000	8.4000	8.0000
NIST	D5453	07/26/05	4	32	8.6000	8.5800	8.4500	0.8264	8.5800	8.4500	8.6000	8.5800
NIST	D5453	08/22/05	4	33	10.6800	10.4300	10.5200	0.8264				
NIST	D5453	07/20/05	4	35	7.7800	7.5200	7.4900	0.8956	7.5200	7.4900	7.7800	7.4900
NIST	D5453	07/15/05	4	36	7.2000	7.2000	7.0000	0.8264	7.2000	7.0000		
NIST	D5453	07/21/05	4	37	8.6000	8.4000	8.8000	0.8264	8.6000	8.4000	8.4000	8.8000
NIST	D5453	07/26/05	4	38	9.2000	9.2000	8.7000	0.8264	9.2000	9.2000	9.2000	9.2000
NIST	D5453	07/28/05	4	39	10.2600	10.2100	10.2600	0.8264	10.2100	10.2600		
NIST	D2622	08/02/05	4	41	9.1000	9.5000	9.3000	0.8264	9.1000	9.3000	9.1000	9.5000
NIST	D5453	08/04/05	4	41	9.3800	9.1900	8.8800	0.8264	9.3800	9.1900	9.3800	8.8800
NIST	D2622	09/01/05	4	EPA	8.9000	9.6000	9.5000	0.8264	8.9000	9.6000		
NIST	D5453	08/30/05	4	EPA	8.2000	8.2000	8.2000	0.8264	8.2000	8.2000	8.2000	8.2000
NIST	D7039	08/03/05	4	EPA	8.7000	8.5000	8.4000	0.8264	8.7000	8.4000	8.5000	8.4000
NIST	D7039	07/22/05	4	47	8.2000	8.2000	8.2000	0.8264	8.2000	8.2000	8.2000	8.2000
NIST	D5453	07/19/05	4	48	8.2200	11.1300	9.8100	0.8264	8.2200	9.8100		
NIST	D2622	08/10/05	4	50	8.0000	9.9000	8.5000	0.8264	8.0000	9.9000	8.0000	8.5000
NIST	D5453	07/26/05	4	51	8.1000	8.3000	8.2000	0.8264	8.1000	8.3000	8.1000	8.3000
NIST	D5453	07/28/05	4	52	8.1000	8.3300	7.9700	0.8264	8.1000	7.9700	8.3300	7.9700
NIST	D2622	07/28/05	4	53	8.6000	8.4000	9.7000	0.8264	8.4000	9.7000	8.6000	8.4000
NIST	D5453	07/21/05	4	54	7.8000	7.8000	7.8000	0.8264	7.8000	7.8000	7.8000	7.8000
NIST	D2622	07/23/05	4	55	8.2000	9.7000	8.9000	0.8264	9.7000	8.9000	9.7000	8.9000

**Table B.8. July Fuel #4 Lab Data and Deletions Based on Composite Test Methods for NIST Calibration**

Calibration	Test Method	Run Date	July Sample #	Lab Code	Original Lab Data Robust Outlier Deletion in Shaded Box				After Robust Outlier Deletion Random Selection of 2 Obs		After Gravimetric Deletion Random Selection of 2 Obs	
					Measure #1	Measure #2	Measure #3	Density	#1	#2	#1	#2
NIST	D5453	07/22/05	4	56	7.6000	7.8000	7.6000	0.8264	7.8000	7.6000	7.6000	7.8000
NIST	D5453	08/31/05	4	59	8.4600	8.4200	8.5700	0.8264	8.4600	8.5700	8.4600	8.5700
NIST	D7039	07/29/05	4	60	8.6000	8.8000	8.6000	0.8264	8.6000	8.6000	8.8000	8.6000
NIST	D5453	07/27/05	4	61	8.5800	8.3900	8.4300	0.8264	8.5800	8.3900	8.5800	8.4300
NIST	D5453	08/31/05	4	CARB	8.0000	7.9000	7.9000	0.8264	8.0000	7.9000	7.9000	7.9000
NIST	D5453	07/29/05	4	63	10.1500	10.0800	10.3500	0.8264	10.1500	10.0800		
NIST	D5453	07/18/05	4	64	8.3000	8.2000	7.8000	0.8264	8.3000	7.8000	8.3000	8.2000
NIST	D5453	08/01/05	4	66	9.7000	9.5000	9.5000	0.8264	9.5000	9.5000		
NIST	D2622	07/25/05	4	67	8.1430	9.1520	9.8200	0.8264	8.1430	9.8200	8.1430	9.1520
NIST	D5453	07/15/05	4	68	9.0400	8.9500	8.6400	0.8264	9.0400	8.9500	8.9500	8.6400
NIST	D5453	07/30/05	4	71	8.5700	8.2900	8.4000	0.8264	8.5700	8.4000	8.5700	8.2900
NIST	D5453	07/19/05	4	72	8.4000	8.2000	8.1000	0.8264	8.2000	8.1000	8.4000	8.2000
NIST	D2622	07/13/05	4	73	8.4000	9.0000	8.4000	0.8264	8.4000	9.0000	8.4000	9.0000
NIST	D5453	07/14/05	4	73	8.9000	8.4000	8.4000	0.8264	8.4000	8.4000	8.4000	8.4000
NIST	D5453	08/02/05	4	75	8.7000	9.6000	8.9000	0.8264	8.7000	8.9000	9.6000	8.9000
NIST	D5453	07/19/05	4	76	8.4700	8.6400	8.6100	0.8264	8.6400	8.6100	8.4700	8.6100
NIST	D5453	07/25/05	4	78	10.9700	11.0800	11.1100	0.8264				
NIST	D5453	08/10/05	4	81	8.4000	8.6000	8.2000	0.8264	8.6000	8.2000	8.4000	8.2000
NIST	D5453	07/26/05	4	82	7.7100	7.4400	7.3800	0.8264	7.7100	7.4400	7.4400	7.3800
NIST	D5453	07/14/05	4	83	8.5500	8.5700	8.2800	0.8264	8.5700	8.2800	8.5700	8.2800
NIST	D5453	07/25/05	4	84	6.2400	6.5500	5.7400	0.8264				
NIST	D5453	07/21/05	4	85	8.1000	8.0000	8.0000	0.8264	8.1000	8.0000	8.1000	8.0000
NIST	D3120	07/25/06	4	86	7.8000	7.8000	7.9000	0.8264	7.8000	7.8000	7.8000	7.9000
NIST	D5453	07/27/05	4	87	9.0000	9.1400	9.0500	0.8264	9.0000	9.0500	9.0000	9.0500
NIST	D5453	07/30/05	4	89	8.2000	8.3000	8.3000	0.8264	8.2000	8.3000	8.2000	8.3000
NIST	D5453	07/14/05	4	90	8.0000	7.9000	8.1000	0.8264	8.0000	7.9000	8.0000	8.1000
NIST	D5453	07/28/05	4	91	8.1600	8.1100	7.9200	0.8264	8.1100	7.9200	8.1600	8.1100
NIST	D5453	07/29/05	4	91.1	8.5800	8.5300	8.5300	0.8264	8.5800	8.5300	8.5800	8.5300
NIST	D2622	07/18/05	4	94	10.7000	11.0000	11.3000	0.8264				
NIST	D3120	07/27/05	4	95	7.1000	7.2000	6.9000	0.8264	7.1000	6.9000		
NIST	D5453	07/21/05	4	95	8.0000	8.0000	8.0000	0.8264	8.0000	8.0000	8.0000	8.0000
NIST	D5453	07/22/05	4	96	8.4000	8.5000	8.5000	0.8264	8.4000	8.5000	8.4000	8.5000
NIST	D5453	07/18/05	4	97	8.1000	8.2000	8.1000	0.8264	8.1000	8.2000	8.2000	8.1000
NIST	D5453	08/12/05	4	99	8.4300	8.1100	7.4100	0.8264	8.4300	7.4100	8.1100	7.4100
NIST	D5453	07/21/05	4	100	11.0000	10.6000	10.5000	0.8264				
NIST	D7039	07/26/05	4	102	8.4000	8.2000	8.2000	0.8264	8.2000	8.2000	8.2000	8.2000
NIST	D2622	07/28/05	4	103	6.1000	5.6000	6.0000	0.8264				
NIST	D5453	07/27/05	4	103	8.0597	7.7370	7.6736	0.8264	8.0597	7.6736	8.0597	7.6736
NIST	D7039	07/26/05	4	103	8.2000	8.6000	8.6000	0.8264	8.6000	8.6000	8.6000	8.6000
NIST	D2622	07/12/05	4	105	8.3000	8.9100	8.2400	0.8264	8.3000	8.2400	8.3000	8.2400
NIST	D5453	08/04/05	4	105	8.2200	8.0800	8.1200	0.8264	8.0800	8.1200	8.2200	8.1200
NIST	D7039	07/26/05	4	106	8.2000	8.0000	8.4000	0.8264	8.2000	8.0000	8.0000	8.4000
NIST	D7039	07/25/05	4	107	8.6000	9.9000	8.8000	0.8264	9.9000	8.8000	8.6000	9.9000
NIST	D5453	07/15/05	4	108	7.0650	7.1710	6.9390	0.8264	7.1710	6.9390		
NIST	D5453	07/27/05	4	109	9.6000	9.6000	9.6000	0.8264	9.6000	9.6000		
NIST	D7039	07/19/05	4	109	8.5000	8.6000	8.2000	0.8264	8.6000	8.2000	8.5000	8.2000
NIST	D5453	07/29/05	4	110	8.2200	8.1900	7.9600	0.8264	8.1900	7.9600	8.1900	7.9600

**Table B.8. July Fuel #4 Lab Data and Deletions Based on Composite Test Methods for NIST Calibration**

Calibration	Test Method	Run Date	July Sample #	Lab Code	Original Lab Data Robust Outlier Deletion in Shaded Box				After Robust Outlier Deletion Random Selection of 2 Obs		After Gravimetric Deletion Random Selection of 2 Obs	
					Measure #1	Measure #2	Measure #3	Density	#1	#2	#1	#2
NIST	D7039	08/03/05	4	111	7.7000	8.3000	7.9000	0.8264	7.7000	8.3000	7.7000	7.9000
NIST	D5453	07/29/05	4	112	8.1400	8.0300	8.0200	0.8956	8.1400	8.0200	8.0300	8.0200
NIST	D5453	07/23/05	4	113	8.5000	8.5000	8.0000	0.8264	8.5000	8.0000	8.5000	8.0000
NIST	D5453	07/27/05	4	114	8.0000	7.9000	7.8000	0.8264	8.0000	7.8000	8.0000	7.8000
NIST	D5453	07/26/05	4	115	7.9000	7.8000	7.6000	0.8264	7.9000	7.8000	7.8000	7.6000
NIST	D5453	07/17/05	4	116	8.0100	7.9700	8.0500	0.8264	7.9700	8.0500	8.0100	8.0500
NIST	D5453	07/19/05	4	117	8.2500	8.2100	8.1100	0.8264	8.2500	8.1100	8.2500	8.2100
NIST	D5453	07/26/05	4	118	8.0900	8.2200	7.6400	0.8264	8.2200	7.6400	8.0900	8.2200
NIST	D5453	07/25/05	4	119	8.6300	8.5500	8.5800	0.8264	8.6300	8.5500	8.6300	8.5500
NIST	D5453	08/09/05	4	120	8.3000	8.3000	8.3000	0.8264	8.3000	8.3000	8.3000	8.3000
NIST	D2622	07/19/05	4	121	9.7000	10.0000	8.7000	0.8264	9.7000	10.0000		
NIST	D5453	07/28/05	4	122	9.2000	8.7000	8.7000	0.8264	9.2000	8.7000	9.2000	8.7000
NIST	D2622	07/26/05	4	123	7.7000	8.2000	8.5000	0.8264	7.7000	8.5000	8.2000	8.5000
NIST	D2622	07/21/05	4	124	10.3000	9.9000	10.9000	0.8264	9.9000			
NIST	D2622	07/28/05	4	126	6.8000	6.1000	7.8000	0.8264	6.8000	7.8000		
NIST	D5453	07/28/05	4	126	6.4000	6.4000	6.7000	0.8264	6.7000			
NIST	D7039	07/15/05	4	127	8.4000	8.9000	8.5000	0.8264	8.4000	8.9000	8.9000	8.5000
NIST	D7039	07/26/05	4	128	8.4000	8.6000	8.7000	0.8264	8.6000	8.7000	8.4000	8.7000
NIST	D5453	07/27/05	4	129	8.3200	8.4300	8.3600	0.8264	8.3200	8.3600	8.3200	8.3600
NIST	D5453	07/25/05	4	130	8.0000	8.0000	8.1000	0.8264	8.0000	8.1000	8.0000	8.1000
NIST	D2622	07/27/05	4	131	7.8000	7.6000	8.1000	0.8264	7.8000	8.1000	7.8000	8.1000
NIST	EDXRF	07/27/05	4	131	8.7000	8.8000	8.6000	0.8264	8.7000	8.8000	8.8000	8.6000
NIST	D5453	08/25/05	4	132	8.8640	8.8310	8.7560	0.8264	8.8640	8.8310	8.8310	8.7560
NIST	D2622	07/19/05	4	133	9.0000	8.8000	8.6000	0.8264	9.0000	8.6000	9.0000	8.8000
NIST	EDXRF	08/29/05	4	134	9.0000	8.8000	10.1000	0.8264	9.0000	10.1000	9.0000	8.8000
NIST	EDXRF	08/04/05	4	135	8.3000	9.7000	9.9000	0.8264	9.7000	9.9000	9.7000	9.9000
NIST	D2622	07/19/05	4	136	9.3000	8.3000	8.7000	0.8264	9.3000	8.3000	9.3000	8.3000
NIST	EDXRF	07/15/05	4	136	9.4000	8.9000	9.4000	0.8264	9.4000	9.4000	9.4000	9.4000
NIST	D5453	07/18/05	4	137	9.1200	8.8500	8.3200	0.8264	8.8500	8.3200	8.8500	8.3200
NIST	EDXRF	07/15/05	4	137	7.4000	7.8000	7.1000	0.8264	7.4000	7.8000		
NIST	D5453	07/22/05	4	138	8.5000	8.8000	8.7000	0.8264	8.5000	8.8000	8.5000	8.8000
NIST	D2622	07/15/05	4	139	9.1000	8.7000	8.6000	0.8264	9.1000	8.7000	8.7000	8.6000
NIST	D5453	07/20/05	4	139	12.9400	12.7900	13.1600	0.8264				
NIST	D2622	07/20/05	4	140	8.0000	8.7000	8.4000	0.8264	8.7000	8.4000	8.0000	8.4000
NIST	EDXRF	08/12/05	4	141	9.0000	8.0000	8.4000	0.8264	9.0000	8.4000	9.0000	8.4000
NIST	D5453	07/14/05	4	143	8.5100	8.3100	8.0900	0.8264	8.3100	8.0900	8.5100	8.0900
NIST	D3120	07/25/05	4	144	9.1700	8.4700	8.5700	0.8264	8.4700	8.5700	9.1700	8.4700
NIST	D2622	07/24/05	4	145	10.6000	10.5000	9.8000	0.8956	9.8000			
NIST	D5453	08/16/05	4	147	9.0000	7.9000	7.3000	0.8264	7.9000	7.3000	9.0000	7.3000
NIST	D5453	07/15/05	4	148	8.8600	8.5500	8.7600	0.8264	8.8600	8.7600	8.8600	8.7600
NIST	D7039	08/10/05	4	148	8.5000	8.3000	8.9000	0.8264	8.5000	8.3000	8.5000	8.3000
NIST	D5453	07/20/05	4	149	8.4950	8.4420	8.2860	0.8264	8.4420	8.2860	8.4950	8.4420
NIST	D5453	08/01/05	4	151	7.8000	7.7000	7.7000	0.8264	7.8000	7.7000	7.8000	7.7000
NIST	D7039	07/28/05	4	151	8.0000	8.7000	8.5000	0.8956	8.0000	8.5000	8.0000	8.7000
NIST	D5453	07/27/05	4	152	8.2600	8.4000	8.4100	0.8264	8.4000	8.4100	8.2600	8.4000
NIST	D5453	07/15/05	4	153	7.9400	7.8500	7.7900	0.8264	7.9400	7.7900	7.9400	7.7900
NIST	D5453	07/04/05	4	154	8.8200	8.2800	8.6400	0.8264	8.8200	8.6400	8.2800	8.6400

**Table B.8. July Fuel #4 Lab Data and Deletions Based on Composite Test Methods for NIST Calibration**

Calibration	Test Method	Run Date	July Sample #	Lab Code	Original Lab Data Robust Outlier Deletion in Shaded Box				After Robust Outlier Deletion Random Selection of 2 Obs		After Gravimetric Deletion Random Selection of 2 Obs	
					Measure #1	Measure #2	Measure #3	Density	#1	#2	#1	#2
NIST	D5453	07/28/05	4	156	8.6700	8.1000	9.3900	0.8264	8.6700	9.3900	8.6700	9.3900
NIST	D5453	07/21/05	4	158	10.1500	10.4000	10.0300	0.8264	10.1500	10.0300		
NIST	D5453	08/08/05	4	159	8.0900	8.1000	8.1000	0.8264	8.1000	8.1000	8.0900	8.1000
NIST	D7039	08/04/05	4	160	9.0000	9.6000	9.4000	0.8264	9.0000	9.6000		
NIST	D5453	07/24/05	4	161	8.1600	7.9900	8.4400	0.8264	7.9900	8.4400	7.9900	8.4400
NIST	D2622	07/31/05	4	162	7.9400	8.7400	7.8500	0.8264	8.7400	7.8500	7.9400	8.7400
NIST	D5453	07/30/05	4	162	8.3100	8.2900	8.1800	0.8264	8.2900	8.1800	8.3100	8.2900

**Table B.9. July Fuel #5 Lab Data and Deletions Based on Composite Test Methods for In-House Calibration**

Calibration	Test Method	Run Date	July Sample #	Lab Code	Original Lab Data Robust Outlier Deletion in Shaded Box				After Robust Outlier Deletion Random Selection of 2 Obs		After Gravimetric Deletion Random Selection of 2 Obs	
					Measure #1	Measure #2	Measure #3	Density	#1	#2	#1	#2
In-House	D5453	07/13/05	5	1	13.9000	14.0000	14.0000	0.8270	14.0000	14.0000	13.9000	14.0000
In-House	D5453	07/12/05	5	2	14.8500	14.6800	15.2800	0.8270	14.6800	15.2800	14.8500	15.2800
In-House	D2622	07/13/05	5	3	16.1300	16.6700	16.5700	0.8270	16.6700	16.5700		
In-House	D5453	07/21/05	5	4	15.9700	15.8800	15.8400	0.8270	15.9700	15.8400	15.8800	15.8400
In-House	D2622	07/15/05	5	5	14.6000	13.9000	14.0000	0.8270	13.9000	14.0000	14.6000	13.9000
In-House	D7039	07/27/05	5	6	15.3000	15.6000	15.3000	0.8270	15.3000	15.3000	15.6000	15.3000
In-House	D7039	07/21/05	5	7	15.7000	16.7000	16.0000	0.8270	15.7000	16.7000	16.7000	16.0000
In-House	D2622	07/13/05	5	8	16.1600	17.0300	16.4500	0.8270	16.1600	16.4500	17.0300	16.4500
In-House	D5453	07/13/05	5	8	15.1200	15.2300	15.3300	0.8270	15.1200	15.2300	15.1200	15.3300
In-House	D5453	07/15/05	5	9	14.2300	14.1600	14.1400	0.8270	14.1600	14.1400	14.1600	14.1400
In-House	D5453	07/28/05	5	11	14.3900	14.9300	14.3600	0.8270	14.3900	14.3600	14.3900	14.3600
In-House	D5453	07/27/05	5	12	14.3600	14.3200	14.4300	0.8270	14.3600	14.3200	14.3200	14.4300
In-House	D5453	07/20/05	5	13	15.4400	15.3500	15.3200	0.8270	15.3500	15.3200	15.3500	15.3200
In-House	D5453	07/26/05	5	15	15.3000	14.8000	14.8000	0.8270	14.8000	14.8000	15.3000	14.8000
In-House	D5453	07/19/05	5	16	13.6500	14.4700	14.4700	0.8270	13.6500	14.4700	13.6500	14.4700
In-House	D5453	07/20/05	5	18	14.8400	14.0200	13.5200	0.8270	14.0200	13.5200	14.8400	14.0200
In-House	D5453	08/03/05	5	19	13.8000	13.8000	14.1000	0.8270	13.8000	13.8000	13.8000	14.1000
In-House	D5453	08/02/05	5	21	14.2200	14.0000	14.1300	0.8270	14.0000	14.1300	14.2200	14.1300
In-House	D5453	08/10/05	5	23	13.6100	13.5600	13.5800	0.8270	13.6100	13.5800		
In-House	D5453	07/13/05	5	24	16.4400	16.1800	17.2200	0.8270	16.4400	17.2200		
In-House	D5453	08/30/05	5	25	13.5800	13.6100	13.5700	0.8270	13.6100	13.5700		
In-House	D5453	07/19/05	5	26	14.7400	14.7700	15.0900	0.8270	14.7400	15.0900	14.7400	14.7700
In-House	D5453	07/25/05	5	27	14.6600	14.6200	14.5100	0.8270	14.6600	14.6200	14.6600	14.5100
In-House	D2622	07/22/05	5	28	15.9000	16.0000	16.2000	0.8270	15.9000	16.0000	15.9000	16.2000
In-House	D5453	07/19/05	5	29	12.7970	13.1180	12.7690	0.8270	13.1180	12.7690		
In-House	D5453	07/12/05	5	30	14.9000	14.8000	15.0000	0.8270	14.9000	15.0000	14.8000	15.0000
In-House	D5453	07/13/05	5	31	14.6000	14.9000	14.6000	0.8270	14.9000	14.6000	14.9000	14.6000
In-House	D5453	07/25/05	5	32	15.5600	15.4500	15.4200	0.8270	15.4500	15.4200	15.4500	15.4200
In-House	D5453	08/19/05	5	33	14.6900	14.6700	14.6300	0.8270	14.6700	14.6300	14.6900	14.6300
In-House	D5453	07/26/05	5	35	13.4100	13.2700	13.4000	0.8526	13.4100	13.2700		
In-House	D5453	07/15/05	5	36	12.1000	12.4000	12.3000	0.8270	12.1000	12.4000		
In-House	D5453	07/15/05	5	37	14.4000	14.3000	14.4000	0.8270	14.3000	14.4000	14.4000	14.3000
In-House	D5453	07/25/05	5	38	13.7000	14.0000	14.1000	0.8270	13.7000	14.1000	13.7000	14.0000
In-House	D5453	07/28/05	5	39	18.9100	18.6900	18.6100	0.8270				
In-House	D2622	08/02/05	5	41	17.1000	18.1000	18.5000	0.8270	17.1000			
In-House	D5453	08/03/05	5	41	14.2200	13.1700	14.0400	0.8270	13.1700	14.0400	14.2200	14.0400
In-House	D2622	08/31/05	5	EPA	16.3000	16.2000	16.3000	0.8270	16.2000	16.3000	16.2000	16.3000
In-House	D5453	08/30/05	5	EPA	15.0000	14.9000	14.9000	0.8270	15.0000	14.9000	15.0000	14.9000
In-House	D7039	08/02/05	5	EPA	13.7000	14.0000	14.4000	0.8270	13.7000	14.4000	14.0000	14.4000
In-House	D7039	07/21/05	5	47	14.0000	14.2000	14.3000	0.8270	14.0000	14.2000	14.0000	14.3000
In-House	D5453	07/19/05	5	48	15.5100	14.3800	14.0700	0.8270	15.5100	14.0700	15.5100	14.3800
In-House	D2622	08/10/05	5	50	14.6000	15.4000	15.0000	0.8270	14.6000	15.4000	14.6000	15.0000
In-House	D5453	07/25/05	5	51	15.0000	15.2000	15.3000	0.8270	15.0000	15.3000	15.2000	15.3000
In-House	D5453	07/27/05	5	52	13.0200	12.9300	12.9500	0.8270	12.9300	12.9500		
In-House	D2622	07/26/05	5	53	17.8000	17.1000	16.1000	0.8270	17.8000	17.1000	17.8000	16.1000
In-House	D5453	07/19/05	5	54	13.9000	13.8000	13.8000	0.8270	13.8000	13.8000		
In-House	D2622	07/21/05	5	55	14.0000	14.6000	14.6000	0.8270	14.6000	14.6000	14.0000	14.6000

**Table B.9. July Fuel #5 Lab Data and Deletions Based on Composite Test Methods for In-House Calibration**

Calibration	Test Method	Run Date	July Sample #	Lab Code	Original Lab Data Robust Outlier Deletion in Shaded Box				After Robust Outlier Deletion Random Selection of 2 Obs		After Gravimetric Deletion Random Selection of 2 Obs	
					Measure #1	Measure #2	Measure #3	Density	#1	#2	#1	#2
In-House	D5453	07/21/05	5	56	13.6000	13.8000	13.7000	0.8270	13.6000	13.8000	13.8000	13.7000
In-House	D5453	07/26/05	5	59	14.2800	14.4800	14.1400	0.8270	14.2800	14.1400	14.2800	14.1400
In-House	D7039	07/28/05	5	60	14.8000	14.9000	15.4000	0.8270	14.9000	15.4000	14.8000	14.9000
In-House	D5453	07/27/05	5	61	13.5700	13.6100	13.6000	0.8270	13.5700	13.6100	13.5700	13.6100
In-House	D5453	08/30/05	5	CARB	13.6200	13.5100	13.7700	0.8270	13.5100	13.7700		
In-House	D5453	07/29/05	5	63	18.2300	17.1000	17.1000	0.8270	17.1000	17.1000		
In-House	D5453	08/02/05	5	64	13.9000	13.4000	13.8000	0.8270	13.9000	13.4000	13.9000	13.8000
In-House	D5453	08/01/05	5	66	16.1800	16.2500	16.9100	0.8270	16.2500	16.9100		
In-House	D2622	07/18/05	5	67	14.7000	15.5000	14.7000	0.8270	14.7000	15.5000	14.7000	14.7000
In-House	D5453	07/15/05	5	68	10.5400	10.7500	10.2700	0.8270			10.5400	10.7500
In-House	D5453	07/29/05	5	71	14.5300	14.5700	14.4700	0.8270	14.5300	14.5700	14.5300	14.4700
In-House	D5453	07/19/05	5	72	14.6000	14.8000	14.3000	0.8270	14.6000	14.3000	14.6000	14.8000
In-House	D2622	07/13/05	5	73	15.1000	15.4000	15.1000	0.8270	15.1000	15.4000	15.1000	15.4000
In-House	D5453	07/14/05	5	73	14.8000	14.4000	14.8000	0.8270	14.4000	14.8000	14.4000	14.8000
In-House	D5453	07/13/05	5	75	13.6500	14.2000	14.2600	0.8270	14.2000	14.2600	13.6500	14.2000
In-House	D5453	07/15/05	5	76	16.4900	16.2100	16.2600	0.8270	16.4900	16.2600	16.4900	16.2600
In-House	D5453	07/25/05	5	78	15.2900	15.2400	15.3300	0.8270	15.2900	15.2400		
In-House	D5453	08/09/05	5	81	12.2000	12.1000	12.4000	0.8270	12.2000	12.1000	12.2000	12.1000
In-House	D5453	07/19/05	5	82	14.3000	14.2600	14.2800	0.8270	14.3000	14.2800	14.2600	14.2800
In-House	D5453	07/14/05	5	83	14.6000	14.9200	13.9700	0.8270	14.9200	13.9700	14.9200	13.9700
In-House	D5453	07/22/05	5	84	12.5700	12.6300	12.9800	0.8270	12.5700	12.9800	12.5700	12.6300
In-House	D5453	07/20/05	5	85	14.0000	14.1000	14.2000	0.8270	14.0000	14.1000	14.0000	14.2000
In-House	D3120	07/19/05	5	86	14.8000	14.8000	14.7000	0.8270	14.8000	14.7000	14.8000	14.7000
In-House	D5453	07/27/05	5	87	13.4500	13.5400	13.1000	0.8270	13.4500	13.5400	13.5400	13.1000
In-House	D5453	07/30/05	5	89	14.2000	14.8000	14.4000	0.8270	14.2000	14.8000	14.8000	14.4000
In-House	D5453	07/14/05	5	90	13.1000	13.0000	13.0000	0.8270	13.1000	13.0000	13.0000	13.0000
In-House	D5453	07/27/05	5	91	14.8500	14.8100	15.0500	0.8270	14.8500	14.8100	14.8500	14.8100
In-House	D5453	07/25/05	5	91.1	14.6500	14.6800	14.5800	0.8270	14.6500	14.6800	14.6500	14.5800
In-House	D2622	08/02/05	5	94	12.7000	13.7000	12.4000	0.8270	13.7000	12.4000		
In-House	D3120	07/25/05	5	95	13.1000	13.0000	13.0000	0.8270	13.1000	13.0000		
In-House	D5453	07/25/05	5	95	13.0000	13.5000	13.3000	0.8270	13.0000	13.5000	13.0000	13.5000
In-House	D5453	07/21/05	5	96	14.8000	14.5000	14.6000	0.8270	14.5000	14.6000	14.5000	14.6000
In-House	D5453	07/18/05	5	97	14.2000	14.2000	14.2000	0.8270	14.2000	14.2000	14.2000	14.2000
In-House	D5453	08/15/05	5	99	14.4900	14.5000	13.9600	0.8270	14.4900	14.5000	14.4900	13.9600
In-House	D5453	07/18/05	5	100	12.7000	12.4000	12.9000	0.8270	12.7000	12.9000	12.7000	12.4000
In-House	D7039	07/26/05	5	102	15.5000	15.1000	15.3000	0.8270	15.1000	15.3000	15.5000	15.1000
In-House	D2622	07/26/05	5	103	17.2380	14.8640	16.1610	0.8270	17.2380	14.8640	14.8640	16.1610
In-House	D5453	07/26/05	5	103	13.3262	13.3060	13.6070	0.8270	13.3262	13.6070	13.3060	13.6070
In-House	D7039	07/25/05	5	103	14.3000	14.8000	14.5000	0.8270	14.8000	14.5000	14.3000	14.8000
In-House	D2622	07/12/05	5	105	15.7000	15.5000	16.1000	0.8270	15.7000	16.1000	15.7000	16.1000
In-House	D5453	08/01/05	5	105	14.9000	14.7500	14.8200	0.8270	14.9000	14.7500	14.7500	14.8200
In-House	D7039	07/26/05	5	106	15.1000	15.0000	15.0000	0.8270	15.1000	15.0000	15.1000	15.0000
In-House	D7039	07/20/05	5	107	15.2000	14.7000	14.9000	0.8270	15.2000	14.7000	15.2000	14.9000
In-House	D5453	07/15/05	5	108	13.0020	12.5840	12.7770	0.8270	13.0020	12.5840		
In-House	D5453	07/19/05	5	109	13.9000	13.9000	14.0000	0.8270	13.9000	14.0000		
In-House	D7039	07/18/05	5	109	13.2000	13.2000	13.1000	0.8270	13.2000	13.1000		
In-House	D5453	07/28/05	5	110	15.1400	15.2600	15.0100	0.8270	15.2600	15.0100	15.1400	15.2600

**Table B.9. July Fuel #5 Lab Data and Deletions Based on Composite Test Methods for In-House Calibration**

Calibration	Test Method	Run Date	July Sample #	Lab Code	Original Lab Data Robust Outlier Deletion in Shaded Box				After Robust Outlier Deletion Random Selection of 2 Obs		After Gravimetric Deletion Random Selection of 2 Obs	
					Measure #1	Measure #2	Measure #3	Density	#1	#2	#1	#2
In-House	D7039	08/02/05	5	111	12.2000	12.4000	12.8000	0.8270	12.4000	12.8000		
In-House	D5453	07/29/05	5	112	16.1200	16.2200	16.3900	0.8526	16.2200	16.3900	16.1200	16.3900
In-House	D5453	07/21/05	5	113	13.5000	13.5000	13.8000	0.8270	13.5000	13.8000		
In-House	D5453	07/25/05	5	114	14.7000	14.9000	15.1000	0.8270	14.7000	15.1000	14.7000	15.1000
In-House	D5453	07/25/05	5	115	15.5000	15.4000	15.5000	0.8270	15.5000	15.4000	15.5000	15.5000
In-House	D5453	07/16/05	5	116	14.7100	14.5000	14.7100	0.8270	14.7100	14.7100	14.7100	14.5000
In-House	D5453	07/19/05	5	117	14.8100	14.8000	14.8800	0.8270	14.8100	14.8800	14.8100	14.8000
In-House	D5453	07/25/05	5	118	15.2200	15.2900	14.9100	0.8270	15.2200	15.2900	15.2200	15.2900
In-House	D5453	07/25/05	5	119	14.1900	14.2000	14.1700	0.8270	14.2000	14.1700	14.1900	14.2000
In-House	D5453	08/08/05	5	120	14.7000	14.8000	14.7000	0.8270	14.7000	14.8000	14.8000	14.7000
In-House	D2622	07/19/05	5	121	15.1000	15.7000	16.2000	0.8270	15.1000	16.2000	15.1000	16.2000
In-House	D5453	07/27/05	5	122	14.9000	15.2000	14.9000	0.8270	15.2000	14.9000	14.9000	14.9000
In-House	D2622	07/25/05	5	123	14.6000	15.0000	14.2000	0.8270	14.6000	14.2000	15.0000	14.2000
In-House	D2622	07/13/05	5	124	16.3000	16.3000	16.6000	0.8270	16.3000	16.6000	16.3000	16.6000
In-House	D2622	07/28/05	5	126	13.9000	14.3000	16.9000	0.8270	13.9000	14.3000	13.9000	16.9000
In-House	D5453	07/28/05	5	126	12.3000	11.8500	12.0000	0.8270	12.3000	12.0000		
In-House	D7039	07/15/05	5	127	14.6000	14.7000	14.8000	0.8270	14.6000	14.8000	14.6000	14.8000
In-House	D7039	07/25/05	5	128	14.6000	14.4000	14.9000	0.8270	14.6000	14.4000	14.6000	14.4000
In-House	D5453	07/21/05	5	129	15.7400	16.0000	15.8000	0.8270	16.0000	15.8000	15.7400	16.0000
In-House	D5453	07/22/05	5	130	14.7000	14.6000	14.7000	0.8270	14.7000	14.7000	14.7000	14.6000
In-House	D2622	07/22/05	5	131	15.3000	15.2000	14.7000	0.8270	15.3000	15.2000	15.2000	14.7000
In-House	EDXRF	07/22/05	5	131	15.2000	15.4000	15.1000	0.8270	15.2000	15.1000	15.2000	15.1000
In-House	D5453	08/25/05	5	132	15.3580	14.8590	14.9040	0.8270	14.8590	14.9040	15.3580	14.8590
In-House	D2622	07/19/05	5	133	16.5000	15.3000	15.6000	0.8270	15.3000	15.6000	16.5000	15.3000
In-House	EDXRF	08/30/05	5	134	14.6000	16.0000	15.2000	0.8270	14.6000	15.2000	16.0000	15.2000
In-House	EDXRF	08/04/05	5	135	14.8000	15.9000	15.0000	0.8270	15.9000	15.0000	14.8000	15.9000
In-House	D2622	07/19/05	5	136	15.0000	15.2000	15.8000	0.8270	15.0000	15.8000	15.0000	15.8000
In-House	EDXRF	07/15/05	5	136	14.3000	14.2000	14.5000	0.8270	14.2000	14.5000	14.3000	14.5000
In-House	D5453	07/15/05	5	137	13.2300	13.1900	13.4700	0.8270	13.2300	13.1900		
In-House	EDXRF	07/15/05	5	137	15.3000	14.3000	16.4000	0.8270	15.3000	14.3000	14.3000	16.4000
In-House	D5453	07/22/05	5	138	15.0000	15.1000	14.9000	0.8270	15.0000	14.9000	15.1000	14.9000
In-House	D2622	07/13/05	5	139	15.7500	15.8700	15.9000	0.8270	15.7500	15.9000	15.7500	15.9000
In-House	D5453	07/13/05	5	139	17.0200	16.9100	16.8400	0.8270	16.9100	16.8400		
In-House	D2622	07/19/05	5	140	13.9000	15.2000	16.1000	0.8270	13.9000	15.2000	15.2000	16.1000
In-House	EDXRF	08/09/05	5	141	15.3000	15.5000	14.5000	0.8270	15.5000	14.5000	15.5000	14.5000
In-House	D5453	07/14/05	5	143	14.8100	15.2600	14.9200	0.8270	14.8100	14.9200	14.8100	14.9200
In-House	D3120	07/25/05	5	144	14.3800	13.8200	13.6800	0.8270	13.8200	13.6800		
In-House	D2622	07/24/05	5	145	14.1000	14.9000	15.1000	0.8526	14.9000	15.1000		
In-House	D5453	08/16/05	5	147	13.8000	13.9000	14.0000	0.8270	13.9000	14.0000		
In-House	D5453	07/15/05	5	148	14.9700	14.7600	14.6800	0.8270	14.9700	14.7600	14.9700	14.7600
In-House	D7039	08/08/05	5	148	15.3000	13.8000	14.8000	0.8270	13.8000	14.8000	13.8000	14.8000
In-House	D5453	07/27/05	5	149	15.0240	15.1590	15.1250	0.8270	15.1590	15.1250	15.0240	15.1590
In-House	D5453	08/01/05	5	151	14.9000	14.4000	13.6000	0.8270	14.4000	13.6000	14.9000	13.6000
In-House	D7039	07/28/05	5	151	14.7000	15.5000	15.7000	0.8526	14.7000	15.5000	14.7000	15.7000
In-House	D5453	07/22/05	5	152	12.5900	12.9000	13.1000	0.8270	12.5900	13.1000	12.5900	13.1000
In-House	D5453	07/14/05	5	153	16.4000	16.3800	16.3200	0.8270	16.3800	16.3200	16.4000	16.3200
In-House	D5453	07/26/05	5	154	14.5400	14.8000	14.8000	0.8270	14.5400	14.8000	14.5400	14.8000



**Table B.9. July Fuel #5 Lab Data and Deletions Based on Composite Test Methods for In-House Calibration**

Calibration	Test Method	Run Date	July Sample #	Lab Code	Original Lab Data Robust Outlier Deletion in Shaded Box				After Robust Outlier Deletion Random Selection of 2 Obs		After Gravimetric Deletion Random Selection of 2 Obs	
					Measure #1	Measure #2	Measure #3	Density	#1	#2	#1	#2
In-House	D5453	07/28/05	5	156	14.2700	15.2400	14.0300	0.8270	14.2700	14.0300		
In-House	D5453	07/20/05	5	158	19.3900	19.2200	19.1800	0.8270				
In-House	D5453	08/08/05	5	159	15.5500	15.5300	15.6400	0.8270	15.5300	15.6400	15.5500	15.6400
In-House	D7039	08/03/05	5	160	12.9000	12.6000	12.8000	0.8270	12.9000	12.6000	12.9000	12.8000
In-House	D5453	07/24/05	5	161	16.2200	15.3400	15.7400	0.8270	16.2200	15.7400		
In-House	D2622	07/31/05	5	162	14.7200	13.4200	14.3000	0.8270	14.7200	13.4200		
In-House	D5453	07/29/05	5	162	14.6600	14.6400	14.6800	0.8270	14.6600	14.6800	14.6400	14.6800

**Table B.10. July Fuel #5 Lab Data and Deletions Based on Composite Test Methods for NIST Calibration**

Calibration	Test Method	Run Date	July Sample #	Lab Code	Original Lab Data Robust Outlier Deletion in Shaded Box				After Robust Outlier Deletion Random Selection of 2 Obs			After Gravimetric Deletion Random Selection of 2 Obs	
					Measure #1	Measure #2	Measure #3	Density	#1	#2	#3	#1	#2
NIST	D5453	07/13/05	5	1	14.6000	14.7000	14.7000	0.8270	14.6000	14.7000		14.7000	14.7000
NIST	D5453	07/12/05	5	2	15.1400	14.6700	14.5800	0.8270	14.6700	14.5800		14.6700	14.5800
NIST	D2622	07/13/05	5	3	15.7700	15.0700	16.1200	0.8270	15.0700	16.1200			
NIST	D5453	07/21/05	5	4	14.4200	12.9300	11.2600	0.8270	14.4200	12.9300		12.9300	11.2600
NIST	D2622	07/15/05	5	5	16.8000	16.0000	16.1000	0.8270	16.8000	16.1000			
NIST	D7039	07/27/05	5	6	14.6000	15.3000	14.7000	0.8270	14.6000	14.7000		15.3000	14.7000
NIST	D7039	07/21/05	5	7	15.5000	14.9000	15.4000	0.8270	14.9000	15.4000		15.5000	15.4000
NIST	D2622	07/13/05	5	8	15.7300	16.9300	16.5200	0.8270	15.7300	16.9300		15.7300	16.5200
NIST	D5453	07/13/05	5	8	14.4200	14.3200	14.3700	0.8270	14.3200	14.3700		14.4200	14.3200
NIST	D5453	07/18/05	5	9	13.9300	14.4100	14.1800	0.8270	14.4100	14.1800		13.9300	14.1800
NIST	D5453	07/29/05	5	11	14.3500	14.6800	14.4200	0.8270	14.3500	14.6800		14.3500	14.4200
NIST	D5453	07/28/05	5	12	14.6000	14.6000	14.5000	0.8270	14.6000	14.5000		14.6000	14.5000
NIST	D5453	07/21/05	5	13	14.4000	14.2900	14.3600	0.8270	14.4000	14.2900		14.4000	14.2900
NIST	D5453	07/28/05	5	15	14.6000	14.3000	14.4000	0.8270	14.6000	14.4000		14.6000	14.4000
NIST	D5453	07/21/05	5	16	13.9600	14.2000	14.6000	0.8270	13.9600	14.2000		13.9600	14.6000
NIST	D5453	07/20/05	5	18	14.7900	15.2700	14.6300	0.8270	14.7900	14.6300		14.7900	15.2700
NIST	D5453	08/05/05	5	19	14.8000	14.8000	14.8000	0.8270	14.8000	14.8000		14.8000	14.8000
NIST	D5453	08/03/05	5	21	14.3000	14.3900	14.3300	0.8270	14.3000	14.3300		14.3000	14.3300
NIST	D5453	08/11/05	5	23	14.6600	14.6200	14.6500	0.8270	14.6600	14.6200		14.6600	14.6200
NIST	D5453	07/13/05	5	24	14.1800	14.1600	14.1600	0.8270	14.1800	14.1600		14.1800	14.1600
NIST	D5453	08/31/05	5	25	14.8800	14.8700	14.8500	0.8270	14.8800	14.8500		14.8800	14.8700
NIST	D5453	07/21/05	5	26	14.7400	15.1200	14.6400	0.8270	15.1200	14.6400		14.7400	15.1200
NIST	D5453	07/25/05	5	27	14.0500	14.2800	14.2100	0.8270	14.2800	14.2100		14.2800	14.2100
NIST	D2622	07/14/05	5	28	16.5000	16.3000	16.4000	0.8270	16.5000	16.4000		16.3000	16.4000
NIST	D5453	07/20/05	5	29	13.0960	13.2450	13.3430	0.8270	13.0960	13.3430			
NIST	D5453	07/13/05	5	30	14.5000	14.8000	15.0000	0.8270	14.5000	15.0000		14.5000	15.0000
NIST	D5453	07/13/05	5	31	14.8000	14.9000	14.8000	0.8270	14.8000	14.8000		14.8000	14.9000
NIST	D5453	07/26/05	5	32	15.2800	15.4800	15.4000	0.8270	15.2800	15.4800		15.2800	15.4000
NIST	D5453	08/22/05	5	33	19.3900	18.3300	18.4500	0.8270					
NIST	D5453	07/20/05	5	35	13.7300	13.9100	13.8100	0.8526	13.7300	13.9100		13.7300	13.8100
NIST	D5453	07/15/05	5	36	13.3000	13.5000	13.4000	0.8270	13.5000	13.4000			
NIST	D5453	07/21/05	5	37	16.2000	16.2000	16.0000	0.8270	16.2000	16.2000		16.2000	16.0000
NIST	D5453	07/26/05	5	38	15.8000	16.3000	15.8000	0.8270	15.8000	16.3000		16.3000	15.8000
NIST	D5453	07/28/05	5	39	18.2400	17.7200	18.1000	0.8270	17.7200				
NIST	D2622	08/02/05	5	41	16.5000	17.0000	16.8000	0.8270	16.5000	16.8000		16.5000	17.0000
NIST	D5453	08/04/05	5	41	16.1700	16.2700	15.6200	0.8270	16.1700	16.2700		16.2700	15.6200
NIST	D2622	09/01/05	5	EPA	16.6000	16.4000	16.8000	0.8270	16.6000	16.8000			
NIST	D5453	08/30/05	5	EPA	14.9000	14.8000	14.7000	0.8270	14.9000	14.8000		14.9000	14.7000
NIST	D7039	08/03/05	5	EPA	14.8000	14.3000	15.0000	0.8270	14.8000	14.3000		14.8000	15.0000
NIST	D7039	07/22/05	5	47	14.2000	14.9000	15.6000	0.8270	14.9000	15.6000		14.9000	15.6000
NIST	D5453	07/19/05	5	48	6.6900	10.7800	39.4500	0.8270					
NIST	D2622	08/10/05	5	50	17.1000	16.6000	15.7000	0.8270	17.1000	16.6000		17.1000	15.7000
NIST	D5453	07/26/05	5	51	14.6000	15.0000	14.8000	0.8270	15.0000	14.8000		15.0000	14.8000
NIST	D5453	07/28/05	5	52	13.3700	13.5800	13.6500	0.8270	13.3700	13.6500		13.3700	13.6500
NIST	D2622	07/28/05	5	53	15.9000	16.1000	15.8000	0.8270	15.9000	16.1000		15.9000	15.8000
NIST	D5453	07/21/05	5	54	14.1000	14.1000	14.0000	0.8270	14.1000	14.0000		14.1000	14.1000
NIST	D2622	07/23/05	5	55	14.9000	15.2000	15.7000	0.8270	14.9000	15.7000		14.9000	15.7000

**Table B.10. July Fuel #5 Lab Data and Deletions Based on Composite Test Methods for NIST Calibration**

Calibration	Test Method	Run Date	July Sample #	Lab Code	Original Lab Data Robust Outlier Deletion in Shaded Box				After Robust Outlier Deletion Random Selection of 2 Obs		After Gravimetric Deletion Random Selection of 2 Obs	
					Measure #1	Measure #2	Measure #3	Density	#1	#2	#1	#2
NIST	D5453	07/22/05	5	56	14.2000	14.2000	14.4000	0.8270	14.2000	14.4000	14.2000	14.4000
NIST	D5453	08/31/05	5	59	15.4700	15.4700	15.3700	0.8270	15.4700	15.3700	15.4700	15.3700
NIST	D7039	07/29/05	5	60	14.2000	14.1000	14.8000	0.8270	14.2000	14.1000	14.2000	14.8000
NIST	D5453	07/27/05	5	61	14.7400	14.9600	14.9800	0.8270	14.7400	14.9600	14.7400	14.9600
NIST	D5453	08/31/05	5	CARB	14.6000	14.5000	14.8000	0.8270	14.6000	14.8000	14.5000	14.8000
NIST	D5453	07/29/05	5	63	18.5700	17.5300	18.1100	0.8270				
NIST	D5453	07/18/05	5	64	14.1000	13.6000	14.4000	0.8270	14.1000	14.4000	14.1000	14.4000
NIST	D5453	08/01/05	5	66	16.8000	17.0000	17.0000	0.8270	16.8000	17.0000		
NIST	D2622	07/25/05	5	67	15.8990	14.4360	15.6520	0.8270	15.8990	15.6520	15.8990	15.6520
NIST	D5453	07/15/05	5	68	16.1800	15.8300	15.9600	0.8270	15.8300	15.9600	16.1800	15.8300
NIST	D5453	07/30/05	5	71	14.8900	14.9400	14.9300	0.8270	14.9400	14.9300	14.9400	14.9300
NIST	D5453	07/19/05	5	72	14.6000	14.8000	14.5000	0.8270	14.8000	14.5000	14.6000	14.8000
NIST	D2622	07/13/05	5	73	15.5000	15.0000	14.8000	0.8270	15.5000		14.8000	14.8000
NIST	D5453	07/14/05	5	73	14.7000	14.7000	15.0000	0.8270	14.7000	15.0000	14.7000	14.7000
NIST	D5453	08/02/05	5	75	14.4000	14.7000	14.0000	0.8270	14.7000	14.0000	14.4000	14.7000
NIST	D5453	07/19/05	5	76	15.7000	15.6100	15.5100	0.8270	15.6100	15.5100	15.6100	15.5100
NIST	D5453	07/25/05	5	78	14.6600	14.7600	15.2600	0.8270	14.6600	14.7600		
NIST	D5453	08/10/05	5	81	13.8000	13.9000	14.2000	0.8270	13.8000	14.2000	13.8000	14.2000
NIST	D5453	07/26/05	5	82	13.4100	13.4800	13.3700	0.8270	13.4100	13.4800	13.4800	13.3700
NIST	D5453	07/14/05	5	83	15.0600	15.0600	15.0800	0.8270	15.0600	15.0800	15.0600	15.0800
NIST	D5453	07/25/05	5	84	10.1000	10.8000	10.5600	0.8270				
NIST	D5453	07/21/05	5	85	13.6000	13.5000	13.6000	0.8270	13.6000	13.5000	13.6000	13.5000
NIST	D3120	07/25/06	5	86	14.8000	13.9000	14.3000	0.8270	14.8000	13.9000	13.9000	14.3000
NIST	D5453	07/27/05	5	87	13.5000	13.7500	13.6700	0.8270	13.5000	13.7500	13.7500	13.6700
NIST	D5453	07/30/05	5	89	15.1000	15.0000	15.4000	0.8270	15.0000	15.4000	15.0000	15.4000
NIST	D5453	07/14/05	5	90	12.8000	12.9000	13.3000	0.8270	12.8000	13.3000	12.8000	13.3000
NIST	D5453	07/28/05	5	91	14.5800	14.3400	14.4000	0.8270	14.3400	14.4000	14.5800	14.4000
NIST	D5453	07/29/05	5	91.1	15.3300	15.2700	15.2600	0.8270	15.2700	15.2600	15.2700	15.2600
NIST	D2622	07/18/05	5	94	13.9000	14.9000	12.2000	0.8270	14.9000	12.2000		
NIST	D3120	07/27/05	5	95	12.8000	13.0000	13.0000	0.8270	12.8000	13.0000		
NIST	D5453	07/21/05	5	95	13.7000	13.8000	14.0000	0.8270	13.7000	14.0000	13.7000	14.0000
NIST	D5453	07/22/05	5	96	14.6000	14.5000	14.6000	0.8270	14.6000	14.6000	14.5000	14.6000
NIST	D5453	07/18/05	5	97	14.5000	14.4000	14.4000	0.8270	14.5000	14.4000	14.5000	14.4000
NIST	D5453	08/12/05	5	99	12.2000	11.9200	11.6300	0.8270	12.2000		12.2000	11.6300
NIST	D5453	07/21/05	5	100	16.9000	17.7000	17.6000	0.8270	16.9000	17.6000		
NIST	D7039	07/26/05	5	102	15.1000	15.1000	15.4000	0.8270	15.1000	15.4000	15.1000	15.1000
NIST	D2622	07/28/05	5	103	13.7000	13.8000	14.0000	0.8270	13.8000	14.0000		
NIST	D5453	07/27/05	5	103	14.4011	14.4491	13.8314	0.8270	14.4491	13.8314	14.4491	13.8314
NIST	D7039	07/26/05	5	103	13.9000	15.1000	14.9000	0.8270	13.9000	14.9000	15.1000	14.9000
NIST	D2622	07/12/05	5	105	15.7200	15.4700	15.4900	0.8270	15.4700	15.4900	15.7200	15.4700
NIST	D5453	08/04/05	5	105	14.4500	14.4700	14.7300	0.8270	14.4500	14.4700	14.4500	14.7300
NIST	D7039	07/26/05	5	106	14.7000	14.5000	15.0000	0.8270	14.7000	14.5000	14.7000	15.0000
NIST	D7039	07/25/05	5	107	14.8000	14.5000	15.6000	0.8270	14.5000	15.6000	14.8000	14.5000
NIST	D5453	07/15/05	5	108	12.8750	12.7040	12.7940	0.8270	12.8750	12.7040		
NIST	D5453	07/27/05	5	109	18.1000	18.1000	18.1000	0.8270				
NIST	D7039	07/19/05	5	109	14.8000	14.8000	15.3000	0.8270	14.8000	15.3000	14.8000	15.3000
NIST	D5453	07/29/05	5	110	14.4900	14.5600	14.4600	0.8270	14.5600	14.4600	14.4900	14.4600

**Table B.10. July Fuel #5 Lab Data and Deletions Based on Composite Test Methods for NIST Calibration**

Calibration	Test Method	Run Date	July Sample #	Lab Code	Original Lab Data Robust Outlier Deletion in Shaded Box				After Robust Outlier Deletion Random Selection of 2 Obs		After Gravimetric Deletion Random Selection of 2 Obs	
					Measure #1	Measure #2	Measure #3	Density	#1	#2	#1	#2
NIST	D7039	08/03/05	5	111	14.1000	13.8000	13.7000	0.8270	13.8000	13.7000	14.1000	13.8000
NIST	D5453	07/29/05	5	112	14.4500	14.7500	14.9000	0.8526	14.4500	14.9000	14.4500	14.7500
NIST	D5453	07/23/05	5	113	14.5000	14.6000	14.9000	0.8270	14.5000	14.9000	14.5000	14.9000
NIST	D5453	07/27/05	5	114	14.0000	14.3000	14.4000	0.8270	14.0000	14.3000	14.3000	14.4000
NIST	D5453	07/26/05	5	115	13.5000	13.3000	13.1000	0.8270	13.5000	13.3000	13.5000	13.1000
NIST	D5453	07/17/05	5	116	14.1800	13.9700	13.9700	0.8270	14.1800	13.9700	13.9700	13.9700
NIST	D5453	07/19/05	5	117	14.6100	14.6500	14.4600	0.8270	14.6100	14.6500	14.6500	14.4600
NIST	D5453	07/26/05	5	118	13.9800	14.2300	14.5600	0.8270	14.2300	14.5600	14.2300	14.5600
NIST	D5453	07/25/05	5	119	15.7600	15.7900	15.6500	0.8270	15.7900	15.6500	15.7600	15.7900
NIST	D5453	08/09/05	5	120	14.4000	14.6000	14.5000	0.8270	14.6000	14.5000	14.4000	14.5000
NIST	D2622	07/19/05	5	121	15.5000	16.1000	16.6000	0.8270	16.1000	16.6000		
NIST	D5453	07/28/05	5	122	16.0000	15.8000	15.9000	0.8270	15.8000	15.9000	16.0000	15.8000
NIST	D2622	07/26/05	5	123	15.5000	15.3000	14.5000	0.8270	15.5000	15.3000	15.5000	15.3000
NIST	D2622	07/21/05	5	124	16.8000	17.0000	16.5000	0.8270	17.0000	16.5000		
NIST	D2622	07/28/05	5	126	13.2000	14.4000	15.1000	0.8270	13.2000	15.1000		
NIST	D5453	07/28/05	5	126	12.6500	12.4700	12.4000	0.8270	12.4700	12.4000		
NIST	D7039	07/15/05	5	127	15.4000	14.9000	15.4000	0.8270	15.4000	14.9000	14.9000	15.4000
NIST	D7039	07/26/05	5	128	14.7000	15.8000	15.3000	0.8270	14.7000	15.8000	14.7000	15.8000
NIST	D5453	07/27/05	5	129	14.5000	14.6900	14.5500	0.8270	14.5000	14.6900	14.6900	14.5500
NIST	D5453	07/25/05	5	130	14.4000	14.7000	14.6000	0.8270	14.7000	14.6000	14.7000	14.6000
NIST	D2622	07/27/05	5	131	15.2000	15.1000	15.4000	0.8270	15.2000	15.4000	15.1000	15.4000
NIST	EDXRF	07/27/05	5	131	15.5000	15.0000	15.4000	0.8270	15.5000	15.0000	15.5000	15.0000
NIST	D5453	08/25/05	5	132	14.8760	15.0030	14.9530	0.8270	14.8760	15.0030	15.0030	14.9530
NIST	D2622	07/19/05	5	133	16.4000	16.5000	16.2000	0.8270	16.4000	16.2000	16.5000	16.2000
NIST	EDXRF	08/29/05	5	134	14.7000	14.8000	14.6000	0.8270	14.7000	14.8000	14.8000	14.6000
NIST	EDXRF	08/04/05	5	135	14.1000	15.0000	14.3000	0.8270	14.1000	14.3000	15.0000	14.3000
NIST	D2622	07/19/05	5	136	14.9000	15.1000	15.7000	0.8270	14.9000	15.1000	14.9000	15.7000
NIST	EDXRF	07/15/05	5	136	15.5000	16.0000	15.2000	0.8270	16.0000	15.2000	15.5000	16.0000
NIST	D5453	07/18/05	5	137	15.1400	15.5300	15.7400	0.8270	15.1400	15.5300	15.1400	15.7400
NIST	EDXRF	07/15/05	5	137	14.7000	14.0000	15.0000	0.8270	14.7000	15.0000		
NIST	D5453	07/22/05	5	138	15.4000	15.3000	15.3000	0.8270	15.4000	15.3000	15.3000	15.3000
NIST	D2622	07/15/05	5	139	15.6000	15.6000	15.5000	0.8270	15.1000	15.7000	15.6000	15.6000
NIST	D5453	07/20/05	5	139	20.2000	20.2000	21.2600	0.8270				
NIST	D2622	07/20/05	5	140	14.2000	14.3000	14.1000	0.8270	14.2000	14.1000	14.3000	14.1000
NIST	EDXRF	08/12/05	5	141	14.9000	14.9000	15.4000	0.8270	14.9000	14.9000	14.9000	15.4000
NIST	D5453	07/14/05	5	143	14.7400	14.5100	14.7000	0.8270	14.7400	14.7000	14.7400	14.5100
NIST	D3120	07/25/05	5	144	15.7000	14.4000	15.4000	0.8270	15.7000	14.4000	15.7000	15.4000
NIST	D2622	07/24/05	5	145	14.8000	14.7000	14.5000	0.8526	14.7000	14.5000		
NIST	D5453	08/16/05	5	147	14.3000	14.6000	15.1000	0.8270	14.3000	15.1000	14.3000	14.6000
NIST	D5453	07/15/05	5	148	15.3300	15.1100	15.0000	0.8270	15.1100	15.0000	15.3300	15.1100
NIST	D7039	08/10/05	5	148	15.9000	16.8000	17.0000	0.8270	15.9000	16.8000	15.9000	17.0000
NIST	D5453	07/20/05	5	149	14.8070	14.9900	15.0030	0.8270	14.8070	14.9900	14.8070	15.0030
NIST	D5453	08/01/05	5	151	14.1000	13.8000	13.4000	0.8270	13.8000	13.4000	14.1000	13.4000
NIST	D7039	07/28/05	5	151	15.2000	17.6000	14.7000	0.8526	15.2000	14.7000	17.6000	14.7000
NIST	D5453	07/27/05	5	152	13.1900	13.3800	13.4200	0.8270	13.1900	13.3800	13.1900	13.3800
NIST	D5453	07/15/05	5	153	14.6900	14.7000	14.6900	0.8270	14.6900	14.7000	14.6900	14.7000
NIST	D5453	07/04/05	5	154	15.1000	15.0700	14.9000	0.8270	15.0700	14.9000	15.1000	15.0700

**Table B.10. July Fuel #5 Lab Data and Deletions Based on Composite Test Methods for NIST Calibration**

Calibration	Test Method	Run Date	July Sample #	Lab Code	Original Lab Data Robust Outlier Deletion in Shaded Box				After Robust Outlier Deletion Random Selection of 2 Obs		After Gravimetric Deletion Random Selection of 2 Obs	
					Measure #1	Measure #2	Measure #3	Density	#1	#2	#1	#2
NIST	D5453	07/28/05	5	156	15.1500	14.5800	15.3200	0.8270	14.5800	15.3200	15.1500	15.3200
NIST	D5453	07/21/05	5	158	19.2700	19.1700	19.1900	0.8270				
NIST	D5453	08/08/05	5	159	14.5600	14.7400	14.5900	0.8270	14.5600	14.5900	14.5600	14.7400
NIST	D7039	08/04/05	5	160	15.5000	13.9000	14.5000	0.8270	15.5000	14.5000		
NIST	D5453	07/24/05	5	161	14.2100	14.3300	14.9000	0.8270	14.2100	14.3300	14.2100	14.3300
NIST	D2622	07/31/05	5	162	15.3400	15.8800	15.0000	0.8270	15.3400	15.8800	15.3400	15.8800
NIST	D5453	07/30/05	5	162	14.2500	14.2500	14.4000	0.8270	14.2500	14.2500	14.2500	14.4000

**Table B.11. August Fuel #1 Lab Data and Deletions Based on Composite Test Methods for In-House Calibration**

Calibration	Test Method	Run Date	August Sample #	Lab Code	Original Lab Data Robust Outlier Deletion in Shaded Box			Density	After Robust Outlier Deletion Random Selection of 2 Obs		After Gravimetric Deletion Random Selection of 2 Obs	
					Measure #1	Measure #2	Measure #3		#1	#2	#1	#2
In-House	D5453	08/18/05	1	1	9.2000	9.1000	9.0000	0.8240	9.2000	9.1000	9.2000	9.0000
In-House	D5453	08/04/05	1	2	10.3200	10.7500	10.2300	0.8240	10.3200	10.2300	10.7500	10.2300
In-House	D2622	08/08/05	1	3	11.1500	11.1600	11.1100	0.8240	11.1500	11.1100		
In-House	D5453	08/31/05	1	4	9.9500	10.0100	10.2900	0.8240	10.0100	10.2900		
In-House	D2622		1	5	10.4000	10.7000	11.3000	0.8240	10.7000	11.3000		
In-House	D7039	08/22/05	1	6	10.2000	10.7000	11.1000	0.8240	10.7000	11.1000	10.2000	11.1000
In-House	D7039	08/09/05	1	7	10.6000	10.5000	10.6000	0.8240	10.5000	10.6000	10.6000	10.6000
In-House	D2622	08/04/05	1	8	11.3700	11.0700	11.4300	0.8240	11.0700	11.4300	11.3700	11.4300
In-House	D5453	08/03/05	1	8	10.2000	10.0000	9.9000	0.8240	10.2000	10.0000	10.2000	10.0000
In-House	D5453	08/05/05	1	9	9.6500	9.5200	9.3600	0.8240	9.5200	9.3600	9.6500	9.5200
In-House	D5453	08/04/05	1	11	10.3000	9.9000	10.3000	0.8240	9.9000	10.3000	10.3000	9.9000
In-House	D5453	08/25/05	1	12	9.9000	9.5000	9.7000	0.8240	9.9000	9.7000	9.5000	9.7000
In-House	D5453	08/08/05	1	13	10.7000	10.5000	10.7000	0.8240	10.7000	10.7000	10.5000	10.7000
In-House	D5453	07/26/05	1	15	10.2200	9.8400	9.8900	0.8240	10.2200	9.8900	10.2200	9.8900
In-House	D5453	08/19/05	1	16	9.7500	9.6600	9.8500	0.8240	9.7500	9.8500	9.7500	9.6600
In-House	D5453	08/11/05	1	18	10.3700	10.0900	10.0600	0.8359	10.3700	10.0600	10.3700	10.0900
In-House	D5453	08/16/05	1	19	9.8000	9.8000	9.8000	0.8240	9.8000	9.8000	9.8000	9.8000
In-House	D5453	08/10/05	1	21	9.4800	9.2200	9.2900	0.8240	9.4800	9.2900	9.2200	9.2900
In-House	D5453	08/22/05	1	23	9.1900	9.1300	9.1100	0.8240	9.1900	9.1300		
In-House	D5453	08/04/05	1	24	10.1400	10.0500	10.0700		10.1400	10.0500	10.1400	10.0500
In-House	D5453	08/31/05	1	25	9.0500	9.1000	8.9400	0.8359	9.0500	8.9400		
In-House	D5453	08/03/05	1	26	10.0900	10.0300	9.9100	0.8240	10.0900	9.9100	10.0900	10.0300
In-House	D5453	08/25/05	1	27	10.1200	9.9700	10.2000	0.8240	10.1200	10.2000	10.1200	9.9700
In-House	D2622	08/16/05	1	28	13.0000	11.7000	11.1000	0.8240	11.7000	11.1000	11.7000	11.1000
In-House	D5453	08/24/05	1	29	9.7740	9.4760	9.9950	0.8240	9.7740	9.9950	9.4760	9.9950
In-House	D5453	08/05/05	1	30	10.0300	10.0600	10.2000	0.8240	10.0600	10.2000	10.0300	10.2000
In-House	D5453	08/10/05	1	31	9.9000	9.8000	9.9000	0.8240	9.9000	9.9000	9.9000	9.8000
In-House	D5453	08/08/05	1	32	9.6400	9.7500	9.5100	0.8240	9.6400	9.5100	9.7500	9.5100
In-House	D5453	08/26/05	1	36	9.3000	8.9000	8.9000	0.8372	9.3000	8.9000		
In-House	D5453	08/30/05	1	37	9.5000	9.7000	9.6000	0.8240	9.5000	9.7000	9.7000	9.6000
In-House	D5453	08/26/05	1	38	8.8000	8.9000	9.2000	0.8240	8.8000	8.9000	8.8000	9.2000
In-House	D5453	08/31/05	1	39	10.2200	9.5900	9.2100	0.8240	10.2200	9.5900	9.5900	9.2100
In-House	D2622	08/05/05	1	41	11.6000	11.8000	11.2000	0.8240	11.6000	11.2000		
In-House	D5453	08/05/05	1	41	9.4300	9.4900	10.1700	0.8240	9.4300	10.1700	9.4300	9.4900
In-House	D2622	08/31/05	1	EPA	11.1000	10.9000	11.5000	0.8240	11.1000	10.9000	11.1000	11.5000
In-House	D5453	08/30/05	1	EPA	10.6000	10.4000	10.4000	0.8240	10.6000	10.4000	10.4000	10.4000
In-House	D7039	09/07/05	1	EPA	9.5000	10.4000	10.9000	0.8240	9.5000	10.9000	9.5000	10.9000
In-House	D7039	08/18/05	1	47	11.1000	9.8000	9.4000	0.8240	11.1000	9.4000	11.1000	9.4000
In-House	D5453	08/10/05	1	48	9.7500	9.8000	10.4200	0.8359	9.7500	9.8000		
In-House	D2622	08/25/05	1	50	9.9000	9.5000	10.2000	0.8240	9.9000	10.2000	9.5000	10.2000
In-House	D5453	08/24/05	1	51	10.1000	9.9000	10.0000	0.8240	10.1000	10.0000	10.1000	9.9000
In-House	D2622	08/26/05	1	53	11.0000	10.9000	10.5000	0.8240	11.0000	10.5000	11.0000	10.5000
In-House	D5453	08/11/05	1	54	9.5000	9.5000	9.5000	0.8240	9.5000	9.5000	9.5000	9.5000
In-House	D2622	08/02/05	1	55	9.1000	9.5000	9.4000	0.8240	9.1000	9.4000	9.1000	9.4000
In-House	D5453	08/04/05	1	56	9.5000	9.6000	9.6000	0.8240	9.6000	9.6000	9.6000	9.6000
In-House	D5453	08/30/05	1	59	10.7700	11.0700	11.0700	0.8240	10.7700	11.0700	10.7700	11.0700
In-House	D7039	08/04/05	1	60	10.2000	10.3000	10.3000	0.8240	10.3000	10.3000	10.2000	10.3000

**Table B.11. August Fuel #1 Lab Data and Deletions Based on Composite Test Methods for In-House Calibration**

Calibration	Test Method	Run Date	August Sample #	Lab Code	Original Lab Data Robust Outlier Deletion in Shaded Box				After Robust Outlier Deletion Random Selection of 2 Obs		After Gravimetric Deletion Random Selection of 2 Obs	
					Measure #1	Measure #2	Measure #3	Density	#1	#2	#1	#2
In-House	D5453	08/13/05	1	61	9.5300	9.3400	9.1600	0.8240	9.5300	9.3400	9.5300	9.3400
In-House	D5453	08/30/05	1	CARB	9.1900	9.0600	9.4000	0.8240	9.0600	9.4000		
In-House	D5453	08/23/05	1	63	9.6400	10.2800	10.3900	0.8240	9.6400	10.3900	9.6400	10.3900
In-House	D5453	08/22/05	1	64	10.0200	10.4000	10.1600	0.8240	10.0200	10.1600	10.0200	10.1600
In-House	D5453	08/29/05	1	66	9.3900	9.2300	8.9300	0.8240	9.3900	8.9300	9.2300	8.9300
In-House	D2622	08/30/05	1	67	11.6360	10.6190	10.9510	0.8240	11.6360	10.9510	10.6190	10.9510
In-House	D5453	08/22/05	1	68	9.4000	9.3000	9.3000	0.8240	9.4000	9.3000	9.4000	9.3000
In-House	D5453	08/19/05	1	72	9.5200	9.5800	9.7000	0.8240	9.5200	9.7000	9.5200	9.5800
In-House	D2622	08/26/05	1	73	11.8000	11.7000	11.9000	0.8240	11.8000	11.7000	11.8000	11.9000
In-House	D5453	08/26/05	1	73	11.7000	11.0000	11.6000	0.8240	11.0000	11.6000		
In-House	D5453	08/31/05	1	75	10.4300	9.6000	10.0700	0.8240	9.6000	10.0700		
In-House	D5453	08/22/05	1	76	10.0400	9.9300	9.6800	0.8240	10.0400	9.9300	10.0400	9.6800
In-House	D5453	08/03/05	1	77	8.3700	8.1000	8.2500	0.8240	8.1000	8.2500	8.3700	8.1000
In-House	D5453	08/31/05	1	78	9.9100	10.2600	10.1900	0.8240	9.9100	10.2600	9.9100	10.2600
In-House	D5453	08/17/05	1	81	8.9000	9.1000	9.2000	0.8240	9.1000	9.2000	8.9000	9.1000
In-House	D5453	08/05/05	1	82	9.9200	10.2100	9.9200	0.8240	9.9200	9.9200	9.9200	9.9200
In-House	D5453	08/18/05	1	83	10.0000	8.8000	10.3000	0.8240	10.0000	10.3000	10.0000	10.3000
In-House	D5453	08/11/05	1	84	10.4000	10.5000	10.3000	0.8240	10.4000	10.5000	10.4000	10.3000
In-House	D5453	08/05/05	1	85	8.6900	8.8000	9.0000	0.8240	8.8000	9.0000	8.6900	8.8000
In-House	D3120	08/11/05	1	86	9.8000	9.6000	9.6000	0.8240	9.8000	9.6000	9.8000	9.6000
In-House	D5453	08/31/05	1	87	8.2000	8.4000	8.1000	0.8240	8.4000	8.1000		
In-House	D5453	08/20/05	1	89	9.8000	9.7000	9.5000	0.8240	9.8000	9.5000	9.7000	9.5000
In-House	D5453	08/04/05	1	90	8.9000	8.7000	8.7000	0.8240	8.9000	8.7000	8.9000	8.7000
In-House	D5453	08/11/05	1	91	10.4000	10.4000	10.2900	0.8240	10.4000	10.2900	10.4000	10.2900
In-House	D3120	08/09/05	1	95	9.3000	8.9000	8.9000	0.8240	9.3000	8.9000	9.3000	8.9000
In-House	D5453	08/09/05	1	95	9.1000	9.1000	9.2000	0.8240	9.1000	9.2000	9.1000	9.2000
In-House	D5453	08/17/05	1	96	12.5300	12.1500	12.2200	0.8240	12.5300	12.1500		
In-House	D5453	08/15/05	1	97	9.6000	9.6000	9.4000	0.8240	9.6000	9.4000	9.6000	9.6000
In-House	D5453	08/24/05	1	99	7.6500	7.9400	7.4700	0.8240	7.6500	7.4700	7.9400	7.4700
In-House	D5453	08/10/05	1	100	7.5000	8.2000	8.1000	0.8240	7.5000	8.1000		
In-House	D7039	08/16/05	1	102	10.1000	10.6000	10.3000	0.8240	10.1000	10.3000	10.6000	10.3000
In-House	D2622	08/25/05	1	103	11.9000	11.3000	11.5000	0.8240	11.3000	11.5000	11.3000	11.5000
In-House	D5453	08/23/05	1	103	9.0000	9.3000	9.0000	0.8240	9.3000	9.0000	9.0000	9.0000
In-House	D7039	08/24/05	1	103	9.7000	10.3000	10.2000	0.8240	9.7000	10.2000		
In-House	D2622	08/09/05	1	105	11.4000	10.9000	11.0000	0.8240	11.4000	11.0000	11.4000	10.9000
In-House	D7039	08/30/05	1	106	9.9000	10.4000	11.2000	0.8240	9.9000	10.4000	10.4000	11.2000
In-House	D7039	08/11/05	1	107	11.8000	10.4000	11.4000	0.8240	11.8000	11.4000	11.8000	11.4000
In-House	D5453	08/03/05	1	108	8.7000	8.8000	8.5000	0.8240	8.8000	8.5000		
In-House	D5453	08/29/05	1	109	9.8000	9.6000	9.8000	0.8240	9.8000	9.6000	9.6000	9.8000
In-House	D7039	08/26/05	1	109	8.7000	9.0000	9.0000	0.8240	8.7000	9.0000		
In-House	D5453	08/12/05	1	110	10.3400	10.0500	10.0700	0.8240	10.0500	10.0700	10.3400	10.0700
In-House	D7039	08/12/05	1	111	7.9000	9.8000	7.6000	0.8240	7.9000	9.8000	7.9000	9.8000
In-House	D5453	08/18/05	1	112	11.8700	11.8900	11.8700	0.8523	11.8700	11.8900		
In-House	D5453	08/15/05	1	113	8.9000	8.9000	9.4000	0.8240	8.9000	9.4000		
In-House	D5453	08/25/05	1	114	10.7000	10.4000	10.6000	0.8240	10.7000	10.6000	10.7000	10.4000
In-House	D5453	08/11/05	1	115	10.6000	10.0000	10.1000	0.8240	10.6000	10.0000	10.6000	10.0000
In-House	D5453	08/09/05	1	116	10.4000	10.5300	10.2000	0.8240	10.4000	10.5300	10.5300	10.2000

**Table B.11. August Fuel #1 Lab Data and Deletions Based on Composite Test Methods for In-House Calibration**

Calibration	Test Method	Run Date	August Sample #	Lab Code	Original Lab Data Robust Outlier Deletion in Shaded Box				After Robust Outlier Deletion Random Selection of 2 Obs		After Gravimetric Deletion Random Selection of 2 Obs	
					Measure #1	Measure #2	Measure #3	Density	#1	#2	#1	#2
In-House	D5453	08/16/05	1	117	10.3200	10.1100	10.1500	0.8240	10.3200	10.1500	10.1100	10.1500
In-House	D5453	08/25/05	1	118	9.9500	10.1300	9.9900	0.8240	10.1300	9.9900	9.9500	9.9900
In-House	D5453	08/11/05	1	119	9.7300	9.6800	9.5700	0.8240	9.7300	9.6800	9.6800	9.5700
In-House	D5453	08/29/05	1	120	10.3000	10.4000	10.3000	0.8240	10.3000	10.4000	10.3000	10.4000
In-House	D2622	08/31/05	1	121	10.8000	11.0000	11.1000	0.8240	11.0000	11.1000	10.8000	11.0000
In-House	D5453	08/11/05	1	122	9.9000	10.0000	10.0000	0.8240	9.9000	10.0000	10.0000	10.0000
In-House	D2622	08/15/05	1	123	10.3000	9.7000	10.8000	0.8240	10.3000	10.8000	9.7000	10.8000
In-House	D2622	08/17/05	1	124	11.4000	10.2000	14.1000	0.8240	11.4000	10.2000	11.4000	10.2000
In-House	D2622	08/10/05	1	126	8.5000	9.1000	8.8000	0.8240	8.5000	8.8000	8.5000	8.8000
In-House	D5453	08/10/05	1	126	7.9000	8.9000	7.7000	0.8240	7.9000	8.9000		
In-House	D7039	08/26/05	1	127	10.1000	10.2000	10.3000	0.8240	10.1000	10.2000	10.1000	10.2000
In-House	D7039	08/17/05	1	128	10.3000	9.5000	9.9000	0.8240	10.3000	9.5000	9.5000	9.9000
In-House	D5453	08/09/05	1	129	10.7000	10.6000	10.6000	0.8240	10.6000	10.6000	10.7000	10.6000
In-House	D5453	08/09/05	1	130	9.8000	9.8000	9.6000	0.8240	9.8000	9.6000	9.8000	9.8000
In-House	D2622	08/15/05	1	131	11.5000	11.6000	11.1000	0.8240	11.5000	11.6000		
In-House	EDXRF	08/10/05	1	131	10.2000	11.2000	10.5000	0.8240	11.2000	10.5000	10.2000	10.5000
In-House	D5453	08/25/05	1	132	10.3160	10.3420	10.3060	0.8240	10.3160	10.3060	10.3420	10.3060
In-House	D2622	08/31/05	1	133	12.2000	11.0000	12.3000	0.8240	12.2000	12.3000	11.0000	12.3000
In-House	EDXRF	08/30/05	1	134	10.5000	10.6000	11.5000	0.8240	10.6000	11.5000	10.6000	11.5000
In-House	EDXRF	08/09/05	1	135	9.4000	9.8000	9.9000	0.8240	9.4000	9.8000	9.8000	9.9000
In-House	D2622	08/09/05	1	136	10.2000	9.7000	9.9000	0.8240	10.2000	9.9000	9.7000	9.9000
In-House	EDXRF	08/09/05	1	136	9.2000	9.6000	9.2000	0.8240	9.2000	9.2000	9.6000	9.2000
In-House	D5453	08/12/05	1	137	9.7100	10.0200	9.8400	0.8240	9.7100	9.8400	9.7100	10.0200
In-House	EDXRF	08/12/05	1	137	11.1000	12.0000	11.1000	0.8240	12.0000	11.1000	11.1000	12.0000
In-House	D5453	08/17/05	1	138	10.4000	10.2000	10.7000	0.8240	10.4000	10.2000	10.4000	10.7000
In-House	D2622	08/26/05	1	139	11.7000	11.8000	11.6000	0.8523	11.7000	11.8000	11.7000	11.8000
In-House	D5453	08/31/05	1	139	9.2300	9.2700	9.4000	0.8240	9.2300	9.4000	9.2300	9.4000
In-House	D2622	08/22/05	1	140	12.0000	12.0000	13.4000	0.8240	12.0000	12.0000		
In-House	EDXRF	08/10/05	1	141	10.7000	10.5000	10.1000	0.8359	10.5000	10.1000	10.7000	10.1000
In-House	D5453	08/12/05	1	143	10.2900	10.2400	10.1000	0.8240	10.2400	10.1000	10.2400	10.1000
In-House	D3120	07/09/05	1	144	8.9000	9.1000	9.0000	0.8240	9.1000	9.0000	9.1000	9.0000
In-House	D2622	09/04/05	1	145	11.9000	11.9000	11.5000		11.9000	11.5000		
In-House	D5453	08/26/05	1	147	10.1000	10.4000	10.4000	0.8240	10.1000	10.4000	10.1000	10.4000
In-House	D5453	08/15/05	1	148	10.1000	10.5000	10.5000	0.8240	10.5000	10.5000	10.1000	10.5000
In-House	D7039	08/09/05	1	148	10.1000	9.5000	10.4000	0.8240	9.5000	10.4000	10.1000	9.5000
In-House	D5453	08/18/05	1	149	9.9360	9.4800	9.4780	0.8240	9.4800	9.4780	9.9360	9.4780
In-House	D5453	08/17/05	1	151	10.5200	10.5800	10.5400	0.8240	10.5200	10.5800	10.5200	10.5800
In-House	D7039	08/16/05	1	151	9.2000	10.1000	9.1000	0.8240	10.1000	9.1000	9.2000	10.1000
In-House	D5453	08/11/05	1	152	7.8700	7.8900	8.0200	0.8240	7.8900	8.0200	7.8700	7.8900
In-House	D5453	08/12/05	1	153	9.7200	9.6800	9.8100	0.8240	9.7200	9.8100	9.7200	9.6800
In-House	D5453	08/15/05	1	154	10.0000	10.3000	9.1000	0.8240	10.0000	9.1000	10.3000	9.1000
In-House	D5453	08/16/05	1	156	9.5900	9.3400	8.9800	0.8240	9.3400	8.9800	9.3400	8.9800
In-House	D5453	08/05/05	1	158	13.1900	13.5100	12.9300	0.8240				
In-House	D5453	08/08/05	1	159	11.0200	10.6400	10.8500	0.8359	11.0200	10.8500	11.0200	10.6400
In-House	D7039	08/26/05	1	160	9.5000	9.5000	9.9000	0.8240	9.5000	9.9000	9.5000	9.9000
In-House	D5453	08/30/05	1	161	9.1800	9.3400	9.8800	0.8240	9.1800	9.3400	9.3400	9.8800
In-House	D2622	08/26/05	1	162	9.7200	10.1400	10.9100	0.8240	10.1400	10.9100	10.1400	10.9100



**Table B.11. August Fuel #1 Lab Data and Deletions Based on Composite Test Methods for In-House Calibration**

Calibration	Test Method	Run Date	August Sample #	Lab Code	Original Lab Data Robust Outlier Deletion in Shaded Box			Density	After Robust Outlier Deletion Random Selection of 2 Obs		After Gravimetric Deletion Random Selection of 2 Obs	
					Measure #1	Measure #2	Measure #3		#1	#2	#1	#2
In-House	D5453	08/25/05	1	162	10.7100	10.9400	10.4400	0.8240	10.9400	10.4400	10.9400	10.4400

Table B.12. August Fuel #1 Lab Data and Deletions Based on Composite Test Methods for NIST Calibration

Calibration	Test Method	Run Date	August Sample #	Lab Code	Original Lab Data Robust Outlier Deletion in Shaded Box				After Robust Outlier Deletion Random Selection of 2 Obs		After Gravimetric Deletion Random Selection of 2 Obs	
					Measure #1	Measure #2	Measure #3	Density	#1	#2	#1	#2
NIST	D5453	08/18/05	1	1	10.0000	10.0000	9.9000	0.8240	10.0000	9.9000	10.0000	9.9000
NIST	D5453	08/04/05	1	2	9.9000	9.8200	10.1100	0.8240	9.9000	9.8200	9.9000	9.8200
NIST	D2622	08/08/05	1	3	10.8700	11.4100	10.8800	0.8240	11.4100	10.8800	11.4100	10.8800
NIST	D5453	08/31/05	1	4	11.1100	11.2100	11.1600	0.8240	11.1100	11.2100		
NIST	D2622	08/26/05	1	5	11.0000	10.9000	11.0000	0.8240	11.0000	10.9000	11.0000	10.9000
NIST	D7039	08/22/05	1	6	10.7000	10.7000	11.2000	0.8240	10.7000	11.2000	10.7000	10.7000
NIST	D7039	08/09/05	1	7	10.6000	9.6000	10.0000	0.8240	10.6000	10.0000	10.6000	10.0000
NIST	D2622	08/04/05	1	8	11.8700	11.6800	11.0800	0.8240	11.6800	11.0800	11.6800	11.0800
NIST	D5453	08/03/05	1	8	10.1000	10.2000	10.2000	0.8240	10.1000	10.2000	10.2000	10.2000
NIST	D5453	08/05/05	1	9	9.8900	9.4200	9.9300	0.8240	9.4200	9.9300	9.8900	9.9300
NIST	D5453	08/05/05	1	11	11.0000	10.9000	11.1000	0.8240	11.0000	10.9000	11.0000	11.1000
NIST	D5453	08/26/08	1	12	10.0000	9.9000	10.3000	0.8240	10.0000	9.9000	9.9000	10.3000
NIST	D5453	08/24/05	1	13	9.6000	9.9400	9.8400	0.8240	9.9400	9.8400	9.9400	9.8400
NIST	D5453	08/24/05	1	15	10.1800	9.7800	9.4800	0.8240	10.1800	9.4800	10.1800	9.4800
NIST	D5453	08/22/05	1	16	9.5500	9.5000	9.5200	0.8240	9.5500	9.5200	9.5000	9.5200
NIST	D5453	08/11/05	1	18	10.2300	9.8400	10.3800	0.8359	9.8400	10.3800	9.8400	10.3800
NIST	D5453	08/19/05	1	19	10.0000	10.0000	9.9000	0.8240	10.0000	10.0000	10.0000	9.9000
NIST	D5453	08/12/05	1	21	9.3400	9.5800	9.3000	0.8240	9.5800	9.3000	9.3400	9.5800
NIST	D5453	08/22/05	1	23	9.7000	9.7100	9.3400	0.8240	9.7000	9.3400		
NIST	D5453	08/03/05	1	24	10.3200	10.3100	10.3000		10.3200	10.3100	10.3100	10.3000
NIST	D5453	08/31/05	1	25	10.0100	9.9900	10.0300	0.8359	9.9900	10.0300	9.9900	10.0300
NIST	D5453	08/04/05	1	26	10.5000	9.8700	10.0100	0.8240	10.5000	9.8700	9.8700	10.0100
NIST	D5453	08/25/05	1	27	10.3200	10.3200	10.3000	0.8240	10.3200	10.3000	10.3200	10.3000
NIST	D2622	08/26/05	1	28	11.6000	11.6000	11.3000	0.8240	11.6000	11.3000		
NIST	D5453	08/25/05	1	29	9.5330	9.5640	9.6340	0.8240	9.5640	9.6340	9.5330	9.6340
NIST	D5453	08/06/05	1	30	10.1500	10.1000	10.2000	0.8240	10.1000	10.2000	10.1000	10.2000
NIST	D5453	08/10/05	1	31	10.0000	10.0000	9.9000	0.8240	10.0000	10.0000	10.0000	10.0000
NIST	D5453	08/09/05	1	32	10.4300	10.3500	10.4400	0.8240	10.4300	10.4400	10.4300	10.3500
NIST	D5453	08/30/05	1	36	8.7800	8.9000	8.7000	0.8372	8.7800	8.7000		
NIST	D5453	08/26/05	1	37	9.4200	9.5000	9.4000	0.8240	9.4200	9.4000	9.4200	9.4000
NIST	D5453	08/30/05	1	38	10.5000	10.2000	9.9000	0.8240	10.5000	10.2000	10.5000	10.2000
NIST	D5453	09/01/05	1	39	10.3100	10.3100	10.3900	0.8240	10.3100	10.3900	10.3100	10.3900
NIST	D2622	08/05/05	1	41	10.8000	10.7000	10.6000	0.8240	10.8000	10.7000	10.8000	10.7000
NIST	D5453	08/11/05	1	41	11.0300	11.5800	10.2500	0.8240	11.0300	11.5800	11.0300	10.2500
NIST	D2622	09/01/05	1	EPA	11.6000	11.5000	12.1000	0.8240	11.5000	12.1000	11.6000	12.1000
NIST	D5453	08/30/05	1	EPA	10.3000	10.3000	10.3000	0.8240	10.3000	10.3000	10.3000	10.3000
NIST	D7039	09/07/05	1	EPA	10.3000	10.5000	10.5000	0.8240	10.5000	10.5000	10.5000	10.5000
NIST	D7039	08/19/05	1	47	9.9000	9.5000	10.0000	0.8240	9.9000	9.5000	9.9000	10.0000
NIST	D5453	08/11/05	1	48	8.9500	5.5600	7.4600	0.8359	8.9500			
NIST	D2622	08/26/05	1	50	10.6500	11.2100	9.6000	0.8240	11.2100	9.6000	11.2100	9.6000
NIST	D5453	08/25/05	1	51	12.2000	12.3000	12.2000	0.8240				
NIST	D2622	08/29/05	1	53	11.1000	10.9000	11.9000	0.8240		11.9000	10.9000	11.9000
NIST	D5453	08/16/05	1	54	9.7000	9.7000	9.7000	0.8240	9.7000	9.7000	9.7000	9.7000
NIST	D2622	08/02/05	1	55	9.2000	10.5000	10.7000	0.8240	9.2000	10.7000	10.5000	10.7000
NIST	D5453	08/05/05	1	56	9.5000	9.6000	9.7000	0.8240	9.6000	9.7000	9.5000	9.6000
NIST	D5453	08/31/05	1	59	10.3500	10.0300	10.1300	0.8240	10.3500	10.0300	10.3500	10.1300
NIST	D7039	08/04/05	1	60	10.2000	10.0000	9.9000	0.8240	10.2000	9.9000	10.2000	10.0000

**Table B.12. August Fuel #1 Lab Data and Deletions Based on Composite Test Methods for NIST Calibration**

Calibration	Test Method	Run Date	August Sample #	Lab Code	Original Lab Data Robust Outlier Deletion in Shaded Box				After Robust Outlier Deletion Random Selection of 2 Obs		After Gravimetric Deletion Random Selection of 2 Obs	
					Measure #1	Measure #2	Measure #3	Density	#1	#2	#1	#2
NIST	D5453	08/13/05	1	61	10.0100	9.9600	9.7700	0.8240	9.9600	9.7700	10.0100	9.7700
NIST	D5453	08/31/05	1	CARB	9.6000	9.6000	9.9000	0.8240	9.6000	9.9000	9.6000	9.9000
NIST	D5453	08/24/05	1	63	9.7800	10.0900	9.9000	0.8240	10.0900	9.9000	9.7800	10.0900
NIST	D5453	08/25/05	1	64	9.7000	9.5000	9.6000	0.8240	9.7000	9.6000	9.7000	9.5000
NIST	D5453		1	66	8.6300	8.6400	8.7400	0.8240	8.6400	8.7400	8.6300	8.6400
NIST	D2622	08/31/05	1	67	9.2650	9.7860	10.2830	0.8240	9.2650	9.7860	9.7860	10.2830
NIST	D5453	08/22/05	1	68	9.0000	9.0000	9.2000	0.8240	9.0000	9.0000		
NIST	D5453	08/19/05	1	72	9.7000	9.4000	9.5000	0.8240	9.4000	9.5000	9.7000	9.4000
NIST	D2622	08/26/05	1	73	10.6000	10.8000	11.8000	0.8240	10.8000	11.8000		
NIST	D5453	08/26/05	1	73	11.3000	11.1000	11.3000	0.8240	11.3000	11.3000	11.1000	11.3000
NIST	D5453	09/01/05	1	75	9.6000	10.0500	10.0400	0.8240	9.6000	10.0500	10.0500	10.0400
NIST	D5453	08/22/05	1	76	9.6700	9.3900	9.9400	0.8240	9.6700	9.3900	9.6700	9.3900
NIST	D5453	08/03/05	1	77	10.9600	10.5200	10.7300	0.8240	10.5200	10.7300		
NIST	D5453	08/31/05	1	78	10.3300	10.4700	10.3300	0.8240	10.4700	10.3300	10.4700	10.3300
NIST	D5453	08/24/05	1	81	8.2000	7.7000	8.0000	0.8240	8.2000		8.2000	8.0000
NIST	D5453	08/05/05	1	82	9.8700	9.9000	10.1900	0.8240	9.8700	10.1900	9.8700	9.9000
NIST	D5453	08/18/05	1	83	8.8000	9.2000	9.2000	0.8240	8.8000	9.2000		
NIST	D5453	08/18/05	1	84	9.7000	10.2000	10.0000	0.8240	9.7000	10.0000	9.7000	10.2000
NIST	D5453	08/12/05	1	85	7.8000	7.8000	8.0000	0.8240			7.8000	7.8000
NIST	D3120	08/18/05	1	86	9.7000	9.6000	9.6000	0.8240	9.6000	9.6000	9.6000	9.6000
NIST	D5453	08/31/05	1	87	8.2000	8.4000	8.8000	0.8240	8.2000	8.8000	8.2000	8.8000
NIST	D5453	08/20/05	1	89	9.7000	10.0000	9.8000	0.8240	9.7000	10.0000	9.7000	9.8000
NIST	D5453	08/05/05	1	90	8.9000	8.7000	8.6000	0.8240	8.7000	8.6000	8.9000	8.6000
NIST	D5453	08/12/05	1	91	10.3100	10.3200	10.2700	0.8240	10.3100	10.3200	10.3100	10.2700
NIST	D3120	08/17/05	1	95	9.4000	9.8000	9.8000	0.8240	9.8000	9.8000	9.8000	9.8000
NIST	D5453	08/17/05	1	95	10.0000	9.9000	10.1000	0.8240	9.9000	10.1000	10.0000	10.1000
NIST	D5453		1	96	12.1600	12.1900	11.9300	0.8240	11.9300			
NIST	D5453	08/15/05	1	97	10.0000	9.9000	9.9000	0.8240	9.9000	9.9000	10.0000	9.9000
NIST	D5453	08/25/05	1	99	7.9100	8.0700	7.4000	0.8240	8.0700			
NIST	D5453	08/11/05	1	100	10.5000	10.1000	10.2000	0.8240	10.1000	10.2000		
NIST	D7039	08/15/05	1	102	10.3000	10.4000	10.5000	0.8240	10.4000	10.5000	10.4000	10.5000
NIST	D2622	08/26/05	1	103	11.9000	11.1000	11.7000	0.8240	11.9000	11.7000		
NIST	D5453	08/25/05	1	103	9.3000	9.2000	9.6000	0.8240	9.2000	9.6000	9.2000	9.6000
NIST	D7039	08/24/05	1	103	10.0000	10.1000	9.5000	0.8240	10.0000	10.1000	10.1000	9.5000
NIST	D2622	08/09/05	1	105	11.0000	11.6000	11.0000	0.8240	11.6000	11.0000	11.0000	11.6000
NIST	D7039	08/31/05	1	106	9.8000	10.1000	9.5000	0.8240	10.1000	9.5000	10.1000	9.5000
NIST	D7039	08/19/05	1	107	10.8000	10.2000	10.2000	0.8240	10.8000	10.2000	10.8000	10.2000
NIST	D5453	08/08/05	1	108	8.7000	8.7000	8.7000	0.8240	8.7000	8.7000		
NIST	D5453	08/31/05	1	109	9.9000	10.1000	10.1000	0.8240	9.9000	10.1000		
NIST	D7039	08/29/05	1	109	10.2000	9.9000	10.3000	0.8240	9.9000	10.3000	10.2000	9.9000
NIST	D5453	08/22/05	1	110	9.8400	9.9600	9.7800	0.8240	9.9600	9.7800	9.9600	9.7800
NIST	D7039	08/15/05	1	111	9.5000	8.8000	8.8000	0.8240	9.5000	8.8000	9.5000	8.8000
NIST	D5453	08/19/05	1	112	9.8500	9.7300	9.5200	0.8523	9.8500	9.5200	9.7300	9.5200
NIST	D5453	08/19/05	1	113	9.9000	9.9000	9.4000	0.8240	9.9000	9.4000	9.9000	9.4000
NIST	D5453	08/26/05	1	114	9.9000	9.9000	10.0000	0.8240	9.9000	10.0000	9.9000	10.0000
NIST	D5453	08/12/05	1	115	9.6000	9.7000	9.7000	0.8240	9.7000	9.7000	9.7000	9.7000
NIST	D5453	08/09/05	1	116	9.8200	10.0700	9.8700	0.8240	9.8200	9.8700	9.8200	10.0700

**Table B.12. August Fuel #1 Lab Data and Deletions Based on Composite Test Methods for NIST Calibration**

Calibration	Test Method	Run Date	August Sample #	Lab Code	Original Lab Data Robust Outlier Deletion in Shaded Box				After Robust Outlier Deletion Random Selection of 2 Obs		After Gravimetric Deletion Random Selection of 2 Obs	
					Measure #1	Measure #2	Measure #3	Density	#1	#2	#1	#2
NIST	D5453	08/15/05	1	117	9.9600	10.0000	10.0100	0.8240	9.9600	10.0100	9.9600	10.0100
NIST	D5453	08/25/05	1	118	10.5500	10.4900	10.3800	0.8240	10.5500	10.4900	10.5500	10.4900
NIST	D5453	08/11/05	1	119	10.6400	10.6300	10.4900	0.8240	10.6300	10.4900	10.6300	10.4900
NIST	D5453	08/30/05	1	120	10.0000	10.2000	9.9000	0.8240	10.0000	10.2000	10.2000	9.9000
NIST	D2622	09/01/05	1	121	11.7000	11.8000	11.8000	0.8240	11.8000	11.8000	11.7000	11.8000
NIST	D5453	08/12/05	1	122	9.6000	9.8000	10.0000	0.8240	9.6000	10.0000	9.6000	9.8000
NIST	D2622	08/15/05	1	123	10.7000	10.2000	10.4000	0.8240	10.2000	10.4000	10.2000	10.4000
NIST	D2622	08/24/05	1	124	11.2000	11.1000	10.5000	0.8240	11.1000	10.5000		
NIST	D2622	08/31/05	1	126	8.7000	9.3000	9.1000	0.8240	9.3000	9.1000	8.7000	9.1000
NIST	D5453	08/10/05	1	126	10.8000	10.0500	10.1300	0.8240	10.8000	10.0500	10.8000	10.0500
NIST	D7039	08/26/05	1	127	10.8000	10.5000	10.3000	0.8240	10.8000	10.5000	10.8000	10.5000
NIST	D7039	08/17/05	1	128	10.6000	10.8000	10.4000	0.8240	10.6000	10.4000	10.6000	10.4000
NIST	D5453	08/10/05	1	129	9.7400	9.8000	9.6000	0.8240	9.8000	9.6000	9.7400	9.6000
NIST	D5453	08/08/05	1	130	10.0000	9.7000	9.8000	0.8240	10.0000	9.8000	9.7000	9.8000
NIST	D2622	08/11/05	1	131	9.3000	9.6000	9.4000	0.8240	9.3000	9.4000		
NIST	EDXRF	08/11/05	1	131	10.0000	10.5000	9.5000	0.8240	10.5000	9.5000		
NIST	D5453	08/25/05	1	132	9.5950	9.6190	9.6120	0.8240	9.5950	9.6120	9.6190	9.6120
NIST	D2622	08/31/05	1	133	11.6000	10.2000	10.2000	0.8240	11.6000	10.2000	10.2000	10.2000
NIST	EDXRF	08/30/05	1	134	10.1000	10.3000	9.6000	0.8240	10.3000	9.6000	10.3000	9.6000
NIST	EDXRF	08/10/05	1	135	9.8000	10.1000	9.5000	0.8240	10.1000	9.5000	10.1000	9.5000
NIST	D2622	08/09/05	1	136	10.2000	10.2000	10.6000	0.8240	10.2000	10.6000	10.2000	10.6000
NIST	EDXRF	08/09/05	1	136	10.7000	10.2000	10.6000	0.8240	10.7000	10.2000	10.7000	10.2000
NIST	D5453	08/14/05	1	137	9.8300	9.1500	9.7800	0.8240	9.8300	9.7800	9.8300	9.7800
NIST	EDXRF		1	137	9.3000	9.7000	10.7000	0.8240	9.7000	10.7000		
NIST	D5453	08/15/05	1	138	10.9000	10.4000	10.6000	0.8240	10.9000	10.6000	10.4000	10.6000
NIST	D2622	08/23/05	1	139	10.2000	10.9000	10.7000	0.8523	10.2000	10.9000	10.9000	10.7000
NIST	D5453	08/25/05	1	139	9.7000	9.7000	10.1000	0.8240	9.7000	9.7000	9.7000	9.7000
NIST	D2622	08/22/05	1	140	7.6000	7.9000	10.7000	0.8240	10.7000		7.6000	7.9000
NIST	EDXRF	08/22/05	1	141	10.6000	10.7000	10.2000	0.8359	10.6000	10.2000	10.6000	10.7000
NIST	D5453	08/12/05	1	143	9.5300	9.4400	9.7900	0.8240	9.5300	9.4400	9.5300	9.4400
NIST	D3120		1	144	10.3000	9.3000	10.1000	0.8240	10.3000	9.3000	10.3000	10.1000
NIST	D2622	09/04/05	1	145	12.7000	12.4000	11.8000		11.8000			
NIST	D5453	08/26/05	1	147	9.8000	9.9000	9.8000	0.8240	9.8000	9.9000		
NIST	D5453	08/15/05	1	148	10.3000	10.8000	10.8000	0.8240	10.3000	10.8000	10.8000	10.8000
NIST	D7039	08/09/05	1	148	10.6000	10.4000	10.8000	0.8240	10.6000	10.4000	10.6000	10.8000
NIST	D5453	08/25/05	1	149	10.0500	9.7870	9.5750	0.8240	10.0500	9.7870	10.0500	9.7870
NIST	D5453	08/17/05	1	151	9.8700	9.8400	9.7400	0.8240	9.8700	9.7400	9.8400	9.7400
NIST	D7039	08/16/05	1	151	10.7000	10.6000	10.7000	0.8240	10.7000	10.6000	10.6000	10.7000
NIST	D5453	08/19/05	1	152	7.5600	7.8800	7.9700	0.8240			7.5600	7.8800
NIST	D5453	08/17/05	1	153	10.4800	10.4200	10.3900	0.8240	10.4800	10.3900	10.4200	10.3900
NIST	D5453	08/16/05	1	154	9.1000	9.6000	9.6000	0.8240	9.6000	9.6000	9.1000	9.6000
NIST	D5453	08/15/05	1	156	10.8600	10.3400	10.8900	0.8240	10.8600	10.3400	10.8600	10.3400
NIST	D5453	08/06/05	1	158	13.3500	12.6800	13.0800	0.8240				
NIST	D5453	08/08/05	1	159	10.0400	9.6000	9.6000	0.8359	10.0400	9.6000	10.0400	9.6000
NIST	D7039	08/26/05	1	160	10.1000	10.2000	10.0000	0.8240	10.1000	10.2000	10.1000	10.0000
NIST	D5453	08/29/05	1	161	9.3600	9.3900	9.5000	0.8240	9.3600	9.3900	9.3600	9.5000
NIST	D2622	07/26/05	1	162	9.5700	9.5800	10.6900	0.8240	9.5800	10.6900		

**Table B.12. August Fuel #1 Lab Data and Deletions Based on Composite Test Methods for NIST Calibration**

Table B.12. August Fuel #1 Lab Data and Deletions Based on Composite Test Methods for NIST Calibration														
					Original Lab Data Robust Outlier Deletion in Shaded Box					After Robust Outlier Deletion Random Selection of 2 Obs			After Gravimetric Deletion Random Selection of 2 Obs	
Calibration	Test Method	Run Date	August Sample #	Lab Code	Measure #1	Measure #2	Measure #3	Density		#1	#2		#1	#2
NIST	D5453	08/30/05	1	162	9.9400	9.5400	9.2400	0.8240		9.9400	9.2400		9.9400	9.2400

**Table B.13. August Fuel #2 Lab Data and Deletions Based on Composite Test Methods for In-House Calibration**

Calibration	Test Method	Run Date	August Sample #	Lab Code	Original Lab Data Robust Outlier Deletion in Shaded Box				After Robust Outlier Deletion Random Selection of 2 Obs		After Gravimetric Deletion Random Selection of 2 Obs	
					Measure #1	Measure #2	Measure #3	Density	#1	#2	#1	#2
In-House	D5453	08/18/05	2	1	13.3000	13.3000	13.3000	0.8371	13.3000	13.3000	13.3000	13.3000
In-House	D5453	08/04/05	2	2	14.8000	15.0400	14.6900	0.8371	14.8000	14.6900	15.0400	14.6900
In-House	D2622	08/08/05	2	3	15.2600	16.6900	16.1400	0.8371	15.2600	16.6900		
In-House	D5453	08/31/05	2	4	15.8400	15.4700	15.8200	0.8371	15.8400	15.8200		
In-House	D2622		2	5	15.6000	16.2000	18.2000	0.8371	15.6000	16.2000		
In-House	D7039	08/22/05	2	6	14.6000	14.2000	14.2000	0.8371	14.6000	14.2000	14.6000	14.2000
In-House	D7039	08/09/05	2	7	13.6000	14.7000	14.9000	0.8371	13.6000	14.9000	14.7000	14.9000
In-House	D2622	08/04/05	2	8	16.4000	15.6800	16.0000	0.8371	16.4000	15.6800	16.4000	16.0000
In-House	D5453	08/03/05	2	8	14.3100	14.2000	14.5000	0.8371	14.2000	14.5000	14.3100	14.2000
In-House	D5453	08/05/05	2	9	13.9500	14.2200	14.2700	0.8371	13.9500	14.2200	14.2200	14.2700
In-House	D5453	08/04/05	2	11	14.4000	14.8000	15.1000	0.8371	14.8000	15.1000	14.4000	15.1000
In-House	D5453	08/25/05	2	12	14.2000	14.0000	14.0000	0.8371	14.0000	14.0000	14.0000	14.0000
In-House	D5453	08/08/05	2	13	15.7000	15.6000	15.7000	0.8371	15.6000	15.7000	15.6000	15.7000
In-House	D5453	07/26/05	2	15	13.8000	14.3100	13.6700	0.8371	14.3100	13.6700	13.8000	13.6700
In-House	D5453	08/19/05	2	16	13.9700	13.9400	14.1200	0.8371	13.9700	13.9400	13.9700	14.1200
In-House	D5453	08/11/05	2	18	14.9000	14.9000	14.8500	0.8371	14.9000	14.9000	14.9000	14.8500
In-House	D5453	08/16/05	2	19	14.2000	14.2000	14.2000	0.8371	14.2000	14.2000	14.2000	14.2000
In-House	D5453	08/10/05	2	21	13.7200	13.7000	13.8200	0.8371	13.7000	13.8200	13.7200	13.7000
In-House	D5453	08/22/05	2	23	13.2000	13.2400	13.3900	0.8371	13.2000	13.3900		
In-House	D5453	08/04/05	2	24	15.0300	14.9900	14.9100		15.0300	14.9100	15.0300	14.9100
In-House	D5453	08/31/05	2	25	13.4000	13.3800	13.4900	0.8371	13.4000	13.3800		
In-House	D5453	08/03/05	2	26	14.7100	14.9600	14.4700	0.8371	14.7100	14.9600	14.7100	14.9600
In-House	D5453	08/25/05	2	27	14.8900	15.0000	15.0500	0.8371	14.8900	15.0500	14.8900	15.0500
In-House	D2622	08/16/05	2	28	16.1000	16.4000	16.2000	0.8371	16.1000	16.4000	16.1000	16.2000
In-House	D5453	08/24/05	2	29	14.1880	13.8590	13.8190	0.8371	13.8590	13.8190	13.8590	13.8190
In-House	D5453	08/05/05	2	30	14.5000	14.4000	14.6000	0.8371	14.5000	14.6000	14.5000	14.6000
In-House	D5453	08/10/05	2	31	14.5000	14.3000	14.6000	0.8371	14.5000	14.3000	14.5000	14.3000
In-House	D5453	08/08/05	2	32	14.2100	14.1800	14.1400	0.8371	14.2100	14.1800	14.1800	14.1400
In-House	D5453	08/26/05	2	36	13.3000	13.4000	13.2000	0.8264	13.3000	13.4000		
In-House	D5453	08/30/05	2	37	14.1000	13.8000	13.9000	0.8371	14.1000	13.8000	14.1000	13.9000
In-House	D5453	08/26/05	2	38	13.0000	13.1000	13.2000	0.8371	13.0000	13.1000	13.0000	13.2000
In-House	D5453	08/31/05	2	39	14.6500	14.4400	14.3500	0.8371	14.6500	14.3500	14.4400	14.3500
In-House	D2622	08/05/05	2	41	14.7000	14.3000	14.6000	0.8371	14.3000	14.6000		
In-House	D5453	08/05/05	2	41	14.4900	14.0200	14.2700	0.8371	14.4900	14.2700	14.4900	14.2700
In-House	D2622	08/31/05	2	EPA	15.3000	15.4000	15.6000	0.8371	15.4000	15.6000	15.3000	15.6000
In-House	D5453	08/30/05	2	EPA	15.0000	14.9000	14.9000	0.8371	15.0000	14.9000	15.0000	14.9000
In-House	D7039	09/07/05	2	EPA	14.2000	13.6000	14.8000	0.8371	14.2000	14.8000	14.2000	14.8000
In-House	D7039	08/18/05	2	47	13.9000	13.5000	14.4000	0.8371	13.5000	14.4000	13.9000	13.5000
In-House	D5453	08/10/05	2	48	15.8000	14.6700	12.9700	0.8371	15.8000	12.9700		
In-House	D2622	08/25/05	2	50	13.7000	15.6000	15.5000	0.8371	13.7000	15.5000	13.7000	15.5000
In-House	D5453	08/24/05	2	51	14.5000	14.3000	14.6000	0.8371	14.5000	14.3000	14.5000	14.6000
In-House	D2622	08/26/05	2	53	15.3000	15.1000	15.2000	0.8371	15.3000	15.1000	15.3000	15.2000
In-House	D5453	08/11/05	2	54	13.9000	13.8000	13.8000	0.8371	13.8000	13.8000	13.9000	13.8000
In-House	D2622	08/02/05	2	55	14.5000	13.7000	14.8000	0.8371	13.7000	14.8000	13.7000	14.8000
In-House	D5453	08/04/05	2	56	13.4000	13.3000	13.2000	0.8371	13.4000	13.3000	13.3000	13.2000
In-House	D5453	08/30/05	2	59	15.4800	15.1300	15.3900	0.8371	15.4800	15.3900	15.4800	15.3900
In-House	D7039	08/04/05	2	60	14.3000	14.5000	14.7000	0.8371	14.3000	14.5000	14.5000	14.7000

**Table B.13. August Fuel #2 Lab Data and Deletions Based on Composite Test Methods for In-House Calibration**

Calibration	Test Method	Run Date	August Sample #	Lab Code	Original Lab Data Robust Outlier Deletion in Shaded Box				After Robust Outlier Deletion Random Selection of 2 Obs		After Gravimetric Deletion Random Selection of 2 Obs	
					Measure #1	Measure #2	Measure #3	Density	#1	#2	#1	#2
In-House	D5453	08/13/05	2	61	13.4800	13.2700	13.0500	0.8371	13.4800	13.0500	13.4800	13.0500
In-House	D5453	08/30/05	2	CARB	13.1200	13.3100	13.2500	0.8371	13.3100	13.2500		
In-House	D5453	08/23/05	2	63	14.0500	14.6000	14.6400	0.8371	14.6000	14.6400	14.0500	14.6400
In-House	D5453	08/22/05	2	64	14.5000	14.2600	14.2100	0.8371	14.5000	14.2600	14.5000	14.2100
In-House	D5453	08/29/05	2	66	13.2700	13.7400	13.3800	0.8371	13.7400	13.3800	13.2700	13.7400
In-House	D2622	08/30/05	2	67	15.3150	14.1510	14.6230	0.8371	15.3150	14.1510	15.3150	14.6230
In-House	D5453	08/22/05	2	68	10.9000	11.0000	11.0000	0.8371			11.0000	11.0000
In-House	D5453	08/19/05	2	72	14.0900	13.9000	14.1600	0.8371	14.0900	13.9000	14.0900	14.1600
In-House	D2622	08/26/05	2	73	16.6000	16.2000	16.2000	0.8371	16.6000	16.2000	16.2000	16.2000
In-House	D5453	08/26/05	2	73	16.8000	16.3000	16.9000	0.8371	16.8000	16.9000		
In-House	D5453	08/31/05	2	75	12.7700	12.7500	12.8900	0.8371	12.7700	12.7500		
In-House	D5453	08/22/05	2	76	14.0500	14.2200	14.1600	0.8371	14.2200	14.1600	14.0500	14.1600
In-House	D5453	08/03/05	2	77	12.7700	13.0400	14.4200	0.8371	12.7700	13.0400	12.7700	14.4200
In-House	D5453	08/31/05	2	78	14.7400	14.5500	14.4800	0.8371	14.7400	14.4800	14.7400	14.4800
In-House	D5453	08/17/05	2	81	14.3000	14.4000	13.9000	0.8371	14.4000	13.9000	14.3000	14.4000
In-House	D5453	08/05/05	2	82	14.0500	14.1700	14.4600	0.8371	14.0500	14.1700	14.0500	14.4600
In-House	D5453	08/18/05	2	83	16.1000	15.9000	16.0000	0.8371	15.9000	16.0000	16.1000	16.0000
In-House	D5453	08/11/05	2	84	15.2000	14.7000	15.0000	0.8371	15.2000	15.0000	14.7000	15.0000
In-House	D5453	08/05/05	2	85	13.6000	13.6000	13.6000	0.8371	13.6000	13.6000	13.6000	13.6000
In-House	D3120	08/11/05	2	86	13.4000	13.5000	13.4000	0.8371	13.4000	13.4000	13.4000	13.4000
In-House	D5453	08/31/05	2	87	12.0000	11.9000	11.4000	0.8371	11.9000	11.4000		
In-House	D5453	08/20/05	2	89	13.8000	14.2000	14.0000	0.8371	13.8000	14.2000	13.8000	14.0000
In-House	D5453	08/04/05	2	90	13.0000	12.7000	12.6000	0.8371	12.7000	12.6000	12.7000	12.6000
In-House	D5453	08/11/05	2	91	14.7600	14.7500	14.6800	0.8371	14.7500	14.6800	14.7600	14.6800
In-House	D3120	08/09/05	2	95	13.0000	13.2000	13.1000	0.8371	13.2000	13.1000	13.0000	13.1000
In-House	D5453	08/09/05	2	95	14.2000	13.8000	13.5000	0.8371	14.2000	13.5000	14.2000	13.5000
In-House	D5453	08/17/05	2	96	17.4200	17.3500	17.2500	0.8371	17.4200	17.3500		
In-House	D5453	08/15/05	2	97	14.0000	13.8000	13.8000	0.8371	14.0000	13.8000	14.0000	13.8000
In-House	D5453	08/24/05	2	99	12.2700	11.5700	11.5900	0.8371	11.5700	11.5900	12.2700	11.5900
In-House	D5453	08/10/05	2	100	11.8000	11.8000	12.1000	0.8371	11.8000	12.1000		
In-House	D7039	08/16/05	2	102	14.7000	14.6000	14.2000	0.8371	14.7000	14.6000	14.7000	14.2000
In-House	D2622	08/25/05	2	103	15.8000	15.9000	17.0000	0.8371	15.8000	15.9000	15.8000	15.9000
In-House	D5453	08/23/05	2	103	12.7000	12.7000	13.0000	0.8371	12.7000	13.0000	12.7000	12.7000
In-House	D7039	08/24/05	2	103	13.7000	13.9000	14.2000	0.8371	13.7000	13.9000		
In-House	D2622	08/09/05	2	105	15.6000	15.5000	14.9000	0.8371	15.5000	14.9000	15.6000	14.9000
In-House	D7039	08/30/05	2	106	14.5000	14.2000	14.3000	0.8371	14.5000	14.3000	14.5000	14.2000
In-House	D7039	08/11/05	2	107	14.8000	14.7000	14.0000	0.8371	14.8000	14.0000	14.8000	14.7000
In-House	D5453	08/03/05	2	108	12.6000	12.6000	12.5000	0.8371	12.6000	12.6000		
In-House	D5453	08/29/05	2	109	12.4000	12.6000	12.6000	0.8371	12.6000	12.6000	12.4000	12.6000
In-House	D7039	08/26/05	2	109	12.5000	12.6000	12.5000	0.8371	12.5000	12.6000		
In-House	D5453	08/12/05	2	110	14.6100	14.9100	14.8600	0.8371	14.9100	14.8600	14.6100	14.9100
In-House	D7039	08/12/05	2	111	13.0000	11.7000	11.7000	0.8371	13.0000	11.7000	13.0000	11.7000
In-House	D5453	08/18/05	2	112	17.3800	17.6800	17.2000	0.8695	17.3800	17.2000		
In-House	D5453	08/15/05	2	113	12.9000	13.1000	13.1000	0.8371	13.1000	13.1000		
In-House	D5453	08/25/05	2	114	14.8000	14.9000	14.8000	0.8371	14.9000	14.8000	14.8000	14.8000
In-House	D5453	08/11/05	2	115	14.5000	14.6000	14.2000	0.8371	14.6000	14.2000	14.5000	14.2000
In-House	D5453	08/09/05	2	116	14.9400	14.7800	14.9700	0.8371	14.9400	14.9700	14.9400	14.9700

**Table B.13. August Fuel #2 Lab Data and Deletions Based on Composite Test Methods for In-House Calibration**

Calibration	Test Method	Run Date	August Sample #	Lab Code	Original Lab Data Robust Outlier Deletion in Shaded Box				After Robust Outlier Deletion Random Selection of 2 Obs		After Gravimetric Deletion Random Selection of 2 Obs	
					Measure #1	Measure #2	Measure #3	Density	#1	#2	#1	#2
In-House	D5453	08/16/05	2	117	14.3000	14.4100	14.2400	0.8371	14.4100	14.2400	14.3000	14.2400
In-House	D5453	08/25/05	2	118	14.7100	14.5000	14.8100	0.8371	14.7100	14.8100	14.7100	14.5000
In-House	D5453	08/11/05	2	119	13.6900	13.8400	13.7900	0.8371	13.6900	13.8400	13.6900	13.8400
In-House	D5453	08/29/05	2	120	14.8000	14.8000	14.8000	0.8371	14.8000	14.8000	14.8000	14.8000
In-House	D2622	08/31/05	2	121	15.5000	15.7000	16.3000	0.8371	15.5000	16.3000	15.7000	16.3000
In-House	D5453	08/11/05	2	122	15.0000	14.9000	14.8000	0.8371	14.9000	14.8000	14.9000	14.8000
In-House	D2622	08/15/05	2	123	14.3000	15.0000	14.2000	0.8371	14.3000	14.2000	14.3000	14.2000
In-House	D2622	08/17/05	2	124	14.7000	14.9000	15.5000	0.8371	14.7000	15.5000	14.7000	14.9000
In-House	D2622	08/10/05	2	126	13.7000	14.0000	13.4000	0.8371	13.7000	14.0000	13.7000	13.4000
In-House	D5453	08/10/05	2	126	12.0000	12.2000	13.1000	0.8371	12.0000	13.1000		
In-House	D7039	08/26/05	2	127	13.5000	15.2000	14.1000	0.8371	15.2000	14.1000	13.5000	14.1000
In-House	D7039	08/17/05	2	128	14.1000	14.2000	14.5000	0.8371	14.1000	14.5000	14.2000	14.5000
In-House	D5453	08/09/05	2	129	15.7000	15.5000	15.5000	0.8371	15.7000	15.5000	15.5000	15.5000
In-House	D5453	08/09/05	2	130	14.4000	14.3000	14.2000	0.8371	14.4000	14.3000	14.3000	14.2000
In-House	D2622	08/15/05	2	131	15.1000	14.5000	14.9000	0.8371	15.1000	14.9000		
In-House	EDXRF	08/10/05	2	131	14.6000	15.0000	15.3000	0.8371	14.6000	15.3000	14.6000	15.0000
In-House	D5453	08/25/05	2	132	14.4900	14.4880	14.5170	0.8371	14.4880	14.5170	14.4880	14.5170
In-House	D2622	08/31/05	2	133	16.2000	16.3000	16.2000	0.8371	16.2000	16.2000	16.2000	16.3000
In-House	EDXRF	08/30/05	2	134	14.7000	15.0000	14.8000	0.8371	15.0000	14.8000	14.7000	15.0000
In-House	EDXRF	08/09/05	2	135	14.4000	13.7000	14.4000	0.8371	14.4000	14.4000	14.4000	13.7000
In-House	D2622	08/09/05	2	136	15.1000	14.9000	14.6000	0.8371	14.9000	14.6000	14.9000	14.6000
In-House	EDXRF	08/09/05	2	136	15.6000	13.4000	14.1000	0.8371	15.6000	14.1000	15.6000	14.1000
In-House	D5453	08/12/05	2	137	14.6300	14.4900	13.6200	0.8371	14.4900	13.6200	14.4900	13.6200
In-House	EDXRF	08/12/05	2	137	15.6000	15.0000	14.3000	0.8371	15.6000	15.0000	15.6000	14.3000
In-House	D5453	08/17/05	2	138	15.0000	15.2000	15.0000	0.8371	15.2000	15.0000	15.0000	15.2000
In-House	D2622	08/26/05	2	139	16.8000	15.8000	16.2000	0.8695	15.8000	16.2000	16.8000	16.2000
In-House	D5453	08/31/05	2	139	13.8500	13.9500	14.4000	0.8371	13.8500	13.9500	13.8500	14.4000
In-House	D2622	08/22/05	2	140	18.0000	16.9000	17.1000	0.8371	16.9000	17.1000		
In-House	EDXRF	08/10/05	2	141	13.8000	15.3000	15.0000	0.8371	15.3000	15.0000	13.8000	15.0000
In-House	D5453	08/12/05	2	143	15.0100	15.6800	14.6800	0.8371	15.0100	14.6800	15.0100	15.6800
In-House	D3120	07/09/05	2	144	13.6000	13.5000	14.0000	0.8371	13.6000	13.5000	13.5000	14.0000
In-House	D2622	09/04/05	2	145	17.7000	16.6000	17.3000		16.6000	17.3000		
In-House	D5453	08/26/05	2	147	15.3000	15.1000	14.9000	0.8371	15.3000	15.1000	15.3000	15.1000
In-House	D5453	08/15/05	2	148	14.5000	14.6000	15.0000	0.8371	14.5000	15.0000	14.5000	14.6000
In-House	D7039	08/09/05	2	148	13.8000	14.9000	14.1000	0.8371	13.8000	14.9000	14.9000	14.1000
In-House	D5453	08/18/05	2	149	14.9760	14.8180	14.8650	0.8371	14.9760	14.8180	14.8180	14.8650
In-House	D5453	08/17/05	2	151	15.7500	15.7800	15.7700	0.8371	15.7500	15.7800	15.7500	15.7800
In-House	D7039	08/16/05	2	151	15.0000	14.4000	14.8000	0.8371	14.4000	14.8000	15.0000	14.4000
In-House	D5453	08/11/05	2	152	12.3100	12.7800	12.7300	0.8371	12.7800	12.7300	12.7800	12.7300
In-House	D5453	08/12/05	2	153	14.2400	14.3000	14.1600	0.8371	14.2400	14.3000	14.2400	14.3000
In-House	D5453	08/15/05	2	154	14.3000	14.8000	15.2000	0.8371	14.3000	15.2000	14.3000	15.2000
In-House	D5453	08/16/05	2	156	13.3800	13.6200	12.9000	0.8371	13.6200	12.9000	13.6200	12.9000
In-House	D5453	08/05/05	2	158	19.1800	19.0900	18.9500	0.8371				
In-House	D5453	08/08/05	2	159	14.7800	14.5500	14.6200	0.8371	14.7800	14.5500	14.5500	14.6200
In-House	D7039	08/26/05	2	160	13.1000	12.9000	13.3000	0.8371	13.1000	12.9000	12.9000	13.3000
In-House	D5453	08/30/05	2	161	14.0400	13.6300	14.1700	0.8371	14.0400	14.1700	14.0400	13.6300
In-House	D2622	08/26/05	2	162	14.2400	13.7300	14.7200	0.8371	13.7300	14.7200	14.2400	14.7200



**Table B.13. August Fuel #2 Lab Data and Deletions Based on Composite Test Methods for In-House Calibration**

Table B.13. August Fuel #2 Lab Data and Deletions Based on Composite Test Methods for In-House Calibration														
					Original Lab Data Robust Outlier Deletion in Shaded Box					After Robust Outlier Deletion Random Selection of 2 Obs			After Gravimetric Deletion Random Selection of 2 Obs	
Calibration	Test Method	Run Date	August Sample #	Lab Code	Measure #1	Measure #2	Measure #3	Density		#1	#2		#1	#2
In-House	D5453	08/25/05	2	162	15.2300	15.0500	15.1400	0.8371		15.0500	15.1400		15.0500	15.1400

Table B.14. August Fuel #2 Lab Data and Deletions Based on Composite Test Methods for NIST Calibration

Calibration	Test Method	Run Date	August Sample #	Lab Code	Original Lab Data Robust Outlier Deletion in Shaded Box				After Robust Outlier Deletion Random Selection of 2 Obs		After Gravimetric Deletion Random Selection of 2 Obs	
					Measure #1	Measure #2	Measure #3	Density	#1	#2	#1	#2
NIST	D5453	08/18/05	2	1	14.3000	14.2000	14.2000	0.8371	14.3000	14.2000	14.2000	14.2000
NIST	D5453	08/04/05	2	2	14.7200	14.8700	14.6000	0.8371	14.8700	14.6000	14.7200	14.6000
NIST	D2622	08/08/05	2	3	14.4000	14.2900	14.7900	0.8371	14.2900	14.7900	14.2900	14.7900
NIST	D5453	08/31/05	2	4	16.5800	16.4400	16.5000	0.8371	16.5800	16.5000		
NIST	D2622	08/26/05	2	5	16.8000	15.0000	14.4000	0.8371	16.8000	15.0000	16.8000	14.4000
NIST	D7039	08/22/05	2	6	15.2000	16.2000	14.8000	0.8371	15.2000	14.8000	15.2000	16.2000
NIST	D7039	08/09/05	2	7	14.7000	15.0000	15.0000	0.8371	15.0000	15.0000	14.7000	15.0000
NIST	D2622	08/04/05	2	8	15.7500	16.1600	15.8900	0.8371	15.7500	16.1600	15.7500	15.8900
NIST	D5453	08/03/05	2	8	14.4500	14.5000	14.7000	0.8371	14.5000	14.7000	14.5000	14.7000
NIST	D5453	08/05/05	2	9	14.1900	14.4000	14.3600	0.8371	14.1900	14.4000	14.1900	14.3600
NIST	D5453	08/05/05	2	11	15.8000	16.1000	14.7000	0.8371	16.1000	14.7000	15.8000	16.1000
NIST	D5453	08/26/08	2	12	14.4000	14.3000	14.4000	0.8371	14.4000	14.3000	14.3000	14.4000
NIST	D5453	08/24/05	2	13	14.3500	14.3500	14.7300	0.8371	14.3500	14.7300	14.3500	14.7300
NIST	D5453	08/17/05	2	15	14.5900	13.6300	14.0800	0.8371	14.5900	13.6300	14.5900	14.0800
NIST	D5453	08/22/05	2	16	13.8600	13.9300	13.8300	0.8371	13.8600	13.8300	13.8600	13.9300
NIST	D5453	08/11/05	2	18	14.6800	14.6500	14.7300	0.8371	14.6800	14.7300	14.6500	14.7300
NIST	D5453	08/19/05	2	19	14.5000	14.5000	14.4000	0.8371	14.5000	14.5000	14.5000	14.4000
NIST	D5453	08/12/05	2	21	13.6200	13.5500	13.5900	0.8371	13.6200	13.5900	13.6200	13.5500
NIST	D5453	08/22/05	2	23	13.9900	14.1600	14.2200	0.8371	13.9900	14.2200		
NIST	D5453	08/03/05	2	24	14.9600	15.0200	14.9500		15.0200	14.9500	14.9600	15.0200
NIST	D5453	08/31/05	2	25	14.8300	14.7400	14.8700	0.8371	14.8300	14.7400	14.7400	14.8700
NIST	D5453	08/04/05	2	26	15.0100	14.6700	14.7400	0.8371	15.0100	14.6700	15.0100	14.7400
NIST	D5453	08/25/05	2	27	15.0100	14.9200	14.8300	0.8371	15.0100	14.9200	15.0100	14.9200
NIST	D2622	08/26/05	2	28	15.9000	16.0000	15.8000	0.8371	16.0000	15.8000		
NIST	D5453	08/25/05	2	29	14.0370	14.1430	13.4460	0.8371	14.0370	14.1430	14.0370	14.1430
NIST	D5453	08/06/05	2	30	14.8000	14.7000	14.6000	0.8371	14.7000	14.6000	14.8000	14.7000
NIST	D5453	08/10/05	2	31	14.3000	14.4000	14.3000	0.8371	14.3000	14.4000	14.4000	14.3000
NIST	D5453	08/09/05	2	32	15.0400	15.1700	14.9100	0.8371	15.0400	15.1700	15.1700	14.9100
NIST	D5453	08/30/05	2	36	13.5000	13.4000	13.4000	0.8264	13.4000	13.4000		
NIST	D5453	08/26/05	2	37	13.8000	13.7000	13.6000	0.8371	13.8000	13.6000	13.8000	13.7000
NIST	D5453	08/30/05	2	38	14.8000	14.6000	15.1000	0.8371	14.8000	15.1000	14.6000	15.1000
NIST	D5453	09/01/05	2	39	14.9800	15.2000	14.6000	0.8371	14.9800	14.6000	15.2000	14.6000
NIST	D2622	08/05/05	2	41	13.6000	13.3000	14.5000	0.8371	13.6000	13.3000	13.3000	14.5000
NIST	D5453	08/11/05	2	41	15.7800	15.4500	15.5000	0.8371	15.7800	15.5000	15.4500	15.5000
NIST	D2622	09/01/05	2	EPA	15.7000	16.2000	16.1000	0.8371	16.2000	16.1000	16.2000	16.1000
NIST	D5453	08/30/05	2	EPA	14.5000	14.9000	15.0000	0.8371	14.5000	14.9000	14.5000	14.9000
NIST	D7039	09/07/05	2	EPA	14.4000	14.4000	14.1000	0.8371	14.4000	14.1000	14.4000	14.1000
NIST	D7039	08/19/05	2	47	14.8000	14.8000	14.0000	0.8371	14.8000	14.0000	14.8000	14.0000
NIST	D5453	08/11/05	2	48	54.9300	29.4400	16.2800	0.8371	16.2800			
NIST	D2622	08/26/05	2	50	15.3000	15.4000	14.6000	0.8371	15.3000	15.4000	15.3000	15.4000
NIST	D5453	08/25/05	2	51	17.1000	17.4000	17.3000	0.8371	17.1000			
NIST	D2622	08/29/05	2	53	15.7000	15.3000	15.8000	0.8371	15.3000	15.8000	15.7000	15.8000
NIST	D5453	08/16/05	2	54	14.2000	14.3000	14.2000	0.8371	14.3000	14.2000	14.2000	14.2000
NIST	D2622	08/02/05	2	55	14.4000	13.9000	13.8000	0.8371	14.4000	13.9000	13.9000	13.8000
NIST	D5453	08/05/05	2	56	13.8000	14.0000	13.8000	0.8371	13.8000	14.0000	13.8000	13.8000
NIST	D5453	08/31/05	2	59	15.1000	15.1200	14.6600	0.8371	15.1200	14.6600	15.1000	15.1200
NIST	D7039	08/04/05	2	60	14.3000	14.5000	14.0000	0.8371	14.5000	14.0000	14.3000	14.0000

**Table B.14. August Fuel #2 Lab Data and Deletions Based on Composite Test Methods for NIST Calibration**

Calibration	Test Method	Run Date	August Sample #	Lab Code	Original Lab Data Robust Outlier Deletion in Shaded Box				After Robust Outlier Deletion Random Selection of 2 Obs		After Gravimetric Deletion Random Selection of 2 Obs	
					Measure #1	Measure #2	Measure #3	Density	#1	#2	#1	#2
NIST	D5453	08/13/05	2	61	14.6100	14.5300	14.3700	0.8371	14.5300	14.3700	14.6100	14.3700
NIST	D5453	08/31/05	2	CARB	14.3000	13.7000	14.2000	0.8371	14.3000	14.2000	13.7000	14.2000
NIST	D5453	08/24/05	2	63	14.6200	14.3400	14.2300	0.8371	14.6200	14.3400	14.6200	14.2300
NIST	D5453	08/25/05	2	64	13.8000	13.2000	14.2000	0.8371	13.2000	14.2000	13.8000	13.2000
NIST	D5453		2	66	12.8700	12.8700	12.9700	0.8371	12.8700	12.9700	12.8700	12.9700
NIST	D2622	08/31/05	2	67	14.9460	13.9380	14.3410	0.8371	13.9380	14.3410	13.9380	14.3410
NIST	D5453	08/22/05	2	68	12.1100	12.0000	12.2000	0.8371	12.1100	12.2000		
NIST	D5453	08/19/05	2	72	13.9000	13.8000	13.7000	0.8371	13.8000	13.7000	13.9000	13.8000
NIST	D2622	08/26/05	2	73	16.7000	17.1000	17.0000	0.8371	17.1000	17.0000		
NIST	D5453	08/26/05	2	73	16.3000	16.4000	16.2000	0.8371	16.3000	16.4000	16.3000	16.2000
NIST	D5453	09/01/05	2	75	12.9400	13.4800	14.6300	0.8371	12.9400	14.6300	12.9400	14.6300
NIST	D5453	08/22/05	2	76	14.2900	14.3200	14.3100	0.8371	14.2900	14.3200	14.2900	14.3100
NIST	D5453	08/03/05	2	77	16.4400	16.3100	16.7900	0.8371	16.4400	16.3100		
NIST	D5453	08/31/05	2	78	14.8900	14.8800	15.0000	0.8371	14.8900	15.0000	14.8800	15.0000
NIST	D5453	08/24/05	2	81	13.4000	13.1000	13.1000	0.8371	13.1000	13.1000	13.4000	13.1000
NIST	D5453	08/05/05	2	82	14.7000	15.2100	14.6700	0.8371	14.7000	14.6700	15.2100	14.6700
NIST	D5453	08/18/05	2	83	13.3000	12.0000	13.0000	0.8371	13.3000	12.0000		
NIST	D5453	08/18/05	2	84	14.5000	14.2000	13.8000	0.8371	14.5000	13.8000	14.5000	14.2000
NIST	D5453	08/12/05	2	85	12.4000	12.5000	12.5000	0.8371	12.5000	12.5000	12.5000	12.5000
NIST	D3120	08/18/05	2	86	13.8000	13.5000	13.6000	0.8371	13.8000	13.6000	13.8000	13.5000
NIST	D5453	08/31/05	2	87	11.0000	11.1000	10.9000	0.8371			11.0000	10.9000
NIST	D5453	08/20/05	2	89	14.5000	14.9000	14.6000	0.8371	14.5000	14.9000	14.5000	14.9000
NIST	D5453	08/05/05	2	90	12.7000	12.8000	12.9000	0.8371	12.8000	12.9000	12.7000	12.8000
NIST	D5453	08/12/05	2	91	14.7900	14.7100	14.5500	0.8371	14.7900	14.7100	14.7100	14.5500
NIST	D3120	08/17/05	2	95	15.1000	14.4000	14.7000	0.8371	15.1000	14.7000	15.1000	14.4000
NIST	D5453	08/17/05	2	95	14.8000	14.3000	14.7000	0.8371	14.8000	14.7000	14.8000	14.3000
NIST	D5453		2	96	17.3500	17.4000	17.1400	0.8371	17.1400			
NIST	D5453	08/15/05	2	97	14.3000	14.2000	13.9000	0.8371	14.3000	13.9000	14.2000	13.9000
NIST	D5453	08/25/05	2	99	11.7900	11.2800	10.6700	0.8371	11.7900			
NIST	D5453	08/11/05	2	100	16.7000	16.0000	16.6000	0.8371	16.7000	16.0000		
NIST	D7039	08/15/05	2	102	14.5000	14.2000	14.3000	0.8371	14.2000	14.3000	14.5000	14.3000
NIST	D2622	08/26/05	2	103	16.2000	16.0000	16.0000	0.8371	16.2000	16.0000		
NIST	D5453	08/25/05	2	103	13.2000	13.3000	13.2000	0.8371	13.3000	13.2000	13.2000	13.2000
NIST	D7039	08/24/05	2	103	14.0000	13.9000	13.7000	0.8371	14.0000	13.7000	13.9000	13.7000
NIST	D2622	08/09/05	2	105	15.8000	15.8000	15.2000	0.8371	15.8000	15.2000	15.8000	15.8000
NIST	D7039	08/31/05	2	106	13.7000	13.5000	14.2000	0.8371	13.7000	14.2000	13.7000	13.5000
NIST	D7039	08/19/05	2	107	14.0000	14.3000	13.8000	0.8371	14.0000	14.3000	14.0000	14.3000
NIST	D5453	08/08/05	2	108	12.7000	12.8000	12.6000	0.8371	12.7000	12.6000		
NIST	D5453	08/31/05	2	109	15.0000	15.0000	14.6000	0.8371	15.0000	15.0000		
NIST	D7039	08/29/05	2	109	14.1000	13.8000	14.0000	0.8371	14.1000	13.8000	13.8000	14.0000
NIST	D5453	08/22/05	2	110	14.1800	14.3600	14.3200	0.8371	14.1800	14.3200	14.3600	14.3200
NIST	D7039	08/15/05	2	111	11.9000	13.4000	12.4000	0.8371	11.9000	12.4000	11.9000	13.4000
NIST	D5453	08/19/05	2	112	14.4500	14.2500	14.3700	0.8695	14.2500	14.3700	14.4500	14.3700
NIST	D5453	08/19/05	2	113	14.0000	14.1000	14.6000	0.8371	14.0000	14.1000	14.0000	14.1000
NIST	D5453	08/26/05	2	114	14.1000	14.0000	13.8000	0.8371	14.1000	13.8000	14.1000	13.8000
NIST	D5453	08/12/05	2	115	13.7000	13.7000	13.6000	0.8371	13.7000	13.6000	13.7000	13.6000
NIST	D5453	08/09/05	2	116	14.3500	14.5400	14.3500	0.8371	14.3500	14.5400	14.3500	14.5400

**Table B.14. August Fuel #2 Lab Data and Deletions Based on Composite Test Methods for NIST Calibration**

Calibration	Test Method	Run Date	August Sample #	Lab Code	Original Lab Data Robust Outlier Deletion in Shaded Box				After Robust Outlier Deletion Random Selection of 2 Obs		After Gravimetric Deletion Random Selection of 2 Obs	
					Measure #1	Measure #2	Measure #3	Density	#1	#2	#1	#2
NIST	D5453	08/15/05	2	117	14.4600	14.4500	14.2500	0.8371	14.4600	14.2500	14.4600	14.2500
NIST	D5453	08/25/05	2	118	14.8100	14.8800	15.0300	0.8371	14.8100	14.8800	14.8800	15.0300
NIST	D5453	08/11/05	2	119	15.5500	15.3000	15.3400	0.8371	15.5500	15.3000	15.3000	15.3400
NIST	D5453	08/30/05	2	120	14.3000	14.3000	14.5000	0.8371	14.3000	14.3000	14.3000	14.5000
NIST	D2622	09/01/05	2	121	15.9000	15.4000	15.3000	0.8371	15.9000	15.4000	15.9000	15.3000
NIST	D5453	08/12/05	2	122	14.0000	14.3000	14.3000	0.8371	14.3000	14.3000	14.0000	14.3000
NIST	D2622	08/15/05	2	123	14.2000	14.4000	14.0000	0.8371	14.2000	14.4000	14.2000	14.4000
NIST	D2622	08/24/05	2	124	14.8000	15.1000	15.2000	0.8371	14.8000	15.2000		
NIST	D2622	08/31/05	2	126	14.1000	14.3000	13.8000	0.8371	14.1000	14.3000	14.1000	14.3000
NIST	D5453	08/10/05	2	126	16.6000	13.5000	14.7000	0.8371	16.6000	13.5000	16.6000	14.7000
NIST	D7039	08/26/05	2	127	15.0000	15.0000	14.2000	0.8371	15.0000	14.2000	15.0000	14.2000
NIST	D7039	08/17/05	2	128	14.7000	15.1000	15.3000	0.8371	14.7000	15.1000	14.7000	15.1000
NIST	D5453	08/10/05	2	129	14.1000	14.0000	13.8000	0.8371	14.0000	13.8000	14.1000	14.0000
NIST	D5453	08/08/05	2	130	14.1000	14.1000	14.2000	0.8371	14.1000	14.1000	14.1000	14.2000
NIST	D2622	08/11/05	2	131	12.9000	13.0000	13.0000	0.8371	12.9000	13.0000		
NIST	EDXRF	08/11/05	2	131	12.9000	13.2000	13.5000	0.8371	13.2000	13.5000		
NIST	D5453	08/25/05	2	132	13.5850	13.7940	13.7400	0.8371	13.5850	13.7940	13.5850	13.7940
NIST	D2622	08/31/05	2	133	14.8000	14.3000	14.5000	0.8371	14.3000	14.5000	14.3000	14.5000
NIST	EDXRF	08/30/05	2	134	14.2000	14.4000	15.5000	0.8371	14.4000	15.5000	14.2000	15.5000
NIST	EDXRF	08/10/05	2	135	14.2000	14.6000	14.7000	0.8371	14.6000	14.7000	14.2000	14.6000
NIST	D2622	08/09/05	2	136	14.4000	14.1000	14.5000	0.8371	14.4000	14.1000	14.4000	14.1000
NIST	EDXRF	08/09/05	2	136	15.2000	15.0000	15.0000	0.8371	15.2000	15.0000	15.2000	15.0000
NIST	D5453	08/14/05	2	137	15.5600	14.4900	14.2200	0.8371	14.4900	14.2200	14.4900	14.2200
NIST	EDXRF		2	137	13.4000	13.6000	12.6000	0.8371	13.6000	12.6000		
NIST	D5453	08/15/05	2	138	15.4000	15.3000	15.3000	0.8371	15.3000	15.3000	15.4000	15.3000
NIST	D2622	08/23/05	2	139	15.2000	14.9000	17.3000	0.8695	15.2000	14.9000	14.9000	17.3000
NIST	D5453	08/25/05	2	139	14.5000	14.6000	14.2000	0.8371	14.5000	14.2000	14.5000	14.6000
NIST	D2622	08/22/05	2	140	12.3000	12.4000	12.8000	0.8371	12.3000	12.4000	12.3000	12.4000
NIST	EDXRF	08/22/05	2	141	15.4000	15.0000	15.8000	0.8371	15.4000	15.0000	15.4000	15.0000
NIST	D5453	08/12/05	2	143	15.5500	15.1100	15.0200	0.8371	15.5500	15.0200	15.5500	15.1100
NIST	D3120		2	144	13.7000	14.3000	14.5000	0.8371	13.7000	14.5000	13.7000	14.3000
NIST	D2622	09/04/05	2	145	17.3000	17.4000	18.5000					
NIST	D5453	08/26/05	2	147	13.2600	13.7000	13.3000	0.8371	13.7000	13.3000		
NIST	D5453	08/15/05	2	148	15.0000	15.1000	15.5000	0.8371	15.0000	15.1000	15.0000	15.1000
NIST	D7039	08/09/05	2	148	14.3000	14.9000	14.5000	0.8371	14.9000	14.5000	14.3000	14.5000
NIST	D5453	08/25/05	2	149	14.3080	14.3600	14.4620	0.8371	14.3600	14.4620	14.3600	14.4620
NIST	D5453	08/17/05	2	151	14.7100	14.5700	14.1600	0.8371	14.7100	14.5700	14.5700	14.1600
NIST	D7039	08/16/05	2	151	14.8000	14.7000	15.6000	0.8371	14.8000	14.7000	14.8000	15.6000
NIST	D5453	08/19/05	2	152	11.9900	11.9500	11.8900	0.8371	11.9900	11.8900	11.9500	11.8900
NIST	D5453	08/17/05	2	153	15.4400	15.3800	15.4100	0.8371	15.4400	15.3800	15.3800	15.4100
NIST	D5453	08/16/05	2	154	13.8000	13.7000	13.9000	0.8371	13.8000	13.9000	13.8000	13.9000
NIST	D5453	08/15/05	2	156	15.0800	15.3600	15.2700	0.8371	15.0800	15.2700	15.0800	15.2700
NIST	D5453	08/06/05	2	158	19.3800	19.3300	19.5300	0.8371				
NIST	D5453	08/08/05	2	159	13.7400	13.7400	13.8400	0.8371	13.7400	13.7400	13.7400	13.8400
NIST	D7039	08/26/05	2	160	13.4000	13.7000	13.8000	0.8371	13.4000	13.8000	13.4000	13.7000
NIST	D5453	08/29/05	2	161	14.1300	14.8100	14.3100	0.8371	14.8100	14.3100	14.1300	14.3100
NIST	D2622	07/26/05	2	162	14.4000	13.9300	14.9600	0.8371	14.4000	13.9300		

**Table B.14. August Fuel #2 Lab Data and Deletions Based on Composite Test Methods for NIST Calibration**

Table B.14. August Fuel #2 Lab Data and Deletions Based on Composite Test Methods for NIST Calibration														
					Original Lab Data Robust Outlier Deletion in Shaded Box					After Robust Outlier Deletion Random Selection of 2 Obs			After Gravimetric Deletion Random Selection of 2 Obs	
Calibration	Test Method	Run Date	August Sample #	Lab Code	Measure #1	Measure #2	Measure #3	Density		#1	#2		#1	#2
NIST	D5453	08/30/05	2	162	13.9500	14.0700	13.7000	0.8371		14.0700	13.7000		13.9500	13.7000

**Table B.15. August Fuel #3 Lab Data and Deletions Based on Composite Test Methods for In-House Calibration**

Calibration	Test Method	Run Date	August Sample #	Lab Code	Original Lab Data Robust Outlier Deletion in Shaded Box				After Robust Outlier Deletion Random Selection of 2 Obs		After Gravimetric Deletion Random Selection of 2 Obs	
					Measure #1	Measure #2	Measure #3	Density	#1	#2	#1	#2
In-House	D5453	08/18/05	3	1	17.0000	17.2000	17.0000	0.8372	17.0000	17.0000	17.2000	17.0000
In-House	D5453	08/04/05	3	2	18.1900	18.1200	18.0100	0.8372	18.1900	18.0100	18.1200	18.0100
In-House	D2622	08/08/05	3	3	22.3800	21.7100	22.3500	0.8372				
In-House	D5453	08/31/05	3	4	20.1200	19.5500	20.8100	0.8372	20.1200	20.8100		
In-House	D2622		3	5	19.9000	18.1000	17.9000	0.8372	18.1000	17.9000		
In-House	D7039	08/22/05	3	6	18.1000	18.4000	18.4000	0.8372	18.4000	18.4000	18.1000	18.4000
In-House	D7039	08/09/05	3	7	18.7000	18.1000	18.3000	0.8372	18.7000	18.1000	18.7000	18.1000
In-House	D2622	08/04/05	3	8	19.3600	19.4800	19.9900	0.8372	19.4800	19.9900	19.4800	19.9900
In-House	D5453	08/03/05	3	8	17.6900	17.4000	17.5800	0.8372	17.6900	17.4000	17.4000	17.5800
In-House	D5453	08/05/05	3	9	17.5500	17.7800	17.6300	0.8372	17.7800	17.6300	17.5500	17.7800
In-House	D5453	08/04/05	3	11	18.0000	17.4000	18.1000	0.8372	18.0000	17.4000	18.0000	17.4000
In-House	D5453	08/25/05	3	12	17.3000	17.2000	17.6000	0.8372	17.3000	17.2000	17.2000	17.6000
In-House	D5453	08/08/05	3	13	19.2000	18.5000	19.4000	0.8372	19.2000	19.4000	19.2000	18.5000
In-House	D5453	07/26/05	3	15	17.0600	17.1900	17.3700	0.8372	17.0600	17.1900	17.1900	17.3700
In-House	D5453	08/19/05	3	16	17.1100	17.0700	17.0600	0.8372	17.0700	17.0600	17.1100	17.0700
In-House	D5453	08/11/05	3	18	18.5400	18.0900	18.3400	0.8372	18.0900	18.3400	18.0900	18.3400
In-House	D5453	08/16/05	3	19	17.6000	17.7000	17.8000	0.8372	17.6000	17.7000	17.6000	17.7000
In-House	D5453	08/10/05	3	21	17.1200	17.2600	17.2700	0.8372	17.1200	17.2700	17.1200	17.2600
In-House	D5453	08/22/05	3	23	16.4200	16.6600	16.5500	0.8372	16.4200	16.5500		
In-House	D5453	08/04/05	3	24	18.7700	18.5000	20.7200		18.7700	20.7200	18.7700	18.5000
In-House	D5453	08/31/05	3	25	16.3500	16.3100	16.3100	0.8372	16.3500	16.3100		
In-House	D5453	08/03/05	3	26	17.5300	17.7700	17.3700	0.8372	17.5300	17.7700	17.7700	17.3700
In-House	D5453	08/25/05	3	27	18.6400	18.6400	18.4000	0.8372	18.6400	18.4000	18.6400	18.6400
In-House	D2622	08/16/05	3	28	19.3000	19.2000	19.7000	0.8372	19.3000	19.7000	19.3000	19.2000
In-House	D5453	08/24/05	3	29	17.2020	16.9300	17.2340	0.8372	17.2020	16.9300	17.2020	16.9300
In-House	D5453	08/05/05	3	30	17.9000	17.8000	17.8000	0.8372	17.9000	17.8000	17.9000	17.8000
In-House	D5453	08/10/05	3	31	17.7000	17.8000	17.7000	0.8372	17.7000	17.8000	17.8000	17.7000
In-House	D5453	08/08/05	3	32	17.6900	17.2700	17.5600	0.8372	17.6900	17.5600	17.6900	17.5600
In-House	D5453	08/26/05	3	36	16.1000	16.3000	16.2000	0.8270	16.1000	16.2000		
In-House	D5453	08/30/05	3	37	17.4500	17.3000	17.0000	0.8372	17.4500	17.0000	17.4500	17.0000
In-House	D5453	08/26/05	3	38	14.9000	15.4000	14.7000	0.8372	14.9000	14.7000	14.9000	14.7000
In-House	D5453	08/31/05	3	39	17.9800	18.2500	17.7100	0.8372	18.2500	17.7100	18.2500	17.7100
In-House	D2622	08/05/05	3	41	18.4000	18.4000	18.2000	0.8372	18.4000	18.2000		
In-House	D5453	08/05/05	3	41	18.0000	18.3500	17.8500	0.8372	18.0000	17.8500	18.0000	18.3500
In-House	D2622	08/31/05	3	EPA	18.8000	17.8000	18.4000	0.8372	17.8000	18.4000	18.8000	18.4000
In-House	D5453	08/30/05	3	EPA	18.4000	18.4000	18.5000	0.8372	18.4000	18.5000	18.4000	18.5000
In-House	D7039	09/07/05	3	EPA	17.2000	17.0000	17.2000	0.8372	17.2000	17.2000	17.0000	17.2000
In-House	D7039	08/18/05	3	47	16.7000	17.2000	17.4000	0.8372	16.7000	17.4000	16.7000	17.4000
In-House	D5453	08/10/05	3	48	17.9900	18.0900	17.8500	0.8372	18.0900	17.8500		
In-House	D2622	08/25/05	3	50	17.4000	18.2000	17.9000	0.8372	18.2000	17.9000	17.4000	17.9000
In-House	D5453	08/24/05	3	51	17.8000	18.0000	17.7000	0.8372	17.8000	17.7000	17.8000	18.0000
In-House	D2622	08/26/05	3	53	19.6000	20.0000	19.7000	0.8372	19.6000	19.7000	19.6000	20.0000
In-House	D5453	08/11/05	3	54	17.1000	17.1000	17.1000	0.8372	17.1000	17.1000	17.1000	17.1000
In-House	D2622	08/02/05	3	55	16.4000	16.2000	17.9000	0.8372	16.2000	17.9000	16.2000	17.9000
In-House	D5453	08/04/05	3	56	16.4000	16.3000	16.3000	0.8372	16.3000	16.3000	16.4000	16.3000
In-House	D5453	08/30/05	3	59	18.9000	18.6400	18.5200	0.8372	18.6400	18.5200	18.9000	18.5200
In-House	D7039	08/04/05	3	60	18.8000	17.7000	18.0000	0.8372	18.8000	18.0000	18.8000	17.7000

**Table B.15. August Fuel #3 Lab Data and Deletions Based on Composite Test Methods for In-House Calibration**

Calibration	Test Method	Run Date	August Sample #	Lab Code	Original Lab Data Robust Outlier Deletion in Shaded Box				After Robust Outlier Deletion Random Selection of 2 Obs		After Gravimetric Deletion Random Selection of 2 Obs	
					Measure #1	Measure #2	Measure #3	Density	#1	#2	#1	#2
In-House	D5453	08/13/05	3	61	16.8200	16.8100	16.8400	0.8372	16.8200	16.8100	16.8100	16.8400
In-House	D5453	08/30/05	3	CARB	16.7600	16.3700	16.5600	0.8372	16.3700	16.5600		
In-House	D5453	08/23/05	3	63	18.5300	18.3600	18.1600	0.8372	18.5300	18.3600	18.3600	18.1600
In-House	D5453	08/22/05	3	64	17.6400	18.2300	17.8700	0.8372	18.2300	17.8700	18.2300	17.8700
In-House	D5453	08/29/05	3	66	16.0500	15.9600	16.2900	0.8372	15.9600	16.2900	15.9600	16.2900
In-House	D2622	08/30/05	3	67	18.5870	17.2970	17.9200	0.8372	18.5870	17.2970	18.5870	17.9200
In-House	D5453	08/22/05	3	68	12.5000	12.5000	12.5000	0.8372			12.5000	12.5000
In-House	D5453	08/19/05	3	72	17.2000	17.3000	17.4000	0.8372	17.2000	17.3000	17.3000	17.4000
In-House	D2622	08/26/05	3	73	30.4000	20.0000	19.7000	0.8372	20.0000	19.7000	30.4000	20.0000
In-House	D5453	08/26/05	3	73	20.1000	20.7000	20.9000	0.8372	20.7000	20.9000		
In-House	D5453	08/31/05	3	75	16.3400	17.0900	16.5300	0.8372	17.0900	16.5300		
In-House	D5453	08/22/05	3	76	18.0500	18.0300	17.7700	0.8372	18.0500	18.0300	18.0300	17.7700
In-House	D5453	08/03/05	3	77	16.6400	16.6800	16.8700	0.8372	16.6400	16.8700	16.6400	16.8700
In-House	D5453	08/31/05	3	78	18.2500	18.0500	18.0700	0.8372	18.2500	18.0500	18.2500	18.0500
In-House	D5453	08/17/05	3	81	18.9000	18.7000	18.9000	0.8372	18.9000	18.9000	18.9000	18.7000
In-House	D5453	08/05/05	3	82	17.9000	17.5800	17.7500	0.8372	17.9000	17.7500	17.9000	17.7500
In-House	D5453	08/18/05	3	83	18.9000	19.4000	19.2000	0.8372	18.9000	19.2000	18.9000	19.4000
In-House	D5453	08/11/05	3	84	18.6000	18.5000	18.7000	0.8372	18.5000	18.7000	18.6000	18.7000
In-House	D5453	08/05/05	3	85	17.1000	17.1000	17.0000	0.8372	17.1000	17.0000	17.1000	17.0000
In-House	D3120	08/11/05	3	86	16.8000	16.8000	16.9000	0.8372	16.8000	16.8000	16.8000	16.9000
In-House	D5453	08/31/05	3	87	16.0000	15.5000	14.9000	0.8372	16.0000	14.9000		
In-House	D5453	08/20/05	3	89	18.3000	17.5000	17.4000	0.8372	18.3000	17.5000	18.3000	17.5000
In-House	D5453	08/04/05	3	90	16.7000	16.2000	16.5000	0.8372	16.7000	16.2000	16.7000	16.2000
In-House	D5453	08/11/05	3	91	18.1800	17.9900	18.0300	0.8372	17.9900	18.0300	18.1800	17.9900
In-House	D3120	08/09/05	3	95	16.1000	16.4000	16.2000	0.8372	16.1000	16.4000	16.1000	16.2000
In-House	D5453	08/09/05	3	95	17.0000	17.0000	16.8000	0.8372	17.0000	16.8000	17.0000	16.8000
In-House	D5453	08/17/05	3	96	21.4100	21.2700	21.1000	0.8372	21.1000			
In-House	D5453	08/15/05	3	97	17.2000	17.3000	17.2000	0.8372	17.3000	17.2000	17.3000	17.2000
In-House	D5453	08/24/05	3	99	15.9200	15.6200	15.3500	0.8372	15.6200	15.3500	15.9200	15.6200
In-House	D5453	08/10/05	3	100	14.8000	15.1000	14.6000	0.8372	15.1000	14.6000		
In-House	D7039	08/16/05	3	102	17.4000	17.2000	17.6000	0.8372	17.4000	17.2000	17.4000	17.2000
In-House	D2622	08/25/05	3	103	19.0000	18.9000	18.5000	0.8372	18.9000	18.5000	19.0000	18.9000
In-House	D5453	08/23/05	3	103	16.2000	16.3000	16.3000	0.8372	16.2000	16.3000	16.3000	16.3000
In-House	D7039	08/24/05	3	103	16.7000	16.8000	16.7000	0.8372	16.7000	16.7000		
In-House	D2622	08/09/05	3	105	18.7000	17.8000	18.9000	0.8372	18.7000	18.9000	17.8000	18.9000
In-House	D7039	08/30/05	3	106	18.3000	18.1000	17.7000	0.8372	18.3000	17.7000	18.1000	17.7000
In-House	D7039	08/11/05	3	107	17.2000	17.6000	17.9000	0.8372	17.2000	17.9000	17.6000	17.9000
In-House	D5453	08/03/05	3	108	15.4000	15.4000	15.4000	0.8372	15.4000	15.4000		
In-House	D5453	08/29/05	3	109	15.7000	15.7000	16.1000	0.8372	15.7000	15.7000	15.7000	16.1000
In-House	D7039	08/26/05	3	109	15.5000	15.7000	15.8000	0.8372	15.5000	15.8000		
In-House	D5453	08/12/05	3	110	18.2800	18.1400	18.1800	0.8372	18.1400	18.1800	18.2800	18.1800
In-House	D7039	08/12/05	3	111	14.6000	15.5000	15.5000	0.8372	15.5000	15.5000	14.6000	15.5000
In-House	D5453	08/18/05	3	112	22.1000	21.6700	21.8700	0.8745				
In-House	D5453	08/15/05	3	113	16.8000	16.0000	16.5000	0.8372	16.0000	16.5000		
In-House	D5453	08/25/05	3	114	18.2000	18.2000	18.2000	0.8372	18.2000	18.2000	18.2000	18.2000
In-House	D5453	08/11/05	3	115	16.1000	17.5000	16.5000	0.8372	16.1000	16.5000	17.5000	16.5000
In-House	D5453	08/09/05	3	116	18.4400	18.4100	18.5700	0.8372	18.4400	18.5700	18.4400	18.5700

**Table B.15. August Fuel #3 Lab Data and Deletions Based on Composite Test Methods for In-House Calibration**

Calibration	Test Method	Run Date	August Sample #	Lab Code	Original Lab Data Robust Outlier Deletion in Shaded Box				After Robust Outlier Deletion Random Selection of 2 Obs		After Gravimetric Deletion Random Selection of 2 Obs	
					Measure #1	Measure #2	Measure #3	Density	#1	#2	#1	#2
In-House	D5453	08/16/05	3	117	17.5200	17.6700	17.7500	0.8372	17.6700	17.7500	17.5200	17.6700
In-House	D5453	08/25/05	3	118	18.2600	18.2900	18.3200	0.8372	18.2900	18.3200	18.2600	18.2900
In-House	D5453	08/11/05	3	119	17.0600	17.0100	17.0000	0.8372	17.0600	17.0000	17.0600	17.0000
In-House	D5453	08/29/05	3	120	18.0000	18.1000	18.0000	0.8372	18.1000	18.0000	18.0000	18.0000
In-House	D2622	08/31/05	3	121	17.7000	18.4000	18.7000	0.8372	18.4000	18.7000	18.4000	18.7000
In-House	D5453	08/11/05	3	122	18.8000	18.5000	18.4000	0.8372	18.8000	18.5000	18.8000	18.4000
In-House	D2622	08/15/05	3	123	17.6000	18.1000	17.5000	0.8372	17.6000	17.5000	17.6000	18.1000
In-House	D2622	08/17/05	3	124	17.9000	19.1000	18.6000	0.8372	17.9000	18.6000	17.9000	18.6000
In-House	D2622	08/10/05	3	126	16.3000	16.2000	17.6000	0.8372	16.3000	17.6000	16.3000	17.6000
In-House	D5453	08/10/05	3	126	15.4000	15.1000	14.9000	0.8372	15.4000	15.1000		
In-House	D7039	08/26/05	3	127	18.0000	17.8000	17.0000	0.8372	18.0000	17.8000	17.8000	17.0000
In-House	D7039	08/17/05	3	128	17.9000	18.1000	17.7000	0.8372	18.1000	17.7000	17.9000	18.1000
In-House	D5453	08/09/05	3	129	19.4000	19.0200	19.4000	0.8372	19.0200	19.4000	19.4000	19.4000
In-House	D5453	08/09/05	3	130	18.0000	18.1000	18.2000	0.8372	18.0000	18.2000	18.0000	18.2000
In-House	D2622	08/15/05	3	131	18.2000	18.1000	18.8000	0.8372	18.1000	18.8000		
In-House	EDXRF	08/10/05	3	131	18.4000	18.1000	18.2000	0.8372	18.4000	18.2000	18.1000	18.2000
In-House	D5453	08/25/05	3	132	17.7840	17.6770	17.7280	0.8372	17.7840	17.7280	17.6770	17.7280
In-House	D2622	08/31/05	3	133	18.8000	19.2000	19.1000	0.8372	19.2000	19.1000	19.2000	19.1000
In-House	EDXRF	08/30/05	3	134	17.8000	17.6000	18.3000	0.8372	17.8000	17.6000	17.6000	18.3000
In-House	EDXRF	08/09/05	3	135	17.7000	18.1000	18.1000	0.8372	17.7000	18.1000	18.1000	18.1000
In-House	D2622	08/09/05	3	136	17.5000	18.0000	18.1000	0.8372	18.0000	18.1000	18.0000	18.1000
In-House	EDXRF	08/09/05	3	136	17.5000	16.9000	17.3000	0.8372	16.9000	17.3000	17.5000	16.9000
In-House	D5453	08/12/05	3	137	17.2400	18.0400	17.1200	0.8372	18.0400	17.1200	18.0400	17.1200
In-House	EDXRF	08/12/05	3	137	19.1000	18.2000	18.4000	0.8372	19.1000	18.4000	19.1000	18.4000
In-House	D5453	08/17/05	3	138	18.1000	18.3000	18.8000	0.8372	18.3000	18.8000	18.3000	18.8000
In-House	D2622	08/26/05	3	139	19.1000	19.4000	18.6000	0.8745	19.1000	19.4000	19.4000	18.6000
In-House	D5453	08/31/05	3	139	17.1400	17.0400	17.4300	0.8372	17.1400	17.0400	17.1400	17.0400
In-House	D2622	08/22/05	3	140	20.7000	21.9000	20.8000	0.8372	20.7000	20.8000		
In-House	EDXRF	08/10/05	3	141	17.3000	18.2000	18.0000	0.8372	18.2000	18.0000	17.3000	18.2000
In-House	D5453	08/12/05	3	143	19.7500	18.5000	18.2500	0.8372	19.7500	18.2500	19.7500	18.2500
In-House	D3120	07/09/05	3	144	17.3000	17.2000	17.0000	0.8372	17.2000	17.0000	17.3000	17.2000
In-House	D2622	09/04/05	3	145	19.7000	18.2000	20.1000		19.7000	18.2000		
In-House	D5453	08/26/05	3	147	18.8000	18.0000	19.2000	0.8372	18.8000	18.0000	18.0000	19.2000
In-House	D5453	08/15/05	3	148	17.6000	17.5000	17.7000	0.8372	17.6000	17.7000	17.5000	17.7000
In-House	D7039	08/09/05	3	148	19.1000	19.9000	18.7000	0.8372	19.9000	18.7000	19.9000	18.7000
In-House	D5453	08/18/05	3	149	18.4670	18.0510	18.0130	0.8372	18.4670	18.0130	18.4670	18.0510
In-House	D5453	08/17/05	3	151	19.4000	18.8000	18.7600	0.8372	18.8000	18.7600	19.4000	18.8000
In-House	D7039	08/16/05	3	151	17.2000	17.4000	18.5000	0.8372	17.4000	18.5000	17.2000	18.5000
In-House	D5453	08/11/05	3	152	14.6900	14.6600	15.0200	0.8372	14.6600	15.0200	14.6900	14.6600
In-House	D5453	08/12/05	3	153	17.5900	17.5300	17.6200	0.8372	17.5900	17.6200	17.5900	17.6200
In-House	D5453	08/15/05	3	154	18.2000	18.1000	18.9000	0.8372	18.1000	18.9000	18.2000	18.9000
In-House	D5453	08/16/05	3	156	16.7200	16.4800	15.8900	0.8372	16.7200	15.8900	16.7200	15.8900
In-House	D5453	08/05/05	3	158	23.3700	23.5800	23.4900	0.8372				
In-House	D5453	08/08/05	3	159	18.8800	18.9000	18.5200	0.8372	18.8800	18.9000	18.9000	18.5200
In-House	D7039	08/26/05	3	160	17.6000	17.4000	17.0000	0.8372	17.4000	17.0000	17.6000	17.4000
In-House	D5453	08/30/05	3	161	17.1000	17.2800	17.2700	0.8372	17.1000	17.2800	17.1000	17.2700
In-House	D2622	08/26/05	3	162	19.3700	19.1700	18.6300	0.8372	19.1700	18.6300	19.1700	18.6300



**Table B.15. August Fuel #3 Lab Data and Deletions Based on Composite Test Methods for In-House Calibration**

Table B.15. August Fuel #3 Lab Data and Deletions Based on Composite Test Methods for In-House Calibration													
Calibration	Test Method	Run Date	August Sample #	Lab Code	Original Lab Data Robust Outlier Deletion in Shaded Box				After Robust Outlier Deletion Random Selection of 2 Obs		After Gravimetric Deletion Random Selection of 2 Obs		
					Measure #1	Measure #2	Measure #3	Density	#1	#2	#1	#2	
In-House	D5453	08/25/05	3	162	19.3900	18.7900	18.9000	0.8372	19.3900	18.9000	19.3900	18.7900	

**Table B.16. August Fuel #3 Lab Data and Deletions Based on Composite Test Methods for NIST Calibration**

Calibration	Test Method	Run Date	August Sample #	Lab Code	Original Lab Data Robust Outlier Deletion in Shaded Box				After Robust Outlier Deletion Random Selection of 2 Obs		After Gravimetric Deletion Random Selection of 2 Obs	
					Measure #1	Measure #2	Measure #3	Density	#1	#2	#1	#2
NIST	D5453	08/18/05	3	1	17.5000	17.6000	17.4000	0.8372	17.5000	17.4000	17.5000	17.6000
NIST	D5453	08/04/05	3	2	18.4900	18.0500	18.6500	0.8372	18.4900	18.0500	18.4900	18.6500
NIST	D2622	08/08/05	3	3	18.5900	18.4200	18.8800	0.8372	18.5900	18.4200	18.5900	18.4200
NIST	D5453	08/31/05	3	4	20.6000	20.3200	20.4100	0.8372	20.6000	20.4100		
NIST	D2622	08/26/05	3	5	19.4000	18.7000	18.8000	0.8372	18.7000	18.8000	18.7000	18.8000
NIST	D7039	08/22/05	3	6	17.6000	17.5000	18.3000	0.8372	17.6000	17.5000	17.5000	18.3000
NIST	D7039	08/09/05	3	7	17.1000	17.4000	18.5000	0.8372	17.4000	18.5000	17.4000	18.5000
NIST	D2622	08/04/05	3	8	19.6700	19.4200	19.2800	0.8372	19.4200	19.2800	19.4200	19.2800
NIST	D5453	08/03/05	3	8	18.0000	17.8800	18.0800	0.8372	18.0000	18.0800	18.0000	18.0800
NIST	D5453	08/05/05	3	9	18.1400	17.9100	17.9700	0.8372	18.1400	17.9100	18.1400	17.9700
NIST	D5453	08/05/05	3	11	19.7000	19.6000	19.6000	0.8372	19.7000	19.6000	19.7000	19.6000
NIST	D5453	08/26/08	3	12	17.3000	16.9000	17.5000	0.8372	17.3000	17.5000	17.3000	17.5000
NIST	D5453	08/24/05	3	13	17.6500	17.7800	17.5100	0.8372	17.7800	17.5100	17.7800	17.5100
NIST	D5453	08/17/05	3	15	17.7900	18.2800	17.8500	0.8372	18.2800	17.8500	17.7900	18.2800
NIST	D5453	08/22/05	3	16	17.1400	17.3700	16.8800	0.8372	17.1400	16.8800	17.1400	16.8800
NIST	D5453	08/11/05	3	18	18.1500	18.1100	17.9000	0.8372	18.1500	18.1100	18.1100	17.9000
NIST	D5453	08/19/05	3	19	17.7000	17.8000	17.8000	0.8372	17.8000	17.8000	17.8000	17.8000
NIST	D5453	08/12/05	3	21	16.8700	16.9200	16.9200	0.8372	16.8700	16.9200	16.9200	16.9200
NIST	D5453	08/22/05	3	23	17.3100	17.4600	17.8100	0.8372	17.3100	17.4600		
NIST	D5453	08/03/05	3	24	18.4900	18.5400	18.6000		18.5400	18.6000	18.4900	18.6000
NIST	D5453	08/31/05	3	25	18.3600	18.3900	18.3300	0.8372	18.3600	18.3300	18.3900	18.3300
NIST	D5453	08/04/05	3	26	19.0600	18.7700	18.4600	0.8372	19.0600	18.4600	19.0600	18.7700
NIST	D5453	08/25/05	3	27	18.7300	18.5000	18.4600	0.8372	18.7300	18.5000	18.5000	18.4600
NIST	D2622	08/26/05	3	28	18.8000	18.9000	19.2000	0.8372	18.8000	18.9000		
NIST	D5453	08/25/05	3	29	17.2980	17.2840	17.7300	0.8372	17.2840	17.7300	17.2980	17.2840
NIST	D5453	08/06/05	3	30	18.1000	18.0000	18.2000	0.8372	18.0000	18.2000	18.0000	18.2000
NIST	D5453	08/10/05	3	31	17.9000	17.6000	17.7000	0.8372	17.6000	17.7000	17.9000	17.6000
NIST	D5453	08/09/05	3	32	18.5200	18.6600	18.4800	0.8372	18.6600	18.4800	18.5200	18.4800
NIST	D5453	08/30/05	3	36	17.3000	17.4000	17.3000	0.8270	17.4000	17.3000		
NIST	D5453	08/26/05	3	37	17.2000	17.3000	17.2000	0.8372	17.2000	17.3000	17.2000	17.2000
NIST	D5453	08/30/05	3	38	18.1000	18.4000	18.3000	0.8372	18.4000	18.3000	18.1000	18.3000
NIST	D5453	09/01/05	3	39	18.5300	18.3000	18.5800	0.8372	18.5300	18.5800	18.3000	18.5800
NIST	D2622	08/05/05	3	41	17.2000	17.4000	17.7000	0.8372	17.4000	17.7000	17.4000	17.7000
NIST	D5453	08/11/05	3	41	19.9300	19.7900	19.9000	0.8372	19.9300	19.7900	19.7900	19.9000
NIST	D2622	09/01/05	3	EPA	19.5000	18.7000	19.2000	0.8372	19.5000	19.2000	19.5000	18.7000
NIST	D5453	08/30/05	3	EPA	18.2000	18.3000	18.3000	0.8372	18.3000	18.3000	18.2000	18.3000
NIST	D7039	09/07/05	3	EPA	17.3000	17.9000	17.6000	0.8372	17.3000	17.6000	17.3000	17.6000
NIST	D7039	08/19/05	3	47	17.3000	17.8000	16.9000	0.8372	17.3000	17.8000	17.8000	16.9000
NIST	D5453	08/11/05	3	48	22.9500	24.0800	15.5800	0.8372	15.5800			
NIST	D2622	08/26/05	3	50	18.1000	18.7000	19.2000	0.8372	18.7000	19.2000	18.1000	18.7000
NIST	D5453	08/25/05	3	51	21.4000	21.4000	21.3000	0.8372				
NIST	D2622	08/29/05	3	53	20.0000	19.5000	19.7000	0.8372	20.0000	19.7000	20.0000	19.5000
NIST	D5453	08/16/05	3	54	17.8000	17.9000	17.8000	0.8372	17.8000	17.9000	17.8000	17.9000
NIST	D2622	08/02/05	3	55	17.6000	18.5000	17.8000	0.8372	17.6000	17.8000	18.5000	17.8000
NIST	D5453	08/05/05	3	56	17.4000	17.8000	17.4000	0.8372	17.4000	17.8000	17.4000	17.8000
NIST	D5453	08/31/05	3	59	18.7100	18.6000	18.5600	0.8372	18.7100	18.6000	18.7100	18.5600
NIST	D7039	08/04/05	3	60	17.5000	17.1000	16.9000	0.8372	17.5000	17.1000	17.1000	16.9000

**Table B.16. August Fuel #3 Lab Data and Deletions Based on Composite Test Methods for NIST Calibration**

Calibration	Test Method	Run Date	August Sample #	Lab Code	Original Lab Data Robust Outlier Deletion in Shaded Box				After Robust Outlier Deletion Random Selection of 2 Obs		After Gravimetric Deletion Random Selection of 2 Obs	
					Measure #1	Measure #2	Measure #3	Density	#1	#2	#1	#2
NIST	D5453	08/13/05	3	61	18.0100	18.1200	18.0100	0.8372	18.0100	18.1200	18.0100	18.1200
NIST	D5453	08/31/05	3	CARB	17.3000	17.8000	17.4000	0.8372	17.3000	17.8000	17.3000	17.4000
NIST	D5453	08/24/05	3	63	18.2100	18.1300	18.3900	0.8372	18.2100	18.3900	18.1300	18.3900
NIST	D5453	08/25/05	3	64	17.2000	16.6000	16.7000	0.8372	16.6000	16.7000	17.2000	16.6000
NIST	D5453		3	66	16.1300	16.0500	16.1400	0.8372	16.1300	16.0500	16.0500	16.1400
NIST	D2622	08/31/05	3	67	16.9580	17.3400	16.7740	0.8372	16.9580	17.3400	16.9580	17.3400
NIST	D5453	08/22/05	3	68	15.0000	14.7000	15.0000	0.8372	15.0000	15.0000		
NIST	D5453	08/19/05	3	72	16.9000	17.2000	16.8000	0.8372	17.2000	16.8000	16.9000	16.8000
NIST	D2622	08/26/05	3	73	20.4000	19.9000	19.6000	0.8372	19.9000	19.6000		
NIST	D5453	08/26/05	3	73	19.8000	20.2000	20.0000	0.8372	20.2000	20.0000	19.8000	20.2000
NIST	D5453	09/01/05	3	75	17.8600	18.3400	17.1400	0.8372	18.3400	17.1400	17.8600	18.3400
NIST	D5453	08/22/05	3	76	18.1000	18.3600	18.3900	0.8372	18.1000	18.3900	18.3600	18.3900
NIST	D5453	08/03/05	3	77	19.9200	19.7800	19.6900	0.8372	19.9200	19.6900		
NIST	D5453	08/31/05	3	78	18.3800	18.4700	18.2900	0.8372	18.4700	18.2900	18.3800	18.2900
NIST	D5453	08/24/05	3	81	17.5000	17.3000	17.1000	0.8372	17.5000	17.3000	17.3000	17.1000
NIST	D5453	08/05/05	3	82	18.3900	18.6000	18.6400	0.8372	18.3900	18.6000	18.3900	18.6000
NIST	D5453	08/18/05	3	83	16.5000	16.3000	16.0000	0.8372	16.5000	16.3000		
NIST	D5453	08/18/05	3	84	17.5000	17.8000	17.3000	0.8372	17.5000	17.3000	17.5000	17.3000
NIST	D5453	08/12/05	3	85	16.0000	16.0000	15.9000	0.8372	16.0000	15.9000	16.0000	16.0000
NIST	D3120	08/18/05	3	86	17.0000	17.3000	16.9000	0.8372	17.3000	16.9000	17.0000	17.3000
NIST	D5453	08/31/05	3	87	13.5000	13.5000	13.8000	0.8372			13.5000	13.8000
NIST	D5453	08/20/05	3	89	18.3000	18.2000	18.2000	0.8372	18.3000	18.2000	18.3000	18.2000
NIST	D5453	08/05/05	3	90	16.3000	16.4000	16.0000	0.8372	16.4000	16.0000	16.4000	16.0000
NIST	D5453	08/12/05	3	91	17.9900	18.1000	18.0700	0.8372	17.9900	18.0700	17.9900	18.0700
NIST	D3120	08/17/05	3	95	16.2000	16.7000	16.6000	0.8372	16.2000	16.7000	16.2000	16.6000
NIST	D5453	08/17/05	3	95	17.7000	17.6000	17.9000	0.8372	17.7000	17.6000	17.7000	17.9000
NIST	D5453		3	96	21.6300	21.7800	21.1300	0.8372				
NIST	D5453	08/15/05	3	97	17.6000	17.4000	17.4000	0.8372	17.6000	17.4000	17.6000	17.4000
NIST	D5453	08/25/05	3	99	15.9900	14.7400	14.6200	0.8372	15.9900			
NIST	D5453	08/11/05	3	100	20.5000	20.7000	20.2000	0.8372	20.5000	20.7000		
NIST	D7039	08/15/05	3	102	17.5000	17.6000	17.7000	0.8372	17.5000	17.6000	17.5000	17.7000
NIST	D2622	08/26/05	3	103	19.5000	19.3000	19.0000	0.8372	19.5000	19.0000		
NIST	D5453	08/25/05	3	103	16.7000	16.9000	17.1000	0.8372	16.7000	17.1000	16.7000	16.9000
NIST	D7039	08/24/05	3	103	17.6000	17.2000	17.5000	0.8372	17.6000	17.2000	17.6000	17.5000
NIST	D2622	08/09/05	3	105	18.1000	19.0000	19.3000	0.8372	18.1000	19.3000	18.1000	19.3000
NIST	D7039	08/31/05	3	106	18.4000	17.2000	17.1000	0.8372	18.4000	17.2000	17.2000	17.1000
NIST	D7039	08/19/05	3	107	16.7000	17.0000	16.7000	0.8372	16.7000	17.0000	16.7000	16.7000
NIST	D5453	08/08/05	3	108	16.0000	16.0000	16.0000	0.8372	16.0000	16.0000		
NIST	D5453	08/31/05	3	109	18.4000	18.2000	18.6000	0.8372	18.2000	18.6000		
NIST	D7039	08/29/05	3	109	18.2000	17.7000	17.5000	0.8372	18.2000	17.7000	17.7000	17.5000
NIST	D5453	08/22/05	3	110	17.4200	17.4800	17.4500	0.8372	17.4800	17.4500	17.4800	17.4500
NIST	D7039	08/15/05	3	111	15.3000	15.5000	15.0000	0.8372	15.5000	15.0000	15.3000	15.0000
NIST	D5453	08/19/05	3	112	17.7500	17.9300	17.9900	0.8745	17.9300	17.9900	17.7500	17.9900
NIST	D5453	08/19/05	3	113	17.1000	17.5000	17.4000	0.8372	17.1000	17.5000	17.1000	17.5000
NIST	D5453	08/26/05	3	114	17.0000	17.2000	17.1000	0.8372	17.0000	17.1000	17.0000	17.1000
NIST	D5453	08/12/05	3	115	16.8000	16.8000	16.8000	0.8372	16.8000	16.8000	16.8000	16.8000
NIST	D5453	08/09/05	3	116	17.6700	17.5700	17.5800	0.8372	17.6700	17.5700	17.6700	17.5700

**Table B.16. August Fuel #3 Lab Data and Deletions Based on Composite Test Methods for NIST Calibration**

Calibration	Test Method	Run Date	August Sample #	Lab Code	Original Lab Data Robust Outlier Deletion in Shaded Box				After Robust Outlier Deletion Random Selection of 2 Obs		After Gravimetric Deletion Random Selection of 2 Obs	
					Measure #1	Measure #2	Measure #3	Density	#1	#2	#1	#2
NIST	D5453	08/15/05	3	117	17.6800	17.6000	17.6800	0.8372	17.6800	17.6000	17.6800	17.6800
NIST	D5453	08/25/05	3	118	18.1800	18.3900	18.2200	0.8372	18.1800	18.2200	18.1800	18.3900
NIST	D5453	08/11/05	3	119	19.0100	18.9900	18.8600	0.8372	19.0100	18.9900	18.9900	18.8600
NIST	D5453	08/30/05	3	120	17.9000	17.9000	17.8000	0.8372	17.9000	17.8000	17.9000	17.8000
NIST	D2622	09/01/05	3	121	17.9000	18.6000	18.8000	0.8372	17.9000	18.8000	17.9000	18.6000
NIST	D5453	08/12/05	3	122	17.5000	17.6000	17.6000	0.8372	17.5000	17.6000	17.5000	17.6000
NIST	D2622	08/15/05	3	123	17.8000	17.6000	17.3000	0.8372	17.8000	17.6000	17.8000	17.3000
NIST	D2622	08/24/05	3	124	17.7000	19.1000	18.9000	0.8372	17.7000	19.1000		
NIST	D2622	08/31/05	3	126	16.6000	16.5000	17.9000	0.8372	16.6000	17.9000	16.6000	17.9000
NIST	D5453	08/10/05	3	126	18.2000	17.3000	18.1000	0.8372	18.2000	17.3000	18.2000	17.3000
NIST	D7039	08/26/05	3	127	18.6000	18.2000	17.8000	0.8372	18.6000	18.2000	18.6000	17.8000
NIST	D7039	08/17/05	3	128	18.6000	18.0000	18.2000	0.8372	18.6000	18.2000	18.6000	18.2000
NIST	D5453	08/10/05	3	129	17.2000	17.2000	17.3000	0.8372	17.2000	17.2000	17.2000	17.2000
NIST	D5453	08/08/05	3	130	17.3000	17.5000	17.4000	0.8372	17.3000	17.4000	17.3000	17.4000
NIST	D2622	08/11/05	3	131	15.3000	15.8000	15.2000	0.8372	15.8000	15.2000		
NIST	EDXRF	08/11/05	3	131	15.8000	16.4000	16.2000	0.8372	16.4000	16.2000		
NIST	D5453	08/25/05	3	132	18.1510	18.0470	17.8950	0.8372	18.1510	18.0470	18.0470	17.8950
NIST	D2622	08/31/05	3	133	18.2000	18.1000	17.7000	0.8372	18.1000	17.7000	18.1000	17.7000
NIST	EDXRF	08/30/05	3	134	18.0000	16.9000	18.4000	0.8372	16.9000	18.4000	18.0000	18.4000
NIST	EDXRF	08/10/05	3	135	17.4000	17.7000	17.1000	0.8372	17.4000	17.1000	17.7000	17.1000
NIST	D2622	08/09/05	3	136	18.1000	18.6000	18.0000	0.8372	18.1000	18.0000	18.1000	18.0000
NIST	EDXRF	08/09/05	3	136	17.9000	17.7000	18.8000	0.8372	17.7000	18.8000	17.9000	17.7000
NIST	D5453	08/14/05	3	137	18.4300	18.0800	18.8200	0.8372	18.4300	18.0800	18.4300	18.8200
NIST	EDXRF		3	137	17.2000	16.8000	16.3000	0.8372	17.2000	16.8000		
NIST	D5453	08/15/05	3	138	18.6000	18.8000	18.4000	0.8372	18.6000	18.4000	18.6000	18.8000
NIST	D2622	08/23/05	3	139	18.9000	18.7000	18.1000	0.8745	18.9000	18.7000	18.9000	18.1000
NIST	D5453	08/25/05	3	139	18.2000	17.6000	18.2000	0.8372	17.6000	18.2000	17.6000	18.2000
NIST	D2622	08/22/05	3	140	16.0000	16.2000	17.3000	0.8372	16.0000	17.3000	16.0000	16.2000
NIST	EDXRF	08/22/05	3	141	17.5000	17.7000	18.0000	0.8372	17.7000	18.0000	17.5000	17.7000
NIST	D5453	08/12/05	3	143	19.4700	20.7500	19.3700	0.8372	19.4700	19.3700	19.4700	20.7500
NIST	D3120		3	144	18.6000	17.5000	18.6000	0.8372	18.6000	18.6000	17.5000	18.6000
NIST	D2622	09/04/05	3	145	20.4000	19.2000	22.4000		20.4000	19.2000		
NIST	D5453	08/26/05	3	147	16.7000	17.3000	16.6000	0.8372	17.3000	16.6000		
NIST	D5453	08/15/05	3	148	18.3000	18.2000	18.4000	0.8372	18.3000	18.4000	18.3000	18.4000
NIST	D7039	08/09/05	3	148	18.3000	17.6000	17.8000	0.8372	17.6000	17.8000	18.3000	17.8000
NIST	D5453	08/25/05	3	149	17.6930	17.6120	14.4940	0.8372	17.6930	17.6120	17.6930	17.6120
NIST	D5453	08/17/05	3	151	17.4900	17.0100	17.6800	0.8372	17.4900	17.0100	17.0100	17.6800
NIST	D7039	08/16/05	3	151	18.4000	18.3000	18.7000	0.8372	18.4000	18.3000	18.4000	18.3000
NIST	D5453	08/19/05	3	152	15.3000	14.9200	15.2500	0.8372	15.3000	15.2500	15.3000	14.9200
NIST	D5453	08/17/05	3	153	18.9200	18.9400	18.9800	0.8372	18.9200	18.9400	18.9200	18.9800
NIST	D5453	08/16/05	3	154	17.2000	17.1000	17.1000	0.8372	17.2000	17.1000	17.2000	17.1000
NIST	D5453	08/15/05	3	156	19.0000	19.5100	18.7600	0.8372	19.0000	18.7600	19.0000	19.5100
NIST	D5453	08/06/05	3	158	23.8800	23.5800	23.8700	0.8372				
NIST	D5453	08/08/05	3	159	16.8900	16.9700	16.7600	0.8372	16.8900	16.9700	16.8900	16.9700
NIST	D7039	08/26/05	3	160	16.8000	17.1000	18.4000	0.8372	17.1000	18.4000	17.1000	18.4000
NIST	D5453	08/29/05	3	161	18.0700	18.1100	18.4900	0.8372	18.0700	18.1100	18.0700	18.1100
NIST	D2622	07/26/05	3	162	18.6600	17.9900	16.3100	0.8372	18.6600	17.9900		

**Table B.16. August Fuel #3 Lab Data and Deletions Based on Composite Test Methods for NIST Calibration**

Table B.16. August Fuel #3 Lab Data and Deletions Based on Composite Test Methods for NIST Calibration													
Calibration	Test Method	Run Date	August Sample #	Lab Code	Original Lab Data Robust Outlier Deletion in Shaded Box				After Robust Outlier Deletion Random Selection of 2 Obs		After Gravimetric Deletion Random Selection of 2 Obs		
					Measure #1	Measure #2	Measure #3	Density	#1	#2	#1	#2	
NIST	D5453	08/30/05	3	162	17.4800	16.8900	17.1300	0.8372	17.4800	16.8900	16.8900	17.1300	

**Table B.17. August Fuel #4 Lab Data and Deletions Based on Composite Test Methods for In-House Calibration**

Calibration	Test Method	Run Date	August Sample #	Lab Code	Original Lab Data Robust Outlier Deletion in Shaded Box				After Robust Outlier Deletion Random Selection of 2 Obs		After Gravimetric Deletion Random Selection of 2 Obs	
					Measure #1	Measure #2	Measure #3	Density	#1	#2	#1	#2
In-House	D5453	08/18/05	4	1	7.6000	7.5000	7.5000	0.8264	7.6000	7.5000	7.5000	7.5000
In-House	D5453	08/04/05	4	2	8.6000	8.3800	8.5500	0.8264	8.6000	8.3800	8.3800	8.5500
In-House	D2622	08/08/05	4	3	10.3300	10.3000	10.3200	0.8264				
In-House	D5453	08/31/05	4	4	9.2300	10.1500	8.8500	0.8264	9.2300	8.8500		
In-House	D2622		4	5	10.3000	9.6000	11.2000	0.8264		9.6000		
In-House	D7039	08/22/05	4	6	9.1000	8.9000	8.6000	0.8264	9.1000	8.9000	9.1000	8.6000
In-House	D7039	08/09/05	4	7	8.5000	9.6000	9.0000	0.8264	9.6000	9.0000	9.6000	9.0000
In-House	D2622	08/04/05	4	8	8.6100	7.3900	7.8100	0.8264	8.6100	7.8100	8.6100	7.8100
In-House	D5453	08/03/05	4	8	8.1100	8.0000	7.9600	0.8264	8.1100	7.9600	8.1100	7.9600
In-House	D5453	08/05/05	4	9	8.2100	8.2100	7.8700	0.8264	8.2100	7.8700	8.2100	7.8700
In-House	D5453	08/04/05	4	11	9.0000	9.0000	8.5000	0.8264	9.0000	8.5000	9.0000	8.5000
In-House	D5453	08/25/05	4	12	7.7000	7.8000	8.0000	0.8264	7.7000	7.8000	7.8000	8.0000
In-House	D5453	08/08/05	4	13	8.8000	8.6000	8.9000	0.8264	8.8000	8.9000	8.8000	8.6000
In-House	D5453	07/26/05	4	15	7.8000	7.7900	7.7900	0.8264	7.7900	7.7900	7.8000	7.7900
In-House	D5453	08/19/05	4	16	8.0400	8.0200	8.0100	0.8264	8.0200	8.0100	8.0200	8.0100
In-House	D5453	08/11/05	4	18	8.3300	8.5500	8.1700	0.8264	8.3300	8.5500	8.3300	8.5500
In-House	D5453	08/16/05	4	19	8.0000	8.0000	8.0000	0.8264	8.0000	8.0000	8.0000	8.0000
In-House	D5453	08/10/05	4	21	8.0700	8.0700	8.0300	0.8264	8.0700	8.0300	8.0700	8.0700
In-House	D5453	08/22/05	4	23	7.2800	7.7100	7.3200	0.8264	7.2800	7.7100		
In-House	D5453	08/04/05	4	24	7.8000	7.4200	7.7700		7.8000	7.4200	7.4200	7.7700
In-House	D5453	08/31/05	4	25	7.5700	7.3900	7.4200	0.8264	7.5700	7.3900		
In-House	D5453	08/03/05	4	26	8.4000	8.2300	8.2900	0.8264	8.2300	8.2900	8.2300	8.2900
In-House	D5453	08/25/05	4	27	8.4000	8.6100	8.5000	0.8264	8.4000	8.6100	8.6100	8.5000
In-House	D2622	08/16/05	4	28	9.8000	9.0000	8.9000	0.8264	9.8000	8.9000	9.8000	8.9000
In-House	D5453	08/24/05	4	29	8.3590	7.7440	8.3830	0.8264	7.7440	8.3830	8.3590	8.3830
In-House	D5453	08/05/05	4	30	7.8500	7.7000	7.9000	0.8264	7.7000	7.9000	7.8500	7.7000
In-House	D5453	08/10/05	4	31	8.2000	8.2000	8.2000	0.8264	8.2000	8.2000	8.2000	8.2000
In-House	D5453	08/08/05	4	32	8.0300	7.8300	7.9700	0.8264	7.8300	7.9700	8.0300	7.8300
In-House	D5453	08/26/05	4	36	7.6000	7.5000	7.4000	0.8240	7.5000	7.4000		
In-House	D5453	08/30/05	4	37	8.0500	7.9000	7.8000	0.8264	7.9000	7.8000	8.0500	7.9000
In-House	D5453	08/26/05	4	38	7.7000	7.7000	7.5000	0.8264	7.7000	7.7000	7.7000	7.7000
In-House	D5453	08/31/05	4	39	7.6700	7.5500	7.9800	0.8264	7.5500	7.9800	7.5500	7.9800
In-House	D2622	08/05/05	4	41	9.7000	9.7000	9.8000	0.8264	9.7000	9.7000		
In-House	D5453	08/05/05	4	41	7.6200	7.9600	8.6700	0.8264	7.6200	7.9600	7.6200	8.6700
In-House	D2622	08/31/05	4	EPA	8.4000	8.9000	8.4000	0.8264	8.9000	8.4000	8.4000	8.4000
In-House	D5453	08/30/05	4	EPA	8.5000	8.5000	8.4000	0.8264	8.5000	8.5000	8.5000	8.4000
In-House	D7039	09/07/05	4	EPA	8.2000	8.7000	8.7000	0.8264	8.7000	8.7000	8.2000	8.7000
In-House	D7039	08/18/05	4	47	8.1000	8.4000	7.6000	0.8264	8.4000	7.6000	8.1000	8.4000
In-House	D5453	08/10/05	4	48	7.7600	17.9900	17.3300	0.8264	7.7600			
In-House	D2622	08/25/05	4	50	8.7000	8.2000	8.3000	0.8264	8.7000	8.2000	8.7000	8.2000
In-House	D5453	08/24/05	4	51	8.2000	8.2000	8.8000	0.8264	8.2000	8.2000	8.2000	8.8000
In-House	D2622	08/26/05	4	53	9.5000	8.4000	8.2000	0.8264	8.4000	8.2000	8.4000	8.2000
In-House	D5453	08/11/05	4	54	7.7000	7.6000	7.6000	0.8264	7.7000	7.6000	7.7000	7.6000
In-House	D2622	08/02/05	4	55	8.3000	8.7000	9.0000	0.8264	8.3000	8.7000	8.7000	9.0000
In-House	D5453	08/04/05	4	56	7.8000	7.7000	7.7000	0.8264	7.8000	7.7000	7.7000	7.7000
In-House	D5453	08/30/05	4	59	8.6100	8.6000	8.5100	0.8264	8.6100	8.6000	8.6100	8.5100
In-House	D7039	08/04/05	4	60	8.3000	7.9000	8.2000	0.8264	7.9000	8.2000	7.9000	8.2000

**Table B.17. August Fuel #4 Lab Data and Deletions Based on Composite Test Methods for In-House Calibration**

Calibration	Test Method	Run Date	August Sample #	Lab Code	Original Lab Data Robust Outlier Deletion in Shaded Box				After Robust Outlier Deletion Random Selection of 2 Obs		After Gravimetric Deletion Random Selection of 2 Obs	
					Measure #1	Measure #2	Measure #3	Density	#1	#2	#1	#2
In-House	D5453	08/13/05	4	61	7.8700	7.8200	7.6500	0.8264	7.8700	7.6500	7.8200	7.6500
In-House	D5453	08/30/05	4	CARB	7.4300	7.1700	7.7200	0.8264	7.4300	7.7200		
In-House	D5453	08/23/05	4	63	8.1000	8.5300	8.2100	0.8264	8.1000	8.5300	8.1000	8.5300
In-House	D5453	08/22/05	4	64	8.4600	7.9600	8.3000	0.8264	7.9600	8.3000	8.4600	8.3000
In-House	D5453	08/29/05	4	66	7.8100	8.4100	9.4600	0.8264	8.4100	9.4600	7.8100	9.4600
In-House	D2622	08/30/05	4	67	8.5790	9.0640	8.4020	0.8264	9.0640	8.4020	8.5790	9.0640
In-House	D5453	08/22/05	4	68	8.4000	8.3000	8.5000	0.8264	8.4000	8.3000	8.4000	8.3000
In-House	D5453	08/19/05	4	72	8.3000	7.9000	8.1000	0.8264	7.9000	8.1000	7.9000	8.1000
In-House	D2622	08/26/05	4	73	7.7000	8.5000	8.3000	0.8264	8.5000	8.3000	8.5000	8.3000
In-House	D5453	08/26/05	4	73	9.2000	9.3000	9.7000	0.8264	9.3000	9.7000		
In-House	D5453	08/31/05	4	75	5.9900	6.0800	6.0000	0.8264				
In-House	D5453	08/22/05	4	76	8.2400	8.2600	7.9500	0.8264	8.2600	7.9500	8.2400	7.9500
In-House	D5453	08/03/05	4	77	8.2500	8.0900	9.4700	0.8264	8.2500	8.0900	8.2500	9.4700
In-House	D5453	08/31/05	4	78	8.6500	8.5700	8.6400	0.8264	8.6500	8.5700	8.6500	8.5700
In-House	D5453	08/17/05	4	81	9.1000	8.8000	8.6000	0.8264	9.1000	8.8000	9.1000	8.8000
In-House	D5453	08/05/05	4	82	8.3700	8.2800	8.4500	0.8264	8.3700	8.2800	8.3700	8.4500
In-House	D5453	08/18/05	4	83	8.9000	9.0000	9.2000	0.8264	9.0000	9.2000	8.9000	9.0000
In-House	D5453	08/11/05	4	84	8.8000	8.9000	9.0000	0.8264	8.9000	9.0000	8.8000	9.0000
In-House	D5453	08/05/05	4	85	8.3000	8.2000	8.2000	0.8264	8.2000	8.2000	8.2000	8.2000
In-House	D3120	08/11/05	4	86	8.6000	8.6000	8.7000	0.8264	8.6000	8.7000	8.6000	8.6000
In-House	D5453	08/31/05	4	87	7.3000	7.1000	7.0000	0.8264	7.1000	7.0000		
In-House	D5453	08/20/05	4	89	7.8000	7.7000	7.6000	0.8264	7.8000	7.7000	7.7000	7.6000
In-House	D5453	08/04/05	4	90	7.9000	7.9000	8.3000	0.8264	7.9000	7.9000	7.9000	7.9000
In-House	D5453	08/11/05	4	91	8.6800	8.6900	8.6100	0.8264	8.6800	8.6100	8.6800	8.6900
In-House	D3120	08/09/05	4	95	7.9000	8.0000	8.0000	0.8264	7.9000	8.0000	7.9000	8.0000
In-House	D5453	08/09/05	4	95	8.1000	8.1000	8.1000	0.8264	8.1000	8.1000	8.1000	8.1000
In-House	D5453	08/17/05	4	96	9.9600	10.1200	10.3000	0.8264	9.9600	10.1200		
In-House	D5453	08/15/05	4	97	7.9000	7.7000	7.7000	0.8264	7.9000	7.7000	7.9000	7.7000
In-House	D5453	08/24/05	4	99	7.7400	8.0900	6.7800	0.8264	7.7400	8.0900	7.7400	6.7800
In-House	D5453	08/10/05	4	100	6.8000	7.0000	6.8000	0.8264	6.8000	6.8000		
In-House	D7039	08/16/05	4	102	8.2000	8.7000	8.4000	0.8264	8.7000	8.4000	8.2000	8.4000
In-House	D2622	08/25/05	4	103	7.6000	8.2000	8.0000	0.8264	8.2000	8.0000	7.6000	8.2000
In-House	D5453	08/23/05	4	103	8.0000	8.5000	7.9000	0.8264	8.5000	7.9000	8.0000	8.5000
In-House	D7039	08/24/05	4	103	10.7000	9.6000	9.2000	0.8264	9.6000	9.2000		
In-House	D2622	08/09/05	4	105	9.0000	8.3000	8.5000	0.8264	9.0000	8.5000	9.0000	8.3000
In-House	D7039	08/30/05	4	106	8.9000	8.3000	8.4000	0.8264	8.9000	8.4000	8.3000	8.4000
In-House	D7039	08/11/05	4	107	8.7000	8.6000	8.1000	0.8264	8.6000	8.1000	8.7000	8.1000
In-House	D5453	08/03/05	4	108	6.9000	6.8000	6.9000	0.8264	6.9000	6.8000		
In-House	D5453	08/29/05	4	109	7.9000	8.0000	8.0000	0.8264	8.0000	8.0000	7.9000	8.0000
In-House	D7039	08/26/05	4	109	7.2000	7.3000	7.1000	0.8264	7.3000	7.1000		
In-House	D5453	08/12/05	4	110	8.1300	8.3500	8.2200	0.8264	8.1300	8.3500	8.1300	8.2200
In-House	D7039	08/12/05	4	111	5.8000	12.2000	6.0000	0.8264			12.2000	6.0000
In-House	D5453	08/18/05	4	112	9.8600	9.7500	9.4400	0.8956	9.7500	9.4400		
In-House	D5453	08/15/05	4	113	7.2000	6.8000	6.9000	0.8264	6.8000	6.9000		
In-House	D5453	08/25/05	4	114	8.7000	8.5000	8.8000	0.8264	8.5000	8.8000	8.7000	8.5000
In-House	D5453	08/11/05	4	115	7.8000	8.1000	8.3000	0.8264	8.1000	8.3000	7.8000	8.3000
In-House	D5453	08/09/05	4	116	8.6400	8.7800	8.5000	0.8264	8.7800	8.5000	8.7800	8.5000

**Table B.17. August Fuel #4 Lab Data and Deletions Based on Composite Test Methods for In-House Calibration**

Calibration	Test Method	Run Date	August Sample #	Lab Code	Original Lab Data Robust Outlier Deletion in Shaded Box				After Robust Outlier Deletion Random Selection of 2 Obs		After Gravimetric Deletion Random Selection of 2 Obs	
					Measure #1	Measure #2	Measure #3	Density	#1	#2	#1	#2
In-House	D5453	08/16/05	4	117	8.2700	8.4200	8.3000	0.8264	8.2700	8.3000	8.2700	8.4200
In-House	D5453	08/25/05	4	118	8.2300	8.3900	8.2200	0.8264	8.2300	8.2200	8.2300	8.3900
In-House	D5453	08/11/05	4	119	8.1300	8.0400	8.0000	0.8264	8.1300	8.0000	8.1300	8.0400
In-House	D5453	08/29/05	4	120	8.7000	8.6000	8.6000	0.8264	8.7000	8.6000	8.7000	8.6000
In-House	D2622	08/31/05	4	121	8.2000	8.7000	8.1000	0.8264	8.2000	8.7000	8.7000	8.1000
In-House	D5453	08/11/05	4	122	8.8000	8.6000	8.4000	0.8264	8.8000	8.6000	8.8000	8.6000
In-House	D2622	08/15/05	4	123	8.4000	8.2000	8.5000	0.8264	8.2000	8.5000	8.2000	8.5000
In-House	D2622	08/17/05	4	124	9.5000	8.6000	8.9000	0.8264	9.5000	8.6000	8.6000	8.9000
In-House	D2622	08/10/05	4	126	8.8000	8.5000	8.8000	0.8264	8.8000	8.8000	8.8000	8.5000
In-House	D5453	08/10/05	4	126	6.8000	6.8000	7.3000	0.8264	6.8000	7.3000		
In-House	D7039	08/26/05	4	127	9.1000	8.4000	8.1000	0.8264	8.4000	8.1000	9.1000	8.1000
In-House	D7039	08/17/05	4	128	8.4000	8.4000	8.0000	0.8264	8.4000	8.0000	8.4000	8.0000
In-House	D5453	08/09/05	4	129	8.6700	8.7000	8.8000	0.8264	8.6700	8.7000	8.6700	8.7000
In-House	D5453	08/09/05	4	130	8.1000	7.9000	7.9000	0.8264	7.9000	7.9000	8.1000	7.9000
In-House	D2622	08/15/05	4	131	9.8000	9.5000	9.7000	0.8264	9.5000	9.7000		
In-House	EDXRF	08/10/05	4	131	8.2000	8.5000	9.0000	0.8264	8.2000	9.0000	8.2000	9.0000
In-House	D5453	08/25/05	4	132	8.8100	9.0420	9.0760	0.8264	8.8100	9.0760	8.8100	9.0760
In-House	D2622	08/31/05	4	133	9.3000	9.1000	8.7000	0.8264	9.3000	8.7000	9.3000	8.7000
In-House	EDXRF	08/30/05	4	134	8.5000	8.3000	8.6000	0.8264	8.5000	8.3000	8.5000	8.3000
In-House	EDXRF	08/09/05	4	135	7.9000	8.4000	8.0000	0.8264	7.9000	8.0000	8.4000	8.0000
In-House	D2622	08/09/05	4	136	8.5000	8.4000	8.4000	0.8264	8.4000	8.4000	8.5000	8.4000
In-House	EDXRF	08/09/05	4	136	8.1000	7.5000	7.7000	0.8264	8.1000	7.5000	7.5000	7.7000
In-House	D5453	08/12/05	4	137	8.3000	8.0100	8.3000	0.8264	8.3000	8.0100	8.3000	8.3000
In-House	EDXRF	08/12/05	4	137	8.8000	8.6000	9.8000	0.8264	8.6000	9.8000	8.8000	9.8000
In-House	D5453	08/17/05	4	138	8.8000	8.6000	8.8000	0.8264	8.8000	8.8000	8.8000	8.8000
In-House	D2622	08/26/05	4	139	9.5000	9.2000	8.5000	0.8956	9.5000	8.5000	9.5000	8.5000
In-House	D5453	08/31/05	4	139	8.3400	8.5500	8.4500	0.8264	8.3400	8.5500	8.3400	8.5500
In-House	D2622	08/22/05	4	140	9.0000	10.0000	11.3000	0.8264	9.0000	10.0000		
In-House	EDXRF	08/10/05	4	141	7.1000	7.2000	8.8000	0.8264	7.2000	8.8000	7.1000	7.2000
In-House	D5453	08/12/05	4	143	9.0400	8.2200	9.4800	0.8264	8.2200	9.4800	9.0400	8.2200
In-House	D3120	07/09/05	4	144	7.8000	8.0000	7.7000	0.8264	7.8000	7.7000	7.8000	7.7000
In-House	D2622	09/04/05	4	145	13.4000	12.3000	11.1000					
In-House	D5453	08/26/05	4	147	8.1000	8.1000	8.4000	0.8264	8.1000	8.1000	8.1000	8.1000
In-House	D5453	08/15/05	4	148	8.2000	8.8000	8.4000	0.8264	8.8000	8.4000	8.8000	8.4000
In-House	D7039	08/09/05	4	148	8.0000	8.1000	8.2000	0.8264	8.0000	8.1000	8.0000	8.1000
In-House	D5453	08/18/05	4	149	8.4880	8.2290	8.0480	0.8264	8.2290	8.0480	8.4880	8.2290
In-House	D5453	08/17/05	4	151	8.5900	8.7600	8.5700	0.8264	8.5900	8.7600	8.7600	8.5700
In-House	D7039	08/16/05	4	151	8.2000	8.0000	7.9000	0.8264	8.2000	7.9000	8.2000	8.0000
In-House	D5453	08/11/05	4	152	8.1000	7.9300	7.8700	0.8264	8.1000	7.8700	8.1000	7.9300
In-House	D5453	08/12/05	4	153	7.6300	7.6600	7.6300	0.8264	7.6600	7.6300	7.6300	7.6300
In-House	D5453	08/15/05	4	154	8.4000	8.5000	8.4000	0.8264	8.5000	8.4000	8.4000	8.4000
In-House	D5453	08/16/05	4	156	8.2300	7.5000	8.1100	0.8264	8.2300	7.5000	8.2300	7.5000
In-House	D5453	08/05/05	4	158	10.5500	10.1800	10.3200	0.8264	10.1800			
In-House	D5453	08/08/05	4	159	8.9900	8.7900	8.6400	0.8264	8.7900	8.6400	8.9900	8.7900
In-House	D7039	08/26/05	4	160	8.3000	7.9000	8.0000	0.8264	7.9000	8.0000	8.3000	8.0000
In-House	D5453	08/30/05	4	161	8.4300	8.1000	8.3400	0.8264	8.1000	8.3400	8.1000	8.3400
In-House	D2622	08/26/05	4	162	8.8400	9.5400	9.0400	0.8264	8.8400	9.0400	8.8400	9.5400



**Table B.17. August Fuel #4 Lab Data and Deletions Based on Composite Test Methods for In-House Calibration**

Table B.17. August Fuel #4 Lab Data and Deletions Based on Composite Test Methods for In-House Calibration														
					Original Lab Data Robust Outlier Deletion in Shaded Box					After Robust Outlier Deletion Random Selection of 2 Obs			After Gravimetric Deletion Random Selection of 2 Obs	
Calibration	Test Method	Run Date	August Sample #	Lab Code	Measure #1	Measure #2	Measure #3	Density		#1	#2		#1	#2
In-House	D5453	08/25/05	4	162	9.1100	8.8600	9.0300	0.8264		9.1100	9.0300		9.1100	9.0300

Table B.18. August Fuel #4 Lab Data and Deletions Based on Composite Test Methods for NIST Calibration

Calibration	Test Method	Run Date	August Sample #	Lab Code	Original Lab Data Robust Outlier Deletion in Shaded Box				After Robust Outlier Deletion Random Selection of 2 Obs		After Gravimetric Deletion Random Selection of 2 Obs	
					Measure #1	Measure #2	Measure #3	Density	#1	#2	#1	#2
NIST	D5453	08/18/05	4	1	8.3000	8.2000	8.2000	0.8264	8.2000	8.2000	8.3000	8.2000
NIST	D5453	08/04/05	4	2	8.4700	8.1100	8.1800	0.8264	8.4700	8.1100	8.4700	8.1100
NIST	D2622	08/08/05	4	3	8.8400	8.5700	9.3200	0.8264	8.8400	9.3200	8.8400	8.5700
NIST	D5453	08/31/05	4	4	9.1900	9.4700	9.9400	0.8264	9.1900	9.4700		
NIST	D2622	08/26/05	4	5	8.3000	9.4000	9.6000	0.8264	8.3000	9.4000	8.3000	9.6000
NIST	D7039	08/22/05	4	6	7.4000	8.7000	8.7000	0.8264	8.7000	8.7000	7.4000	8.7000
NIST	D7039	08/09/05	4	7	9.1000	9.3000	9.2000	0.8264	9.1000	9.2000	9.3000	9.2000
NIST	D2622	08/04/05	4	8	9.1500	8.0400	9.8400	0.8264	8.0400	9.8400	9.1500	8.0400
NIST	D5453	08/03/05	4	8	8.6000	8.4600	8.4000	0.8264	8.6000	8.4600	8.6000	8.4600
NIST	D5453	08/05/05	4	9	8.7700	8.6100	8.9400	0.8264	8.7700	8.9400	8.6100	8.9400
NIST	D5453	08/05/05	4	11	9.2000	8.7000	8.9000	0.8264	9.2000	8.7000	9.2000	8.9000
NIST	D5453	08/26/08	4	12	8.1000	7.7000	8.2000	0.8264	8.1000	8.2000	8.1000	7.7000
NIST	D5453	08/24/05	4	13	8.0900	7.9900	8.0400	0.8264	8.0900	8.0400	7.9900	8.0400
NIST	D5453	08/17/05	4	15	8.4600	7.7900	8.2000	0.8264	7.7900	8.2000	8.4600	7.7900
NIST	D5453	08/22/05	4	16	8.1000	8.0800	8.0900	0.8264	8.0800	8.0900	8.1000	8.0800
NIST	D5453	08/11/05	4	18	8.2600	8.2400	8.4000	0.8264	8.2400	8.4000	8.2600	8.4000
NIST	D5453	08/19/05	4	19	8.0000	8.1000	8.1000	0.8264	8.0000	8.1000	8.0000	8.1000
NIST	D5453	08/12/05	4	21	7.9300	7.8900	7.9000	0.8264	7.9300	7.9000	7.8900	7.9000
NIST	D5453	08/22/05	4	23	7.4800	7.3800	7.5600	0.8264	7.4800	7.5600		
NIST	D5453	08/03/05	4	24	8.2000	8.4700	8.4600		8.2000	8.4600	8.2000	8.4600
NIST	D5453	08/31/05	4	25	8.2700	8.2800	8.3700	0.8264	8.2800	8.3700	8.2700	8.2800
NIST	D5453	08/04/05	4	26	8.4100	8.5200	8.2700	0.8264	8.4100	8.5200	8.5200	8.2700
NIST	D5453	08/25/05	4	27	8.4100	8.5400	8.5500	0.8264	8.4100	8.5400	8.5400	8.5500
NIST	D2622	08/26/05	4	28	10.0000	9.0000	9.5000	0.8264	10.0000	9.0000		
NIST	D5453	08/25/05	4	29	7.9980	8.5640	8.4210	0.8264	7.9980	8.4210	8.5640	8.4210
NIST	D5453	08/06/05	4	30	7.9800	8.1000	8.0000	0.8264	7.9800	8.0000	7.9800	8.1000
NIST	D5453	08/10/05	4	31	8.3000	8.2000	8.2000	0.8264	8.2000	8.2000	8.3000	8.2000
NIST	D5453	08/09/05	4	32	8.7100	8.7000	8.3500	0.8264	8.7100	8.7000	8.7100	8.7000
NIST	D5453	08/30/05	4	36	7.1000	7.2000	7.1000	0.8240	7.1000	7.2000		
NIST	D5453	08/26/05	4	37	7.7500	7.8500	7.7000	0.8264	7.7500	7.7000	7.7500	7.7000
NIST	D5453	08/30/05	4	38	8.9000	8.6000	8.7000	0.8264	8.9000	8.6000	8.6000	8.7000
NIST	D5453	09/01/05	4	39	8.0100	8.0900	7.9600	0.8264	8.0900	7.9600	8.0900	7.9600
NIST	D2622	08/05/05	4	41	8.6000	8.5000	8.6000	0.8264	8.6000	8.5000	8.6000	8.6000
NIST	D5453	08/11/05	4	41	8.9900	9.3100	9.1100	0.8264	9.3100	9.1100	8.9900	9.3100
NIST	D2622	09/01/05	4	EPA	8.8000	8.6000	8.7000	0.8264	8.8000	8.7000	8.8000	8.6000
NIST	D5453	08/30/05	4	EPA	8.3000	8.4000	8.4000	0.8264	8.3000	8.4000	8.3000	8.4000
NIST	D7039	09/07/05	4	EPA	7.8000	8.7000	9.1000	0.8264	7.8000	9.1000	8.7000	9.1000
NIST	D7039	08/19/05	4	47	8.8000	7.9000	8.4000	0.8264	8.8000	7.9000	7.9000	8.4000
NIST	D5453	08/11/05	4	48	10.0600	9.1600	26.3100	0.8264	10.0600	9.1600		
NIST	D2622	08/26/05	4	50	9.4000	9.2000	8.7000	0.8264	9.2000	8.7000	9.4000	9.2000
NIST	D5453	08/25/05	4	51	10.1000	10.0000	9.9000	0.8264	10.1000	10.0000		
NIST	D2622	08/29/05	4	53	8.6000	8.4000	8.8000	0.8264	8.6000	8.4000	8.6000	8.4000
NIST	D5453	08/16/05	4	54	7.8000	7.8000	7.8000	0.8264	7.8000	7.8000	7.8000	7.8000
NIST	D2622	08/02/05	4	55	8.0000	8.6000	9.0000	0.8264	8.0000	8.6000	8.6000	9.0000
NIST	D5453	08/05/05	4	56	7.8000	7.7000	7.6000	0.8264	7.8000	7.7000	7.8000	7.6000
NIST	D5453	08/31/05	4	59	8.7500	8.2000	8.6000	0.8264	8.2000	8.6000	8.7500	8.6000
NIST	D7039	08/04/05	4	60	8.2000	8.4000	8.2000	0.8264	8.4000	8.2000	8.2000	8.2000

Table B.18. August Fuel #4 Lab Data and Deletions Based on Composite Test Methods for NIST Calibration

Calibration	Test Method	Run Date	August Sample #	Lab Code	Original Lab Data Robust Outlier Deletion in Shaded Box				After Robust Outlier Deletion Random Selection of 2 Obs		After Gravimetric Deletion Random Selection of 2 Obs	
					Measure #1	Measure #2	Measure #3	Density	#1	#2	#1	#2
NIST	D5453	08/13/05	4	61	8.3800	8.2600	8.2500	0.8264	8.3800	8.2600	8.3800	8.2500
NIST	D5453	08/31/05	4	CARB	8.1000	8.0000	7.7000	0.8264	8.1000	7.7000	8.1000	8.0000
NIST	D5453	08/24/05	4	63	7.9800	8.0600	7.8000	0.8264	7.9800	7.8000	8.0600	7.8000
NIST	D5453	08/25/05	4	64	8.0000	8.0000	7.9000	0.8264	8.0000	8.0000	8.0000	8.0000
NIST	D5453		4	66	8.3500	8.4000	8.4800	0.8264	8.4000	8.4800	8.3500	8.4000
NIST	D2622	08/31/05	4	67	7.2670	9.0500	8.6060	0.8264	7.2670	9.0500	7.2670	8.6060
NIST	D5453	08/22/05	4	68	7.4000	7.5000	7.1000	0.8264	7.5000	7.1000		
NIST	D5453	08/19/05	4	72	8.2000	8.0000	8.1000	0.8264	8.2000	8.1000	8.0000	8.1000
NIST	D2622	08/26/05	4	73	9.4000	9.1000	9.6000	0.8264	9.4000	9.6000		
NIST	D5453	08/26/05	4	73	9.2000	9.2000	9.3000	0.8264	9.2000	9.3000	9.2000	9.3000
NIST	D5453	09/01/05	4	75	7.3600	7.5300	8.0700	0.8264	7.3600	8.0700	7.3600	7.5300
NIST	D5453	08/22/05	4	76	8.1100	8.0200	8.2000	0.8264	8.1100	8.2000	8.1100	8.0200
NIST	D5453	08/03/05	4	77	9.0800	9.9400	9.5500	0.8264	9.9400	9.5500		
NIST	D5453	08/31/05	4	78	8.8700	8.7300	9.1200	0.8264	8.7300	9.1200	8.8700	9.1200
NIST	D5453	08/24/05	4	81	8.1000	8.1000	7.9000	0.8264	8.1000	8.1000	8.1000	7.9000
NIST	D5453	08/05/05	4	82	8.3800	8.4900	8.2700	0.8264	8.3800	8.4900	8.3800	8.4900
NIST	D5453	08/18/05	4	83	7.3000	7.2000	7.0000	0.8264	7.3000	7.2000		
NIST	D5453	08/18/05	4	84	8.5000	9.1000	8.1000	0.8264	9.1000	8.1000	8.5000	9.1000
NIST	D5453	08/12/05	4	85	8.2000	8.1000	7.9000	0.8264	8.1000	7.9000	8.2000	7.9000
NIST	D3120	08/18/05	4	86	7.8000	8.1000	8.0000	0.8264	8.1000	8.0000	8.1000	8.0000
NIST	D5453	08/31/05	4	87	8.1000	7.9000	8.1000	0.8264	8.1000	7.9000	8.1000	8.1000
NIST	D5453	08/20/05	4	89	8.2000	8.0000	8.1000	0.8264	8.2000	8.0000	8.2000	8.0000
NIST	D5453	08/05/05	4	90	7.7000	7.9000	7.7000	0.8264	7.9000	7.7000	7.7000	7.7000
NIST	D5453	08/12/05	4	91	8.6200	8.5300	8.4900	0.8264	8.6200	8.4900	8.6200	8.5300
NIST	D3120	08/17/05	4	95	8.3000	8.3000	8.2000	0.8264	8.3000	8.2000	8.3000	8.2000
NIST	D5453	08/17/05	4	95	8.9000	9.0000	9.0000	0.8264	8.9000	9.0000	8.9000	9.0000
NIST	D5453		4	96	9.7400	9.5400	10.0100	0.8264	9.7400	9.5400		
NIST	D5453	08/15/05	4	97	8.3000	8.1000	8.1000	0.8264	8.1000	8.1000	8.3000	8.1000
NIST	D5453	08/25/05	4	99	8.1400	7.3000	6.9400	0.8264	7.3000	6.9400		
NIST	D5453	08/11/05	4	100	9.6000	9.6000	9.1000	0.8264	9.6000	9.6000		
NIST	D7039	08/15/05	4	102	8.7000	8.4000	8.7000	0.8264	8.4000	8.7000	8.4000	8.7000
NIST	D2622	08/26/05	4	103	7.4000	7.8000	7.1000	0.8264	7.4000	7.1000		
NIST	D5453	08/25/05	4	103	8.3000	7.8000	8.0000	0.8264	7.8000	8.0000	7.8000	8.0000
NIST	D7039	08/24/05	4	103	8.8000	8.4000	8.3000	0.8264	8.4000	8.3000	8.4000	8.3000
NIST	D2622	08/09/05	4	105	8.5000	9.2000	8.6000	0.8264	9.2000	8.6000	8.5000	8.6000
NIST	D7039	08/31/05	4	106	8.2000	8.8000	7.8000	0.8264	8.2000	8.8000	8.2000	7.8000
NIST	D7039	08/19/05	4	107	8.0000	8.5000	9.0000	0.8264	8.0000	8.5000	8.0000	8.5000
NIST	D5453	08/08/05	4	108	7.0000	7.0000	7.0000	0.8264	7.0000	7.0000		
NIST	D5453	08/31/05	4	109	9.5000	9.1000	9.4000	0.8264	9.5000	9.1000		
NIST	D7039	08/29/05	4	109	8.3000	8.2000	8.4000	0.8264	8.3000	8.2000	8.3000	8.2000
NIST	D5453	08/22/05	4	110	8.2200	8.1500	8.4500	0.8264	8.2200	8.1500	8.2200	8.1500
NIST	D7039	08/15/05	4	111	7.1000	7.2000	9.4000	0.8264	7.2000	9.4000	7.1000	7.2000
NIST	D5453	08/19/05	4	112	8.2500	8.4200	8.2300	0.8956	8.2500	8.4200	8.2500	8.2300
NIST	D5453	08/19/05	4	113	7.4000	7.5000	8.0000	0.8264	7.4000	8.0000	7.4000	7.5000
NIST	D5453	08/26/05	4	114	8.1000	8.0000	7.9000	0.8264	8.1000	7.9000	8.0000	7.9000
NIST	D5453	08/12/05	4	115	7.9000	7.9000	7.9000	0.8264	7.9000	7.9000	7.9000	7.9000
NIST	D5453	08/09/05	4	116	8.2700	8.1300	8.3700	0.8264	8.2700	8.3700	8.2700	8.3700

**Table B.18. August Fuel #4 Lab Data and Deletions Based on Composite Test Methods for NIST Calibration**

Calibration	Test Method	Run Date	August Sample #	Lab Code	Original Lab Data Robust Outlier Deletion in Shaded Box				After Robust Outlier Deletion Random Selection of 2 Obs		After Gravimetric Deletion Random Selection of 2 Obs	
					Measure #1	Measure #2	Measure #3	Density	#1	#2	#1	#2
NIST	D5453	08/15/05	4	117	8.2900	8.1200	8.3200	0.8264	8.2900	8.1200	8.2900	8.3200
NIST	D5453	08/25/05	4	118	8.5200	8.7200	8.8300	0.8264	8.5200	8.8300	8.7200	8.8300
NIST	D5453	08/11/05	4	119	8.6400	8.5900	8.6500	0.8264	8.5900	8.6500	8.6400	8.6500
NIST	D5453	08/30/05	4	120	8.4000	8.6000	8.3000	0.8264	8.6000	8.3000	8.6000	8.3000
NIST	D2622	09/01/05	4	121	8.8000	9.2000	9.1000	0.8264	8.8000	9.1000	9.2000	9.1000
NIST	D5453	08/12/05	4	122	8.5000	8.4000	8.0000	0.8264	8.4000	8.0000	8.4000	8.0000
NIST	D2622	08/15/05	4	123	8.3000	8.8000	8.3000	0.8264	8.3000	8.3000	8.3000	8.8000
NIST	D2622	08/24/05	4	124	9.4000	9.1000	10.3000	0.8264	9.4000	9.1000		
NIST	D2622	08/31/05	4	126	9.0000	8.6000	9.1000	0.8264	9.0000	8.6000	9.0000	9.1000
NIST	D5453	08/10/05	4	126	7.8000	7.8000	8.9700	0.8264	7.8000	7.8000	7.8000	8.9700
NIST	D7039	08/26/05	4	127	8.9000	8.2000	8.0000	0.8264	8.2000	8.0000	8.2000	8.0000
NIST	D7039	08/17/05	4	128	8.9000	9.1000	9.3000	0.8264	8.9000	9.1000	8.9000	9.1000
NIST	D5453	08/10/05	4	129	8.1000	8.2000	8.2000	0.8264	8.2000	8.2000	8.1000	8.2000
NIST	D5453	08/08/05	4	130	8.1000	8.0000	7.9000	0.8264	8.1000	7.9000	8.0000	7.9000
NIST	D2622	08/11/05	4	131	7.3000	7.1000	7.3000	0.8264	7.3000	7.1000		
NIST	EDXRF	08/11/05	4	131	7.3000	7.4000	7.6000	0.8264	7.3000	7.4000		
NIST	D5453	08/25/05	4	132	8.4300	8.3030	8.1610	0.8264	8.3030	8.1610	8.3030	8.1610
NIST	D2622	08/31/05	4	133	7.7000	7.7000	7.8000	0.8264	7.7000	7.7000	7.7000	7.8000
NIST	EDXRF	08/30/05	4	134	8.2000	8.0000	8.5000	0.8264	8.2000	8.0000	8.0000	8.5000
NIST	EDXRF	08/10/05	4	135	8.0000	7.6000	8.3000	0.8264	7.6000	8.3000	7.6000	8.3000
NIST	D2622	08/09/05	4	136	8.6000	9.6000	9.4000	0.8264	8.6000	9.6000	8.6000	9.4000
NIST	EDXRF	08/09/05	4	136	8.4000	8.4000	8.7000	0.8264	8.4000	8.7000	8.4000	8.4000
NIST	D5453	08/14/05	4	137	9.0000	8.0400	7.6600	0.8264	9.0000	7.6600	9.0000	8.0400
NIST	EDXRF		4	137	7.4000	7.4000	7.3000	0.8264	7.4000	7.4000		
NIST	D5453	08/15/05	4	138	8.5000	8.6000	8.6000	0.8264	8.5000	8.6000	8.5000	8.6000
NIST	D2622	08/23/05	4	139	8.1000	8.9000	8.4000	0.8956	8.9000	8.4000	8.9000	8.4000
NIST	D5453	08/25/05	4	139	8.6000	8.3000	8.2000	0.8264	8.3000	8.2000	8.3000	8.2000
NIST	D2622	08/22/05	4	140	7.4000	8.2000	10.2000	0.8264	8.2000	10.2000	7.4000	10.2000
NIST	EDXRF	08/22/05	4	141	8.3000	8.5000	8.4000	0.8264	8.3000	8.4000	8.3000	8.4000
NIST	D5453	08/12/05	4	143	9.0200	8.8400	9.0700	0.8264	8.8400	9.0700	9.0200	9.0700
NIST	D3120		4	144	8.1000	8.3000	8.4000	0.8264	8.1000	8.3000	8.1000	8.3000
NIST	D2622	09/04/05	4	145	10.6000	10.5000	9.6000		9.6000			
NIST	D5453	08/26/05	4	147	7.5000	9.0000	11.5000	0.8264	7.5000	9.0000		
NIST	D5453	08/15/05	4	148	8.3000	8.9000	8.5000	0.8264	8.3000	8.9000	8.3000	8.9000
NIST	D7039	08/09/05	4	148	8.2000	8.2000	8.7000	0.8264	8.2000	8.2000	8.2000	8.2000
NIST	D5453	08/25/05	4	149	8.4230	8.2580	8.2650	0.8264	8.4230	8.2650	8.4230	8.2650
NIST	D5453	08/17/05	4	151	7.3500	7.6700	7.6800	0.8264	7.3500	7.6700	7.3500	7.6800
NIST	D7039	08/16/05	4	151	8.7000	9.2000	8.9000	0.8264	8.7000	8.9000	8.7000	9.2000
NIST	D5453	08/19/05	4	152	7.9400	8.0600	8.1400	0.8264	7.9400	8.1400	7.9400	8.0600
NIST	D5453	08/17/05	4	153	8.3300	8.4400	8.2100	0.8264	8.4400	8.2100	8.3300	8.2100
NIST	D5453	08/16/05	4	154	8.5000	8.3000	8.2000	0.8264	8.3000	8.2000	8.3000	8.2000
NIST	D5453	08/15/05	4	156	9.1200	8.7700	8.2900	0.8264	9.1200	8.2900	9.1200	8.7700
NIST	D5453	08/06/05	4	158	10.6600	10.5200	10.3500	0.8264				
NIST	D5453	08/08/05	4	159	7.9700	7.6100	7.5600	0.8264	7.6100	7.5600	7.9700	7.6100
NIST	D7039	08/26/05	4	160	8.8000	9.5000	8.6000	0.8264	9.5000	8.6000	9.5000	8.6000
NIST	D5453	08/29/05	4	161	8.6500	8.6300	8.4300	0.8264	8.6500	8.4300	8.6500	8.4300
NIST	D2622	07/26/05	4	162	6.2600	5.6200	4.4600	0.8264				

**Table B.18. August Fuel #4 Lab Data and Deletions Based on Composite Test Methods for NIST Calibration**

Table B.18. August Fuel #4 Lab Data and Deletions Based on Composite Test Methods for NIST Calibration														
					Original Lab Data Robust Outlier Deletion in Shaded Box					After Robust Outlier Deletion Random Selection of 2 Obs			After Gravimetric Deletion Random Selection of 2 Obs	
Calibration	Test Method	Run Date	August Sample #	Lab Code	Measure #1	Measure #2	Measure #3	Density		#1	#2		#1	#2
NIST	D5453	08/30/05	4	162	8.1300	7.8100	8.0400	0.8264		8.1300	8.0400		7.8100	8.0400

**Table B.19. August Fuel #5 Lab Data and Deletions Based on Composite Test Methods for In-House Calibration**

Calibration	Test Method	Run Date	August Sample #	Lab Code	Original Lab Data Robust Outlier Deletion in Shaded Box				After Robust Outlier Deletion Random Selection of 2 Obs		After Gravimetric Deletion Random Selection of 2 Obs	
					Measure #1	Measure #2	Measure #3	Density	#1	#2	#1	#2
In-House	D5453	08/18/05	5	1	14.0000	13.8000	13.8000	0.8270	14.0000	13.8000	14.0000	13.8000
In-House	D5453	08/04/05	5	2	14.6700	14.8700	14.8600	0.8270	14.8700	14.8600	14.6700	14.8600
In-House	D2622	08/08/05	5	3	17.7600	16.7000	16.6900	0.8270	16.7000	16.6900		
In-House	D5453	08/31/05	5	4	15.8500	16.1300	16.1600	0.8270	16.1300	16.1600		
In-House	D2622		5	5	16.9000	15.3000	14.9000	0.8270	16.9000	14.9000		
In-House	D7039	08/22/05	5	6	15.9000	15.5000	16.4000	0.8270	15.9000	16.4000	15.9000	15.5000
In-House	D7039	08/09/05	5	7	15.4000	16.5000	16.4000	0.8270	15.4000	16.5000	16.5000	16.4000
In-House	D2622	08/04/05	5	8	16.3700	16.4000	16.4000	0.8270	16.3700	16.4000	16.4000	16.4000
In-House	D5453	08/03/05	5	8	14.1900	14.1400	14.0000	0.8270	14.1900	14.0000	14.1900	14.0000
In-House	D5453	08/05/05	5	9	14.2600	14.4500	14.2100	0.8270	14.2600	14.2100	14.2600	14.2100
In-House	D5453	08/04/05	5	11	15.0000	15.1000	15.0000	0.8270	15.1000	15.0000	15.0000	15.1000
In-House	D5453	08/25/05	5	12	14.9000	14.2500	14.4000	0.8270	14.2500	14.4000	14.2500	14.4000
In-House	D5453	08/08/05	5	13	15.4000	15.3000	15.6000	0.8270	15.4000	15.3000	15.4000	15.3000
In-House	D5453	07/26/05	5	15	15.0800	14.2000	14.7800	0.8270	14.2000	14.7800	15.0800	14.7800
In-House	D5453	08/19/05	5	16	14.1800	13.9300	14.0400	0.8270	14.1800	14.0400	14.1800	13.9300
In-House	D5453	08/11/05	5	18	14.9500	15.0300	14.9800	0.8270	14.9500	15.0300	14.9500	15.0300
In-House	D5453	08/16/05	5	19	14.6000	14.5000	14.6000	0.8270	14.6000	14.6000	14.6000	14.6000
In-House	D5453	08/10/05	5	21	14.2100	14.1900	14.4300	0.8270	14.1900	14.4300	14.2100	14.1900
In-House	D5453	08/22/05	5	23	13.0800	13.2700	13.5300	0.8270	13.2700	13.5300		
In-House	D5453	08/04/05	5	24	16.2400	16.3600	16.6500		16.2400	16.3600	16.2400	16.3600
In-House	D5453	08/31/05	5	25	13.7500	13.7400	13.7400	0.8270	13.7500	13.7400		
In-House	D5453	08/03/05	5	26	14.4100	14.1800	14.3400	0.8270	14.4100	14.3400	14.1800	14.3400
In-House	D5453	08/25/05	5	27	15.4000	15.2600	15.3200	0.8270	15.4000	15.3200	15.4000	15.3200
In-House	D2622	08/16/05	5	28	17.5000	16.8000	16.5000	0.8270	16.8000	16.5000	17.5000	16.8000
In-House	D5453	08/24/05	5	29	14.3260	14.5850	14.1140	0.8270	14.5850	14.1140	14.3260	14.1140
In-House	D5453	08/05/05	5	30	14.6000	14.7000	14.6000	0.8270	14.7000	14.6000	14.7000	14.6000
In-House	D5453	08/10/05	5	31	14.6000	14.7000	14.8000	0.8270	14.7000	14.8000	14.6000	14.7000
In-House	D5453	08/08/05	5	32	14.3600	14.4500	14.5100	0.8270	14.3600	14.4500	14.3600	14.4500
In-House	D5453	08/26/05	5	36	13.3000	13.5000	13.2000	0.8371	13.3000	13.2000		
In-House	D5453	08/30/05	5	37	14.2000	14.4000	14.2000	0.8270	14.4000	14.2000	14.2000	14.4000
In-House	D5453	08/26/05	5	38	13.3000	13.3000	13.4000	0.8270	13.3000	13.4000	13.3000	13.3000
In-House	D5453	08/31/05	5	39	15.2400	14.7500	14.3300	0.8270	15.2400	14.7500	14.7500	14.3300
In-House	D2622	08/05/05	5	41	16.0000	16.0000	15.9000	0.8270	16.0000	16.0000		
In-House	D5453	08/05/05	5	41	14.6300	14.7200	15.0700	0.8270	14.6300	15.0700	14.6300	15.0700
In-House	D2622	08/31/05	5	EPA	15.6000	15.9000	15.1000	0.8270	15.6000	15.9000	15.6000	15.9000
In-House	D5453	08/30/05	5	EPA	15.4000	15.3000	15.2000	0.8270	15.3000	15.2000	15.3000	15.2000
In-House	D7039	09/07/05	5	EPA	15.3000	15.1000	14.8000	0.8270	15.3000	15.1000	15.3000	14.8000
In-House	D7039	08/18/05	5	47	14.9000	14.5000	14.5000	0.8270	14.5000	14.5000	14.5000	14.5000
In-House	D5453	08/10/05	5	48	15.8300	14.6300	13.7100	0.8270	15.8300	14.6300		
In-House	D2622	08/25/05	5	50	15.3000	16.1000	15.5000	0.8270	15.3000	15.5000	15.3000	15.5000
In-House	D5453	08/24/05	5	51	14.6000	14.6000	14.8000	0.8270	14.6000	14.6000	14.6000	14.8000
In-House	D2622	08/26/05	5	53	16.4000	17.8000	17.6000	0.8270	17.8000	17.6000	16.4000	17.8000
In-House	D5453	08/11/05	5	54	14.0000	13.9000	13.9000	0.8270	13.9000	13.9000	13.9000	13.9000
In-House	D2622	08/02/05	5	55	15.1000	15.1000	15.3000	0.8270	15.1000	15.3000	15.1000	15.3000
In-House	D5453	08/04/05	5	56	13.6000	13.8000	13.7000	0.8270	13.6000	13.7000	13.8000	13.7000
In-House	D5453	08/30/05	5	59	15.7000	15.7500	16.3500	0.8270	15.7500	16.3500	15.7500	16.3500
In-House	D7039	08/04/05	5	60	15.8000	15.6000	14.8000	0.8270	15.6000	14.8000	15.6000	14.8000

**Table B.19. August Fuel #5 Lab Data and Deletions Based on Composite Test Methods for In-House Calibration**

Calibration	Test Method	Run Date	August Sample #	Lab Code	Original Lab Data Robust Outlier Deletion in Shaded Box				After Robust Outlier Deletion Random Selection of 2 Obs		After Gravimetric Deletion Random Selection of 2 Obs	
					Measure #1	Measure #2	Measure #3	Density	#1	#2	#1	#2
In-House	D5453	08/13/05	5	61	13.9300	13.9800	13.9300	0.8270	13.9300	13.9300	13.9300	13.9800
In-House	D5453	08/30/05	5	CARB	13.7200	13.6300	14.0900	0.8270	13.6300	14.0900		
In-House	D5453	08/23/05	5	63	15.1800	14.1700	14.6400	0.8270	14.1700	14.6400	15.1800	14.1700
In-House	D5453	08/22/05	5	64	14.6000	14.7000	14.9000	0.8270	14.6000	14.7000	14.6000	14.7000
In-House	D5453	08/29/05	5	66	14.1200	14.5500	14.5200	0.8270	14.1200	14.5200	14.5500	14.5200
In-House	D2622	08/30/05	5	67	14.1620	15.0930	14.8230	0.8270	14.1620	15.0930	14.1620	15.0930
In-House	D5453	08/22/05	5	68	11.0000	10.9000	10.8000	0.8270			11.0000	10.8000
In-House	D5453	08/19/05	5	72	14.1000	13.7000	14.0000	0.8270	14.1000	14.0000	13.7000	14.0000
In-House	D2622	08/26/05	5	73	16.0000	17.3000	17.3000	0.8270	16.0000	17.3000	16.0000	17.3000
In-House	D5453	08/26/05	5	73	16.3000	16.0000	16.2000	0.8270	16.0000	16.2000		
In-House	D5453	08/31/05	5	75	11.7500	11.3400	12.2700	0.8270	11.7500	12.2700		
In-House	D5453	08/22/05	5	76	14.1500	14.2000	14.2800	0.8270	14.2000	14.2800	14.1500	14.2800
In-House	D5453	08/03/05	5	77	16.0000	15.6000	14.5800	0.8270	15.6000	14.5800	15.6000	14.5800
In-House	D5453	08/31/05	5	78	14.7900	14.9100	15.1800	0.8270	14.9100	15.1800	14.9100	15.1800
In-House	D5453	08/17/05	5	81	15.1000	15.3000	15.4000	0.8270	15.1000	15.3000	15.1000	15.3000
In-House	D5453	08/05/05	5	82	14.7800	14.5900	14.6800	0.8270	14.5900	14.6800	14.5900	14.6800
In-House	D5453	08/18/05	5	83	15.5000	15.3000	14.8000	0.8270	15.3000	14.8000	15.5000	14.8000
In-House	D5453	08/11/05	5	84	15.1000	15.3000	15.5000	0.8270	15.1000	15.5000	15.1000	15.3000
In-House	D5453	08/05/05	5	85	13.9000	13.9000	13.8000	0.8270	13.9000	13.8000	13.9000	13.8000
In-House	D3120	08/11/05	5	86	14.4000	14.1000	14.0000	0.8270	14.4000	14.0000	14.4000	14.1000
In-House	D5453	08/31/05	5	87	12.3000	12.1000	11.8000	0.8270	12.3000	12.1000		
In-House	D5453	08/20/05	5	89	14.4000	14.5000	14.3000	0.8270	14.4000	14.3000	14.4000	14.5000
In-House	D5453	08/04/05	5	90	13.7000	13.6000	13.9000	0.8270	13.7000	13.9000	13.7000	13.9000
In-House	D5453	08/11/05	5	91	15.1400	15.1400	14.9800	0.8270	15.1400	14.9800	15.1400	14.9800
In-House	D3120	08/09/05	5	95	13.4000	13.9000	13.3000	0.8270	13.4000	13.9000	13.4000	13.9000
In-House	D5453	08/09/05	5	95	14.3000	14.5000	14.4000	0.8270	14.5000	14.4000	14.5000	14.4000
In-House	D5453	08/17/05	5	96	18.0900	17.8900	18.2200	0.8270		17.8900		
In-House	D5453	08/15/05	5	97	14.3000	14.1000	14.3000	0.8270	14.1000	14.3000	14.3000	14.3000
In-House	D5453	08/24/05	5	99	13.1600	12.4500	12.8000	0.8270	12.4500	12.8000	13.1600	12.8000
In-House	D5453	08/10/05	5	100	11.6000	12.4000	11.8000	0.8270	12.4000	11.8000		
In-House	D7039	08/16/05	5	102	14.6000	14.5000	15.0000	0.8270	14.6000	14.5000	14.5000	15.0000
In-House	D2622	08/25/05	5	103	16.4000	15.5000	16.2000	0.8270	15.5000	16.2000	15.5000	16.2000
In-House	D5453	08/23/05	5	103	14.1000	14.0000	14.5000	0.8270	14.0000	14.5000	14.0000	14.5000
In-House	D7039	08/24/05	5	103	14.1000	14.7000	14.0000	0.8270	14.1000	14.0000		
In-House	D2622	08/09/05	5	105	15.6000	16.0000	16.0000	0.8270	15.6000	16.0000	15.6000	16.0000
In-House	D7039	08/30/05	5	106	15.0000	14.4000	15.0000	0.8270	14.4000	15.0000	14.4000	15.0000
In-House	D7039	08/11/05	5	107	14.7000	14.5000	14.6000	0.8270	14.5000	14.6000	14.5000	14.6000
In-House	D5453	08/03/05	5	108	12.7000	12.8000	12.7000	0.8270	12.8000	12.7000		
In-House	D5453	08/29/05	5	109	13.1000	13.0000	13.1000	0.8270	13.1000	13.0000	13.1000	13.0000
In-House	D7039	08/26/05	5	109	13.5000	13.2000	13.4000	0.8270	13.2000	13.4000		
In-House	D5453	08/12/05	5	110	15.2400	14.9700	14.7900	0.8270	15.2400	14.9700	15.2400	14.9700
In-House	D7039	08/12/05	5	111	13.0000	12.5000	12.0000	0.8270	13.0000	12.0000	13.0000	12.0000
In-House	D5453	08/18/05	5	112	17.3000	17.4500	17.3400	0.8526	17.4500	17.3400		
In-House	D5453	08/15/05	5	113	14.2000	14.9000	14.7000	0.8270	14.9000	14.7000		
In-House	D5453	08/25/05	5	114	15.3000	15.3000	14.9000	0.8270	15.3000	14.9000	15.3000	14.9000
In-House	D5453	08/11/05	5	115	14.2000	14.9000	14.7000	0.8270	14.2000	14.7000	14.9000	14.7000
In-House	D5453	08/09/05	5	116	15.1300	15.0500	15.1400	0.8270	15.1300	15.0500	15.1300	15.0500

**Table B.19. August Fuel #5 Lab Data and Deletions Based on Composite Test Methods for In-House Calibration**

Calibration	Test Method	Run Date	August Sample #	Lab Code	Original Lab Data Robust Outlier Deletion in Shaded Box				After Robust Outlier Deletion Random Selection of 2 Obs		After Gravimetric Deletion Random Selection of 2 Obs	
					Measure #1	Measure #2	Measure #3	Density	#1	#2	#1	#2
In-House	D5453	08/16/05	5	117	14.8100	14.6000	14.4700	0.8270	14.8100	14.6000	14.8100	14.6000
In-House	D5453	08/25/05	5	118	15.1300	15.2000	15.3400	0.8270	15.2000	15.3400	15.1300	15.3400
In-House	D5453	08/11/05	5	119	14.2100	14.1500	14.2100	0.8270	14.2100	14.2100	14.1500	14.2100
In-House	D5453	08/29/05	5	120	15.2000	15.1000	15.2000	0.8270	15.2000	15.1000	15.2000	15.1000
In-House	D2622	08/31/05	5	121	15.4000	15.2000	15.5000	0.8270	15.4000	15.2000	15.4000	15.5000
In-House	D5453	08/11/05	5	122	15.0000	15.0000	15.1000	0.8270	15.0000	15.0000	15.0000	15.1000
In-House	D2622	08/15/05	5	123	14.6000	15.3000	15.0000	0.8270	14.6000	15.0000	15.3000	15.0000
In-House	D2622	08/17/05	5	124	16.1000	15.6000	15.1000	0.8270	16.1000	15.6000	16.1000	15.6000
In-House	D2622	08/10/05	5	126	13.8000	15.1000	12.9000	0.8270	13.8000	12.9000	13.8000	15.1000
In-House	D5453	08/10/05	5	126	12.0000	12.2000	12.1000	0.8270	12.2000	12.1000		
In-House	D7039	08/26/05	5	127	14.6000	14.8000	15.1000	0.8270	14.6000	14.8000	14.6000	15.1000
In-House	D7039	08/17/05	5	128	14.5000	14.4000	14.3000	0.8270	14.5000	14.3000	14.4000	14.3000
In-House	D5453	08/09/05	5	129	15.6700	15.7000	15.5000	0.8270	15.6700	15.5000	15.7000	15.5000
In-House	D5453	08/09/05	5	130	14.9000	14.8000	14.6000	0.8270	14.8000	14.6000	14.8000	14.6000
In-House	D2622	08/15/05	5	131	15.5000	15.6000	16.1000	0.8270	15.6000	16.1000		
In-House	EDXRF	08/10/05	5	131	14.9000	15.7000	15.5000	0.8270	14.9000	15.7000	15.7000	15.5000
In-House	D5453	08/25/05	5	132	15.1380	15.7710	15.1950	0.8270	15.7710	15.1950	15.1380	15.7710
In-House	D2622	08/31/05	5	133	15.9000	15.9000	16.9000	0.8270	15.9000	15.9000	15.9000	16.9000
In-House	EDXRF	08/30/05	5	134	17.6000	16.5000	17.9000	0.8270	17.6000	17.9000	17.6000	16.5000
In-House	EDXRF	08/09/05	5	135	14.8000	14.6000	14.8000	0.8270	14.6000	14.8000	14.8000	14.6000
In-House	D2622	08/09/05	5	136	15.6000	15.5000	15.1000	0.8270	15.5000	15.1000	15.6000	15.1000
In-House	EDXRF	08/09/05	5	136	15.3000	14.5000	15.2000	0.8270	15.3000	14.5000	15.3000	14.5000
In-House	D5453	08/12/05	5	137	14.0500	14.4600	14.1800	0.8270	14.4600	14.1800	14.0500	14.4600
In-House	EDXRF	08/12/05	5	137	16.5000	15.4000	15.8000	0.8270	16.5000	15.8000	16.5000	15.4000
In-House	D5453	08/17/05	5	138	15.4000	15.5000	15.2000	0.8270	15.4000	15.5000	15.4000	15.5000
In-House	D2622	08/26/05	5	139	15.8000	16.0000	16.2000	0.8526	15.8000	16.2000	16.0000	16.2000
In-House	D5453	08/31/05	5	139	13.9000	14.4000	14.1200	0.8270	13.9000	14.4000	13.9000	14.1200
In-House	D2622	08/22/05	5	140	22.4000	20.5000	18.5000	0.8270				
In-House	EDXRF	08/10/05	5	141	15.3000	15.1000	14.9000	0.8270	15.3000	14.9000	15.3000	14.9000
In-House	D5453	08/12/05	5	143	15.2700	15.9700	16.0400	0.8270	15.9700	16.0400	15.2700	15.9700
In-House	D3120	07/09/05	5	144	13.5000	13.4000	13.5000	0.8270	13.5000	13.4000	13.5000	13.4000
In-House	D2622	09/04/05	5	145	19.0000	19.4000	19.3000					
In-House	D5453	08/26/05	5	147	15.0000	15.0000	15.2000	0.8270	15.0000	15.0000	15.0000	15.2000
In-House	D5453	08/15/05	5	148	14.8000	14.8000	15.0000	0.8270	14.8000	14.8000	14.8000	14.8000
In-House	D7039	08/09/05	5	148	14.5000	14.4000	14.6000	0.8270	14.4000	14.6000	14.5000	14.6000
In-House	D5453	08/18/05	5	149	15.1190	14.7670	14.6280	0.8270	15.1190	14.7670	15.1190	14.6280
In-House	D5453	08/17/05	5	151	15.7500	15.6000	15.1100	0.8270	15.7500	15.6000	15.7500	15.6000
In-House	D7039	08/16/05	5	151	14.5000	14.6000	15.4000	0.8270	14.5000	15.4000	14.5000	15.4000
In-House	D5453	08/11/05	5	152	12.9900	12.8400	12.8800	0.8270	12.9900	12.8400	12.9900	12.8800
In-House	D5453	08/12/05	5	153	14.4400	14.8200	14.4400	0.8270	14.4400	14.4400	14.8200	14.4400
In-House	D5453	08/15/05	5	154	15.0000	15.3000	16.0000	0.8270	15.3000	16.0000	15.0000	16.0000
In-House	D5453	08/16/05	5	156	14.3900	14.2700	14.1500	0.8270	14.2700	14.1500	14.2700	14.1500
In-House	D5453	08/05/05	5	158	19.7200	19.6900	19.8300	0.8270				
In-House	D5453	08/08/05	5	159	16.1800	15.7900	15.9600	0.8270	16.1800	15.7900	16.1800	15.9600
In-House	D7039	08/26/05	5	160	14.7000	13.5000	14.1000	0.8270	14.7000	13.5000	14.7000	14.1000
In-House	D5453	08/30/05	5	161	14.0300	14.0800	14.4100	0.8270	14.0300	14.4100	14.0300	14.0800
In-House	D2622	08/26/05	5	162	14.3200	13.7900	14.8700	0.8270	14.3200	13.7900	14.3200	14.8700



**Table B.19. August Fuel #5 Lab Data and Deletions Based on Composite Test Methods for In-House Calibration**

Table B.19. August Fuel #5 Lab Data and Deletions Based on Composite Test Methods for In-House Calibration													
Calibration	Test Method	Run Date	August Sample #	Lab Code	Original Lab Data Robust Outlier Deletion in Shaded Box				After Robust Outlier Deletion Random Selection of 2 Obs		After Gravimetric Deletion Random Selection of 2 Obs		
					Measure #1	Measure #2	Measure #3	Density	#1	#2	#1	#2	
In-House	D5453	08/25/05	5	162	15.2900	16.1300	15.6000	0.8270	16.1300	15.6000	15.2900	15.6000	

**Table B.20. August Fuel #5 Lab Data and Deletions Based on Composite Test Methods for NIST Calibration**

Calibration	Test Method	Run Date	August Sample #	Lab Code	Original Lab Data Robust Outlier Deletion in Shaded Box				After Robust Outlier Deletion Random Selection of 2 Obs		After Gravimetric Deletion Random Selection of 2 Obs	
					Measure #1	Measure #2	Measure #3	Density	#1	#2	#1	#2
NIST	D5453	08/18/05	5	1	14.5000	14.7000	14.6000	0.8270	14.7000	14.6000	14.7000	14.6000
NIST	D5453	08/04/05	5	2	14.7600	14.8300	15.0000	0.8270	14.8300	15.0000	14.8300	15.0000
NIST	D2622	08/08/05	5	3	16.0200	16.5800	16.2500	0.8270	16.0200	16.5800	16.0200	16.2500
NIST	D5453	08/31/05	5	4	16.6800	17.1900	16.7100	0.8270	16.6800	16.7100		
NIST	D2622	08/26/05	5	5	15.0000	15.5000	15.0000	0.8270	15.5000	15.0000	15.5000	15.0000
NIST	D7039	08/22/05	5	6	13.4000	12.9000	12.9000	0.8270	13.4000	12.9000	12.9000	12.9000
NIST	D7039	08/09/05	5	7	15.8000	16.4000	16.7000	0.8270	15.8000	16.7000	15.8000	16.7000
NIST	D2622	08/04/05	5	8	16.9900	16.6800	16.5900	0.8270	16.9900	16.5900	16.9900	16.5900
NIST	D5453	08/03/05	5	8	14.7000	14.9800	14.9600	0.8270	14.9800	14.9600	14.7000	14.9800
NIST	D5453	08/05/05	5	9	14.6700	14.7100	14.7100	0.8270	14.7100	14.7100	14.6700	14.7100
NIST	D5453	08/05/05	5	11	15.9000	15.8000	16.1000	0.8270	15.9000	15.8000	15.8000	16.1000
NIST	D5453	08/26/08	5	12	14.2000	14.2000	14.2000	0.8270	14.2000	14.2000	14.2000	14.2000
NIST	D5453	08/24/05	5	13	14.1200	14.4200	14.1100	0.8270	14.1200	14.4200	14.4200	14.1100
NIST	D5453	08/17/05	5	15	14.2000	14.7800	14.5900	0.8270	14.2000	14.7800	14.2000	14.5900
NIST	D5453	08/22/05	5	16	13.9000	14.1700	14.3200	0.8270	13.9000	14.3200	13.9000	14.3200
NIST	D5453	08/11/05	5	18	14.7700	14.7200	14.8100	0.8270	14.7200	14.8100	14.7700	14.8100
NIST	D5453	08/19/05	5	19	14.7000	14.6000	14.5000	0.8270	14.6000	14.5000	14.7000	14.5000
NIST	D5453	08/12/05	5	21	14.0500	14.0200	13.9800	0.8270	14.0500	13.9800	14.0200	13.9800
NIST	D5453	08/22/05	5	23	13.7800	14.0400	14.2900	0.8270	13.7800	14.0400		
NIST	D5453	08/03/05	5	24	15.2800	15.0300	15.1600	0.8270	15.0300	15.1600	15.2800	15.0300
NIST	D5453	08/31/05	5	25	14.9900	14.9700	15.0700	0.8270	14.9900	15.0700	14.9900	15.0700
NIST	D5453	08/04/05	5	26	14.8400	14.9100	15.7000	0.8270	14.8400	14.9100	14.9100	15.7000
NIST	D5453	08/25/05	5	27	15.1100	14.6700	14.9000	0.8270	14.6700	14.9000	14.6700	14.9000
NIST	D2622	08/26/05	5	28	16.5000	17.3000	16.3000	0.8270	16.5000	17.3000		
NIST	D5453	08/25/05	5	29	14.2290	13.8630	14.2230	0.8270	14.2290	13.8630	14.2290	14.2230
NIST	D5453	08/06/05	5	30	14.7000	14.6000	14.7000	0.8270	14.7000	14.6000	14.7000	14.7000
NIST	D5453	08/10/05	5	31	14.9000	14.7000	14.4000	0.8270	14.9000	14.4000	14.7000	14.4000
NIST	D5453	08/09/05	5	32	15.3700	15.7000	15.3800	0.8270	15.3700	15.7000	15.3700	15.7000
NIST	D5453	08/30/05	5	36	13.7000	13.9000	13.8000	0.8371	13.9000	13.8000		
NIST	D5453	08/26/05	5	37	14.3000	14.1000	14.3000	0.8270	14.3000	14.1000	14.1000	14.3000
NIST	D5453	08/30/05	5	38	15.1000	14.8000	15.1000	0.8270	15.1000	14.8000	15.1000	15.1000
NIST	D5453	09/01/05	5	39	14.5300	14.7500	14.7500	0.8270	14.5300	14.7500	14.7500	14.7500
NIST	D2622	08/05/05	5	41	15.4000	15.4000	14.9000	0.8270	15.4000	14.9000	15.4000	15.4000
NIST	D5453	08/11/05	5	41	15.8400	16.6100	16.2600	0.8270	16.6100	16.2600	15.8400	16.2600
NIST	D2622	09/01/05	5	EPA	16.5000	16.5000	16.4000	0.8270	16.5000	16.5000	16.5000	16.4000
NIST	D5453	08/30/05	5	EPA	15.1000	15.3000	15.0000	0.8270	15.3000	15.0000	15.1000	15.0000
NIST	D7039	09/07/05	5	EPA	15.2000	14.8000	15.6000	0.8270	15.2000	14.8000	15.2000	15.6000
NIST	D7039	08/19/05	5	47	14.5000	14.3000	15.4000	0.8270	14.3000	15.4000	14.5000	15.4000
NIST	D5453	08/11/05	5	48	17.2700	10.2900	30.5000	0.8270	17.2700			
NIST	D2622	08/26/05	5	50	15.6000	16.3000	16.9000	0.8270	15.6000	16.9000	15.6000	16.9000
NIST	D5453	08/25/05	5	51	18.0000	17.9000	18.0000	0.8270				
NIST	D2622	08/29/05	5	53	17.1000	17.3000	16.6000	0.8270	17.1000	17.3000	17.3000	16.6000
NIST	D5453	08/16/05	5	54	14.4000	14.4000	14.5000	0.8270	14.4000	14.5000	14.4000	14.5000
NIST	D2622	08/02/05	5	55	14.7000	13.9000	15.0000	0.8270	14.7000	15.0000	13.9000	15.0000
NIST	D5453	08/05/05	5	56	14.3000	14.5000	14.6000	0.8270	14.5000	14.6000	14.5000	14.6000
NIST	D5453	08/31/05	5	59	15.3700	15.2900	15.8000	0.8270	15.3700	15.2900	15.2900	15.8000

**Table B.20. August Fuel #5 Lab Data and Deletions Based on Composite Test Methods for NIST Calibration**

Calibration	Test Method	Run Date	August Sample #	Lab Code	Original Lab Data Robust Outlier Deletion in Shaded Box				After Robust Outlier Deletion Random Selection of 2 Obs		After Gravimetric Deletion Random Selection of 2 Obs	
					Measure #1	Measure #2	Measure #3	Density	#1	#2	#1	#2
NIST	D7039	08/04/05	5	60	14.4000	14.6000	14.6000	0.8270	14.6000	14.6000	14.6000	14.6000
NIST	D5453	08/13/05	5	61	14.6600	14.6800	14.5700	0.8270	14.6800	14.5700	14.6800	14.5700
NIST	D5453	08/31/05	5	CARB	14.5000	14.3000	14.4000	0.8270	14.3000	14.4000	14.3000	14.4000
NIST	D5453	08/24/05	5	63	15.2500	14.4800	14.2000	0.8270	15.2500	14.4800	14.4800	14.2000
NIST	D5453	08/25/05	5	64	14.4000	14.0000	13.6000	0.8270	14.4000	14.0000	14.0000	13.6000
NIST	D5453		5	66	13.5500	13.5300	13.7500	0.8270	13.5500	13.5300	13.5500	13.5300
NIST	D2622	08/31/05	5	67	14.3910	14.3420	13.6940	0.8270	14.3910	13.6940	14.3910	13.6940
NIST	D5453	08/22/05	5	68	10.8000	11.0000	10.7000	0.8270				
NIST	D5453	08/19/05	5	72	13.9000	13.7000	13.6000	0.8270	13.7000	13.6000	13.7000	13.6000
NIST	D2622	08/26/05	5	73	15.6000	17.1000	17.5000	0.8270	15.6000	17.1000		
NIST	D5453	08/26/05	5	73	16.3000	16.2000	16.2000	0.8270	16.2000	16.2000	16.3000	16.2000
NIST	D5453	09/01/05	5	75	13.1100	12.9400	14.1100	0.8270	12.9400	14.1100	13.1100	12.9400
NIST	D5453	08/22/05	5	76	14.4700	14.6600	14.6400	0.8270	14.4700	14.6600	14.6600	14.6400
NIST	D5453	08/03/05	5	77	16.2800	15.9100	16.0300	0.8270	16.2800	15.9100		
NIST	D5453	08/31/05	5	78	15.2500	15.1500	15.1300	0.8270	15.1500	15.1300	15.2500	15.1500
NIST	D5453	08/24/05	5	81	14.8000	14.4000	14.7000	0.8270	14.8000	14.7000	14.8000	14.7000
NIST	D5453	08/05/05	5	82	14.3000	14.2100	13.9900	0.8270	14.2100	13.9900	14.2100	13.9900
NIST	D5453	08/18/05	5	83	12.9000	13.1000	12.7000	0.8270	13.1000	12.7000		
NIST	D5453	08/18/05	5	84	14.3000	13.9000	14.1000	0.8270	14.3000	14.1000	14.3000	13.9000
NIST	D5453	08/12/05	5	85	12.5000	12.7000	12.8000	0.8270	12.5000	12.8000	12.5000	12.7000
NIST	D3120	08/18/05	5	86	14.1000	14.2000	14.0000	0.8270	14.2000	14.0000	14.1000	14.0000
NIST	D5453	08/31/05	5	87	11.1000	11.4000	11.4000	0.8270			11.4000	11.4000
NIST	D5453	08/20/05	5	89	14.7000	14.9000	14.8000	0.8270	14.7000	14.9000	14.7000	14.8000
NIST	D5453	08/05/05	5	90	13.7000	13.7000	13.9000	0.8270	13.7000	13.9000	13.7000	13.9000
NIST	D5453	08/12/05	5	91	15.1000	15.0000	14.8200	0.8270	15.1000	14.8200	15.1000	14.8200
NIST	D3120	08/17/05	5	95	14.7000	14.3000	14.5000	0.8270	14.7000	14.3000	14.7000	14.5000
NIST	D5453	08/17/05	5	95	14.7000	14.9000	15.1000	0.8270	14.9000	15.1000	14.9000	15.1000
NIST	D5453		5	96	18.0900	17.5300	18.1400	0.8270				
NIST	D5453	08/15/05	5	97	14.4000	14.5000	14.4000	0.8270	14.5000	14.4000	14.4000	14.5000
NIST	D5453	08/25/05	5	99	13.7400	12.9300	12.6400	0.8270	13.7400	12.9300		
NIST	D5453	08/11/05	5	100	16.4000	16.0000	16.6000	0.8270	16.4000	16.0000		
NIST	D7039	08/15/05	5	102	14.8000	15.0000	14.8000	0.8270	14.8000	15.0000	15.0000	14.8000
NIST	D2622	08/26/05	5	103	17.4000	17.3000	16.5000	0.8270	17.3000	16.5000		
NIST	D5453	08/25/05	5	103	14.3000	14.1000	13.8000	0.8270	14.1000	13.8000	14.3000	14.1000
NIST	D7039	08/24/05	5	103	15.1000	14.9000	14.6000	0.8270	15.1000	14.6000	14.9000	14.6000
NIST	D2622	08/09/05	5	105	16.3000	15.9000	16.2000	0.8270	16.3000	15.9000	16.3000	16.2000
NIST	D7039	08/31/05	5	106	14.7000	14.3000	14.4000	0.8270	14.7000	14.4000	14.7000	14.4000
NIST	D7039	08/19/05	5	107	14.8000	15.0000	14.3000	0.8270	15.0000	14.3000	14.8000	15.0000
NIST	D5453	08/08/05	5	108	12.8000	12.8000	12.7000	0.8270	12.8000	12.7000		
NIST	D5453	08/31/05	5	109	15.9000	15.7000	15.9000	0.8270	15.7000	15.9000		
NIST	D7039	08/29/05	5	109	14.9000	14.9000	14.3000	0.8270	14.9000	14.3000	14.9000	14.3000
NIST	D5453	08/22/05	5	110	12.6400	14.3700	14.7800	0.8270	12.6400	14.7800	14.3700	14.7800
NIST	D7039	08/15/05	5	111	12.9000	12.6000	13.0000	0.8270	12.9000	12.6000	12.9000	12.6000
NIST	D5453	08/19/05	5	112	14.7000	14.6000	14.8900	0.8526	14.6000	14.8900	14.7000	14.6000
NIST	D5453	08/19/05	5	113	14.2000	14.5000	14.3000	0.8270	14.2000	14.3000	14.2000	14.3000
NIST	D5453	08/26/05	5	114	14.3000	14.1000	14.2000	0.8270	14.3000	14.2000	14.1000	14.2000
NIST	D5453	08/12/05	5	115	14.0000	14.2000	14.1000	0.8270	14.2000	14.1000	14.2000	14.1000

**Table B.20. August Fuel #5 Lab Data and Deletions Based on Composite Test Methods for NIST Calibration**

Calibration	Test Method	Run Date	August Sample #	Lab Code	Original Lab Data Robust Outlier Deletion in Shaded Box				After Robust Outlier Deletion Random Selection of 2 Obs		After Gravimetric Deletion Random Selection of 2 Obs	
					Measure #1	Measure #2	Measure #3	Density	#1	#2	#1	#2
NIST	D5453	08/09/05	5	116	14.4100	14.6200	14.5300	0.8270	14.6200	14.5300	14.4100	14.5300
NIST	D5453	08/15/05	5	117	14.5500	14.5700	14.4200	0.8270	14.5500	14.5700	14.5500	14.4200
NIST	D5453	08/25/05	5	118	15.2300	15.3800	15.3200	0.8270	15.2300	15.3800	15.2300	15.3800
NIST	D5453	08/11/05	5	119	16.0500	15.7200	15.7000	0.8270	16.0500	15.7200	15.7200	15.7000
NIST	D5453	08/30/05	5	120	15.3000	14.9000	15.2000	0.8270	15.3000	14.9000	15.3000	14.9000
NIST	D2622	09/01/05	5	121	15.3000	15.5000	16.0000	0.8270	15.3000	15.5000	15.3000	16.0000
NIST	D5453	08/12/05	5	122	14.2000	14.9000	14.5000	0.8270	14.2000	14.9000	14.2000	14.9000
NIST	D2622	08/15/05	5	123	14.2000	15.0000	14.4000	0.8270	15.0000	14.4000	14.2000	15.0000
NIST	D2622	08/24/05	5	124	14.5000	15.8000	15.6000	0.8270	14.5000	15.8000		
NIST	D2622	08/31/05	5	126	14.0000	15.4000	13.2000	0.8270	14.0000	15.4000	14.0000	15.4000
NIST	D5453	08/10/05	5	126	14.0900	13.9600	14.7900	0.8270	13.9600	14.7900	13.9600	14.7900
NIST	D7039	08/26/05	5	127	14.7000	14.8000	15.1000	0.8270	14.7000	15.1000	14.7000	14.8000
NIST	D7039	08/17/05	5	128	15.5000	15.2000	15.5000	0.8270	15.5000	15.2000	15.2000	15.5000
NIST	D5453	08/10/05	5	129	14.1000	14.2000	14.0000	0.8270	14.1000	14.2000	14.1000	14.0000
NIST	D5453	08/08/05	5	130	14.5000	14.5000	14.4000	0.8270	14.5000	14.4000	14.5000	14.4000
NIST	D2622	08/11/05	5	131	14.7000	13.9000	14.9000	0.8270	13.9000	14.9000		
NIST	EDXRF	08/11/05	5	131	13.3000	14.2000	14.2000	0.8270	14.2000	14.2000		
NIST	D5453	08/25/05	5	132	14.2360	14.2290	14.2580	0.8270	14.2360	14.2290	14.2360	14.2290
NIST	D2622	08/31/05	5	133	15.1000	15.2000	14.9000	0.8270	15.2000	14.9000	15.2000	14.9000
NIST	EDXRF	08/30/05	5	134	15.0000	15.2000	15.7000	0.8270	15.0000	15.7000	15.2000	15.7000
NIST	EDXRF	08/10/05	5	135	14.8000	15.2000	14.9000	0.8270	14.8000	14.9000	14.8000	14.9000
NIST	D2622	08/09/05	5	136	14.9000	15.3000	14.9000	0.8270	14.9000	15.3000	14.9000	15.3000
NIST	EDXRF	08/09/05	5	136	14.7000	15.3000	15.6000	0.8270	14.7000	15.6000	14.7000	15.6000
NIST	D5453	08/14/05	5	137	14.8600	14.8700	14.7600	0.8270	14.8700	14.7600	14.8600	14.8700
NIST	EDXRF		5	137	13.7000	14.0000	14.0000	0.8270	14.0000	14.0000		
NIST	D5453	08/15/05	5	138	15.5000	15.5000	15.6000	0.8270	15.5000	15.5000	15.5000	15.6000
NIST	D2622	08/23/05	5	139	14.5000	14.5000	14.7000	0.8526	14.5000	14.7000	14.5000	14.7000
NIST	D5453	08/25/05	5	139	14.6000	14.5000	14.8000	0.8270	14.6000	14.5000	14.6000	14.5000
NIST	D2622	08/22/05	5	140	14.4000	15.0000	14.7000	0.8270	15.0000	14.7000	14.4000	15.0000
NIST	EDXRF	08/22/05	5	141	15.1000	15.9000	15.6000	0.8270	15.1000	15.9000	15.9000	15.6000
NIST	D5453	08/12/05	5	143	15.5900	15.3800	15.6600	0.8270	15.5900	15.6600	15.5900	15.6600
NIST	D3120		5	144	13.9000	13.9000	14.2000	0.8270	13.9000	13.9000	13.9000	14.2000
NIST	D2622	09/04/05	5	145	19.5000	18.5000	19.6000					
NIST	D5453	08/26/05	5	147	13.6000	13.6000	14.6000	0.8270	13.6000	13.6000		
NIST	D5453	08/15/05	5	148	15.3000	15.3000	15.5000	0.8270	15.3000	15.3000	15.3000	15.3000
NIST	D7039	08/09/05	5	148	14.9000	15.1000	13.9000	0.8270	14.9000	15.1000	14.9000	13.9000
NIST	D5453	08/25/05	5	149	14.4950	14.4680	14.3780	0.8270	14.4950	14.3780	14.4680	14.3780
NIST	D5453	08/17/05	5	151	15.0000	14.9800	14.6000	0.8270	14.9800	14.6000	14.9800	14.6000
NIST	D7039	08/16/05	5	151	15.6000	15.7000	15.2000	0.8270	15.7000	15.2000	15.7000	15.2000
NIST	D5453	08/19/05	5	152	12.8300	12.9800	13.0500	0.8270	12.9800	13.0500	12.8300	13.0500
NIST	D5453	08/17/05	5	153	15.5200	15.6400	15.5100	0.8270	15.5200	15.6400	15.6400	15.5100
NIST	D5453	08/16/05	5	154	14.0000	14.0000	14.6000	0.8270	14.0000	14.6000	14.0000	14.6000
NIST	D5453	08/15/05	5	156	14.9800	15.6900	15.3200	0.8270	14.9800	15.3200	15.6900	15.3200
NIST	D5453	08/06/05	5	158	19.5500	19.8200	19.7400	0.8270				
NIST	D5453	08/08/05	5	159	14.9100	14.9100	14.9300	0.8270	14.9100	14.9300	14.9100	14.9300
NIST	D7039	08/26/05	5	160	14.2000	14.0000	13.5000	0.8270	14.2000	13.5000	14.2000	13.5000
NIST	D5453	08/29/05	5	161	14.1600	14.7500	14.3600	0.8270	14.1600	14.3600	14.1600	14.3600

**Table B.20. August Fuel #5 Lab Data and Deletions Based on Composite Test Methods for NIST Calibration**

Calibration	Test Method	Run Date	August Sample #	Lab Code	Original Lab Data Robust Outlier Deletion in Shaded Box				After Robust Outlier Deletion Random Selection of 2 Obs		After Gravimetric Deletion Random Selection of 2 Obs	
					Measure #1	Measure #2	Measure #3	Density	#1	#2	#1	#2
NIST	D2622	07/26/05	5	162	19.5500	14.5700	15.5600	0.8270	14.5700	15.5600		
NIST	D5453	08/30/05	5	162	14.3300	14.1300	14.4700	0.8270	14.3300	14.4700	14.3300	14.4700

**Table B.21. July Fuel #1 Lab Data and Deletions Based on D5453 Test Method for In-House Calibration**

Calibration	Test Method	Run Date	July Sample #	Lab Code	Original Lab Data Robust Outlier Deletion in Shaded Box				After Robust Outlier Deletion Random Selection of 2 Obs		After Gravimetric Deletion Random Selection of 2 Obs	
					Measure #1	Measure #2	Measure #3	Density	#1	#2	#1	#2
In-House	D5453	07/13/05	1	1	6.5000	6.5000	6.6000	0.8359	6.5000	6.5000	6.5000	6.6000
In-House	D5453	07/12/05	1	2	8.4200	7.9100	7.5400	0.8359	8.4200	7.5400	8.4200	7.9100
In-House	D5453	07/21/05	1	4	7.7200	7.8400	8.0100	0.8359	7.7200	8.0100	7.7200	7.8400
In-House	D5453	07/13/05	1	8	7.5300	7.5100	7.5200	0.8359	7.5300	7.5100	7.5300	7.5100
In-House	D5453	07/15/05	1	9	6.7500	6.9200	6.9800	0.8359	6.7500	6.9800	6.9200	6.9800
In-House	D5453	07/28/05	1	11	7.6000	7.6600	7.5600	0.8359	7.6600	7.5600	7.6600	7.5600
In-House	D5453	07/27/05	1	12	6.9600	7.0300	7.1000	0.8359	7.0300	7.1000	7.0300	7.1000
In-House	D5453	07/20/05	1	13	7.6900	7.5600	7.7500	0.8359	7.6900	7.5600	7.5600	7.7500
In-House	D5453	07/26/05	1	15	7.0000	7.2000	7.0000	0.8359	7.0000	7.0000	7.2000	7.0000
In-House	D5453	07/19/05	1	16	6.9850	6.7300	6.9900	0.8359	6.9850	6.9900	6.9850	6.9900
In-House	D5453	07/20/05	1	18	6.9600	7.1700	6.5800	0.8359	7.1700	6.5800	7.1700	6.5800
In-House	D5453	08/03/05	1	19	6.7000	6.8000	6.7000	0.8359	6.7000	6.8000	6.8000	6.7000
In-House	D5453	08/02/05	1	21	6.6600	6.6500	6.5800	0.8359	6.6600	6.6500	6.6600	6.5800
In-House	D5453	08/10/05	1	23	6.7200	6.6300	6.5700	0.8359	6.6300	6.5700		
In-House	D5453	07/13/05	1	24	6.9600	6.9900	6.8200	0.8359	6.9600	6.9900		
In-House	D5453	08/30/05	1	25	6.9500	6.8500	6.7500	0.8359	6.9500	6.7500		
In-House	D5453	07/19/05	1	26	7.4600	7.2100	7.3400	0.8359	7.4600	7.2100	7.4600	7.2100
In-House	D5453	07/25/05	1	27	7.0700	7.1400	7.0300	0.8359	7.0700	7.1400	7.1400	7.0300
In-House	D5453	07/19/05	1	29	6.5070	6.4010	6.6630	0.8359	6.4010	6.6630		
In-House	D5453	07/12/05	1	30	7.3000	7.4000	7.3000	0.8359	7.4000	7.3000	7.3000	7.4000
In-House	D5453	07/13/05	1	31	7.1000	7.1000	7.1000	0.8359	7.1000	7.1000	7.1000	7.1000
In-House	D5453	07/25/05	1	32	7.6500	7.5500	7.4900	0.8359	7.6500	7.4900	7.5500	7.4900
In-House	D5453	08/19/05	1	33	7.3200	7.1800	7.2300	0.8359	7.3200	7.2300	7.3200	7.2300
In-House	D5453	07/26/05	1	35	6.8500	6.7600	6.6000	0.8523	6.8500	6.7600		
In-House	D5453	07/15/05	1	36	5.7000	6.3000	6.2000	0.8359	5.7000	6.2000		
In-House	D5453	07/15/05	1	37	6.6000	6.7600	6.7600	0.8359	6.6000	6.7600	6.6000	6.7600
In-House	D5453	07/25/05	1	38	7.0000	7.0000	6.6000	0.8359	7.0000	7.0000	7.0000	7.0000
In-House	D5453	07/28/05	1	39	8.2600	8.4800	8.2400	0.8359	8.2600	8.2400		
In-House	D5453	08/03/05	1	41	6.8300	7.0500	7.3800	0.8359	7.0500	7.3800	6.8300	7.3800
In-House	D5453	08/30/05	1	EPA	7.5000	7.5000	7.5000	0.8359	7.5000	7.5000	7.5000	7.5000
In-House	D5453	07/19/05	1	48	7.0500	7.1600	7.4300	0.8359	7.0500	7.4300	7.1600	7.4300
In-House	D5453	07/25/05	1	51	7.6000	7.7000	7.6000	0.8359	7.7000	7.6000	7.7000	7.6000
In-House	D5453	07/27/05	1	52	6.4200	6.4900	6.5900	0.8359	6.4900	6.5900		
In-House	D5453	07/19/05	1	54	6.7000	6.7000	6.6000	0.8359	6.7000	6.7000		
In-House	D5453	07/21/05	1	56	7.2000	7.0000	7.0000	0.8359	7.2000	7.0000	7.0000	7.0000
In-House	D5453	07/26/05	1	59	6.7400	6.9300	7.0300	0.8240	6.7400	6.9300	6.9300	7.0300
In-House	D5453	07/27/05	1	61	6.8200	7.0100	6.9200	0.8359	6.8200	7.0100	7.0100	6.9200
In-House	D5453	08/30/05	1	CARB	6.4700	6.5400	6.6600	0.8359	6.5400	6.6600		
In-House	D5453	07/29/05	1	63	8.4600	8.8000	9.3400	0.8359	8.4600	8.8000		

**Table B.21. July Fuel #1 Lab Data and Deletions Based on D5453 Test Method for In-House Calibration**

Calibration	Test Method	Run Date	July Sample #	Lab Code	Original Lab Data Robust Outlier Deletion in Shaded Box			Density	After Robust Outlier Deletion Random Selection of 2 Obs		After Gravimetric Deletion Random Selection of 2 Obs	
					Measure #1	Measure #2	Measure #3		#1	#2	#1	#2
In-House	D5453	08/02/05	1	64	6.4000	6.7000	6.7000	0.8359	6.4000	6.7000	6.4000	6.7000
In-House	D5453	08/01/05	1	66	7.1500	7.1800	7.6600	0.8359	7.1800	7.6600		
In-House	D5453	07/15/05	1	68	5.1400	4.9500	4.9000	0.8359			4.9500	4.9000
In-House	D5453	07/29/05	1	71	6.9800	6.9800	6.9800	0.8359	6.9800	6.9800	6.9800	6.9800
In-House	D5453	07/19/05	1	72	7.0000	7.2000	7.3000	0.8359	7.0000	7.2000	7.0000	7.2000
In-House	D5453	07/14/05	1	73	7.0000	7.0000	7.1000	0.8359	7.0000	7.1000	7.0000	7.0000
In-House	D5453	07/13/05	1	75	5.7000	6.1600	6.2700	0.8359	5.7000	6.1600	5.7000	6.1600
In-House	D5453	07/15/05	1	76	7.1600	7.4100	7.4300	0.8359	7.4100	7.4300	7.4100	7.4300
In-House	D5453	07/25/05	1	78	7.5000	7.8700	7.8000	0.8359	7.5000	7.8000		
In-House	D5453	08/09/05	1	81	6.4000	6.3000	6.5000	0.8359	6.4000	6.5000	6.4000	6.5000
In-House	D5453	07/19/05	1	82	6.4400	6.3600	6.6100	0.8359	6.4400	6.3600	6.4400	6.6100
In-House	D5453	07/14/05	1	83	6.5400	6.1200	6.3800	0.8359	6.5400	6.3800	6.5400	6.1200
In-House	D5453	07/22/05	1	84	7.0700	6.4300	6.6000	0.8359	7.0700	6.4300	7.0700	6.6000
In-House	D5453	07/20/05	1	85	6.0000	6.2000	6.2000	0.8359	6.0000	6.2000	6.0000	6.2000
In-House	D5453	07/27/05	1	87	6.8700	6.9800	7.2000	0.8359	6.9800	7.2000	6.8700	6.9800
In-House	D5453	07/30/05	1	89	6.8000	6.8000	7.0000	0.8359	6.8000	7.0000	6.8000	7.0000
In-House	D5453	07/14/05	1	90	6.3000	5.7000	6.1000	0.8359	6.3000	5.7000	6.3000	5.7000
In-House	D5453	07/27/05	1	91	7.5200	7.3800	7.5100	0.8359	7.5200	7.3800	7.3800	7.5100
In-House	D5453	07/25/05	1	91.1	7.3600	7.3100	7.3200	0.8359	7.3100	7.3200	7.3600	7.3100
In-House	D5453	07/25/05	1	95	5.1000	5.2000	5.1000	0.8359			5.2000	5.1000
In-House	D5453	07/21/05	1	96	7.2000	7.8000	7.6000	0.8359	7.2000	7.8000	7.2000	7.6000
In-House	D5453	07/18/05	1	97	6.8000	6.8000	6.7000	0.8359	6.8000	6.8000	6.8000	6.7000
In-House	D5453	08/15/05	1	99	5.6700	5.7000	5.4000	0.8359	5.7000	5.4000	5.6700	5.7000
In-House	D5453	07/18/05	1	100	5.4000	6.0000	6.1000	0.8359	6.0000	6.1000	5.4000	6.0000
In-House	D5453	07/26/05	1	103	6.3311	6.3943	5.8317	0.8359	6.3311	6.3943	6.3311	6.3943
In-House	D5453	08/01/05	1	105	7.4900	7.5200	7.3100	0.8359	7.5200	7.3100	7.4900	7.3100
In-House	D5453	07/15/05	1	108	6.2990	6.0120	6.1890	0.8359	6.0120	6.1890		
In-House	D5453	07/19/05	1	109	7.0000	7.0000	7.0000	0.8359	7.0000	7.0000		
In-House	D5453	07/28/05	1	110	7.4000	7.1000	7.3700	0.8359	7.4000	7.3700	7.4000	7.3700
In-House	D5453	07/29/05	1	112	8.0100	7.7800	7.9000	0.8523	8.0100	7.7800	8.0100	7.7800
In-House	D5453	07/21/05	1	113	6.6000	6.4000	6.6000	0.8359	6.6000	6.4000		
In-House	D5453	07/25/05	1	114	7.4000	7.5000	7.4000	0.8359	7.4000	7.5000	7.4000	7.5000
In-House	D5453	07/25/05	1	115	7.9000	7.8000	7.7000	0.8359	7.9000	7.8000	7.9000	7.8000
In-House	D5453	07/16/05	1	116	6.9300	7.1600	7.1800	0.8359	6.9300	7.1800	7.1600	7.1800
In-House	D5453	07/19/05	1	117	7.3100	7.3600	7.4200	0.8359	7.3600	7.4200	7.3100	7.3600
In-House	D5453	07/25/05	1	118	7.1400	7.2500	8.0900	0.8359	8.0900	7.2500	7.2500	8.0900
In-House	D5453	07/25/05	1	119	6.9000	6.9900	7.0300	0.8359	6.9000	6.9900	6.9900	7.0300
In-House	D5453	08/08/05	1	120	7.5000	7.4000	7.3000	0.8359	7.5000	7.4000	7.4000	7.3000
In-House	D5453	07/27/05	1	122	6.9000	7.2000	7.1000	0.8359	6.9000	7.2000	7.2000	7.1000

**Table B.21. July Fuel #1 Lab Data and Deletions Based on D5453 Test Method for In-House Calibration**

Calibration	Test Method	Run Date	July Sample #	Lab Code	Original Lab Data Robust Outlier Deletion in Shaded Box			Density	After Robust Outlier Deletion Random Selection of 2 Obs		After Gravimetric Deletion Random Selection of 2 Obs	
					Measure #1	Measure #2	Measure #3		#1	#2	#1	#2
In-House	D5453	07/28/05	1	126	5.6000	5.3800	5.1000	0.8359	5.6000	5.3800		
In-House	D5453	07/21/05	1	129	7.0600	7.0400	6.9500	0.8359	7.0600	7.0400	7.0600	7.0400
In-House	D5453	07/22/05	1	130	7.1000	6.9000	6.7000	0.8359	7.1000	6.9000	7.1000	6.9000
In-House	D5453	08/25/05	1	132	7.5190	7.5010	7.2610	0.8359	7.5190	7.2610	7.5190	7.2610
In-House	D5453	07/15/05	1	137	6.7700	6.8500	6.7900	0.8359	6.7700	6.8500		
In-House	D5453	07/22/05	1	138	7.5000	7.2000	7.5000	0.8359	7.5000	7.2000	7.5000	7.2000
In-House	D5453	07/13/05	1	139	8.1600	8.1600	8.4400	0.8359	8.1600	8.4400		
In-House	D5453	07/14/05	1	143	6.8300	6.9400	7.0500	0.8359	6.8300	7.0500	6.9400	7.0500
In-House	D5453	08/16/05	1	147	6.0000	6.1000	6.3000	0.8359	6.0000	6.1000		
In-House	D5453	07/15/05	1	148	7.7900	7.5900	7.7800	0.8359	7.7900	7.7800	7.5900	7.7800
In-House	D5453	07/27/05	1	149	7.3630	7.2010	7.1200	0.8359	7.3630	7.2010	7.2010	7.1200
In-House	D5453	08/01/05	1	151	7.3000	7.0000	6.7000	0.8359	7.3000	7.0000	7.0000	6.7000
In-House	D5453	07/22/05	1	152	4.6400	5.2700	5.4300	0.8359	5.2700	5.4300	5.2700	5.4300
In-House	D5453	07/14/05	1	153	7.8400	7.9000	7.9400	0.8359	7.8400	7.9000	7.9000	7.9400
In-House	D5453	07/26/05	1	154	7.4900	7.8000	7.9200	0.8359	7.8000	7.9200	7.8000	7.9200
In-House	D5453	07/28/05	1	156	6.7000	6.9400	6.9400	0.8359	6.7000	6.9400		
In-House	D5453	07/20/05	1	158	8.5700	8.4500	8.5100	0.8359	8.5700	8.5100		
In-House	D5453	08/08/05	1	159	7.8900	7.9800	7.7600	0.8359	7.9800	7.7600	7.8900	7.9800
In-House	D5453	07/24/05	1	161	7.6100	7.9900	7.8500	0.8359	7.9900	7.8500		
In-House	D5453	07/29/05	1	162	7.0300	7.4700	7.4300	0.8359	7.0300	7.4700	7.4700	7.4300



**Table B.22. July Fuel #1 Lab Data and Deletions Based On D5453 Test Method for NIST Calibration**

Calibration	Test Method	Run Date	July Sample #	Lab Code	Original Lab Data				After Robust Outlier Deletion		After Gravimetric Deletion	
					Measure #1	Measure #2	Measure #3	Density	Random Selection of 2 Obs		Random Selection of 2 Obs	
NIST	D5453	07/13/05	1	1	7.2000	7.1200	7.2000	0.8359	7.2000	7.1200	7.2000	7.1200
NIST	D5453	07/12/05	1	2	7.0900	7.0700	6.9300	0.8359	7.0900	7.0700	7.0900	6.9300
NIST	D5453	07/21/05	1	4	6.9800	6.7400	7.2900	0.8359	6.9800	7.2900	6.9800	7.2900
NIST	D5453	07/13/05	1	8	7.1100	7.1000	7.0400	0.8359	7.1100	7.1000	7.1100	7.1000
NIST	D5453	07/18/05	1	9	6.6400	6.8300	6.7200	0.8359	6.8300	6.7200	6.6400	6.8300
NIST	D5453	07/29/05	1	11	6.9800	7.1100	7.2800	0.8359	7.1100	7.2800	6.9800	7.1100
NIST	D5453	07/28/05	1	12	7.2000	7.0000	7.0000	0.8359	7.2000	7.0000	7.2000	7.0000
NIST	D5453	07/21/05	1	13	7.0300	6.9100	7.3000	0.8359	7.0300	7.3000	7.0300	6.9100
NIST	D5453	07/28/05	1	15	7.3000	7.3000	7.3000	0.8359	7.3000	7.3000	7.3000	7.3000
NIST	D5453	07/21/05	1	16	6.5300	6.1000	6.5500	0.8359	6.5300	6.5500	6.1000	6.5500
NIST	D5453	07/20/05	1	18	7.3700	7.2700	7.1300	0.8359	7.3700	7.2700	7.3700	7.1300
NIST	D5453	08/05/05	1	19	7.5000	7.5000	7.5000	0.8359	7.5000	7.5000	7.5000	7.5000
NIST	D5453	08/03/05	1	21	6.8800	6.8100	6.8000	0.8359	6.8800	6.8000	6.8800	6.8100
NIST	D5453	08/11/05	1	23	7.1800	7.2100	7.1200	0.8359	7.2100	7.1200	7.1800	7.1200
NIST	D5453	07/13/05	1	24	8.4100	8.6000	8.3000	0.8359	8.6000	8.3000	8.4100	8.6000
NIST	D5453	08/31/05	1	25	7.2900	7.2900	7.2700	0.8359	7.2900	7.2900	7.2900	7.2700
NIST	D5453	07/21/05	1	26	7.3200	7.2000	7.5500	0.8359	7.2000	7.5500	7.2000	7.5500
NIST	D5453	07/25/05	1	27	7.0900	7.0400	7.1000	0.8359	7.0900	7.1000	7.0900	7.0400
NIST	D5453	07/20/05	1	29	6.8180	6.3940	6.9000	0.8359	6.3940	6.9000		
NIST	D5453	07/13/05	1	30	7.5000	7.5000	7.7000	0.8359	7.5000	7.7000	7.5000	7.7000
NIST	D5453	07/13/05	1	31	7.2000	7.2000	7.3000	0.8359	7.2000	7.3000	7.2000	7.3000
NIST	D5453	07/26/05	1	32	7.3900	7.4000	7.5100	0.8359	7.3900	7.5100	7.3900	7.5100
NIST	D5453	08/22/05	1	33	9.4400	8.8500	8.8600	0.8359				
NIST	D5453	07/20/05	1	35	7.0300	7.0900	7.0300	0.8523	7.0300	7.0300	7.0900	7.0300
NIST	D5453	07/15/05	1	36	6.3000	6.0000	6.0000	0.8359	6.3000	6.0000		
NIST	D5453	07/21/05	1	37	7.3000	7.5000	7.3000	0.8359	7.3000	7.5000	7.5000	7.3000
NIST	D5453	07/26/05	1	38	8.0000	8.0000	8.1000	0.8359	8.0000	8.1000	8.0000	8.0000
NIST	D5453	07/28/05	1	39	9.1300	9.1100	8.7300	0.8359				
NIST	D5453	08/04/05	1	41	7.2900	7.2500	7.6800	0.8359	7.2500	7.6800	7.2900	7.2500
NIST	D5453	08/30/05	1	EPA	7.5000	7.6000	7.6000	0.8359	7.5000	7.6000	7.5000	7.6000
NIST	D5453	07/19/05	1	48	6.3800	5.8100	6.3700	0.8359	6.3800	5.8100		
NIST	D5453	07/26/05	1	51	7.2000	7.3000	7.4000	0.8359	7.2000	7.3000	7.2000	7.3000
NIST	D5453	07/28/05	1	52	6.0600	6.2600	6.1700	0.8359	6.2600	6.1700	6.2600	6.1700
NIST	D5453	07/21/05	1	54	6.9000	6.9000	6.9000	0.8359	6.9000	6.9000	6.9000	6.9000
NIST	D5453	07/22/05	1	56	6.8700	6.8000	6.8000	0.8359	6.8700	6.8000	6.8700	6.8000
NIST	D5453	08/31/05	1	59	7.4200	7.7300	7.4400	0.8240	7.7300	7.4400	7.4200	7.7300
NIST	D5453	07/27/05	1	61	7.2500	7.4300	7.2100	0.8359	7.2500	7.2100	7.4300	7.2100
NIST	D5453	08/31/05	1	CARB	6.8000	6.6000	6.8000	0.8359	6.8000	6.6000	6.8000	6.8000
NIST	D5453	07/29/05	1	63	9.2000	8.8800	8.6600	0.8359		8.6600		
NIST	D5453	07/18/05	1	64	7.0000	6.8000	6.9000	0.8359	7.0000	6.8000	7.0000	6.9000

**Table B.22. July Fuel #1 Lab Data and Deletions Based On D5453 Test Method for NIST Calibration**

Calibration	Test Method	Run Date	July Sample #	Lab Code	Original Lab Data				After Robust Outlier Deletion		After Gravimetric Deletion	
					Measure #1	Measure #2	Measure #3	Density	#1	#2	#1	#2
NIST	D5453	08/01/05	1	66	7.4000	7.5000	7.6000	0.8359	7.4000	7.5000		
NIST	D5453	07/15/05	1	68	6.9200	7.4000	7.2300	0.8359	7.4000	7.2300	6.9200	7.2300
NIST	D5453	07/30/05	1	71	7.0900	7.1100	7.0200	0.8359	7.0900	7.0200	7.0900	7.1100
NIST	D5453	07/19/05	1	72	7.2000	7.1000	7.0000	0.8359	7.2000	7.1000	7.2000	7.0000
NIST	D5453	07/14/05	1	73	7.1000	7.0000	7.4000	0.8359	7.1000	7.0000	7.1000	7.4000
NIST	D5453	08/02/05	1	75	6.9100	7.1000	7.8000	0.8359	6.9100	7.8000	7.1000	7.8000
NIST	D5453	07/19/05	1	76	6.5700	6.5900	6.3700	0.8359	6.5700	6.3700	6.5700	6.3700
NIST	D5453	07/25/05	1	78	7.9700	7.7900	7.5200	0.8359	7.7900	7.5200		
NIST	D5453	08/10/05	1	81	6.6000	6.4000	6.7000	0.8359	6.4000	6.7000	6.4000	6.7000
NIST	D5453	07/26/05	1	82	6.6600	6.4300	6.3800	0.8359	6.4300	6.3800	6.6600	6.3800
NIST	D5453	07/14/05	1	83	7.4500	7.4300	7.7800	0.8359	7.4500	7.7800	7.4300	7.7800
NIST	D5453	07/25/05	1	84	7.6400	6.3000	7.7400	0.8359	7.6400	7.7400		
NIST	D5453	07/21/05	1	85	5.7000	6.0000	6.1000	0.8359	6.0000	6.1000	6.0000	6.1000
NIST	D5453	07/27/05	1	87	6.4100	6.4000	6.3700	0.8359	6.4100	6.3700	6.4100	6.4000
NIST	D5453	07/30/05	1	89	7.3000	7.4000	7.2000	0.8359	7.3000	7.2000	7.3000	7.2000
NIST	D5453	07/14/05	1	90	5.5000	6.3000	6.3000	0.8359	6.3000	6.3000	5.5000	6.3000
NIST	D5453	07/28/05	1	91	7.2700	7.3300	7.2200	0.8359	7.2700	7.2200	7.3300	7.2200
NIST	D5453	07/29/05	1	91.1	7.4500	7.3600	7.3300	0.8359	7.4500	7.3600	7.3600	7.3300
NIST	D5453	07/21/05	1	95	5.7000	6.4000	6.1000	0.8359	5.7000	6.4000	5.7000	6.4000
NIST	D5453	07/22/05	1	96	7.4000	7.4000	7.1000	0.8359	7.4000	7.1000	7.4000	7.4000
NIST	D5453	07/18/05	1	97	7.2000	7.1000	7.2000	0.8359	7.1000	7.2000	7.1000	7.2000
NIST	D5453	08/12/05	1	99	5.3000	4.6900	4.9200	0.8359			5.3000	4.6900
NIST	D5453	07/21/05	1	100	6.5000	7.1000	7.4000	0.8359	6.5000	7.4000		
NIST	D5453	07/27/05	1	103	5.9878	6.4913	6.1320	0.8359	5.9878	6.4913	5.9878	6.4913
NIST	D5453	08/03/05	1	105	7.8100	7.2100	7.0400	0.8359	7.2100	7.0400	7.8100	7.2100
NIST	D5453	07/15/05	1	108	6.3300	6.1400	6.1600	0.8359	6.1400	6.1600		
NIST	D5453	07/27/05	1	109	8.4000	8.3000	8.4000	0.8359	8.3000	8.4000		
NIST	D5453	07/29/05	1	110	7.5500	7.5300	7.3400	0.8359	7.5500	7.5300	7.5500	7.3400
NIST	D5453	07/29/05	1	112	7.2100	7.2300	7.2400	0.8523	7.2100	7.2400	7.2300	7.2400
NIST	D5453	07/23/05	1	113	7.1000	6.7000	7.2000	0.8359	7.1000	6.7000	7.1000	6.7000
NIST	D5453	07/27/05	1	114	7.1000	7.2000	7.0000	0.8359	7.2000	7.0000	7.2000	7.0000
NIST	D5453	07/26/05	1	115	7.0000	7.0000	6.8000	0.8359	7.0000	7.0000	7.0000	6.8000
NIST	D5453	07/17/05	1	116	6.7600	6.8000	6.9400	0.8359	6.8000	6.9400	6.8000	6.9400
NIST	D5453	07/19/05	1	117	7.5000	7.3000	7.0600	0.8359	7.5000	7.0600	7.3000	7.0600
NIST	D5453	07/26/05	1	118	7.5900	7.7100	7.1800	0.8359	7.7100	7.1800	7.5900	7.7100
NIST	D5453	07/25/05	1	119	7.4600	7.4400	7.3500	0.8359	7.4400	7.3500	7.4400	7.3500
NIST	D5453	08/09/05	1	120	7.2000	7.3000	7.3000	0.8359	7.2000	7.3000	7.3000	7.3000
NIST	D5453	07/28/05	1	122	7.2000	7.6000	7.5000	0.8359	7.6000	7.5000	7.2000	7.5000
NIST	D5453	07/28/05	1	126	5.1900	5.2900	5.4000	0.8359				
NIST	D5453	07/27/05	1	129	6.9200	7.0000	6.9500	0.8359	7.0000	6.9500	6.9200	6.9500

**Table B.22. July Fuel #1 Lab Data and Deletions Based On D5453 Test Method for NIST Calibration**

Calibration	Test Method	Run Date	July Sample #	Lab Code	Original Lab Data Robust Outlier Deletion in Shaded Box				After Robust Outlier Deletion Random Selection of 2 Obs		After Gravimetric Deletion Random Selection of 2 Obs		
					Measure #1	Measure #2	Measure #3	Density	#1	#2	#1	#2	
NIST	D5453	07/25/05	1	130	7.2000	7.3000	7.2000	0.8359	7.3000	7.2000	7.2000	7.2000	7.2000
NIST	D5453	08/25/05	1	132	7.7045	7.0070	6.9710	0.8359	7.7045	6.9710	7.0070	6.9710	6.9710
NIST	D5453	07/18/05	1	137	7.4400	7.5600	7.3200	0.8359	7.4400	7.5600	7.4400	7.3200	7.3200
NIST	D5453	07/22/05	1	138	7.4000	7.3000	7.5000	0.8359	7.4000	7.3000	7.4000	7.3000	7.3000
NIST	D5453	07/20/05	1	139	11.0100	11.4000	10.2000	0.8359					
NIST	D5453	07/14/05	1	143	7.4900	7.2600	7.2600	0.8359	7.4900	7.2600	7.4900	7.2600	7.2600
NIST	D5453	08/16/05	1	147	7.1000	7.4000	7.4000	0.8359	7.4000	7.4000	7.1000	7.4000	7.4000
NIST	D5453	07/15/05	1	148	7.7100	7.5000	7.7000	0.8359	7.7100	7.7000	7.7100	7.5000	7.5000
NIST	D5453	07/20/05	1	149	7.5760	7.4310	7.2150	0.8359	7.5760	7.2150	7.5760	7.4310	7.4310
NIST	D5453	08/01/05	1	151	6.8000	6.6000	6.5000	0.8359	6.6000	6.5000	6.8000	6.5000	6.5000
NIST	D5453	07/27/05	1	152	5.1200	5.3600	5.5700	0.8359			5.1200	5.5700	5.5700
NIST	D5453	07/15/05	1	153	7.4200	7.3000	7.2500	0.8359	7.4200	7.3000	7.4200	7.3000	7.3000
NIST	D5453	07/04/05	1	154	7.7700	7.5600	7.4400	0.8359	7.7700	7.5600	7.5600	7.4400	7.4400
NIST	D5453	07/28/05	1	156	6.8400	7.5700	7.2500	0.8359	7.5700	7.2500	6.8400	7.5700	7.5700
NIST	D5453	07/21/05	1	158	8.5500	8.5100	8.2100	0.8359	8.5500	8.2100			
NIST	D5453	08/08/05	1	159	6.8800	6.2500	6.5200	0.8359	6.2500	6.5200	6.8800	6.2500	6.2500
NIST	D5453	07/24/05	1	161	7.2900	7.6500	6.9800	0.8359	7.2900	6.9800	7.2900	7.6500	7.6500
NIST	D5453	07/30/05	1	162	7.3100	7.2100	7.2300	0.8359	7.3100	7.2300	7.3100	7.2100	7.2100

**Table B.23. July Fuel #2 Lab Data and Deletions Based on D5453 Test Method for In-House Calibration**

Calibration	Test Method	Run Date	July Sample #	Lab Code	Original Lab Data Robust Outlier Deletion in Shaded Box				After Robust Outlier Deletion Random Selection of 2 Obs		After Gravimetric Deletion Random Selection of 2 Obs	
					Measure #1	Measure #2	Measure #3	Density	#1	#2	#1	#2
In-House	D5453	07/13/05	2	1	10.2000	10.1000	10.0000	0.8371	10.1000	10.0000	10.2000	10.0000
In-House	D5453	07/12/05	2	2	11.0900	10.9000	11.2300	0.8371	11.0900	10.9000	10.9000	11.2300
In-House	D5453	07/21/05	2	4	11.5600	11.6000	11.1100	0.8371	11.5600	11.6000	11.6000	11.1100
In-House	D5453	07/13/05	2	8	10.9800	11.0200	11.1800	0.8371	10.9800	11.0200	10.9800	11.1800
In-House	D5453	07/15/05	2	9	10.2800	10.0400	10.3400	0.8371	10.0400	10.3400	10.2800	10.3400
In-House	D5453	07/28/05	2	11	10.5000	11.1800	10.8800	0.8371	11.1800	10.8800	10.5000	11.1800
In-House	D5453	07/27/05	2	12	10.3900	10.4800	10.3100	0.8371	10.3900	10.4800	10.3900	10.3100
In-House	D5453	07/20/05	2	13	11.1200	11.3300	11.5000	0.8371	11.3300	11.5000	11.1200	11.5000
In-House	D5453	07/26/05	2	15	10.4000	10.7000	10.6000	0.8371	10.7000	10.6000	10.7000	10.6000
In-House	D5453	07/19/05	2	16	10.8400	11.1700	11.0000	0.8371	10.8400	11.0000	10.8400	11.1700
In-House	D5453	07/20/05	2	18	11.2800	10.6200	9.9200	0.8371	11.2800	10.6200	10.6200	9.9200
In-House	D5453	08/03/05	2	19	10.0000	9.9000	9.9000	0.8371	10.0000	9.9000	10.0000	9.9000
In-House	D5453	08/02/05	2	21	10.1500	9.9500	10.1100	0.8371	10.1500	9.9500	10.1500	10.1100
In-House	D5453	08/10/05	2	23	9.7000	10.0700	10.2900	0.8371	9.7000	10.2900		
In-House	D5453	07/13/05	2	24	10.3600	9.7100	11.7800	0.8371	10.3600	11.7800		
In-House	D5453	08/30/05	2	25	10.2600	10.1200	10.1600	0.8371	10.1200	10.1600		
In-House	D5453	07/19/05	2	26	11.3200	10.8200	10.6800	0.8371	11.3200	10.8200	11.3200	10.6800
In-House	D5453	07/25/05	2	27	10.7200	10.5200	10.4000	0.8371	10.5200	10.4000	10.5200	10.4000
In-House	D5453	07/19/05	2	29	9.7100	9.6660	9.7320	0.8371	9.7100	9.6660		
In-House	D5453	07/12/05	2	30	11.0000	11.1000	10.9000	0.8371	11.0000	10.9000	11.0000	11.1000
In-House	D5453	07/13/05	2	31	10.7000	10.4000	10.6000	0.8371	10.7000	10.6000	10.7000	10.6000
In-House	D5453	07/25/05	2	32	11.2500	11.2200	11.1500	0.8371	11.2500	11.2200	11.2200	11.1500
In-House	D5453	08/19/05	2	33	10.3900	10.5000	10.5400	0.8371	10.3900	10.5400	10.3900	10.5000
In-House	D5453	07/26/05	2	35	9.7600	9.6400	9.6500	0.8695	9.7600	9.6500		
In-House	D5453	07/15/05	2	36	8.9000	8.2000	8.5000	0.8371	8.9000	8.5000		
In-House	D5453	07/15/05	2	37	10.4000	10.3000	10.1000	0.8371	10.4000	10.3000	10.3000	10.1000
In-House	D5453	07/25/05	2	38	9.8000	10.0000	10.2000	0.8371	10.0000	10.2000	9.8000	10.0000
In-House	D5453	07/28/05	2	39	12.8800	12.1900	11.0100	0.8371	12.8800	12.1900		
In-House	D5453	08/03/05	2	41	10.4000	10.1300	10.9400	0.8371	10.4000	10.9400	10.4000	10.1300
In-House	D5453	08/30/05	2	EPA	11.0000	11.0000	11.2000	0.8371	11.0000	11.2000	11.0000	11.0000
In-House	D5453	07/19/05	2	48	10.0300	11.4900	10.1600	0.8371	10.0300	11.4900	10.0300	10.1600
In-House	D5453	07/25/05	2	51	10.9000	10.9000	11.0000	0.8371	10.9000	11.0000	10.9000	11.0000
In-House	D5453	07/27/05	2	52	9.5000	9.3200	9.0700	0.8371	9.5000	9.0700		
In-House	D5453	07/19/05	2	54	10.0000	9.9000	10.0000	0.8371	10.0000	9.9000		
In-House	D5453	07/21/05	2	56	10.0000	10.0000	10.2000	0.8371	10.0000	10.2000	10.0000	10.2000
In-House	D5453	07/26/05	2	59	10.4700	10.5400	10.4300	0.8371	10.4700	10.5400	10.5400	10.4300
In-House	D5453	07/27/05	2	61	10.0600	9.8700	9.8700	0.8371	10.0600	9.8700	9.8700	9.8700
In-House	D5453	08/30/05	2	CARB	9.8700	9.7500	9.6700	0.8371	9.7500	9.6700		
In-House	D5453	07/29/05	2	63	12.6900	12.1900	12.7800	0.8371	12.6900	12.7800		
In-House	D5453	08/02/05	2	64	10.1000	10.0000	9.4000	0.8371	10.0000	9.4000	10.0000	9.4000
In-House	D5453	08/01/05	2	66	11.4300	11.4100	11.4800	0.8371	11.4300	11.4100		
In-House	D5453	07/15/05	2	68	8.3600	7.9400	8.4000	0.8371	8.3600	8.4000	8.3600	8.4000
In-House	D5453	07/29/05	2	71	10.4200	10.3200	10.3700	0.8371	10.4200	10.3700	10.3200	10.3700
In-House	D5453	07/19/05	2	72	10.6000	10.7000	10.4000	0.8371	10.6000	10.7000	10.6000	10.4000
In-House	D5453	07/14/05	2	73	10.5000	10.4000	10.4000	0.8371	10.5000	10.4000	10.4000	10.4000
In-House	D5453	07/13/05	2	75	9.7200	9.6200	8.9000	0.8371	9.6200	8.9000	9.6200	8.9000
In-House	D5453	07/15/05	2	76	11.2000	11.5300	11.5000	0.8371	11.5300	11.5000	11.5300	11.5000

**Table B.23. July Fuel #2 Lab Data and Deletions Based on D5453 Test Method for In-House Calibration**

Calibration	Test Method	Run Date	July Sample #	Lab Code	Original Lab Data Robust Outlier Deletion in Shaded Box				After Robust Outlier Deletion Random Selection of 2 Obs		After Gravimetric Deletion Random Selection of 2 Obs	
					Measure #1	Measure #2	Measure #3	Density	#1	#2	#1	#2
In-House	D5453	07/25/05	2	78	11.5400	11.4100	11.0000	0.8371	11.5400	11.4100		
In-House	D5453	08/09/05	2	81	8.1000	8.3000	8.4000	0.8371	8.1000	8.4000	8.1000	8.4000
In-House	D5453	07/19/05	2	82	10.0800	10.1700	10.0500	0.8371	10.0800	10.1700	10.0800	10.0500
In-House	D5453	07/14/05	2	83	10.7700	10.5600	10.7000	0.8371	10.7700	10.7000	10.5600	10.7000
In-House	D5453	07/22/05	2	84	8.9400	9.3500	9.4600	0.8371	8.9400	9.4600	9.3500	9.4600
In-House	D5453	07/20/05	2	85	9.9000	9.8000	10.0000	0.8371	9.9000	10.0000	9.9000	10.0000
In-House	D5453	07/27/05	2	87	9.5700	9.8600	9.3800	0.8371	9.8600	9.3800	9.8600	9.3800
In-House	D5453	07/30/05	2	89	10.3000	10.5000	10.5000	0.8371	10.3000	10.5000	10.3000	10.5000
In-House	D5453	07/14/05	2	90	9.1000	9.2000	9.2000	0.8371	9.2000	9.2000	9.1000	9.2000
In-House	D5453	07/27/05	2	91	10.8100	10.8600	10.7900	0.8371	10.8100	10.7900	10.8100	10.8600
In-House	D5453	07/25/05	2	91.1	10.7100	10.5100	10.6000	0.8371	10.5100	10.6000	10.7100	10.6000
In-House	D5453	07/25/05	2	95	8.4000	8.2000	8.8000	0.8371	8.4000	8.2000	8.2000	8.8000
In-House	D5453	07/21/05	2	96	10.9000	11.6000	10.4000	0.8371	10.9000	11.6000	10.9000	10.4000
In-House	D5453	07/18/05	2	97	10.3000	10.2000	10.2000	0.8371	10.3000	10.2000	10.2000	10.2000
In-House	D5453	08/15/05	2	99	8.7900	8.6400	8.4200	0.8371	8.7900	8.4200	8.6400	8.4200
In-House	D5453	07/18/05	2	100	10.0000	9.9000	10.2000	0.8371	10.0000	9.9000	10.0000	10.2000
In-House	D5453	07/26/05	2	103	9.8751	10.0287	9.4474	0.8371	10.0287	9.4474	10.0287	9.4474
In-House	D5453	08/01/05	2	105	10.6100	10.7300	10.6900	0.8371	10.6100	10.7300	10.7300	10.6900
In-House	D5453	07/15/05	2	108	9.3450	9.4950	9.2150	0.8371	9.3450	9.2150		
In-House	D5453	07/19/05	2	109	9.6000	9.7000	9.8000	0.8371	9.6000	9.8000		
In-House	D5453	07/28/05	2	110	11.1800	10.8500	10.9900	0.8371	11.1800	10.9900	10.8500	10.9900
In-House	D5453	07/29/05	2	112	11.5000	11.9000	11.8000	0.8695	11.9000	11.8000	11.5000	11.8000
In-House	D5453	07/21/05	2	113	9.8000	9.9000	9.8000	0.8371	9.8000	9.8000		
In-House	D5453	07/25/05	2	114	11.0000	10.8000	10.9000	0.8371	11.0000	10.9000	10.8000	10.9000
In-House	D5453	07/25/05	2	115	11.5000	11.3000	11.5000	0.8371	11.5000	11.5000	11.3000	11.5000
In-House	D5453	07/16/05	2	116	10.8700	10.9200	11.1200	0.8371	10.8700	10.9200	10.8700	10.9200
In-House	D5453	07/19/05	2	117	10.8500	10.8600	10.6800	0.8371	10.8600	10.6800	10.8500	10.6800
In-House	D5453	07/25/05	2	118	11.3600	11.2000	10.5900	0.8371	11.3600	10.5900	11.3600	11.2000
In-House	D5453	07/25/05	2	119	10.3800	10.3100	10.2500	0.8371	10.3800	10.2500	10.3800	10.3100
In-House	D5453	08/08/05	2	120	10.7000	10.7000	10.8000	0.8371	10.7000	10.8000	10.7000	10.8000
In-House	D5453	07/27/05	2	122	10.8000	10.7000	10.5000	0.8371	10.8000	10.5000	10.8000	10.7000
In-House	D5453	07/28/05	2	126	8.2700	8.3300	6.8800	0.8371	8.2700	8.3300		
In-House	D5453	07/21/05	2	129	10.9800	11.0700	11.0400	0.8371	10.9800	11.0400	11.0700	11.0400
In-House	D5453	07/22/05	2	130	10.4000	10.6000	10.5000	0.8371	10.6000	10.5000	10.4000	10.5000
In-House	D5453	08/25/05	2	132	10.5070	10.8520	10.6610	0.8371	10.5070	10.6610	10.5070	10.6610
In-House	D5453	07/15/05	2	137	10.4800	10.3900	9.5900	0.8371	10.3900	9.5900		
In-House	D5453	07/22/05	2	138	11.0000	10.7000	11.0000	0.8371	10.7000	11.0000	11.0000	11.0000
In-House	D5453	07/13/05	2	139	12.0800	11.9700	12.1300	0.8371	12.0800	11.9700		
In-House	D5453	07/14/05	2	143	10.6600	10.6600	10.9400	0.8371	10.6600	10.9400	10.6600	10.9400
In-House	D5453	08/16/05	2	147	9.8000	9.8000	9.8000	0.8371	9.8000	9.8000		
In-House	D5453	07/15/05	2	148	11.1600	11.4500	11.2900	0.8371	11.1600	11.4500	11.4500	11.2900
In-House	D5453	07/27/05	2	149	10.8160	10.7800	10.5970	0.8371	10.8160	10.7800	10.7800	10.5970
In-House	D5453	08/01/05	2	151	10.8000	10.5000	10.2000	0.8371	10.8000	10.5000	10.8000	10.5000
In-House	D5453	07/22/05	2	152	9.1500	9.3500	9.1900	0.8371	9.1500	9.1900	9.1500	9.1900
In-House	D5453	07/14/05	2	153	12.1400	11.9900	11.9500	0.8371	12.1400	11.9500	11.9900	11.9500
In-House	D5453	07/26/05	2	154	11.2000	10.8500	10.8460	0.8371	10.8500	10.8460	10.8500	10.8460
In-House	D5453	07/28/05	2	156	9.8000	9.6800	9.9200	0.8371	9.8000	9.6800		

**Table B.23. July Fuel #2 Lab Data and Deletions Based on D5453 Test Method for In-House Calibration**

Calibration	Test Method	Run Date	July Sample #	Lab Code	Original Lab Data Robust Outlier Deletion in Shaded Box				After Robust Outlier Deletion Random Selection of 2 Obs		After Gravimetric Deletion Random Selection of 2 Obs	
					Measure #1	Measure #2	Measure #3	Density	#1	#2	#1	#2
In-House	D5453	07/20/05	2	158	13.7100	13.5500	13.3900	0.8371				
In-House	D5453	08/08/05	2	159	11.5600	11.4700	11.2700	0.8371	11.5600	11.4700		11.5600 11.2700
In-House	D5453	07/24/05	2	161	12.2500	11.9100	11.5900	0.8371	12.2500	11.5900		
In-House	D5453	07/29/05	2	162	10.7100	10.8200	10.9600	0.8371	10.8200	10.9600		10.7100 10.8200

Table B.24. July Fuel #2 Lab Data and Deletions Based on D5453 Test Method for NIST Calibration

Calibration	Test Method	Run Date	July Sample #	Lab Code	Original Lab Data Robust Outlier Deletion in Shaded Box				After Robust Outlier Deletion Random Selection of 2 Obs		After Gravimetric Deletion Random Selection of 2 Obs	
					Measure #1	Measure #2	Measure #3	Density	#1	#2	#1	#2
NIST	D5453	07/13/05	2	1	10.6000	10.6000	10.5000	0.8371	10.6000	10.6000	10.6000	10.6000
NIST	D5453	07/12/05	2	2	10.7800	10.5900	10.7100	0.8371	10.7800	10.7100	10.7800	10.7100
NIST	D5453	07/21/05	2	4	9.9800	9.3900	8.6100	0.8371	9.3900	8.6100	9.9800	8.6100
NIST	D5453	07/13/05	2	8	10.3900	10.5000	10.4000	0.8371	10.3900	10.4000	10.3900	10.5000
NIST	D5453	07/18/05	2	9	10.2100	10.2200	10.2300	0.8371	10.2100	10.2300	10.2200	10.2300
NIST	D5453	07/29/05	2	11	10.4800	10.5000	10.5200	0.8371	10.4800	10.5200	10.5000	10.5200
NIST	D5453	07/28/05	2	12	10.7000	10.6000	10.2000	0.8371	10.6000	10.2000	10.7000	10.6000
NIST	D5453	07/21/05	2	13	10.5600	10.5300	10.6500	0.8371	10.5600	10.5300	10.5600	10.5300
NIST	D5453	07/28/05	2	15	10.6000	10.3000	10.5000	0.8371	10.3000	10.5000	10.3000	10.5000
NIST	D5453	07/21/05	2	16	9.9300	9.8500	10.0400	0.8371	9.8500	10.0400	9.9300	10.0400
NIST	D5453	07/20/05	2	18	10.7300	11.0400	10.6500	0.8371	10.7300	10.6500	11.0400	10.6500
NIST	D5453	08/05/05	2	19	10.7000	10.7000	10.9000	0.8371	10.7000	10.9000	10.7000	10.9000
NIST	D5453	08/03/05	2	21	10.3900	10.2400	10.2300	0.8371	10.3900	10.2400	10.3900	10.2400
NIST	D5453	08/11/05	2	23	10.6700	10.7300	10.7200	0.8371	10.6700	10.7300	10.6700	10.7200
NIST	D5453	07/13/05	2	24	10.4900	10.2200	12.0200	0.8371	10.2200	12.0200	10.4900	12.0200
NIST	D5453	08/31/05	2	25	10.8100	10.8800	10.8400	0.8371	10.8100	10.8800	10.8100	10.8400
NIST	D5453	07/21/05	2	26	11.0700	11.1200	10.8700	0.8371	11.0700	10.8700	11.1200	10.8700
NIST	D5453	07/25/05	2	27	10.3500	10.4300	10.3100	0.8371	10.4300	10.3100	10.3500	10.4300
NIST	D5453	07/20/05	2	29	9.8840	9.7710	9.7010	0.8371	9.7710	9.7010		
NIST	D5453	07/13/05	2	30	11.1000	11.2000	11.1000	0.8371	11.2000	11.1000	11.1000	11.2000
NIST	D5453	07/13/05	2	31	10.6000	10.5000	10.6000	0.8371	10.6000	10.5000	10.6000	10.6000
NIST	D5453	07/26/05	2	32	11.4600	11.1800	11.2200	0.8371	11.1800	11.2200	11.4600	11.1800
NIST	D5453	08/22/05	2	33	14.2500	14.0300	13.8700	0.8371				
NIST	D5453	07/20/05	2	35	10.1400	10.4800	10.2800	0.8695	10.4800	10.2800	10.1400	10.4800
NIST	D5453	07/15/05	2	36	9.5000	9.2000	9.1000	0.8371	9.2000	9.1000		
NIST	D5453	07/21/05	2	37	11.1000	11.5000	11.8000	0.8371	11.1000	11.8000	11.5000	11.8000
NIST	D5453	07/26/05	2	38	10.4000	10.7000	10.8000	0.8371	10.4000	10.8000	10.4000	10.7000
NIST	D5453	07/28/05	2	39	13.0500	12.8600	12.5100	0.8371		12.5100		
NIST	D5453	08/04/05	2	41	11.9900	12.1600	11.5100	0.8371	12.1600	11.5100	11.9900	12.1600
NIST	D5453	08/30/05	2	EPA	10.9000	11.1000	11.1000	0.8371	11.1000	11.1000	11.1000	11.1000
NIST	D5453	07/19/05	2	48	9.2600	9.8300	9.1700	0.8371	9.2600	9.1700		
NIST	D5453	07/26/05	2	51	10.8000	10.6000	10.7000	0.8371	10.8000	10.6000	10.8000	10.7000
NIST	D5453	07/28/05	2	52	9.7900	9.6200	9.5900	0.8371	9.6200	9.5900	9.7900	9.5900
NIST	D5453	07/21/05	2	54	10.4000	10.4000	10.4000	0.8371	10.4000	10.4000	10.4000	10.4000
NIST	D5453	07/22/05	2	56	10.0000	10.1000	10.0000	0.8371	10.0000	10.0000	10.0000	10.0000
NIST	D5453	08/31/05	2	59	11.6500	11.7000	11.2700	0.8371	11.7000	11.2700	11.6500	11.2700
NIST	D5453	07/27/05	2	61	10.7900	10.5700	10.6700	0.8371	10.7900	10.6700	10.5700	10.6700
NIST	D5453	08/31/05	2	CARB	9.9000	10.1000	9.9000	0.8371	9.9000	9.9000	9.9000	9.9000
NIST	D5453	07/29/05	2	63	13.4000	13.2700	12.6600	0.8371		12.6600		
NIST	D5453	07/18/05	2	64	10.7000	10.2000	10.3000	0.8371	10.7000	10.2000	10.2000	10.3000
NIST	D5453	08/01/05	2	66	11.6000	11.6000	11.6000	0.8371	11.6000	11.6000		
NIST	D5453	07/15/05	2	68	11.0300	10.8200	10.9100	0.8371	11.0300	10.9100	11.0300	10.8200
NIST	D5453	07/30/05	2	71	10.6000	10.6000	10.5800	0.8371	10.6000	10.5800	10.6000	10.6000
NIST	D5453	07/19/05	2	72	10.7000	10.5000	10.6000	0.8371	10.5000	10.6000	10.7000	10.5000
NIST	D5453	07/14/05	2	73	10.3000	10.6000	10.6000	0.8371	10.6000	10.6000	10.3000	10.6000
NIST	D5453	08/02/05	2	75	12.6000	10.8000	14.1000	0.8371	12.6000	10.8000	12.6000	10.8000
NIST	D5453	07/19/05	2	76	10.5000	10.7400	10.6800	0.8371	10.5000	10.6800	10.5000	10.7400

**Table B.24. July Fuel #2 Lab Data and Deletions Based on D5453 Test Method for NIST Calibration**

Calibration	Test Method	Run Date	July Sample #	Lab Code	Original Lab Data Robust Outlier Deletion in Shaded Box				After Robust Outlier Deletion Random Selection of 2 Obs		After Gravimetric Deletion Random Selection of 2 Obs	
					Measure #1	Measure #2	Measure #3	Density	#1	#2	#1	#2
NIST	D5453	07/25/05	2	78	11.0000	10.7700	10.9300	0.8371	11.0000	10.9300		
NIST	D5453	08/10/05	2	81	9.2000	8.8000	9.2000	0.8371	9.2000	9.2000	8.8000	9.2000
NIST	D5453	07/26/05	2	82	9.7200	9.6500	9.5800	0.8371	9.6500	9.5800	9.7200	9.6500
NIST	D5453	07/14/05	2	83	11.3000	11.3000	11.0100	0.8371	11.3000	11.0100	11.3000	11.3000
NIST	D5453	07/25/05	2	84	10.8000	9.9600	10.0700	0.8371	10.8000	10.0700		
NIST	D5453	07/21/05	2	85	9.8000	9.7000	9.7000	0.8371	9.8000	9.7000	9.7000	9.7000
NIST	D5453	07/27/05	2	87	10.2000	10.1700	10.1200	0.8371	10.1700	10.1200	10.2000	10.1200
NIST	D5453	07/30/05	2	89	10.9000	10.8000	11.0000	0.8371	10.8000	11.0000	10.8000	11.0000
NIST	D5453	07/14/05	2	90	9.1000	8.9000	9.0000	0.8371	9.1000	8.9000	9.1000	8.9000
NIST	D5453	07/28/05	2	91	10.7400	10.6400	10.3800	0.8371	10.7400	10.6400	10.7400	10.3800
NIST	D5453	07/29/05	2	91.1	10.9000	10.9400	10.8800	0.8371	10.9000	10.9400	10.9000	10.8800
NIST	D5453	07/21/05	2	95	9.7000	10.0000	9.9000	0.8371	10.0000	9.9000	10.0000	9.9000
NIST	D5453	07/22/05	2	96	10.8000	11.2000	11.3000	0.8371	11.2000	11.3000	10.8000	11.2000
NIST	D5453	07/18/05	2	97	10.6000	10.5000	10.4000	0.8371	10.6000	10.5000	10.5000	10.4000
NIST	D5453	08/12/05	2	99	8.2300	7.7400	8.2700	0.8371			8.2300	7.7400
NIST	D5453	07/21/05	2	100	11.4000	11.7000	12.5000	0.8371	11.4000	11.7000		
NIST	D5453	07/27/05	2	103	10.1106	9.9054	9.6090	0.8371	10.1106	9.9054	9.9054	9.6090
NIST	D5453	08/04/05	2	105	10.6800	10.5000	10.4200	0.8371	10.6800	10.4200	10.6800	10.4200
NIST	D5453	07/15/05	2	108	9.4130	9.5380	9.3000	0.8371	9.5380	9.3000		
NIST	D5453	07/27/05	2	109	12.5000	12.5000	12.4000	0.8371	12.5000	12.5000		
NIST	D5453	07/29/05	2	110	10.9100	11.0700	10.7900	0.8371	11.0700	10.7900	10.9100	11.0700
NIST	D5453	07/29/05	2	112	10.8400	10.7400	10.8500	0.8695	10.8400	10.8500	10.8400	10.7400
NIST	D5453	07/23/05	2	113	10.1000	10.4000	10.8000	0.8371	10.4000	10.8000	10.1000	10.8000
NIST	D5453	07/27/05	2	114	10.3000	10.0000	10.3000	0.8371	10.3000	10.0000	10.0000	10.3000
NIST	D5453	07/26/05	2	115	10.2000	10.1000	10.1000	0.8371	10.2000	10.1000	10.2000	10.1000
NIST	D5453	07/17/05	2	116	10.5400	10.6800	10.6500	0.8371	10.6800	10.6500	10.5400	10.6800
NIST	D5453	07/19/05	2	117	10.6000	10.6800	10.6600	0.8371	10.6000	10.6600	10.6000	10.6600
NIST	D5453	07/26/05	2	118	10.4100	10.8300	10.0800	0.8371	10.8300	10.0800	10.4100	10.0800
NIST	D5453	07/25/05	2	119	11.3500	11.3700	11.3600	0.8371	11.3500	11.3700	11.3500	11.3600
NIST	D5453	08/09/05	2	120	10.8000	10.7000	10.5000	0.8371	10.8000	10.5000	10.7000	10.5000
NIST	D5453	07/28/05	2	122	11.6000	11.3000	11.6000	0.8371	11.6000	11.6000	11.3000	11.6000
NIST	D5453	07/28/05	2	126	8.5000	8.4000	8.6000	0.8371		8.6000		
NIST	D5453	07/27/05	2	129	10.3800	10.3500	10.3600	0.8371	10.3500	10.3600	10.3800	10.3600
NIST	D5453	07/25/05	2	130	10.6000	10.6000	10.5000	0.8371	10.6000	10.5000	10.6000	10.5000
NIST	D5453	08/25/05	2	132	10.2560	9.9880	10.1160	0.8371	10.2560	9.9880	9.9880	10.1160
NIST	D5453	07/18/05	2	137	10.5900	11.4200	11.5000	0.8371	10.5900	11.5000	10.5900	11.4200
NIST	D5453	07/22/05	2	138	11.0000	11.2000	10.9000	0.8371	11.0000	10.9000	11.0000	11.2000
NIST	D5453	07/20/05	2	139	16.1300	15.6900	15.3200	0.8371				
NIST	D5453	07/14/05	2	143	11.0300	10.8100	10.7600	0.8371	11.0300	10.8100	11.0300	10.7600
NIST	D5453	08/16/05	2	147	11.2000	10.8000	10.9000	0.8371	11.2000	10.9000	11.2000	10.8000
NIST	D5453	07/15/05	2	148	11.3400	11.6500	11.4800	0.8371	11.3400	11.6500	11.3400	11.4800
NIST	D5453	07/20/05	2	149	10.9170	10.5810	10.6430	0.8371	10.9170	10.6430	10.9170	10.5810
NIST	D5453	08/01/05	2	151	10.7000	10.2000	9.8000	0.8371	10.7000	10.2000	10.7000	10.2000
NIST	D5453	07/27/05	2	152	9.1600	9.1400	9.1500	0.8371	9.1600	9.1500	9.1400	9.1500
NIST	D5453	07/15/05	2	153	10.8700	10.9100	10.8300	0.8371	10.9100	10.8300	10.8700	10.8300
NIST	D5453	07/04/05	2	154	11.2000	11.8000	11.3000	0.8371	11.2000	11.8000	11.2000	11.3000
NIST	D5453	07/28/05	2	156	11.2300	11.4200	11.0300	0.8371	11.4200	11.0300	11.4200	11.0300



**Table B.24. July Fuel #2 Lab Data and Deletions Based on D5453 Test Method for NIST Calibration**

Calibration	Test Method	Run Date	July Sample #	Lab Code	Original Lab Data Robust Outlier Deletion in Shaded Box				After Robust Outlier Deletion Random Selection of 2 Obs		After Gravimetric Deletion Random Selection of 2 Obs	
					Measure #1	Measure #2	Measure #3	Density	#1	#2	#1	#2
NIST	D5453	07/21/05	2	158	13.3900	13.4000	13.5700	0.8371				
NIST	D5453	08/08/05	2	159	10.9100	10.5400	10.8300	0.8371	10.5400	10.8300	10.9100	10.8300
NIST	D5453	07/24/05	2	161	10.7100	10.6400	10.8300	0.8371	10.7100	10.6400	10.7100	10.8300
NIST	D5453	07/30/05	2	162	10.6000	10.4800	10.6100	0.8371	10.6000	10.4800	10.4800	10.6100

**Table B.25. July Fuel #3 Lab Data and Deletions Based on D5453 Test Method for In-House Calibration**

Calibration	Test Method	Run Date	July Sample #	Lab Code	Original Lab Data Robust Outlier Deletion in Shaded Box				After Robust Outlier Deletion Random Selection of 2 Obs		After Gravimetric Deletion Random Selection of 2 Obs	
					Measure #1	Measure #2	Measure #3	Density	#1	#2	#1	#2
In-House	D5453	07/13/05	3	1	19.8000	19.9000	19.9000	0.8372	19.9000	19.9000	19.8000	19.9000
In-House	D5453	07/12/05	3	2	21.1500	21.2400	21.1000	0.8372	21.2400	21.1000	21.1500	21.2400
In-House	D5453	07/21/05	3	4	23.1000	23.0000	22.7900	0.8372	23.1000	22.7900	23.1000	23.0000
In-House	D5453	07/13/05	3	8	21.1700	21.3600	21.9900	0.8372	21.1700	21.9900	21.3600	21.9900
In-House	D5453	07/15/05	3	9	20.2400	19.9100	20.2000	0.8372	19.9100	20.2000	19.9100	20.2000
In-House	D5453	07/28/05	3	11	20.1000	20.8700	20.5000	0.8372	20.1000	20.8700	20.8700	20.5000
In-House	D5453	07/27/05	3	12	20.3400	20.1300	20.3300	0.8372	20.3400	20.3300	20.1300	20.3300
In-House	D5453	07/20/05	3	13	22.6400	22.3300	22.4400	0.8372	22.6400	22.3300	22.3300	22.4400
In-House	D5453	07/26/05	3	15	20.6000	21.1000	21.0000	0.8372	21.1000	21.0000	21.1000	21.0000
In-House	D5453	07/19/05	3	16	21.1100	21.0400	20.5900	0.8372	21.1100	21.0400	21.1100	20.5900
In-House	D5453	07/20/05	3	18	21.4200	22.2100	20.3500	0.8372	22.2100	20.3500	21.4200	22.2100
In-House	D5453	08/03/05	3	19	20.3000	20.2000	20.2000	0.8372	20.3000	20.2000	20.3000	20.2000
In-House	D5453	08/02/05	3	21	20.1500	20.3800	20.0800	0.8372	20.1500	20.3800	20.1500	20.3800
In-House	D5453	08/10/05	3	23	20.0400	19.6600	20.0400	0.8372	20.0400	20.0400		
In-House	D5453	07/13/05	3	24	20.9700	18.9500	19.0000	0.8372	18.9500	19.0000		
In-House	D5453	08/30/05	3	25	17.6900	17.8900	17.9900	0.8372	17.8900	17.9900		
In-House	D5453	07/19/05	3	26	21.2300	21.4300	21.3800	0.8372	21.2300	21.3800	21.2300	21.4300
In-House	D5453	07/25/05	3	27	21.0900	21.3700	20.9100	0.8372	21.0900	20.9100	21.0900	21.3700
In-House	D5453	07/19/05	3	29	19.9130	20.2290	19.7040	0.8372	19.9130	20.2290		
In-House	D5453	07/12/05	3	30	21.3000	21.4000	21.2000	0.8372	21.3000	21.2000	21.3000	21.2000
In-House	D5453	07/13/05	3	31	20.7000	20.5000	20.7000	0.8372	20.5000	20.7000	20.7000	20.7000
In-House	D5453	07/25/05	3	32	21.4300	21.6000	21.6400	0.8372	21.4300	21.6000	21.6000	21.6400
In-House	D5453	08/19/05	3	33	20.1000	20.3500	20.4800	0.8372	20.1000	20.4800	20.1000	20.3500
In-House	D5453	07/26/05	3	35	18.6100	18.8300	18.8300	0.8745	18.6100	18.8300		
In-House	D5453	07/15/05	3	36	16.7000		16.4000	0.8372	16.7000	16.4000		
In-House	D5453	07/15/05	3	37	20.2000	20.5000	20.1000	0.8372	20.2000	20.5000	20.2000	20.1000
In-House	D5453	07/25/05	3	38	19.1000	19.5000	19.2000	0.8372	19.5000	19.2000	19.1000	19.5000
In-House	D5453	07/28/05	3	39	26.3700	23.8800	24.5100	0.8372	23.8800	24.5100		
In-House	D5453	08/03/05	3	41	21.7000	20.8300	20.9200	0.8372	21.7000	20.8300	20.8300	20.9200
In-House	D5453	08/30/05	3	EPA	21.2000	21.1000	21.0000	0.8372	21.2000	21.1000	21.1000	21.0000
In-House	D5453	07/19/05	3	48	21.2900	21.2500	21.4800	0.8372	21.2500	21.4800	21.2900	21.2500
In-House	D5453	07/25/05	3	51	21.1000	21.6000	21.0000	0.8372	21.6000	21.0000	21.1000	21.0000
In-House	D5453	07/27/05	3	52	18.2500	18.0700	17.9900	0.8372	18.2500	17.9900		
In-House	D5453	07/19/05	3	54	20.3000	20.3000	20.3000	0.8372	20.3000	20.3000		
In-House	D5453	07/21/05	3	56	19.4000	19.4000	19.4000	0.8372	19.4000	19.4000	19.4000	19.4000
In-House	D5453	07/26/05	3	59	20.0500	19.8300	19.9800	0.8372	20.0500	19.8300	20.0500	19.9800
In-House	D5453	07/27/05	3	61	19.3400	19.1300	19.4700	0.8372	19.3400	19.1300	19.3400	19.4700
In-House	D5453	08/30/05	3	CARB	19.2800	19.5900	19.3000	0.8372	19.5900	19.3000		
In-House	D5453	07/29/05	3	63	25.3700	23.6500	23.6500	0.8372	23.6500	23.6500		
In-House	D5453	08/02/05	3	64	19.4000	20.0000	19.5000	0.8372	20.0000	19.5000	19.4000	19.5000
In-House	D5453	08/01/05	3	66	22.4100	22.6200	22.6200	0.8372	22.4100	22.6200		
In-House	D5453	07/15/05	3	68	13.1300	13.5800	13.4000	0.8372			13.1300	13.4000
In-House	D5453	07/29/05	3	71	20.0200	20.3600	20.2400	0.8372	20.0200	20.3600	20.0200	20.2400
In-House	D5453	07/19/05	3	72	21.3000	21.5000	21.0000	0.8372	21.3000	21.5000	21.3000	21.5000
In-House	D5453	07/14/05	3	73	20.9000	20.7000	21.0000	0.8372	20.9000	21.0000	20.9000	20.7000
In-House	D5453	07/13/05	3	75	19.9100	20.4200	19.3300	0.8372	19.9100	20.4200	20.4200	19.3300
In-House	D5453	07/15/05	3	76	22.6900	23.0700	22.6800	0.8372	22.6900	22.6800	22.6900	22.6800

**Table B.25. July Fuel #3 Lab Data and Deletions Based on D5453 Test Method for In-House Calibration**

Calibration	Test Method	Run Date	July Sample #	Lab Code	Original Lab Data Robust Outlier Deletion in Shaded Box				After Robust Outlier Deletion Random Selection of 2 Obs		After Gravimetric Deletion Random Selection of 2 Obs	
					Measure #1	Measure #2	Measure #3	Density	#1	#2	#1	#2
In-House	D5453	07/25/05	3	78	21.5300	21.7700	21.8100	0.8372	21.5300	21.7700		
In-House	D5453	08/09/05	3	81	19.8000	20.1000	20.3000	0.8372	19.8000	20.1000	19.8000	20.3000
In-House	D5453	07/19/05	3	82	20.5600	20.7800	20.5600	0.8372	20.7800	20.5600	20.5600	20.7800
In-House	D5453	07/14/05	3	83	20.8900	20.8900	20.4300	0.8372	20.8900	20.8900	20.8900	20.4300
In-House	D5453	07/22/05	3	84	18.1900	18.1800	17.8100	0.8372	18.1800	17.8100	18.1800	17.8100
In-House	D5453	07/20/05	3	85	20.3000	20.0000	19.9000	0.8372	20.3000	20.0000	20.3000	19.9000
In-House	D5453	07/27/05	3	87	22.4700	23.1300	22.0900	0.8372	22.4700	22.0900	22.4700	23.1300
In-House	D5453	07/30/05	3	89	21.1000	21.0000	20.9000	0.8372	21.0000	20.9000	21.1000	20.9000
In-House	D5453	07/14/05	3	90	18.6000	19.1000	18.7000	0.8372	18.6000	19.1000	18.6000	19.1000
In-House	D5453	07/27/05	3	91	20.8500	20.9000	20.8800	0.8372	20.9000	20.8800	20.8500	20.9000
In-House	D5453	07/25/05	3	91.1	20.3800	20.2400	20.1800	0.8372	20.3800	20.2400	20.3800	20.2400
In-House	D5453	07/25/05	3	95	18.9000	18.7000	18.4000	0.8372	18.9000	18.7000	18.9000	18.4000
In-House	D5453	07/21/05	3	96	20.7000	20.8000	20.4000	0.8372	20.7000	20.8000	20.7000	20.8000
In-House	D5453	07/18/05	3	97	20.2000	20.1000	20.1000	0.8372	20.1000	20.1000	20.2000	20.1000
In-House	D5453	08/15/05	3	99	18.8800	18.0800	18.0500	0.8372	18.8800	18.0800	18.0800	18.0500
In-House	D5453	07/18/05	3	100	17.4000	17.5000	17.5000	0.8372	17.4000	17.5000	17.5000	17.5000
In-House	D5453	07/26/05	3	103	19.8891	19.9451	19.4953	0.8372	19.8891	19.4953	19.8891	19.4953
In-House	D5453	08/01/05	3	105	22.0200	22.2600	22.1700	0.8372	22.2600	22.1700	22.2600	22.1700
In-House	D5453	07/15/05	3	108	18.2540	18.1630	18.1190	0.8372	18.2540	18.1630		
In-House	D5453	07/19/05	3	109	19.0000	19.2000	19.2000	0.8372	19.0000	19.2000		
In-House	D5453	07/28/05	3	110	21.7500	22.0200	21.3500	0.8372	22.0200	21.3500	21.7500	21.3500
In-House	D5453	07/29/05	3	112	23.2600	23.8800	23.0400	0.8745	23.2600	23.0400	23.2600	23.8800
In-House	D5453	07/21/05	3	113	20.4000	20.9000	20.8000	0.8372	20.4000	20.8000		
In-House	D5453	07/25/05	3	114	20.9000	21.1000	21.0000	0.8372	20.9000	21.1000	20.9000	21.0000
In-House	D5453	07/25/05	3	115	21.9000	21.7000	21.7000	0.8372	21.9000	21.7000	21.9000	21.7000
In-House	D5453	07/16/05	3	116	21.3800	21.5300	21.2500	0.8372	21.5300	21.2500	21.5300	21.2500
In-House	D5453	07/19/05	3	117	21.4300	21.4700	21.7600	0.8372	21.4700	21.7600	21.4700	21.7600
In-House	D5453	07/25/05	3	118	21.9800	21.3900	21.9900	0.8372	21.9800	21.9900	21.9800	21.9900
In-House	D5453	07/25/05	3	119	19.7900	20.0200	19.7500	0.8372	19.7900	19.7500	19.7900	19.7500
In-House	D5453	08/08/05	3	120	21.0000	21.2000	21.1000	0.8372	21.0000	21.1000	21.0000	21.1000
In-House	D5453	07/27/05	3	122	21.4000	21.5000	21.9000	0.8372	21.4000	21.9000	21.4000	21.9000
In-House	D5453	07/28/05	3	126	17.0900	17.3100	17.0000	0.8372	17.0900	17.0000		
In-House	D5453	07/21/05	3	129	22.4000	22.6000	22.3000	0.8372	22.4000	22.3000	22.6000	22.3000
In-House	D5453	07/22/05	3	130	21.4000	21.2000	21.3000	0.8372	21.2000	21.3000	21.4000	21.3000
In-House	D5453	08/25/05	3	132	21.8210	21.5810	21.3580	0.8372	21.8210	21.5810	21.8210	21.3580
In-House	D5453	07/15/05	3	137	18.5100	19.0200	18.7300	0.8372	18.5100	18.7300		
In-House	D5453	07/22/05	3	138	20.9000	20.9000	21.0000	0.8372	20.9000	21.0000	20.9000	20.9000
In-House	D5453	07/13/05	3	139	23.1900	23.1700	23.3800	0.8372	23.1700	23.3800		
In-House	D5453	07/14/05	3	143	20.8900	20.3400	20.5100	0.8372	20.8900	20.5100	20.8900	20.5100
In-House	D5453	08/16/05	3	147	19.5000	19.9000	19.9000	0.8372	19.5000	19.9000		
In-House	D5453	07/15/05	3	148	20.7800	20.8500	21.2900	0.8372	20.7800	21.2900	20.7800	21.2900
In-House	D5453	07/27/05	3	149	22.0580	22.1110	22.0140	0.8372	22.0580	22.0140	22.0580	22.0140
In-House	D5453	08/01/05	3	151	21.6000	20.9000	20.4000	0.8372	20.9000	20.4000	21.6000	20.4000
In-House	D5453	07/22/05	3	152	18.4100	19.0300	19.3300	0.8372	18.4100	19.0300	18.4100	19.0300
In-House	D5453	07/14/05	3	153	22.9600	22.9400	22.8500	0.8372	22.9600	22.9400	22.9400	22.8500
In-House	D5453	07/26/05	3	154	21.8300	22.3100	21.6600	0.8372	22.3100	21.6600	21.8300	22.3100
In-House	D5453	07/28/05	3	156	19.3500	19.2300	19.2300	0.8372	19.2300	19.2300		

**Table B.25. July Fuel #3 Lab Data and Deletions Based on D5453 Test Method for In-House Calibration**

Calibration	Test Method	Run Date	July Sample #	Lab Code	Original Lab Data Robust Outlier Deletion in Shaded Box				After Robust Outlier Deletion Random Selection of 2 Obs		After Gravimetric Deletion Random Selection of 2 Obs		
					Measure #1	Measure #2	Measure #3	Density	#1	#2	#1	#2	
In-House	D5453	07/20/05	3	158	27.0600	27.2200	27.0600	0.8372					
In-House	D5453	08/08/05	3	159	21.5300	21.6400	21.7800	0.8372	21.5300	21.6400		21.5300	21.6400
In-House	D5453	07/24/05	3	161	22.1500	22.7800	22.1400	0.8372	22.1500	22.7800			
In-House	D5453	07/29/05	3	162	20.7300	20.6900	20.7300	0.8372	20.7300	20.7300		20.7300	20.6900

Table B.26. July Fuel #3 Lab Data and Deletions Based on D5453 Test Method for NIST Calibration

Calibration	Test Method	Run Date	July Sample #	Lab Code	Original Lab Data Robust Outlier Deletion in Shaded Box				After Robust Outlier Deletion Random Selection of 2 Obs		After Gravimetric Deletion Random Selection of 2 Obs	
					Measure #1	Measure #2	Measure #3	Density	#1	#2	#1	#2
NIST	D5453	07/13/05	3	1	20.3000	20.5000	20.5000	0.8372	20.5000	20.5000	20.3000	20.5000
NIST	D5453	07/12/05	3	2	20.8900	20.8500	21.0800	0.8372	20.8900	21.0800	20.8900	20.8500
NIST	D5453	07/21/05	3	4	20.7600	20.5300	20.0700	0.8372	20.7600	20.5300	20.7600	20.0700
NIST	D5453	07/13/05	3	8	20.2000	19.9900	19.9200	0.8372	20.2000	19.9900	20.2000	19.9200
NIST	D5453	07/18/05	3	9	20.4000	20.2600	20.2300	0.8372	20.2600	20.2300	20.4000	20.2600
NIST	D5453	07/29/05	3	11	19.6700	20.4200	20.6300	0.8372	19.6700	20.6300	19.6700	20.4200
NIST	D5453	07/28/05	3	12	20.4000	20.5000	20.8000	0.8372	20.5000	20.8000	20.4000	20.8000
NIST	D5453	07/21/05	3	13	20.9200	20.8600	21.0600	0.8372	20.9200	21.0600	20.9200	21.0600
NIST	D5453	07/28/05	3	15	20.8000	20.9000	20.5000	0.8372	20.9000	20.5000	20.9000	20.5000
NIST	D5453	07/21/05	3	16	20.0000	19.5600	20.6200	0.8372	20.0000	19.5600	20.0000	20.6200
NIST	D5453	07/20/05	3	18	21.0900	20.7800	20.9200	0.8372	21.0900	20.7800	21.0900	20.9200
NIST	D5453	08/05/05	3	19	21.7000	21.7000	21.7000	0.8372	21.7000	21.7000	21.7000	21.7000
NIST	D5453	08/03/05	3	21	20.5300	20.3000	20.5900	0.8372	20.5300	20.5900	20.5300	20.3000
NIST	D5453	08/11/05	3	23	21.9300	21.6900	21.8700	0.8372	21.9300	21.8700	21.9300	21.6900
NIST	D5453	07/13/05	3	24	22.6900	19.4300	19.9800	0.8372	19.4300	19.9800	19.4300	19.9800
NIST	D5453	08/31/05	3	25	21.3900	21.3900	21.5500	0.8372	21.3900	21.3900	21.3900	21.5500
NIST	D5453	07/21/05	3	26	21.3700	21.7800	21.0300	0.8372	21.7800	21.0300	21.3700	21.0300
NIST	D5453	07/25/05	3	27	20.0000	19.7800	19.7700	0.8372	20.0000	19.7800	20.0000	19.7700
NIST	D5453	07/20/05	3	29	20.5970	19.4380	19.5120	0.8372	19.4380	19.5120		
NIST	D5453	07/13/05	3	30	21.5000	21.5000	21.5000	0.8372	21.5000	21.5000	21.5000	21.5000
NIST	D5453	07/13/05	3	31	20.6000	20.6000	21.1000	0.8372	20.6000	20.6000	20.6000	20.6000
NIST	D5453	07/26/05	3	32	21.4800	21.4100	21.5900	0.8372	21.4100	21.5900	21.4800	21.5900
NIST	D5453	08/22/05	3	33	28.2100	28.2900	28.3700	0.8372				
NIST	D5453	07/20/05	3	35	20.2800	20.0300	20.1600	0.8745	20.0300	20.1600	20.0300	20.1600
NIST	D5453	07/15/05	3	36	18.8000	19.1000	19.3000	0.8372	18.8000	19.3000		
NIST	D5453	07/21/05	3	37	22.4000	22.9000	22.7000	0.8372	22.4000	22.7000	22.4000	22.9000
NIST	D5453	07/26/05	3	38	22.0000	22.0000	22.2000	0.8372	22.0000	22.2000	22.0000	22.2000
NIST	D5453	07/28/05	3	39	25.2600	25.5700	25.3200	0.8372				
NIST	D5453	08/04/05	3	41	23.1200	22.8700	22.8500	0.8372	23.1200	22.8700	22.8700	22.8500
NIST	D5453	08/30/05	3	EPA	20.6000	21.0000	20.8000	0.8372	20.6000	20.8000	21.0000	20.8000
NIST	D5453	07/19/05	3	48	20.5100	21.1400	21.8500	0.8372	21.1400	21.8500		
NIST	D5453	07/26/05	3	51	20.9000	20.6000	20.7000	0.8372	20.9000	20.6000	20.6000	20.7000
NIST	D5453	07/28/05	3	52	18.7600	19.6000	19.0900	0.8372	18.7600	19.0900	19.6000	19.0900
NIST	D5453	07/21/05	3	54	21.4000	21.4000	21.3000	0.8372	21.4000	21.4000	21.4000	21.3000
NIST	D5453	07/22/05	3	56	20.4000	20.4000	20.6000	0.8372	20.4000	20.6000	20.4000	20.6000
NIST	D5453	08/31/05	3	59	21.5000	21.4900	21.4100	0.8372	21.5000	21.4900	21.4900	21.4100
NIST	D5453	07/27/05	3	61	21.0900	20.9200	20.6400	0.8372	20.9200	20.6400	20.9200	20.6400
NIST	D5453	08/31/05	3	CARB	20.6000	20.3000	20.9000	0.8372	20.3000	20.9000	20.6000	20.9000
NIST	D5453	07/29/05	3	63	24.8600	24.7400	24.5600	0.8372				
NIST	D5453	07/18/05	3	64	22.4000	21.4000	20.2000	0.8372	22.4000	21.4000	21.4000	20.2000
NIST	D5453	08/01/05	3	66	23.2000	23.3000	23.7000	0.8372	23.2000	23.3000		
NIST	D5453	07/15/05	3	68	23.3700	23.2400	23.7300	0.8372	23.3700	23.7300	23.2400	23.7300
NIST	D5453	07/30/05	3	71	20.3000	20.4800	20.2300	0.8372	20.3000	20.4800	20.3000	20.4800
NIST	D5453	07/19/05	3	72	21.3000	21.2000	21.1000	0.8372	21.3000	21.1000	21.3000	21.1000
NIST	D5453	07/14/05	3	73	21.0000	21.2000	21.0000	0.8372	21.0000	21.2000	21.0000	21.2000
NIST	D5453	08/02/05	3	75	21.7400	20.3400	21.1000	0.8372	20.3400	21.1000	20.3400	21.1000
NIST	D5453	07/19/05	3	76	21.4000	22.2700	21.3400	0.8372	21.4000	22.2700	21.4000	22.2700

Table B.26. July Fuel #3 Lab Data and Deletions Based on D5453 Test Method for NIST Calibration

Calibration	Test Method	Run Date	July Sample #	Lab Code	Original Lab Data Robust Outlier Deletion in Shaded Box				After Robust Outlier Deletion Random Selection of 2 Obs		After Gravimetric Deletion Random Selection of 2 Obs	
					Measure #1	Measure #2	Measure #3	Density	#1	#2	#1	#2
NIST	D5453	07/25/05	3	78	20.9300	21.0700	20.9600	0.8372	20.9300	21.0700		
NIST	D5453	08/10/05	3	81	20.9000	20.8000	21.3000	0.8372	20.8000	21.3000	20.9000	20.8000
NIST	D5453	07/26/05	3	82	19.6600	19.8400	19.7500	0.8372	19.8400	19.7500	19.8400	19.7500
NIST	D5453	07/14/05	3	83	21.7000	21.7000	21.6900	0.8372	21.7000	21.7000	21.7000	21.6900
NIST	D5453	07/25/05	3	84	19.8600	20.8900	19.3000	0.8372	19.8600	19.3000		
NIST	D5453	07/21/05	3	85	19.9000	19.8000	19.9000	0.8372	19.9000	19.8000	19.9000	19.8000
NIST	D5453	07/27/05	3	87	21.5000	21.7500	21.5600	0.8372	21.5000	21.5600	21.5000	21.5600
NIST	D5453	07/30/05	3	89	21.5000	21.9000	21.8000	0.8372	21.9000	21.8000	21.9000	21.8000
NIST	D5453	07/14/05	3	90	18.8000	18.8000	19.2000	0.8372	18.8000	19.2000	18.8000	19.2000
NIST	D5453	07/28/05	3	91	20.5900	20.4200	20.2800	0.8372	20.5900	20.4200	20.5900	20.2800
NIST	D5453	07/29/05	3	91.1	21.1400	21.1900	21.3700	0.8372	21.1400	21.1900	21.1400	21.3700
NIST	D5453	07/21/05	3	95	20.3000	20.0000	20.0000	0.8372	20.3000	20.0000	20.3000	20.0000
NIST	D5453	07/22/05	3	96	20.9000	20.8000	20.8000	0.8372	20.8000	20.8000	20.9000	20.8000
NIST	D5453	07/18/05	3	97	20.5000	20.3000	20.3000	0.8372	20.5000	20.3000	20.5000	20.3000
NIST	D5453	08/12/05	3	99	17.2000	16.9200	16.9800	0.8372			16.9200	16.9800
NIST	D5453	07/21/05	3	100	22.8000	23.9000	23.7000	0.8372	22.8000	23.7000		
NIST	D5453	07/27/05	3	103	20.4045	19.8562	19.5548	0.8372	19.8562	19.5548	19.8562	19.5548
NIST	D5453	08/04/05	3	105	21.7000	21.8600	21.8000	0.8372	21.7000	21.8000	21.7000	21.8600
NIST	D5453	07/15/05	3	108	18.0520	18.1190	18.1000	0.8372	18.0520	18.1000		
NIST	D5453	07/27/05	3	109	25.7000	25.6000	25.8000	0.8372				
NIST	D5453	07/29/05	3	110	21.2000	20.9900	20.4500	0.8372	20.9900	20.4500	21.2000	20.4500
NIST	D5453	07/29/05	3	112	21.1700	21.0800	20.7600	0.8745	21.1700	21.0800	21.1700	21.0800
NIST	D5453	07/23/05	3	113	21.2000	20.9000	21.0000	0.8372	21.2000	21.0000	20.9000	21.0000
NIST	D5453	07/27/05	3	114	19.9000	19.9000	19.8000	0.8372	19.9000	19.8000	19.9000	19.8000
NIST	D5453	07/26/05	3	115	19.8000	19.6000	19.7000	0.8372	19.6000	19.7000	19.6000	19.7000
NIST	D5453	07/17/05	3	116	20.4900	20.3700	20.7300	0.8372	20.3700	20.7300	20.4900	20.7300
NIST	D5453	07/19/05	3	117	21.6100	21.4300	21.4100	0.8372	21.4300	21.4100	21.6100	21.4100
NIST	D5453	07/26/05	3	118	20.0600	20.2300	20.2000	0.8372	20.2300	20.2000	20.0600	20.2300
NIST	D5453	07/25/05	3	119	22.0800	22.1200	22.0000	0.8372	22.0800	22.1200	22.0800	22.1200
NIST	D5453	08/09/05	3	120	20.4000	20.5000	20.4000	0.8372	20.4000	20.4000	20.4000	20.4000
NIST	D5453	07/28/05	3	122	23.0000	22.7000	23.4000	0.8372	22.7000	23.4000	23.0000	23.4000
NIST	D5453	07/28/05	3	126	19.2000	21.0000	20.5000	0.8372	21.0000	20.5000		
NIST	D5453	07/27/05	3	129	20.5000	20.5000	20.3000	0.8372	20.5000	20.3000	20.5000	20.5000
NIST	D5453	07/25/05	3	130	20.7000	20.7000	20.7000	0.8372	20.7000	20.7000	20.7000	20.7000
NIST	D5453	08/25/05	3	132	21.8660	21.2560	20.8060	0.8372	21.8660	21.2560	21.8660	20.8060
NIST	D5453	07/18/05	3	137	22.1300	22.0600	22.2400	0.8372	22.1300	22.2400	22.1300	22.0600
NIST	D5453	07/22/05	3	138	21.6000	21.7000	21.8000	0.8372	21.6000	21.7000	21.7000	21.8000
NIST	D5453	07/20/05	3	139	28.1300	29.9400	29.5400	0.8372				
NIST	D5453	07/14/05	3	143	20.9400	21.0300	21.2700	0.8372	21.0300	21.2700	20.9400	21.2700
NIST	D5453	08/16/05	3	147	21.4000	21.3000	21.3000	0.8372	21.4000	21.3000	21.3000	21.3000
NIST	D5453	07/15/05	3	148	21.1900	21.2600	21.6900	0.8372	21.2600	21.6900	21.2600	21.6900
NIST	D5453	07/20/05	3	149	20.9890	20.9430	21.0220	0.8372	20.9890	21.0220	20.9430	21.0220
NIST	D5453	08/01/05	3	151	20.4000	20.0000	19.5000	0.8372	20.4000	20.0000	20.4000	20.0000
NIST	D5453	07/27/05	3	152	19.5300	19.5500	19.2800	0.8372	19.5300	19.2800	19.5300	19.5500
NIST	D5453	07/15/05	3	153	20.6800	20.8500	20.7900	0.8372	20.6800	20.8500	20.6800	20.8500
NIST	D5453	07/04/05	3	154	21.6400	21.9000	21.7000	0.8372	21.6400	21.9000	21.9000	21.7000
NIST	D5453	07/28/05	3	156	21.9500	21.0400	21.8000	0.8372	21.0400	21.8000	21.0400	21.8000

**Table B.26. July Fuel #3 Lab Data and Deletions Based on D5453 Test Method for NIST Calibration**

Calibration	Test Method	Run Date	July Sample #	Lab Code	Original Lab Data Robust Outlier Deletion in Shaded Box				After Robust Outlier Deletion Random Selection of 2 Obs		After Gravimetric Deletion Random Selection of 2 Obs	
					Measure #1	Measure #2	Measure #3	Density	#1	#2	#1	#2
NIST	D5453	07/21/05	3	158	27.0200	27.2900	26.7900	0.8372				
NIST	D5453	08/08/05	3	159	20.4300	20.0000	19.7100	0.8372	20.4300	19.7100	20.4300	19.7100
NIST	D5453	07/24/05	3	161	20.6400	20.5400	20.4600	0.8372	20.6400	20.5400	20.6400	20.5400
NIST	D5453	07/30/05	3	162	21.1100	20.7400	20.8700	0.8372	21.1100	20.7400	21.1100	20.8700

**Table B.27. July Fuel #4 Lab Data and Deletions Based on D5453 Test Method for In-House Calibration**

Calibration	Test Method	Run Date	July Sample #	Lab Code	Original Lab Data Robust Outlier Deletion in Shaded Box				After Robust Outlier Deletion Random Selection of 2 Obs		After Gravimetric Deletion Random Selection of 2 Obs	
					Measure #1	Measure #2	Measure #3	Density	#1	#2	#1	#2
In-House	D5453	07/13/05	4	1	7.6000	7.7000	7.5000	0.8264	7.6000	7.7000	7.6000	7.5000
In-House	D5453	07/12/05	4	2	8.9300	8.6700	8.9300	0.8264	8.9300	8.6700	8.9300	8.9300
In-House	D5453	07/21/05	4	4	8.9800	8.5900	8.7700	0.8264	8.5900	8.7700	8.5900	8.7700
In-House	D5453	07/13/05	4	8	8.9100	8.6100	8.4600	0.8264	8.9100	8.6100	8.6100	8.4600
In-House	D5453	07/15/05	4	9	7.9200	8.5500	8.0200	0.8264	7.9200	8.5500	8.5500	8.0200
In-House	D5453	07/28/05	4	11	8.9000	8.6300	8.8000	0.8264	8.9000	8.6300	8.9000	8.8000
In-House	D5453	07/27/05	4	12	7.9600	8.3000	8.0100	0.8264	7.9600	8.0100	8.3000	8.0100
In-House	D5453	07/20/05	4	13	8.7700	8.6400	8.5200	0.8264	8.6400	8.5200	8.7700	8.5200
In-House	D5453	07/26/05	4	15	7.4000	7.5000	7.8000	0.8264	7.5000	7.8000	7.4000	7.5000
In-House	D5453	07/19/05	4	16	7.7100	8.4600	8.0700	0.8264	7.7100	8.0700	7.7100	8.4600
In-House	D5453	07/20/05	4	18	8.1700	7.9400	7.3300	0.8264	7.9400	7.3300	8.1700	7.9400
In-House	D5453	08/03/05	4	19	7.6000	7.5000	7.5000	0.8264	7.6000	7.5000	7.5000	7.5000
In-House	D5453	08/02/05	4	21	7.8600	7.9200	7.8800	0.8264	7.8600	7.9200	7.9200	7.8800
In-House	D5453	08/10/05	4	23	7.5100	7.2000	7.5000	0.8264	7.5100	7.2000		
In-House	D5453	07/13/05	4	24	7.3800	7.3100	7.3600	0.8264	7.3100	7.3600		
In-House	D5453	08/30/05	4	25	7.4500	7.4200	7.3800	0.8264	7.4500	7.3800		
In-House	D5453	07/19/05	4	26	8.7500	8.6400	8.2600	0.8264	8.7500	8.6400	8.6400	8.2600
In-House	D5453	07/25/05	4	27	8.1200	7.8800	7.8600	0.8264	8.1200	7.8800	8.1200	7.8600
In-House	D5453	07/19/05	4	29	7.2580	7.4140	6.8340	0.8264	7.4140	6.8340		
In-House	D5453	07/12/05	4	30	8.1000	8.1000	8.2000	0.8264	8.1000	8.2000	8.1000	8.2000
In-House	D5453	07/13/05	4	31	8.0000	8.1000	8.3000	0.8264	8.0000	8.3000	8.0000	8.3000
In-House	D5453	07/25/05	4	32	8.8000	8.6500	8.4900	0.8264	8.8000	8.6500	8.8000	8.4900
In-House	D5453	08/19/05	4	33	8.1800	8.1800	8.1400	0.8264	8.1800	8.1400	8.1800	8.1400
In-House	D5453	07/26/05	4	35	7.5100	7.4700	7.4900	0.8956	7.5100	7.4700		
In-House	D5453	07/15/05	4	36	6.7000	6.9000	6.6000	0.8264	6.9000	6.6000		
In-House	D5453	07/15/05	4	37	7.8000	7.9000	7.7000	0.8264	7.8000	7.7000	7.9000	7.7000
In-House	D5453	07/25/05	4	38	7.9000	7.6000	7.9000	0.8264	7.6000	7.9000	7.9000	7.6000
In-House	D5453	07/28/05	4	39	9.9700	10.0400	10.1400	0.8264	9.9700			
In-House	D5453	08/03/05	4	41	8.2600	8.6500	8.6500	0.8264	8.2600	8.6500	8.2600	8.6500
In-House	D5453	08/30/05	4	EPA	8.2000	8.2000	8.2000	0.8264	8.2000	8.2000	8.2000	8.2000
In-House	D5453	07/19/05	4	48	7.5200	7.3000	8.1200	0.8264	7.5200	8.1200	7.5200	8.1200
In-House	D5453	07/25/05	4	51	8.6000	8.6000	8.5000	0.8264	8.6000	8.5000	8.6000	8.5000
In-House	D5453	07/27/05	4	52	7.5800	7.4200	7.3800	0.8264	7.4200	7.3800		
In-House	D5453	07/19/05	4	54	7.5000	7.5000	7.4000	0.8264	7.5000	7.5000		
In-House	D5453	07/21/05	4	56	7.9000	8.0000	7.9000	0.8264	7.9000	8.0000	7.9000	8.0000
In-House	D5453	07/26/05	4	59	8.1300	7.9100	8.0400	0.8264	8.1300	8.0400	7.9100	8.0400
In-House	D5453	07/27/05	4	61	7.9700	7.8300	7.7700	0.8264	7.9700	7.8300	7.9700	7.8300
In-House	D5453	08/30/05	4	CARB	7.4200	7.5100	7.5600	0.8264	7.4200	7.5100		
In-House	D5453	07/29/05	4	63	10.5800	9.8100	9.8100	0.8264	9.8100	9.8100		
In-House	D5453	08/02/05	4	64	7.6000	7.3000	7.8000	0.8264	7.3000	7.8000	7.3000	7.8000
In-House	D5453	08/01/05	4	66	9.5900	9.4200	9.0400	0.8264	9.4200	9.0400		
In-House	D5453	07/15/05	4	68	8.4100	8.2800	8.2000	0.8264	8.2800	8.2000	8.4100	8.2800
In-House	D5453	07/29/05	4	71	8.0000	7.9900	7.9800	0.8264	7.9900	7.9800	7.9900	7.9800
In-House	D5453	07/19/05	4	72	8.1000	8.4000	8.3000	0.8264	8.1000	8.4000	8.1000	8.4000
In-House	D5453	07/14/05	4	73	8.4000	8.5000	8.4000	0.8264	8.5000	8.4000	8.4000	8.4000
In-House	D5453	07/13/05	4	75	7.5800	7.7800	7.8700	0.8264	7.5800	7.8700	7.5800	7.8700
In-House	D5453	07/15/05	4	76	9.3300	9.1700	9.2700	0.8264	9.3300	9.1700	9.3300	9.1700



**Table B.27. July Fuel #4 Lab Data and Deletions Based on D5453 Test Method for In-House Calibration**

Calibration	Test Method	Run Date	July Sample #	Lab Code	Original Lab Data Robust Outlier Deletion in Shaded Box				After Robust Outlier Deletion Random Selection of 2 Obs		After Gravimetric Deletion Random Selection of 2 Obs	
					Measure #1	Measure #2	Measure #3	Density	#1	#2	#1	#2
In-House	D5453	07/25/05	4	78	10.4000	10.5000	10.5000	0.8264				
In-House	D5453	08/09/05	4	81	8.1000	8.0000	8.3000	0.8264	8.1000	8.0000	8.1000	8.3000
In-House	D5453	07/19/05	4	82	8.5000	8.2900	8.0500	0.8264	8.5000	8.2900	8.5000	8.2900
In-House	D5453	07/14/05	4	83	8.0400	8.2400	7.9100	0.8264	8.0400	7.9100	8.0400	8.2400
In-House	D5453	07/22/05	4	84	8.4300	7.5400	7.4200	0.8264	8.4300	7.5400	8.4300	7.5400
In-House	D5453	07/20/05	4	85	8.2000	8.2000	8.2000	0.8264	8.2000	8.2000	8.2000	8.2000
In-House	D5453	07/27/05	4	87	8.5800	8.4400	8.5200	0.8264	8.5800	8.5200	8.5800	8.4400
In-House	D5453	07/30/05	4	89	7.8000	7.7000	7.5000	0.8264	7.8000	7.5000	7.7000	7.5000
In-House	D5453	07/14/05	4	90	7.9000	7.7000	7.5000	0.8264	7.7000	7.5000	7.9000	7.5000
In-House	D5453	07/27/05	4	91	8.4700	8.4200	8.5100	0.8264	8.4200	8.5100	8.4200	8.5100
In-House	D5453	07/25/05	4	91.1	8.3000	8.3700	8.2300	0.8264	8.3000	8.2300	8.3700	8.2300
In-House	D5453	07/25/05	4	95	8.2000	8.3000	8.1000	0.8264	8.2000	8.3000	8.2000	8.1000
In-House	D5453	07/21/05	4	96	8.5000	8.3000	8.5000	0.8264	8.3000	8.5000	8.3000	8.5000
In-House	D5453	07/18/05	4	97	7.9000	7.9000	7.8000	0.8264	7.9000	7.8000	7.9000	7.8000
In-House	D5453	08/15/05	4	99	9.0300	8.5800	7.8500	0.8264	8.5800	7.8500	9.0300	7.8500
In-House	D5453	07/18/05	4	100	8.4000	8.2000	7.6000	0.8264	8.4000	7.6000	8.2000	7.6000
In-House	D5453	07/26/05	4	103	7.8748	7.5459	7.5822	0.8264	7.8748	7.5822	7.8748	7.5459
In-House	D5453	08/01/05	4	105	8.3000	8.3200	8.1400	0.8264	8.3000	8.1400	8.3000	8.1400
In-House	D5453	07/15/05	4	108	7.0080	7.2750	7.2410	0.8264	7.0080	7.2750		
In-House	D5453	07/19/05	4	109	7.4000	7.3000	7.5000	0.8264	7.3000	7.5000		
In-House	D5453	07/28/05	4	110	8.3600	8.4900	8.3000	0.8264	8.3600	8.3000	8.3600	8.3000
In-House	D5453	07/29/05	4	112	9.1200	8.8500	8.6600	0.8956	8.8500	8.6600	9.1200	8.8500
In-House	D5453	07/21/05	4	113	7.4000	7.2000	7.7000	0.8264	7.4000	7.7000		
In-House	D5453	07/25/05	4	114	8.4000	8.3000	8.6000	0.8264	8.4000	8.6000	8.4000	8.6000
In-House	D5453	07/25/05	4	115	8.7000	8.7000	8.7000	0.8264	8.7000	8.7000	8.7000	8.7000
In-House	D5453	07/16/05	4	116	8.5300	8.3000	8.2500	0.8264	8.5300	8.3000	8.5300	8.3000
In-House	D5453	07/19/05	4	117	8.4600	8.3400	8.2600	0.8264	8.4600	8.2600	8.4600	8.2600
In-House	D5453	07/25/05	4	118	7.8400	8.1800	8.2800	0.8264	8.1800	8.2800	7.8400	8.2800
In-House	D5453	07/25/05	4	119	8.0800	8.0500	8.0000	0.8264	8.0800	8.0000	8.0800	8.0500
In-House	D5453	08/08/05	4	120	8.4000	8.5000	8.4000	0.8264	8.5000	8.4000	8.4000	8.5000
In-House	D5453	07/27/05	4	122	8.4000	8.3000	8.3000	0.8264	8.4000	8.3000	8.3000	8.3000
In-House	D5453	07/28/05	4	126	6.7300	6.7900	6.4600	0.8264	6.7900	6.4600		
In-House	D5453	07/21/05	4	129	9.0600	9.0500	8.8000	0.8264	9.0500	8.8000	9.0600	8.8000
In-House	D5453	07/22/05	4	130	7.8000	7.7000	7.9000	0.8264	7.8000	7.7000	7.8000	7.7000
In-House	D5453	08/25/05	4	132	9.1170	8.8830	8.9300	0.8264	9.1170	8.8830	9.1170	8.8830
In-House	D5453	07/15/05	4	137	7.2900	6.9000	7.2600	0.8264	7.2900	6.9000		
In-House	D5453	07/22/05	4	138	8.4000	8.5000	8.4000	0.8264	8.4000	8.5000	8.4000	8.5000
In-House	D5453	07/13/05	4	139	9.6300	9.5000	9.4000	0.8264	9.5000	9.4000		
In-House	D5453	07/14/05	4	143	8.2900	8.4200	8.3000	0.8264	8.2900	8.4200	8.2900	8.3000
In-House	D5453	08/16/05	4	147	7.3000	7.4000	7.3000	0.8264	7.3000	7.3000		
In-House	D5453	07/15/05	4	148	8.8500	8.5700	8.7700	0.8264	8.5700	8.7700	8.8500	8.5700
In-House	D5453	07/27/05	4	149	8.7200	8.6580	8.5470	0.8264	8.7200	8.6580	8.7200	8.6580
In-House	D5453	08/01/05	4	151	8.3000	7.7000	7.3000	0.8264	8.3000	7.7000	8.3000	7.7000
In-House	D5453	07/22/05	4	152	7.5700	7.5300	7.6200	0.8264	7.5700	7.6200	7.5700	7.5300
In-House	D5453	07/14/05	4	153	8.8400	8.8400	8.8300	0.8264	8.8400	8.8300	8.8400	8.8300
In-House	D5453	07/26/05	4	154	7.8800	7.8460	8.1100	0.8264	7.8460	8.1100	7.8800	7.8460
In-House	D5453	07/28/05	4	156	7.7400	7.5000	7.2600	0.8264	7.7400	7.5000		

**Table B.27. July Fuel #4 Lab Data and Deletions Based on D5453 Test Method for In-House Calibration**

Calibration	Test Method	Run Date	July Sample #	Lab Code	Original Lab Data Robust Outlier Deletion in Shaded Box				After Robust Outlier Deletion Random Selection of 2 Obs		After Gravimetric Deletion Random Selection of 2 Obs		
					Measure #1	Measure #2	Measure #3	Density	#1	#2	#1	#2	
In-House	D5453	07/20/05	4	158	9.9700	10.2100	10.0700	0.8264	9.9700				
In-House	D5453	08/08/05	4	159	7.7500	8.6100	8.6700	0.8264	8.6100	8.6700		7.7500	8.6700
In-House	D5453	07/24/05	4	161	9.7100	9.5500	9.4000	0.8264	9.7100	9.4000			
In-House	D5453	07/29/05	4	162	8.6300	8.7000	8.4200	0.8264	8.7000	8.4200		8.6300	8.4200

Table B.28. July Fuel #4 Lab Data and Deletions Based on D5453 Test Method for NIST Calibration

Calibration	Test Method	Run Date	July Sample #	Lab Code	Original Lab Data Robust Outlier Deletion in Shaded Box				After Robust Outlier Deletion Random Selection of 2 Obs		After Gravimetric Deletion Random Selection of 2 Obs	
					Measure #1	Measure #2	Measure #3	Density	#1	#2	#1	#2
NIST	D5453	07/13/05	4	1	8.2000	8.2000	8.1000	0.8264	8.2000	8.1000	8.2000	8.2000
NIST	D5453	07/12/05	4	2	8.1200	8.3500	8.0700	0.8264	8.1200	8.3500	8.1200	8.3500
NIST	D5453	07/21/05	4	4	7.6900	8.5200	6.8300	0.8264	7.6900	6.8300	7.6900	8.5200
NIST	D5453	07/13/05	4	8	8.0700	8.0500	8.0400	0.8264	8.0700	8.0500	8.0700	8.0400
NIST	D5453	07/18/05	4	9	8.0300	8.1400	8.1000	0.8264	8.0300	8.1000	8.0300	8.1400
NIST	D5453	07/29/05	4	11	8.4400	8.3700	8.2300	0.8264	8.4400	8.2300	8.4400	8.2300
NIST	D5453	07/28/05	4	12	8.3000	8.3000	8.2000	0.8264	8.3000	8.2000	8.3000	8.2000
NIST	D5453	07/21/05	4	13	8.0600	8.1500	8.1600	0.8264	8.0600	8.1600	8.0600	8.1500
NIST	D5453	07/28/05	4	15	8.2000	7.8000	7.7000	0.8264	8.2000	7.8000	8.2000	7.8000
NIST	D5453	07/21/05	4	16	8.4400	8.1500	8.6400	0.8264	8.4400	8.1500	8.4400	8.1500
NIST	D5453	07/20/05	4	18	8.1500	8.0400	8.2100	0.8264	8.1500	8.0400	8.0400	8.2100
NIST	D5453	08/05/05	4	19	8.3000	8.3000	8.4000	0.8264	8.3000	8.4000	8.3000	8.4000
NIST	D5453	08/03/05	4	21	8.2500	8.2300	8.1400	0.8264	8.2500	8.2300	8.2500	8.1400
NIST	D5453	08/11/05	4	23	8.0500	7.9800	8.0200	0.8264	7.9800	8.0200	8.0500	7.9800
NIST	D5453	07/13/05	4	24	9.5100	9.4200	7.7800	0.8264	9.4200	7.7800	9.5100	9.4200
NIST	D5453	08/31/05	4	25	8.2800	8.3200	8.2900	0.8264	8.2800	8.3200	8.2800	8.2900
NIST	D5453	07/21/05	4	26	8.9300	8.5900	7.7900	0.8264	8.5900	7.7900	8.5900	7.7900
NIST	D5453	07/25/05	4	27	7.9900	8.0100	7.9600	0.8264	7.9900	7.9600	7.9900	7.9600
NIST	D5453	07/20/05	4	29	7.7680	7.3120	7.3120	0.8264	7.3120	7.3120		
NIST	D5453	07/13/05	4	30	8.3000	8.3000	8.0000	0.8264	8.3000	8.0000	8.3000	8.0000
NIST	D5453	07/13/05	4	31	8.4000	8.3000	8.0000	0.8264	8.4000	8.0000	8.4000	8.0000
NIST	D5453	07/26/05	4	32	8.6000	8.5800	8.4500	0.8264	8.6000	8.4500	8.6000	8.5800
NIST	D5453	08/22/05	4	33	10.6800	10.4300	10.5200	0.8264				
NIST	D5453	07/20/05	4	35	7.7800	7.5200	7.4900	0.8956	7.7800	7.5200	7.7800	7.4900
NIST	D5453	07/15/05	4	36	7.2000	7.2000	7.0000	0.8264	7.2000	7.0000		
NIST	D5453	07/21/05	4	37	8.6000	8.4000	8.8000	0.8264	8.4000	8.8000	8.4000	8.8000
NIST	D5453	07/26/05	4	38	9.2000	9.2000	8.7000	0.8264	9.2000	9.2000	9.2000	9.2000
NIST	D5453	07/28/05	4	39	10.2600	10.2100	10.2600	0.8264				
NIST	D5453	08/04/05	4	41	9.3800	9.1900	8.8800	0.8264	9.1900	8.8800	9.3800	8.8800
NIST	D5453	08/30/05	4	EPA	8.2000	8.2000	8.2000	0.8264	8.2000	8.2000	8.2000	8.2000
NIST	D5453	07/19/05	4	48	8.2200	11.1300	9.8100	0.8264	8.2200	9.8100		
NIST	D5453	07/26/05	4	51	8.1000	8.3000	8.2000	0.8264	8.3000	8.2000	8.1000	8.3000
NIST	D5453	07/28/05	4	52	8.1000	8.3300	7.9700	0.8264	8.3300	7.9700	8.3300	7.9700
NIST	D5453	07/21/05	4	54	7.8000	7.8000	7.8000	0.8264	7.8000	7.8000	7.8000	7.8000
NIST	D5453	07/22/05	4	56	7.6000	7.8000	7.6000	0.8264	7.8000	7.6000	7.6000	7.8000
NIST	D5453	08/31/05	4	59	8.4600	8.4200	8.5700	0.8264	8.4200	8.5700	8.4600	8.5700
NIST	D5453	07/27/05	4	61	8.5800	8.3900	8.4300	0.8264	8.5800	8.3900	8.5800	8.4300
NIST	D5453	08/31/05	4	CARB	8.0000	7.9000	7.9000	0.8264	7.9000	7.9000	7.9000	7.9000
NIST	D5453	07/29/05	4	63	10.1500	10.0800	10.3500	0.8264				
NIST	D5453	07/18/05	4	64	8.3000	8.2000	7.8000	0.8264	8.3000	7.8000	8.3000	8.2000
NIST	D5453	08/01/05	4	66	9.7000	9.5000	9.5000	0.8264	9.7000	9.5000		
NIST	D5453	07/15/05	4	68	9.0400	8.9500	8.6400	0.8264	9.0400	8.9500	8.9500	8.6400
NIST	D5453	07/30/05	4	71	8.5700	8.2900	8.4000	0.8264	8.2900	8.4000	8.5700	8.2900
NIST	D5453	07/19/05	4	72	8.4000	8.2000	8.1000	0.8264	8.4000	8.1000	8.4000	8.2000
NIST	D5453	07/14/05	4	73	8.9000	8.4000	8.4000	0.8264	8.9000	8.4000	8.4000	8.4000
NIST	D5453	08/02/05	4	75	8.7000	9.6000	8.9000	0.8264	9.6000	8.9000	9.6000	8.9000
NIST	D5453	07/19/05	4	76	8.4700	8.6400	8.6100	0.8264	8.6400	8.6100	8.4700	8.6100

**Table B.28. July Fuel #4 Lab Data and Deletions Based on D5453 Test Method for NIST Calibration**

Calibration	Test Method	Run Date	July Sample #	Lab Code	Original Lab Data Robust Outlier Deletion in Shaded Box				After Robust Outlier Deletion Random Selection of 2 Obs		After Gravimetric Deletion Random Selection of 2 Obs	
					Measure #1	Measure #2	Measure #3	Density	#1	#2	#1	#2
NIST	D5453	07/25/05	4	78	10.9700	11.0800	11.1100	0.8264				
NIST	D5453	08/10/05	4	81	8.4000	8.6000	8.2000	0.8264	8.4000	8.6000	8.4000	8.2000
NIST	D5453	07/26/05	4	82	7.7100	7.4400	7.3800	0.8264	7.4400	7.3800	7.4400	7.3800
NIST	D5453	07/14/05	4	83	8.5500	8.5700	8.2800	0.8264	8.5500	8.2800	8.5700	8.2800
NIST	D5453	07/25/05	4	84	6.2400	6.5500	5.7400	0.8264				
NIST	D5453	07/21/05	4	85	8.1000	8.0000	8.0000	0.8264	8.0000	8.0000	8.1000	8.0000
NIST	D5453	07/27/05	4	87	9.0000	9.1400	9.0500	0.8264	9.0000	9.0500	9.0000	9.0500
NIST	D5453	07/30/05	4	89	8.2000	8.3000	8.3000	0.8264	8.2000	8.3000	8.2000	8.3000
NIST	D5453	07/14/05	4	90	8.0000	7.9000	8.1000	0.8264	8.0000	8.1000	8.0000	8.1000
NIST	D5453	07/28/05	4	91	8.1600	8.1100	7.9200	0.8264	8.1600	7.9200	8.1600	8.1100
NIST	D5453	07/29/05	4	91.1	8.5800	8.5300	8.5300	0.8264	8.5800	8.5300	8.5800	8.5300
NIST	D5453	07/21/05	4	95	8.0000	8.0000	8.0000	0.8264	8.0000	8.0000	8.0000	8.0000
NIST	D5453	07/22/05	4	96	8.4000	8.5000	8.5000	0.8264	8.5000	8.5000	8.4000	8.5000
NIST	D5453	07/18/05	4	97	8.1000	8.2000	8.1000	0.8264	8.1000	8.1000	8.2000	8.1000
NIST	D5453	08/12/05	4	99	8.4300	8.1100	7.4100	0.8264	8.4300	7.4100	8.1100	7.4100
NIST	D5453	07/21/05	4	100	11.0000	10.6000	10.5000	0.8264				
NIST	D5453	07/27/05	4	103	8.0597	7.7370	7.6736	0.8264	7.7370	7.6736	8.0597	7.6736
NIST	D5453	08/04/05	4	105	8.2200	8.0800	8.1200	0.8264	8.2200	8.1200	8.2200	8.1200
NIST	D5453	07/15/05	4	108	7.0650	7.1710	6.9390	0.8264	7.1710	6.9390		
NIST	D5453	07/27/05	4	109	9.6000	9.6000	9.6000	0.8264	9.6000	9.6000		
NIST	D5453	07/29/05	4	110	8.2200	8.1900	7.9600	0.8264	8.2200	8.1900	8.1900	7.9600
NIST	D5453	07/29/05	4	112	8.1400	8.0300	8.0200	0.8956	8.0300	8.0200	8.0300	8.0200
NIST	D5453	07/23/05	4	113	8.5000	8.5000	8.0000	0.8264	8.5000	8.0000	8.5000	8.0000
NIST	D5453	07/27/05	4	114	8.0000	7.9000	7.8000	0.8264	7.9000	7.8000	8.0000	7.8000
NIST	D5453	07/26/05	4	115	7.9000	7.8000	7.6000	0.8264	7.8000	7.6000	7.8000	7.6000
NIST	D5453	07/17/05	4	116	8.0100	7.9700	8.0500	0.8264	7.9700	8.0500	8.0100	8.0500
NIST	D5453	07/19/05	4	117	8.2500	8.2100	8.1100	0.8264	8.2500	8.2100	8.2500	8.2100
NIST	D5453	07/26/05	4	118	8.0900	8.2200	7.6400	0.8264	8.2200	7.6400	8.0900	8.2200
NIST	D5453	07/25/05	4	119	8.6300	8.5500	8.5800	0.8264	8.6300	8.5800	8.6300	8.5500
NIST	D5453	08/09/05	4	120	8.3000	8.3000	8.3000	0.8264	8.3000	8.3000	8.3000	8.3000
NIST	D5453	07/28/05	4	122	9.2000	8.7000	8.7000	0.8264	9.2000	8.7000	9.2000	8.7000
NIST	D5453	07/28/05	4	126	6.4000	6.4000	6.7000	0.8264				
NIST	D5453	07/27/05	4	129	8.3200	8.4300	8.3600	0.8264	8.3200	8.4300	8.3200	8.3600
NIST	D5453	07/25/05	4	130	8.0000	8.0000	8.1000	0.8264	8.0000	8.0000	8.0000	8.1000
NIST	D5453	08/25/05	4	132	8.8640	8.8310	8.7560	0.8264	8.8640	8.7560	8.8310	8.7560
NIST	D5453	07/18/05	4	137	9.1200	8.8500	8.3200	0.8264	8.8500	8.3200	8.8500	8.3200
NIST	D5453	07/22/05	4	138	8.5000	8.8000	8.7000	0.8264	8.5000	8.7000	8.5000	8.8000
NIST	D5453	07/20/05	4	139	12.9400	12.7900	13.1600	0.8264				
NIST	D5453	07/14/05	4	143	8.5100	8.3100	8.0900	0.8264	8.5100	8.0900	8.5100	8.0900
NIST	D5453	08/16/05	4	147	9.0000	7.9000	7.3000	0.8264	9.0000	7.3000	9.0000	7.3000
NIST	D5453	07/15/05	4	148	8.8600	8.5500	8.7600	0.8264	8.8600	8.5500	8.8600	8.7600
NIST	D5453	07/20/05	4	149	8.4950	8.4420	8.2860	0.8264	8.4950	8.2860	8.4950	8.4420
NIST	D5453	08/01/05	4	151	7.8000	7.7000	7.7000	0.8264	7.8000	7.7000	7.8000	7.7000
NIST	D5453	07/27/05	4	152	8.2600	8.4000	8.4100	0.8264	8.2600	8.4000	8.2600	8.4000
NIST	D5453	07/15/05	4	153	7.9400	7.8500	7.7900	0.8264	7.9400	7.7900	7.9400	7.7900
NIST	D5453	07/04/05	4	154	8.8200	8.2800	8.6400	0.8264	8.8200	8.2800	8.2800	8.6400
NIST	D5453	07/28/05	4	156	8.6700	8.1000	9.3900	0.8264	8.1000	9.3900	8.6700	9.3900

**Table B.28. July Fuel #4 Lab Data and Deletions Based on D5453 Test Method for NIST Calibration**

Calibration	Test Method	Run Date	July Sample #	Lab Code	Original Lab Data Robust Outlier Deletion in Shaded Box				After Robust Outlier Deletion Random Selection of 2 Obs		After Gravimetric Deletion Random Selection of 2 Obs	
					Measure #1	Measure #2	Measure #3	Density	#1	#2	#1	#2
NIST	D5453	07/21/05	4	158	10.1500	10.4000	10.0300	0.8264				
NIST	D5453	08/08/05	4	159	8.0900	8.1000	8.1000	0.8264	8.0900	8.1000	8.0900	8.1000
NIST	D5453	07/24/05	4	161	8.1600	7.9900	8.4400	0.8264	8.1600	8.4400	7.9900	8.4400
NIST	D5453	07/30/05	4	162	8.3100	8.2900	8.1800	0.8264	8.3100	8.1800	8.3100	8.2900

**Table B.29. July Fuel #5 Lab Data and Deletions Based on D5453 Test Method for In-House Calibration**

Calibration	Test Method	Run Date	July Sample #	Lab Code	Original Lab Data Robust Outlier Deletion in Shaded Box				After Robust Outlier Deletion Random Selection of 2 Obs		After Gravimetric Deletion Random Selection of 2 Obs	
					Measure #1	Measure #2	Measure #3	Density	#1	#2	#1	#2
In-House	D5453	07/13/05	5	1	13.9000	14.0000	14.0000	0.8270	13.9000	14.0000	13.9000	14.0000
In-House	D5453	07/12/05	5	2	14.8500	14.6800	15.2800	0.8270	14.6800	15.2800	14.8500	15.2800
In-House	D5453	07/21/05	5	4	15.9700	15.8800	15.8400	0.8270	15.9700	15.8400	15.8800	15.8400
In-House	D5453	07/13/05	5	8	15.1200	15.2300	15.3300	0.8270	15.1200	15.3300	15.1200	15.3300
In-House	D5453	07/15/05	5	9	14.2300	14.1600	14.1400	0.8270	14.1600	14.1400	14.1600	14.1400
In-House	D5453	07/28/05	5	11	14.3900	14.9300	14.3600	0.8270	14.3900	14.9300	14.3900	14.3600
In-House	D5453	07/27/05	5	12	14.3600	14.3200	14.4300	0.8270	14.3200	14.4300	14.3200	14.4300
In-House	D5453	07/20/05	5	13	15.4400	15.3500	15.3200	0.8270	15.3500	15.3200	15.3500	15.3200
In-House	D5453	07/26/05	5	15	15.3000	14.8000	14.8000	0.8270	15.3000	14.8000	15.3000	14.8000
In-House	D5453	07/19/05	5	16	13.6500	14.4700	14.4700	0.8270	14.4700	14.4700	13.6500	14.4700
In-House	D5453	07/20/05	5	18	14.8400	14.0200	13.5200	0.8270	14.0200	13.5200	14.8400	14.0200
In-House	D5453	08/03/05	5	19	13.8000	13.8000	14.1000	0.8270	13.8000	14.1000	13.8000	14.1000
In-House	D5453	08/02/05	5	21	14.2200	14.0000	14.1300	0.8270	14.0000	14.1300	14.2200	14.1300
In-House	D5453	08/10/05	5	23	13.6100	13.5600	13.5800	0.8270	13.5600	13.5800		
In-House	D5453	07/13/05	5	24	16.4400	16.1800	17.2200	0.8270	16.1800	17.2200		
In-House	D5453	08/30/05	5	25	13.5800	13.6100	13.5700	0.8270	13.5800	13.5700		
In-House	D5453	07/19/05	5	26	14.7400	14.7700	15.0900	0.8270	14.7400	14.7700	14.7400	14.7700
In-House	D5453	07/25/05	5	27	14.6600	14.6200	14.5100	0.8270	14.6600	14.5100	14.6600	14.5100
In-House	D5453	07/19/05	5	29	12.7970	13.1180	12.7690	0.8270	12.7970	13.1180		
In-House	D5453	07/12/05	5	30	14.9000	14.8000	15.0000	0.8270	14.9000	14.8000	14.8000	15.0000
In-House	D5453	07/13/05	5	31	14.6000	14.9000	14.6000	0.8270	14.6000	14.9000	14.9000	14.6000
In-House	D5453	07/25/05	5	32	15.5600	15.4500	15.4200	0.8270	15.4500	15.4200	15.4500	15.4200
In-House	D5453	08/19/05	5	33	14.6900	14.6700	14.6300	0.8270	14.6900	14.6700	14.6900	14.6300
In-House	D5453	07/26/05	5	35	13.4100	13.2700	13.4000	0.8526	13.2700	13.4000		
In-House	D5453	07/15/05	5	36	12.1000	12.4000	12.3000	0.8270	12.1000	12.3000		
In-House	D5453	07/15/05	5	37	14.4000	14.3000	14.4000	0.8270	14.4000	14.4000	14.4000	14.3000
In-House	D5453	07/25/05	5	38	13.7000	14.0000	14.1000	0.8270	13.7000	14.1000	13.7000	14.0000
In-House	D5453	07/28/05	5	39	18.9100	18.6900	18.6100	0.8270				
In-House	D5453	08/03/05	5	41	14.2200	13.1700	14.0400	0.8270	13.1700	14.0400	14.2200	14.0400
In-House	D5453	08/30/05	5	EPA	15.0000	14.9000	14.9000	0.8270	14.9000	14.9000	15.0000	14.9000
In-House	D5453	07/19/05	5	48	15.5100	14.3800	14.0700	0.8270	15.5100	14.3800	15.5100	14.3800
In-House	D5453	07/25/05	5	51	15.0000	15.2000	15.3000	0.8270	15.0000	15.3000	15.2000	15.3000
In-House	D5453	07/27/05	5	52	13.0200	12.9300	12.9500	0.8270	13.0200	12.9300		
In-House	D5453	07/19/05	5	54	13.9000	13.8000	13.8000	0.8270	13.9000	13.8000		
In-House	D5453	07/21/05	5	56	13.6000	13.8000	13.7000	0.8270	13.6000	13.8000	13.8000	13.7000
In-House	D5453	07/26/05	5	59	14.2800	14.4800	14.1400	0.8270	14.2800	14.4800	14.2800	14.1400
In-House	D5453	07/27/05	5	61	13.5700	13.6100	13.6000	0.8270	13.5700	13.6000	13.5700	13.6100
In-House	D5453	08/30/05	5	CARB	13.6200	13.5100	13.7700	0.8270	13.5100	13.7700		
In-House	D5453	07/29/05	5	63	18.2300	17.1000	17.1000	0.8270	17.1000	17.1000		
In-House	D5453	08/02/05	5	64	13.9000	13.4000	13.8000	0.8270	13.9000	13.4000	13.9000	13.8000
In-House	D5453	08/01/05	5	66	16.1800	16.2500	16.9100	0.8270	16.2500	16.9100		
In-House	D5453	07/15/05	5	68	10.5400	10.7500	10.2700	0.8270			10.5400	10.7500
In-House	D5453	07/29/05	5	71	14.5300	14.5700	14.4700	0.8270	14.5300	14.4700	14.5300	14.4700
In-House	D5453	07/19/05	5	72	14.6000	14.8000	14.3000	0.8270	14.6000	14.8000	14.6000	14.8000
In-House	D5453	07/14/05	5	73	14.8000	14.4000	14.8000	0.8270	14.8000	14.4000	14.4000	14.8000
In-House	D5453	07/13/05	5	75	13.6500	14.2000	14.2600	0.8270	14.2000	14.2600	13.6500	14.2000
In-House	D5453	07/15/05	5	76	16.4900	16.2100	16.2600	0.8270	16.4900	16.2600	16.4900	16.2600

**Table B.29. July Fuel #5 Lab Data and Deletions Based on D5453 Test Method for In-House Calibration**

Calibration	Test Method	Run Date	July Sample #	Lab Code	Original Lab Data Robust Outlier Deletion in Shaded Box				After Robust Outlier Deletion Random Selection of 2 Obs		After Gravimetric Deletion Random Selection of 2 Obs	
					Measure #1	Measure #2	Measure #3	Density	#1	#2	#1	#2
In-House	D5453	07/25/05	5	78	15.2900	15.2400	15.3300	0.8270	15.2900	15.3300		
In-House	D5453	08/09/05	5	81	12.2000	12.1000	12.4000	0.8270	12.2000	12.4000	12.2000	12.1000
In-House	D5453	07/19/05	5	82	14.3000	14.2600	14.2800	0.8270	14.2600	14.2800	14.2600	14.2800
In-House	D5453	07/14/05	5	83	14.6000	14.9200	13.9700	0.8270	14.9200	13.9700	14.9200	13.9700
In-House	D5453	07/22/05	5	84	12.5700	12.6300	12.9800	0.8270	12.5700	12.9800	12.5700	12.6300
In-House	D5453	07/20/05	5	85	14.0000	14.1000	14.2000	0.8270	14.0000	14.2000	14.0000	14.2000
In-House	D5453	07/27/05	5	87	13.4500	13.5400	13.1000	0.8270	13.4500	13.1000	13.5400	13.1000
In-House	D5453	07/30/05	5	89	14.2000	14.8000	14.4000	0.8270	14.2000	14.4000	14.8000	14.4000
In-House	D5453	07/14/05	5	90	13.1000	13.0000	13.0000	0.8270	13.0000	13.0000	13.0000	13.0000
In-House	D5453	07/27/05	5	91	14.8500	14.8100	15.0500	0.8270	14.8500	15.0500	14.8500	14.8100
In-House	D5453	07/25/05	5	91.1	14.6500	14.6800	14.5800	0.8270	14.6800	14.5800	14.6500	14.5800
In-House	D5453	07/25/05	5	95	13.0000	13.5000	13.3000	0.8270	13.0000	13.5000	13.0000	13.5000
In-House	D5453	07/21/05	5	96	14.8000	14.5000	14.6000	0.8270	14.5000	14.6000	14.5000	14.6000
In-House	D5453	07/18/05	5	97	14.2000	14.2000	14.2000	0.8270	14.2000	14.2000	14.2000	14.2000
In-House	D5453	08/15/05	5	99	14.4900	14.5000	13.9600	0.8270	14.4900	13.9600	14.4900	13.9600
In-House	D5453	07/18/05	5	100	12.7000	12.4000	12.9000	0.8270	12.7000	12.4000	12.7000	12.4000
In-House	D5453	07/26/05	5	103	13.3262	13.3060	13.6070	0.8270	13.3262	13.3060	13.3060	13.6070
In-House	D5453	08/01/05	5	105	14.9000	14.7500	14.8200	0.8270	14.9000	14.8200	14.7500	14.8200
In-House	D5453	07/15/05	5	108	13.0020	12.5840	12.7770	0.8270	12.5840	12.7770		
In-House	D5453	07/19/05	5	109	13.9000	13.9000	14.0000	0.8270	13.9000	14.0000		
In-House	D5453	07/28/05	5	110	15.1400	15.2600	15.0100	0.8270	15.1400	15.0100	15.1400	15.2600
In-House	D5453	07/29/05	5	112	16.1200	16.2200	16.3900	0.8526	16.2200	16.3900	16.1200	16.3900
In-House	D5453	07/21/05	5	113	13.5000	13.5000	13.8000	0.8270	13.5000	13.5000		
In-House	D5453	07/25/05	5	114	14.7000	14.9000	15.1000	0.8270	14.9000	15.1000	14.7000	15.1000
In-House	D5453	07/25/05	5	115	15.5000	15.4000	15.5000	0.8270	15.4000	15.5000	15.5000	15.5000
In-House	D5453	07/16/05	5	116	14.7100	14.5000	14.7100	0.8270	14.7100	14.5000	14.7100	14.5000
In-House	D5453	07/19/05	5	117	14.8100	14.8000	14.8800	0.8270	14.8000	14.8800	14.8100	14.8000
In-House	D5453	07/25/05	5	118	15.2200	15.2900	14.9100	0.8270	15.2900	14.9100	15.2200	15.2900
In-House	D5453	07/25/05	5	119	14.1900	14.2000	14.1700	0.8270	14.2000	14.1700	14.1900	14.2000
In-House	D5453	08/08/05	5	120	14.7000	14.8000	14.7000	0.8270	14.7000	14.8000	14.8000	14.7000
In-House	D5453	07/27/05	5	122	14.9000	15.2000	14.9000	0.8270	14.9000	15.2000	14.9000	14.9000
In-House	D5453	07/28/05	5	126	12.3000	11.8500	12.0000	0.8270	11.8500	12.0000		
In-House	D5453	07/21/05	5	129	15.7400	16.0000	15.8000	0.8270	15.7400	16.0000	15.7400	16.0000
In-House	D5453	07/22/05	5	130	14.7000	14.6000	14.7000	0.8270	14.7000	14.7000	14.7000	14.6000
In-House	D5453	08/25/05	5	132	15.3580	14.8590	14.9040	0.8270	15.3580	14.8590	15.3580	14.8590
In-House	D5453	07/15/05	5	137	13.2300	13.1900	13.4700	0.8270	13.1900	13.4700		
In-House	D5453	07/22/05	5	138	15.0000	15.1000	14.9000	0.8270	15.0000	15.1000	15.1000	14.9000
In-House	D5453	07/13/05	5	139	17.0200	16.9100	16.8400	0.8270	16.9100	16.8400		
In-House	D5453	07/14/05	5	143	14.8100	15.2600	14.9200	0.8270	14.8100	15.2600	14.8100	14.9200
In-House	D5453	08/16/05	5	147	13.8000	13.9000	14.0000	0.8270	13.9000	14.0000		
In-House	D5453	07/15/05	5	148	14.9700	14.7600	14.6800	0.8270	14.9700	14.7600	14.9700	14.7600
In-House	D5453	07/27/05	5	149	15.0240	15.1590	15.1250	0.8270	15.1590	15.1250	15.0240	15.1590
In-House	D5453	08/01/05	5	151	14.9000	14.4000	13.6000	0.8270	14.9000	13.6000	14.9000	13.6000
In-House	D5453	07/22/05	5	152	12.5900	12.9000	13.1000	0.8270	12.5900	13.1000	12.5900	13.1000
In-House	D5453	07/14/05	5	153	16.4000	16.3800	16.3200	0.8270	16.4000	16.3200	16.4000	16.3200
In-House	D5453	07/26/05	5	154	14.5400	14.8000	14.8000	0.8270	14.8000	14.8000	14.5400	14.8000
In-House	D5453	07/28/05	5	156	14.2700	15.2400	14.0300	0.8270	15.2400	14.0300		

**Table B.29. July Fuel #5 Lab Data and Deletions Based on D5453 Test Method for In-House Calibration**

Calibration	Test Method	Run Date	July Sample #	Lab Code	Original Lab Data Robust Outlier Deletion in Shaded Box			Density	After Robust Outlier Deletion Random Selection of 2 Obs		After Gravimetric Deletion Random Selection of 2 Obs	
					Measure #1	Measure #2	Measure #3		#1	#2	#1	#2
In-House	D5453	07/20/05	5	158	19.3900	19.2200	19.1800	0.8270				
In-House	D5453	08/08/05	5	159	15.5500	15.5300	15.6400	0.8270	15.5300	15.6400	15.5500	15.6400
In-House	D5453	07/24/05	5	161	16.2200	15.3400	15.7400	0.8270	16.2200	15.3400		
In-House	D5453	07/29/05	5	162	14.6600	14.6400	14.6800	0.8270	14.6400	14.6800	14.6400	14.6800



Table B.30. July Fuel #5 Lab Data and Deletions Based on D5453 Test Method for NIST Calibration

Calibration	Test Method	Run Date	July Sample #	Lab Code	Original Lab Data Robust Outlier Deletion in Shaded Box				After Robust Outlier Deletion Random Selection of 2 Obs		After Gravimetric Deletion Random Selection of 2 Obs	
					Measure #1	Measure #2	Measure #3	Density	#1	#2	#1	#2
NIST	D5453	07/13/05	5	1	14.6000	14.7000	14.7000	0.8270	14.6000	14.7000	14.7000	14.7000
NIST	D5453	07/12/05	5	2	15.1400	14.6700	14.5800	0.8270	14.6700	14.5800	14.6700	14.5800
NIST	D5453	07/21/05	5	4	14.4200	12.9300	11.2600	0.8270	14.4200	12.9300	12.9300	11.2600
NIST	D5453	07/13/05	5	8	14.4200	14.3200	14.3700	0.8270	14.3200	14.3700	14.4200	14.3200
NIST	D5453	07/18/05	5	9	13.9300	14.4100	14.1800	0.8270	14.4100	14.1800	13.9300	14.1800
NIST	D5453	07/29/05	5	11	14.3500	14.6800	14.4200	0.8270	14.6800	14.4200	14.3500	14.4200
NIST	D5453	07/28/05	5	12	14.6000	14.6000	14.5000	0.8270	14.6000	14.6000	14.6000	14.5000
NIST	D5453	07/21/05	5	13	14.4000	14.2900	14.3600	0.8270	14.4000	14.2900	14.4000	14.2900
NIST	D5453	07/28/05	5	15	14.6000	14.3000	14.4000	0.8270	14.6000	14.3000	14.6000	14.4000
NIST	D5453	07/21/05	5	16	13.9600	14.2000	14.6000	0.8270	13.9600	14.6000	13.9600	14.6000
NIST	D5453	07/20/05	5	18	14.7900	15.2700	14.6300	0.8270	14.7900	15.2700	14.7900	15.2700
NIST	D5453	08/05/05	5	19	14.8000	14.8000	14.8000	0.8270	14.8000	14.8000	14.8000	14.8000
NIST	D5453	08/03/05	5	21	14.3000	14.3900	14.3300	0.8270	14.3000	14.3900	14.3000	14.3300
NIST	D5453	08/11/05	5	23	14.6600	14.6200	14.6500	0.8270	14.6600	14.6200	14.6600	14.6200
NIST	D5453	07/13/05	5	24	14.1800	14.1600	14.1600	0.8270	14.1800	14.1600	14.1800	14.1600
NIST	D5453	08/31/05	5	25	14.8800	14.8700	14.8500	0.8270	14.8700	14.8500	14.8800	14.8700
NIST	D5453	07/21/05	5	26	14.7400	15.1200	14.6400	0.8270	14.7400	14.6400	14.7400	15.1200
NIST	D5453	07/25/05	5	27	14.0500	14.2800	14.2100	0.8270	14.2800	14.2100	14.2800	14.2100
NIST	D5453	07/20/05	5	29	13.0960	13.2450	13.3430	0.8270	13.0960	13.3430		
NIST	D5453	07/13/05	5	30	14.5000	14.8000	15.0000	0.8270	14.5000	15.0000	14.5000	15.0000
NIST	D5453	07/13/05	5	31	14.8000	14.9000	14.8000	0.8270	14.9000	14.8000	14.8000	14.9000
NIST	D5453	07/26/05	5	32	15.2800	15.4800	15.4000	0.8270	15.2800	15.4800	15.2800	15.4000
NIST	D5453	08/22/05	5	33	19.3900	18.3300	18.4500	0.8270				
NIST	D5453	07/20/05	5	35	13.7300	13.9100	13.8100	0.8526	13.7300	13.9100	13.7300	13.8100
NIST	D5453	07/15/05	5	36	13.3000	13.5000	13.4000	0.8270	13.5000	13.4000		
NIST	D5453	07/21/05	5	37	16.2000	16.2000	16.0000	0.8270	16.2000	16.0000	16.2000	16.0000
NIST	D5453	07/26/05	5	38	15.8000	16.3000	15.8000	0.8270	16.3000	15.8000	16.3000	15.8000
NIST	D5453	07/28/05	5	39	18.2400	17.7200	18.1000	0.8270				
NIST	D5453	08/04/05	5	41	16.1700	16.2700	15.6200	0.8270	16.2700	15.6200	16.2700	15.6200
NIST	D5453	08/30/05	5	EPA	14.9000	14.8000	14.7000	0.8270	14.9000	14.8000	14.9000	14.7000
NIST	D5453	07/19/05	5	48	6.6900	10.7800	39.4500	0.8270				
NIST	D5453	07/26/05	5	51	14.6000	15.0000	14.8000	0.8270	15.0000	14.8000	15.0000	14.8000
NIST	D5453	07/28/05	5	52	13.3700	13.5800	13.6500	0.8270	13.3700	13.5800	13.3700	13.6500
NIST	D5453	07/21/05	5	54	14.1000	14.1000	14.0000	0.8270	14.1000	14.0000	14.1000	14.1000
NIST	D5453	07/22/05	5	56	14.2000	14.2000	14.4000	0.8270	14.2000	14.4000	14.2000	14.4000
NIST	D5453	08/31/05	5	59	15.4700	15.4700	15.3700	0.8270	15.4700	15.3700	15.4700	15.3700
NIST	D5453	07/27/05	5	61	14.7400	14.9600	14.9800	0.8270	14.9600	14.9800	14.7400	14.9600
NIST	D5453	08/31/05	5	CARB	14.6000	14.5000	14.8000	0.8270	14.6000	14.5000	14.5000	14.8000
NIST	D5453	07/29/05	5	63	18.5700	17.5300	18.1100	0.8270				
NIST	D5453	07/18/05	5	64	14.1000	13.6000	14.4000	0.8270	14.1000	14.4000	14.1000	14.4000
NIST	D5453	08/01/05	5	66	16.8000	17.0000	17.0000	0.8270	16.8000	17.0000		
NIST	D5453	07/15/05	5	68	16.1800	15.8300	15.9600	0.8270	15.8300	15.9600	16.1800	15.8300
NIST	D5453	07/30/05	5	71	14.8900	14.9400	14.9300	0.8270	14.9400	14.9300	14.9400	14.9300
NIST	D5453	07/19/05	5	72	14.6000	14.8000	14.5000	0.8270	14.8000	14.5000	14.6000	14.8000
NIST	D5453	07/14/05	5	73	14.7000	14.7000	15.0000	0.8270	14.7000	15.0000	14.7000	14.7000
NIST	D5453	08/02/05	5	75	14.4000	14.7000	14.0000	0.8270	14.7000	14.0000	14.4000	14.7000
NIST	D5453	07/19/05	5	76	15.7000	15.6100	15.5100	0.8270	15.7000	15.5100	15.6100	15.5100

Table B.30. July Fuel #5 Lab Data and Deletions Based on D5453 Test Method for NIST Calibration

Calibration	Test Method	Run Date	July Sample #	Lab Code	Original Lab Data Robust Outlier Deletion in Shaded Box				After Robust Outlier Deletion Random Selection of 2 Obs		After Gravimetric Deletion Random Selection of 2 Obs	
					Measure #1	Measure #2	Measure #3	Density	#1	#2	#1	#2
NIST	D5453	07/25/05	5	78	14.6600	14.7600	15.2600	0.8270	14.6600	15.2600		
NIST	D5453	08/10/05	5	81	13.8000	13.9000	14.2000	0.8270	13.8000	14.2000	13.8000	14.2000
NIST	D5453	07/26/05	5	82	13.4100	13.4800	13.3700	0.8270	13.4100	13.3700	13.4800	13.3700
NIST	D5453	07/14/05	5	83	15.0600	15.0600	15.0800	0.8270	15.0600	15.0800	15.0600	15.0800
NIST	D5453	07/25/05	5	84	10.1000	10.8000	10.5600	0.8270				
NIST	D5453	07/21/05	5	85	13.6000	13.5000	13.6000	0.8270	13.6000	13.5000	13.6000	13.5000
NIST	D5453	07/27/05	5	87	13.5000	13.7500	13.6700	0.8270	13.5000	13.6700	13.7500	13.6700
NIST	D5453	07/30/05	5	89	15.1000	15.0000	15.4000	0.8270	15.1000	15.4000	15.0000	15.4000
NIST	D5453	07/14/05	5	90	12.8000	12.9000	13.3000	0.8270	12.8000	12.9000	12.8000	13.3000
NIST	D5453	07/28/05	5	91	14.5800	14.3400	14.4000	0.8270	14.5800	14.4000	14.5800	14.4000
NIST	D5453	07/29/05	5	91.1	15.3300	15.2700	15.2600	0.8270	15.3300	15.2600	15.2700	15.2600
NIST	D5453	07/21/05	5	95	13.7000	13.8000	14.0000	0.8270	13.7000	13.8000	13.7000	14.0000
NIST	D5453	07/22/05	5	96	14.6000	14.5000	14.6000	0.8270	14.6000	14.6000	14.5000	14.6000
NIST	D5453	07/18/05	5	97	14.5000	14.4000	14.4000	0.8270	14.5000	14.4000	14.5000	14.4000
NIST	D5453	08/12/05	5	99	12.2000	11.9200	11.6300	0.8270	12.2000		12.2000	11.6300
NIST	D5453	07/21/05	5	100	16.9000	17.7000	17.6000	0.8270	16.9000	17.6000		
NIST	D5453	07/27/05	5	103	14.4011	14.4491	13.8314	0.8270	14.4491	13.8314	14.4491	13.8314
NIST	D5453	08/04/05	5	105	14.4500	14.4700	14.7300	0.8270	14.4500	14.7300	14.4500	14.7300
NIST	D5453	07/15/05	5	108	12.8750	12.7040	12.7940	0.8270	12.8750	12.7940		
NIST	D5453	07/27/05	5	109	18.1000	18.1000	18.1000	0.8270				
NIST	D5453	07/29/05	5	110	14.4900	14.5600	14.4600	0.8270	14.4900	14.4600	14.4900	14.4600
NIST	D5453	07/29/05	5	112	14.4500	14.7500	14.9000	0.8526	14.7500	14.9000	14.4500	14.7500
NIST	D5453	07/23/05	5	113	14.5000	14.6000	14.9000	0.8270	14.5000	14.9000	14.5000	14.9000
NIST	D5453	07/27/05	5	114	14.0000	14.3000	14.4000	0.8270	14.3000	14.4000	14.3000	14.4000
NIST	D5453	07/26/05	5	115	13.5000	13.3000	13.1000	0.8270	13.3000	13.1000	13.5000	13.1000
NIST	D5453	07/17/05	5	116	14.1800	13.9700	13.9700	0.8270	14.1800	13.9700	13.9700	13.9700
NIST	D5453	07/19/05	5	117	14.6100	14.6500	14.4600	0.8270	14.6100	14.6500	14.6500	14.4600
NIST	D5453	07/26/05	5	118	13.9800	14.2300	14.5600	0.8270	14.2300	14.5600	14.2300	14.5600
NIST	D5453	07/25/05	5	119	15.7600	15.7900	15.6500	0.8270	15.7600	15.7900	15.7600	15.7900
NIST	D5453	08/09/05	5	120	14.4000	14.6000	14.5000	0.8270	14.4000	14.5000	14.4000	14.5000
NIST	D5453	07/28/05	5	122	16.0000	15.8000	15.9000	0.8270	16.0000	15.8000		
NIST	D5453	07/28/05	5	126	12.6500	12.4700	12.4000	0.8270	12.4700	12.4000		
NIST	D5453	07/27/05	5	129	14.5000	14.6900	14.5500	0.8270	14.5000	14.6900	14.6900	14.5500
NIST	D5453	07/25/05	5	130	14.4000	14.7000	14.6000	0.8270	14.4000	14.6000	14.7000	14.6000
NIST	D5453	08/25/05	5	132	14.8760	15.0030	14.9530	0.8270	14.8760	15.0030	15.0030	14.9530
NIST	D5453	07/18/05	5	137	15.1400	15.5300	15.7400	0.8270	15.5300	15.7400	15.1400	15.7400
NIST	D5453	07/22/05	5	138	15.4000	15.3000	15.3000	0.8270	15.4000	15.3000	15.3000	15.3000
NIST	D5453	07/20/05	5	139	20.2000	20.2000	21.2600	0.8270				
NIST	D5453	07/14/05	5	143	14.7400	14.5100	14.7000	0.8270	14.7400	14.7000	14.7400	14.5100
NIST	D5453	08/16/05	5	147	14.3000	14.6000	15.1000	0.8270	14.3000	15.1000	14.3000	14.6000
NIST	D5453	07/15/05	5	148	15.3300	15.1100	15.0000	0.8270	15.3300	15.1100	15.3300	15.1100
NIST	D5453	07/20/05	5	149	14.8070	14.9900	15.0030	0.8270	14.8070	15.0030	14.8070	15.0030
NIST	D5453	08/01/05	5	151	14.1000	13.8000	13.4000	0.8270	14.1000	13.4000	14.1000	13.4000
NIST	D5453	07/27/05	5	152	13.1900	13.3800	13.4200	0.8270	13.1900	13.3800	13.1900	13.3800
NIST	D5453	07/15/05	5	153	14.6900	14.7000	14.6900	0.8270	14.7000	14.6900	14.6900	14.7000
NIST	D5453	07/04/05	5	154	15.1000	15.0700	14.9000	0.8270	15.1000	14.9000	15.1000	15.0700
NIST	D5453	07/28/05	5	156	15.1500	14.5800	15.3200	0.8270	15.1500	14.5800	15.1500	15.3200

**Table B.30. July Fuel #5 Lab Data and Deletions Based on D5453 Test Method for NIST Calibration**

Calibration	Test Method	Run Date	July Sample #	Lab Code	Original Lab Data Robust Outlier Deletion in Shaded Box				After Robust Outlier Deletion Random Selection of 2 Obs		After Gravimetric Deletion Random Selection of 2 Obs	
					Measure #1	Measure #2	Measure #3	Density	#1	#2	#1	#2
NIST	D5453	07/21/05	5	158	19.2700	19.1700	19.1900	0.8270				
NIST	D5453	08/08/05	5	159	14.5600	14.7400	14.5900	0.8270	14.7400	14.5900	14.5600	14.7400
NIST	D5453	07/24/05	5	161	14.2100	14.3300	14.9000	0.8270	14.2100	14.9000	14.2100	14.3300
NIST	D5453	07/30/05	5	162	14.2500	14.2500	14.4000	0.8270	14.2500	14.4000	14.2500	14.4000

**Table B.31. August Fuel #1 Lab Data and Deletions Based on D5453 Test Method for In-House Calibration**

Calibration	Test Method	Run Date	August Sample #	Lab Code	Original Lab Data Robust Outlier Deletion in Shaded Box				After Robust Outlier Deletion Random Selection of 2 Obs		After Gravimetric Deletion Random Selection of 2 Obs	
					Measure #1	Measure #2	Measure #3	Density	#1	#2	#1	#2
In-House	D5453	08/18/05	1	1	9.2000	9.1000	9.0000	0.8240	9.2000	9.1000	9.2000	9.0000
In-House	D5453	08/04/05	1	2	10.3200	10.7500	10.2300	0.8240	10.7500	10.2300	10.7500	10.2300
In-House	D5453	08/31/05	1	4	9.9500	10.0100	10.2900	0.8240	9.9500	10.2900		
In-House	D5453	08/03/05	1	8	10.2000	10.0000	9.9000	0.8240	10.2000	9.9000	10.2000	10.0000
In-House	D5453	08/05/05	1	9	9.6500	9.5200	9.3600	0.8240	9.5200	9.3600	9.6500	9.5200
In-House	D5453	08/04/05	1	11	10.3000	9.9000	10.3000	0.8240	10.3000	9.9000	10.3000	9.9000
In-House	D5453	08/25/05	1	12	9.9000	9.5000	9.7000	0.8240	9.9000	9.5000	9.5000	9.7000
In-House	D5453	08/08/05	1	13	10.7000	10.5000	10.7000	0.8240	10.5000	10.7000	10.5000	10.7000
In-House	D5453	07/26/05	1	15	10.2200	9.8400	9.8900	0.8240	10.2200	9.8900	10.2200	9.8900
In-House	D5453	08/19/05	1	16	9.7500	9.6600	9.8500	0.8240	9.7500	9.6600	9.7500	9.6600
In-House	D5453	08/11/05	1	18	10.3700	10.0900	10.0600	0.8359	10.0900	10.0600	10.3700	10.0900
In-House	D5453	08/16/05	1	19	9.8000	9.8000	9.8000	0.8240	9.8000	9.8000	9.8000	9.8000
In-House	D5453	08/10/05	1	21	9.4800	9.2200	9.2900	0.8240	9.4800	9.2200	9.2200	9.2900
In-House	D5453	08/22/05	1	23	9.1900	9.1300	9.1100	0.8240	9.1300	9.1100		
In-House	D5453	08/04/05	1	24	10.1400	10.0500	10.0700		10.1400	10.0700	10.1400	10.0500
In-House	D5453	08/31/05	1	25	9.0500	9.1000	8.9400	0.8359	9.0500	8.9400		
In-House	D5453	08/03/05	1	26	10.0900	10.0300	9.9100	0.8240	10.0300	9.9100	10.0900	10.0300
In-House	D5453	08/25/05	1	27	10.1200	9.9700	10.2000	0.8240	10.1200	9.9700	10.1200	9.9700
In-House	D5453	08/24/05	1	29	9.7740	9.4760	9.9950	0.8240	9.7740	9.9950	9.4760	9.9950
In-House	D5453	08/05/05	1	30	10.0300	10.0600	10.2000	0.8240	10.0300	10.2000	10.0300	10.2000
In-House	D5453	08/10/05	1	31	9.9000	9.8000	9.9000	0.8240	9.9000	9.9000	9.9000	9.8000
In-House	D5453	08/08/05	1	32	9.6400	9.7500	9.5100	0.8240	9.7500	9.5100	9.7500	9.5100
In-House	D5453	08/26/05	1	36	9.3000	8.9000	8.9000	0.8372	9.3000	8.9000		
In-House	D5453	08/30/05	1	37	9.5000	9.7000	9.6000	0.8240	9.7000	9.6000	9.7000	9.6000
In-House	D5453	08/26/05	1	38	8.8000	8.9000	9.2000	0.8240	8.9000	9.2000	8.8000	9.2000
In-House	D5453	08/31/05	1	39	10.2200	9.5900	9.2100	0.8240	9.5900	9.2100	9.5900	9.2100
In-House	D5453	08/05/05	1	41	9.4300	9.4900	10.1700	0.8240	9.4300	9.4900	9.4300	9.4900
In-House	D5453	08/30/05	1	EPA	10.6000	10.4000	10.4000	0.8240	10.4000	10.4000	10.4000	10.4000
In-House	D5453	08/10/05	1	48	9.7500	9.8000	10.4200	0.8359	9.7500	9.8000		
In-House	D5453	08/24/05	1	51	10.1000	9.9000	10.0000	0.8240	9.9000	10.0000	10.1000	9.9000
In-House	D5453	08/11/05	1	54	9.5000	9.5000	9.5000	0.8240	9.5000	9.5000	9.5000	9.5000
In-House	D5453	08/04/05	1	56	9.5000	9.6000	9.6000	0.8240	9.6000	9.6000	9.6000	9.6000
In-House	D5453	08/30/05	1	59	10.7700	11.0700	11.0700	0.8240	11.0700	11.0700	10.7700	11.0700
In-House	D5453	08/13/05	1	61	9.5300	9.3400	9.1600	0.8240	9.3400	9.1600	9.5300	9.3400
In-House	D5453	08/30/05	1	CARB	9.1900	9.0600	9.4000	0.8240	9.0600	9.4000		
In-House	D5453	08/23/05	1	63	9.6400	10.2800	10.3900	0.8240	10.2800	10.3900	9.6400	10.3900
In-House	D5453	08/22/05	1	64	10.0200	10.4000	10.1600	0.8240	10.0200	10.4000	10.0200	10.1600
In-House	D5453	08/29/05	1	66	9.3900	9.2300	8.9300	0.8240	9.3900	9.2300	9.2300	8.9300
In-House	D5453	08/22/05	1	68	9.4000	9.3000	9.3000	0.8240	9.4000	9.3000	9.4000	9.3000
In-House	D5453	08/19/05	1	72	9.5200	9.5800	9.7000	0.8240	9.5800	9.7000	9.5200	9.5800
In-House	D5453	08/26/05	1	73	11.7000	11.0000	11.6000	0.8240	11.7000	11.0000		
In-House	D5453	08/31/05	1	75	10.4300	9.6000	10.0700	0.8240	9.6000	10.0700		
In-House	D5453	08/22/05	1	76	10.0400	9.9300	9.6800	0.8240	10.0400	9.9300	10.0400	9.6800
In-House	D5453	08/03/05	1	77	8.3700	8.1000	8.2500	0.8240	8.3700	8.1000	8.3700	8.1000
In-House	D5453	08/31/05	1	78	9.9100	10.2600	10.1900	0.8240	9.9100	10.1900	9.9100	10.2600
In-House	D5453	08/17/05	1	81	8.9000	9.1000	9.2000	0.8240	8.9000	9.2000	8.9000	9.1000
In-House	D5453	08/05/05	1	82	9.9200	10.2100	9.9200	0.8240	9.9200	10.2100	9.9200	9.9200

**Table B.31. August Fuel #1 Lab Data and Deletions Based on D5453 Test Method for In-House Calibration**

Calibration	Test Method	Run Date	August Sample #	Lab Code	Original Lab Data				After Robust Outlier Deletion			After Gravimetric Deletion	
					Robust Outlier Deletion in Shaded Box				Random Selection of 2 Obs			Random Selection of 2 Obs	
					Measure #1	Measure #2	Measure #3	Density	#1	#2		#1	#2
In-House	D5453	08/18/05	1	83	10.0000	8.8000	10.3000	0.8240	10.0000	10.3000		10.0000	10.3000
In-House	D5453	08/11/05	1	84	10.4000	10.5000	10.3000	0.8240	10.5000	10.3000		10.4000	10.3000
In-House	D5453	08/05/05	1	85	8.6900	8.8000	9.0000	0.8240	8.6900	9.0000		8.6900	8.8000
In-House	D5453	08/31/05	1	87	8.2000	8.4000	8.1000	0.8240	8.2000	8.4000			
In-House	D5453	08/20/05	1	89	9.8000	9.7000	9.5000	0.8240	9.8000	9.7000		9.7000	9.5000
In-House	D5453	08/04/05	1	90	8.9000	8.7000	8.7000	0.8240	8.9000	8.7000		8.9000	8.7000
In-House	D5453	08/11/05	1	91	10.4000	10.4000	10.2900	0.8240	10.4000	10.4000		10.4000	10.2900
In-House	D5453	08/09/05	1	95	9.1000	9.1000	9.2000	0.8240	9.1000	9.1000		9.1000	9.2000
In-House	D5453	08/17/05	1	96	12.5300	12.1500	12.2200	0.8240					
In-House	D5453	08/15/05	1	97	9.6000	9.6000	9.4000	0.8240	9.6000	9.4000		9.6000	9.6000
In-House	D5453	08/24/05	1	99	7.6500	7.9400	7.4700	0.8240	7.9400			7.9400	7.4700
In-House	D5453	08/10/05	1	100	7.5000	8.2000	8.1000	0.8240	8.2000	8.1000			
In-House	D5453	08/23/05	1	103	9.0000	9.3000	9.0000	0.8240	9.3000	9.0000		9.0000	9.0000
In-House	D5453	08/03/05	1	108	8.7000	8.8000	8.5000	0.8240	8.7000	8.5000			
In-House	D5453	08/29/05	1	109	9.8000	9.6000	9.8000	0.8240	9.8000	9.8000		9.6000	9.8000
In-House	D5453	08/12/05	1	110	10.3400	10.0500	10.0700	0.8240	10.3400	10.0700		10.3400	10.0700
In-House	D5453	08/18/05	1	112	11.8700	11.8900	11.8700	0.8523					
In-House	D5453	08/15/05	1	113	8.9000	8.9000	9.4000	0.8240	8.9000	8.9000			
In-House	D5453	08/25/05	1	114	10.7000	10.4000	10.6000	0.8240	10.7000	10.4000		10.7000	10.4000
In-House	D5453	08/11/05	1	115	10.6000	10.0000	10.1000	0.8240	10.0000	10.1000		10.6000	10.0000
In-House	D5453	08/09/05	1	116	10.4000	10.5300	10.2000	0.8240	10.4000	10.5300		10.5300	10.2000
In-House	D5453	08/16/05	1	117	10.3200	10.1100	10.1500	0.8240	10.1100	10.1500		10.1100	10.1500
In-House	D5453	08/25/05	1	118	9.9500	10.1300	9.9900	0.8240	10.1300	9.9900		9.9500	9.9900
In-House	D5453	08/11/05	1	119	9.7300	9.6800	9.5700	0.8240	9.6800	9.5700		9.6800	9.5700
In-House	D5453	08/29/05	1	120	10.3000	10.4000	10.3000	0.8240	10.3000	10.4000		10.3000	10.4000
In-House	D5453	08/11/05	1	122	9.9000	10.0000	10.0000	0.8240	9.9000	10.0000		10.0000	10.0000
In-House	D5453	08/10/05	1	126	7.9000	8.9000	7.7000	0.8240	7.9000	8.9000			
In-House	D5453	08/09/05	1	129	10.7000	10.6000	10.6000	0.8240	10.7000	10.6000		10.7000	10.6000
In-House	D5453	08/09/05	1	130	9.8000	9.8000	9.6000	0.8240	9.8000	9.8000		9.8000	9.8000
In-House	D5453	08/25/05	1	132	10.3160	10.3420	10.3060	0.8240	10.3160	10.3420		10.3420	10.3060
In-House	D5453	08/12/05	1	137	9.7100	10.0200	9.8400	0.8240	9.7100	9.8400		9.7100	10.0200
In-House	D5453	08/17/05	1	138	10.4000	10.2000	10.7000	0.8240	10.4000	10.2000		10.4000	10.7000
In-House	D5453	08/31/05	1	139	9.2300	9.2700	9.4000	0.8240	9.2300	9.2700		9.2300	9.4000
In-House	D5453	08/12/05	1	143	10.2900	10.2400	10.1000	0.8240	10.2900	10.2400		10.2400	10.1000
In-House	D5453	08/26/05	1	147	10.1000	10.4000	10.4000	0.8240	10.4000	10.4000		10.1000	10.4000
In-House	D5453	08/15/05	1	148	10.1000	10.5000	10.5000	0.8240	10.1000	10.5000		10.1000	10.5000
In-House	D5453	08/18/05	1	149	9.9360	9.4800	9.4780	0.8240	9.9360	9.4780		9.9360	9.4780
In-House	D5453	08/17/05	1	151	10.5200	10.5800	10.5400	0.8240	10.5200	10.5800		10.5200	10.5800
In-House	D5453	08/11/05	1	152	7.8700	7.8900	8.0200	0.8240	7.8700	8.0200		7.8700	7.8900
In-House	D5453	08/12/05	1	153	9.7200	9.6800	9.8100	0.8240	9.7200	9.8100		9.7200	9.6800
In-House	D5453	08/15/05	1	154	10.0000	10.3000	9.1000	0.8240	10.0000	9.1000		10.3000	9.1000
In-House	D5453	08/16/05	1	156	9.5900	9.3400	8.9800	0.8240	9.5900	9.3400		9.3400	8.9800
In-House	D5453	08/05/05	1	158	13.1900	13.5100	12.9300	0.8240					
In-House	D5453	08/08/05	1	159	11.0200	10.6400	10.8500	0.8359	10.6400	10.8500		11.0200	10.6400
In-House	D5453	08/30/05	1	161	9.1800	9.3400	9.8800	0.8240	9.3400	9.8800		9.3400	9.8800
In-House	D5453	08/25/05	1	162	10.7100	10.9400	10.4400	0.8240	10.9400	10.4400		10.9400	10.4400

**Table B.32. August Fuel #1 Lab Data and Deletions Based on D5453 Test Method for NIST Calibration**

Calibration	Test Method	Run Date	August Sample #	Lab Code	Original Lab Data Robust Outlier Deletion in Shaded Box				After Robust Outlier Deletion Random Selection of 2 Obs		After Gravimetric Deletion Random Selection of 2 Obs	
					Measure #1	Measure #2	Measure #3	Density	#1	#2	#1	#2
NIST	D5453	08/18/05	1	1	10.0000	10.0000	9.9000	0.8240	10.0000	9.9000	10.0000	9.9000
NIST	D5453	08/04/05	1	2	9.9000	9.8200	10.1100	0.8240	9.8200	10.1100	9.9000	9.8200
NIST	D5453	08/31/05	1	4	11.1100	11.2100	11.1600	0.8240	11.1100	11.2100		
NIST	D5453	08/03/05	1	8	10.1000	10.2000	10.2000	0.8240	10.1000	10.2000	10.2000	10.2000
NIST	D5453	08/05/05	1	9	9.8900	9.4200	9.9300	0.8240	9.4200	9.9300	9.8900	9.9300
NIST	D5453	08/05/05	1	11	11.0000	10.9000	11.1000	0.8240	11.0000	11.1000	11.0000	11.1000
NIST	D5453	08/26/08	1	12	10.0000	9.9000	10.3000	0.8240	10.0000	9.9000	9.9000	10.3000
NIST	D5453	08/24/05	1	13	9.6000	9.9400	9.8400	0.8240	9.6000	9.9400	9.9400	9.8400
NIST	D5453	08/24/05	1	15	10.1800	9.7800	9.4800	0.8240	10.1800	9.7800	10.1800	9.4800
NIST	D5453	08/22/05	1	16	9.5500	9.5000	9.5200	0.8240	9.5000	9.5200	9.5000	9.5200
NIST	D5453	08/11/05	1	18	10.2300	9.8400	10.3800	0.8359	9.8400	10.3800	9.8400	10.3800
NIST	D5453	08/19/05	1	19	10.0000	10.0000	9.9000	0.8240	10.0000	10.0000	10.0000	9.9000
NIST	D5453	08/12/05	1	21	9.3400	9.5800	9.3000	0.8240	9.3400	9.3000	9.3400	9.5800
NIST	D5453	08/22/05	1	23	9.7000	9.7100	9.3400	0.8240	9.7100	9.3400		
NIST	D5453	08/03/05	1	24	10.3200	10.3100	10.3000		10.3100	10.3000	10.3100	10.3000
NIST	D5453	08/31/05	1	25	10.0100	9.9900	10.0300	0.8359	10.0100	10.0300	9.9900	10.0300
NIST	D5453	08/04/05	1	26	10.5000	9.8700	10.0100	0.8240	9.8700	10.0100	9.8700	10.0100
NIST	D5453	08/25/05	1	27	10.3200	10.3200	10.3000	0.8240	10.3200	10.3200	10.3200	10.3000
NIST	D5453	08/25/05	1	29	9.5330	9.5640	9.6340	0.8240	9.5330	9.6340	9.5330	9.6340
NIST	D5453	08/06/05	1	30	10.1500	10.1000	10.2000	0.8240	10.1500	10.1000	10.1000	10.2000
NIST	D5453	08/10/05	1	31	10.0000	10.0000	9.9000	0.8240	10.0000	9.9000	10.0000	10.0000
NIST	D5453	08/09/05	1	32	10.4300	10.3500	10.4400	0.8240	10.3500	10.4400	10.4300	10.3500
NIST	D5453	08/30/05	1	36	8.7800	8.9000	8.7000	0.8372	8.7800	8.9000		
NIST	D5453	08/26/05	1	37	9.4200	9.5000	9.4000	0.8240	9.4200	9.4000	9.4200	9.4000
NIST	D5453	08/30/05	1	38	10.5000	10.2000	9.9000	0.8240	10.5000	10.2000	10.5000	10.2000
NIST	D5453	09/01/05	1	39	10.3100	10.3100	10.3900	0.8240	10.3100	10.3900	10.3100	10.3900
NIST	D5453	08/11/05	1	41	11.0300	11.5800	10.2500	0.8240	11.0300	10.2500	11.0300	10.2500
NIST	D5453	08/30/05	1	EPA	10.3000	10.3000	10.3000	0.8240	10.3000	10.3000	10.3000	10.3000
NIST	D5453	08/11/05	1	48	8.9500	5.5600	7.4600	0.8359	8.9500			
NIST	D5453	08/25/05	1	51	12.2000	12.3000	12.2000	0.8240				
NIST	D5453	08/16/05	1	54	9.7000	9.7000	9.7000	0.8240	9.7000	9.7000	9.7000	9.7000
NIST	D5453	08/05/05	1	56	9.5000	9.6000	9.7000	0.8240	9.5000	9.6000	9.5000	9.6000
NIST	D5453	08/31/05	1	59	10.3500	10.0300	10.1300	0.8240	10.0300	10.1300	10.3500	10.1300
NIST	D5453	08/13/05	1	61	10.0100	9.9600	9.7700	0.8240	9.9600	9.7700	10.0100	9.7700
NIST	D5453	08/31/05	1	CARB	9.6000	9.6000	9.9000	0.8240	9.6000	9.9000	9.6000	9.9000
NIST	D5453	08/24/05	1	63	9.7800	10.0900	9.9000	0.8240	9.7800	9.9000	9.7800	10.0900
NIST	D5453	08/25/05	1	64	9.7000	9.5000	9.6000	0.8240	9.7000	9.6000	9.7000	9.5000
NIST	D5453		1	66	8.6300	8.6400	8.7400	0.8240	8.6400	8.7400	8.6300	8.6400
NIST	D5453	08/22/05	1	68	9.0000	9.0000	9.2000	0.8240	9.0000	9.2000		
NIST	D5453	08/19/05	1	72	9.7000	9.4000	9.5000	0.8240	9.4000	9.5000	9.7000	9.4000
NIST	D5453	08/26/05	1	73	11.3000	11.1000	11.3000	0.8240	11.1000	11.3000	11.1000	11.3000
NIST	D5453	09/01/05	1	75	9.6000	10.0500	10.0400	0.8240	9.6000	10.0400	10.0500	10.0400
NIST	D5453	08/22/05	1	76	9.6700	9.3900	9.9400	0.8240	9.3900	9.9400	9.6700	9.3900
NIST	D5453	08/03/05	1	77	10.9600	10.5200	10.7300	0.8240	10.9600	10.7300		
NIST	D5453	08/31/05	1	78	10.3300	10.4700	10.3300	0.8240	10.3300	10.3300	10.4700	10.3300
NIST	D5453	08/24/05	1	81	8.2000	7.7000	8.0000	0.8240			8.2000	8.0000
NIST	D5453	08/05/05	1	82	9.8700	9.9000	10.1900	0.8240	9.9000	10.1900	9.8700	9.9000

**Table B.32. August Fuel #1 Lab Data and Deletions Based on D5453 Test Method for NIST Calibration**

Calibration	Test Method	Run Date	August Sample #	Lab Code	Original Lab Data Robust Outlier Deletion in Shaded Box				After Robust Outlier Deletion Random Selection of 2 Obs		After Gravimetric Deletion Random Selection of 2 Obs	
					Measure #1	Measure #2	Measure #3	Density	#1	#2	#1	#2
NIST	D5453	08/18/05	1	83	8.8000	9.2000	9.2000	0.8240	8.8000	9.2000		
NIST	D5453	08/18/05	1	84	9.7000	10.2000	10.0000	0.8240	9.7000	10.2000	9.7000	10.2000
NIST	D5453	08/12/05	1	85	7.8000	7.8000	8.0000	0.8240			7.8000	7.8000
NIST	D5453	08/31/05	1	87	8.2000	8.4000	8.8000	0.8240	8.4000	8.8000	8.2000	8.8000
NIST	D5453	08/20/05	1	89	9.7000	10.0000	9.8000	0.8240	9.7000	10.0000	9.7000	9.8000
NIST	D5453	08/05/05	1	90	8.9000	8.7000	8.6000	0.8240	8.7000	8.6000	8.9000	8.6000
NIST	D5453	08/12/05	1	91	10.3100	10.3200	10.2700	0.8240	10.3100	10.2700	10.3100	10.2700
NIST	D5453	08/17/05	1	95	10.0000	9.9000	10.1000	0.8240	9.9000	10.1000	10.0000	10.1000
NIST	D5453		1	96	12.1600	12.1900	11.9300	0.8240				
NIST	D5453	08/15/05	1	97	10.0000	9.9000	9.9000	0.8240	10.0000	9.9000	10.0000	9.9000
NIST	D5453	08/25/05	1	99	7.9100	8.0700	7.4000	0.8240				
NIST	D5453	08/11/05	1	100	10.5000	10.1000	10.2000	0.8240	10.5000	10.2000		
NIST	D5453	08/25/05	1	103	9.3000	9.2000	9.6000	0.8240	9.3000	9.2000	9.2000	9.6000
NIST	D5453	08/08/05	1	108	8.7000	8.7000	8.7000	0.8240	8.7000	8.7000		
NIST	D5453	08/31/05	1	109	9.9000	10.1000	10.1000	0.8240	10.1000	10.1000		
NIST	D5453	08/22/05	1	110	9.8400	9.9600	9.7800	0.8240	9.9600	9.7800	9.9600	9.7800
NIST	D5453	08/19/05	1	112	9.8500	9.7300	9.5200	0.8523	9.7300	9.5200	9.7300	9.5200
NIST	D5453	08/19/05	1	113	9.9000	9.9000	9.4000	0.8240	9.9000	9.4000	9.9000	9.4000
NIST	D5453	08/26/05	1	114	9.9000	9.9000	10.0000	0.8240	9.9000	10.0000	9.9000	10.0000
NIST	D5453	08/12/05	1	115	9.6000	9.7000	9.7000	0.8240	9.6000	9.7000	9.7000	9.7000
NIST	D5453	08/09/05	1	116	9.8200	10.0700	9.8700	0.8240	9.8200	9.8700	9.8200	10.0700
NIST	D5453	08/15/05	1	117	9.9600	10.0000	10.0100	0.8240	9.9600	10.0000	9.9600	10.0100
NIST	D5453	08/25/05	1	118	10.5500	10.4900	10.3800	0.8240	10.5500	10.3800	10.5500	10.4900
NIST	D5453	08/11/05	1	119	10.6400	10.6300	10.4900	0.8240	10.6400	10.4900	10.6300	10.4900
NIST	D5453	08/30/05	1	120	10.0000	10.2000	9.9000	0.8240	10.0000	9.9000	10.2000	9.9000
NIST	D5453	08/12/05	1	122	9.6000	9.8000	10.0000	0.8240	9.6000	10.0000	9.6000	9.8000
NIST	D5453	08/10/05	1	126	10.8000	10.0500	10.1300	0.8240	10.8000	10.0500	10.8000	10.0500
NIST	D5453	08/10/05	1	129	9.7400	9.8000	9.6000	0.8240	9.8000	9.6000	9.7400	9.6000
NIST	D5453	08/08/05	1	130	10.0000	9.7000	9.8000	0.8240	10.0000	9.7000	9.7000	9.8000
NIST	D5453	08/25/05	1	132	9.5950	9.6190	9.6120	0.8240	9.6190	9.6120	9.6190	9.6120
NIST	D5453	08/14/05	1	137	9.8300	9.1500	9.7800	0.8240	9.1500	9.7800	9.8300	9.7800
NIST	D5453	08/15/05	1	138	10.9000	10.4000	10.6000	0.8240	10.9000	10.6000	10.4000	10.6000
NIST	D5453	08/25/05	1	139	9.7000	9.7000	10.1000	0.8240	9.7000	10.1000	9.7000	9.7000
NIST	D5453	08/12/05	1	143	9.5300	9.4400	9.7900	0.8240	9.4400	9.7900	9.5300	9.4400
NIST	D5453	08/26/05	1	147	9.8000	9.9000	9.8000	0.8240	9.8000	9.8000		
NIST	D5453	08/15/05	1	148	10.3000	10.8000	10.8000	0.8240	10.3000	10.8000	10.8000	10.8000
NIST	D5453	08/25/05	1	149	10.0500	9.7870	9.5750	0.8240	10.0500	9.5750	10.0500	9.7870
NIST	D5453	08/17/05	1	151	9.8700	9.8400	9.7400	0.8240	9.8400	9.7400	9.8400	9.7400
NIST	D5453	08/19/05	1	152	7.5600	7.8800	7.9700	0.8240			7.5600	7.8800
NIST	D5453	08/17/05	1	153	10.4800	10.4200	10.3900	0.8240	10.4800	10.3900	10.4200	10.3900
NIST	D5453	08/16/05	1	154	9.1000	9.6000	9.6000	0.8240	9.1000	9.6000	9.1000	9.6000
NIST	D5453	08/15/05	1	156	10.8600	10.3400	10.8900	0.8240	10.8600	10.8900	10.8600	10.3400
NIST	D5453	08/06/05	1	158	13.3500	12.6800	13.0800	0.8240				
NIST	D5453	08/08/05	1	159	10.0400	9.6000	9.6000	0.8359	10.0400	9.6000	10.0400	9.6000
NIST	D5453	08/29/05	1	161	9.3600	9.3900	9.5000	0.8240	9.3900	9.5000	9.3600	9.5000
NIST	D5453	08/30/05	1	162	9.9400	9.5400	9.2400	0.8240	9.9400	9.5400	9.9400	9.2400

**Table B.33. August Fuel #2 Lab Data and Deletions Based on D5453 Test Method for In-House Calibration**

Calibration	Test Method	Run Date	August Sample #	Lab Code	Original Lab Data Robust Outlier Deletion in Shaded Box				After Robust Outlier Deletion Random Selection of 2 Obs		After Gravimetric Deletion Random Selection of 2 Obs	
					Measure #1	Measure #2	Measure #3	Density	#1	#2	#1	#2
In-House	D5453	08/18/05	2	1	13.3000	13.3000	13.3000	0.8371	13.3000	13.3000	13.3000	13.3000
In-House	D5453	08/04/05	2	2	14.8000	15.0400	14.6900	0.8371	14.8000	15.0400	15.0400	14.6900
In-House	D5453	08/31/05	2	4	15.8400	15.4700	15.8200	0.8371	15.8400	15.4700		
In-House	D5453	08/03/05	2	8	14.3100	14.2000	14.5000	0.8371	14.3100	14.5000	14.3100	14.2000
In-House	D5453	08/05/05	2	9	13.9500	14.2200	14.2700	0.8371	13.9500	14.2700	14.2200	14.2700
In-House	D5453	08/04/05	2	11	14.4000	14.8000	15.1000	0.8371	14.8000	15.1000	14.4000	15.1000
In-House	D5453	08/25/05	2	12	14.2000	14.0000	14.0000	0.8371	14.2000	14.0000	14.0000	14.0000
In-House	D5453	08/08/05	2	13	15.7000	15.6000	15.7000	0.8371	15.7000	15.6000	15.6000	15.7000
In-House	D5453	07/26/05	2	15	13.8000	14.3100	13.6700	0.8371	13.8000	14.3100	13.8000	13.6700
In-House	D5453	08/19/05	2	16	13.9700	13.9400	14.1200	0.8371	13.9400	14.1200	13.9700	14.1200
In-House	D5453	08/11/05	2	18	14.9000	14.9000	14.8500	0.8371	14.9000	14.8500	14.9000	14.8500
In-House	D5453	08/16/05	2	19	14.2000	14.2000	14.2000	0.8371	14.2000	14.2000	14.2000	14.2000
In-House	D5453	08/10/05	2	21	13.7200	13.7000	13.8200	0.8371	13.7000	13.8200	13.7200	13.7000
In-House	D5453	08/22/05	2	23	13.2000	13.2400	13.3900	0.8371	13.2000	13.3900		
In-House	D5453	08/04/05	2	24	15.0300	14.9900	14.9100		14.9900	14.9100	15.0300	14.9100
In-House	D5453	08/31/05	2	25	13.4000	13.3800	13.4900	0.8371	13.4000	13.4900		
In-House	D5453	08/03/05	2	26	14.7100	14.9600	14.4700	0.8371	14.9600	14.4700	14.7100	14.9600
In-House	D5453	08/25/05	2	27	14.8900	15.0000	15.0500	0.8371	14.8900	15.0000	14.8900	15.0500
In-House	D5453	08/24/05	2	29	14.1880	13.8590	13.8190	0.8371	14.1880	13.8590	13.8590	13.8190
In-House	D5453	08/05/05	2	30	14.5000	14.4000	14.6000	0.8371	14.5000	14.4000	14.5000	14.6000
In-House	D5453	08/10/05	2	31	14.5000	14.3000	14.6000	0.8371	14.3000	14.6000	14.5000	14.3000
In-House	D5453	08/08/05	2	32	14.2100	14.1800	14.1400	0.8371	14.2100	14.1400	14.1800	14.1400
In-House	D5453	08/26/05	2	36	13.3000	13.4000	13.2000	0.8264	13.3000	13.2000		
In-House	D5453	08/30/05	2	37	14.1000	13.8000	13.9000	0.8371	14.1000	13.8000	14.1000	13.9000
In-House	D5453	08/26/05	2	38	13.0000	13.1000	13.2000	0.8371	13.0000	13.2000	13.0000	13.2000
In-House	D5453	08/31/05	2	39	14.6500	14.4400	14.3500	0.8371	14.4400	14.3500	14.4400	14.3500
In-House	D5453	08/05/05	2	41	14.4900	14.0200	14.2700	0.8371	14.4900	14.2700	14.4900	14.2700
In-House	D5453	08/30/05	2	EPA	15.0000	14.9000	14.9000	0.8371	14.9000	14.9000	15.0000	14.9000
In-House	D5453	08/10/05	2	48	15.8000	14.6700	12.9700	0.8371	15.8000	12.9700		
In-House	D5453	08/24/05	2	51	14.5000	14.3000	14.6000	0.8371	14.5000	14.6000	14.5000	14.6000
In-House	D5453	08/11/05	2	54	13.9000	13.8000	13.8000	0.8371	13.8000	13.8000	13.9000	13.8000
In-House	D5453	08/04/05	2	56	13.4000	13.3000	13.2000	0.8371	13.4000	13.3000	13.3000	13.2000
In-House	D5453	08/30/05	2	59	15.4800	15.1300	15.3900	0.8371	15.4800	15.1300	15.4800	15.3900
In-House	D5453	08/13/05	2	61	13.4800	13.2700	13.0500	0.8371	13.4800	13.2700	13.4800	13.0500
In-House	D5453	08/30/05	2	CARB	13.1200	13.3100	13.2500	0.8371	13.3100	13.2500		
In-House	D5453	08/23/05	2	63	14.0500	14.6000	14.6400	0.8371	14.6000	14.6400	14.0500	14.6400
In-House	D5453	08/22/05	2	64	14.5000	14.2600	14.2100	0.8371	14.5000	14.2100	14.5000	14.2100
In-House	D5453	08/29/05	2	66	13.2700	13.7400	13.3800	0.8371	13.2700	13.3800	13.2700	13.7400
In-House	D5453	08/22/05	2	68	10.9000	11.0000	11.0000	0.8371			11.0000	11.0000
In-House	D5453	08/19/05	2	72	14.0900	13.9000	14.1600	0.8371	14.0900	13.9000	14.0900	14.1600
In-House	D5453	08/26/05	2	73	16.8000	16.3000	16.9000	0.8371	16.3000	16.9000		
In-House	D5453	08/31/05	2	75	12.7700	12.7500	12.8900	0.8371	12.7700	12.8900		
In-House	D5453	08/22/05	2	76	14.0500	14.2200	14.1600	0.8371	14.2200	14.1600	14.0500	14.1600
In-House	D5453	08/03/05	2	77	12.7700	13.0400	14.4200	0.8371	12.7700	13.0400	12.7700	14.4200
In-House	D5453	08/31/05	2	78	14.7400	14.5500	14.4800	0.8371	14.5500	14.4800	14.7400	14.4800
In-House	D5453	08/17/05	2	81	14.3000	14.4000	13.9000	0.8371	14.3000	13.9000	14.3000	14.4000
In-House	D5453	08/05/05	2	82	14.0500	14.1700	14.4600	0.8371	14.0500	14.4600	14.0500	14.4600



**Table B.33. August Fuel #2 Lab Data and Deletions Based on D5453 Test Method for In-House Calibration**

Calibration	Test Method	Run Date	August Sample #	Lab Code	Original Lab Data Robust Outlier Deletion in Shaded Box				After Robust Outlier Deletion Random Selection of 2 Obs		After Gravimetric Deletion Random Selection of 2 Obs	
					Measure #1	Measure #2	Measure #3	Density	#1	#2	#1	#2
In-House	D5453	08/18/05	2	83	16.1000	15.9000	16.0000	0.8371	15.9000	16.0000	16.1000	16.0000
In-House	D5453	08/11/05	2	84	15.2000	14.7000	15.0000	0.8371	15.2000	14.7000	14.7000	15.0000
In-House	D5453	08/05/05	2	85	13.6000	13.6000	13.6000	0.8371	13.6000	13.6000	13.6000	13.6000
In-House	D5453	08/31/05	2	87	12.0000	11.9000	11.4000	0.8371	11.9000	11.4000		
In-House	D5453	08/20/05	2	89	13.8000	14.2000	14.0000	0.8371	13.8000	14.2000	13.8000	14.0000
In-House	D5453	08/04/05	2	90	13.0000	12.7000	12.6000	0.8371	13.0000	12.7000	12.7000	12.6000
In-House	D5453	08/11/05	2	91	14.7600	14.7500	14.6800	0.8371	14.7600	14.6800	14.7600	14.6800
In-House	D5453	08/09/05	2	95	14.2000	13.8000	13.5000	0.8371	13.8000	13.5000	14.2000	13.5000
In-House	D5453	08/17/05	2	96	17.4200	17.3500	17.2500	0.8371				
In-House	D5453	08/15/05	2	97	14.0000	13.8000	13.8000	0.8371	14.0000	13.8000	14.0000	13.8000
In-House	D5453	08/24/05	2	99	12.2700	11.5700	11.5900	0.8371	11.5700	11.5900	12.2700	11.5900
In-House	D5453	08/10/05	2	100	11.8000	11.8000	12.1000	0.8371	11.8000	12.1000		
In-House	D5453	08/23/05	2	103	12.7000	12.7000	13.0000	0.8371	12.7000	13.0000	12.7000	12.7000
In-House	D5453	08/03/05	2	108	12.6000	12.6000	12.5000	0.8371	12.6000	12.6000		
In-House	D5453	08/29/05	2	109	12.4000	12.6000	12.6000	0.8371	12.6000	12.6000	12.4000	12.6000
In-House	D5453	08/12/05	2	110	14.6100	14.9100	14.8600	0.8371	14.9100	14.8600	14.6100	14.9100
In-House	D5453	08/18/05	2	112	17.3800	17.6800	17.2000	0.8695				
In-House	D5453	08/15/05	2	113	12.9000	13.1000	13.1000	0.8371	12.9000	13.1000		
In-House	D5453	08/25/05	2	114	14.8000	14.9000	14.8000	0.8371	14.8000	14.9000	14.8000	14.8000
In-House	D5453	08/11/05	2	115	14.5000	14.6000	14.2000	0.8371	14.5000	14.2000	14.5000	14.2000
In-House	D5453	08/09/05	2	116	14.9400	14.7800	14.9700	0.8371	14.9400	14.9700	14.9400	14.9700
In-House	D5453	08/16/05	2	117	14.3000	14.4100	14.2400	0.8371	14.4100	14.2400	14.3000	14.2400
In-House	D5453	08/25/05	2	118	14.7100	14.5000	14.8100	0.8371	14.5000	14.8100	14.7100	14.5000
In-House	D5453	08/11/05	2	119	13.6900	13.8400	13.7900	0.8371	13.6900	13.7900	13.6900	13.8400
In-House	D5453	08/29/05	2	120	14.8000	14.8000	14.8000	0.8371	14.8000	14.8000	14.8000	14.8000
In-House	D5453	08/11/05	2	122	15.0000	14.9000	14.8000	0.8371	15.0000	14.8000	14.9000	14.8000
In-House	D5453	08/10/05	2	126	12.0000	12.2000	13.1000	0.8371	12.0000	12.2000		
In-House	D5453	08/09/05	2	129	15.7000	15.5000	15.5000	0.8371	15.7000	15.5000	15.5000	15.5000
In-House	D5453	08/09/05	2	130	14.4000	14.3000	14.2000	0.8371	14.4000	14.2000	14.3000	14.2000
In-House	D5453	08/25/05	2	132	14.4900	14.4880	14.5170	0.8371	14.4900	14.5170	14.4880	14.5170
In-House	D5453	08/12/05	2	137	14.6300	14.4900	13.6200	0.8371	14.4900	13.6200	14.4900	13.6200
In-House	D5453	08/17/05	2	138	15.0000	15.2000	15.0000	0.8371	15.2000	15.0000	15.0000	15.2000
In-House	D5453	08/31/05	2	139	13.8500	13.9500	14.4000	0.8371	13.8500	14.4000	13.8500	14.4000
In-House	D5453	08/12/05	2	143	15.0100	15.6800	14.6800	0.8371	15.0100	15.6800	15.0100	15.6800
In-House	D5453	08/26/05	2	147	15.3000	15.1000	14.9000	0.8371	15.3000	15.1000	15.3000	15.1000
In-House	D5453	08/15/05	2	148	14.5000	14.6000	15.0000	0.8371	14.5000	15.0000	14.5000	14.6000
In-House	D5453	08/18/05	2	149	14.9760	14.8180	14.8650	0.8371	14.9760	14.8180	14.8180	14.8650
In-House	D5453	08/17/05	2	151	15.7500	15.7800	15.7700	0.8371	15.7500	15.7700	15.7500	15.7800
In-House	D5453	08/11/05	2	152	12.3100	12.7800	12.7300	0.8371	12.3100	12.7300	12.7800	12.7300
In-House	D5453	08/12/05	2	153	14.2400	14.3000	14.1600	0.8371	14.2400	14.1600	14.2400	14.3000
In-House	D5453	08/15/05	2	154	14.3000	14.8000	15.2000	0.8371	14.8000	15.2000	14.3000	15.2000
In-House	D5453	08/16/05	2	156	13.3800	13.6200	12.9000	0.8371	13.3800	13.6200	13.6200	12.9000
In-House	D5453	08/05/05	2	158	19.1800	19.0900	18.9500	0.8371				
In-House	D5453	08/08/05	2	159	14.7800	14.5500	14.6200	0.8371	14.7800	14.6200	14.5500	14.6200
In-House	D5453	08/30/05	2	161	14.0400	13.6300	14.1700	0.8371	14.0400	13.6300	14.0400	13.6300
In-House	D5453	08/25/05	2	162	15.2300	15.0500	15.1400	0.8371	15.2300	15.0500	15.0500	15.1400

**Table B.34. August Fuel #2 Lab Data and Deletions Based on D5453 Test Method for NIST Calibration**

Calibration	Test Method	Run Date	August Sample #	Lab Code	Original Lab Data Robust Outlier Deletion in Shaded Box				After Robust Outlier Deletion Random Selection of 2 Obs		After Gravimetric Deletion Random Selection of 2 Obs	
					Measure #1	Measure #2	Measure #3	Density	#1	#2	#1	#2
NIST	D5453	08/18/05	2	1	14.3000	14.2000	14.2000	0.8371	14.3000	14.2000	14.2000	14.2000
NIST	D5453	08/04/05	2	2	14.7200	14.8700	14.6000	0.8371	14.8700	14.6000	14.7200	14.6000
NIST	D5453	08/31/05	2	4	16.5800	16.4400	16.5000	0.8371	16.5800	16.5000		
NIST	D5453	08/03/05	2	8	14.4500	14.5000	14.7000	0.8371	14.4500	14.7000	14.5000	14.7000
NIST	D5453	08/05/05	2	9	14.1900	14.4000	14.3600	0.8371	14.1900	14.4000	14.1900	14.3600
NIST	D5453	08/05/05	2	11	15.8000	16.1000	14.7000	0.8371	15.8000	16.1000	15.8000	16.1000
NIST	D5453	08/26/08	2	12	14.4000	14.3000	14.4000	0.8371	14.3000	14.4000	14.3000	14.4000
NIST	D5453	08/24/05	2	13	14.3500	14.3500	14.7300	0.8371	14.3500	14.7300	14.3500	14.7300
NIST	D5453	08/17/05	2	15	14.5900	13.6300	14.0800	0.8371	14.5900	14.0800	14.5900	14.0800
NIST	D5453	08/22/05	2	16	13.8600	13.9300	13.8300	0.8371	13.8600	13.8300	13.8600	13.9300
NIST	D5453	08/11/05	2	18	14.6800	14.6500	14.7300	0.8371	14.6500	14.7300	14.6500	14.7300
NIST	D5453	08/19/05	2	19	14.5000	14.5000	14.4000	0.8371	14.5000	14.4000	14.5000	14.4000
NIST	D5453	08/12/05	2	21	13.6200	13.5500	13.5900	0.8371	13.5500	13.5900	13.6200	13.5500
NIST	D5453	08/22/05	2	23	13.9900	14.1600	14.2200	0.8371	13.9900	14.1600		
NIST	D5453	08/03/05	2	24	14.9600	15.0200	14.9500		14.9600	14.9500	14.9600	15.0200
NIST	D5453	08/31/05	2	25	14.8300	14.7400	14.8700	0.8371	14.7400	14.8700	14.7400	14.8700
NIST	D5453	08/04/05	2	26	15.0100	14.6700	14.7400	0.8371	15.0100	14.7400	15.0100	14.7400
NIST	D5453	08/25/05	2	27	15.0100	14.9200	14.8300	0.8371	15.0100	14.9200	15.0100	14.9200
NIST	D5453	08/25/05	2	29	14.0370	14.1430	13.4460	0.8371	14.0370	14.1430	14.0370	14.1430
NIST	D5453	08/06/05	2	30	14.8000	14.7000	14.6000	0.8371	14.8000	14.7000	14.8000	14.7000
NIST	D5453	08/10/05	2	31	14.3000	14.4000	14.3000	0.8371	14.4000	14.3000	14.4000	14.3000
NIST	D5453	08/09/05	2	32	15.0400	15.1700	14.9100	0.8371	15.1700	14.9100	15.1700	14.9100
NIST	D5453	08/30/05	2	36	13.5000	13.4000	13.4000	0.8264	13.5000	13.4000		
NIST	D5453	08/26/05	2	37	13.8000	13.7000	13.6000	0.8371	13.8000	13.7000	13.8000	13.7000
NIST	D5453	08/30/05	2	38	14.8000	14.6000	15.1000	0.8371	14.8000	15.1000	14.6000	15.1000
NIST	D5453	09/01/05	2	39	14.9800	15.2000	14.6000	0.8371	14.9800	15.2000	15.2000	14.6000
NIST	D5453	08/11/05	2	41	15.7800	15.4500	15.5000	0.8371	15.4500	15.5000	15.4500	15.5000
NIST	D5453	08/30/05	2	EPA	14.5000	14.9000	15.0000	0.8371	14.5000	14.9000	14.5000	14.9000
NIST	D5453	08/11/05	2	48	54.9300	29.4400	16.2800	0.8371	16.2800			
NIST	D5453	08/25/05	2	51	17.1000	17.4000	17.3000	0.8371				
NIST	D5453	08/16/05	2	54	14.2000	14.3000	14.2000	0.8371	14.3000	14.2000	14.2000	14.2000
NIST	D5453	08/05/05	2	56	13.8000	14.0000	13.8000	0.8371	13.8000	14.0000	13.8000	13.8000
NIST	D5453	08/31/05	2	59	15.1000	15.1200	14.6600	0.8371	15.1000	14.6600	15.1000	15.1200
NIST	D5453	08/13/05	2	61	14.6100	14.5300	14.3700	0.8371	14.5300	14.3700	14.6100	14.3700
NIST	D5453	08/31/05	2	CARB	14.3000	13.7000	14.2000	0.8371	14.3000	13.7000	13.7000	14.2000
NIST	D5453	08/24/05	2	63	14.6200	14.3400	14.2300	0.8371	14.3400	14.2300	14.6200	14.2300
NIST	D5453	08/25/05	2	64	13.8000	13.2000	14.2000	0.8371	13.8000	14.2000	13.8000	13.2000
NIST	D5453		2	66	12.8700	12.8700	12.9700	0.8371	12.8700	12.9700	12.8700	12.9700
NIST	D5453	08/22/05	2	68	12.1100	12.0000	12.2000	0.8371	12.0000	12.2000		
NIST	D5453	08/19/05	2	72	13.9000	13.8000	13.7000	0.8371	13.8000	13.7000	13.9000	13.8000
NIST	D5453	08/26/05	2	73	16.3000	16.4000	16.2000	0.8371	16.3000	16.2000	16.3000	16.2000
NIST	D5453	09/01/05	2	75	12.9400	13.4800	14.6300	0.8371	12.9400	14.6300	12.9400	14.6300
NIST	D5453	08/22/05	2	76	14.2900	14.3200	14.3100	0.8371	14.2900	14.3100	14.2900	14.3100
NIST	D5453	08/03/05	2	77	16.4400	16.3100	16.7900	0.8371	16.4400	16.3100		
NIST	D5453	08/31/05	2	78	14.8900	14.8800	15.0000	0.8371	14.8900	15.0000	14.8800	15.0000
NIST	D5453	08/24/05	2	81	13.4000	13.1000	13.1000	0.8371	13.1000	13.1000	13.4000	13.1000
NIST	D5453	08/05/05	2	82	14.7000	15.2100	14.6700	0.8371	14.7000	14.6700	15.2100	14.6700

**Table B.34. August Fuel #2 Lab Data and Deletions Based on D5453 Test Method for NIST Calibration**

Calibration	Test Method	Run Date	August Sample #	Lab Code	Original Lab Data Robust Outlier Deletion in Shaded Box				After Robust Outlier Deletion Random Selection of 2 Obs		After Gravimetric Deletion Random Selection of 2 Obs	
					Measure #1	Measure #2	Measure #3	Density	#1	#2	#1	#2
NIST	D5453	08/18/05	2	83	13.3000	12.0000	13.0000	0.8371	12.0000	13.0000		
NIST	D5453	08/18/05	2	84	14.5000	14.2000	13.8000	0.8371	14.5000	14.2000	14.5000	14.2000
NIST	D5453	08/12/05	2	85	12.4000	12.5000	12.5000	0.8371	12.5000	12.5000	12.5000	12.5000
NIST	D5453	08/31/05	2	87	11.0000	11.1000	10.9000	0.8371			11.0000	10.9000
NIST	D5453	08/20/05	2	89	14.5000	14.9000	14.6000	0.8371	14.9000	14.6000	14.5000	14.9000
NIST	D5453	08/05/05	2	90	12.7000	12.8000	12.9000	0.8371	12.7000	12.9000	12.7000	12.8000
NIST	D5453	08/12/05	2	91	14.7900	14.7100	14.5500	0.8371	14.7900	14.7100	14.7100	14.5500
NIST	D5453	08/17/05	2	95	14.8000	14.3000	14.7000	0.8371	14.3000	14.7000	14.8000	14.3000
NIST	D5453		2	96	17.3500	17.4000	17.1400	0.8371				
NIST	D5453	08/15/05	2	97	14.3000	14.2000	13.9000	0.8371	14.3000	14.2000	14.2000	13.9000
NIST	D5453	08/25/05	2	99	11.7900	11.2800	10.6700	0.8371				
NIST	D5453	08/11/05	2	100	16.7000	16.0000	16.6000	0.8371	16.0000	16.6000		
NIST	D5453	08/25/05	2	103	13.2000	13.3000	13.2000	0.8371	13.2000	13.2000	13.2000	13.2000
NIST	D5453	08/08/05	2	108	12.7000	12.8000	12.6000	0.8371	12.7000	12.6000		
NIST	D5453	08/31/05	2	109	15.0000	15.0000	14.6000	0.8371	15.0000	15.0000		
NIST	D5453	08/22/05	2	110	14.1800	14.3600	14.3200	0.8371	14.3600	14.3200	14.3600	14.3200
NIST	D5453	08/19/05	2	112	14.4500	14.2500	14.3700	0.8695	14.2500	14.3700	14.4500	14.3700
NIST	D5453	08/19/05	2	113	14.0000	14.1000	14.6000	0.8371	14.1000	14.6000	14.0000	14.1000
NIST	D5453	08/26/05	2	114	14.1000	14.0000	13.8000	0.8371	14.1000	14.0000	14.1000	13.8000
NIST	D5453	08/12/05	2	115	13.7000	13.7000	13.6000	0.8371	13.7000	13.6000	13.7000	13.6000
NIST	D5453	08/09/05	2	116	14.3500	14.5400	14.3500	0.8371	14.5400	14.3500	14.3500	14.5400
NIST	D5453	08/15/05	2	117	14.4600	14.4500	14.2500	0.8371	14.4600	14.2500	14.4600	14.2500
NIST	D5453	08/25/05	2	118	14.8100	14.8800	15.0300	0.8371	14.8800	15.0300	14.8800	15.0300
NIST	D5453	08/11/05	2	119	15.5500	15.3000	15.3400	0.8371	15.3000	15.3400	15.3000	15.3400
NIST	D5453	08/30/05	2	120	14.3000	14.3000	14.5000	0.8371	14.3000	14.5000	14.3000	14.5000
NIST	D5453	08/12/05	2	122	14.0000	14.3000	14.3000	0.8371	14.3000	14.3000	14.0000	14.3000
NIST	D5453	08/10/05	2	126	16.6000	13.5000	14.7000	0.8371	16.6000	13.5000	16.6000	14.7000
NIST	D5453	08/10/05	2	129	14.1000	14.0000	13.8000	0.8371	14.1000	14.0000	14.1000	14.0000
NIST	D5453	08/08/05	2	130	14.1000	14.1000	14.2000	0.8371	14.1000	14.2000	14.1000	14.2000
NIST	D5453	08/25/05	2	132	13.5850	13.7940	13.7400	0.8371	13.5850	13.7400	13.5850	13.7940
NIST	D5453	08/14/05	2	137	15.5600	14.4900	14.2200	0.8371	15.5600	14.4900	14.4900	14.2200
NIST	D5453	08/15/05	2	138	15.4000	15.3000	15.3000	0.8371	15.3000	15.3000	15.4000	15.3000
NIST	D5453	08/25/05	2	139	14.5000	14.6000	14.2000	0.8371	14.6000	14.2000	14.5000	14.6000
NIST	D5453	08/12/05	2	143	15.5500	15.1100	15.0200	0.8371	15.5500	15.0200	15.5500	15.1100
NIST	D5453	08/26/05	2	147	13.2600	13.7000	13.3000	0.8371	13.7000	13.3000		
NIST	D5453	08/15/05	2	148	15.0000	15.1000	15.5000	0.8371	15.0000	15.5000	15.0000	15.1000
NIST	D5453	08/25/05	2	149	14.3080	14.3600	14.4620	0.8371	14.3080	14.4620	14.3600	14.4620
NIST	D5453	08/17/05	2	151	14.7100	14.5700	14.1600	0.8371	14.7100	14.1600	14.5700	14.1600
NIST	D5453	08/19/05	2	152	11.9900	11.9500	11.8900	0.8371	11.9900	11.9500	11.9500	11.8900
NIST	D5453	08/17/05	2	153	15.4400	15.3800	15.4100	0.8371	15.4400	15.3800	15.3800	15.4100
NIST	D5453	08/16/05	2	154	13.8000	13.7000	13.9000	0.8371	13.8000	13.9000	13.8000	13.9000
NIST	D5453	08/15/05	2	156	15.0800	15.3600	15.2700	0.8371	15.0800	15.2700	15.0800	15.2700
NIST	D5453	08/06/05	2	158	19.3800	19.3300	19.5300	0.8371				
NIST	D5453	08/08/05	2	159	13.7400	13.7400	13.8400	0.8371	13.7400	13.8400	13.7400	13.8400
NIST	D5453	08/29/05	2	161	14.1300	14.8100	14.3100	0.8371	14.1300	14.3100	14.1300	14.3100
NIST	D5453	08/30/05	2	162	13.9500	14.0700	13.7000	0.8371	14.0700	13.7000	13.9500	13.7000

**Table B.35. August Fuel #3 Lab Data and Deletions Based on D5453 Test Method for In-House Calibration**

Calibration	Test Method	Run Date	August Sample #	Lab Code	Original Lab Data Robust Outlier Deletion in Shaded Box				After Robust Outlier Deletion Random Selection of 2 Obs		After Gravimetric Deletion Random Selection of 2 Obs	
					Measure #1	Measure #2	Measure #3	Density	#1	#2	#1	#2
In-House	D5453	08/18/05	3	1	17.0000	17.2000	17.0000	0.8372	17.0000	17.0000	17.2000	17.0000
In-House	D5453	08/04/05	3	2	18.1900	18.1200	18.0100	0.8372	18.1900	18.1200	18.1200	18.0100
In-House	D5453	08/31/05	3	4	20.1200	19.5500	20.8100	0.8372	20.1200	19.5500		
In-House	D5453	08/03/05	3	8	17.6900	17.4000	17.5800	0.8372	17.4000	17.5800	17.4000	17.5800
In-House	D5453	08/05/05	3	9	17.5500	17.7800	17.6300	0.8372	17.5500	17.6300	17.5500	17.7800
In-House	D5453	08/04/05	3	11	18.0000	17.4000	18.1000	0.8372	18.0000	17.4000	18.0000	17.4000
In-House	D5453	08/25/05	3	12	17.3000	17.2000	17.6000	0.8372	17.2000	17.6000	17.2000	17.6000
In-House	D5453	08/08/05	3	13	19.2000	18.5000	19.4000	0.8372	19.2000	18.5000	19.2000	18.5000
In-House	D5453	07/26/05	3	15	17.0600	17.1900	17.3700	0.8372	17.1900	17.3700	17.1900	17.3700
In-House	D5453	08/19/05	3	16	17.1100	17.0700	17.0600	0.8372	17.1100	17.0700	17.1100	17.0700
In-House	D5453	08/11/05	3	18	18.5400	18.0900	18.3400	0.8372	18.0900	18.3400	18.0900	18.3400
In-House	D5453	08/16/05	3	19	17.6000	17.7000	17.8000	0.8372	17.6000	17.8000	17.6000	17.7000
In-House	D5453	08/10/05	3	21	17.1200	17.2600	17.2700	0.8372	17.1200	17.2700	17.1200	17.2600
In-House	D5453	08/22/05	3	23	16.4200	16.6600	16.5500	0.8372	16.4200	16.6600		
In-House	D5453	08/04/05	3	24	18.7700	18.5000	20.7200		18.7700	18.5000	18.7700	18.5000
In-House	D5453	08/31/05	3	25	16.3500	16.3100	16.3100	0.8372	16.3500	16.3100		
In-House	D5453	08/03/05	3	26	17.5300	17.7700	17.3700	0.8372	17.5300	17.3700	17.7700	17.3700
In-House	D5453	08/25/05	3	27	18.6400	18.6400	18.4000	0.8372	18.6400	18.6400	18.6400	18.6400
In-House	D5453	08/24/05	3	29	17.2020	16.9300	17.2340	0.8372	16.9300	17.2340	17.2020	16.9300
In-House	D5453	08/05/05	3	30	17.9000	17.8000	17.8000	0.8372	17.9000	17.8000	17.9000	17.8000
In-House	D5453	08/10/05	3	31	17.7000	17.8000	17.7000	0.8372	17.7000	17.7000	17.8000	17.7000
In-House	D5453	08/08/05	3	32	17.6900	17.2700	17.5600	0.8372	17.6900	17.2700	17.6900	17.5600
In-House	D5453	08/26/05	3	36	16.1000	16.3000	16.2000	0.8270	16.3000	16.2000		
In-House	D5453	08/30/05	3	37	17.4500	17.3000	17.0000	0.8372	17.4500	17.0000	17.4500	17.0000
In-House	D5453	08/26/05	3	38	14.9000	15.4000	14.7000	0.8372	14.9000	15.4000	14.9000	14.7000
In-House	D5453	08/31/05	3	39	17.9800	18.2500	17.7100	0.8372	17.9800	17.7100	18.2500	17.7100
In-House	D5453	08/05/05	3	41	18.0000	18.3500	17.8500	0.8372	18.0000	17.8500	18.0000	18.3500
In-House	D5453	08/30/05	3	EPA	18.4000	18.4000	18.5000	0.8372	18.4000	18.5000	18.4000	18.5000
In-House	D5453	08/10/05	3	48	17.9900	18.0900	17.8500	0.8372	17.9900	18.0900		
In-House	D5453	08/24/05	3	51	17.8000	18.0000	17.7000	0.8372	17.8000	18.0000	17.8000	18.0000
In-House	D5453	08/11/05	3	54	17.1000	17.1000	17.1000	0.8372	17.1000	17.1000	17.1000	17.1000
In-House	D5453	08/04/05	3	56	16.4000	16.3000	16.3000	0.8372	16.4000	16.3000	16.4000	16.3000
In-House	D5453	08/30/05	3	59	18.9000	18.6400	18.5200	0.8372	18.9000	18.5200	18.9000	18.5200
In-House	D5453	08/13/05	3	61	16.8200	16.8100	16.8400	0.8372	16.8200	16.8100	16.8100	16.8400
In-House	D5453	08/30/05	3	CARB	16.7600	16.3700	16.5600	0.8372	16.7600	16.5600		
In-House	D5453	08/23/05	3	63	18.5300	18.3600	18.1600	0.8372	18.5300	18.1600	18.3600	18.1600
In-House	D5453	08/22/05	3	64	17.6400	18.2300	17.8700	0.8372	17.6400	18.2300	18.2300	17.8700
In-House	D5453	08/29/05	3	66	16.0500	15.9600	16.2900	0.8372	16.0500	15.9600	15.9600	16.2900
In-House	D5453	08/22/05	3	68	12.5000	12.5000	12.5000	0.8372		12.5000	12.5000	12.5000
In-House	D5453	08/19/05	3	72	17.2000	17.3000	17.4000	0.8372	17.2000	17.4000	17.3000	17.4000
In-House	D5453	08/26/05	3	73	20.1000	20.7000	20.9000	0.8372	20.1000	20.7000		
In-House	D5453	08/31/05	3	75	16.3400	17.0900	16.5300	0.8372	16.3400	17.0900		
In-House	D5453	08/22/05	3	76	18.0500	18.0300	17.7700	0.8372	18.0500	18.0300	18.0300	17.7700
In-House	D5453	08/03/05	3	77	16.6400	16.6800	16.8700	0.8372	16.6400	16.8700	16.6400	16.8700
In-House	D5453	08/31/05	3	78	18.2500	18.0500	18.0700	0.8372	18.2500	18.0500	18.2500	18.0500
In-House	D5453	08/17/05	3	81	18.9000	18.7000	18.9000	0.8372	18.9000	18.7000	18.9000	18.7000
In-House	D5453	08/05/05	3	82	17.9000	17.5800	17.7500	0.8372	17.9000	17.5800	17.9000	17.7500

**Table B.35. August Fuel #3 Lab Data and Deletions Based on D5453 Test Method for In-House Calibration**

Calibration	Test Method	Run Date	August Sample #	Lab Code	Original Lab Data Robust Outlier Deletion in Shaded Box				After Robust Outlier Deletion Random Selection of 2 Obs		After Gravimetric Deletion Random Selection of 2 Obs	
					Measure #1	Measure #2	Measure #3	Density	#1	#2	#1	#2
In-House	D5453	08/18/05	3	83	18.9000	19.4000	19.2000	0.8372	18.9000	19.2000	18.9000	19.4000
In-House	D5453	08/11/05	3	84	18.6000	18.5000	18.7000	0.8372	18.6000	18.5000	18.6000	18.7000
In-House	D5453	08/05/05	3	85	17.1000	17.1000	17.0000	0.8372	17.1000	17.0000	17.1000	17.0000
In-House	D5453	08/31/05	3	87	16.0000	15.5000	14.9000	0.8372	16.0000	15.5000		
In-House	D5453	08/20/05	3	89	18.3000	17.5000	17.4000	0.8372	18.3000	17.5000	18.3000	17.5000
In-House	D5453	08/04/05	3	90	16.7000	16.2000	16.5000	0.8372	16.7000	16.5000	16.7000	16.2000
In-House	D5453	08/11/05	3	91	18.1800	17.9900	18.0300	0.8372	17.9900	18.0300	18.1800	17.9900
In-House	D5453	08/09/05	3	95	17.0000	17.0000	16.8000	0.8372	17.0000	16.8000	17.0000	16.8000
In-House	D5453	08/17/05	3	96	21.4100	21.2700	21.1000	0.8372				
In-House	D5453	08/15/05	3	97	17.2000	17.3000	17.2000	0.8372	17.3000	17.2000	17.3000	17.2000
In-House	D5453	08/24/05	3	99	15.9200	15.6200	15.3500	0.8372	15.6200	15.3500	15.9200	15.6200
In-House	D5453	08/10/05	3	100	14.8000	15.1000	14.6000	0.8372	14.8000	14.6000		
In-House	D5453	08/23/05	3	103	16.2000	16.3000	16.3000	0.8372	16.2000	16.3000	16.3000	16.3000
In-House	D5453	08/03/05	3	108	15.4000	15.4000	15.4000	0.8372	15.4000	15.4000		
In-House	D5453	08/29/05	3	109	15.7000	15.7000	16.1000	0.8372	15.7000	16.1000	15.7000	16.1000
In-House	D5453	08/12/05	3	110	18.2800	18.1400	18.1800	0.8372	18.1400	18.1800	18.2800	18.1800
In-House	D5453	08/18/05	3	112	22.1000	21.6700	21.8700	0.8745				
In-House	D5453	08/15/05	3	113	16.8000	16.0000	16.5000	0.8372	16.0000	16.5000		
In-House	D5453	08/25/05	3	114	18.2000	18.2000	18.2000	0.8372	18.2000	18.2000	18.2000	18.2000
In-House	D5453	08/11/05	3	115	16.1000	17.5000	16.5000	0.8372	16.1000	17.5000	17.5000	16.5000
In-House	D5453	08/09/05	3	116	18.4400	18.4100	18.5700	0.8372	18.4400	18.4100	18.4400	18.5700
In-House	D5453	08/16/05	3	117	17.5200	17.6700	17.7500	0.8372	17.5200	17.6700	17.5200	17.6700
In-House	D5453	08/25/05	3	118	18.2600	18.2900	18.3200	0.8372	18.2900	18.3200	18.2600	18.2900
In-House	D5453	08/11/05	3	119	17.0600	17.0100	17.0000	0.8372	17.0600	17.0000	17.0600	17.0000
In-House	D5453	08/29/05	3	120	18.0000	18.1000	18.0000	0.8372	18.0000	18.1000	18.0000	18.0000
In-House	D5453	08/11/05	3	122	18.8000	18.5000	18.4000	0.8372	18.5000	18.4000	18.8000	18.4000
In-House	D5453	08/10/05	3	126	15.4000	15.1000	14.9000	0.8372	15.4000	15.1000		
In-House	D5453	08/09/05	3	129	19.4000	19.0200	19.4000	0.8372	19.0200	19.4000	19.4000	19.4000
In-House	D5453	08/09/05	3	130	18.0000	18.1000	18.2000	0.8372	18.0000	18.2000	18.0000	18.2000
In-House	D5453	08/25/05	3	132	17.7840	17.6770	17.7280	0.8372	17.7840	17.6770	17.6770	17.7280
In-House	D5453	08/12/05	3	137	17.2400	18.0400	17.1200	0.8372	17.2400	17.1200	18.0400	17.1200
In-House	D5453	08/17/05	3	138	18.1000	18.3000	18.8000	0.8372	18.1000	18.3000	18.3000	18.8000
In-House	D5453	08/31/05	3	139	17.1400	17.0400	17.4300	0.8372	17.1400	17.0400	17.1400	17.0400
In-House	D5453	08/12/05	3	143	19.7500	18.5000	18.2500	0.8372	19.7500	18.5000	19.7500	18.2500
In-House	D5453	08/26/05	3	147	18.8000	18.0000	19.2000	0.8372	18.8000	18.0000	18.0000	19.2000
In-House	D5453	08/15/05	3	148	17.6000	17.5000	17.7000	0.8372	17.5000	17.7000	17.5000	17.7000
In-House	D5453	08/18/05	3	149	18.4670	18.0510	18.0130	0.8372	18.0510	18.0130	18.4670	18.0510
In-House	D5453	08/17/05	3	151	19.4000	18.8000	18.7600	0.8372	19.4000	18.7600	19.4000	18.8000
In-House	D5453	08/11/05	3	152	14.6900	14.6600	15.0200	0.8372	14.6600	15.0200	14.6900	14.6600
In-House	D5453	08/12/05	3	153	17.5900	17.5300	17.6200	0.8372	17.5900	17.5300	17.5900	17.6200
In-House	D5453	08/15/05	3	154	18.2000	18.1000	18.9000	0.8372	18.2000	18.1000	18.2000	18.9000
In-House	D5453	08/16/05	3	156	16.7200	16.4800	15.8900	0.8372	16.7200	16.4800	16.7200	15.8900
In-House	D5453	08/05/05	3	158	23.3700	23.5800	23.4900	0.8372				
In-House	D5453	08/08/05	3	159	18.8800	18.9000	18.5200	0.8372	18.8800	18.5200	18.9000	18.5200
In-House	D5453	08/30/05	3	161	17.1000	17.2800	17.2700	0.8372	17.1000	17.2800	17.1000	17.2700
In-House	D5453	08/25/05	3	162	19.3900	18.7900	18.9000	0.8372	19.3900	18.9000	19.3900	18.7900

**Table B.36. August Fuel #3 Lab Data and Deletions Based on D5453 Test Method for NIST Calibration**

Calibration	Test Method	Run Date	August Sample #	Lab Code	Original Lab Data Robust Outlier Deletion in Shaded Box				After Robust Outlier Deletion Random Selection of 2 Obs		After Gravimetric Deletion Random Selection of 2 Obs	
					Measure #1	Measure #2	Measure #3	Density	#1	#2	#1	#2
NIST	D5453	08/18/05	3	1	17.5000	17.6000	17.4000	0.8372	17.5000	17.6000	17.5000	17.6000
NIST	D5453	08/04/05	3	2	18.4900	18.0500	18.6500	0.8372	18.4900	18.0500	18.4900	18.6500
NIST	D5453	08/31/05	3	4	20.6000	20.3200	20.4100	0.8372	20.6000	20.4100		
NIST	D5453	08/03/05	3	8	18.0000	17.8800	18.0800	0.8372	17.8800	18.0800	18.0000	18.0800
NIST	D5453	08/05/05	3	9	18.1400	17.9100	17.9700	0.8372	18.1400	17.9700	18.1400	17.9700
NIST	D5453	08/05/05	3	11	19.7000	19.6000	19.6000	0.8372	19.6000	19.6000	19.7000	19.6000
NIST	D5453	08/26/08	3	12	17.3000	16.9000	17.5000	0.8372	17.3000	17.5000	17.3000	17.5000
NIST	D5453	08/24/05	3	13	17.6500	17.7800	17.5100	0.8372	17.6500	17.5100	17.7800	17.5100
NIST	D5453	08/17/05	3	15	17.7900	18.2800	17.8500	0.8372	17.7900	18.2800	17.7900	18.2800
NIST	D5453	08/22/05	3	16	17.1400	17.3700	16.8800	0.8372	17.1400	17.3700	17.1400	16.8800
NIST	D5453	08/11/05	3	18	18.1500	18.1100	17.9000	0.8372	18.1500	17.9000	18.1100	17.9000
NIST	D5453	08/19/05	3	19	17.7000	17.8000	17.8000	0.8372	17.7000	17.8000	17.8000	17.8000
NIST	D5453	08/12/05	3	21	16.8700	16.9200	16.9200	0.8372	16.8700	16.9200	16.9200	16.9200
NIST	D5453	08/22/05	3	23	17.3100	17.4600	17.8100	0.8372	17.3100	17.8100		
NIST	D5453	08/03/05	3	24	18.4900	18.5400	18.6000		18.4900	18.5400	18.4900	18.6000
NIST	D5453	08/31/05	3	25	18.3600	18.3900	18.3300	0.8372	18.3600	18.3900	18.3900	18.3300
NIST	D5453	08/04/05	3	26	19.0600	18.7700	18.4600	0.8372	19.0600	18.7700	19.0600	18.7700
NIST	D5453	08/25/05	3	27	18.7300	18.5000	18.4600	0.8372	18.7300	18.5000	18.5000	18.4600
NIST	D5453	08/25/05	3	29	17.2980	17.2840	17.7300	0.8372	17.2980	17.7300	17.2980	17.2840
NIST	D5453	08/06/05	3	30	18.1000	18.0000	18.2000	0.8372	18.0000	18.2000	18.0000	18.2000
NIST	D5453	08/10/05	3	31	17.9000	17.6000	17.7000	0.8372	17.9000	17.7000	17.9000	17.6000
NIST	D5453	08/09/05	3	32	18.5200	18.6600	18.4800	0.8372	18.5200	18.4800	18.5200	18.4800
NIST	D5453	08/30/05	3	36	17.3000	17.4000	17.3000	0.8270	17.4000	17.3000		
NIST	D5453	08/26/05	3	37	17.2000	17.3000	17.2000	0.8372	17.3000	17.2000	17.2000	17.2000
NIST	D5453	08/30/05	3	38	18.1000	18.4000	18.3000	0.8372	18.1000	18.4000	18.1000	18.3000
NIST	D5453	09/01/05	3	39	18.5300	18.3000	18.5800	0.8372	18.5300	18.3000	18.3000	18.5800
NIST	D5453	08/11/05	3	41	19.9300	19.7900	19.9000	0.8372	19.9300	19.9000	19.7900	19.9000
NIST	D5453	08/30/05	3	EPA	18.2000	18.3000	18.3000	0.8372	18.3000	18.3000	18.2000	18.3000
NIST	D5453	08/11/05	3	48	22.9500	24.0800	15.5800	0.8372	15.5800			
NIST	D5453	08/25/05	3	51	21.4000	21.4000	21.3000	0.8372				
NIST	D5453	08/16/05	3	54	17.8000	17.9000	17.8000	0.8372	17.8000	17.9000	17.8000	17.9000
NIST	D5453	08/05/05	3	56	17.4000	17.8000	17.4000	0.8372	17.4000	17.8000	17.4000	17.8000
NIST	D5453	08/31/05	3	59	18.7100	18.6000	18.5600	0.8372	18.7100	18.6000	18.7100	18.5600
NIST	D5453	08/13/05	3	61	18.0100	18.1200	18.0100	0.8372	18.1200	18.0100	18.0100	18.1200
NIST	D5453	08/31/05	3	CARB	17.3000	17.8000	17.4000	0.8372	17.3000	17.4000	17.3000	17.4000
NIST	D5453	08/24/05	3	63	18.2100	18.1300	18.3900	0.8372	18.2100	18.3900	18.1300	18.3900
NIST	D5453	08/25/05	3	64	17.2000	16.6000	16.7000	0.8372	17.2000	16.6000	17.2000	16.6000
NIST	D5453		3	66	16.1300	16.0500	16.1400	0.8372	16.1300	16.1400	16.0500	16.1400
NIST	D5453	08/22/05	3	68	15.0000	14.7000	15.0000	0.8372	15.0000	15.0000		
NIST	D5453	08/19/05	3	72	16.9000	17.2000	16.8000	0.8372	16.9000	16.8000	16.9000	16.8000
NIST	D5453	08/26/05	3	73	19.8000	20.2000	20.0000	0.8372	19.8000	20.0000	19.8000	20.2000
NIST	D5453	09/01/05	3	75	17.8600	18.3400	17.1400	0.8372	18.3400	17.1400	17.8600	18.3400
NIST	D5453	08/22/05	3	76	18.1000	18.3600	18.3900	0.8372	18.1000	18.3900	18.3600	18.3900
NIST	D5453	08/03/05	3	77	19.9200	19.7800	19.6900	0.8372	19.9200	19.7800		
NIST	D5453	08/31/05	3	78	18.3800	18.4700	18.2900	0.8372	18.3800	18.2900	18.3800	18.2900
NIST	D5453	08/24/05	3	81	17.5000	17.3000	17.1000	0.8372	17.5000	17.1000	17.3000	17.1000
NIST	D5453	08/05/05	3	82	18.3900	18.6000	18.6400	0.8372	18.3900	18.6400	18.3900	18.6000

**Table B.36. August Fuel #3 Lab Data and Deletions Based on D5453 Test Method for NIST Calibration**

Calibration	Test Method	Run Date	August Sample #	Lab Code	Original Lab Data Robust Outlier Deletion in Shaded Box				After Robust Outlier Deletion Random Selection of 2 Obs		After Gravimetric Deletion Random Selection of 2 Obs	
					Measure #1	Measure #2	Measure #3	Density	#1	#2	#1	#2
NIST	D5453	08/18/05	3	83	16.5000	16.3000	16.0000	0.8372	16.5000	16.0000		
NIST	D5453	08/18/05	3	84	17.5000	17.8000	17.3000	0.8372	17.8000	17.3000	17.5000	17.3000
NIST	D5453	08/12/05	3	85	16.0000	16.0000	15.9000	0.8372	16.0000	15.9000	16.0000	16.0000
NIST	D5453	08/31/05	3	87	13.5000	13.5000	13.8000	0.8372			13.5000	13.8000
NIST	D5453	08/20/05	3	89	18.3000	18.2000	18.2000	0.8372	18.3000	18.2000	18.3000	18.2000
NIST	D5453	08/05/05	3	90	16.3000	16.4000	16.0000	0.8372	16.4000	16.0000	16.4000	16.0000
NIST	D5453	08/12/05	3	91	17.9900	18.1000	18.0700	0.8372	18.1000	18.0700	17.9900	18.0700
NIST	D5453	08/17/05	3	95	17.7000	17.6000	17.9000	0.8372	17.7000	17.6000	17.7000	17.9000
NIST	D5453		3	96	21.6300	21.7800	21.1300	0.8372				
NIST	D5453	08/15/05	3	97	17.6000	17.4000	17.4000	0.8372	17.6000	17.4000	17.6000	17.4000
NIST	D5453	08/25/05	3	99	15.9900	14.7400	14.6200	0.8372	15.9900			
NIST	D5453	08/11/05	3	100	20.5000	20.7000	20.2000	0.8372	20.5000	20.7000		
NIST	D5453	08/25/05	3	103	16.7000	16.9000	17.1000	0.8372	16.9000	17.1000	16.7000	16.9000
NIST	D5453	08/08/05	3	108	16.0000	16.0000	16.0000	0.8372	16.0000	16.0000		
NIST	D5453	08/31/05	3	109	18.4000	18.2000	18.6000	0.8372	18.4000	18.2000		
NIST	D5453	08/22/05	3	110	17.4200	17.4800	17.4500	0.8372	17.4200	17.4500	17.4800	17.4500
NIST	D5453	08/19/05	3	112	17.7500	17.9300	17.9900	0.8745	17.7500	17.9900	17.7500	17.9900
NIST	D5453	08/19/05	3	113	17.1000	17.5000	17.4000	0.8372	17.1000	17.5000	17.1000	17.5000
NIST	D5453	08/26/05	3	114	17.0000	17.2000	17.1000	0.8372	17.0000	17.2000	17.0000	17.1000
NIST	D5453	08/12/05	3	115	16.8000	16.8000	16.8000	0.8372	16.8000	16.8000	16.8000	16.8000
NIST	D5453	08/09/05	3	116	17.6700	17.5700	17.5800	0.8372	17.5700	17.5800	17.6700	17.5700
NIST	D5453	08/15/05	3	117	17.6800	17.6000	17.6800	0.8372	17.6800	17.6000	17.6800	17.6800
NIST	D5453	08/25/05	3	118	18.1800	18.3900	18.2200	0.8372	18.1800	18.3900	18.1800	18.3900
NIST	D5453	08/11/05	3	119	19.0100	18.9900	18.8600	0.8372	19.0100	18.8600	18.9900	18.8600
NIST	D5453	08/30/05	3	120	17.9000	17.9000	17.8000	0.8372	17.9000	17.9000	17.9000	17.8000
NIST	D5453	08/12/05	3	122	17.5000	17.6000	17.6000	0.8372	17.5000	17.6000	17.5000	17.6000
NIST	D5453	08/10/05	3	126	18.2000	17.3000	18.1000	0.8372	17.3000	18.1000	18.2000	17.3000
NIST	D5453	08/10/05	3	129	17.2000	17.2000	17.3000	0.8372	17.2000	17.2000	17.2000	17.2000
NIST	D5453	08/08/05	3	130	17.3000	17.5000	17.4000	0.8372	17.3000	17.4000	17.3000	17.4000
NIST	D5453	08/25/05	3	132	18.1510	18.0470	17.8950	0.8372	18.0470	17.8950	18.0470	17.8950
NIST	D5453	08/14/05	3	137	18.4300	18.0800	18.8200	0.8372	18.4300	18.0800	18.4300	18.8200
NIST	D5453	08/15/05	3	138	18.6000	18.8000	18.4000	0.8372	18.6000	18.8000	18.6000	18.8000
NIST	D5453	08/25/05	3	139	18.2000	17.6000	18.2000	0.8372	18.2000	18.2000	17.6000	18.2000
NIST	D5453	08/12/05	3	143	19.4700	20.7500	19.3700	0.8372	19.4700	20.7500	19.4700	20.7500
NIST	D5453	08/26/05	3	147	16.7000	17.3000	16.6000	0.8372	16.7000	17.3000		
NIST	D5453	08/15/05	3	148	18.3000	18.2000	18.4000	0.8372	18.3000	18.4000	18.3000	18.4000
NIST	D5453	08/25/05	3	149	17.6930	17.6120	14.4940	0.8372	17.6930	17.6120	17.6930	17.6120
NIST	D5453	08/17/05	3	151	17.4900	17.0100	17.6800	0.8372	17.4900	17.0100	17.0100	17.6800
NIST	D5453	08/19/05	3	152	15.3000	14.9200	15.2500	0.8372	15.3000	14.9200	15.3000	14.9200
NIST	D5453	08/17/05	3	153	18.9200	18.9400	18.9800	0.8372	18.9200	18.9400	18.9200	18.9800
NIST	D5453	08/16/05	3	154	17.2000	17.1000	17.1000	0.8372	17.2000	17.1000	17.2000	17.1000
NIST	D5453	08/15/05	3	156	19.0000	19.5100	18.7600	0.8372	19.0000	19.5100	19.0000	19.5100
NIST	D5453	08/06/05	3	158	23.8800	23.5800	23.8700	0.8372				
NIST	D5453	08/08/05	3	159	16.8900	16.9700	16.7600	0.8372	16.8900	16.7600	16.8900	16.9700
NIST	D5453	08/29/05	3	161	18.0700	18.1100	18.4900	0.8372	18.0700	18.4900	18.0700	18.1100
NIST	D5453	08/30/05	3	162	17.4800	16.8900	17.1300	0.8372	17.4800	17.1300	16.8900	17.1300

**Table B.37. August Fuel #4 Lab Data and Deletions Based on D5453 Test Method for In-House Calibration**

Calibration	Test Method	Run Date	August Sample #	Lab Code	Original Lab Data Robust Outlier Deletion in Shaded Box				After Robust Outlier Deletion Random Selection of 2 Obs		After Gravimetric Deletion Random Selection of 2 Obs	
					Measure #1	Measure #2	Measure #3	Density	#1	#2	#1	#2
In-House	D5453	08/18/05	4	1	7.6000	7.5000	7.5000	0.8264	7.6000	7.5000	7.5000	7.5000
In-House	D5453	08/04/05	4	2	8.6000	8.3800	8.5500	0.8264	8.6000	8.3800	8.3800	8.5500
In-House	D5453	08/31/05	4	4	9.2300	10.1500	8.8500	0.8264	9.2300	8.8500		
In-House	D5453	08/03/05	4	8	8.1100	8.0000	7.9600	0.8264	8.1100	8.0000	8.1100	7.9600
In-House	D5453	08/05/05	4	9	8.2100	8.2100	7.8700	0.8264	8.2100	7.8700	8.2100	7.8700
In-House	D5453	08/04/05	4	11	9.0000	9.0000	8.5000	0.8264	9.0000	8.5000	9.0000	8.5000
In-House	D5453	08/25/05	4	12	7.7000	7.8000	8.0000	0.8264	7.7000	7.8000	7.8000	8.0000
In-House	D5453	08/08/05	4	13	8.8000	8.6000	8.9000	0.8264	8.6000	8.9000	8.8000	8.6000
In-House	D5453	07/26/05	4	15	7.8000	7.7900	7.7900	0.8264	7.8000	7.7900	7.8000	7.7900
In-House	D5453	08/19/05	4	16	8.0400	8.0200	8.0100	0.8264	8.0400	8.0200	8.0200	8.0100
In-House	D5453	08/11/05	4	18	8.3300	8.5500	8.1700	0.8264	8.3300	8.1700	8.3300	8.5500
In-House	D5453	08/16/05	4	19	8.0000	8.0000	8.0000	0.8264	8.0000	8.0000	8.0000	8.0000
In-House	D5453	08/10/05	4	21	8.0700	8.0700	8.0300	0.8264	8.0700	8.0700	8.0700	8.0700
In-House	D5453	08/22/05	4	23	7.2800	7.7100	7.3200	0.8264	7.2800	7.7100		
In-House	D5453	08/04/05	4	24	7.8000	7.4200	7.7700		7.4200	7.7700	7.4200	7.7700
In-House	D5453	08/31/05	4	25	7.5700	7.3900	7.4200	0.8264	7.3900	7.4200		
In-House	D5453	08/03/05	4	26	8.4000	8.2300	8.2900	0.8264	8.4000	8.2300	8.2300	8.2900
In-House	D5453	08/25/05	4	27	8.4000	8.6100	8.5000	0.8264	8.4000	8.6100	8.6100	8.5000
In-House	D5453	08/24/05	4	29	8.3590	7.7440	8.3830	0.8264	8.3590	7.7440	8.3590	8.3830
In-House	D5453	08/05/05	4	30	7.8500	7.7000	7.9000	0.8264	7.7000	7.9000	7.8500	7.7000
In-House	D5453	08/10/05	4	31	8.2000	8.2000	8.2000	0.8264	8.2000	8.2000	8.2000	8.2000
In-House	D5453	08/08/05	4	32	8.0300	7.8300	7.9700	0.8264	8.0300	7.8300	8.0300	7.8300
In-House	D5453	08/26/05	4	36	7.6000	7.5000	7.4000	0.8240	7.6000	7.4000		
In-House	D5453	08/30/05	4	37	8.0500	7.9000	7.8000	0.8264	8.0500	7.9000	8.0500	7.9000
In-House	D5453	08/26/05	4	38	7.7000	7.7000	7.5000	0.8264	7.7000	7.5000	7.7000	7.7000
In-House	D5453	08/31/05	4	39	7.6700	7.5500	7.9800	0.8264	7.5500	7.9800	7.5500	7.9800
In-House	D5453	08/05/05	4	41	7.6200	7.9600	8.6700	0.8264	7.9600	8.6700	7.6200	8.6700
In-House	D5453	08/30/05	4	EPA	8.5000	8.5000	8.4000	0.8264	8.5000	8.4000	8.5000	8.4000
In-House	D5453	08/10/05	4	48	7.7600	17.9900	17.3300	0.8264	7.7600			
In-House	D5453	08/24/05	4	51	8.2000	8.2000	8.8000	0.8264	8.2000	8.2000	8.2000	8.8000
In-House	D5453	08/11/05	4	54	7.7000	7.6000	7.6000	0.8264	7.7000	7.6000	7.7000	7.6000
In-House	D5453	08/04/05	4	56	7.8000	7.7000	7.7000	0.8264	7.8000	7.7000	7.7000	7.7000
In-House	D5453	08/30/05	4	59	8.6100	8.6000	8.5100	0.8264	8.6000	8.5100	8.6100	8.5100
In-House	D5453	08/13/05	4	61	7.8700	7.8200	7.6500	0.8264	7.8700	7.6500	7.8200	7.6500
In-House	D5453	08/30/05	4	CARB	7.4300	7.1700	7.7200	0.8264	7.1700	7.7200		
In-House	D5453	08/23/05	4	63	8.1000	8.5300	8.2100	0.8264	8.5300	8.2100	8.1000	8.5300
In-House	D5453	08/22/05	4	64	8.4600	7.9600	8.3000	0.8264	7.9600	8.3000	8.4600	8.3000
In-House	D5453	08/29/05	4	66	7.8100	8.4100	9.4600	0.8264	8.4100	9.4600	7.8100	9.4600
In-House	D5453	08/22/05	4	68	8.4000	8.3000	8.5000	0.8264	8.4000	8.3000	8.4000	8.3000
In-House	D5453	08/19/05	4	72	8.3000	7.9000	8.1000	0.8264	8.3000	8.1000	7.9000	8.1000
In-House	D5453	08/26/05	4	73	9.2000	9.3000	9.7000	0.8264	9.2000	9.3000		
In-House	D5453	08/31/05	4	75	5.9900	6.0800	6.0000	0.8264				
In-House	D5453	08/22/05	4	76	8.2400	8.2600	7.9500	0.8264	8.2400	8.2600	8.2400	7.9500
In-House	D5453	08/03/05	4	77	8.2500	8.0900	9.4700	0.8264	8.2500	8.0900	8.2500	9.4700
In-House	D5453	08/31/05	4	78	8.6500	8.5700	8.6400	0.8264	8.6500	8.5700	8.6500	8.5700
In-House	D5453	08/17/05	4	81	9.1000	8.8000	8.6000	0.8264	8.8000	8.6000	9.1000	8.8000
In-House	D5453	08/05/05	4	82	8.3700	8.2800	8.4500	0.8264	8.3700	8.2800	8.3700	8.4500



**Table B.37. August Fuel #4 Lab Data and Deletions Based on D5453 Test Method for In-House Calibration**

Calibration	Test Method	Run Date	August Sample #	Lab Code	Original Lab Data Robust Outlier Deletion in Shaded Box				After Robust Outlier Deletion Random Selection of 2 Obs		After Gravimetric Deletion Random Selection of 2 Obs	
					Measure #1	Measure #2	Measure #3	Density	#1	#2	#1	#2
In-House	D5453	08/18/05	4	83	8.9000	9.0000	9.2000	0.8264	8.9000	9.0000	8.9000	9.0000
In-House	D5453	08/11/05	4	84	8.8000	8.9000	9.0000	0.8264	8.8000	8.9000	8.8000	9.0000
In-House	D5453	08/05/05	4	85	8.3000	8.2000	8.2000	0.8264	8.2000	8.2000	8.2000	8.2000
In-House	D5453	08/31/05	4	87	7.3000	7.1000	7.0000	0.8264	7.1000	7.0000		
In-House	D5453	08/20/05	4	89	7.8000	7.7000	7.6000	0.8264	7.8000	7.7000	7.7000	7.6000
In-House	D5453	08/04/05	4	90	7.9000	7.9000	8.3000	0.8264	7.9000	7.9000	7.9000	7.9000
In-House	D5453	08/11/05	4	91	8.6800	8.6900	8.6100	0.8264	8.6900	8.6100	8.6800	8.6900
In-House	D5453	08/09/05	4	95	8.1000	8.1000	8.1000	0.8264	8.1000	8.1000	8.1000	8.1000
In-House	D5453	08/17/05	4	96	9.9600	10.1200	10.3000	0.8264				
In-House	D5453	08/15/05	4	97	7.9000	7.7000	7.7000	0.8264	7.7000	7.7000	7.9000	7.7000
In-House	D5453	08/24/05	4	99	7.7400	8.0900	6.7800	0.8264	7.7400	6.7800	7.7400	6.7800
In-House	D5453	08/10/05	4	100	6.8000	7.0000	6.8000	0.8264	6.8000	6.8000		
In-House	D5453	08/23/05	4	103	8.0000	8.5000	7.9000	0.8264	8.0000	7.9000	8.0000	8.5000
In-House	D5453	08/03/05	4	108	6.9000	6.8000	6.9000	0.8264	6.9000	6.8000		
In-House	D5453	08/29/05	4	109	7.9000	8.0000	8.0000	0.8264	8.0000	8.0000	7.9000	8.0000
In-House	D5453	08/12/05	4	110	8.1300	8.3500	8.2200	0.8264	8.1300	8.3500	8.1300	8.2200
In-House	D5453	08/18/05	4	112	9.8600	9.7500	9.4400	0.8956	9.8600	9.7500		
In-House	D5453	08/15/05	4	113	7.2000	6.8000	6.9000	0.8264	6.8000	6.9000		
In-House	D5453	08/25/05	4	114	8.7000	8.5000	8.8000	0.8264	8.5000	8.8000	8.7000	8.5000
In-House	D5453	08/11/05	4	115	7.8000	8.1000	8.3000	0.8264	7.8000	8.1000	7.8000	8.3000
In-House	D5453	08/09/05	4	116	8.6400	8.7800	8.5000	0.8264	8.6400	8.5000	8.7800	8.5000
In-House	D5453	08/16/05	4	117	8.2700	8.4200	8.3000	0.8264	8.2700	8.4200	8.2700	8.4200
In-House	D5453	08/25/05	4	118	8.2300	8.3900	8.2200	0.8264	8.2300	8.2200	8.2300	8.3900
In-House	D5453	08/11/05	4	119	8.1300	8.0400	8.0000	0.8264	8.0400	8.0000	8.1300	8.0400
In-House	D5453	08/29/05	4	120	8.7000	8.6000	8.6000	0.8264	8.7000	8.6000	8.7000	8.6000
In-House	D5453	08/11/05	4	122	8.8000	8.6000	8.4000	0.8264	8.8000	8.6000	8.8000	8.6000
In-House	D5453	08/10/05	4	126	6.8000	6.8000	7.3000	0.8264	6.8000	7.3000		
In-House	D5453	08/09/05	4	129	8.6700	8.7000	8.8000	0.8264	8.6700	8.8000	8.6700	8.7000
In-House	D5453	08/09/05	4	130	8.1000	7.9000	7.9000	0.8264	8.1000	7.9000	8.1000	7.9000
In-House	D5453	08/25/05	4	132	8.8100	9.0420	9.0760	0.8264	8.8100	9.0420	8.8100	9.0760
In-House	D5453	08/12/05	4	137	8.3000	8.0100	8.3000	0.8264	8.3000	8.0100	8.3000	8.3000
In-House	D5453	08/17/05	4	138	8.8000	8.6000	8.8000	0.8264	8.6000	8.8000	8.8000	8.8000
In-House	D5453	08/31/05	4	139	8.3400	8.5500	8.4500	0.8264	8.3400	8.4500	8.3400	8.5500
In-House	D5453	08/12/05	4	143	9.0400	8.2200	9.4800	0.8264	9.0400	8.2200	9.0400	8.2200
In-House	D5453	08/26/05	4	147	8.1000	8.1000	8.4000	0.8264	8.1000	8.4000	8.1000	8.1000
In-House	D5453	08/15/05	4	148	8.2000	8.8000	8.4000	0.8264	8.8000	8.4000	8.8000	8.4000
In-House	D5453	08/18/05	4	149	8.4880	8.2290	8.0480	0.8264	8.4880	8.0480	8.4880	8.2290
In-House	D5453	08/17/05	4	151	8.5900	8.7600	8.5700	0.8264	8.5900	8.5700	8.7600	8.5700
In-House	D5453	08/11/05	4	152	8.1000	7.9300	7.8700	0.8264	8.1000	7.9300	8.1000	7.9300
In-House	D5453	08/12/05	4	153	7.6300	7.6600	7.6300	0.8264	7.6300	7.6300	7.6300	7.6300
In-House	D5453	08/15/05	4	154	8.4000	8.5000	8.4000	0.8264	8.5000	8.4000	8.4000	8.4000
In-House	D5453	08/16/05	4	156	8.2300	7.5000	8.1100	0.8264	8.2300	7.5000	8.2300	7.5000
In-House	D5453	08/05/05	4	158	10.5500	10.1800	10.3200	0.8264				
In-House	D5453	08/08/05	4	159	8.9900	8.7900	8.6400	0.8264	8.7900	8.6400	8.9900	8.7900
In-House	D5453	08/30/05	4	161	8.4300	8.1000	8.3400	0.8264	8.4300	8.3400	8.1000	8.3400
In-House	D5453	08/25/05	4	162	9.1100	8.8600	9.0300	0.8264	8.8600	9.0300	9.1100	9.0300

Table B.38. August Fuel #4 Lab Data and Deletions Based on D5453 Test Method for NIST Calibration

Calibration	Test Method	Run Date	August Sample #	Lab Code	Original Lab Data				After Robust Outlier Deletion		After Gravimetric Deletion	
					Robust Outlier Deletion in Shaded Box				Random Selection of 2 Obs		Random Selection of 2 Obs	
					Measure #1	Measure #2	Measure #3	Density	#1	#2	#1	#2
NIST	D5453	08/18/05	4	1	8.3000	8.2000	8.2000	0.8264	8.3000	8.2000	8.3000	8.2000
NIST	D5453	08/04/05	4	2	8.4700	8.1100	8.1800	0.8264	8.4700	8.1800	8.4700	8.1100
NIST	D5453	08/31/05	4	4	9.1900	9.4700	9.9400	0.8264	9.1900	9.4700		
NIST	D5453	08/03/05	4	8	8.6000	8.4600	8.4000	0.8264	8.6000	8.4600	8.6000	8.4600
NIST	D5453	08/05/05	4	9	8.7700	8.6100	8.9400	0.8264	8.7700	8.6100	8.6100	8.9400
NIST	D5453	08/05/05	4	11	9.2000	8.7000	8.9000	0.8264	9.2000	8.7000	9.2000	8.9000
NIST	D5453	08/26/08	4	12	8.1000	7.7000	8.2000	0.8264	8.1000	7.7000	8.1000	7.7000
NIST	D5453	08/24/05	4	13	8.0900	7.9900	8.0400	0.8264	7.9900	8.0400	7.9900	8.0400
NIST	D5453	08/17/05	4	15	8.4600	7.7900	8.2000	0.8264	8.4600	8.2000	8.4600	7.7900
NIST	D5453	08/22/05	4	16	8.1000	8.0800	8.0900	0.8264	8.1000	8.0800	8.1000	8.0800
NIST	D5453	08/11/05	4	18	8.2600	8.2400	8.4000	0.8264	8.2400	8.4000	8.2600	8.4000
NIST	D5453	08/19/05	4	19	8.0000	8.1000	8.1000	0.8264	8.0000	8.1000	8.0000	8.1000
NIST	D5453	08/12/05	4	21	7.9300	7.8900	7.9000	0.8264	7.9300	7.9000	7.8900	7.9000
NIST	D5453	08/22/05	4	23	7.4800	7.3800	7.5600	0.8264	7.4800	7.5600		
NIST	D5453	08/03/05	4	24	8.2000	8.4700	8.4600		8.2000	8.4600	8.2000	8.4600
NIST	D5453	08/31/05	4	25	8.2700	8.2800	8.3700	0.8264	8.2700	8.3700	8.2700	8.2800
NIST	D5453	08/04/05	4	26	8.4100	8.5200	8.2700	0.8264	8.4100	8.5200	8.5200	8.2700
NIST	D5453	08/25/05	4	27	8.4100	8.5400	8.5500	0.8264	8.5400	8.5500	8.5400	8.5500
NIST	D5453	08/25/05	4	29	7.9980	8.5640	8.4210	0.8264	8.5640	8.4210	8.5640	8.4210
NIST	D5453	08/06/05	4	30	7.9800	8.1000	8.0000	0.8264	7.9800	8.0000	7.9800	8.1000
NIST	D5453	08/10/05	4	31	8.3000	8.2000	8.2000	0.8264	8.3000	8.2000	8.3000	8.2000
NIST	D5453	08/09/05	4	32	8.7100	8.7000	8.3500	0.8264	8.7100	8.3500	8.7100	8.7000
NIST	D5453	08/30/05	4	36	7.1000	7.2000	7.1000	0.8240	7.2000	7.1000		
NIST	D5453	08/26/05	4	37	7.7500	7.8500	7.7000	0.8264	7.7500	7.7000	7.7500	7.7000
NIST	D5453	08/30/05	4	38	8.9000	8.6000	8.7000	0.8264	8.9000	8.7000	8.6000	8.7000
NIST	D5453	09/01/05	4	39	8.0100	8.0900	7.9600	0.8264	8.0900	7.9600	8.0900	7.9600
NIST	D5453	08/11/05	4	41	8.9900	9.3100	9.1100	0.8264	9.3100	9.1100	8.9900	9.3100
NIST	D5453	08/30/05	4	EPA	8.3000	8.4000	8.4000	0.8264	8.4000	8.4000	8.3000	8.4000
NIST	D5453	08/11/05	4	48	10.0600	9.1600	26.3100	0.8264	9.1600			
NIST	D5453	08/25/05	4	51	10.1000	10.0000	9.9000	0.8264				
NIST	D5453	08/16/05	4	54	7.8000	7.8000	7.8000	0.8264	7.8000	7.8000	7.8000	7.8000
NIST	D5453	08/05/05	4	56	7.8000	7.7000	7.6000	0.8264	7.8000	7.7000	7.8000	7.6000
NIST	D5453	08/31/05	4	59	8.7500	8.2000	8.6000	0.8264	8.7500	8.2000	8.7500	8.6000
NIST	D5453	08/13/05	4	61	8.3800	8.2600	8.2500	0.8264	8.3800	8.2600	8.3800	8.2500
NIST	D5453	08/31/05	4	CARB	8.1000	8.0000	7.7000	0.8264	8.1000	8.0000	8.1000	8.0000
NIST	D5453	08/24/05	4	63	7.9800	8.0600	7.8000	0.8264	7.9800	7.8000	8.0600	7.8000
NIST	D5453	08/25/05	4	64	8.0000	8.0000	7.9000	0.8264	8.0000	7.9000	8.0000	8.0000
NIST	D5453		4	66	8.3500	8.4000	8.4800	0.8264	8.4000	8.4800	8.3500	8.4000
NIST	D5453	08/22/05	4	68	7.4000	7.5000	7.1000	0.8264	7.4000	7.5000		
NIST	D5453	08/19/05	4	72	8.2000	8.0000	8.1000	0.8264	8.2000	8.0000	8.0000	8.1000
NIST	D5453	08/26/05	4	73	9.2000	9.2000	9.3000	0.8264	9.2000	9.3000	9.2000	9.3000
NIST	D5453	09/01/05	4	75	7.3600	7.5300	8.0700	0.8264	7.5300	8.0700	7.3600	7.5300
NIST	D5453	08/22/05	4	76	8.1100	8.0200	8.2000	0.8264	8.1100	8.0200	8.1100	8.0200
NIST	D5453	08/03/05	4	77	9.0800	9.9400	9.5500	0.8264	9.0800	9.5500		
NIST	D5453	08/31/05	4	78	8.8700	8.7300	9.1200	0.8264	8.8700	9.1200	8.8700	9.1200
NIST	D5453	08/24/05	4	81	8.1000	8.1000	7.9000	0.8264	8.1000	7.9000	8.1000	7.9000
NIST	D5453	08/05/05	4	82	8.3800	8.4900	8.2700	0.8264	8.4900	8.2700	8.3800	8.4900

**Table B.38. August Fuel #4 Lab Data and Deletions Based on D5453 Test Method for NIST Calibration**

Calibration	Test Method	Run Date	August Sample #	Lab Code	Original Lab Data Robust Outlier Deletion in Shaded Box				After Robust Outlier Deletion Random Selection of 2 Obs		After Gravimetric Deletion Random Selection of 2 Obs	
					Measure #1	Measure #2	Measure #3	Density	#1	#2	#1	#2
NIST	D5453	08/18/05	4	83	7.3000	7.2000	7.0000	0.8264	7.3000	7.2000		
NIST	D5453	08/18/05	4	84	8.5000	9.1000	8.1000	0.8264	9.1000	8.1000	8.5000	9.1000
NIST	D5453	08/12/05	4	85	8.2000	8.1000	7.9000	0.8264	8.2000	7.9000	8.2000	7.9000
NIST	D5453	08/31/05	4	87	8.1000	7.9000	8.1000	0.8264	7.9000	8.1000	8.1000	8.1000
NIST	D5453	08/20/05	4	89	8.2000	8.0000	8.1000	0.8264	8.2000	8.0000	8.2000	8.0000
NIST	D5453	08/05/05	4	90	7.7000	7.9000	7.7000	0.8264	7.9000	7.7000	7.7000	7.7000
NIST	D5453	08/12/05	4	91	8.6200	8.5300	8.4900	0.8264	8.6200	8.5300	8.6200	8.5300
NIST	D5453	08/17/05	4	95	8.9000	9.0000	9.0000	0.8264	9.0000	9.0000	8.9000	9.0000
NIST	D5453		4	96	9.7400	9.5400	10.0100	0.8264	9.7400	9.5400		
NIST	D5453	08/15/05	4	97	8.3000	8.1000	8.1000	0.8264	8.3000	8.1000	8.3000	8.1000
NIST	D5453	08/25/05	4	99	8.1400	7.3000	6.9400	0.8264	8.1400	6.9400		
NIST	D5453	08/11/05	4	100	9.6000	9.6000	9.1000	0.8264	9.6000	9.1000		
NIST	D5453	08/25/05	4	103	8.3000	7.8000	8.0000	0.8264	8.3000	7.8000	7.8000	8.0000
NIST	D5453	08/08/05	4	108	7.0000	7.0000	7.0000	0.8264	7.0000	7.0000		
NIST	D5453	08/31/05	4	109	9.5000	9.1000	9.4000	0.8264	9.5000	9.4000		
NIST	D5453	08/22/05	4	110	8.2200	8.1500	8.4500	0.8264	8.2200	8.1500	8.2200	8.1500
NIST	D5453	08/19/05	4	112	8.2500	8.4200	8.2300	0.8956	8.4200	8.2300	8.2500	8.2300
NIST	D5453	08/19/05	4	113	7.4000	7.5000	8.0000	0.8264	7.4000	7.5000	7.4000	7.5000
NIST	D5453	08/26/05	4	114	8.1000	8.0000	7.9000	0.8264	8.0000	7.9000	8.0000	7.9000
NIST	D5453	08/12/05	4	115	7.9000	7.9000	7.9000	0.8264	7.9000	7.9000	7.9000	7.9000
NIST	D5453	08/09/05	4	116	8.2700	8.1300	8.3700	0.8264	8.2700	8.1300	8.2700	8.3700
NIST	D5453	08/15/05	4	117	8.2900	8.1200	8.3200	0.8264	8.1200	8.3200	8.2900	8.3200
NIST	D5453	08/25/05	4	118	8.5200	8.7200	8.8300	0.8264	8.5200	8.7200	8.7200	8.8300
NIST	D5453	08/11/05	4	119	8.6400	8.5900	8.6500	0.8264	8.6400	8.5900	8.6400	8.6500
NIST	D5453	08/30/05	4	120	8.4000	8.6000	8.3000	0.8264	8.4000	8.3000	8.6000	8.3000
NIST	D5453	08/12/05	4	122	8.5000	8.4000	8.0000	0.8264	8.5000	8.4000	8.4000	8.0000
NIST	D5453	08/10/05	4	126	7.8000	7.8000	8.9700	0.8264	7.8000	7.8000	7.8000	8.9700
NIST	D5453	08/10/05	4	129	8.1000	8.2000	8.2000	0.8264	8.1000	8.2000	8.1000	8.2000
NIST	D5453	08/08/05	4	130	8.1000	8.0000	7.9000	0.8264	8.1000	7.9000	8.0000	7.9000
NIST	D5453	08/25/05	4	132	8.4300	8.3030	8.1610	0.8264	8.3030	8.1610	8.3030	8.1610
NIST	D5453	08/14/05	4	137	9.0000	8.0400	7.6600	0.8264	8.0400	7.6600	9.0000	8.0400
NIST	D5453	08/15/05	4	138	8.5000	8.6000	8.6000	0.8264	8.6000	8.6000	8.5000	8.6000
NIST	D5453	08/25/05	4	139	8.6000	8.3000	8.2000	0.8264	8.6000	8.2000	8.3000	8.2000
NIST	D5453	08/12/05	4	143	9.0200	8.8400	9.0700	0.8264	9.0200	9.0700	9.0200	9.0700
NIST	D5453	08/26/05	4	147	7.5000	9.0000	11.5000	0.8264	7.5000	9.0000		
NIST	D5453	08/15/05	4	148	8.3000	8.9000	8.5000	0.8264	8.9000	8.5000	8.3000	8.9000
NIST	D5453	08/25/05	4	149	8.4230	8.2580	8.2650	0.8264	8.4230	8.2650	8.4230	8.2650
NIST	D5453	08/17/05	4	151	7.3500	7.6700	7.6800	0.8264	7.3500	7.6700	7.3500	7.6800
NIST	D5453	08/19/05	4	152	7.9400	8.0600	8.1400	0.8264	7.9400	8.0600	7.9400	8.0600
NIST	D5453	08/17/05	4	153	8.3300	8.4400	8.2100	0.8264	8.3300	8.4400	8.3300	8.2100
NIST	D5453	08/16/05	4	154	8.5000	8.3000	8.2000	0.8264	8.5000	8.2000	8.3000	8.2000
NIST	D5453	08/15/05	4	156	9.1200	8.7700	8.2900	0.8264	9.1200	8.7700	9.1200	8.7700
NIST	D5453	08/06/05	4	158	10.6600	10.5200	10.3500	0.8264				
NIST	D5453	08/08/05	4	159	7.9700	7.6100	7.5600	0.8264	7.6100	7.5600	7.9700	7.6100
NIST	D5453	08/29/05	4	161	8.6500	8.6300	8.4300	0.8264	8.6500	8.4300	8.6500	8.4300
NIST	D5453	08/30/05	4	162	8.1300	7.8100	8.0400	0.8264	8.1300	8.0400	7.8100	8.0400

**Table B.39. August Fuel #5 Lab Data and Deletions Based on D5453 Test Method for In-House Calibration**

Calibration	Test Method	Run Date	August Sample #	Lab Code	Original Lab Data Robust Outlier Deletion in Shaded Box				After Robust Outlier Deletion Random Selection of 2 Obs		After Gravimetric Deletion Random Selection of 2 Obs	
					Measure #1	Measure #2	Measure #3	Density	#1	#2	#1	#2
In-House	D5453	08/18/05	5	1	14.0000	13.8000	13.8000	0.8270	13.8000	13.8000	14.0000	13.8000
In-House	D5453	08/04/05	5	2	14.6700	14.8700	14.8600	0.8270	14.6700	14.8600	14.6700	14.8600
In-House	D5453	08/31/05	5	4	15.8500	16.1300	16.1600	0.8270	16.1300	16.1600		
In-House	D5453	08/03/05	5	8	14.1900	14.1400	14.0000	0.8270	14.1900	14.1400	14.1900	14.0000
In-House	D5453	08/05/05	5	9	14.2600	14.4500	14.2100	0.8270	14.2600	14.2100	14.2600	14.2100
In-House	D5453	08/04/05	5	11	15.0000	15.1000	15.0000	0.8270	15.1000	15.0000	15.0000	15.1000
In-House	D5453	08/25/05	5	12	14.9000	14.2500	14.4000	0.8270	14.2500	14.4000	14.2500	14.4000
In-House	D5453	08/08/05	5	13	15.4000	15.3000	15.6000	0.8270	15.3000	15.6000	15.4000	15.3000
In-House	D5453	07/26/05	5	15	15.0800	14.2000	14.7800	0.8270	15.0800	14.2000	15.0800	14.7800
In-House	D5453	08/19/05	5	16	14.1800	13.9300	14.0400	0.8270	14.1800	14.0400	14.1800	13.9300
In-House	D5453	08/11/05	5	18	14.9500	15.0300	14.9800	0.8270	14.9500	14.9800	14.9500	15.0300
In-House	D5453	08/16/05	5	19	14.6000	14.5000	14.6000	0.8270	14.6000	14.5000	14.6000	14.6000
In-House	D5453	08/10/05	5	21	14.2100	14.1900	14.4300	0.8270	14.2100	14.4300	14.2100	14.1900
In-House	D5453	08/22/05	5	23	13.0800	13.2700	13.5300	0.8270	13.0800	13.2700		
In-House	D5453	08/04/05	5	24	16.2400	16.3600	16.6500		16.2400	16.6500	16.2400	16.3600
In-House	D5453	08/31/05	5	25	13.7500	13.7400	13.7400	0.8270	13.7500	13.7400		
In-House	D5453	08/03/05	5	26	14.4100	14.1800	14.3400	0.8270	14.1800	14.3400	14.1800	14.3400
In-House	D5453	08/25/05	5	27	15.4000	15.2600	15.3200	0.8270	15.4000	15.3200	15.4000	15.3200
In-House	D5453	08/24/05	5	29	14.3260	14.5850	14.1140	0.8270	14.3260	14.5850	14.3260	14.1140
In-House	D5453	08/05/05	5	30	14.6000	14.7000	14.6000	0.8270	14.6000	14.7000	14.7000	14.6000
In-House	D5453	08/10/05	5	31	14.6000	14.7000	14.8000	0.8270	14.6000	14.7000	14.6000	14.7000
In-House	D5453	08/08/05	5	32	14.3600	14.4500	14.5100	0.8270	14.4500	14.5100	14.3600	14.4500
In-House	D5453	08/26/05	5	36	13.3000	13.5000	13.2000	0.8371	13.5000	13.2000		
In-House	D5453	08/30/05	5	37	14.2000	14.4000	14.2000	0.8270	14.2000	14.4000	14.2000	14.4000
In-House	D5453	08/26/05	5	38	13.3000	13.3000	13.4000	0.8270	13.3000	13.3000	13.3000	13.3000
In-House	D5453	08/31/05	5	39	15.2400	14.7500	14.3300	0.8270	15.2400	14.7500	14.7500	14.3300
In-House	D5453	08/05/05	5	41	14.6300	14.7200	15.0700	0.8270	14.6300	14.7200	14.6300	15.0700
In-House	D5453	08/30/05	5	EPA	15.4000	15.3000	15.2000	0.8270	15.4000	15.3000	15.3000	15.2000
In-House	D5453	08/10/05	5	48	15.8300	14.6300	13.7100	0.8270	15.8300	14.6300		
In-House	D5453	08/24/05	5	51	14.6000	14.6000	14.8000	0.8270	14.6000	14.6000	14.6000	14.8000
In-House	D5453	08/11/05	5	54	14.0000	13.9000	13.9000	0.8270	14.0000	13.9000	13.9000	13.9000
In-House	D5453	08/04/05	5	56	13.6000	13.8000	13.7000	0.8270	13.8000	13.7000	13.8000	13.7000
In-House	D5453	08/30/05	5	59	15.7000	15.7500	16.3500	0.8270	15.7000	16.3500	15.7500	16.3500
In-House	D5453	08/13/05	5	61	13.9300	13.9800	13.9300	0.8270	13.9800	13.9300	13.9300	13.9800
In-House	D5453	08/30/05	5	CARB	13.7200	13.6300	14.0900	0.8270	13.7200	13.6300		
In-House	D5453	08/23/05	5	63	15.1800	14.1700	14.6400	0.8270	15.1800	14.1700	15.1800	14.1700
In-House	D5453	08/22/05	5	64	14.6000	14.7000	14.9000	0.8270	14.6000	14.9000	14.6000	14.7000
In-House	D5453	08/29/05	5	66	14.1200	14.5500	14.5200	0.8270	14.1200	14.5200	14.5500	14.5200
In-House	D5453	08/22/05	5	68	11.0000	10.9000	10.8000	0.8270			11.0000	10.8000
In-House	D5453	08/19/05	5	72	14.1000	13.7000	14.0000	0.8270	13.7000	14.0000	13.7000	14.0000
In-House	D5453	08/26/05	5	73	16.3000	16.0000	16.2000	0.8270	16.3000	16.0000		
In-House	D5453	08/31/05	5	75	11.7500	11.3400	12.2700	0.8270	12.2700			
In-House	D5453	08/22/05	5	76	14.1500	14.2000	14.2800	0.8270	14.2000	14.2800	14.1500	14.2800
In-House	D5453	08/03/05	5	77	16.0000	15.6000	14.5800	0.8270	16.0000	14.5800	15.6000	14.5800
In-House	D5453	08/31/05	5	78	14.7900	14.9100	15.1800	0.8270	14.9100	15.1800	14.9100	15.1800
In-House	D5453	08/17/05	5	81	15.1000	15.3000	15.4000	0.8270	15.1000	15.3000	15.1000	15.3000
In-House	D5453	08/05/05	5	82	14.7800	14.5900	14.6800	0.8270	14.7800	14.5900	14.5900	14.6800

**Table B.39. August Fuel #5 Lab Data and Deletions Based on D5453 Test Method for In-House Calibration**

Calibration	Test Method	Run Date	August Sample #	Lab Code	Original Lab Data Robust Outlier Deletion in Shaded Box				After Robust Outlier Deletion Random Selection of 2 Obs		After Gravimetric Deletion Random Selection of 2 Obs	
					Measure #1	Measure #2	Measure #3	Density	#1	#2	#1	#2
In-House	D5453	08/18/05	5	83	15.5000	15.3000	14.8000	0.8270	15.5000	15.3000	15.5000	14.8000
In-House	D5453	08/11/05	5	84	15.1000	15.3000	15.5000	0.8270	15.3000	15.5000	15.1000	15.3000
In-House	D5453	08/05/05	5	85	13.9000	13.9000	13.8000	0.8270	13.9000	13.8000	13.9000	13.8000
In-House	D5453	08/31/05	5	87	12.3000	12.1000	11.8000	0.8270	12.3000	12.1000		
In-House	D5453	08/20/05	5	89	14.4000	14.5000	14.3000	0.8270	14.4000	14.5000	14.4000	14.5000
In-House	D5453	08/04/05	5	90	13.7000	13.6000	13.9000	0.8270	13.7000	13.6000	13.7000	13.9000
In-House	D5453	08/11/05	5	91	15.1400	15.1400	14.9800	0.8270	15.1400	15.1400	15.1400	14.9800
In-House	D5453	08/09/05	5	95	14.3000	14.5000	14.4000	0.8270	14.3000	14.5000	14.5000	14.4000
In-House	D5453	08/17/05	5	96	18.0900	17.8900	18.2200	0.8270				
In-House	D5453	08/15/05	5	97	14.3000	14.1000	14.3000	0.8270	14.3000	14.3000	14.3000	14.3000
In-House	D5453	08/24/05	5	99	13.1600	12.4500	12.8000	0.8270	13.1600	12.8000	13.1600	12.8000
In-House	D5453	08/10/05	5	100	11.6000	12.4000	11.8000	0.8270	12.4000			
In-House	D5453	08/23/05	5	103	14.1000	14.0000	14.5000	0.8270	14.1000	14.5000	14.0000	14.5000
In-House	D5453	08/03/05	5	108	12.7000	12.8000	12.7000	0.8270	12.7000	12.8000		
In-House	D5453	08/29/05	5	109	13.1000	13.0000	13.1000	0.8270	13.0000	13.1000	13.1000	13.0000
In-House	D5453	08/12/05	5	110	15.2400	14.9700	14.7900	0.8270	15.2400	14.9700	15.2400	14.9700
In-House	D5453	08/18/05	5	112	17.3000	17.4500	17.3400	0.8526				
In-House	D5453	08/15/05	5	113	14.2000	14.9000	14.7000	0.8270	14.2000	14.7000		
In-House	D5453	08/25/05	5	114	15.3000	15.3000	14.9000	0.8270	15.3000	14.9000	15.3000	14.9000
In-House	D5453	08/11/05	5	115	14.2000	14.9000	14.7000	0.8270	14.9000	14.7000	14.9000	14.7000
In-House	D5453	08/09/05	5	116	15.1300	15.0500	15.1400	0.8270	15.0500	15.1400	15.1300	15.0500
In-House	D5453	08/16/05	5	117	14.8100	14.6000	14.4700	0.8270	14.8100	14.6000	14.8100	14.6000
In-House	D5453	08/25/05	5	118	15.1300	15.2000	15.3400	0.8270	15.1300	15.2000	15.1300	15.3400
In-House	D5453	08/11/05	5	119	14.2100	14.1500	14.2100	0.8270	14.2100	14.1500	14.1500	14.2100
In-House	D5453	08/29/05	5	120	15.2000	15.1000	15.2000	0.8270	15.1000	15.2000	15.2000	15.1000
In-House	D5453	08/11/05	5	122	15.0000	15.0000	15.1000	0.8270	15.0000	15.1000	15.0000	15.1000
In-House	D5453	08/10/05	5	126	12.0000	12.2000	12.1000	0.8270	12.0000	12.2000		
In-House	D5453	08/09/05	5	129	15.6700	15.7000	15.5000	0.8270	15.6700	15.5000	15.7000	15.5000
In-House	D5453	08/09/05	5	130	14.9000	14.8000	14.6000	0.8270	14.8000	14.6000	14.8000	14.6000
In-House	D5453	08/25/05	5	132	15.1380	15.7710	15.1950	0.8270	15.1380	15.7710	15.1380	15.7710
In-House	D5453	08/12/05	5	137	14.0500	14.4600	14.1800	0.8270	14.0500	14.4600	14.0500	14.4600
In-House	D5453	08/17/05	5	138	15.4000	15.5000	15.2000	0.8270	15.4000	15.2000	15.4000	15.5000
In-House	D5453	08/31/05	5	139	13.9000	14.4000	14.1200	0.8270	13.9000	14.1200	13.9000	14.1200
In-House	D5453	08/12/05	5	143	15.2700	15.9700	16.0400	0.8270	15.2700	15.9700	15.2700	15.9700
In-House	D5453	08/26/05	5	147	15.0000	15.0000	15.2000	0.8270	15.0000	15.2000	15.0000	15.2000
In-House	D5453	08/15/05	5	148	14.8000	14.8000	15.0000	0.8270	14.8000	15.0000	14.8000	14.8000
In-House	D5453	08/18/05	5	149	15.1190	14.7670	14.6280	0.8270	15.1190	14.6280	15.1190	14.6280
In-House	D5453	08/17/05	5	151	15.7500	15.6000	15.1100	0.8270	15.7500	15.6000	15.7500	15.6000
In-House	D5453	08/11/05	5	152	12.9900	12.8400	12.8800	0.8270	12.9900	12.8800	12.9900	12.8800
In-House	D5453	08/12/05	5	153	14.4400	14.8200	14.4400	0.8270	14.4400	14.4400	14.8200	14.4400
In-House	D5453	08/15/05	5	154	15.0000	15.3000	16.0000	0.8270	15.0000	15.3000	15.3000	16.0000
In-House	D5453	08/16/05	5	156	14.3900	14.2700	14.1500	0.8270	14.2700	14.1500	14.2700	14.1500
In-House	D5453	08/05/05	5	158	19.7200	19.6900	19.8300	0.8270				
In-House	D5453	08/08/05	5	159	16.1800	15.7900	15.9600	0.8270	15.7900	15.9600	16.1800	15.9600
In-House	D5453	08/30/05	5	161	14.0300	14.0800	14.4100	0.8270	14.0300	14.0800	14.0300	14.0800
In-House	D5453	08/25/05	5	162	15.2900	16.1300	15.6000	0.8270	15.2900	16.1300	15.2900	15.6000

Table B.40. August Fuel #5 Lab Data and Deletions Based on D5453 Test Method for NIST Calibration

Calibration	Test Method	Run Date	August Sample #	Lab Code	Original Lab Data				After Robust Outlier Deletion		After Gravimetric Deletion	
					Robust Outlier Deletion in Shaded Box				Random Selection of 2 Obs		Random Selection of 2 Obs	
					Measure #1	Measure #2	Measure #3	Density	#1	#2	#1	#2
NIST	D5453	08/18/05	5	1	14.5000	14.7000	14.6000	0.8270	14.5000	14.7000	14.7000	14.6000
NIST	D5453	08/04/05	5	2	14.7600	14.8300	15.0000	0.8270	14.8300	15.0000	14.8300	15.0000
NIST	D5453	08/31/05	5	4	16.6800	17.1900	16.7100	0.8270	16.6800	16.7100		
NIST	D5453	08/03/05	5	8	14.7000	14.9800	14.9600	0.8270	14.7000	14.9600	14.7000	14.9800
NIST	D5453	08/05/05	5	9	14.6700	14.7100	14.7100	0.8270	14.6700	14.7100	14.6700	14.7100
NIST	D5453	08/05/05	5	11	15.9000	15.8000	16.1000	0.8270	15.8000	16.1000	15.8000	16.1000
NIST	D5453	08/26/08	5	12	14.2000	14.2000	14.2000	0.8270	14.2000	14.2000	14.2000	14.2000
NIST	D5453	08/24/05	5	13	14.1200	14.4200	14.1100	0.8270	14.1200	14.1100	14.4200	14.1100
NIST	D5453	08/17/05	5	15	14.2000	14.7800	14.5900	0.8270	14.2000	14.7800	14.2000	14.5900
NIST	D5453	08/22/05	5	16	13.9000	14.1700	14.3200	0.8270	13.9000	14.3200	13.9000	14.3200
NIST	D5453	08/11/05	5	18	14.7700	14.7200	14.8100	0.8270	14.7700	14.7200	14.7700	14.8100
NIST	D5453	08/19/05	5	19	14.7000	14.6000	14.5000	0.8270	14.7000	14.6000	14.7000	14.5000
NIST	D5453	08/12/05	5	21	14.0500	14.0200	13.9800	0.8270	14.0500	13.9800	14.0200	13.9800
NIST	D5453	08/22/05	5	23	13.7800	14.0400	14.2900	0.8270	13.7800	14.0400		
NIST	D5453	08/03/05	5	24	15.2800	15.0300	15.1600		15.0300	15.1600	15.2800	15.0300
NIST	D5453	08/31/05	5	25	14.9900	14.9700	15.0700	0.8270	14.9900	15.0700	14.9900	15.0700
NIST	D5453	08/04/05	5	26	14.8400	14.9100	15.7000	0.8270	14.8400	15.7000	14.9100	15.7000
NIST	D5453	08/25/05	5	27	15.1100	14.6700	14.9000	0.8270	15.1100	14.6700	14.6700	14.9000
NIST	D5453	08/25/05	5	29	14.2290	13.8630	14.2230	0.8270	14.2290	13.8630	14.2290	14.2230
NIST	D5453	08/06/05	5	30	14.7000	14.6000	14.7000	0.8270	14.6000	14.7000	14.7000	14.7000
NIST	D5453	08/10/05	5	31	14.9000	14.7000	14.4000	0.8270	14.9000	14.7000	14.7000	14.4000
NIST	D5453	08/09/05	5	32	15.3700	15.7000	15.3800	0.8270	15.3700	15.3800	15.3700	15.7000
NIST	D5453	08/30/05	5	36	13.7000	13.9000	13.8000	0.8371	13.7000	13.9000		
NIST	D5453	08/26/05	5	37	14.3000	14.1000	14.3000	0.8270	14.3000	14.3000	14.1000	14.3000
NIST	D5453	08/30/05	5	38	15.1000	14.8000	15.1000	0.8270	14.8000	15.1000	15.1000	15.1000
NIST	D5453	09/01/05	5	39	14.5300	14.7500	14.7500	0.8270	14.5300	14.7500	14.7500	14.7500
NIST	D5453	08/11/05	5	41	15.8400	16.6100	16.2600	0.8270	15.8400	16.2600	15.8400	16.2600
NIST	D5453	08/30/05	5	EPA	15.1000	15.3000	15.0000	0.8270	15.1000	15.3000	15.1000	15.0000
NIST	D5453	08/11/05	5	48	17.2700	10.2900	30.5000	0.8270				
NIST	D5453	08/25/05	5	51	18.0000	17.9000	18.0000	0.8270				
NIST	D5453	08/16/05	5	54	14.4000	14.4000	14.5000	0.8270	14.4000	14.5000	14.4000	14.5000
NIST	D5453	08/05/05	5	56	14.3000	14.5000	14.6000	0.8270	14.5000	14.6000	14.5000	14.6000
NIST	D5453	08/31/05	5	59	15.3700	15.2900	15.8000	0.8270	15.3700	15.8000	15.2900	15.8000
NIST	D5453	08/13/05	5	61	14.6600	14.6800	14.5700	0.8270	14.6600	14.6800	14.6800	14.5700
NIST	D5453	08/31/05	5	CARB	14.5000	14.3000	14.4000	0.8270	14.5000	14.4000	14.3000	14.4000
NIST	D5453	08/24/05	5	63	15.2500	14.4800	14.2000	0.8270	15.2500	14.4800	14.4800	14.2000
NIST	D5453	08/25/05	5	64	14.4000	14.0000	13.6000	0.8270	14.4000	13.6000	14.0000	13.6000
NIST	D5453		5	66	13.5500	13.5300	13.7500	0.8270	13.5500	13.7500	13.5500	13.5300
NIST	D5453	08/22/05	5	68	10.8000	11.0000	10.7000	0.8270				
NIST	D5453	08/19/05	5	72	13.9000	13.7000	13.6000	0.8270	13.9000	13.7000	13.7000	13.6000
NIST	D5453	08/26/05	5	73	16.3000	16.2000	16.2000	0.8270	16.3000	16.2000	16.3000	16.2000
NIST	D5453	09/01/05	5	75	13.1100	12.9400	14.1100	0.8270	13.1100	12.9400	13.1100	12.9400
NIST	D5453	08/22/05	5	76	14.4700	14.6600	14.6400	0.8270	14.4700	14.6400	14.6600	14.6400
NIST	D5453	08/03/05	5	77	16.2800	15.9100	16.0300	0.8270	16.2800	16.0300		
NIST	D5453	08/31/05	5	78	15.2500	15.1500	15.1300	0.8270	15.2500	15.1500	15.2500	15.1500
NIST	D5453	08/24/05	5	81	14.8000	14.4000	14.7000	0.8270	14.8000	14.4000	14.8000	14.7000
NIST	D5453	08/05/05	5	82	14.3000	14.2100	13.9900	0.8270	14.3000	14.2100	14.2100	13.9900

**Table B.40. August Fuel #5 Lab Data and Deletions Based on D5453 Test Method for NIST Calibration**

Calibration	Test Method	Run Date	August Sample #	Lab Code	Original Lab Data Robust Outlier Deletion in Shaded Box				After Robust Outlier Deletion Random Selection of 2 Obs		After Gravimetric Deletion Random Selection of 2 Obs	
					Measure #1	Measure #2	Measure #3	Density	#1	#2	#1	#2
NIST	D5453	08/18/05	5	83	12.9000	13.1000	12.7000	0.8270	12.9000	12.7000		
NIST	D5453	08/18/05	5	84	14.3000	13.9000	14.1000	0.8270	14.3000	13.9000	14.3000	13.9000
NIST	D5453	08/12/05	5	85	12.5000	12.7000	12.8000	0.8270	12.7000	12.8000	12.5000	12.7000
NIST	D5453	08/31/05	5	87	11.1000	11.4000	11.4000	0.8270			11.4000	11.4000
NIST	D5453	08/20/05	5	89	14.7000	14.9000	14.8000	0.8270	14.7000	14.9000	14.7000	14.8000
NIST	D5453	08/05/05	5	90	13.7000	13.7000	13.9000	0.8270	13.7000	13.9000	13.7000	13.9000
NIST	D5453	08/12/05	5	91	15.1000	15.0000	14.8200	0.8270	15.1000	14.8200	15.1000	14.8200
NIST	D5453	08/17/05	5	95	14.7000	14.9000	15.1000	0.8270	14.7000	15.1000	14.9000	15.1000
NIST	D5453		5	96	18.0900	17.5300	18.1400	0.8270				
NIST	D5453	08/15/05	5	97	14.4000	14.5000	14.4000	0.8270	14.4000	14.5000	14.4000	14.5000
NIST	D5453	08/25/05	5	99	13.7400	12.9300	12.6400	0.8270	13.7400	12.9300		
NIST	D5453	08/11/05	5	100	16.4000	16.0000	16.6000	0.8270	16.4000	16.6000		
NIST	D5453	08/25/05	5	103	14.3000	14.1000	13.8000	0.8270	14.3000	13.8000	14.3000	14.1000
NIST	D5453	08/08/05	5	108	12.8000	12.8000	12.7000	0.8270	12.8000	12.8000		
NIST	D5453	08/31/05	5	109	15.9000	15.7000	15.9000	0.8270	15.7000	15.9000		
NIST	D5453	08/22/05	5	110	12.6400	14.3700	14.7800	0.8270	12.6400	14.3700	14.3700	14.7800
NIST	D5453	08/19/05	5	112	14.7000	14.6000	14.8900	0.8526	14.6000	14.8900	14.7000	14.6000
NIST	D5453	08/19/05	5	113	14.2000	14.5000	14.3000	0.8270	14.2000	14.3000	14.2000	14.3000
NIST	D5453	08/26/05	5	114	14.3000	14.1000	14.2000	0.8270	14.1000	14.2000	14.1000	14.2000
NIST	D5453	08/12/05	5	115	14.0000	14.2000	14.1000	0.8270	14.2000	14.1000	14.2000	14.1000
NIST	D5453	08/09/05	5	116	14.4100	14.6200	14.5300	0.8270	14.6200	14.5300	14.4100	14.5300
NIST	D5453	08/15/05	5	117	14.5500	14.5700	14.4200	0.8270	14.5500	14.4200	14.5500	14.4200
NIST	D5453	08/25/05	5	118	15.2300	15.3800	15.3200	0.8270	15.3800	15.3200	15.2300	15.3800
NIST	D5453	08/11/05	5	119	16.0500	15.7200	15.7000	0.8270	16.0500	15.7200	15.7200	15.7000
NIST	D5453	08/30/05	5	120	15.3000	14.9000	15.2000	0.8270	15.3000	15.2000	15.3000	14.9000
NIST	D5453	08/12/05	5	122	14.2000	14.9000	14.5000	0.8270	14.2000	14.9000	14.2000	14.9000
NIST	D5453	08/10/05	5	126	14.0900	13.9600	14.7900	0.8270	13.9600	14.7900	13.9600	14.7900
NIST	D5453	08/10/05	5	129	14.1000	14.2000	14.0000	0.8270	14.2000	14.0000	14.1000	14.0000
NIST	D5453	08/08/05	5	130	14.5000	14.5000	14.4000	0.8270	14.5000	14.4000	14.5000	14.4000
NIST	D5453	08/25/05	5	132	14.2360	14.2290	14.2580	0.8270	14.2360	14.2580	14.2360	14.2290
NIST	D5453	08/14/05	5	137	14.8600	14.8700	14.7600	0.8270	14.8700	14.7600	14.8600	14.8700
NIST	D5453	08/15/05	5	138	15.5000	15.5000	15.6000	0.8270	15.5000	15.5000	15.5000	15.6000
NIST	D5453	08/25/05	5	139	14.6000	14.5000	14.8000	0.8270	14.6000	14.8000	14.6000	14.5000
NIST	D5453	08/12/05	5	143	15.5900	15.3800	15.6600	0.8270	15.5900	15.6600	15.5900	15.6600
NIST	D5453	08/26/05	5	147	13.6000	13.6000	14.6000	0.8270	13.6000	14.6000		
NIST	D5453	08/15/05	5	148	15.3000	15.3000	15.5000	0.8270	15.3000	15.5000	15.3000	15.3000
NIST	D5453	08/25/05	5	149	14.4950	14.4680	14.3780	0.8270	14.4680	14.3780	14.4680	14.3780
NIST	D5453	08/17/05	5	151	15.0000	14.9800	14.6000	0.8270	15.0000	14.6000	14.9800	14.6000
NIST	D5453	08/19/05	5	152	12.8300	12.9800	13.0500	0.8270	12.9800	13.0500	12.8300	13.0500
NIST	D5453	08/17/05	5	153	15.5200	15.6400	15.5100	0.8270	15.5200	15.6400	15.6400	15.5100
NIST	D5453	08/16/05	5	154	14.0000	14.0000	14.6000	0.8270	14.0000	14.6000	14.0000	14.6000
NIST	D5453	08/15/05	5	156	14.9800	15.6900	15.3200	0.8270	14.9800	15.3200	15.6900	15.3200
NIST	D5453	08/06/05	5	158	19.5500	19.8200	19.7400	0.8270				
NIST	D5453	08/08/05	5	159	14.9100	14.9100	14.9300	0.8270	14.9100	14.9100	14.9100	14.9300
NIST	D5453	08/29/05	5	161	14.1600	14.7500	14.3600	0.8270	14.7500	14.3600	14.1600	14.3600
NIST	D5453	08/30/05	5	162	14.3300	14.1300	14.4700	0.8270	14.1300	14.4700	14.3300	14.4700

**Table B.41. July Fuel #1 Lab Data and Deletions Based on D2622 Test Method for In-House Calibration**

Calibration	Test Method	Run Date	July Sample #	Lab Code	Original Lab Data			Density	After Robust Outlier Deletion		After Gravimetric Deletion	
					Measure #1	Measure #2	Measure #3		Random Selection of 2 Obs		Random Selection of 2 Obs	
In-House	D2622	07/13/05	1	3	10.5400	10.4100	10.8400	0.8359	10.5400	10.4100		
In-House	D2622	07/15/05	1	5	6.9000	6.4000	6.7000	0.8359	6.9000	6.7000	6.9000	6.4000
In-House	D2622	07/13/05	1	8	8.1800	9.4000	9.0500	0.8359	9.4000	9.0500	9.4000	9.0500
In-House	D2622	07/22/05	1	28	8.5000	8.4000	8.7000	0.8359	8.4000	8.7000	8.5000	8.7000
In-House	D2622	08/02/05	1	41	7.9000	8.8000	9.1000	0.8359	8.8000	9.1000		
In-House	D2622	08/31/05	1	EPA	9.2000	8.8000	8.4000	0.8359	9.2000	8.4000	8.8000	8.4000
In-House	D2622	08/10/05	1	50	7.1000	7.2000	8.1000	0.8359	7.1000	8.1000	7.1000	8.1000
In-House	D2622	07/26/05	1	53	8.1000	8.3000	8.2000	0.8359	8.1000	8.3000	8.1000	8.2000
In-House	D2622	07/21/05	1	55	7.6000	7.9000	7.8000	0.8359	7.6000	7.8000	7.6000	7.9000
In-House	D2622	07/18/05	1	67	8.4000	8.4000	8.2000	0.8359	8.4000	8.2000	8.4000	8.4000
In-House	D2622	07/13/05	1	73	7.2000	7.4000	7.5000	0.8359	7.2000	7.4000	7.4000	7.5000
In-House	D2622	08/02/05	1	94	6.5000	6.4000	8.4000	0.8359	6.4000	8.4000		
In-House	D2622	07/26/05	1	103	9.0550	8.6820	9.0920	0.8359	9.0550	8.6820	9.0550	9.0920
In-House	D2622	07/12/05	1	105	8.3000	7.9000	8.4000	0.8359	7.9000	8.4000	8.3000	7.9000
In-House	D2622	07/19/05	1	121	7.8000	7.9000	8.1000	0.8359	7.8000	7.9000	7.8000	7.9000
In-House	D2622	07/25/05	1	123	7.3000	7.4000	7.3000	0.8359	7.4000	7.3000	7.3000	7.3000
In-House	D2622	07/13/05	1	124	7.7000	8.5000	7.5000	0.8359	7.7000	8.5000	7.7000	7.5000
In-House	D2622	07/28/05	1	126	7.3000	7.7000	8.4000	0.8359	7.7000	8.4000	7.3000	8.4000
In-House	D2622	07/22/05	1	131	8.3000	7.8000	7.7000	0.8359	7.8000	7.7000	8.3000	7.7000
In-House	D2622	07/19/05	1	133	9.2200	8.9000	8.7000	0.8359	8.9000	8.7000	9.2200	8.7000
In-House	D2622	07/19/05	1	136	8.1000	7.3000	8.3000	0.8359	8.1000	7.3000	8.1000	7.3000
In-House	D2622	07/13/05	1	139	9.9400	9.1300	9.0700	0.8359	9.1300	9.0700	9.1300	9.0700
In-House	D2622	07/19/05	1	140	5.8000	6.6000	7.3000	0.8359	5.8000	7.3000	5.8000	6.6000
In-House	D2622	07/24/05	1	145	8.3000	8.2000	8.8000	0.8523	8.3000	8.8000		
In-House	D2622	07/31/05	1	162	6.9700	7.4000	6.3200	0.8359	6.9700	7.4000		



**Table B.42. July Fuel #1 Lab Data and Deletions Based On D2622 Test Method for NIST Calibration**

Calibration	Test Method	Run Date	July Sample #	Lab Code	Original Lab Data Robust Outlier Deletion in Shaded Box				After Robust Outlier Deletion Random Selection of 2 Obs		After Gravimetric Deletion Random Selection of 2 Obs	
					Measure #1	Measure #2	Measure #3	Density	#1	#2	#1	#2
NIST	D2622	07/13/05	1	3	8.7500	9.3700	9.6100	0.8359	8.7500	9.3700		
NIST	D2622	07/15/05	1	5	8.7000	8.2000	8.5000	0.8359	8.7000	8.5000		
NIST	D2622	07/13/05	1	8	8.5300	8.1000	7.8700	0.8359	8.1000	7.8700	8.5300	8.1000
NIST	D2622	07/14/05	1	28	8.7000	8.7000	8.7000	0.8359	8.7000	8.7000	8.7000	8.7000
NIST	D2622	08/02/05	1	41	8.0000	8.1000	8.9000	0.8359	8.0000	8.9000	8.1000	8.9000
NIST	D2622	09/01/05	1	EPA	9.0000	9.0000	9.0000	0.8359	9.0000	9.0000		
NIST	D2622	08/10/05	1	50	7.8000	6.8000	6.6000	0.8359	7.8000	6.8000	7.8000	6.8000
NIST	D2622	07/28/05	1	53	7.3000	7.5000	7.7000	0.8359	7.3000	7.7000	7.3000	7.5000
NIST	D2622	07/23/05	1	55	7.6000	7.4000	6.7000	0.8359	7.4000	6.7000	7.4000	6.7000
NIST	D2622	07/25/05	1	67	8.8920	7.7400	8.8270	0.8359	8.8920	8.8270	8.8920	8.8270
NIST	D2622	07/13/05	1	73	8.1000	7.8000	7.4000	0.8359	8.1000	7.8000	7.8000	7.4000
NIST	D2622	07/18/05	1	94	9.7000	8.0000	10.2000	0.8359	9.7000	8.0000		
NIST	D2622	07/28/05	1	103	7.1000	7.4000	6.6000	0.8359	7.1000	6.6000		
NIST	D2622	07/12/05	1	105	8.8400	8.2700	8.2700	0.8359	8.8400	8.2700	8.8400	8.2700
NIST	D2622	07/19/05	1	121	8.5000	8.6000	8.7000	0.8359	8.5000	8.7000		
NIST	D2622	07/26/05	1	123	7.0000	7.5000	8.1000	0.8359	7.0000	8.1000	7.0000	8.1000
NIST	D2622	07/21/05	1	124	8.4000	9.9000	8.5000	0.8359	8.4000	9.9000		
NIST	D2622	07/28/05	1	126	6.5000	6.1000	7.4000	0.8359	6.5000	7.4000		
NIST	D2622	07/27/05	1	131	7.3000	7.3000	7.6000	0.8359	7.3000	7.3000	7.3000	7.6000
NIST	D2622	07/19/05	1	133	8.9000	8.9000	9.1000	0.8359	8.9000	9.1000	8.9000	9.1000
NIST	D2622	07/19/05	1	136	8.2000	7.4000	8.4000	0.8359	8.2000	8.4000	7.4000	8.4000
NIST	D2622	07/15/05	1	139	9.0000	9.0000	9.8000	0.8359	9.0000	9.8000	9.0000	9.8000
NIST	D2622	07/20/05	1	140	7.6000	7.2000	6.6000	0.8359	7.6000	7.2000	7.6000	6.6000
NIST	D2622	07/24/05	1	145	8.8000	8.8000	8.2000	0.8523	8.8000	8.8000		
NIST	D2622	07/31/05	1	162	9.1000	8.6700	8.5600	0.8359	8.6700	8.5600	8.6700	8.5600

**Table B.43. July Fuel #2 Lab Data and Deletions Based on D2622 Test Method for In-House Calibration**

Calibration	Test Method	Run Date	July Sample #	Lab Code	Original Lab Data Robust Outlier Deletion in Shaded Box				After Robust Outlier Deletion Random Selection of 2 Obs		After Gravimetric Deletion Random Selection of 2 Obs	
					Measure #1	Measure #2	Measure #3	Density	#1	#2	#1	#2
In-House	D2622	07/13/05	2	3	12.5300	12.6900	13.0300	0.8371	12.6900	13.0300		
In-House	D2622	07/15/05	2	5	9.5000	9.0000	10.1000	0.8371	9.5000	10.1000	9.5000	10.1000
In-House	D2622	07/13/05	2	8	12.8700	12.6600	13.1300	0.8371	12.8700	12.6600	12.6600	13.1300
In-House	D2622	07/22/05	2	28	12.2000	12.2000	13.0000	0.8371	12.2000	12.2000	12.2000	13.0000
In-House	D2622	08/02/05	2	41	11.7000	13.4000	12.2000	0.8371	13.4000	12.2000		
In-House	D2622	08/31/05	2	EPA	12.1000	12.6000	14.0000	0.8371	12.1000	12.6000	12.1000	14.0000
In-House	D2622	08/10/05	2	50	9.5000	10.8000	11.2000	0.8371	9.5000	10.8000	9.5000	10.8000
In-House	D2622	07/26/05	2	53	11.2000	11.7000	11.9000	0.8371	11.2000	11.7000	11.2000	11.9000
In-House	D2622	07/21/05	2	55	10.6000	10.9000	10.4000	0.8371	10.6000	10.9000	10.6000	10.4000
In-House	D2622	07/18/05	2	67	12.1000	12.8000	12.4000	0.8371	12.8000	12.4000	12.8000	12.4000
In-House	D2622	07/13/05	2	73	10.9000	11.0000	11.6000	0.8371	10.9000	11.6000	10.9000	11.6000
In-House	D2622	08/02/05	2	94	10.7000	10.6000	9.7000	0.8371	10.6000	9.7000		
In-House	D2622	07/26/05	2	103	12.5720	12.2160	11.6590	0.8371	12.2160	11.6590	12.2160	11.6590
In-House	D2622	07/12/05	2	105	12.3000	11.9000	12.2000	0.8371	12.3000	12.2000	12.3000	12.2000
In-House	D2622	07/19/05	2	121	11.3000	11.0000	11.2000	0.8371	11.3000	11.2000	11.0000	11.2000
In-House	D2622	07/25/05	2	123	10.9000	10.8000	10.9000	0.8371	10.9000	10.8000	10.9000	10.8000
In-House	D2622	07/13/05	2	124	11.9000	11.8000	11.0000	0.8371	11.9000	11.0000	11.8000	11.0000
In-House	D2622	07/28/05	2	126	8.6000	9.3000	8.3000	0.8371	9.3000	8.3000	8.6000	9.3000
In-House	D2622	07/22/05	2	131	11.3000	10.9000	10.8000	0.8371	11.3000	10.8000	11.3000	10.9000
In-House	D2622	07/19/05	2	133	11.8000	12.0000	12.1000	0.8371	12.0000	12.1000	11.8000	12.0000
In-House	D2622	07/19/05	2	136	10.9000	10.2000	10.4000	0.8371	10.9000	10.4000	10.2000	10.4000
In-House	D2622	07/13/05	2	139	13.1300	12.5800	11.8000	0.8371	12.5800	11.8000	13.1300	12.5800
In-House	D2622	07/19/05	2	140	11.7000	11.4000	11.1000	0.8371	11.7000	11.1000	11.4000	11.1000
In-House	D2622	07/24/05	2	145	10.8000	10.9000	10.6000	0.8695	10.8000	10.6000		
In-House	D2622	07/31/05	2	162	10.4700	10.0500	10.8800	0.8371	10.4700	10.0500		

**Table B.44. July Fuel #2 Lab Data and Deletions Based on D2622 Test Method for NIST Calibration**

Calibration	Test Method	Run Date	July Sample #	Lab Code	Original Lab Data Robust Outlier Deletion in Shaded Box				After Robust Outlier Deletion Random Selection of 2 Obs		After Gravimetric Deletion Random Selection of 2 Obs	
					Measure #1	Measure #2	Measure #3	Density	#1	#2	#1	#2
NIST	D2622	07/13/05	2	3	12.4700	12.4500	11.9600	0.8371	12.4700	11.9600		
NIST	D2622	07/15/05	2	5	11.4000	10.9000	12.1000	0.8371	11.4000	12.1000		
NIST	D2622	07/13/05	2	8	12.3000	11.9000	11.6000	0.8371	12.3000	11.9000	12.3000	11.6000
NIST	D2622	07/14/05	2	28	12.0000	12.1000	12.9000	0.8371	12.0000	12.9000	12.1000	12.9000
NIST	D2622	08/02/05	2	41	11.7000	12.7000	12.5000	0.8371	12.7000	12.5000	11.7000	12.7000
NIST	D2622	09/01/05	2	EPA	12.7000	12.8000	12.7000	0.8371	12.7000	12.8000		
NIST	D2622	08/10/05	2	50	9.9000	11.6000	11.4000	0.8371	9.9000	11.4000	9.9000	11.4000
NIST	D2622	07/28/05	2	53	11.4000	11.4000	11.2000	0.8371	11.4000	11.2000	11.4000	11.2000
NIST	D2622	07/23/05	2	55	11.5000	10.5000	10.8000	0.8371	11.5000	10.5000	11.5000	10.8000
NIST	D2622	07/25/05	2	67	11.7290	11.1000	11.4130	0.8371	11.1000	11.4130	11.7290	11.4130
NIST	D2622	07/13/05	2	73	11.0000	10.9000	11.4000	0.8371	10.9000	11.4000	11.0000	10.9000
NIST	D2622	07/18/05	2	94	10.7000	12.2000	9.5000	0.8371	10.7000	9.5000		
NIST	D2622	07/28/05	2	103	10.2000	11.1000	11.9000	0.8371	10.2000	11.1000		
NIST	D2622	07/12/05	2	105	12.2600	12.0300	11.9000	0.8371	11.9000	12.0300	12.0300	11.9000
NIST	D2622	07/19/05	2	121	11.8000	11.5000	11.7000	0.8371	11.5000	11.7000		
NIST	D2622	07/26/05	2	123	10.7000	10.2000	11.2000	0.8371	10.7000	10.2000	10.7000	11.2000
NIST	D2622	07/21/05	2	124	13.1000	11.9000	12.1000	0.8371	11.9000	12.1000		
NIST	D2622	07/28/05	2	126	9.5000	10.0000	9.9000	0.8371	10.0000	9.9000		
NIST	D2622	07/27/05	2	131	10.6000	11.2000	11.2000	0.8371	10.6000	11.2000	10.6000	11.2000
NIST	D2622	07/19/05	2	133	12.7000	12.3000	12.2000	0.8371	12.3000	12.2000	12.3000	12.2000
NIST	D2622	07/19/05	2	136	10.9000	10.3000	10.4000	0.8371	10.9000	10.3000	10.3000	10.4000
NIST	D2622	07/15/05	2	139	11.6000	12.4000	12.9000	0.8371	11.6000	12.4000	11.6000	12.4000
NIST	D2622	07/20/05	2	140	11.3000	10.3000	11.5000	0.8371	11.3000	11.5000	11.3000	10.3000
NIST	D2622	07/24/05	2	145	11.7000	11.0000	10.9000	0.8695	11.0000	10.9000		
NIST	D2622	07/31/05	2	162	12.4200	13.5500	13.3600	0.8371	12.4200	13.5500	12.4200	13.3600

**Table B.45. July Fuel #3 Lab Data and Deletions Based on D2622 Test Method for In-House Calibration**

Calibration	Test Method	Run Date	July Sample #	Lab Code	Original Lab Data Robust Outlier Deletion in Shaded Box				After Robust Outlier Deletion Random Selection of 2 Obs		After Gravimetric Deletion Random Selection of 2 Obs	
					Measure #1	Measure #2	Measure #3	Density	#1	#2	#1	#2
In-House	D2622	07/13/05	3	3	22.3500	22.9000	22.3100	0.8372	22.3500	22.3100		
In-House	D2622	07/15/05	3	5	19.0000	19.4000	20.3000	0.8372	19.0000	19.4000	19.4000	20.3000
In-House	D2622	07/13/05	3	8	22.2200	21.7500	22.3500	0.8372	22.2200	21.7500	21.7500	22.3500
In-House	D2622	07/22/05	3	28	22.0000	22.3000	21.4000	0.8372	22.3000	21.4000	22.0000	21.4000
In-House	D2622	08/02/05	3	41	24.0000	23.2000	24.1000	0.8372	23.2000	24.1000		
In-House	D2622	08/31/05	3	EPA	22.4000	21.2000	21.3000	0.8372	22.4000	21.2000	22.4000	21.3000
In-House	D2622	08/10/05	3	50	20.4000	22.7000	22.8000	0.8372	22.7000	22.8000	20.4000	22.8000
In-House	D2622	07/26/05	3	53	21.4000	21.7000	21.0000	0.8372	21.7000	21.0000	21.4000	21.7000
In-House	D2622	07/21/05	3	55	19.5000	20.1000	19.5000	0.8372	19.5000	19.5000	20.1000	19.5000
In-House	D2622	07/18/05	3	67	20.5000	21.9000	21.3000	0.8372	20.5000	21.3000	21.9000	21.3000
In-House	D2622	07/13/05	3	73	21.1000	21.4000	21.2000	0.8372	21.1000	21.4000	21.4000	21.2000
In-House	D2622	08/02/05	3	94	23.3000	21.8000	18.3000	0.8372	23.3000	21.8000		
In-House	D2622	07/26/05	3	103	22.3590	22.6930	22.4230	0.8372	22.6930	22.4230	22.3590	22.4230
In-House	D2622	07/12/05	3	105	21.5000	21.2000	21.9000	0.8372	21.5000	21.2000	21.2000	21.9000
In-House	D2622	07/19/05	3	121	21.5000	20.9000	21.6000	0.8372	21.5000	20.9000	21.5000	21.6000
In-House	D2622	07/25/05	3	123	20.5000	20.7000	20.6000	0.8372	20.5000	20.7000	20.7000	20.6000
In-House	D2622	07/13/05	3	124	21.7000	21.1000	21.3000	0.8372	21.1000	21.3000	21.7000	21.1000
In-House	D2622	07/28/05	3	126	20.9000	22.5000	23.5000	0.8372	20.9000	23.5000	20.9000	22.5000
In-House	D2622	07/22/05	3	131	21.6000	21.7000	21.7000	0.8372	21.7000	21.7000	21.6000	21.7000
In-House	D2622	07/19/05	3	133	21.1000	21.6000	22.4000	0.8372	21.6000	22.4000	21.1000	21.6000
In-House	D2622	07/19/05	3	136	21.0000	19.9000	21.5000	0.8372	21.0000	19.9000	21.0000	21.5000
In-House	D2622	07/13/05	3	139	22.1300	22.2100	22.6900	0.8372	22.1300	22.2100	22.1300	22.2100
In-House	D2622	07/19/05	3	140	19.3000	21.5000	20.4000	0.8372	19.3000	21.5000	19.3000	20.4000
In-House	D2622	07/24/05	3	145	23.1000	23.2000	22.1000	0.8745	23.2000	22.1000		
In-House	D2622	07/31/05	3	162	22.7600	22.6200	22.1400	0.8372	22.7600	22.6200		

**Table B.46. July Fuel #3 Lab Data and Deletions Based on D2622 Test Method for NIST Calibration**

Calibration	Test Method	Run Date	July Sample #	Lab Code	Original Lab Data Robust Outlier Deletion in Shaded Box				After Robust Outlier Deletion Random Selection of 2 Obs		After Gravimetric Deletion Random Selection of 2 Obs	
					Measure #1	Measure #2	Measure #3	Density	#1	#2	#1	#2
NIST	D2622	07/13/05	3	3	22.1200	20.5300	21.9300	0.8372	22.1200	21.9300		
NIST	D2622	07/15/05	3	5	21.3000	21.7000	22.6000	0.8372	21.3000	22.6000		
NIST	D2622	07/13/05	3	8	21.6500	20.8900	20.6700	0.8372	21.6500	20.8900	20.8900	20.6700
NIST	D2622	07/14/05	3	28	22.0000	22.2000	21.5000	0.8372	22.2000	21.5000	22.2000	21.5000
NIST	D2622	08/02/05	3	41	20.6000	21.7000	22.0000	0.8372	21.7000	22.0000	20.6000	22.0000
NIST	D2622	09/01/05	3	EPA	22.2000	24.0000	22.5000	0.8372	22.2000	22.5000		
NIST	D2622	08/10/05	3	50	22.1000	27.8000	29.3000	0.8372	22.1000		22.1000	29.3000
NIST	D2622	07/28/05	3	53	21.0000	20.6000	21.1000	0.8372	21.0000	20.6000	20.6000	21.1000
NIST	D2622	07/23/05	3	55	20.8000	20.3000	20.8000	0.8372	20.3000	20.8000	20.8000	20.8000
NIST	D2622	07/25/05	3	67	20.9190	22.2160	22.4770	0.8372	22.2160	22.4770	22.2160	22.4770
NIST	D2622	07/13/05	3	73	21.2000	20.9000	21.0000	0.8372	21.2000	21.0000	21.2000	20.9000
NIST	D2622	07/18/05	3	94	19.9000	17.8000	19.3000	0.8372	19.9000	19.3000		
NIST	D2622	07/28/05	3	103	21.1000	20.2000	21.1000	0.8372	21.1000	20.2000		
NIST	D2622	07/12/05	3	105	21.5600	21.5000	21.1700	0.8372	21.5600	21.5000	21.5000	21.1700
NIST	D2622	07/19/05	3	121	21.9000	21.3000	21.9000	0.8372	21.3000	21.9000		
NIST	D2622	07/26/05	3	123	21.1000	20.5000	20.6000	0.8372	21.1000	20.6000	20.5000	20.6000
NIST	D2622	07/21/05	3	124	22.5000	22.5000	22.4000	0.8372	22.5000	22.4000		
NIST	D2622	07/28/05	3	126	19.0000	21.3000	19.9000	0.8372	19.0000	19.9000		
NIST	D2622	07/27/05	3	131	21.0000	21.2000	21.2000	0.8372	21.0000	21.2000	21.2000	21.2000
NIST	D2622	07/19/05	3	133	22.3000	22.5000	22.6000	0.8372	22.5000	22.6000	22.3000	22.5000
NIST	D2622	07/19/05	3	136	20.9000	19.8000	21.4000	0.8372	20.9000	19.8000	19.8000	21.4000
NIST	D2622	07/15/05	3	139	22.3000	21.8000	21.7000	0.8372	22.3000	21.8000	21.8000	21.7000
NIST	D2622	07/20/05	3	140	20.4000	20.6000	19.2000	0.8372	20.4000	20.6000	20.4000	19.2000
NIST	D2622	07/24/05	3	145	22.1000	22.2000	22.3000	0.8745	22.1000	22.3000		
NIST	D2622	07/31/05	3	162	22.4100	23.9800	23.7800	0.8372	23.9800	23.7800	22.4100	23.7800

**Table B.47. July Fuel #4 Lab Data and Deletions Based on D2622 Test Method for In-House Calibration**

Calibration	Test Method	Run Date	July Sample #	Lab Code	Original Lab Data Robust Outlier Deletion in Shaded Box				After Robust Outlier Deletion Random Selection of 2 Obs		After Gravimetric Deletion Random Selection of 2 Obs	
					Measure #1	Measure #2	Measure #3	Density	#1	#2	#1	#2
In-House	D2622	07/13/05	4	3	10.1900	9.9300	9.7800	0.8264	10.1900	9.9300		
In-House	D2622	07/15/05	4	5	7.7000	7.9000	7.1000	0.8264	7.9000	7.1000	7.7000	7.1000
In-House	D2622	07/13/05	4	8	8.8300	8.2900	8.2500	0.8264	8.8300	8.2900	8.8300	8.2900
In-House	D2622	07/22/05	4	28	8.4000	8.4000	8.3000	0.8264	8.4000	8.3000	8.4000	8.4000
In-House	D2622	08/02/05	4	41	9.9000	9.2000	9.2000	0.8264	9.9000	9.2000		
In-House	D2622	08/31/05	4	EPA	9.5000	9.0000	8.8000	0.8264	9.5000	8.8000	9.0000	8.8000
In-House	D2622	08/10/05	4	50	9.1000	8.8000	7.7000	0.8264	8.8000	7.7000	8.8000	7.7000
In-House	D2622	07/26/05	4	53	8.2000	9.0000	9.7000	0.8264	8.2000	9.0000	8.2000	9.7000
In-House	D2622	07/21/05	4	55	8.8000	8.5000	8.2000	0.8264	8.8000	8.5000	8.8000	8.5000
In-House	D2622	07/18/05	4	67	9.2000	9.2000	8.2000	0.8264	9.2000	9.2000	9.2000	8.2000
In-House	D2622	07/13/05	4	73	8.5000	8.4000	9.1000	0.8264	8.4000	9.1000	8.5000	9.1000
In-House	D2622	08/02/05	4	94	10.5000	10.2000	8.3000	0.8264	10.5000	8.3000		
In-House	D2622	07/26/05	4	103	9.5260	8.0770	7.2040	0.8264	8.0770	7.2040	9.5260	7.2040
In-House	D2622	07/12/05	4	105	8.2000	8.5000	8.8000	0.8264	8.2000	8.5000	8.2000	8.8000
In-House	D2622	07/19/05	4	121	9.2000	9.5000	8.1000	0.8264	9.2000	9.5000	9.2000	9.5000
In-House	D2622	07/25/05	4	123	7.8000	8.1000	8.3000	0.8264	7.8000	8.3000	7.8000	8.1000
In-House	D2622	07/13/05	4	124	8.7000	8.4000	9.5000	0.8264	8.7000	8.4000	8.7000	8.4000
In-House	D2622	07/28/05	4	126	8.8000	8.5000	7.8000	0.8264	8.8000	8.5000	8.5000	7.8000
In-House	D2622	07/22/05	4	131	8.4000	8.1000	8.4000	0.8264	8.4000	8.1000	8.1000	8.4000
In-House	D2622	07/19/05	4	133	8.1000	8.9000	9.0000	0.8264	8.1000	9.0000	8.9000	9.0000
In-House	D2622	07/19/05	4	136	9.2000	8.3000	8.6000	0.8264	9.2000	8.6000	9.2000	8.3000
In-House	D2622	07/13/05	4	139	8.6800	8.8000	9.2000	0.8264	8.6800	8.8000	8.6800	9.2000
In-House	D2622	07/19/05	4	140	8.3000	8.2000	7.4000	0.8264	8.2000	7.4000	8.2000	7.4000
In-House	D2622	07/24/05	4	145	9.7000	9.8000	9.9000	0.8956	9.8000	9.9000		
In-House	D2622	07/31/05	4	162	6.9900	6.9000	7.1200	0.8264	6.9900	6.9000		

**Table B.48. July Fuel #4 Lab Data and Deletions Based on D2622 Test Method for NIST Calibration**

Calibration	Test Method	Run Date	July Sample #	Lab Code	Original Lab Data Robust Outlier Deletion in Shaded Box				After Robust Outlier Deletion Random Selection of 2 Obs		After Gravimetric Deletion Random Selection of 2 Obs	
					Measure #1	Measure #2	Measure #3	Density	#1	#2	#1	#2
NIST	D2622	07/13/05	4	3	10.0500	9.1400	9.0200	0.8264	9.1400	9.0200		
NIST	D2622	07/15/05	4	5	9.6000	9.7000	9.0000	0.8264	9.6000	9.0000		
NIST	D2622	07/13/05	4	8	8.9600	8.3000	7.7800	0.8264	8.9600	7.7800		
NIST	D2622	07/14/05	4	28	8.0000	8.9000	8.1000	0.8264	8.0000	8.1000		
NIST	D2622	08/02/05	4	41	9.1000	9.5000	9.3000	0.8264	9.1000	9.5000		
NIST	D2622	09/01/05	4	EPA	8.9000	9.6000	9.5000	0.8264	8.9000	9.5000		
NIST	D2622	08/10/05	4	50	8.0000	9.9000	8.5000	0.8264	9.9000	8.5000		
NIST	D2622	07/28/05	4	53	8.6000	8.4000	9.7000	0.8264	8.4000	9.7000		
NIST	D2622	07/23/05	4	55	8.2000	9.7000	8.9000	0.8264	8.2000	9.7000		
NIST	D2622	07/25/05	4	67	8.1430	9.1520	9.8200	0.8264	8.1430	9.8200		
NIST	D2622	07/13/05	4	73	8.4000	9.0000	8.4000	0.8264	9.0000	8.4000		
NIST	D2622	07/18/05	4	94	10.7000	11.0000	11.3000	0.8264	10.7000	11.0000		
NIST	D2622	07/28/05	4	103	6.1000	5.6000	6.0000	0.8264	6.1000	6.0000		
NIST	D2622	07/12/05	4	105	8.3000	8.9100	8.2400	0.8264	8.9100	8.2400		
NIST	D2622	07/19/05	4	121	9.7000	10.0000	8.7000	0.8264	10.0000	8.7000		
NIST	D2622	07/26/05	4	123	7.7000	8.2000	8.5000	0.8264	7.7000	8.2000		
NIST	D2622	07/21/05	4	124	10.3000	9.9000	10.9000	0.8264	10.3000	10.9000		
NIST	D2622	07/28/05	4	126	6.8000	6.1000	7.8000	0.8264	6.8000	7.8000		
NIST	D2622	07/27/05	4	131	7.8000	7.6000	8.1000	0.8264	7.8000	8.1000		
NIST	D2622	07/19/05	4	133	9.0000	8.8000	8.6000	0.8264	8.8000	8.6000		
NIST	D2622	07/19/05	4	136	9.3000	8.3000	8.7000	0.8264	9.3000	8.3000		
NIST	D2622	07/15/05	4	139	9.1000	8.7000	8.6000	0.8264	9.1000	8.6000		
NIST	D2622	07/20/05	4	140	8.0000	8.7000	8.4000	0.8264	8.0000	8.4000		
NIST	D2622	07/24/05	4	145	10.6000	10.5000	9.8000	0.8956	10.6000	10.5000		
NIST	D2622	07/31/05	4	162	7.9400	8.7400	7.8500	0.8264	7.9400	8.7400		

**Table B.49. July Fuel #5 Lab Data and Deletions Based on D2622 Test Method for In-House Calibration**

Calibration	Test Method	Run Date	July Sample #	Lab Code	Original Lab Data Robust Outlier Deletion in Shaded Box				After Robust Outlier Deletion Random Selection of 2 Obs		After Gravimetric Deletion Random Selection of 2 Obs	
					Measure #1	Measure #2	Measure #3	Density	#1	#2	#1	#2
In-House	D2622	07/13/05	5	3	16.1300	16.6700	16.5700	0.8270	16.1300	16.6700		
In-House	D2622	07/15/05	5	5	14.6000	13.9000	14.0000	0.8270	14.6000	13.9000	14.6000	13.9000
In-House	D2622	07/13/05	5	8	16.1600	17.0300	16.4500	0.8270	16.1600	16.4500	17.0300	16.4500
In-House	D2622	07/22/05	5	28	15.9000	16.0000	16.2000	0.8270	16.0000	16.2000	15.9000	16.2000
In-House	D2622	08/02/05	5	41	17.1000	18.1000	18.5000	0.8270	17.1000	18.5000		
In-House	D2622	08/31/05	5	EPA	16.3000	16.2000	16.3000	0.8270	16.2000	16.3000	16.2000	16.3000
In-House	D2622	08/10/05	5	50	14.6000	15.4000	15.0000	0.8270	14.6000	15.0000	14.6000	15.0000
In-House	D2622	07/26/05	5	53	17.8000	17.1000	16.1000	0.8270	17.8000	17.1000	17.8000	16.1000
In-House	D2622	07/21/05	5	55	14.0000	14.6000	14.6000	0.8270	14.0000	14.6000	14.0000	14.6000
In-House	D2622	07/18/05	5	67	14.7000	15.5000	14.7000	0.8270	14.7000	14.7000	14.7000	14.7000
In-House	D2622	07/13/05	5	73	15.1000	15.4000	15.1000	0.8270	15.1000	15.1000	15.1000	15.4000
In-House	D2622	08/02/05	5	94	12.7000	13.7000	12.4000	0.8270	13.7000	12.4000		
In-House	D2622	07/26/05	5	103	17.2380	14.8640	16.1610	0.8270	17.2380	16.1610	14.8640	16.1610
In-House	D2622	07/12/05	5	105	15.7000	15.5000	16.1000	0.8270	15.7000	15.5000	15.7000	16.1000
In-House	D2622	07/19/05	5	121	15.1000	15.7000	16.2000	0.8270	15.7000	16.2000	15.1000	16.2000
In-House	D2622	07/25/05	5	123	14.6000	15.0000	14.2000	0.8270	14.6000	15.0000	15.0000	14.2000
In-House	D2622	07/13/05	5	124	16.3000	16.3000	16.6000	0.8270	16.3000	16.6000	16.3000	16.6000
In-House	D2622	07/28/05	5	126	13.9000	14.3000	16.9000	0.8270	13.9000	14.3000	13.9000	16.9000
In-House	D2622	07/22/05	5	131	15.3000	15.2000	14.7000	0.8270	15.3000	14.7000	15.2000	14.7000
In-House	D2622	07/19/05	5	133	16.5000	15.3000	15.6000	0.8270	16.5000	15.6000	16.5000	15.3000
In-House	D2622	07/19/05	5	136	15.0000	15.2000	15.8000	0.8270	15.2000	15.8000	15.0000	15.8000
In-House	D2622	07/13/05	5	139	15.7500	15.8700	15.9000	0.8270	15.8700	15.9000	15.7500	15.9000
In-House	D2622	07/19/05	5	140	13.9000	15.2000	16.1000	0.8270	15.2000	16.1000	15.2000	16.1000
In-House	D2622	07/24/05	5	145	14.1000	14.9000	15.1000	0.8526	14.9000	15.1000		
In-House	D2622	07/31/05	5	162	14.7200	13.4200	14.3000	0.8270	13.4200	14.3000		



**Table B.50. July Fuel #5 Lab Data and Deletions Based on D2622 Test Method for NIST Calibration**

Calibration	Test Method	Run Date	July Sample #	Lab Code	Original Lab Data Robust Outlier Deletion in Shaded Box				After Robust Outlier Deletion Random Selection of 2 Obs		After Gravimetric Deletion Random Selection of 2 Obs	
					Measure #1	Measure #2	Measure #3	Density	#1	#2	#1	#2
NIST	D2622	07/13/05	5	3	15.7700	15.0700	16.1200	0.8270	15.7700	16.1200		
NIST	D2622	07/15/05	5	5	16.8000	16.0000	16.1000	0.8270	16.0000	16.1000		
NIST	D2622	07/13/05	5	8	15.7300	16.9300	16.5200	0.8270	15.7300	16.5200	15.7300	16.5200
NIST	D2622	07/14/05	5	28	16.5000	16.3000	16.4000	0.8270	16.5000	16.3000	16.3000	16.4000
NIST	D2622	08/02/05	5	41	16.5000	17.0000	16.8000	0.8270	16.5000	16.8000	16.5000	17.0000
NIST	D2622	09/01/05	5	EPA	16.6000	16.4000	16.8000	0.8270	16.4000	16.8000		
NIST	D2622	08/10/05	5	50	17.1000	16.6000	15.7000	0.8270	16.6000	15.7000	17.1000	15.7000
NIST	D2622	07/28/05	5	53	15.9000	16.1000	15.8000	0.8270	16.1000	15.8000	15.9000	15.8000
NIST	D2622	07/23/05	5	55	14.9000	15.2000	15.7000	0.8270	15.2000	15.7000	14.9000	15.7000
NIST	D2622	07/25/05	5	67	15.8990	14.4360	15.6520	0.8270	15.8990	14.4360	15.8990	15.6520
NIST	D2622	07/13/05	5	73	15.5000	15.0000	14.8000	0.8270	15.5000	15.0000	14.8000	14.8000
NIST	D2622	07/18/05	5	94	13.9000	14.9000	12.2000	0.8270	13.9000	14.9000		
NIST	D2622	07/28/05	5	103	13.7000	13.8000	14.0000	0.8270	13.8000	14.0000		
NIST	D2622	07/12/05	5	105	15.7200	15.4700	15.4900	0.8270	15.7200	15.4900	15.7200	15.4700
NIST	D2622	07/19/05	5	121	15.5000	16.1000	16.6000	0.8270	15.5000	16.6000		
NIST	D2622	07/26/05	5	123	15.5000	15.3000	14.5000	0.8270	15.3000	14.5000	15.5000	15.3000
NIST	D2622	07/21/05	5	124	16.8000	17.0000	16.5000	0.8270	16.8000	17.0000		
NIST	D2622	07/28/05	5	126	13.2000	14.4000	15.1000	0.8270	13.2000	14.4000		
NIST	D2622	07/27/05	5	131	15.2000	15.1000	15.4000	0.8270	15.1000	15.4000	15.1000	15.4000
NIST	D2622	07/19/05	5	133	16.4000	16.5000	16.2000	0.8270	16.4000	16.2000	16.5000	16.2000
NIST	D2622	07/19/05	5	136	14.9000	15.1000	15.7000	0.8270	14.9000	15.7000	14.9000	15.7000
NIST	D2622	07/15/05	5	139	15.6000	15.6000	15.5000	0.8270	15.6000	15.5000	15.6000	15.6000
NIST	D2622	07/20/05	5	140	14.2000	14.3000	14.1000	0.8270	14.2000	14.3000	14.3000	14.1000
NIST	D2622	07/24/05	5	145	14.8000	14.7000	14.5000	0.8526	14.8000	14.5000		
NIST	D2622	07/31/05	5	162	15.3400	15.8800	15.0000	0.8270	15.3400	15.8800	15.3400	15.8800

**Table B.51. August Fuel #1 Lab Data and Deletions Based on D2622 Test Method for In-House Calibration**

Calibration	Test Method	Run Date	August Sample #	Lab Code	Original Lab Data Robust Outlier Deletion in Shaded Box				After Robust Outlier Deletion Random Selection of 2 Obs		After Gravimetric Deletion Random Selection of 2 Obs	
					Measure #1	Measure #2	Measure #3	Density	#1	#2	#1	#2
In-House	D2622	08/08/05	1	3	11.1500	11.1600	11.1100	0.8240	11.1500	11.1100		
In-House	D2622		1	5	10.4000	10.7000	11.3000	0.8240	10.4000	10.7000		
In-House	D2622	08/04/05	1	8	11.3700	11.0700	11.4300	0.8240	11.3700	11.0700	11.3700	11.4300
In-House	D2622	08/16/05	1	28	13.0000	11.7000	11.1000	0.8240	11.7000	11.1000	11.7000	11.1000
In-House	D2622	08/05/05	1	41	11.6000	11.8000	11.2000	0.8240	11.8000	11.2000		
In-House	D2622	08/31/05	1	EPA	11.1000	10.9000	11.5000	0.8240	11.1000	11.5000	11.1000	11.5000
In-House	D2622	08/25/05	1	50	9.9000	9.5000	10.2000	0.8240	9.9000	9.5000	9.5000	10.2000
In-House	D2622	08/26/05	1	53	11.0000	10.9000	10.5000	0.8240	11.0000	10.5000	11.0000	10.5000
In-House	D2622	08/02/05	1	55	9.1000	9.5000	9.4000	0.8240	9.1000	9.5000	9.1000	9.4000
In-House	D2622	08/30/05	1	67	11.6360	10.6190	10.9510	0.8240	11.6360	10.9510	10.6190	10.9510
In-House	D2622	08/26/05	1	73	11.8000	11.7000	11.9000	0.8240	11.7000	11.9000	11.8000	11.9000
In-House	D2622	08/25/05	1	103	11.9000	11.3000	11.5000	0.8240	11.9000	11.5000	11.3000	11.5000
In-House	D2622	08/09/05	1	105	11.4000	10.9000	11.0000	0.8240	10.9000	11.0000	11.4000	10.9000
In-House	D2622	08/31/05	1	121	10.8000	11.0000	11.1000	0.8240	11.0000	11.1000	10.8000	11.0000
In-House	D2622	08/15/05	1	123	10.3000	9.7000	10.8000	0.8240	10.3000	10.8000	9.7000	10.8000
In-House	D2622	08/17/05	1	124	11.4000	10.2000	14.1000	0.8240	11.4000	10.2000	11.4000	10.2000
In-House	D2622	08/10/05	1	126	8.5000	9.1000	8.8000	0.8240	8.5000	8.8000	8.5000	8.8000
In-House	D2622	08/15/05	1	131	11.5000	11.6000	11.1000	0.8240	11.5000	11.1000		
In-House	D2622	08/31/05	1	133	12.2000	11.0000	12.3000	0.8240	12.2000	12.3000	11.0000	12.3000
In-House	D2622	08/09/05	1	136	10.2000	9.7000	9.9000	0.8240	10.2000	9.7000	9.7000	9.9000
In-House	D2622	08/26/05	1	139	11.7000	11.8000	11.6000	0.8523	11.8000	11.6000	11.7000	11.8000
In-House	D2622	08/22/05	1	140	12.0000	12.0000	13.4000	0.8240	12.0000	13.4000		
In-House	D2622	09/04/05	1	145	11.9000	11.9000	11.5000		11.9000	11.5000		
In-House	D2622	08/26/05	1	162	9.7200	10.1400	10.9100	0.8240	9.7200	10.1400	10.1400	10.9100

**Table B.52. August Fuel #1 Lab Data and Deletions Based on D2622 Test Method for NIST Calibration**

Calibration	Test Method	Run Date	August Sample #	Lab Code	Original Lab Data Robust Outlier Deletion in Shaded Box				After Robust Outlier Deletion Random Selection of 2 Obs		After Gravimetric Deletion Random Selection of 2 Obs	
					Measure #1	Measure #2	Measure #3	Density	#1	#2	#1	#2
NIST	D2622	08/08/05	1	3	10.8700	11.4100	10.8800	0.8240	10.8700	11.4100	11.4100	10.8800
NIST	D2622	08/26/05	1	5	11.0000	10.9000	11.0000	0.8240	10.9000	11.0000	11.0000	10.9000
NIST	D2622	08/04/05	1	8	11.8700	11.6800	11.0800	0.8240	11.8700	11.0800	11.6800	11.0800
NIST	D2622	08/26/05	1	28	11.6000	11.6000	11.3000	0.8240	11.6000	11.3000		
NIST	D2622	08/05/05	1	41	10.8000	10.7000	10.6000	0.8240	10.8000	10.7000	10.8000	10.7000
NIST	D2622	09/01/05	1	EPA	11.6000	11.5000	12.1000	0.8240	11.6000	11.5000	11.6000	12.1000
NIST	D2622	08/26/05	1	50	10.6500	11.2100	9.6000	0.8240	10.6500	11.2100	11.2100	9.6000
NIST	D2622	08/29/05	1	53	11.1000	10.9000	11.9000	0.8240	11.1000	10.9000	10.9000	11.9000
NIST	D2622	08/02/05	1	55	9.2000	10.5000	10.7000	0.8240	9.2000	10.7000	10.5000	10.7000
NIST	D2622	08/31/05	1	67	9.2650	9.7860	10.2830	0.8240	9.2650	9.7860	9.7860	10.2830
NIST	D2622	08/26/05	1	73	10.6000	10.8000	11.8000	0.8240	10.6000	10.8000		
NIST	D2622	08/26/05	1	103	11.9000	11.1000	11.7000	0.8240	11.1000	11.7000		
NIST	D2622	08/09/05	1	105	11.0000	11.6000	11.0000	0.8240	11.0000	11.6000	11.0000	11.6000
NIST	D2622	09/01/05	1	121	11.7000	11.8000	11.8000	0.8240	11.7000	11.8000	11.7000	11.8000
NIST	D2622	08/15/05	1	123	10.7000	10.2000	10.4000	0.8240	10.2000	10.4000	10.2000	10.4000
NIST	D2622	08/24/05	1	124	11.2000	11.1000	10.5000	0.8240	11.1000	10.5000		
NIST	D2622	08/31/05	1	126	8.7000	9.3000	9.1000	0.8240	9.3000	9.1000	8.7000	9.1000
NIST	D2622	08/11/05	1	131	9.3000	9.6000	9.4000	0.8240	9.6000	9.4000		
NIST	D2622	08/31/05	1	133	11.6000	10.2000	10.2000	0.8240	10.2000	10.2000	10.2000	10.2000
NIST	D2622	08/09/05	1	136	10.2000	10.2000	10.6000	0.8240	10.2000	10.6000	10.2000	10.6000
NIST	D2622	08/23/05	1	139	10.2000	10.9000	10.7000	0.8523	10.2000	10.9000	10.9000	10.7000
NIST	D2622	08/22/05	1	140	7.6000	7.9000	10.7000	0.8240	10.7000		7.6000	7.9000
NIST	D2622	09/04/05	1	145	12.7000	12.4000	11.8000		12.7000	11.8000		
NIST	D2622	07/26/05	1	162	9.5700	9.5800	10.6900	0.8240	9.5700	9.5800		

**Table B.53. August Fuel #2 Lab Data and Deletions Based on D2622 Test Method for In-House Calibration**

Calibration	Test Method	Run Date	August Sample #	Lab Code	Original Lab Data Robust Outlier Deletion in Shaded Box				After Robust Outlier Deletion Random Selection of 2 Obs		After Gravimetric Deletion Random Selection of 2 Obs	
					Measure #1	Measure #2	Measure #3	Density	#1	#2	#1	#2
In-House	D2622	08/08/05	2	3	15.2600	16.6900	16.1400	0.8371	16.6900	16.1400		
In-House	D2622		2	5	15.6000	16.2000	18.2000	0.8371	16.2000	18.2000		
In-House	D2622	08/04/05	2	8	16.4000	15.6800	16.0000	0.8371	16.4000	15.6800	16.4000	16.0000
In-House	D2622	08/16/05	2	28	16.1000	16.4000	16.2000	0.8371	16.4000	16.2000	16.1000	16.2000
In-House	D2622	08/05/05	2	41	14.7000	14.3000	14.6000	0.8371	14.3000	14.6000		
In-House	D2622	08/31/05	2	EPA	15.3000	15.4000	15.6000	0.8371	15.3000	15.6000	15.3000	15.6000
In-House	D2622	08/25/05	2	50	13.7000	15.6000	15.5000	0.8371	15.6000	15.5000	13.7000	15.5000
In-House	D2622	08/26/05	2	53	15.3000	15.1000	15.2000	0.8371	15.3000	15.1000	15.3000	15.2000
In-House	D2622	08/02/05	2	55	14.5000	13.7000	14.8000	0.8371	14.5000	14.8000	13.7000	14.8000
In-House	D2622	08/30/05	2	67	15.3150	14.1510	14.6230	0.8371	14.1510	14.6230	15.3150	14.6230
In-House	D2622	08/26/05	2	73	16.6000	16.2000	16.2000	0.8371	16.2000	16.2000	16.2000	16.2000
In-House	D2622	08/25/05	2	103	15.8000	15.9000	17.0000	0.8371	15.9000	17.0000	15.8000	15.9000
In-House	D2622	08/09/05	2	105	15.6000	15.5000	14.9000	0.8371	15.6000	14.9000	15.6000	14.9000
In-House	D2622	08/31/05	2	121	15.5000	15.7000	16.3000	0.8371	15.5000	15.7000	15.7000	16.3000
In-House	D2622	08/15/05	2	123	14.3000	15.0000	14.2000	0.8371	15.0000	14.2000	14.3000	14.2000
In-House	D2622	08/17/05	2	124	14.7000	14.9000	15.5000	0.8371	14.9000	15.5000	14.7000	14.9000
In-House	D2622	08/10/05	2	126	13.7000	14.0000	13.4000	0.8371	13.7000	14.0000	13.7000	13.4000
In-House	D2622	08/15/05	2	131	15.1000	14.5000	14.9000	0.8371	15.1000	14.9000		
In-House	D2622	08/31/05	2	133	16.2000	16.3000	16.2000	0.8371	16.2000	16.2000	16.2000	16.3000
In-House	D2622	08/09/05	2	136	15.1000	14.9000	14.6000	0.8371	14.9000	14.6000	14.9000	14.6000
In-House	D2622	08/26/05	2	139	16.8000	15.8000	16.2000	0.8695	16.8000	16.2000	16.8000	16.2000
In-House	D2622	08/22/05	2	140	18.0000	16.9000	17.1000	0.8371	18.0000	17.1000		
In-House	D2622	09/04/05	2	145	17.7000	16.6000	17.3000		17.7000	17.3000		
In-House	D2622	08/26/05	2	162	14.2400	13.7300	14.7200	0.8371	14.2400	14.7200	14.2400	14.7200

**Table B.54. August Fuel #2 Lab Data and Deletions Based on D2622 Test Method for NIST Calibration**

Calibration	Test Method	Run Date	August Sample #	Lab Code	Original Lab Data Robust Outlier Deletion in Shaded Box				After Robust Outlier Deletion Random Selection of 2 Obs		After Gravimetric Deletion Random Selection of 2 Obs	
					Measure #1	Measure #2	Measure #3	Density	#1	#2	#1	#2
NIST	D2622	08/08/05	2	3	14.4000	14.2900	14.7900	0.8371	14.4000	14.7900	14.2900	14.7900
NIST	D2622	08/26/05	2	5	16.8000	15.0000	14.4000	0.8371	16.8000	14.4000	16.8000	14.4000
NIST	D2622	08/04/05	2	8	15.7500	16.1600	15.8900	0.8371	15.7500	15.8900	15.7500	15.8900
NIST	D2622	08/26/05	2	28	15.9000	16.0000	15.8000	0.8371	15.9000	16.0000		
NIST	D2622	08/05/05	2	41	13.6000	13.3000	14.5000	0.8371	13.6000	13.3000	13.3000	14.5000
NIST	D2622	09/01/05	2	EPA	15.7000	16.2000	16.1000	0.8371	15.7000	16.1000	16.2000	16.1000
NIST	D2622	08/26/05	2	50	15.3000	15.4000	14.6000	0.8371	15.4000	14.6000	15.3000	15.4000
NIST	D2622	08/29/05	2	53	15.7000	15.3000	15.8000	0.8371	15.7000	15.8000	15.7000	15.8000
NIST	D2622	08/02/05	2	55	14.4000	13.9000	13.8000	0.8371	13.9000	13.8000	13.9000	13.8000
NIST	D2622	08/31/05	2	67	14.9460	13.9380	14.3410	0.8371	14.9460	14.3410	13.9380	14.3410
NIST	D2622	08/26/05	2	73	16.7000	17.1000	17.0000	0.8371	17.1000	17.0000		
NIST	D2622	08/26/05	2	103	16.2000	16.0000	16.0000	0.8371	16.2000	16.0000		
NIST	D2622	08/09/05	2	105	15.8000	15.8000	15.2000	0.8371	15.8000	15.2000	15.8000	15.8000
NIST	D2622	09/01/05	2	121	15.9000	15.4000	15.3000	0.8371	15.9000	15.3000	15.9000	15.3000
NIST	D2622	08/15/05	2	123	14.2000	14.4000	14.0000	0.8371	14.2000	14.0000	14.2000	14.4000
NIST	D2622	08/24/05	2	124	14.8000	15.1000	15.2000	0.8371	14.8000	15.2000		
NIST	D2622	08/31/05	2	126	14.1000	14.3000	13.8000	0.8371	14.3000	13.8000	14.1000	14.3000
NIST	D2622	08/11/05	2	131	12.9000	13.0000	13.0000	0.8371	12.9000	13.0000		
NIST	D2622	08/31/05	2	133	14.8000	14.3000	14.5000	0.8371	14.8000	14.5000	14.3000	14.5000
NIST	D2622	08/09/05	2	136	14.4000	14.1000	14.5000	0.8371	14.4000	14.1000	14.4000	14.1000
NIST	D2622	08/23/05	2	139	15.2000	14.9000	17.3000	0.8695	15.2000	17.3000	14.9000	17.3000
NIST	D2622	08/22/05	2	140	12.3000	12.4000	12.8000	0.8371	12.3000	12.8000	12.3000	12.4000
NIST	D2622	09/04/05	2	145	17.3000	17.4000	18.5000		17.3000	18.5000		
NIST	D2622	07/26/05	2	162	14.4000	13.9300	14.9600	0.8371	14.4000	13.9300		

**Table B.55. August Fuel #3 Lab Data and Deletions Based on D2622 Test Method for In-House Calibration**

Calibration	Test Method	Run Date	August Sample #	Lab Code	Original Lab Data Robust Outlier Deletion in Shaded Box				After Robust Outlier Deletion Random Selection of 2 Obs		After Gravimetric Deletion Random Selection of 2 Obs		
					Measure #1	Measure #2	Measure #3	Density	#1	#2	#1	#2	
In-House	D2622	08/08/05	3	3	22.3800	21.7100	22.3500	0.8372	21.7100				
In-House	D2622		3	5	19.9000	18.1000	17.9000	0.8372	19.9000	18.1000			
In-House	D2622	08/04/05	3	8	19.3600	19.4800	19.9900	0.8372	19.4800	19.9900		19.4800	19.9900
In-House	D2622	08/16/05	3	28	19.3000	19.2000	19.7000	0.8372	19.2000	19.7000		19.3000	19.2000
In-House	D2622	08/05/05	3	41	18.4000	18.4000	18.2000	0.8372	18.4000	18.2000			
In-House	D2622	08/31/05	3	EPA	18.8000	17.8000	18.4000	0.8372	17.8000	18.4000		18.8000	18.4000
In-House	D2622	08/25/05	3	50	17.4000	18.2000	17.9000	0.8372	17.4000	18.2000		17.4000	17.9000
In-House	D2622	08/26/05	3	53	19.6000	20.0000	19.7000	0.8372	19.6000	20.0000		19.6000	20.0000
In-House	D2622	08/02/05	3	55	16.4000	16.2000	17.9000	0.8372	16.2000	17.9000		16.2000	17.9000
In-House	D2622	08/30/05	3	67	18.5870	17.2970	17.9200	0.8372	18.5870	17.9200		18.5870	17.9200
In-House	D2622	08/26/05	3	73	30.4000	20.0000	19.7000	0.8372	20.0000	19.7000		30.4000	20.0000
In-House	D2622	08/25/05	3	103	19.0000	18.9000	18.5000	0.8372	19.0000	18.5000		19.0000	18.9000
In-House	D2622	08/09/05	3	105	18.7000	17.8000	18.9000	0.8372	18.7000	18.9000		17.8000	18.9000
In-House	D2622	08/31/05	3	121	17.7000	18.4000	18.7000	0.8372	18.4000	18.7000		18.4000	18.7000
In-House	D2622	08/15/05	3	123	17.6000	18.1000	17.5000	0.8372	17.6000	18.1000		17.6000	18.1000
In-House	D2622	08/17/05	3	124	17.9000	19.1000	18.6000	0.8372	17.9000	18.6000		17.9000	18.6000
In-House	D2622	08/10/05	3	126	16.3000	16.2000	17.6000	0.8372	16.2000	17.6000		16.3000	17.6000
In-House	D2622	08/15/05	3	131	18.2000	18.1000	18.8000	0.8372	18.1000	18.8000			
In-House	D2622	08/31/05	3	133	18.8000	19.2000	19.1000	0.8372	18.8000	19.1000		19.2000	19.1000
In-House	D2622	08/09/05	3	136	17.5000	18.0000	18.1000	0.8372	18.0000	18.1000		18.0000	18.1000
In-House	D2622	08/26/05	3	139	19.1000	19.4000	18.6000	0.8745	19.1000	18.6000		19.4000	18.6000
In-House	D2622	08/22/05	3	140	20.7000	21.9000	20.8000	0.8372	21.9000	20.8000			
In-House	D2622	09/04/05	3	145	19.7000	18.2000	20.1000		19.7000	20.1000			
In-House	D2622	08/26/05	3	162	19.3700	19.1700	18.6300	0.8372	19.3700	19.1700		19.1700	18.6300

**Table B.56. August Fuel #3 Lab Data and Deletions Based on D2622 Test Method for NIST Calibration**

Calibration	Test Method	Run Date	August Sample #	Lab Code	Original Lab Data Robust Outlier Deletion in Shaded Box				After Robust Outlier Deletion Random Selection of 2 Obs		After Gravimetric Deletion Random Selection of 2 Obs	
					Measure #1	Measure #2	Measure #3	Density	#1	#2	#1	#2
NIST	D2622	08/08/05	3	3	18.5900	18.4200	18.8800	0.8372	18.5900	18.4200	18.5900	18.4200
NIST	D2622	08/26/05	3	5	19.4000	18.7000	18.8000	0.8372	19.4000	18.7000	18.7000	18.8000
NIST	D2622	08/04/05	3	8	19.6700	19.4200	19.2800	0.8372	19.6700	19.4200	19.4200	19.2800
NIST	D2622	08/26/05	3	28	18.8000	18.9000	19.2000	0.8372	18.9000	19.2000		
NIST	D2622	08/05/05	3	41	17.2000	17.4000	17.7000	0.8372	17.2000	17.7000	17.4000	17.7000
NIST	D2622	09/01/05	3	EPA	19.5000	18.7000	19.2000	0.8372	18.7000	19.2000	19.5000	18.7000
NIST	D2622	08/26/05	3	50	18.1000	18.7000	19.2000	0.8372	18.1000	18.7000	18.1000	18.7000
NIST	D2622	08/29/05	3	53	20.0000	19.5000	19.7000	0.8372	20.0000	19.5000	20.0000	19.5000
NIST	D2622	08/02/05	3	55	17.6000	18.5000	17.8000	0.8372	17.6000	17.8000	18.5000	17.8000
NIST	D2622	08/31/05	3	67	16.9580	17.3400	16.7740	0.8372	16.9580	16.7740	16.9580	17.3400
NIST	D2622	08/26/05	3	73	20.4000	19.9000	19.6000	0.8372	20.4000	19.9000		
NIST	D2622	08/26/05	3	103	19.5000	19.3000	19.0000	0.8372	19.3000	19.0000		
NIST	D2622	08/09/05	3	105	18.1000	19.0000	19.3000	0.8372	18.1000	19.3000	18.1000	19.3000
NIST	D2622	09/01/05	3	121	17.9000	18.6000	18.8000	0.8372	18.6000	18.8000	17.9000	18.6000
NIST	D2622	08/15/05	3	123	17.8000	17.6000	17.3000	0.8372	17.8000	17.3000	17.8000	17.3000
NIST	D2622	08/24/05	3	124	17.7000	19.1000	18.9000	0.8372	19.1000	18.9000		
NIST	D2622	08/31/05	3	126	16.6000	16.5000	17.9000	0.8372	16.5000	17.9000	16.6000	17.9000
NIST	D2622	08/11/05	3	131	15.3000	15.8000	15.2000	0.8372	15.3000	15.8000		
NIST	D2622	08/31/05	3	133	18.2000	18.1000	17.7000	0.8372	18.1000	17.7000	18.1000	17.7000
NIST	D2622	08/09/05	3	136	18.1000	18.6000	18.0000	0.8372	18.6000	18.0000	18.1000	18.0000
NIST	D2622	08/23/05	3	139	18.9000	18.7000	18.1000	0.8745	18.9000	18.7000	18.9000	18.1000
NIST	D2622	08/22/05	3	140	16.0000	16.2000	17.3000	0.8372	16.0000	17.3000	16.0000	16.2000
NIST	D2622	09/04/05	3	145	20.4000	19.2000	22.4000		20.4000	19.2000		
NIST	D2622	07/26/05	3	162	18.6600	17.9900	16.3100	0.8372	17.9900	16.3100		

**Table B.57. August Fuel #4 Lab Data and Deletions Based on D2622 Test Method for In-House Calibration**

Calibration	Test Method	Run Date	August Sample #	Lab Code	Original Lab Data Robust Outlier Deletion in Shaded Box				After Robust Outlier Deletion Random Selection of 2 Obs		After Gravimetric Deletion Random Selection of 2 Obs	
					Measure #1	Measure #2	Measure #3	Density	#1	#2	#1	#2
In-House	D2622	08/08/05	4	3	10.3300	10.3000	10.3200	0.8264	10.3300	10.3000		
In-House	D2622		4	5	10.3000	9.6000	11.2000	0.8264	10.3000	11.2000		
In-House	D2622	08/04/05	4	8	8.6100	7.3900	7.8100	0.8264	8.6100	7.3900	8.6100	7.8100
In-House	D2622	08/16/05	4	28	9.8000	9.0000	8.9000	0.8264	9.0000	8.9000	9.8000	8.9000
In-House	D2622	08/05/05	4	41	9.7000	9.7000	9.8000	0.8264	9.7000	9.8000		
In-House	D2622	08/31/05	4	EPA	8.4000	8.9000	8.4000	0.8264	8.4000	8.4000	8.4000	8.4000
In-House	D2622	08/25/05	4	50	8.7000	8.2000	8.3000	0.8264	8.7000	8.3000	8.7000	8.2000
In-House	D2622	08/26/05	4	53	9.5000	8.4000	8.2000	0.8264	9.5000	8.4000	8.4000	8.2000
In-House	D2622	08/02/05	4	55	8.3000	8.7000	9.0000	0.8264	8.7000	9.0000	8.7000	9.0000
In-House	D2622	08/30/05	4	67	8.5790	9.0640	8.4020	0.8264	8.5790	8.4020	8.5790	9.0640
In-House	D2622	08/26/05	4	73	7.7000	8.5000	8.3000	0.8264	7.7000	8.5000	8.5000	8.3000
In-House	D2622	08/25/05	4	103	7.6000	8.2000	8.0000	0.8264	8.2000	8.0000	7.6000	8.2000
In-House	D2622	08/09/05	4	105	9.0000	8.3000	8.5000	0.8264	8.3000	8.5000	9.0000	8.3000
In-House	D2622	08/31/05	4	121	8.2000	8.7000	8.1000	0.8264	8.2000	8.1000	8.7000	8.1000
In-House	D2622	08/15/05	4	123	8.4000	8.2000	8.5000	0.8264	8.2000	8.5000	8.2000	8.5000
In-House	D2622	08/17/05	4	124	9.5000	8.6000	8.9000	0.8264	9.5000	8.9000	8.6000	8.9000
In-House	D2622	08/10/05	4	126	8.8000	8.5000	8.8000	0.8264	8.8000	8.5000	8.8000	8.5000
In-House	D2622	08/15/05	4	131	9.8000	9.5000	9.7000	0.8264	9.8000	9.5000		
In-House	D2622	08/31/05	4	133	9.3000	9.1000	8.7000	0.8264	9.3000	9.1000	9.3000	8.7000
In-House	D2622	08/09/05	4	136	8.5000	8.4000	8.4000	0.8264	8.4000	8.4000	8.5000	8.4000
In-House	D2622	08/26/05	4	139	9.5000	9.2000	8.5000	0.8956	9.2000	8.5000	9.5000	8.5000
In-House	D2622	08/22/05	4	140	9.0000	10.0000	11.3000	0.8264	10.0000	11.3000		
In-House	D2622	09/04/05	4	145	13.4000	12.3000	11.1000		11.1000			
In-House	D2622	08/26/05	4	162	8.8400	9.5400	9.0400	0.8264	8.8400	9.5400	8.8400	9.5400



**Table B.58. August Fuel #4 Lab Data and Deletions Based on D2622 Test Method for NIST Calibration**

Calibration	Test Method	Run Date	August Sample #	Lab Code	Original Lab Data Robust Outlier Deletion in Shaded Box				After Robust Outlier Deletion Random Selection of 2 Obs		After Gravimetric Deletion Random Selection of 2 Obs	
					Measure #1	Measure #2	Measure #3	Density	#1	#2	#1	#2
NIST	D2622	08/08/05	4	3	8.8400	8.5700	9.3200	0.8264	8.5700	9.3200	8.8400	8.5700
NIST	D2622	08/26/05	4	5	8.3000	9.4000	9.6000	0.8264	9.4000	9.6000	8.3000	9.6000
NIST	D2622	08/04/05	4	8	9.1500	8.0400	9.8400	0.8264	9.1500	8.0400	9.1500	8.0400
NIST	D2622	08/26/05	4	28	10.0000	9.0000	9.5000	0.8264	10.0000	9.5000		
NIST	D2622	08/05/05	4	41	8.6000	8.5000	8.6000	0.8264	8.6000	8.6000	8.6000	8.6000
NIST	D2622	09/01/05	4	EPA	8.8000	8.6000	8.7000	0.8264	8.6000	8.7000	8.8000	8.6000
NIST	D2622	08/26/05	4	50	9.4000	9.2000	8.7000	0.8264	9.4000	9.2000	9.4000	9.2000
NIST	D2622	08/29/05	4	53	8.6000	8.4000	8.8000	0.8264	8.6000	8.4000	8.6000	8.4000
NIST	D2622	08/02/05	4	55	8.0000	8.6000	9.0000	0.8264	8.0000	8.6000	8.6000	9.0000
NIST	D2622	08/31/05	4	67	7.2670	9.0500	8.6060	0.8264	7.2670	8.6060	7.2670	8.6060
NIST	D2622	08/26/05	4	73	9.4000	9.1000	9.6000	0.8264	9.1000	9.6000		
NIST	D2622	08/26/05	4	103	7.4000	7.8000	7.1000	0.8264	7.4000	7.1000		
NIST	D2622	08/09/05	4	105	8.5000	9.2000	8.6000	0.8264	8.5000	9.2000	8.5000	8.6000
NIST	D2622	09/01/05	4	121	8.8000	9.2000	9.1000	0.8264	9.2000	9.1000	9.2000	9.1000
NIST	D2622	08/15/05	4	123	8.3000	8.8000	8.3000	0.8264	8.8000	8.3000	8.3000	8.8000
NIST	D2622	08/24/05	4	124	9.4000	9.1000	10.3000	0.8264	9.1000	10.3000		
NIST	D2622	08/31/05	4	126	9.0000	8.6000	9.1000	0.8264	9.0000	9.1000	9.0000	9.1000
NIST	D2622	08/11/05	4	131	7.3000	7.1000	7.3000	0.8264	7.1000	7.3000		
NIST	D2622	08/31/05	4	133	7.7000	7.7000	7.8000	0.8264	7.7000	7.8000	7.7000	7.8000
NIST	D2622	08/09/05	4	136	8.6000	9.6000	9.4000	0.8264	9.6000	9.4000	8.6000	9.4000
NIST	D2622	08/23/05	4	139	8.1000	8.9000	8.4000	0.8956	8.9000	8.4000	8.9000	8.4000
NIST	D2622	08/22/05	4	140	7.4000	8.2000	10.2000	0.8264	8.2000	10.2000	7.4000	10.2000
NIST	D2622	09/04/05	4	145	10.6000	10.5000	9.6000		10.5000	9.6000		
NIST	D2622	07/26/05	4	162	6.2600	5.6200	4.4600	0.8264	6.2600			

**Table B.59. August Fuel #5 Lab Data and Deletions Based on D2622 Test Method for In-House Calibration**

Calibration	Test Method	Run Date	August Sample #	Lab Code	Original Lab Data Robust Outlier Deletion in Shaded Box				After Robust Outlier Deletion Random Selection of 2 Obs		After Gravimetric Deletion Random Selection of 2 Obs	
					Measure #1	Measure #2	Measure #3	Density	#1	#2	#1	#2
In-House	D2622	08/08/05	5	3	17.7600	16.7000	16.6900	0.8270	17.7600	16.7000		
In-House	D2622		5	5	16.9000	15.3000	14.9000	0.8270	16.9000	14.9000		
In-House	D2622	08/04/05	5	8	16.3700	16.4000	16.4000	0.8270	16.3700	16.4000	16.4000	16.4000
In-House	D2622	08/16/05	5	28	17.5000	16.8000	16.5000	0.8270	16.8000	16.5000	17.5000	16.8000
In-House	D2622	08/05/05	5	41	16.0000	16.0000	15.9000	0.8270	16.0000	15.9000		
In-House	D2622	08/31/05	5	EPA	15.6000	15.9000	15.1000	0.8270	15.6000	15.1000	15.6000	15.9000
In-House	D2622	08/25/05	5	50	15.3000	16.1000	15.5000	0.8270	16.1000	15.5000	15.3000	15.5000
In-House	D2622	08/26/05	5	53	16.4000	17.8000	17.6000	0.8270	16.4000	17.6000	16.4000	17.8000
In-House	D2622	08/02/05	5	55	15.1000	15.1000	15.3000	0.8270	15.1000	15.1000	15.1000	15.3000
In-House	D2622	08/30/05	5	67	14.1620	15.0930	14.8230	0.8270	15.0930	14.8230	14.1620	15.0930
In-House	D2622	08/26/05	5	73	16.0000	17.3000	17.3000	0.8270	16.0000	17.3000	16.0000	17.3000
In-House	D2622	08/25/05	5	103	16.4000	15.5000	16.2000	0.8270	15.5000	16.2000	15.5000	16.2000
In-House	D2622	08/09/05	5	105	15.6000	16.0000	16.0000	0.8270	16.0000	16.0000	15.6000	16.0000
In-House	D2622	08/31/05	5	121	15.4000	15.2000	15.5000	0.8270	15.2000	15.5000	15.4000	15.5000
In-House	D2622	08/15/05	5	123	14.6000	15.3000	15.0000	0.8270	14.6000	15.0000	15.3000	15.0000
In-House	D2622	08/17/05	5	124	16.1000	15.6000	15.1000	0.8270	16.1000	15.6000	16.1000	15.6000
In-House	D2622	08/10/05	5	126	13.8000	15.1000	12.9000	0.8270	13.8000	15.1000	13.8000	15.1000
In-House	D2622	08/15/05	5	131	15.5000	15.6000	16.1000	0.8270	15.5000	15.6000		
In-House	D2622	08/31/05	5	133	15.9000	15.9000	16.9000	0.8270	15.9000	16.9000	15.9000	16.9000
In-House	D2622	08/09/05	5	136	15.6000	15.5000	15.1000	0.8270	15.5000	15.1000	15.6000	15.1000
In-House	D2622	08/26/05	5	139	15.8000	16.0000	16.2000	0.8526	15.8000	16.0000	16.0000	16.2000
In-House	D2622	08/22/05	5	140	22.4000	20.5000	18.5000	0.8270	18.5000			
In-House	D2622	09/04/05	5	145	19.0000	19.4000	19.3000		19.0000			
In-House	D2622	08/26/05	5	162	14.3200	13.7900	14.8700	0.8270	13.7900	14.8700	14.3200	14.8700

**Table B.60. August Fuel #5 Lab Data and Deletions Based on D2622 Test Method for NIST Calibration**

Calibration	Test Method	Run Date	August Sample #	Lab Code	Original Lab Data Robust Outlier Deletion in Shaded Box				After Robust Outlier Deletion Random Selection of 2 Obs		After Gravimetric Deletion Random Selection of 2 Obs	
					Measure #1	Measure #2	Measure #3	Density	#1	#2	#1	#2
NIST	D2622	08/08/05	5	3	16.0200	16.5800	16.2500	0.8270	16.5800	16.2500	16.0200	16.2500
NIST	D2622	08/26/05	5	5	15.0000	15.5000	15.0000	0.8270	15.0000	15.5000	15.5000	15.0000
NIST	D2622	08/04/05	5	8	16.9900	16.6800	16.5900	0.8270	16.9900	16.6800	16.9900	16.5900
NIST	D2622	08/26/05	5	28	16.5000	17.3000	16.3000	0.8270	17.3000	16.3000		
NIST	D2622	08/05/05	5	41	15.4000	15.4000	14.9000	0.8270	15.4000	15.4000	15.4000	15.4000
NIST	D2622	09/01/05	5	EPA	16.5000	16.5000	16.4000	0.8270	16.5000	16.4000	16.5000	16.4000
NIST	D2622	08/26/05	5	50	15.6000	16.3000	16.9000	0.8270	16.3000	16.9000	15.6000	16.9000
NIST	D2622	08/29/05	5	53	17.1000	17.3000	16.6000	0.8270	17.1000	16.6000	17.3000	16.6000
NIST	D2622	08/02/05	5	55	14.7000	13.9000	15.0000	0.8270	14.7000	13.9000	13.9000	15.0000
NIST	D2622	08/31/05	5	67	14.3910	14.3420	13.6940	0.8270	14.3910	13.6940	14.3910	13.6940
NIST	D2622	08/26/05	5	73	15.6000	17.1000	17.5000	0.8270	15.6000	17.1000		
NIST	D2622	08/26/05	5	103	17.4000	17.3000	16.5000	0.8270	17.4000	17.3000		
NIST	D2622	08/09/05	5	105	16.3000	15.9000	16.2000	0.8270	15.9000	16.2000	16.3000	16.2000
NIST	D2622	09/01/05	5	121	15.3000	15.5000	16.0000	0.8270	15.3000	16.0000	15.3000	16.0000
NIST	D2622	08/15/05	5	123	14.2000	15.0000	14.4000	0.8270	14.2000	14.4000	14.2000	15.0000
NIST	D2622	08/24/05	5	124	14.5000	15.8000	15.6000	0.8270	14.5000	15.6000		
NIST	D2622	08/31/05	5	126	14.0000	15.4000	13.2000	0.8270	14.0000	13.2000	14.0000	15.4000
NIST	D2622	08/11/05	5	131	14.7000	13.9000	14.9000	0.8270	14.7000	13.9000		
NIST	D2622	08/31/05	5	133	15.1000	15.2000	14.9000	0.8270	15.1000	15.2000	15.2000	14.9000
NIST	D2622	08/09/05	5	136	14.9000	15.3000	14.9000	0.8270	14.9000	14.9000	14.9000	15.3000
NIST	D2622	08/23/05	5	139	14.5000	14.5000	14.7000	0.8526	14.5000	14.7000	14.5000	14.7000
NIST	D2622	08/22/05	5	140	14.4000	15.0000	14.7000	0.8270	14.4000	14.7000	14.4000	15.0000
NIST	D2622	09/04/05	5	145	19.5000	18.5000	19.6000		18.5000			
NIST	D2622	07/26/05	5	162	19.5500	14.5700	15.5600	0.8270	14.5700	15.5600		

**Table B.61. July Fuel #1 Lab Data and Deletions Based on D7039 Test Method for In-House Calibration**

Calibration	Test Method	Run Date	July Sample #	Lab Code	Original Lab Data Robust Outlier Deletion in Shaded Box			Density	After Robust Outlier Deletion Random Selection of 2 Obs		After Gravimetric Deletion Random Selection of 2 Obs	
					Measure #1	Measure #2	Measure #3		#1	#2	#1	#2
In-House	D7039	07/27/05	1	6	7.5000	7.9000	8.2000	0.8359	7.5000	8.2000	7.5000	7.9000
In-House	D7039	07/21/05	1	7	7.6000	7.3000	7.6000	0.8359	7.6000	7.3000	7.6000	7.3000
In-House	D7039	08/02/05	1	EPA	6.8000	7.2000	7.9000	0.8359	7.2000	7.9000	6.8000	7.2000
In-House	D7039	07/21/05	1	47	6.8000	7.1000	7.0000	0.8359	6.8000	7.1000	6.8000	7.0000
In-House	D7039	07/28/05	1	60	8.1000	7.7000	7.8000	0.8359	8.1000	7.8000	8.1000	7.7000
In-House	D7039	07/26/05	1	102	7.5000	7.5000	7.5000	0.8359	7.5000	7.5000	7.5000	7.5000
In-House	D7039	07/25/05	1	103	7.2000	7.3000	7.1000	0.8359	7.2000	7.1000	7.3000	7.1000
In-House	D7039	07/26/05	1	106	8.0000	7.0000	7.0000	0.8359	8.0000	7.0000	8.0000	7.0000
In-House	D7039	07/20/05	1	107	7.5000	6.9000	7.1000	0.8359	7.5000	6.9000	7.5000	7.1000
In-House	D7039	07/18/05	1	109	7.0000	6.8000	6.8000	0.8359	6.8000	6.8000		
In-House	D7039	08/02/05	1	111	6.0000	11.6000	5.0000	0.8359	6.0000			
In-House	D7039	07/15/05	1	127	6.9000	7.5000	7.0000	0.8359	7.5000	7.0000	7.5000	7.0000
In-House	D7039	07/25/05	1	128	7.8000	7.1000	7.6000	0.8359	7.1000	7.6000	7.8000	7.1000
In-House	D7039	08/08/05	1	148	7.5000	7.6000	7.5000	0.8359	7.6000	7.5000	7.6000	7.5000
In-House	D7039	07/28/05	1	151	6.4000	7.1000	6.9000	0.8523	7.1000	6.9000	6.4000	7.1000
In-House	D7039	08/03/05	1	160	7.8000	8.2000	8.5000	0.8359	7.8000	8.5000	7.8000	8.5000

**Table B.62. July Fuel #1 Lab Data and Deletions Based On D7039 Test Method for NIST Calibration**

Calibration	Test Method	Run Date	July Sample #	Lab Code	Original Lab Data Robust Outlier Deletion in Shaded Box				After Robust Outlier Deletion Random Selection of 2 Obs		After Gravimetric Deletion Random Selection of 2 Obs	
					Measure #1	Measure #2	Measure #3	Density	#1	#2	#1	#2
NIST	D7039	07/27/05	1	6	7.3000	7.4000	7.4000	0.8359	7.4000	7.4000	7.3000	7.4000
NIST	D7039	07/21/05	1	7	8.5000	8.9000	8.7000	0.8359	8.9000	8.7000	8.9000	8.7000
NIST	D7039	08/03/05	1	EPA	7.1000	7.4000	7.6000	0.8359	7.4000	7.6000	7.4000	7.6000
NIST	D7039	07/22/05	1	47	6.9000	7.2000	7.8000	0.8359	6.9000	7.2000	6.9000	7.8000
NIST	D7039	07/29/05	1	60	7.6000	7.2000	7.4000	0.8359	7.6000	7.4000	7.2000	7.4000
NIST	D7039	07/26/05	1	102	7.6000	7.6000	7.6000	0.8359	7.6000	7.6000	7.6000	7.6000
NIST	D7039	07/26/05	1	103	7.0000	7.1000	7.2000	0.8359	7.0000	7.1000	7.0000	7.1000
NIST	D7039	07/26/05	1	106	7.7000	7.3000	8.1000	0.8359	7.7000	8.1000	7.7000	8.1000
NIST	D7039	07/25/05	1	107	7.4000	8.1000	7.9000	0.8359	7.4000	7.9000	8.1000	7.9000
NIST	D7039	07/19/05	1	109	7.9000	7.7000	7.8000	0.8359	7.7000	7.8000	7.7000	7.8000
NIST	D7039	08/03/05	1	111	6.6000	16.9000	6.9000	0.8359	6.6000	6.9000	6.6000	6.9000
NIST	D7039	07/15/05	1	127	7.8000	7.2000	7.7000	0.8359	7.8000	7.7000	7.8000	7.7000
NIST	D7039	07/26/05	1	128	7.6000	7.8000	7.4000	0.8359	7.6000	7.4000	7.6000	7.4000
NIST	D7039	08/10/05	1	148	7.9000	7.7000	6.9000	0.8359	7.9000	7.7000	7.9000	7.7000
NIST	D7039	07/28/05	1	151	7.3000	7.6000	7.1000	0.8523	7.6000	7.1000	7.3000	7.1000
NIST	D7039	08/04/05	1	160	8.6000	9.0000	8.8000	0.8359	8.6000	9.0000		

**Table B.63. July Fuel #2 Lab Data and Deletions Based on D7039 Test Method for In-House Calibration**

Calibration	Test Method	Run Date	July Sample #	Lab Code	Original Lab Data Robust Outlier Deletion in Shaded Box				After Robust Outlier Deletion Random Selection of 2 Obs		After Gravimetric Deletion Random Selection of 2 Obs	
					Measure #1	Measure #2	Measure #3	Density	#1	#2	#1	#2
In-House	D7039	07/27/05	2	6	11.1000	11.9000	11.6000	0.8371	11.1000	11.6000	11.1000	11.9000
In-House	D7039	07/21/05	2	7	12.0000	11.5000	12.0000	0.8371	12.0000	12.0000	11.5000	12.0000
In-House	D7039	08/02/05	2	EPA	10.4000	10.2000	10.6000	0.8371	10.4000	10.2000	10.2000	10.6000
In-House	D7039	07/21/05	2	47	10.4000	10.4000	10.1000	0.8371	10.4000	10.1000	10.4000	10.1000
In-House	D7039	07/28/05	2	60	11.3000	11.5000	11.2000	0.8371	11.5000	11.2000	11.5000	11.2000
In-House	D7039	07/26/05	2	102	10.7000	10.8000	11.3000	0.8371	10.7000	11.3000	10.8000	11.3000
In-House	D7039	07/25/05	2	103	11.6000	10.7000	10.7000	0.8371	11.6000	10.7000	10.7000	10.7000
In-House	D7039	07/26/05	2	106	10.7000	11.3000	11.0000	0.8371	10.7000	11.3000	10.7000	11.3000
In-House	D7039	07/20/05	2	107	10.1000	10.8000	11.0000	0.8371	10.1000	11.0000	10.8000	11.0000
In-House	D7039	07/18/05	2	109	9.8000	9.9000	9.6000	0.8371	9.8000	9.9000		
In-House	D7039	08/02/05	2	111	8.6000	7.9000	8.8000	0.8371		8.8000		
In-House	D7039	07/15/05	2	127	11.4000	10.8000	10.5000	0.8371	11.4000	10.8000	10.8000	10.5000
In-House	D7039	07/25/05	2	128	10.8000	11.0000	10.7000	0.8371	10.8000	10.7000	11.0000	10.7000
In-House	D7039	08/08/05	2	148	10.8000	10.0000	10.3000	0.8371	10.8000	10.0000	10.8000	10.0000
In-House	D7039	07/28/05	2	151	10.7000	10.7000	10.0000	0.8695	10.7000	10.0000	10.7000	10.0000
In-House	D7039	08/03/05	2	160	10.3000	10.7000	10.6000	0.8371	10.3000	10.6000	10.7000	10.6000

**Table B.64. July Fuel #2 Lab Data and Deletions Based on D7039 Test Method for NIST Calibration**

Calibration	Test Method	Run Date	July Sample #	Lab Code	Original Lab Data Robust Outlier Deletion in Shaded Box				After Robust Outlier Deletion Random Selection of 2 Obs		After Gravimetric Deletion Random Selection of 2 Obs	
					Measure #1	Measure #2	Measure #3	Density	#1	#2	#1	#2
NIST	D7039	07/27/05	2	6	10.7000	11.0000	10.8000	0.8371	10.7000	10.8000	10.7000	10.8000
NIST	D7039	07/21/05	2	7	11.4000	10.9000	10.8000	0.8371	11.4000	10.9000	11.4000	10.9000
NIST	D7039	08/03/05	2	EPA	10.6000	10.0000	10.8000	0.8371	10.0000	10.8000	10.6000	10.8000
NIST	D7039	07/22/05	2	47	10.8000	10.6000	10.7000	0.8371	10.8000	10.6000	10.8000	10.7000
NIST	D7039	07/29/05	2	60	10.7000	10.7000	10.8000	0.8371	10.7000	10.7000	10.7000	10.7000
NIST	D7039	07/26/05	2	102	10.9000	10.8000	11.5000	0.8371	10.9000	10.8000	10.9000	10.8000
NIST	D7039	07/26/05	2	103	10.7000	10.8000	10.5000	0.8371	10.7000	10.5000	10.8000	10.5000
NIST	D7039	07/26/05	2	106	11.0000	11.2000	11.2000	0.8371	11.2000	11.2000	11.0000	11.2000
NIST	D7039	07/25/05	2	107	11.7000	11.5000	10.3000	0.8371	11.5000	10.3000	11.7000	10.3000
NIST	D7039	07/19/05	2	109	11.6000	11.5000	11.3000	0.8371	11.6000	11.3000	11.5000	11.3000
NIST	D7039	08/03/05	2	111	9.6000	10.7000	10.4000	0.8371	10.7000	10.4000	10.7000	10.4000
NIST	D7039	07/15/05	2	127	11.3000	11.7000	11.1000	0.8371	11.7000	11.1000	11.3000	11.1000
NIST	D7039	07/26/05	2	128	11.3000	11.5000	11.2000	0.8371	11.3000	11.2000	11.3000	11.5000
NIST	D7039	08/10/05	2	148	11.4000	10.9000	10.7000	0.8371	11.4000	10.7000	11.4000	10.7000
NIST	D7039	07/28/05	2	151	10.7000	10.4000	10.6000	0.8695	10.4000	10.6000	10.4000	10.6000
NIST	D7039	08/04/05	2	160	10.9000	10.8000	11.6000	0.8371	10.9000	11.6000		

**Table B.65. July Fuel #3 Lab Data and Deletions Based on D7039 Test Method for In-House Calibration**

Calibration	Test Method	Run Date	July Sample #	Lab Code	Original Lab Data Robust Outlier Deletion in Shaded Box				After Robust Outlier Deletion Random Selection of 2 Obs		After Gravimetric Deletion Random Selection of 2 Obs	
					Measure #1	Measure #2	Measure #3	Density	#1	#2	#1	#2
In-House	D7039	07/27/05	3	6	21.7000	21.2000	21.0000	0.8372	21.7000	21.2000	21.2000	21.0000
In-House	D7039	07/21/05	3	7	21.8000	20.5000	21.0000	0.8372	21.8000	21.0000	21.8000	20.5000
In-House	D7039	08/02/05	3	EPA	21.3000	21.3000	21.2000	0.8372	21.3000	21.2000	21.3000	21.3000
In-House	D7039	07/21/05	3	47	18.7000	19.5000	19.0000	0.8372	18.7000	19.5000	18.7000	19.5000
In-House	D7039	07/28/05	3	60	21.2000	20.6000	21.1000	0.8372	20.6000	21.1000	21.2000	20.6000
In-House	D7039	07/26/05	3	102	20.4000	21.3000	21.7000	0.8372	21.3000	21.7000	20.4000	21.3000
In-House	D7039	07/25/05	3	103	20.3000	21.4000	20.3000	0.8372	20.3000	21.4000	20.3000	20.3000
In-House	D7039	07/26/05	3	106	21.2000	19.3000	20.3000	0.8372	19.3000	20.3000	19.3000	20.3000
In-House	D7039	07/20/05	3	107	20.8000	22.2000	20.7000	0.8372	20.8000	20.7000	20.8000	22.2000
In-House	D7039	07/18/05	3	109	18.7000	18.8000	18.6000	0.8372	18.8000	18.6000		
In-House	D7039	08/02/05	3	111	18.3000	17.1000	18.0000	0.8372	17.1000	18.0000		
In-House	D7039	07/15/05	3	127	20.1000	20.9000	20.6000	0.8372	20.9000	20.6000	20.1000	20.9000
In-House	D7039	07/25/05	3	128	20.5000	21.1000	20.5000	0.8372	20.5000	21.1000	21.1000	20.5000
In-House	D7039	08/08/05	3	148	20.4000	19.2000	19.9000	0.8372	20.4000	19.9000	19.2000	19.9000
In-House	D7039	07/28/05	3	151	20.2000	20.2000	20.7000	0.8745	20.2000	20.7000	20.2000	20.7000
In-House	D7039	08/03/05	3	160	19.0000	19.2000	19.4000	0.8372	19.0000	19.2000	19.0000	19.4000



**Table B.66. July Fuel #3 Lab Data and Deletions Based on D7039 Test Method for NIST Calibration**

Calibration	Test Method	Run Date	July Sample #	Lab Code	Original Lab Data Robust Outlier Deletion in Shaded Box				After Robust Outlier Deletion Random Selection of 2 Obs		After Gravimetric Deletion Random Selection of 2 Obs	
					Measure #1	Measure #2	Measure #3	Density	#1	#2	#1	#2
NIST	D7039	07/27/05	3	6	19.4000	19.9000	20.5000	0.8372	19.4000	19.9000	19.4000	20.5000
NIST	D7039	07/21/05	3	7	19.5000	20.5000	21.1000	0.8372	19.5000	20.5000	19.5000	20.5000
NIST	D7039	08/03/05	3	EPA	21.0000	20.4000	20.8000	0.8372	20.4000	20.8000	20.4000	20.8000
NIST	D7039	07/22/05	3	47	20.1000	19.9000	20.1000	0.8372	20.1000	19.9000	20.1000	19.9000
NIST	D7039	07/29/05	3	60	21.5000	21.1000	20.4000	0.8372	21.1000	20.4000	21.1000	20.4000
NIST	D7039	07/26/05	3	102	20.7000	20.4000	20.8000	0.8372	20.4000	20.8000	20.7000	20.4000
NIST	D7039	07/26/05	3	103	20.3000	20.8000	20.1000	0.8372	20.3000	20.1000	20.3000	20.1000
NIST	D7039	07/26/05	3	106	20.4000	21.1000	20.1000	0.8372	21.1000	20.1000	21.1000	20.1000
NIST	D7039	07/25/05	3	107	20.9000	20.6000	20.1000	0.8372	20.9000	20.1000	20.9000	20.1000
NIST	D7039	07/19/05	3	109	21.6000	21.4000	20.9000	0.8372	21.6000	20.9000	21.6000	20.9000
NIST	D7039	08/03/05	3	111	20.0000	18.5000	18.6000	0.8372	20.0000	18.6000	20.0000	18.6000
NIST	D7039	07/15/05	3	127	20.7000	19.7000	20.0000	0.8372	20.7000	19.7000	19.7000	20.0000
NIST	D7039	07/26/05	3	128	20.9000	21.1000	21.4000	0.8372	20.9000	21.1000	21.1000	21.4000
NIST	D7039	08/10/05	3	148	19.8000	20.0000	20.8000	0.8372	19.8000	20.8000	19.8000	20.0000
NIST	D7039	07/28/05	3	151	20.4000	20.8000	20.9000	0.8745	20.4000	20.9000	20.4000	20.9000
NIST	D7039	08/04/05	3	160	21.4000	20.3000	19.7000	0.8372	20.3000	19.7000		

**Table B.67. July Fuel #4 Lab Data and Deletions Based on D7039 Test Method for In-House Calibration**

Calibration	Test Method	Run Date	July Sample #	Lab Code	Original Lab Data Robust Outlier Deletion in Shaded Box				After Robust Outlier Deletion Random Selection of 2 Obs		After Gravimetric Deletion Random Selection of 2 Obs	
					Measure #1	Measure #2	Measure #3	Density	#1	#2	#1	#2
In-House	D7039	07/27/05	4	6	8.9000	9.3000	9.6000	0.8264	8.9000	9.3000	8.9000	9.6000
In-House	D7039	07/21/05	4	7	9.3000	8.3000	9.0000	0.8264	9.3000	9.0000	9.3000	9.0000
In-House	D7039	08/02/05	4	EPA	8.3000	8.2000	7.9000	0.8264	8.2000	7.9000	8.2000	7.9000
In-House	D7039	07/21/05	4	47	8.0000	8.0000	7.5000	0.8264	8.0000	8.0000	8.0000	7.5000
In-House	D7039	07/28/05	4	60	8.6000	9.0000	9.0000	0.8264	8.6000	9.0000	9.0000	9.0000
In-House	D7039	07/26/05	4	102	8.6000	8.9000	8.5000	0.8264	8.6000	8.5000	8.6000	8.5000
In-House	D7039	07/25/05	4	103	8.6000	8.6000	8.7000	0.8264	8.6000	8.7000	8.6000	8.7000
In-House	D7039	07/26/05	4	106	8.9000	8.8000	8.3000	0.8264	8.9000	8.8000	8.8000	8.3000
In-House	D7039	07/20/05	4	107	8.4000	8.6000	8.5000	0.8264	8.4000	8.6000	8.4000	8.5000
In-House	D7039	07/18/05	4	109	7.1000	7.3000	7.2000	0.8264	7.1000	7.2000		
In-House	D7039	08/02/05	4	111	6.5000	6.0000	6.1000	0.8264				
In-House	D7039	07/15/05	4	127	8.5000	8.3000	7.8000	0.8264	8.5000	7.8000	8.5000	7.8000
In-House	D7039	07/25/05	4	128	8.5000	8.1000	8.0000	0.8264	8.1000	8.0000	8.5000	8.1000
In-House	D7039	08/08/05	4	148	8.0000	8.1000	8.2000	0.8264	8.1000	8.2000	8.1000	8.2000
In-House	D7039	07/28/05	4	151	8.4000	8.2000	8.2000	0.8956	8.4000	8.2000	8.4000	8.2000
In-House	D7039	08/03/05	4	160	8.7000	8.8000	8.5000	0.8264	8.7000	8.8000	8.7000	8.5000

**Table B.68. July Fuel #4 Lab Data and Deletions Based on D7039 Test Method for NIST Calibration**

Calibration	Test Method	Run Date	July Sample #	Lab Code	Original Lab Data Robust Outlier Deletion in Shaded Box				After Robust Outlier Deletion Random Selection of 2 Obs		After Gravimetric Deletion Random Selection of 2 Obs		
					Measure #1	Measure #2	Measure #3	Density	#1	#2	#1	#2	
NIST	D7039	07/27/05	4	6	8.3000	9.1000	8.3000	0.8264	8.3000	9.1000		9.1000	8.3000
NIST	D7039	07/21/05	4	7	8.4000	8.3000	9.5000	0.8264	8.4000	8.3000		8.4000	8.3000
NIST	D7039	08/03/05	4	EPA	8.7000	8.5000	8.4000	0.8264	8.5000	8.4000		8.5000	8.4000
NIST	D7039	07/22/05	4	47	8.2000	8.2000	8.2000	0.8264	8.2000	8.2000		8.2000	8.2000
NIST	D7039	07/29/05	4	60	8.6000	8.8000	8.6000	0.8264	8.6000	8.6000		8.8000	8.6000
NIST	D7039	07/26/05	4	102	8.4000	8.2000	8.2000	0.8264	8.2000	8.2000		8.2000	8.2000
NIST	D7039	07/26/05	4	103	8.2000	8.6000	8.6000	0.8264	8.2000	8.6000		8.6000	8.6000
NIST	D7039	07/26/05	4	106	8.2000	8.0000	8.4000	0.8264	8.0000	8.4000		8.0000	8.4000
NIST	D7039	07/25/05	4	107	8.6000	9.9000	8.8000	0.8264	8.6000	8.8000		8.6000	9.9000
NIST	D7039	07/19/05	4	109	8.5000	8.6000	8.2000	0.8264	8.6000	8.2000		8.5000	8.2000
NIST	D7039	08/03/05	4	111	7.7000	8.3000	7.9000	0.8264	7.7000	8.3000		7.7000	7.9000
NIST	D7039	07/15/05	4	127	8.4000	8.9000	8.5000	0.8264	8.4000	8.9000		8.9000	8.5000
NIST	D7039	07/26/05	4	128	8.4000	8.6000	8.7000	0.8264	8.6000	8.7000		8.4000	8.7000
NIST	D7039	08/10/05	4	148	8.5000	8.3000	8.9000	0.8264	8.5000	8.9000		8.5000	8.3000
NIST	D7039	07/28/05	4	151	8.0000	8.7000	8.5000	0.8956	8.7000	8.5000		8.0000	8.7000
NIST	D7039	08/04/05	4	160	9.0000	9.6000	9.4000	0.8264	9.0000	9.4000			

**Table B.69. July Fuel #5 Lab Data and Deletions Based on D7039 Test Method for In-House Calibration**

Calibration	Test Method	Run Date	July Sample #	Lab Code	Original Lab Data Robust Outlier Deletion in Shaded Box				After Robust Outlier Deletion Random Selection of 2 Obs		After Gravimetric Deletion Random Selection of 2 Obs	
					Measure #1	Measure #2	Measure #3	Density	#1	#2	#1	#2
In-House	D7039	07/27/05	5	6	15.3000	15.6000	15.3000	0.8270	15.6000	15.3000	15.6000	15.3000
In-House	D7039	07/21/05	5	7	15.7000	16.7000	16.0000	0.8270	16.7000	16.0000	16.7000	16.0000
In-House	D7039	08/02/05	5	EPA	13.7000	14.0000	14.4000	0.8270	14.0000	14.4000	14.0000	14.4000
In-House	D7039	07/21/05	5	47	14.0000	14.2000	14.3000	0.8270	14.2000	14.3000	14.0000	14.3000
In-House	D7039	07/28/05	5	60	14.8000	14.9000	15.4000	0.8270	14.8000	14.9000	14.8000	14.9000
In-House	D7039	07/26/05	5	102	15.5000	15.1000	15.3000	0.8270	15.1000	15.3000	15.5000	15.1000
In-House	D7039	07/25/05	5	103	14.3000	14.8000	14.5000	0.8270	14.8000	14.5000	14.3000	14.8000
In-House	D7039	07/26/05	5	106	15.1000	15.0000	15.0000	0.8270	15.1000	15.0000	15.1000	15.0000
In-House	D7039	07/20/05	5	107	15.2000	14.7000	14.9000	0.8270	15.2000	14.7000	15.2000	14.9000
In-House	D7039	07/18/05	5	109	13.2000	13.2000	13.1000	0.8270	13.2000	13.2000		
In-House	D7039	08/02/05	5	111	12.2000	12.4000	12.8000	0.8270	12.2000	12.8000		
In-House	D7039	07/15/05	5	127	14.6000	14.7000	14.8000	0.8270	14.6000	14.7000	14.6000	14.8000
In-House	D7039	07/25/05	5	128	14.6000	14.4000	14.9000	0.8270	14.6000	14.4000	14.6000	14.4000
In-House	D7039	08/08/05	5	148	15.3000	13.8000	14.8000	0.8270	15.3000	14.8000	13.8000	14.8000
In-House	D7039	07/28/05	5	151	14.7000	15.5000	15.7000	0.8526	14.7000	15.7000	14.7000	15.7000
In-House	D7039	08/03/05	5	160	12.9000	12.6000	12.8000	0.8270	12.9000	12.8000	12.9000	12.8000

**Table B.70. July Fuel #5 Lab Data and Deletions Based on D7039 Test Method for NIST Calibration**

Calibration	Test Method	Run Date	July Sample #	Lab Code	Original Lab Data Robust Outlier Deletion in Shaded Box				After Robust Outlier Deletion Random Selection of 2 Obs		After Gravimetric Deletion Random Selection of 2 Obs	
					Measure #1	Measure #2	Measure #3	Density	#1	#2	#1	#2
NIST	D7039	07/27/05	5	6	14.6000	15.3000	14.7000	0.8270	15.3000	14.7000	15.3000	14.7000
NIST	D7039	07/21/05	5	7	15.5000	14.9000	15.4000	0.8270	15.5000	14.9000	15.5000	15.4000
NIST	D7039	08/03/05	5	EPA	14.8000	14.3000	15.0000	0.8270	14.3000	15.0000	14.8000	15.0000
NIST	D7039	07/22/05	5	47	14.2000	14.9000	15.6000	0.8270	14.9000	15.6000	14.9000	15.6000
NIST	D7039	07/29/05	5	60	14.2000	14.1000	14.8000	0.8270	14.2000	14.8000	14.2000	14.8000
NIST	D7039	07/26/05	5	102	15.1000	15.1000	15.4000	0.8270	15.1000	15.4000	15.1000	15.1000
NIST	D7039	07/26/05	5	103	13.9000	15.1000	14.9000	0.8270	13.9000	14.9000	15.1000	14.9000
NIST	D7039	07/26/05	5	106	14.7000	14.5000	15.0000	0.8270	14.5000	15.0000	14.7000	15.0000
NIST	D7039	07/25/05	5	107	14.8000	14.5000	15.6000	0.8270	14.8000	15.6000	14.8000	14.5000
NIST	D7039	07/19/05	5	109	14.8000	14.8000	15.3000	0.8270	14.8000	14.8000	14.8000	15.3000
NIST	D7039	08/03/05	5	111	14.1000	13.8000	13.7000	0.8270	14.1000	13.8000	14.1000	13.8000
NIST	D7039	07/15/05	5	127	15.4000	14.9000	15.4000	0.8270	14.9000	15.4000	14.9000	15.4000
NIST	D7039	07/26/05	5	128	14.7000	15.8000	15.3000	0.8270	14.7000	15.3000	14.7000	15.8000
NIST	D7039	08/10/05	5	148	15.9000	16.8000	17.0000	0.8270	15.9000	16.8000	15.9000	17.0000
NIST	D7039	07/28/05	5	151	15.2000	17.6000	14.7000	0.8526	15.2000	14.7000	17.6000	14.7000
NIST	D7039	08/04/05	5	160	15.5000	13.9000	14.5000	0.8270	15.5000	13.9000		

**Table B.71. August Fuel #1 Lab Data and Deletions Based on D7039 Test Method for In-House Calibration**

Calibration	Test Method	Run Date	August Sample #	Lab Code	Original Lab Data Robust Outlier Deletion in Shaded Box				After Robust Outlier Deletion Random Selection of 2 Obs		After Gravimetric Deletion Random Selection of 2 Obs	
					Measure #1	Measure #2	Measure #3	Density	#1	#2	#1	#2
In-House	D7039	08/22/05	1	6	10.2000	10.7000	11.1000	0.8240	10.2000	11.1000	10.2000	11.1000
In-House	D7039	08/09/05	1	7	10.6000	10.5000	10.6000	0.8240	10.6000	10.5000	10.6000	10.6000
In-House	D7039	09/07/05	1	EPA	9.5000	10.4000	10.9000	0.8240	9.5000	10.9000	9.5000	10.9000
In-House	D7039	08/18/05	1	47	11.1000	9.8000	9.4000	0.8240	9.8000	9.4000	11.1000	9.4000
In-House	D7039	08/04/05	1	60	10.2000	10.3000	10.3000	0.8240	10.3000	10.3000	10.2000	10.3000
In-House	D7039	08/16/05	1	102	10.1000	10.6000	10.3000	0.8240	10.1000	10.3000	10.6000	10.3000
In-House	D7039	08/24/05	1	103	9.7000	10.3000	10.2000	0.8240	9.7000	10.3000		
In-House	D7039	08/30/05	1	106	9.9000	10.4000	11.2000	0.8240	9.9000	10.4000	10.4000	11.2000
In-House	D7039	08/11/05	1	107	11.8000	10.4000	11.4000	0.8240	11.8000	11.4000	11.8000	11.4000
In-House	D7039	08/26/05	1	109	8.7000	9.0000	9.0000	0.8240	8.7000	9.0000		
In-House	D7039	08/12/05	1	111	7.9000	9.8000	7.6000	0.8240	9.8000		7.9000	9.8000
In-House	D7039	08/26/05	1	127	10.1000	10.2000	10.3000	0.8240	10.1000	10.2000	10.1000	10.2000
In-House	D7039	08/17/05	1	128	10.3000	9.5000	9.9000	0.8240	9.5000	9.9000	9.5000	9.9000
In-House	D7039	08/09/05	1	148	10.1000	9.5000	10.4000	0.8240	10.1000	9.5000	10.1000	9.5000
In-House	D7039	08/16/05	1	151	9.2000	10.1000	9.1000	0.8240	10.1000	9.1000	9.2000	10.1000
In-House	D7039	08/26/05	1	160	9.5000	9.5000	9.9000	0.8240	9.5000	9.9000	9.5000	9.9000

**Table B.72. August Fuel #1 Lab Data and Deletions Based on D7039 Test Method for NIST Calibration**

Calibration	Test Method	Run Date	August Sample #	Lab Code	Original Lab Data Robust Outlier Deletion in Shaded Box				After Robust Outlier Deletion Random Selection of 2 Obs		After Gravimetric Deletion Random Selection of 2 Obs	
					Measure #1	Measure #2	Measure #3	Density	#1	#2	#1	#2
NIST	D7039	08/22/05	1	6	10.7000	10.7000	11.2000	0.8240	10.7000	11.2000	10.7000	10.7000
NIST	D7039	08/09/05	1	7	10.6000	9.6000	10.0000	0.8240	10.6000	9.6000	10.6000	10.0000
NIST	D7039	09/07/05	1	EPA	10.3000	10.5000	10.5000	0.8240	10.3000	10.5000	10.5000	10.5000
NIST	D7039	08/19/05	1	47	9.9000	9.5000	10.0000	0.8240	9.9000	10.0000	9.9000	10.0000
NIST	D7039	08/04/05	1	60	10.2000	10.0000	9.9000	0.8240	10.2000	10.0000	10.2000	10.0000
NIST	D7039	08/15/05	1	102	10.3000	10.4000	10.5000	0.8240	10.3000	10.5000	10.4000	10.5000
NIST	D7039	08/24/05	1	103	10.0000	10.1000	9.5000	0.8240	10.0000	10.1000	10.1000	9.5000
NIST	D7039	08/31/05	1	106	9.8000	10.1000	9.5000	0.8240	10.1000	9.5000	10.1000	9.5000
NIST	D7039	08/19/05	1	107	10.8000	10.2000	10.2000	0.8240	10.8000	10.2000	10.8000	10.2000
NIST	D7039	08/29/05	1	109	10.2000	9.9000	10.3000	0.8240	10.2000	10.3000	10.2000	9.9000
NIST	D7039	08/15/05	1	111	9.5000	8.8000	8.8000	0.8240	9.5000		9.5000	8.8000
NIST	D7039	08/26/05	1	127	10.8000	10.5000	10.3000	0.8240	10.5000	10.3000	10.8000	10.5000
NIST	D7039	08/17/05	1	128	10.6000	10.8000	10.4000	0.8240	10.6000	10.8000	10.6000	10.4000
NIST	D7039	08/09/05	1	148	10.6000	10.4000	10.8000	0.8240	10.6000	10.4000	10.6000	10.8000
NIST	D7039	08/16/05	1	151	10.7000	10.6000	10.7000	0.8240	10.7000	10.7000	10.6000	10.7000
NIST	D7039	08/26/05	1	160	10.1000	10.2000	10.0000	0.8240	10.1000	10.2000	10.1000	10.0000

**Table B.73. August Fuel #2 Lab Data and Deletions Based on D7039 Test Method for In-House Calibration**

Calibration	Test Method	Run Date	August Sample #	Lab Code	Original Lab Data Robust Outlier Deletion in Shaded Box				After Robust Outlier Deletion Random Selection of 2 Obs		After Gravimetric Deletion Random Selection of 2 Obs	
					Measure #1	Measure #2	Measure #3	Density	#1	#2	#1	#2
In-House	D7039	08/22/05	2	6	14.6000	14.2000	14.2000	0.8371	14.2000	14.2000	14.6000	14.2000
In-House	D7039	08/09/05	2	7	13.6000	14.7000	14.9000	0.8371	13.6000	14.7000	14.7000	14.9000
In-House	D7039	09/07/05	2	EPA	14.2000	13.6000	14.8000	0.8371	14.2000	13.6000	14.2000	14.8000
In-House	D7039	08/18/05	2	47	13.9000	13.5000	14.4000	0.8371	13.9000	14.4000	13.9000	13.5000
In-House	D7039	08/04/05	2	60	14.3000	14.5000	14.7000	0.8371	14.5000	14.7000	14.5000	14.7000
In-House	D7039	08/16/05	2	102	14.7000	14.6000	14.2000	0.8371	14.7000	14.6000	14.7000	14.2000
In-House	D7039	08/24/05	2	103	13.7000	13.9000	14.2000	0.8371	13.9000	14.2000		
In-House	D7039	08/30/05	2	106	14.5000	14.2000	14.3000	0.8371	14.5000	14.2000	14.5000	14.2000
In-House	D7039	08/11/05	2	107	14.8000	14.7000	14.0000	0.8371	14.7000	14.0000	14.8000	14.7000
In-House	D7039	08/26/05	2	109	12.5000	12.6000	12.5000	0.8371	12.5000	12.5000		
In-House	D7039	08/12/05	2	111	13.0000	11.7000	11.7000	0.8371	13.0000		13.0000	11.7000
In-House	D7039	08/26/05	2	127	13.5000	15.2000	14.1000	0.8371	13.5000	15.2000	13.5000	14.1000
In-House	D7039	08/17/05	2	128	14.1000	14.2000	14.5000	0.8371	14.2000	14.5000	14.2000	14.5000
In-House	D7039	08/09/05	2	148	13.8000	14.9000	14.1000	0.8371	13.8000	14.1000	14.9000	14.1000
In-House	D7039	08/16/05	2	151	15.0000	14.4000	14.8000	0.8371	15.0000	14.4000	15.0000	14.4000
In-House	D7039	08/26/05	2	160	13.1000	12.9000	13.3000	0.8371	12.9000	13.3000	12.9000	13.3000



**Table B.74. August Fuel #2 Lab Data and Deletions Based on D7039 Test Method for NIST Calibration**

Calibration	Test Method	Run Date	August Sample #	Lab Code	Original Lab Data Robust Outlier Deletion in Shaded Box				After Robust Outlier Deletion Random Selection of 2 Obs		After Gravimetric Deletion Random Selection of 2 Obs	
					Measure #1	Measure #2	Measure #3	Density	#1	#2	#1	#2
NIST	D7039	08/22/05	2	6	15.2000	16.2000	14.8000	0.8371	15.2000	14.8000	15.2000	16.2000
NIST	D7039	08/09/05	2	7	14.7000	15.0000	15.0000	0.8371	14.7000	15.0000	14.7000	15.0000
NIST	D7039	09/07/05	2	EPA	14.4000	14.4000	14.1000	0.8371	14.4000	14.1000	14.4000	14.1000
NIST	D7039	08/19/05	2	47	14.8000	14.8000	14.0000	0.8371	14.8000	14.8000	14.8000	14.0000
NIST	D7039	08/04/05	2	60	14.3000	14.5000	14.0000	0.8371	14.3000	14.5000	14.3000	14.0000
NIST	D7039	08/15/05	2	102	14.5000	14.2000	14.3000	0.8371	14.5000	14.2000	14.5000	14.3000
NIST	D7039	08/24/05	2	103	14.0000	13.9000	13.7000	0.8371	14.0000	13.9000	13.9000	13.7000
NIST	D7039	08/31/05	2	106	13.7000	13.5000	14.2000	0.8371	13.5000	14.2000	13.7000	13.5000
NIST	D7039	08/19/05	2	107	14.0000	14.3000	13.8000	0.8371	14.0000	13.8000	14.0000	14.3000
NIST	D7039	08/29/05	2	109	14.1000	13.8000	14.0000	0.8371	14.1000	13.8000	13.8000	14.0000
NIST	D7039	08/15/05	2	111	11.9000	13.4000	12.4000	0.8371	13.4000		11.9000	13.4000
NIST	D7039	08/26/05	2	127	15.0000	15.0000	14.2000	0.8371	15.0000	14.2000	15.0000	14.2000
NIST	D7039	08/17/05	2	128	14.7000	15.1000	15.3000	0.8371	14.7000	15.3000	14.7000	15.1000
NIST	D7039	08/09/05	2	148	14.3000	14.9000	14.5000	0.8371	14.3000	14.5000	14.3000	14.5000
NIST	D7039	08/16/05	2	151	14.8000	14.7000	15.6000	0.8371	14.8000	14.7000	14.8000	15.6000
NIST	D7039	08/26/05	2	160	13.4000	13.7000	13.8000	0.8371	13.4000	13.8000	13.4000	13.7000

**Table B.75. August Fuel #3 Lab Data and Deletions Based on D7039 Test Method for In-House Calibration**

Calibration	Test Method	Run Date	August Sample #	Lab Code	Original Lab Data Robust Outlier Deletion in Shaded Box				After Robust Outlier Deletion Random Selection of 2 Obs		After Gravimetric Deletion Random Selection of 2 Obs	
					Measure #1	Measure #2	Measure #3	Density	#1	#2	#1	#2
In-House	D7039	08/22/05	3	6	18.1000	18.4000	18.4000	0.8372	18.1000	18.4000	18.1000	18.4000
In-House	D7039	08/09/05	3	7	18.7000	18.1000	18.3000	0.8372	18.7000	18.1000	18.7000	18.1000
In-House	D7039	09/07/05	3	EPA	17.2000	17.0000	17.2000	0.8372	17.2000	17.0000	17.0000	17.2000
In-House	D7039	08/18/05	3	47	16.7000	17.2000	17.4000	0.8372	16.7000	17.4000	16.7000	17.4000
In-House	D7039	08/04/05	3	60	18.8000	17.7000	18.0000	0.8372	18.8000	17.7000	18.8000	17.7000
In-House	D7039	08/16/05	3	102	17.4000	17.2000	17.6000	0.8372	17.4000	17.6000	17.4000	17.2000
In-House	D7039	08/24/05	3	103	16.7000	16.8000	16.7000	0.8372	16.7000	16.8000		
In-House	D7039	08/30/05	3	106	18.3000	18.1000	17.7000	0.8372	18.3000	17.7000	18.1000	17.7000
In-House	D7039	08/11/05	3	107	17.2000	17.6000	17.9000	0.8372	17.2000	17.9000	17.6000	17.9000
In-House	D7039	08/26/05	3	109	15.5000	15.7000	15.8000	0.8372	15.7000	15.8000		
In-House	D7039	08/12/05	3	111	14.6000	15.5000	15.5000	0.8372	15.5000	15.5000	14.6000	15.5000
In-House	D7039	08/26/05	3	127	18.0000	17.8000	17.0000	0.8372	18.0000	17.0000	17.8000	17.0000
In-House	D7039	08/17/05	3	128	17.9000	18.1000	17.7000	0.8372	17.9000	17.7000	17.9000	18.1000
In-House	D7039	08/09/05	3	148	19.1000	19.9000	18.7000	0.8372	19.1000	19.9000	19.9000	18.7000
In-House	D7039	08/16/05	3	151	17.2000	17.4000	18.5000	0.8372	17.2000	18.5000	17.2000	18.5000
In-House	D7039	08/26/05	3	160	17.6000	17.4000	17.0000	0.8372	17.6000	17.4000	17.6000	17.4000

**Table B.76. August Fuel #3 Lab Data and Deletions Based on D7039 Test Method for NIST Calibration**

Calibration	Test Method	Run Date	August Sample #	Lab Code	Original Lab Data Robust Outlier Deletion in Shaded Box				After Robust Outlier Deletion Random Selection of 2 Obs		After Gravimetric Deletion Random Selection of 2 Obs	
					Measure #1	Measure #2	Measure #3	Density	#1	#2	#1	#2
NIST	D7039	08/22/05	3	6	17.6000	17.5000	18.3000	0.8372	17.5000	18.3000	17.5000	18.3000
NIST	D7039	08/09/05	3	7	17.1000	17.4000	18.5000	0.8372	17.4000	18.5000	17.4000	18.5000
NIST	D7039	09/07/05	3	EPA	17.3000	17.9000	17.6000	0.8372	17.3000	17.9000	17.3000	17.6000
NIST	D7039	08/19/05	3	47	17.3000	17.8000	16.9000	0.8372	17.8000	16.9000	17.8000	16.9000
NIST	D7039	08/04/05	3	60	17.5000	17.1000	16.9000	0.8372	17.5000	16.9000	17.1000	16.9000
NIST	D7039	08/15/05	3	102	17.5000	17.6000	17.7000	0.8372	17.6000	17.7000	17.5000	17.7000
NIST	D7039	08/24/05	3	103	17.6000	17.2000	17.5000	0.8372	17.6000	17.2000	17.6000	17.5000
NIST	D7039	08/31/05	3	106	18.4000	17.2000	17.1000	0.8372	17.2000	17.1000	17.2000	17.1000
NIST	D7039	08/19/05	3	107	16.7000	17.0000	16.7000	0.8372	16.7000	17.0000	16.7000	16.7000
NIST	D7039	08/29/05	3	109	18.2000	17.7000	17.5000	0.8372	18.2000	17.7000	17.7000	17.5000
NIST	D7039	08/15/05	3	111	15.3000	15.5000	15.0000	0.8372			15.3000	15.0000
NIST	D7039	08/26/05	3	127	18.6000	18.2000	17.8000	0.8372	18.6000	17.8000	18.6000	17.8000
NIST	D7039	08/17/05	3	128	18.6000	18.0000	18.2000	0.8372	18.6000	18.2000	18.6000	18.2000
NIST	D7039	08/09/05	3	148	18.3000	17.6000	17.8000	0.8372	17.6000	17.8000	18.3000	17.8000
NIST	D7039	08/16/05	3	151	18.4000	18.3000	18.7000	0.8372	18.3000	18.7000	18.4000	18.3000
NIST	D7039	08/26/05	3	160	16.8000	17.1000	18.4000	0.8372	16.8000	17.1000	17.1000	18.4000

**Table B.77. August Fuel #4 Lab Data and Deletions Based on D7039 Test Method for In-House Calibration**

Calibration	Test Method	Run Date	August Sample #	Lab Code	Original Lab Data Robust Outlier Deletion in Shaded Box				After Robust Outlier Deletion Random Selection of 2 Obs		After Gravimetric Deletion Random Selection of 2 Obs	
					Measure #1	Measure #2	Measure #3	Density	#1	#2	#1	#2
In-House	D7039	08/22/05	4	6	9.1000	8.9000	8.6000	0.8264	9.1000	8.9000	9.1000	8.6000
In-House	D7039	08/09/05	4	7	8.5000	9.6000	9.0000	0.8264	9.6000	9.0000	9.6000	9.0000
In-House	D7039	09/07/05	4	EPA	8.2000	8.7000	8.7000	0.8264	8.2000	8.7000	8.2000	8.7000
In-House	D7039	08/18/05	4	47	8.1000	8.4000	7.6000	0.8264	8.4000	7.6000	8.1000	8.4000
In-House	D7039	08/04/05	4	60	8.3000	7.9000	8.2000	0.8264	7.9000	8.2000	7.9000	8.2000
In-House	D7039	08/16/05	4	102	8.2000	8.7000	8.4000	0.8264	8.2000	8.4000	8.2000	8.4000
In-House	D7039	08/24/05	4	103	10.7000	9.6000	9.2000	0.8264	9.6000	9.2000		
In-House	D7039	08/30/05	4	106	8.9000	8.3000	8.4000	0.8264	8.9000	8.4000	8.3000	8.4000
In-House	D7039	08/11/05	4	107	8.7000	8.6000	8.1000	0.8264	8.6000	8.1000	8.7000	8.1000
In-House	D7039	08/26/05	4	109	7.2000	7.3000	7.1000	0.8264	7.2000	7.3000		
In-House	D7039	08/12/05	4	111	5.8000	12.2000	6.0000	0.8264			12.2000	6.0000
In-House	D7039	08/26/05	4	127	9.1000	8.4000	8.1000	0.8264	9.1000	8.4000	9.1000	8.1000
In-House	D7039	08/17/05	4	128	8.4000	8.4000	8.0000	0.8264	8.4000	8.4000	8.4000	8.0000
In-House	D7039	08/09/05	4	148	8.0000	8.1000	8.2000	0.8264	8.0000	8.1000	8.0000	8.1000
In-House	D7039	08/16/05	4	151	8.2000	8.0000	7.9000	0.8264	8.2000	8.0000	8.2000	8.0000
In-House	D7039	08/26/05	4	160	8.3000	7.9000	8.0000	0.8264	8.3000	8.0000	8.3000	8.0000

**Table B.78. August Fuel #4 Lab Data and Deletions Based on D7039 Test Method for NIST Calibration**

Calibration	Test Method	Run Date	August Sample #	Lab Code	Original Lab Data Robust Outlier Deletion in Shaded Box				After Robust Outlier Deletion Random Selection of 2 Obs		After Gravimetric Deletion Random Selection of 2 Obs	
					Measure #1	Measure #2	Measure #3	Density	#1	#2	#1	#2
NIST	D7039	08/22/05	4	6	7.4000	8.7000	8.7000	0.8264	8.7000	8.7000	7.4000	8.7000
NIST	D7039	08/09/05	4	7	9.1000	9.3000	9.2000	0.8264	9.1000	9.3000	9.3000	9.2000
NIST	D7039	09/07/05	4	EPA	7.8000	8.7000	9.1000	0.8264	7.8000	9.1000	8.7000	9.1000
NIST	D7039	08/19/05	4	47	8.8000	7.9000	8.4000	0.8264	8.8000	7.9000	7.9000	8.4000
NIST	D7039	08/04/05	4	60	8.2000	8.4000	8.2000	0.8264	8.4000	8.2000	8.2000	8.2000
NIST	D7039	08/15/05	4	102	8.7000	8.4000	8.7000	0.8264	8.7000	8.4000	8.4000	8.7000
NIST	D7039	08/24/05	4	103	8.8000	8.4000	8.3000	0.8264	8.8000	8.3000	8.4000	8.3000
NIST	D7039	08/31/05	4	106	8.2000	8.8000	7.8000	0.8264	8.8000	7.8000	8.2000	7.8000
NIST	D7039	08/19/05	4	107	8.0000	8.5000	9.0000	0.8264	8.0000	8.5000	8.0000	8.5000
NIST	D7039	08/29/05	4	109	8.3000	8.2000	8.4000	0.8264	8.3000	8.4000	8.3000	8.2000
NIST	D7039	08/15/05	4	111	7.1000	7.2000	9.4000	0.8264	7.2000	9.4000	7.1000	7.2000
NIST	D7039	08/26/05	4	127	8.9000	8.2000	8.0000	0.8264	8.9000	8.2000	8.2000	8.0000
NIST	D7039	08/17/05	4	128	8.9000	9.1000	9.3000	0.8264	9.1000	9.3000	8.9000	9.1000
NIST	D7039	08/09/05	4	148	8.2000	8.2000	8.7000	0.8264	8.2000	8.7000	8.2000	8.2000
NIST	D7039	08/16/05	4	151	8.7000	9.2000	8.9000	0.8264	8.7000	8.9000	8.7000	9.2000
NIST	D7039	08/26/05	4	160	8.8000	9.5000	8.6000	0.8264	8.8000	9.5000	9.5000	8.6000

**Table B.79. August Fuel #5 Lab Data and Deletions Based on D7039 Test Method for In-House Calibration**

Calibration	Test Method	Run Date	August Sample #	Lab Code	Original Lab Data Robust Outlier Deletion in Shaded Box				After Robust Outlier Deletion Random Selection of 2 Obs		After Gravimetric Deletion Random Selection of 2 Obs	
					Measure #1	Measure #2	Measure #3	Density	#1	#2	#1	#2
In-House	D7039	08/22/05	5	6	15.9000	15.5000	16.4000	0.8270	15.5000	16.4000	15.9000	15.5000
In-House	D7039	08/09/05	5	7	15.4000	16.5000	16.4000	0.8270	16.5000	16.4000	16.5000	16.4000
In-House	D7039	09/07/05	5	EPA	15.3000	15.1000	14.8000	0.8270	15.3000	15.1000	15.3000	14.8000
In-House	D7039	08/18/05	5	47	14.9000	14.5000	14.5000	0.8270	14.5000	14.5000	14.5000	14.5000
In-House	D7039	08/04/05	5	60	15.8000	15.6000	14.8000	0.8270	15.8000	14.8000	15.6000	14.8000
In-House	D7039	08/16/05	5	102	14.6000	14.5000	15.0000	0.8270	14.6000	15.0000	14.5000	15.0000
In-House	D7039	08/24/05	5	103	14.1000	14.7000	14.0000	0.8270	14.1000	14.7000		
In-House	D7039	08/30/05	5	106	15.0000	14.4000	15.0000	0.8270	15.0000	14.4000	14.4000	15.0000
In-House	D7039	08/11/05	5	107	14.7000	14.5000	14.6000	0.8270	14.7000	14.5000	14.5000	14.6000
In-House	D7039	08/26/05	5	109	13.5000	13.2000	13.4000	0.8270	13.5000	13.4000		
In-House	D7039	08/12/05	5	111	13.0000	12.5000	12.0000	0.8270	13.0000	12.5000	13.0000	12.0000
In-House	D7039	08/26/05	5	127	14.6000	14.8000	15.1000	0.8270	14.6000	15.1000	14.6000	15.1000
In-House	D7039	08/17/05	5	128	14.5000	14.4000	14.3000	0.8270	14.5000	14.4000	14.4000	14.3000
In-House	D7039	08/09/05	5	148	14.5000	14.4000	14.6000	0.8270	14.4000	14.6000	14.5000	14.6000
In-House	D7039	08/16/05	5	151	14.5000	14.6000	15.4000	0.8270	14.5000	14.6000	14.5000	15.4000
In-House	D7039	08/26/05	5	160	14.7000	13.5000	14.1000	0.8270	14.7000	14.1000	14.7000	14.1000

**Table B.80. August Fuel #5 Lab Data and Deletions Based on D7039 Test Method for NIST Calibration**

Calibration	Test Method	Run Date	August Sample #	Lab Code	Original Lab Data Robust Outlier Deletion in Shaded Box				After Robust Outlier Deletion Random Selection of 2 Obs		After Gravimetric Deletion Random Selection of 2 Obs	
					Measure #1	Measure #2	Measure #3	Density	#1	#2	#1	#2
NIST	D7039	08/22/05	5	6	13.4000	12.9000	12.9000	0.8270	13.4000	12.9000	12.9000	12.9000
NIST	D7039	08/09/05	5	7	15.8000	16.4000	16.7000	0.8270	16.4000	16.7000	15.8000	16.7000
NIST	D7039	09/07/05	5	EPA	15.2000	14.8000	15.6000	0.8270	14.8000	15.6000	15.2000	15.6000
NIST	D7039	08/19/05	5	47	14.5000	14.3000	15.4000	0.8270	14.5000	15.4000	14.5000	15.4000
NIST	D7039	08/04/05	5	60	14.4000	14.6000	14.6000	0.8270	14.4000	14.6000	14.6000	14.6000
NIST	D7039	08/15/05	5	102	14.8000	15.0000	14.8000	0.8270	14.8000	15.0000	15.0000	14.8000
NIST	D7039	08/24/05	5	103	15.1000	14.9000	14.6000	0.8270	15.1000	14.9000	14.9000	14.6000
NIST	D7039	08/31/05	5	106	14.7000	14.3000	14.4000	0.8270	14.3000	14.4000	14.7000	14.4000
NIST	D7039	08/19/05	5	107	14.8000	15.0000	14.3000	0.8270	14.8000	15.0000	14.8000	15.0000
NIST	D7039	08/29/05	5	109	14.9000	14.9000	14.3000	0.8270	14.9000	14.9000	14.9000	14.3000
NIST	D7039	08/15/05	5	111	12.9000	12.6000	13.0000	0.8270	12.6000	13.0000	12.9000	12.6000
NIST	D7039	08/26/05	5	127	14.7000	14.8000	15.1000	0.8270	14.7000	15.1000	14.7000	14.8000
NIST	D7039	08/17/05	5	128	15.5000	15.2000	15.5000	0.8270	15.5000	15.5000	15.2000	15.5000
NIST	D7039	08/09/05	5	148	14.9000	15.1000	13.9000	0.8270	14.9000	15.1000	14.9000	13.9000
NIST	D7039	08/16/05	5	151	15.6000	15.7000	15.2000	0.8270	15.6000	15.7000	15.7000	15.2000
NIST	D7039	08/26/05	5	160	14.2000	14.0000	13.5000	0.8270	14.2000	13.5000	14.2000	13.5000

**Table B.81. July Fuel #1 Lab Data and Deletions Based on EDXRF Test Method for In-House Calibration**

Calibration	Test Method	Run Date	July Sample #	Lab Code	Original Lab Data Robust Outlier Deletion in Shaded Box				After Robust Outlier Deletion Random Selection of 2 Obs		After Gravimetric Deletion Random Selection of 2 Obs	
					Measure #1	Measure #2	Measure #3	Density	#1	#2	#1	#2
In-House	EDXRF	07/22/05	1	131	7.0000	7.2000	7.9000	0.8359	7.2000	7.9000	7.0000	7.2000
In-House	EDXRF	08/30/05	1	134	8.0000	8.0000	8.7000	0.8359	8.0000	8.7000	8.0000	8.0000
In-House	EDXRF	08/04/05	1	135	8.3000	7.9000	8.1000	0.8359	7.9000	8.1000	7.9000	8.1000
In-House	EDXRF	07/15/05	1	136	7.2000	7.2000	7.2000	0.8359	7.2000	7.2000	7.2000	7.2000
In-House	EDXRF	07/15/05	1	137	8.1000	7.2000	7.9000	0.8359	8.1000	7.2000	8.1000	7.2000
In-House	EDXRF	08/09/05	1	141	8.1000	9.1000	7.0000	0.8359	9.1000	7.0000	9.1000	7.0000



**Table B.82. July Fuel #1 Lab Data and Deletions Based On EDXRF Test Method for NIST Calibration**

Calibration	Test Method	Run Date	July Sample #	Lab Code	Original Lab Data Robust Outlier Deletion in Shaded Box				After Robust Outlier Deletion Random Selection of 2 Obs		After Gravimetric Deletion Random Selection of 2 Obs	
					Measure #1	Measure #2	Measure #3	Density	#1	#2	#1	#2
NIST	EDXRF	07/27/05	1	131	8.7000	7.8000	8.0000	0.8359	8.7000	8.0000	8.7000	7.8000
NIST	EDXRF	08/29/05	1	134	7.8000	7.8000	9.0000	0.8359	7.8000	9.0000	7.8000	9.0000
NIST	EDXRF	08/04/05	1	135	7.7000	8.0000	7.9000	0.8359	7.7000	7.9000	8.0000	7.9000
NIST	EDXRF	07/15/05	1	136	7.4000	7.9000	8.3000	0.8359	7.9000	8.3000	7.9000	8.3000
NIST	EDXRF	07/15/05	1	137	7.0000	8.2000	7.8000	0.8359	7.0000	7.8000		
NIST	EDXRF	08/12/05	1	141	7.9000	8.5000	9.4000	0.8359	7.9000	9.4000	7.9000	8.5000

**Table B.83. July Fuel #2 Lab Data and Deletions Based on EDXRF Test Method for In-House Calibration**

Calibration	Test Method	Run Date	July Sample #	Lab Code	Original Lab Data Robust Outlier Deletion in Shaded Box				After Robust Outlier Deletion Random Selection of 2 Obs		After Gravimetric Deletion Random Selection of 2 Obs	
					Measure #1	Measure #2	Measure #3	Density	#1	#2	#1	#2
In-House	EDXRF	07/22/05	2	131	10.4000	11.2000	11.0000	0.8371	11.2000	11.0000	11.2000	11.0000
In-House	EDXRF	08/30/05	2	134	11.5000	11.3000	11.6000	0.8371	11.5000	11.3000	11.5000	11.3000
In-House	EDXRF	08/04/05	2	135	11.0000	11.2000	11.1000	0.8371	11.2000	11.1000	11.0000	11.2000
In-House	EDXRF	07/15/05	2	136	11.4000	11.3000	11.3000	0.8371	11.4000	11.3000	11.4000	11.3000
In-House	EDXRF	07/15/05	2	137	11.6000	10.5000	11.6000	0.8371	11.6000	11.6000	11.6000	10.5000
In-House	EDXRF	08/09/05	2	141	10.8000	11.1000	11.3000	0.8371	10.8000	11.1000	11.1000	11.3000

**Table B.84. July Fuel #2 Lab Data and Deletions Based on EDXRF Test Method for NIST Calibration**

Calibration	Test Method	Run Date	July Sample #	Lab Code	Original Lab Data Robust Outlier Deletion in Shaded Box				After Robust Outlier Deletion Random Selection of 2 Obs		After Gravimetric Deletion Random Selection of 2 Obs	
					Measure #1	Measure #2	Measure #3	Density	#1	#2	#1	#2
NIST	EDXRF	07/27/05	2	131	11.2000	10.9000	11.2000	0.8371	11.2000	11.2000	10.9000	11.2000
NIST	EDXRF	08/29/05	2	134	11.7000	10.8000	11.4000	0.8371	11.7000	10.8000	11.7000	11.4000
NIST	EDXRF	08/04/05	2	135	10.4000	10.3000	10.0000	0.8371	10.4000	10.0000	10.3000	10.0000
NIST	EDXRF	07/15/05	2	136	10.8000	11.7000	12.1000	0.8371	11.7000	12.1000	11.7000	12.1000
NIST	EDXRF	07/15/05	2	137	11.2000	11.7000	9.4000	0.8371	11.2000	11.7000		
NIST	EDXRF	08/12/05	2	141	12.0000	12.3000	11.7000	0.8371	12.3000	11.7000	12.3000	11.7000

**Table B.85. July Fuel #3 Lab Data and Deletions Based on EDXRF Test Method for In-House Calibration**

Calibration	Test Method	Run Date	July Sample #	Lab Code	Original Lab Data Robust Outlier Deletion in Shaded Box				After Robust Outlier Deletion Random Selection of 2 Obs		After Gravimetric Deletion Random Selection of 2 Obs	
					Measure #1	Measure #2	Measure #3	Density	#1	#2	#1	#2
In-House	EDXRF	07/22/05	3	131	21.9000	22.0000	20.6000	0.8372	21.9000	20.6000	21.9000	22.0000
In-House	EDXRF	08/30/05	3	134	21.7000	21.9000	22.3000	0.8372	21.7000	21.9000	21.7000	22.3000
In-House	EDXRF	08/04/05	3	135	22.0000	23.0000	23.2000	0.8372	23.0000	23.2000	22.0000	23.0000
In-House	EDXRF	07/15/05	3	136	21.0000	20.7000	20.9000	0.8372	20.7000	20.9000	21.0000	20.9000
In-House	EDXRF	07/15/05	3	137	22.1000	22.4000	21.4000	0.8372	22.1000	22.4000	22.1000	21.4000
In-House	EDXRF	08/09/05	3	141	20.8000	21.3000	20.0000	0.8372	21.3000	20.0000	20.8000	21.3000

**Table B.86. July Fuel #3 Lab Data and Deletions Based on EDXRF Test Method for NIST Calibration**

Calibration	Test Method	Run Date	July Sample #	Lab Code	Original Lab Data Robust Outlier Deletion in Shaded Box				After Robust Outlier Deletion Random Selection of 2 Obs		After Gravimetric Deletion Random Selection of 2 Obs	
					Measure #1	Measure #2	Measure #3	Density	#1	#2	#1	#2
NIST	EDXRF	07/27/05	3	131	19.9000	20.2000	20.4000	0.8372	19.9000	20.2000	19.9000	20.2000
NIST	EDXRF	08/29/05	3	134	21.2000	20.3000	20.8000	0.8372	21.2000	20.3000	21.2000	20.8000
NIST	EDXRF	08/04/05	3	135	20.1000	19.4000	20.2000	0.8372	20.1000	19.4000	20.1000	20.2000
NIST	EDXRF	07/15/05	3	136	21.6000	22.0000	21.9000	0.8372	21.6000	21.9000	21.6000	22.0000
NIST	EDXRF	07/15/05	3	137	21.3000	19.3000	18.9000	0.8372	19.3000	18.9000		
NIST	EDXRF	08/12/05	3	141	21.9000	20.5000	23.2000	0.8372	20.5000	23.2000	21.9000	20.5000

**Table B.87. July Fuel #4 Lab Data and Deletions Based on EDXRF Test Method for In-House Calibration**

Calibration	Test Method	Run Date	July Sample #	Lab Code	Original Lab Data Robust Outlier Deletion in Shaded Box				After Robust Outlier Deletion Random Selection of 2 Obs		After Gravimetric Deletion Random Selection of 2 Obs	
					Measure #1	Measure #2	Measure #3	Density	#1	#2	#1	#2
In-House	EDXRF	07/22/05	4	131	8.3000	8.7000	8.2000	0.8264	8.3000	8.7000	8.7000	8.2000
In-House	EDXRF	08/30/05	4	134	9.1000	9.3000	9.2000	0.8264	9.1000	9.3000	9.3000	9.2000
In-House	EDXRF	08/04/05	4	135	9.2000	8.2000	8.6000	0.8264	9.2000	8.2000	9.2000	8.2000
In-House	EDXRF	07/15/05	4	136	8.5000	8.4000	8.4000	0.8264	8.4000	8.4000	8.5000	8.4000
In-House	EDXRF	07/15/05	4	137	9.3000	8.9000	8.3000	0.8264	9.3000	8.9000	9.3000	8.3000
In-House	EDXRF	08/09/05	4	141	8.4000	8.7000	8.5000	0.8264	8.7000	8.5000	8.4000	8.5000

**Table B.88. July Fuel #4 Lab Data and Deletions Based on EDXRF Test Method for NIST Calibration**

Calibration	Test Method	Run Date	July Sample #	Lab Code	Original Lab Data Robust Outlier Deletion in Shaded Box				After Robust Outlier Deletion Random Selection of 2 Obs		After Gravimetric Deletion Random Selection of 2 Obs	
					Measure #1	Measure #2	Measure #3	Density	#1	#2	#1	#2
NIST	EDXRF	07/27/05	4	131	8.7000	8.8000	8.6000	0.8264	8.7000	8.6000	8.8000	8.6000
NIST	EDXRF	08/29/05	4	134	9.0000	8.8000	10.1000	0.8264	9.0000	10.1000	9.0000	8.8000
NIST	EDXRF	08/04/05	4	135	8.3000	9.7000	9.9000	0.8264	8.3000	9.7000	9.7000	9.9000
NIST	EDXRF	07/15/05	4	136	9.4000	8.9000	9.4000	0.8264	9.4000	9.4000	9.4000	9.4000
NIST	EDXRF	07/15/05	4	137	7.4000	7.8000	7.1000	0.8264	7.4000	7.1000		
NIST	EDXRF	08/12/05	4	141	9.0000	8.0000	8.4000	0.8264	9.0000	8.4000	9.0000	8.4000

**Table B.89. July Fuel #5 Lab Data and Deletions Based on EDXRF Test Method for In-House Calibration**

Calibration	Test Method	Run Date	July Sample #	Lab Code	Original Lab Data Robust Outlier Deletion in Shaded Box				After Robust Outlier Deletion Random Selection of 2 Obs		After Gravimetric Deletion Random Selection of 2 Obs	
					Measure #1	Measure #2	Measure #3	Density	#1	#2	#1	#2
In-House	EDXRF	07/22/05	5	131	15.2000	15.4000	15.1000	0.8270	15.2000	15.4000	15.2000	15.1000
In-House	EDXRF	08/30/05	5	134	14.6000	16.0000	15.2000	0.8270	14.6000	15.2000	16.0000	15.2000
In-House	EDXRF	08/04/05	5	135	14.8000	15.9000	15.0000	0.8270	14.8000	15.0000	14.8000	15.9000
In-House	EDXRF	07/15/05	5	136	14.3000	14.2000	14.5000	0.8270	14.3000	14.5000	14.3000	14.5000
In-House	EDXRF	07/15/05	5	137	15.3000	14.3000	16.4000	0.8270	15.3000	16.4000	14.3000	16.4000
In-House	EDXRF	08/09/05	5	141	15.3000	15.5000	14.5000	0.8270	15.3000	15.5000	15.5000	14.5000



**Table B.90. July Fuel #5 Lab Data and Deletions Based on EDXRF Test Method for NIST Calibration**

Calibration	Test Method	Run Date	July Sample #	Lab Code	Original Lab Data Robust Outlier Deletion in Shaded Box				After Robust Outlier Deletion Random Selection of 2 Obs		After Gravimetric Deletion Random Selection of 2 Obs	
					Measure #1	Measure #2	Measure #3	Density	#1	#2	#1	#2
NIST	EDXRF	07/27/05	5	131	15.5000	15.0000	15.4000	0.8270	15.0000	15.4000	15.5000	15.0000
NIST	EDXRF	08/29/05	5	134	14.7000	14.8000	14.6000	0.8270	14.8000	14.6000	14.8000	14.6000
NIST	EDXRF	08/04/05	5	135	14.1000	15.0000	14.3000	0.8270	15.0000	14.3000	15.0000	14.3000
NIST	EDXRF	07/15/05	5	136	15.5000	16.0000	15.2000	0.8270	15.5000	15.2000	15.5000	16.0000
NIST	EDXRF	07/15/05	5	137	14.7000	14.0000	15.0000	0.8270	14.0000	15.0000		
NIST	EDXRF	08/12/05	5	141	14.9000	14.9000	15.4000	0.8270	14.9000	15.4000	14.9000	15.4000

**Table B.91. August Fuel #1 Lab Data and Deletions Based on EDXRF Test Method for In-House Calibration**

Calibration	Test Method	Run Date	August Sample #	Lab Code	Original Lab Data Robust Outlier Deletion in Shaded Box				After Robust Outlier Deletion Random Selection of 2 Obs		After Gravimetric Deletion Random Selection of 2 Obs	
					Measure #1	Measure #2	Measure #3	Density	#1	#2	#1	#2
In-House	EDXRF	08/10/05	1	131	10.2000	11.2000	10.5000	0.8240	10.2000	11.2000	10.2000	10.5000
In-House	EDXRF	08/30/05	1	134	10.5000	10.6000	11.5000	0.8240	10.5000	10.6000	10.6000	11.5000
In-House	EDXRF	08/09/05	1	135	9.4000	9.8000	9.9000	0.8240	9.8000	9.9000	9.8000	9.9000
In-House	EDXRF	08/09/05	1	136	9.2000	9.6000	9.2000	0.8240	9.6000	9.2000	9.6000	9.2000
In-House	EDXRF	08/12/05	1	137	11.1000	12.0000	11.1000	0.8240	12.0000	11.1000	11.1000	12.0000
In-House	EDXRF	08/10/05	1	141	10.7000	10.5000	10.1000	0.8359	10.5000	10.1000	10.7000	10.1000

**Table B.92. August Fuel #1 Lab Data and Deletions Based on EDXRF Test Method for NIST Calibration**

Calibration	Test Method	Run Date	August Sample #	Lab Code	Original Lab Data Robust Outlier Deletion in Shaded Box				After Robust Outlier Deletion Random Selection of 2 Obs		After Gravimetric Deletion Random Selection of 2 Obs	
					Measure #1	Measure #2	Measure #3	Density	#1	#2	#1	#2
NIST	EDXRF	08/11/05	1	131	10.0000	10.5000	9.5000	0.8240	10.0000	10.5000		
NIST	EDXRF	08/30/05	1	134	10.1000	10.3000	9.6000	0.8240	10.1000	10.3000		
NIST	EDXRF	08/10/05	1	135	9.8000	10.1000	9.5000	0.8240	9.8000	9.5000		
NIST	EDXRF	08/09/05	1	136	10.7000	10.2000	10.6000	0.8240	10.7000	10.6000		
NIST	EDXRF		1	137	9.3000	9.7000	10.7000	0.8240	9.3000	10.7000		
NIST	EDXRF	08/22/05	1	141	10.6000	10.7000	10.2000	0.8359	10.6000	10.2000		

**Table B.93. August Fuel #2 Lab Data and Deletions Based on EDXRF Test Method for In-House Calibration**

Calibration	Test Method	Run Date	August Sample #	Lab Code	Original Lab Data Robust Outlier Deletion in Shaded Box				After Robust Outlier Deletion Random Selection of 2 Obs		After Gravimetric Deletion Random Selection of 2 Obs	
					Measure #1	Measure #2	Measure #3	Density	#1	#2	#1	#2
In-House	EDXRF	08/10/05	2	131	14.6000	15.0000	15.3000	0.8371	14.6000	15.0000	14.6000	15.0000
In-House	EDXRF	08/30/05	2	134	14.7000	15.0000	14.8000	0.8371	15.0000	14.8000	14.7000	15.0000
In-House	EDXRF	08/09/05	2	135	14.4000	13.7000	14.4000	0.8371	13.7000	14.4000	14.4000	13.7000
In-House	EDXRF	08/09/05	2	136	15.6000	13.4000	14.1000	0.8371	15.6000	14.1000	15.6000	14.1000
In-House	EDXRF	08/12/05	2	137	15.6000	15.0000	14.3000	0.8371	15.6000	15.0000	15.6000	14.3000
In-House	EDXRF	08/10/05	2	141	13.8000	15.3000	15.0000	0.8371	13.8000	15.0000	13.8000	15.0000

**Table B.94. August Fuel #2 Lab Data and Deletions Based on EDXRF Test Method for NIST Calibration**

Calibration	Test Method	Run Date	August Sample #	Lab Code	Original Lab Data Robust Outlier Deletion in Shaded Box				After Robust Outlier Deletion Random Selection of 2 Obs		After Gravimetric Deletion Random Selection of 2 Obs	
					Measure #1	Measure #2	Measure #3	Density	#1	#2	#1	#2
NIST	EDXRF	08/11/05	2	131	12.9000	13.2000	13.5000	0.8371	13.2000	13.5000		
NIST	EDXRF	08/30/05	2	134	14.2000	14.4000	15.5000	0.8371	14.2000	14.4000	14.2000	15.5000
NIST	EDXRF	08/10/05	2	135	14.2000	14.6000	14.7000	0.8371	14.2000	14.6000	14.2000	14.6000
NIST	EDXRF	08/09/05	2	136	15.2000	15.0000	15.0000	0.8371	15.0000	15.0000	15.2000	15.0000
NIST	EDXRF		2	137	13.4000	13.6000	12.6000	0.8371	13.6000	12.6000		
NIST	EDXRF	08/22/05	2	141	15.4000	15.0000	15.8000	0.8371	15.4000	15.0000	15.4000	15.0000

**Table B.95. August Fuel #3 Lab Data and Deletions Based on EDXRF Test Method for In-House Calibration**

Calibration	Test Method	Run Date	August Sample #	Lab Code	Original Lab Data Robust Outlier Deletion in Shaded Box				After Robust Outlier Deletion Random Selection of 2 Obs		After Gravimetric Deletion Random Selection of 2 Obs	
					Measure #1	Measure #2	Measure #3	Density	#1	#2	#1	#2
In-House	EDXRF	08/10/05	3	131	18.4000	18.1000	18.2000	0.8372	18.4000	18.2000	18.1000	18.2000
In-House	EDXRF	08/30/05	3	134	17.8000	17.6000	18.3000	0.8372	17.6000	18.3000	17.6000	18.3000
In-House	EDXRF	08/09/05	3	135	17.7000	18.1000	18.1000	0.8372	17.7000	18.1000	18.1000	18.1000
In-House	EDXRF	08/09/05	3	136	17.5000	16.9000	17.3000	0.8372	17.5000	16.9000	17.5000	16.9000
In-House	EDXRF	08/12/05	3	137	19.1000	18.2000	18.4000	0.8372	18.2000	18.4000	19.1000	18.4000
In-House	EDXRF	08/10/05	3	141	17.3000	18.2000	18.0000	0.8372	17.3000	18.0000	17.3000	18.2000

**Table B.96. August Fuel #3 Lab Data and Deletions Based on EDXRF Test Method for NIST Calibration**

Calibration	Test Method	Run Date	August Sample #	Lab Code	Original Lab Data Robust Outlier Deletion in Shaded Box				After Robust Outlier Deletion Random Selection of 2 Obs		After Gravimetric Deletion Random Selection of 2 Obs	
					Measure #1	Measure #2	Measure #3	Density	#1	#2	#1	#2
NIST	EDXRF	08/11/05	3	131	15.8000	16.4000	16.2000	0.8372	16.4000	16.2000		
NIST	EDXRF	08/30/05	3	134	18.0000	16.9000	18.4000	0.8372	18.0000	16.9000	18.0000	18.4000
NIST	EDXRF	08/10/05	3	135	17.4000	17.7000	17.1000	0.8372	17.4000	17.7000	17.7000	17.1000
NIST	EDXRF	08/09/05	3	136	17.9000	17.7000	18.8000	0.8372	17.7000	18.8000	17.9000	17.7000
NIST	EDXRF		3	137	17.2000	16.8000	16.3000	0.8372	16.8000	16.3000		
NIST	EDXRF	08/22/05	3	141	17.5000	17.7000	18.0000	0.8372	17.5000	17.7000	17.5000	17.7000

**Table B.97. August Fuel #4 Lab Data and Deletions Based on EDXRF Test Method for In-House Calibration**

Calibration	Test Method	Run Date	August Sample #	Lab Code	Original Lab Data Robust Outlier Deletion in Shaded Box				After Robust Outlier Deletion Random Selection of 2 Obs		After Gravimetric Deletion Random Selection of 2 Obs	
					Measure #1	Measure #2	Measure #3	Density	#1	#2	#1	#2
In-House	EDXRF	08/10/05	4	131	8.2000	8.5000	9.0000	0.8264	8.5000	9.0000	8.2000	9.0000
In-House	EDXRF	08/30/05	4	134	8.5000	8.3000	8.6000	0.8264	8.5000	8.3000	8.5000	8.3000
In-House	EDXRF	08/09/05	4	135	7.9000	8.4000	8.0000	0.8264	8.4000	8.0000	8.4000	8.0000
In-House	EDXRF	08/09/05	4	136	8.1000	7.5000	7.7000	0.8264	8.1000	7.5000	7.5000	7.7000
In-House	EDXRF	08/12/05	4	137	8.8000	8.6000	9.8000	0.8264	8.8000	8.6000	8.8000	9.8000
In-House	EDXRF	08/10/05	4	141	7.1000	7.2000	8.8000	0.8264	7.1000	7.2000	7.1000	7.2000



**Table B.98. August Fuel #4 Lab Data and Deletions Based on EDXRF Test Method for NIST Calibration**

Calibration	Test Method	Run Date	August Sample #	Lab Code	Original Lab Data Robust Outlier Deletion in Shaded Box				After Robust Outlier Deletion Random Selection of 2 Obs		After Gravimetric Deletion Random Selection of 2 Obs	
					Measure #1	Measure #2	Measure #3	Density	#1	#2	#1	#2
NIST	EDXRF	08/11/05	4	131	7.3000	7.4000	7.6000	0.8264	7.3000	7.6000		
NIST	EDXRF	08/30/05	4	134	8.2000	8.0000	8.5000	0.8264	8.0000	8.5000	8.0000	8.5000
NIST	EDXRF	08/10/05	4	135	8.0000	7.6000	8.3000	0.8264	8.0000	8.3000	7.6000	8.3000
NIST	EDXRF	08/09/05	4	136	8.4000	8.4000	8.7000	0.8264	8.4000	8.4000	8.4000	8.4000
NIST	EDXRF		4	137	7.4000	7.4000	7.3000	0.8264	7.4000	7.3000		
NIST	EDXRF	08/22/05	4	141	8.3000	8.5000	8.4000	0.8264	8.3000	8.5000	8.3000	8.4000

**Table B.99. August Fuel #5 Lab Data and Deletions Based on EDXRF Test Method for In-House Calibration**

Calibration	Test Method	Run Date	August Sample #	Lab Code	Original Lab Data Robust Outlier Deletion in Shaded Box				After Robust Outlier Deletion Random Selection of 2 Obs		After Gravimetric Deletion Random Selection of 2 Obs	
					Measure #1	Measure #2	Measure #3	Density	#1	#2	#1	#2
In-House	EDXRF	08/10/05	5	131	14.9000	15.7000	15.5000	0.8270	14.9000	15.5000	15.7000	15.5000
In-House	EDXRF	08/30/05	5	134	17.6000	16.5000	17.9000	0.8270	17.6000	16.5000	17.6000	16.5000
In-House	EDXRF	08/09/05	5	135	14.8000	14.6000	14.8000	0.8270	14.8000	14.6000	14.8000	14.6000
In-House	EDXRF	08/09/05	5	136	15.3000	14.5000	15.2000	0.8270	14.5000	15.2000	15.3000	14.5000
In-House	EDXRF	08/12/05	5	137	16.5000	15.4000	15.8000	0.8270	16.5000	15.4000	16.5000	15.4000
In-House	EDXRF	08/10/05	5	141	15.3000	15.1000	14.9000	0.8270	15.3000	15.1000	15.3000	14.9000

**Table B.100. August Fuel #5 Lab Data and Deletions Based on EDXRF Test Method for NIST Calibration**

Calibration	Test Method	Run Date	August Sample #	Lab Code	Original Lab Data Robust Outlier Deletion in Shaded Box				After Robust Outlier Deletion Random Selection of 2 Obs		After Gravimetric Deletion Random Selection of 2 Obs	
					Measure #1	Measure #2	Measure #3	Density	#1	#2	#1	#2
NIST	EDXRF	08/11/05	5	131	13.3000	14.2000	14.2000	0.8270	13.3000	14.2000		
NIST	EDXRF	08/30/05	5	134	15.0000	15.2000	15.7000	0.8270	15.0000	15.2000	15.2000	15.7000
NIST	EDXRF	08/10/05	5	135	14.8000	15.2000	14.9000	0.8270	14.8000	15.2000	14.8000	14.9000
NIST	EDXRF	08/09/05	5	136	14.7000	15.3000	15.6000	0.8270	14.7000	15.6000	14.7000	15.6000
NIST	EDXRF		5	137	13.7000	14.0000	14.0000	0.8270	14.0000	14.0000		
NIST	EDXRF	08/22/05	5	141	15.1000	15.9000	15.6000	0.8270	15.9000	15.6000	15.9000	15.6000

Table B.101. July Fuels #1-#5 Lab Data on D7041 Test Method for In-House and NIST Calibrations								
					Original Lab Data			
Calibration	Test Method	Run Date	July Sample #	Lab Code	Measure #1	Measure #2	Measure #3	Density
In-House	D7041	08/02/05	1	53	7.1870	7.1040	7.4130	0.8359
In-House	D7041	08/02/05	2	53	10.5570	10.2916	10.4480	0.8371
In-House	D7041	08/02/05	3	53	20.7223	20.2010	20.8380	0.8372
In-House	D7041	08/02/05	4	53	8.1510	8.5820	8.5040	0.8264
In-House	D7041	08/02/05	5	53	12.9940	13.5980	13.2390	0.8270
NIST	D7041	08/02/05	1	53	7.2260	7.2300	7.3400	0.8359
NIST	D7041	08/02/05	2	53	10.1830	10.2570	10.1200	0.8371
NIST	D7041	08/02/05	3	53	20.2268	20.1600	19.9500	0.8372
NIST	D7041	08/02/05	4	53	8.2700	8.4100	7.9300	0.8264
NIST	D7041	08/02/05	5	53	12.7600	12.7800	12.4800	0.8270

**Table B.102. August Fuels #1-#5 Lab Data on D7041 Test Method for In-House and NIST Calibrations**

Original Lab Data								
Calibration	Test Method	Run Date	August Sample #	Lab Code	Measure #1	Measure #2	Measure #3	Density
In-House	D7041	08/16/05	1	53	10.8200	10.4700	10.6500	0.8240
In-House	D7041	08/16/05	2	53	14.9200	14.5100	15.0100	0.8371
In-House	D7041	08/16/05	3	53	15.9300	16.4000	16.1200	0.8372
In-House	D7041	08/16/05	4	53	8.2390	8.1650	8.3620	0.8264
In-House	D7041	08/16/05	5	53	15.3690	15.6200	15.0270	0.8270
NIST	D7041	08/26/05	1	53	10.0200	10.3600	10.6400	0.8240
NIST	D7041	08/26/05	2	53	14.6200	14.9400	14.9400	0.8371
NIST	D7041	08/26/05	3	53	16.7200	17.1500	17.0900	0.8372
NIST	D7041	08/26/05	4	53	7.9700	7.7600	7.9100	0.8264
NIST	D7041	08/26/05	5	53	15.2200	15.7400	15.7300	0.8270

**APPENDIX C**  
**DESCRIPTIVE STATISTICS**

**Table C.1. Descriptive Statistics for Sulfur from All Labs**

Test Method	Calibration	Month	Fuel Number	Number of Observations	Mean	Standard Deviation
Composite	In-House	July	1	444	7.2649	0.8725
Composite	In-House	July	2	444	10.6571	1.0116
Composite	In-House	July	3	444	20.7744	1.6400
Composite	In-House	July	4	444	8.2874	0.7451
Composite	In-House	July	5	444	14.6835	1.2563
Composite	NIST	July	1	444	7.4401	0.9753
Composite	NIST	July	2	444	10.8897	1.0275
Composite	NIST	July	3	444	21.1503	1.6762
Composite	NIST	July	4	444	8.5005	0.9187
Composite	NIST	July	5	444	14.9453	1.7939
Composite	In-House	August	1	426	10.0554	0.9856
Composite	In-House	August	2	426	14.4315	1.2227
Composite	In-House	August	3	426	17.8333	1.5711
Composite	In-House	August	4	426	8.4174	1.0567
Composite	In-House	August	5	426	14.8734	1.3642
Composite	NIST	August	1	426	10.0590	0.8954
Composite	NIST	August	2	426	14.6234	2.3927
Composite	NIST	August	3	426	17.9169	1.3744
Composite	NIST	August	4	426	8.4273	1.1295
Composite	NIST	August	5	426	14.8780	1.4605
D2622	In-House	July	1	75	8.0987	0.9683
D2622	In-House	July	2	75	11.3942	1.1355
D2622	In-House	July	3	75	21.5987	1.1412
D2622	In-House	July	4	75	8.6569	0.7864
D2622	In-House	July	5	75	15.4551	1.1574
D2622	NIST	July	1	75	8.1853	0.8808
D2622	NIST	July	2	75	11.5539	0.9050

**Table C.1. Descriptive Statistics for Sulfur from All Labs**

Test Method	Calibration	Month	Fuel Number	Number of Observations	Mean	Standard Deviation
D2622	NIST	July	3	75	21.5840	1.5831
D2622	NIST	July	4	75	8.7886	1.1131
D2622	NIST	July	5	75	15.5244	0.9818
D2622	In-House	August	1	72	11.0287	1.0031
D2622	In-House	August	2	72	15.5007	1.0509
D2622	In-House	August	3	72	18.9381	1.8616
D2622	In-House	August	4	72	9.0587	1.0431
D2622	In-House	August	5	72	16.0983	1.5023
D2622	NIST	August	1	72	10.7170	0.9910
D2622	NIST	August	2	72	15.0166	1.2429
D2622	NIST	August	3	72	18.3596	1.2515
D2622	NIST	August	4	72	8.6170	1.0403
D2622	NIST	August	5	72	15.7391	1.3359
D3120	In-House	July	1	9	7.0178	0.5943
D3120	In-House	July	2	9	10.1600	0.7813
D3120	In-House	July	3	9	19.2500	0.9048
D3120	In-House	July	4	9	7.6978	0.7961
D3120	In-House	July	5	9	13.9200	0.7747
D3120	NIST	July	1	9	7.1200	0.4920
D3120	NIST	July	2	9	10.2911	0.8177
D3120	NIST	July	3	9	19.9111	1.3271
D3120	NIST	July	4	9	7.8789	0.7527
D3120	NIST	July	5	9	14.1444	1.0608
D3120	In-House	August	1	9	9.2333	0.3536
D3120	In-House	August	2	9	13.4111	0.2977
D3120	In-House	August	3	9	16.7444	0.4246
D3120	In-House	August	4	9	8.1444	0.3812



**Table C.1. Descriptive Statistics for Sulfur from All Labs**

Test Method	Calibration	Month	Fuel Number	Number of Observations	Mean	Standard Deviation
D3120	In-House	August	5	9	13.7222	0.3866
D3120	NIST	August	1	9	9.7333	0.3162
D3120	NIST	August	2	9	14.1778	0.5540
D3120	NIST	August	3	9	17.2667	0.8456
D3120	NIST	August	4	9	8.1667	0.1871
D3120	NIST	August	5	9	14.2000	0.2693
D5453	In-House	July	1	294	7.0077	0.7072
D5453	In-House	July	2	294	10.4549	0.9422
D5453	In-House	July	3	293	20.6427	1.7672
D5453	In-House	July	4	294	8.1907	0.7093
D5453	In-House	July	5	294	14.5132	1.2771
D5453	NIST	July	1	294	7.1602	0.7822
D5453	NIST	July	2	294	10.7159	1.0706
D5453	NIST	July	3	294	21.2185	1.7973
D5453	NIST	July	4	294	8.4254	0.9147
D5453	NIST	July	5	294	14.8133	2.0872
D5453	In-House	August	1	279	9.8131	0.8622
D5453	In-House	August	2	279	14.2482	1.2092
D5453	In-House	August	3	279	17.6389	1.5074
D5453	In-House	August	4	279	8.2762	1.0517
D5453	In-House	August	5	279	14.5917	1.2305
D5453	NIST	August	1	279	9.8702	0.8730
D5453	NIST	August	2	279	14.6082	2.8516
D5453	NIST	August	3	279	17.9305	1.4846
D5453	NIST	August	4	279	8.3982	1.2575
D5453	NIST	August	5	279	14.7202	1.5483
D7039	In-House	July	1	48	7.3896	0.8573

**Table C.1. Descriptive Statistics for Sulfur from All Labs**

Test Method	Calibration	Month	Fuel Number	Number of Observations	Mean	Standard Deviation
D7039	In-House	July	2	48	10.6417	0.8118
D7039	In-House	July	3	48	20.2583	1.1196
D7039	In-House	July	4	48	8.2667	0.7470
D7039	In-House	July	5	48	14.5146	1.0110
D7039	NIST	July	1	48	7.8167	1.4443
D7039	NIST	July	2	48	10.9292	0.4414
D7039	NIST	July	3	48	20.4458	0.6741
D7039	NIST	July	4	48	8.5375	0.4301
D7039	NIST	July	5	48	15.0000	0.7732
D7039	In-House	August	1	48	10.0313	0.8008
D7039	In-House	August	2	48	13.9958	0.8218
D7039	In-House	August	3	48	17.4646	1.0264
D7039	In-House	August	4	48	8.3792	0.9785
D7039	In-House	August	5	48	14.6271	0.9071
D7039	NIST	August	1	48	10.2083	0.4946
D7039	NIST	August	2	48	14.3104	0.7418
D7039	NIST	August	3	48	17.5188	0.8018
D7039	NIST	August	4	48	8.5271	0.5449
D7039	NIST	August	5	48	14.6604	0.8807
D7041	In-House	July	1	3	7.2347	0.1599
D7041	In-House	July	2	3	10.4322	0.1334
D7041	In-House	July	3	3	20.5871	0.3393
D7041	In-House	July	4	3	8.4123	0.2297
D7041	In-House	July	5	3	13.2770	0.3038
D7041	NIST	July	1	3	7.2653	0.0647
D7041	NIST	July	2	3	10.1867	0.0686
D7041	NIST	July	3	3	20.1123	0.1444

**Table C.1. Descriptive Statistics for Sulfur from All Labs**

Test Method	Calibration	Month	Fuel Number	Number of Observations	Mean	Standard Deviation
D7041	NIST	July	4	3	8.2033	0.2468
D7041	NIST	July	5	3	12.6733	0.1677
D7041	In-House	August	1	3	10.6467	0.1750
D7041	In-House	August	2	3	14.8133	0.2665
D7041	In-House	August	3	3	16.1500	0.2364
D7041	In-House	August	4	3	8.2553	0.0995
D7041	In-House	August	5	3	15.3387	0.2977
D7041	NIST	August	1	3	10.3400	0.3105
D7041	NIST	August	2	3	14.8333	0.1848
D7041	NIST	August	3	3	16.9867	0.2329
D7041	NIST	August	4	3	7.8800	0.1082
D7041	NIST	August	5	3	15.5633	0.2974
EDXRF	In-House	July	1	18	7.7833	0.6042
EDXRF	In-House	July	2	18	11.1778	0.3457
EDXRF	In-House	July	3	18	21.6222	0.8537
EDXRF	In-House	July	4	18	8.6778	0.3904
EDXRF	In-House	July	5	18	15.0833	0.6252
EDXRF	NIST	July	1	18	8.0611	0.5637
EDXRF	NIST	July	2	18	11.1556	0.7748
EDXRF	NIST	July	3	18	20.7278	1.1092
EDXRF	NIST	July	4	18	8.7389	0.8190
EDXRF	NIST	July	5	18	14.9444	0.5147
EDXRF	In-House	August	1	18	10.3944	0.7974
EDXRF	In-House	August	2	18	14.6667	0.6371
EDXRF	In-House	August	3	18	17.9556	0.5125
EDXRF	In-House	August	4	18	8.2778	0.6620
EDXRF	In-House	August	5	18	15.5722	0.9718

**Table C.1. Descriptive Statistics for Sulfur from All Labs**

Test Method	Calibration	Month	Fuel Number	Number of Observations	Mean	Standard Deviation
EDXRF	NIST	August	1	18	10.1167	0.4643
EDXRF	NIST	August	2	18	14.3444	0.9525
EDXRF	NIST	August	3	18	17.3222	0.8063
EDXRF	NIST	August	4	18	7.9833	0.4890
EDXRF	NIST	August	5	18	14.8000	0.7468

**Table C.2. Descriptive Statistics for Sulfur from All Labs After Robust Outlier Deletion**

Test Method	Calibration	Month	Fuel Number	Number of Observations	Mean	Standard Deviation
Composite	In-House	July	1	435	7.2478	0.7662
Composite	In-House	July	2	436	10.6477	0.9439
Composite	In-House	July	3	434	20.7684	1.3863
Composite	In-House	July	4	437	8.2724	0.6963
Composite	In-House	July	5	432	14.6275	1.0712
Composite	NIST	July	1	431	7.3892	0.7492
Composite	NIST	July	2	426	10.8121	0.8169
Composite	NIST	July	3	420	20.9137	1.0258
Composite	NIST	July	4	413	8.4168	0.6283
Composite	NIST	July	5	417	14.8070	0.9261
Composite	In-House	August	1	420	10.0083	0.9082
Composite	In-House	August	2	416	14.3897	1.0820
Composite	In-House	August	3	410	17.7122	1.1677
Composite	In-House	August	4	405	8.3111	0.6299
Composite	In-House	August	5	410	14.7946	1.0679
Composite	NIST	August	1	402	10.0829	0.6867
Composite	NIST	August	2	407	14.4356	0.9517
Composite	NIST	August	3	407	17.8473	1.0418
Composite	NIST	August	4	415	8.3685	0.6171
Composite	NIST	August	5	404	14.7758	0.9153
D2622	In-House	July	1	74	8.0616	0.9199
D2622	In-House	July	2	75	11.3942	1.1355
D2622	In-House	July	3	74	21.6433	1.0812
D2622	In-House	July	4	75	8.6569	0.7864
D2622	In-House	July	5	75	15.4551	1.1574
D2622	NIST	July	1	75	8.1853	0.8808

**Table C.2. Descriptive Statistics for Sulfur from All Labs After Robust Outlier Deletion**

Test Method	Calibration	Month	Fuel Number	Number of Observations	Mean	Standard Deviation
D2622	NIST	July	2	75	11.5539	0.9050
D2622	NIST	July	3	72	21.4431	1.0038
D2622	NIST	July	4	74	8.8317	1.0559
D2622	NIST	July	5	74	15.5693	0.9076
D2622	In-House	August	1	71	10.9854	0.9402
D2622	In-House	August	2	72	15.5007	1.0509
D2622	In-House	August	3	69	18.6727	1.1267
D2622	In-House	August	4	70	8.9504	0.8260
D2622	In-House	August	5	68	15.8453	1.0626
D2622	NIST	August	1	70	10.7575	0.9454
D2622	NIST	August	2	72	15.0166	1.2429
D2622	NIST	August	3	71	18.3027	1.1628
D2622	NIST	August	4	70	8.7192	0.8500
D2622	NIST	August	5	69	15.5734	1.0930
D5453	In-House	July	1	285	7.0554	0.6181
D5453	In-House	July	2	289	10.4439	0.8583
D5453	In-House	July	3	285	20.6144	1.4193
D5453	In-House	July	4	286	8.1316	0.6221
D5453	In-House	July	5	284	14.4475	1.0186
D5453	NIST	July	1	273	7.1354	0.5112
D5453	NIST	July	2	275	10.5927	0.6992
D5453	NIST	July	3	273	20.9016	1.0012
D5453	NIST	July	4	266	8.2716	0.4928
D5453	NIST	July	5	265	14.5607	0.7948
D5453	In-House	August	1	266	9.7570	0.6719
D5453	In-House	August	2	267	14.1605	0.9563

**Table C.2. Descriptive Statistics for Sulfur from All Labs After Robust Outlier Deletion**

Test Method	Calibration	Month	Fuel Number	Number of Observations	Mean	Standard Deviation
D5453	In-House	August	3	267	17.5427	1.1540
D5453	In-House	August	4	267	8.1801	0.5707
D5453	In-House	August	5	262	14.5594	0.8699
D5453	NIST	August	1	254	9.9000	0.5277
D5453	NIST	August	2	262	14.3612	0.9032
D5453	NIST	August	3	261	17.8400	1.0211
D5453	NIST	August	4	267	8.2540	0.5216
D5453	NIST	August	5	260	14.6097	0.7968
D7039	In-House	July	1	46	7.3500	0.4952
D7039	In-House	July	2	46	10.7457	0.6463
D7039	In-House	July	3	48	20.2583	1.1196
D7039	In-House	July	4	45	8.4044	0.5313
D7039	In-House	July	5	48	14.5146	1.0110
D7039	NIST	July	1	47	7.6234	0.5474
D7039	NIST	July	2	47	10.9574	0.3999
D7039	NIST	July	3	47	20.4872	0.6167
D7039	NIST	July	4	45	8.4622	0.3207
D7039	NIST	July	5	46	14.9000	0.6125
D7039	In-House	August	1	46	10.1304	0.6538
D7039	In-House	August	2	46	14.0957	0.6789
D7039	In-House	August	3	47	17.5255	0.9456
D7039	In-House	August	4	44	8.3523	0.5428
D7039	In-House	August	5	47	14.6830	0.8292
D7039	NIST	August	1	46	10.2696	0.4043
D7039	NIST	August	2	46	14.4043	0.5963
D7039	NIST	August	3	45	17.6689	0.5612

**Table C.2. Descriptive Statistics for Sulfur from All Labs After Robust Outlier Deletion**

Test Method	Calibration	Month	Fuel Number	Number of Observations	Mean	Standard Deviation
D7039	NIST	August	4	48	8.5271	0.5449
D7039	NIST	August	5	48	14.6604	0.8807
EDXRF	In-House	July	1	18	7.7833	0.6042
EDXRF	In-House	July	2	18	11.1778	0.6457
EDXRF	In-House	July	3	18	21.6222	0.8537
EDXRF	In-House	July	4	18	8.6778	0.3904
EDXRF	In-House	July	5	18	15.0833	0.6252
EDXRF	NIST	July	1	18	8.0611	0.5637
EDXRF	NIST	July	2	18	11.1556	0.7748
EDXRF	NIST	July	3	18	20.7278	1.0922
EDXRF	NIST	July	4	18	8.7389	0.8190
EDXRF	NIST	July	5	18	14.9444	0.5147
EDXRF	In-House	August	1	18	10.3944	0.7974
EDXRF	In-House	August	2	18	14.6667	0.6371
EDXRF	In-House	August	3	18	17.9556	0.5125
EDXRF	In-House	August	4	18	8.2778	0.6620
EDXRF	In-House	August	5	17	15.4353	0.8031
EDXRF	NIST	August	1	18	10.1167	0.4643
EDXRF	NIST	August	2	18	14.3444	0.9525
EDXRF	NIST	August	3	18	17.3222	0.8063
EDXRF	NIST	August	4	18	7.9833	0.4890
EDXRF	NIST	August	5	18	14.8000	0.7468



**Table C.3. Descriptive Statistics for Sulfur from All Labs After Gravimetric Outlier Deletion**

Test Method	Calibration	Month	Fuel Number	Number of Observations	Mean	Standard Deviation
Composite	In-House	July	1	348	7.2768	0.7672
Composite	In-House	July	2	348	10.7195	0.8813
Composite	In-House	July	3	348	20.8364	1.3077
Composite	In-House	July	4	348	8.3378	0.4797
Composite	In-House	July	5	348	14.7214	0.9825
Composite	NIST	July	1	363	7.3363	0.8439
Composite	NIST	July	2	363	10.7806	0.7678
Composite	NIST	July	3	363	20.9290	1.1115
Composite	NIST	July	4	363	8.3721	0.4746
Composite	NIST	July	5	363	14.7826	0.8291
Composite	In-House	August	1	354	10.0202	0.8337
Composite	In-House	August	2	354	14.3880	0.9387
Composite	In-House	August	3	354	17.7721	1.2878
Composite	In-House	August	4	354	8.3203	0.5418
Composite	In-House	August	5	354	14.8197	0.9628
Composite	NIST	August	1	354	10.0170	0.7160
Composite	NIST	August	2	354	14.4019	0.8586
Composite	NIST	August	3	354	17.7978	0.9760
Composite	NIST	August	4	354	8.3635	0.4680
Composite	NIST	August	5	354	14.7238	0.8515
D2622	In-House	July	1	60	8.0420	0.8009
D2622	In-House	July	2	60	11.4053	1.1414
D2622	In-House	July	3	60	21.3608	0.9575
D2622	In-House	July	4	60	8.5276	0.5723
D2622	In-House	July	5	60	15.5121	0.9066
D2622	NIST	July	1	48	8.0494	0.7654

**Table C.3. Descriptive Statistics for Sulfur from All Labs After Gravimetric Outlier Deletion**

Test Method	Calibration	Month	Fuel Number	Number of Observations	Mean	Standard Deviation
D2622	NIST	July	2	48	11.5909	0.8412
D2622	NIST	July	3	48	21.6921	1.7077
D2622	NIST	July	4	48	8.6007	0.5801
D2622	NIST	July	5	48	15.6451	0.7469
D2622	In-House	August	1	54	10.8657	1.0519
D2622	In-House	August	2	54	15.3011	0.8917
D2622	In-House	August	3	54	18.6982	1.8877
D2622	In-House	August	4	54	8.6088	0.4989
D2622	In-House	August	5	54	15.6783	0.9658
D2622	NIST	August	1	51	10.6154	0.9760
D2622	NIST	August	2	51	14.7844	1.0279
D2622	NIST	August	3	51	18.2418	0.9576
D2622	NIST	August	4	51	8.7055	0.5938
D2622	NIST	August	5	51	15.3929	0.9716
D5453	In-House	July	1	225	7.0081	0.6513
D5453	In-House	July	2	225	10.4732	0.7692
D5453	In-House	July	3	225	20.6948	1.4346
D5453	In-House	July	4	225	8.2263	0.4310
D5453	In-House	July	5	225	14.4743	0.9420
D5453	NIST	July	1	249	7.0736	0.5382
D5453	NIST	July	2	249	10.5726	0.6878
D5453	NIST	July	3	249	20.8771	0.9676
D5453	NIST	July	4	249	8.2721	0.4075
D5453	NIST	July	5	249	14.5592	0.7481
D5453	In-House	August	1	231	9.8078	0.6313
D5453	In-House	August	2	231	14.2424	0.8681

**Table C.3. Descriptive Statistics for Sulfur from All Labs After Gravimetric Outlier Deletion**

Test Method	Calibration	Month	Fuel Number	Number of Observations	Mean	Standard Deviation
D5453	In-House	August	3	231	17.6045	1.1235
D5453	In-House	August	4	231	8.2558	0.4311
D5453	In-House	August	5	231	14.6171	0.8271
D5453	NIST	August	1	234	9.8488	0.6265
D5453	NIST	August	2	234	14.3195	0.8367
D5453	NIST	August	3	234	17.7807	1.0043
D5453	NIST	August	4	234	8.2674	0.3857
D5453	NIST	August	5	234	14.5841	0.7661
D7039	In-House	July	1	42	7.4167	0.4499
D7039	In-House	July	2	42	10.8619	0.5300
D7039	In-House	July	3	42	20.5452	0.8446
D7039	In-House	July	4	42	8.4905	0.4344
D7039	In-House	July	5	42	14.7571	0.8166
D7039	NIST	July	1	45	7.7511	1.4684
D7039	NIST	July	2	45	10.9178	0.4443
D7039	NIST	July	3	45	20.4444	0.6720
D7039	NIST	July	4	45	8.4844	0.3837
D7039	NIST	July	5	45	15.0244	0.7741
D7039	In-House	August	1	42	10.1095	0.7929
D7039	In-House	August	2	42	14.1048	0.7758
D7039	In-House	August	3	42	17.6452	0.9472
D7039	In-House	August	4	42	8.3524	0.9004
D7039	In-House	August	5	42	14.7429	0.8920
D7039	NIST	August	1	48	10.2083	0.4946
D7039	NIST	August	2	48	14.3104	0.7418
D7039	NIST	August	3	48	17.5188	0.8018

**Table C.3. Descriptive Statistics for Sulfur from All Labs After Gravimetric Outlier Deletion**

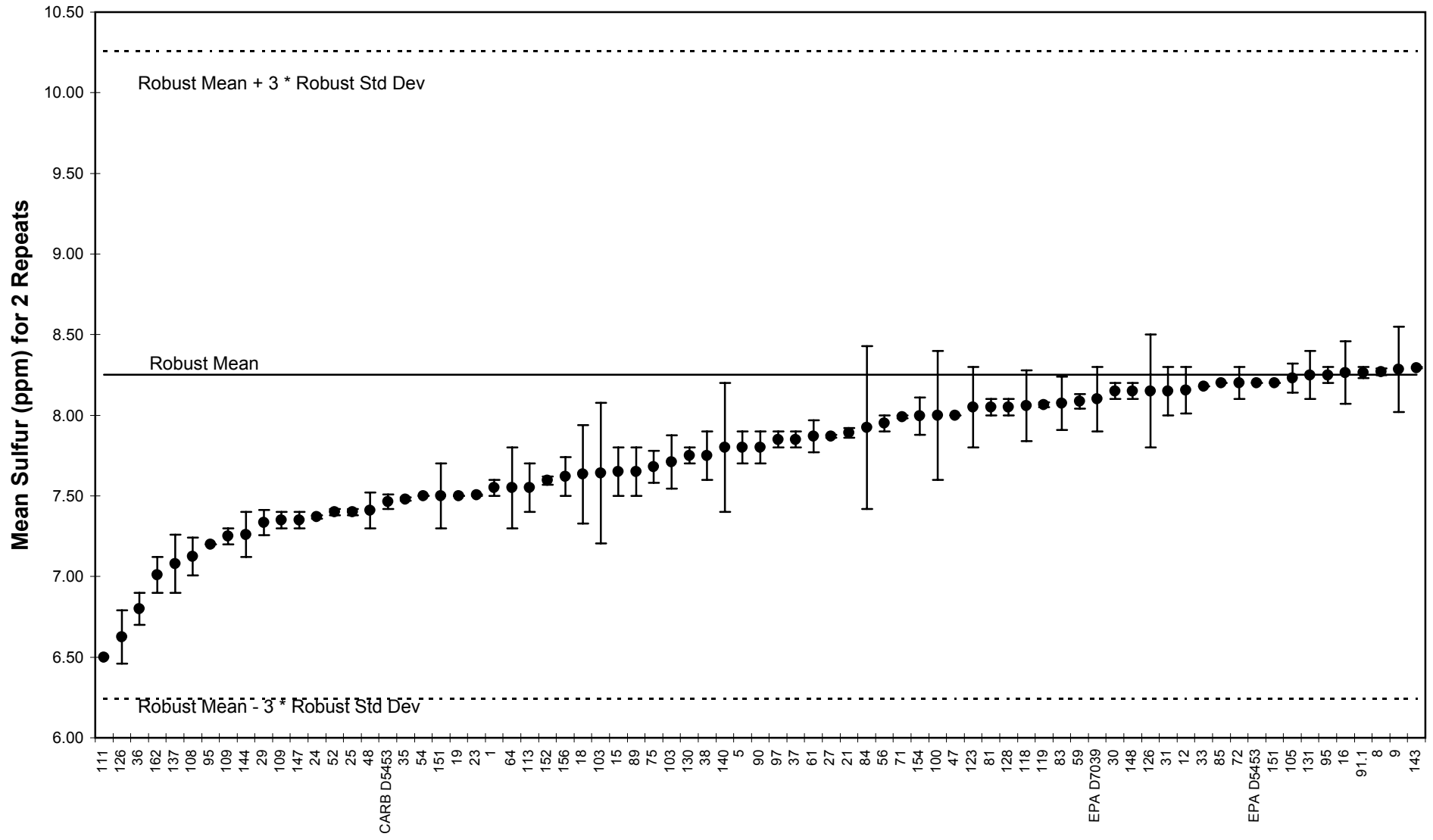
Test Method	Calibration	Month	Fuel Number	Number of Observations	Mean	Standard Deviation
D7039	NIST	August	4	48	8.5271	0.5449
D7039	NIST	August	5	48	14.6604	0.8807
EDXRF	In-House	July	1	18	7.7833	0.6042
EDXRF	In-House	July	2	18	11.1778	0.3457
EDXRF	In-House	July	3	18	21.6222	0.8537
EDXRF	In-House	July	4	18	8.6778	0.3904
EDXRF	In-House	July	5	18	15.0833	0.6252
EDXRF	NIST	July	1	15	8.1400	0.5409
EDXRF	NIST	July	2	15	11.2333	0.6935
EDXRF	NIST	July	3	15	20.9067	1.0257
EDXRF	NIST	July	4	15	9.0000	0.5988
EDXRF	NIST	July	5	15	15.0200	0.4974
EDXRF	In-House	August	1	18	10.3944	0.7974
EDXRF	In-House	August	2	18	14.6667	0.6371
EDXRF	In-House	August	3	18	17.9556	0.5125
EDXRF	In-House	August	4	18	8.2778	0.6620
EDXRF	In-House	August	5	18	15.5722	0.9718
EDXRF	NIST	August	1	12	10.2000	0.4112
EDXRF	NIST	August	2	12	14.9167	0.5132
EDXRF	NIST	August	3	12	17.7583	0.5230
EDXRF	NIST	August	4	12	8.2750	0.2927
EDXRF	NIST	August	5	12	15.2500	0.3802

## **APPENDIX D**

### **PLOTS OF LAB REPRODUCIBILITY (16 PLOTS)**

**Each of the 16 plots are broken into two segments, a and b. The b plots are a continuation of the a plots**

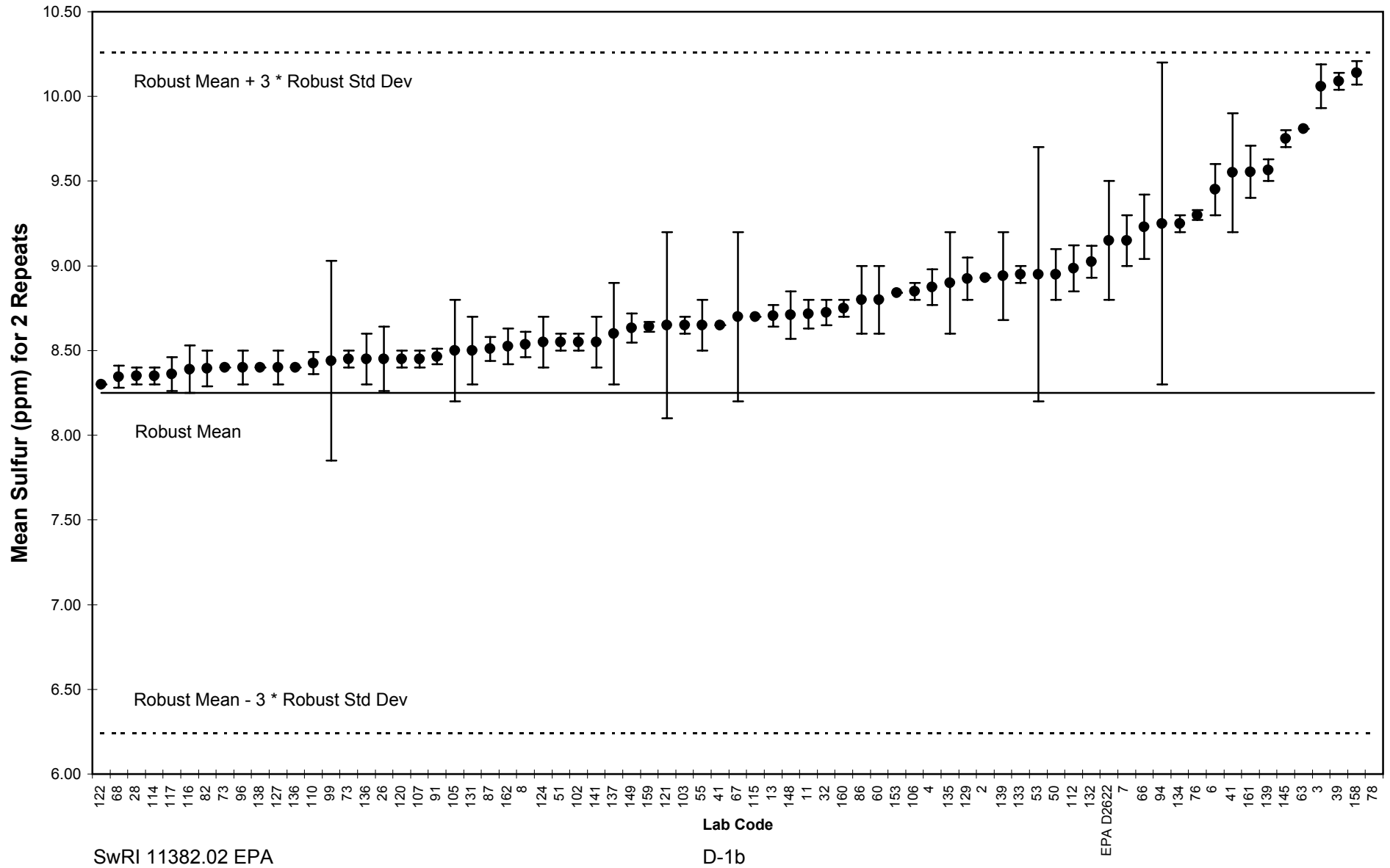
**Figure D-1a July Fuel #4, Robust Outlier Deletion  
Composite Test Methods, In-House Calibration  
ASTM Analysis, Lab Mean and Range**



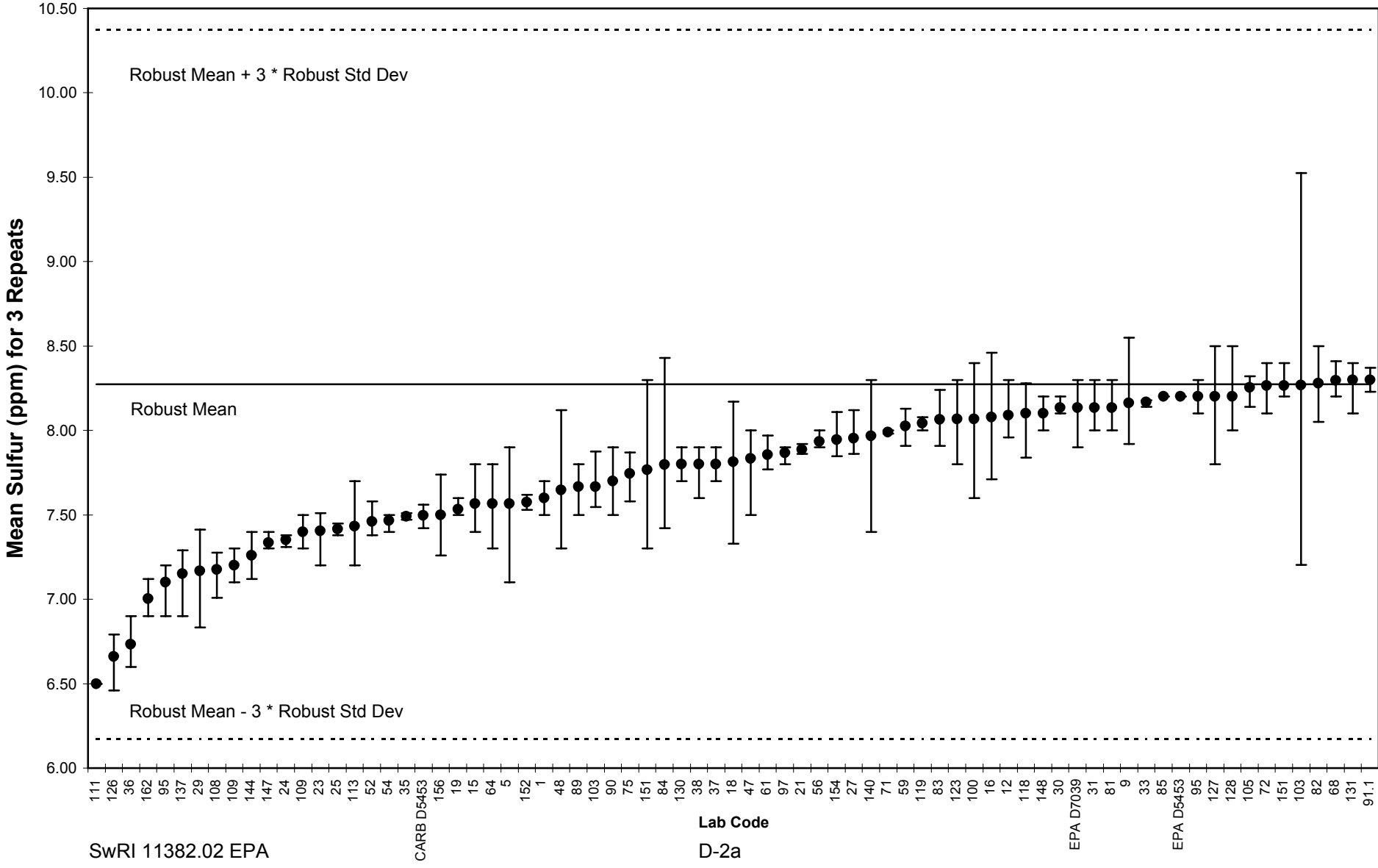
SwRI 11382.02 EPA

Lab Code  
D-1a

**Figure D-1b July Fuel #4, Robust Outlier Deletion  
Composite Test Methods, In-House Calibration  
ASTM Analysis, Lab Mean and Range**

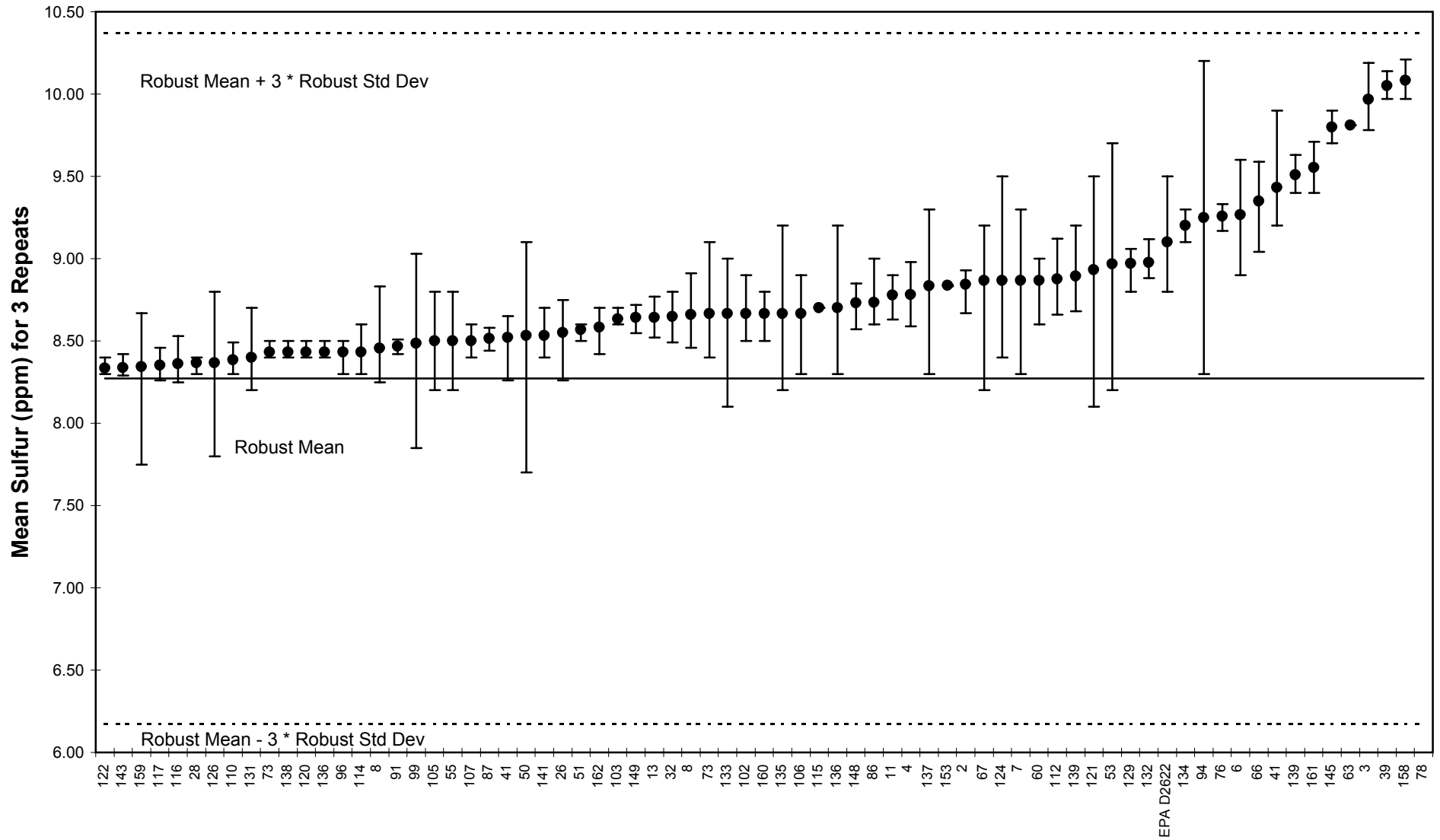


**Figure D-2a July Fuel #4, Robust Outlier Deletion  
Composite Test Methods, In-House Calibration  
ANOVA Analysis, Lab Mean and Range**

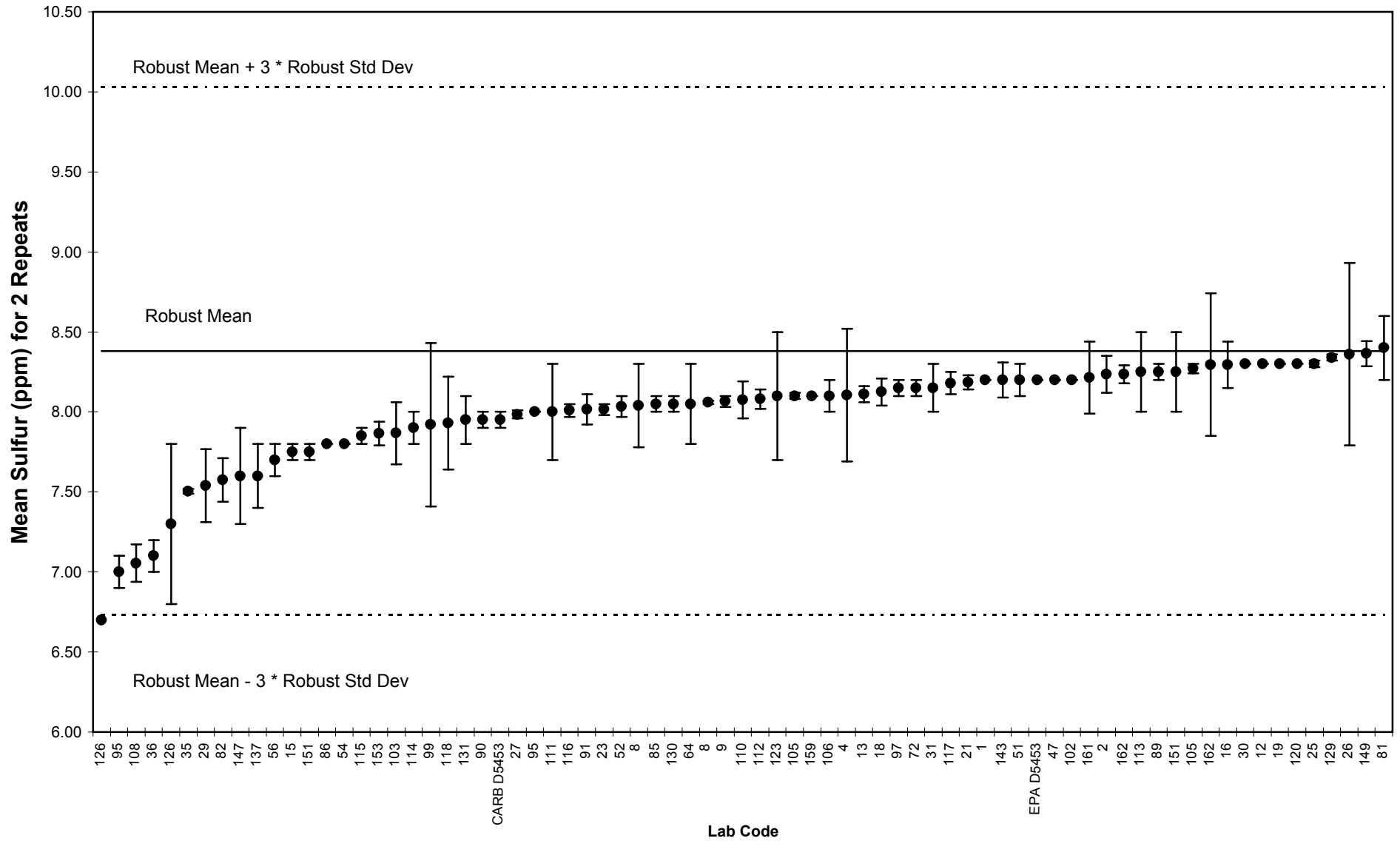




**Figure D-2b July Fuel #4, Robust Outlier Deletion  
Composite Test Methods, In-House Calibration  
ANOVA Analysis, Lab Mean and Range**



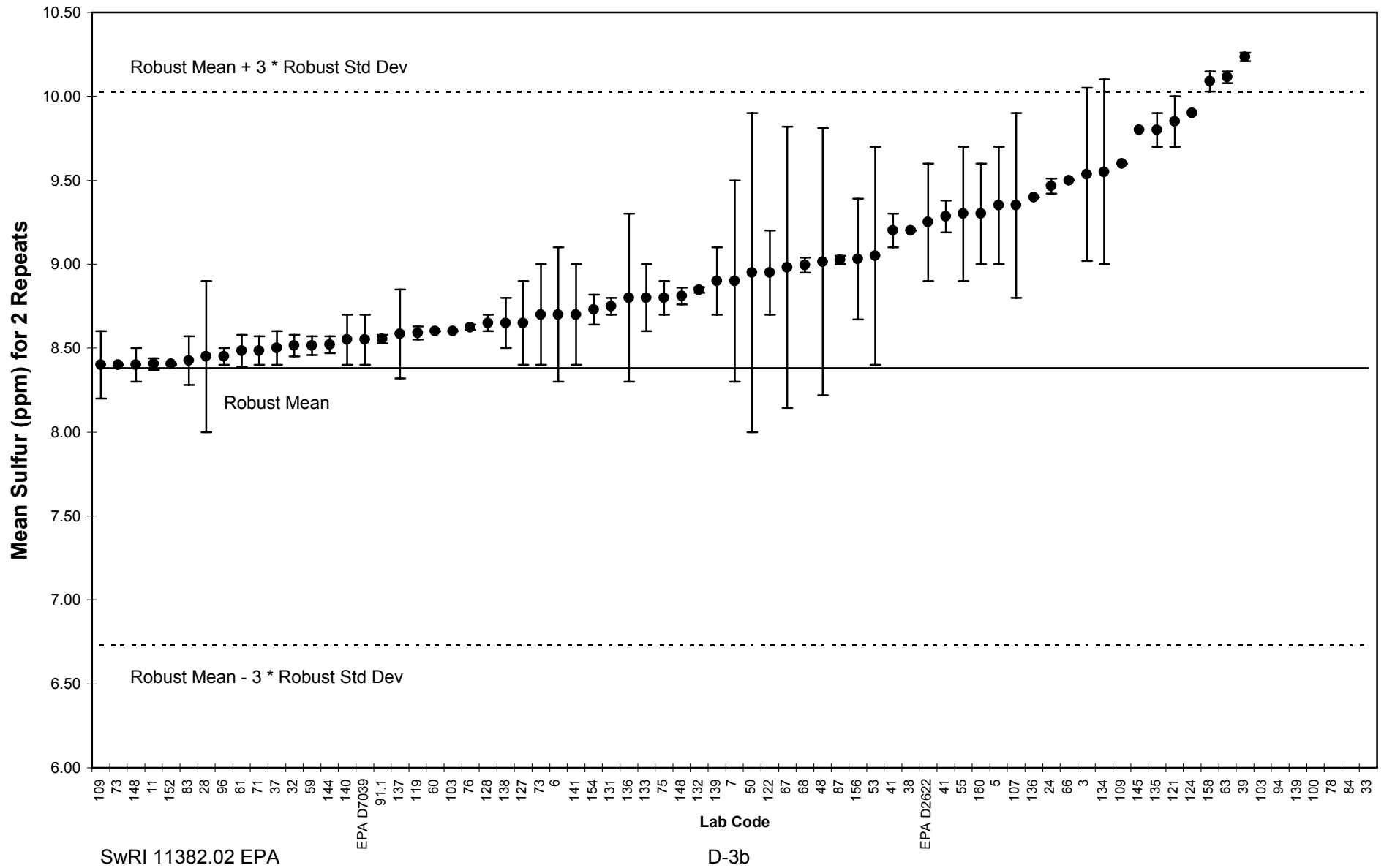
**Figure D-3a July Fuel #4, Robust Outlier Deletion  
Composite Test Methods, NIST Calibration  
ASTM Analysis, Lab Mean and Range**



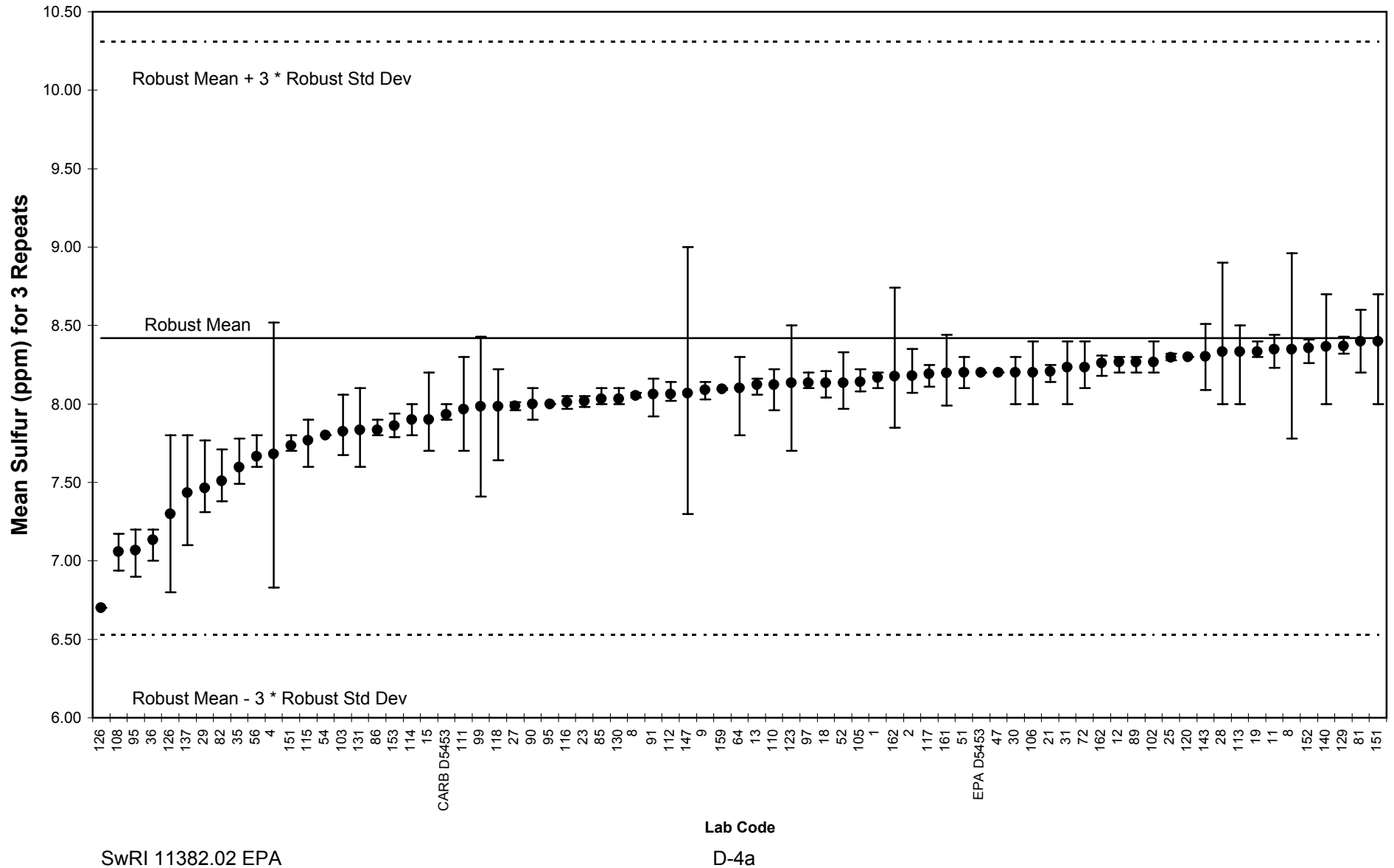
SwRI 11382.02 EPA

D-3a

**Figure D-3b July Fuel #4, Robust Outlier Deletion  
Composite Test Methods, NIST Calibration  
ASTM Analysis, Lab Mean and Range**



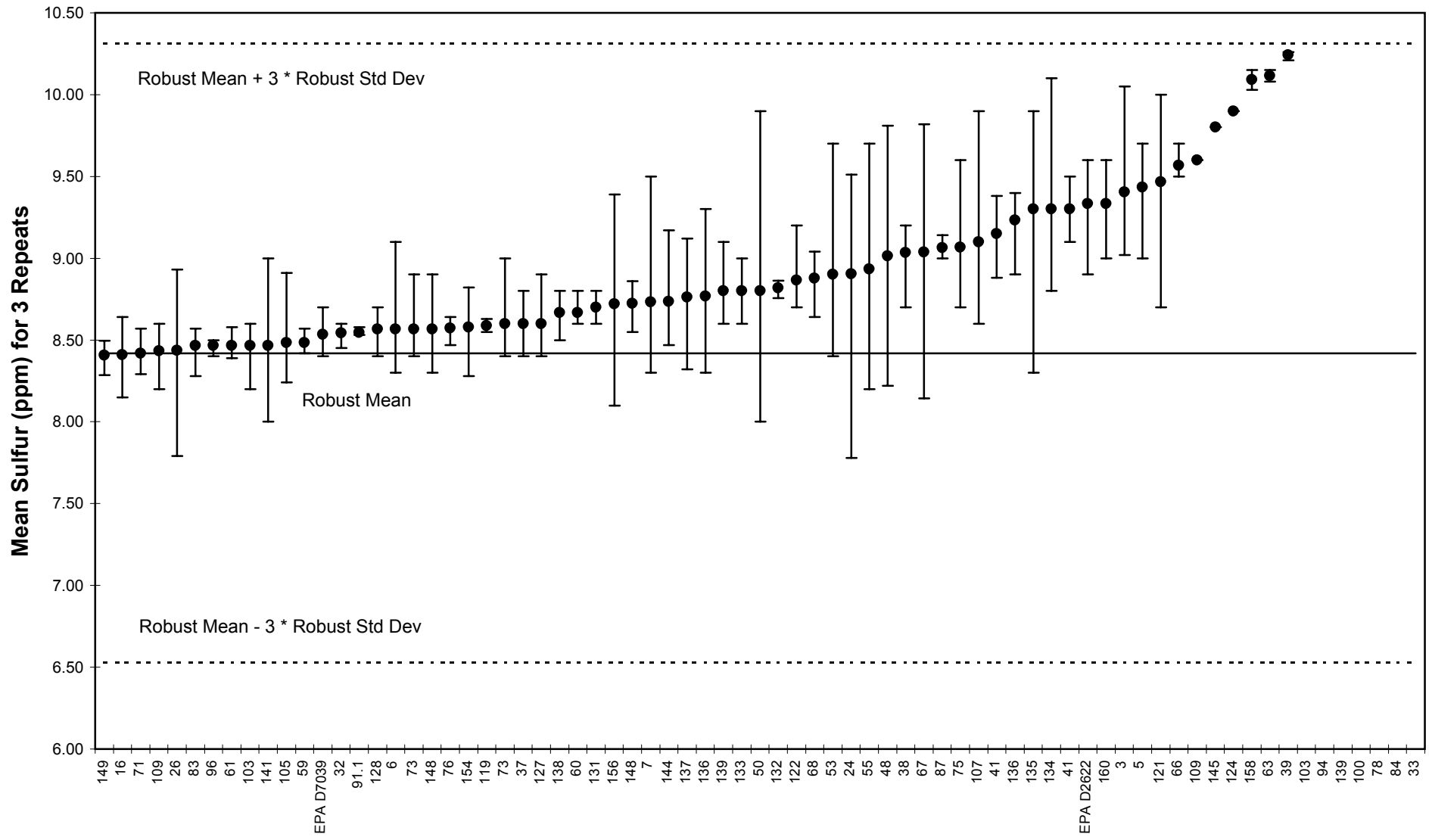
**Figure D-4a July Fuel #4, Robust Outlier Deletion  
Composite Test Methods, NIST Calibration  
ANOVA Analysis, Lab Mean and Range**



SwRI 11382.02 EPA

Lab Code  
D-4a

**Figure D-4b July Fuel #4, Robust Outlier Deletion  
Composite Test Methods, NIST Calibration  
ANOVA Analysis, Lab Mean and Range**

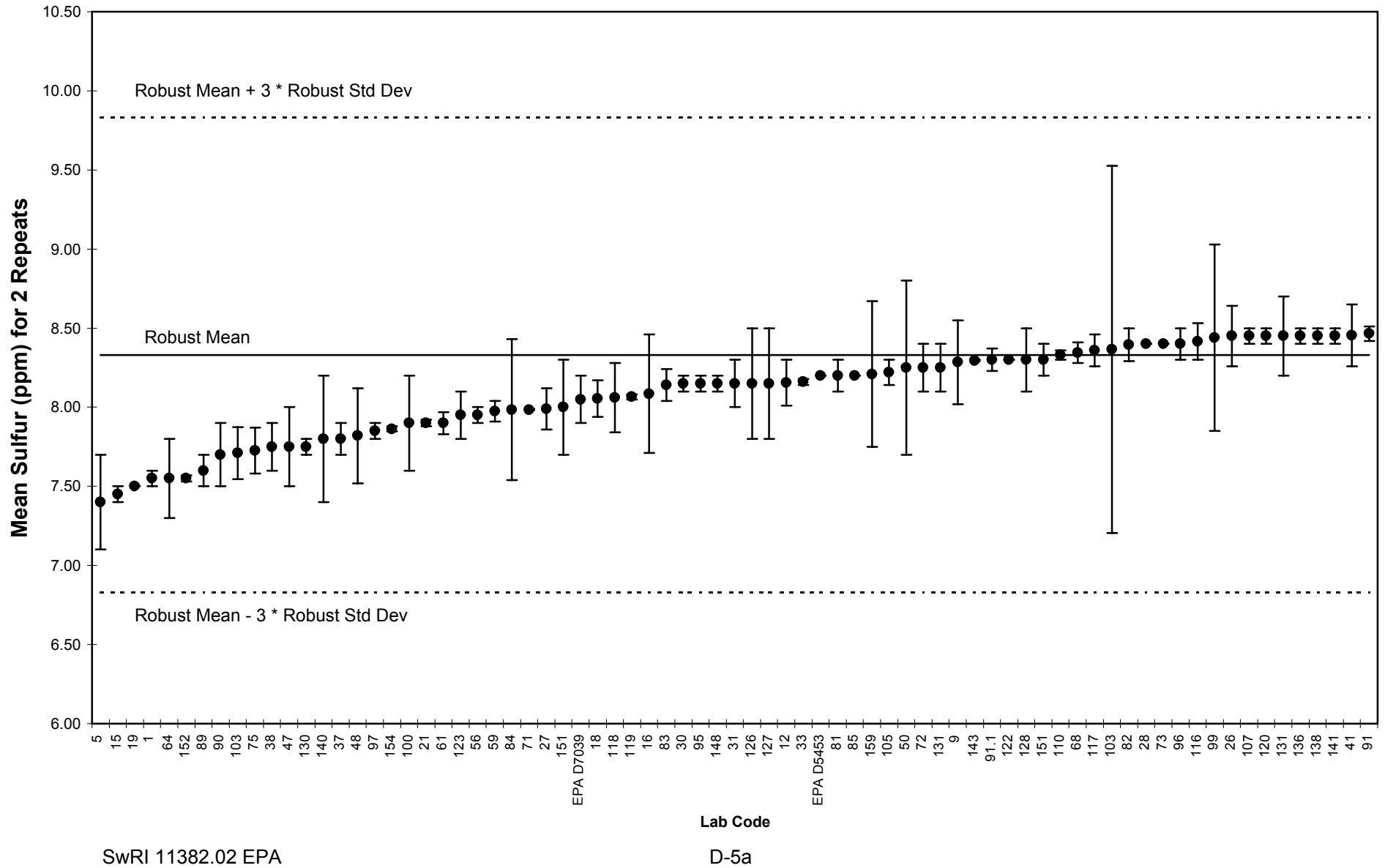


SwRI 11382.02 EPA

Lab Code

D-4b

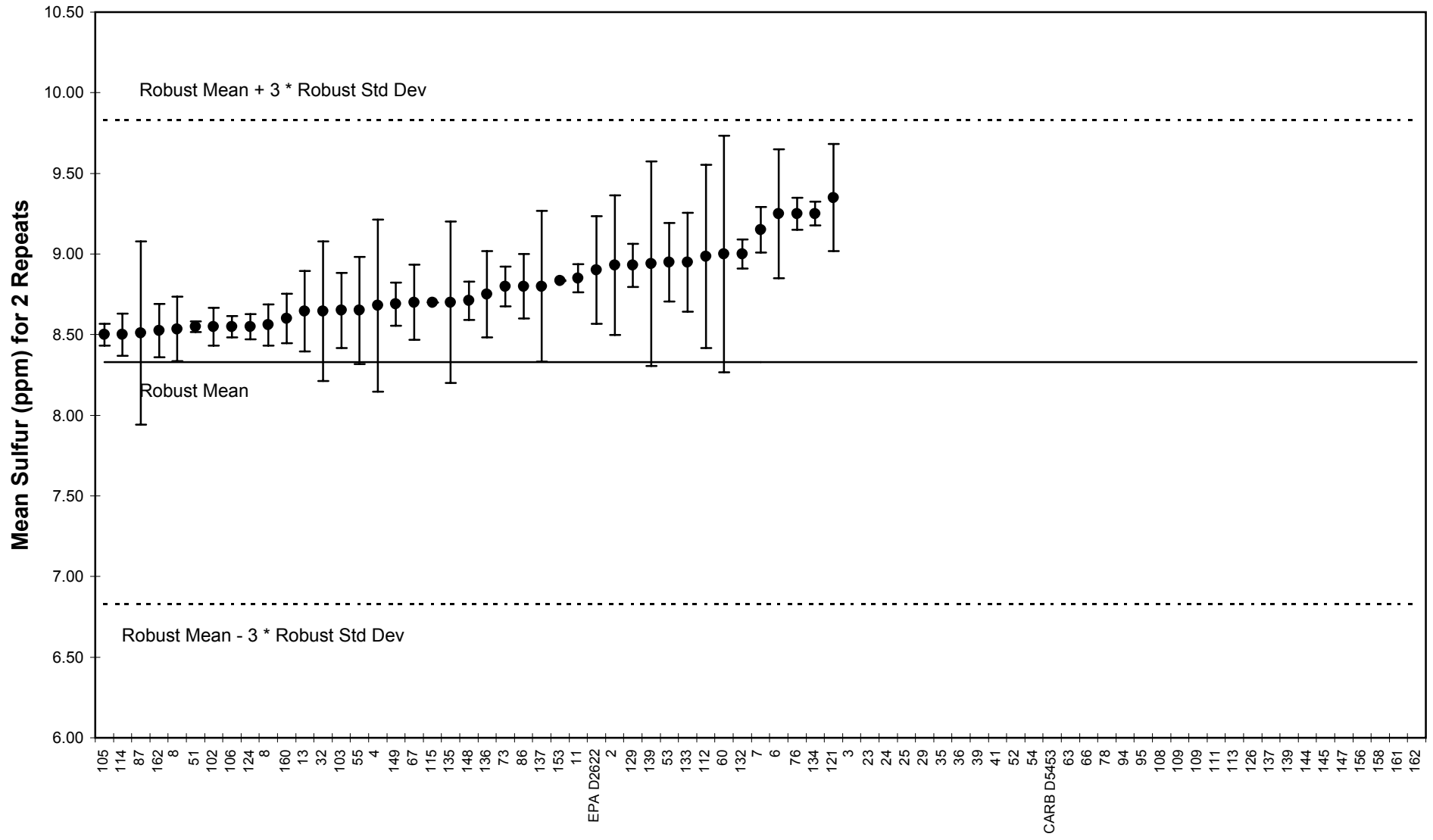
**Figure D-5a July Fuel #4, Gravimetric Outlier Deletion  
Composite Test Methods, In-House Calibration  
ASTM Analysis, Lab Mean and Range**



SwRI 11382.02 EPA

D-5a

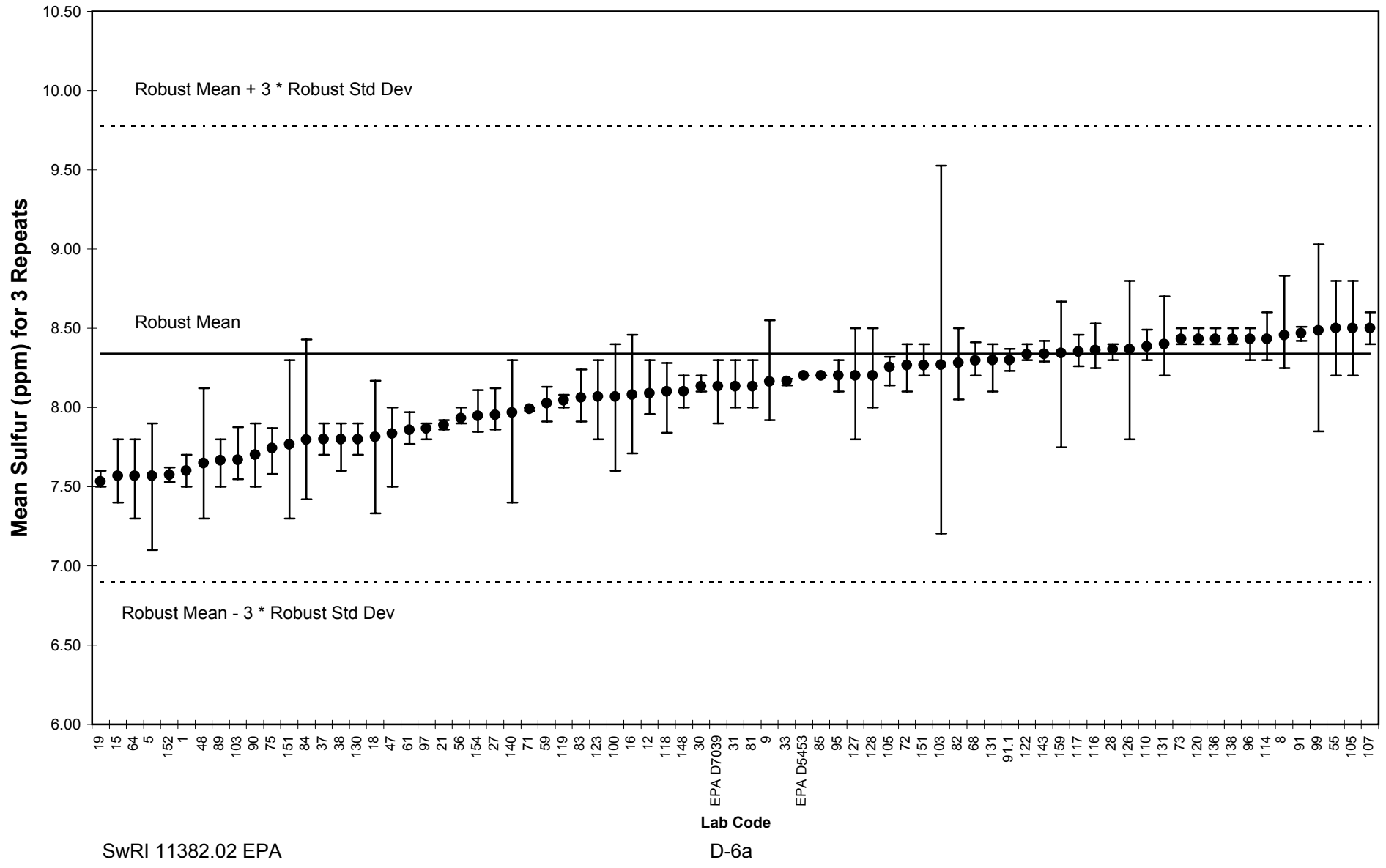
**Figure D-5b July Fuel #4, Gravimetric Outlier Deletion  
Composite Test Methods, In-House Calibration  
ASTM Analysis, Lab Mean and Range**



SwRI 11382.02 EPA

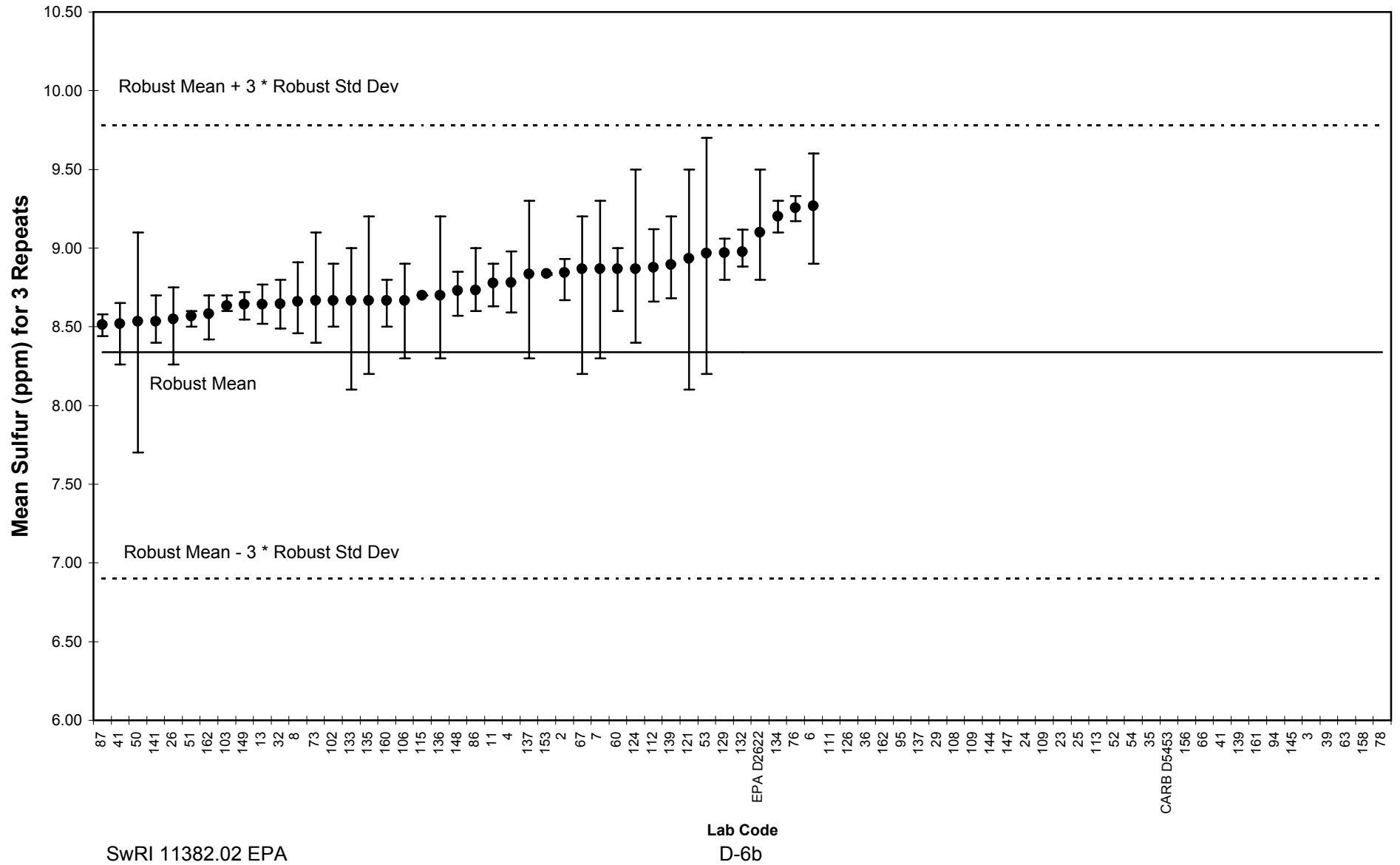
Lab Code  
D-5b

**Figure D-6a July Fuel #4, Gravimetric Outlier Deletion  
Composite Test Methods, In-House Calibration  
ANOVA Analysis, Lab Mean and Range**





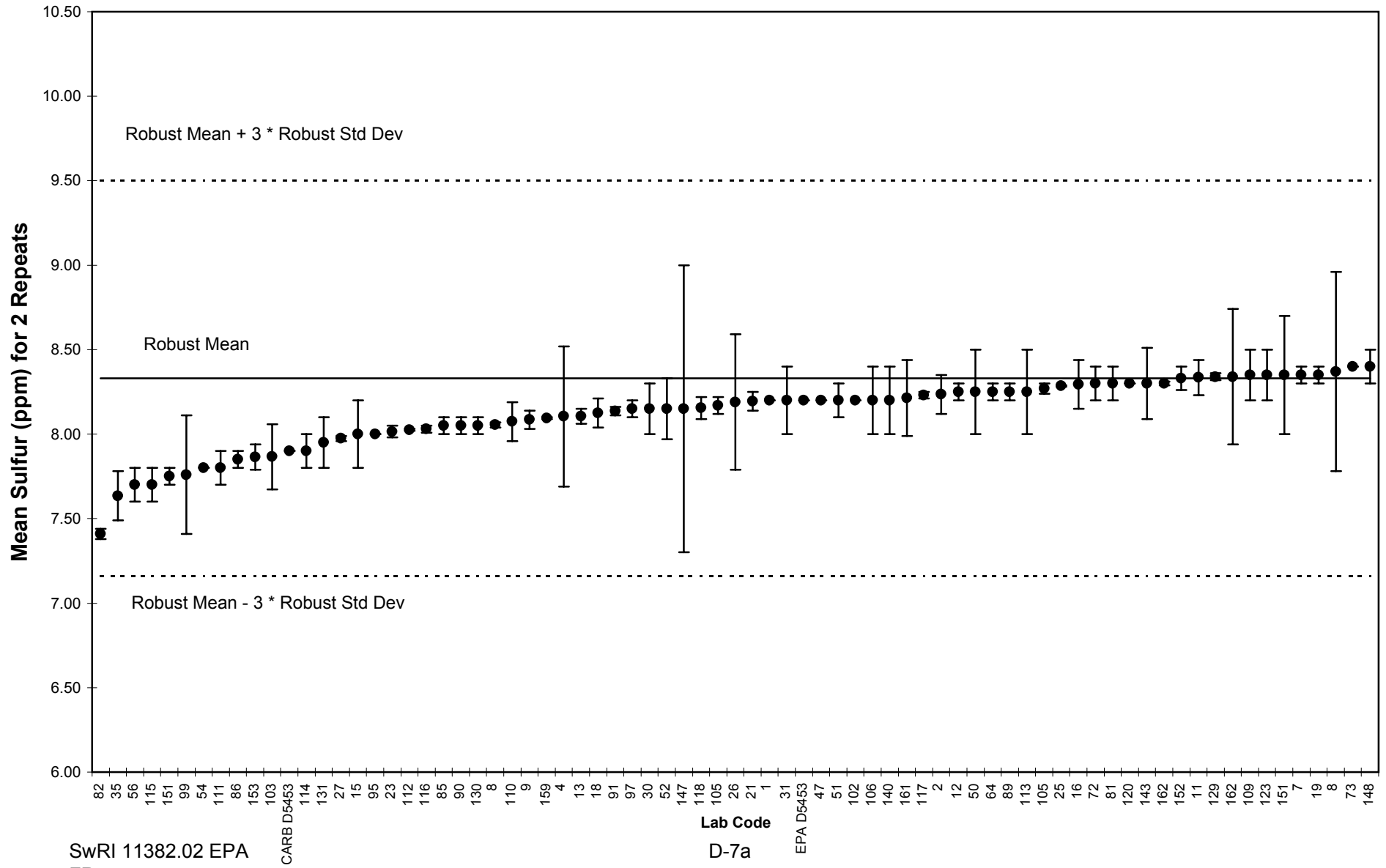
**Figure D-6b July Fuel #4, Gravimetric Outlier Deletion  
Composite Test Methods, In-House Calibration  
ANOVA Analysis, Lab Mean and Range**



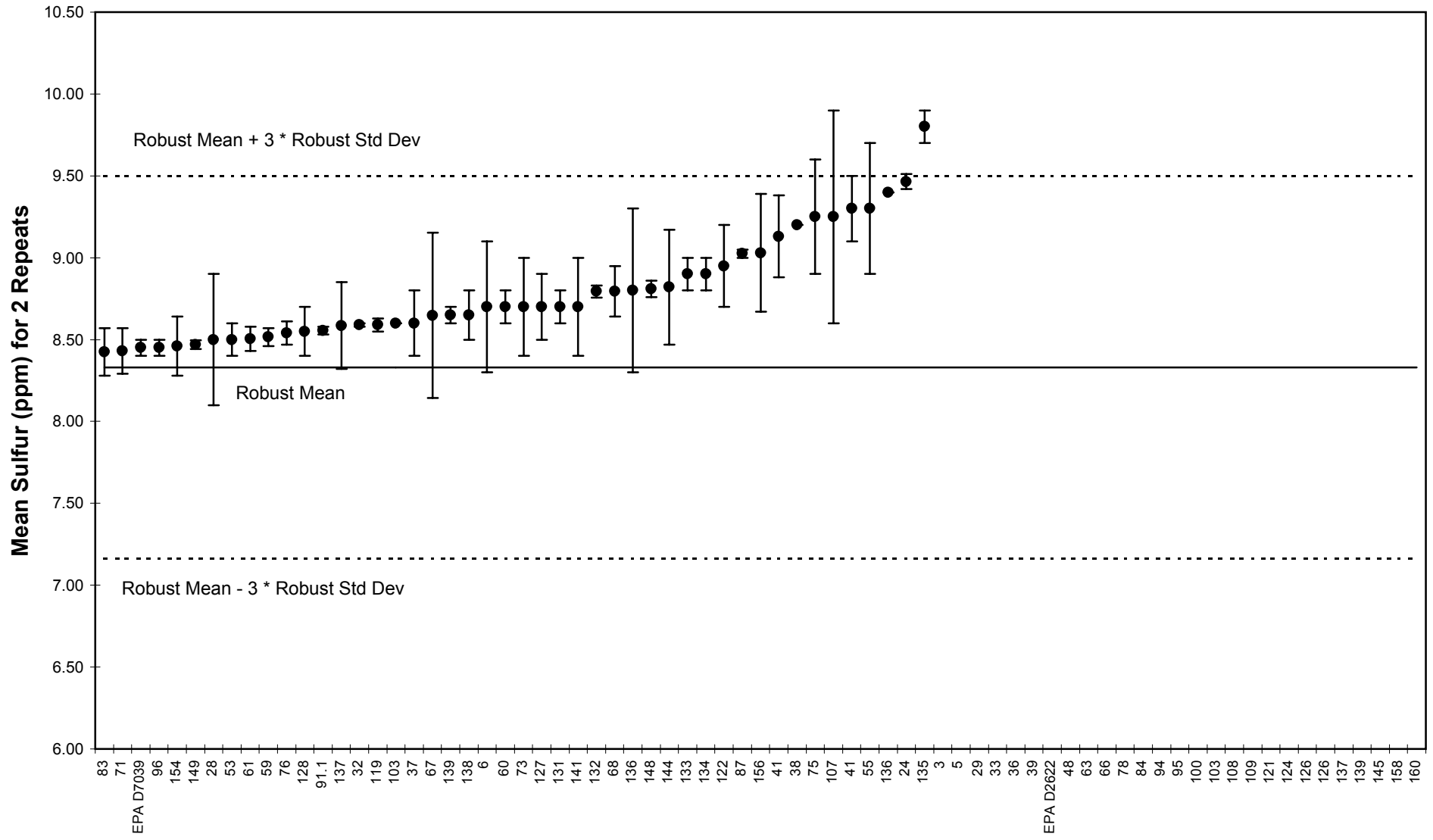
SwRI 11382.02 EPA

Lab Code  
D-6b

**Figure D-7a July Fuel #4, Gravimetric Outlier Deletion  
Composite Test Methods, NIST Calibration  
ASTM Analysis, Lab Mean and Range**



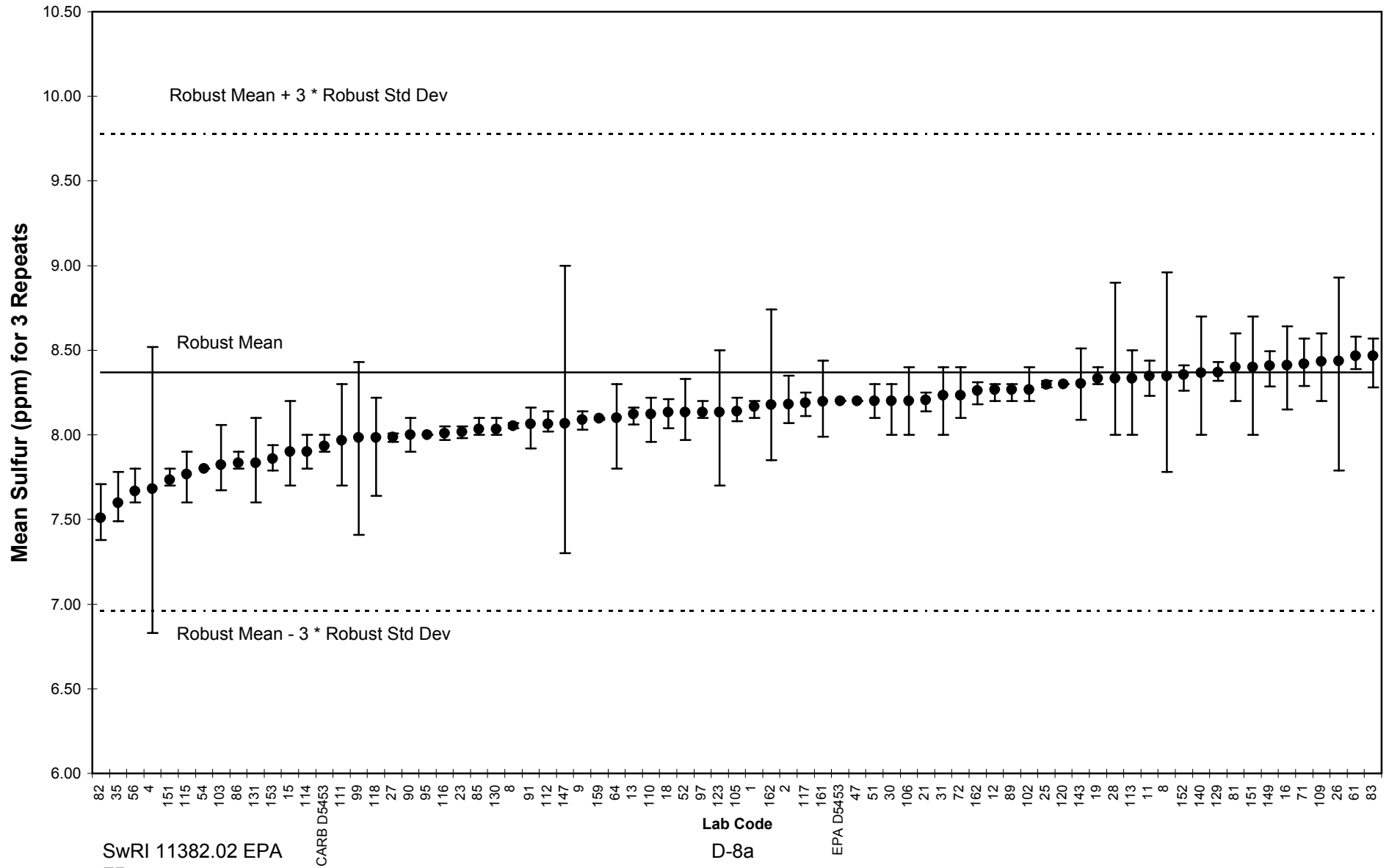
**Figure D-7b July Fuel #4, Gravimetric Outlier Deletion  
Composite Test Methods, NIST Calibration  
ASTM Analysis, Lab Mean and Range**



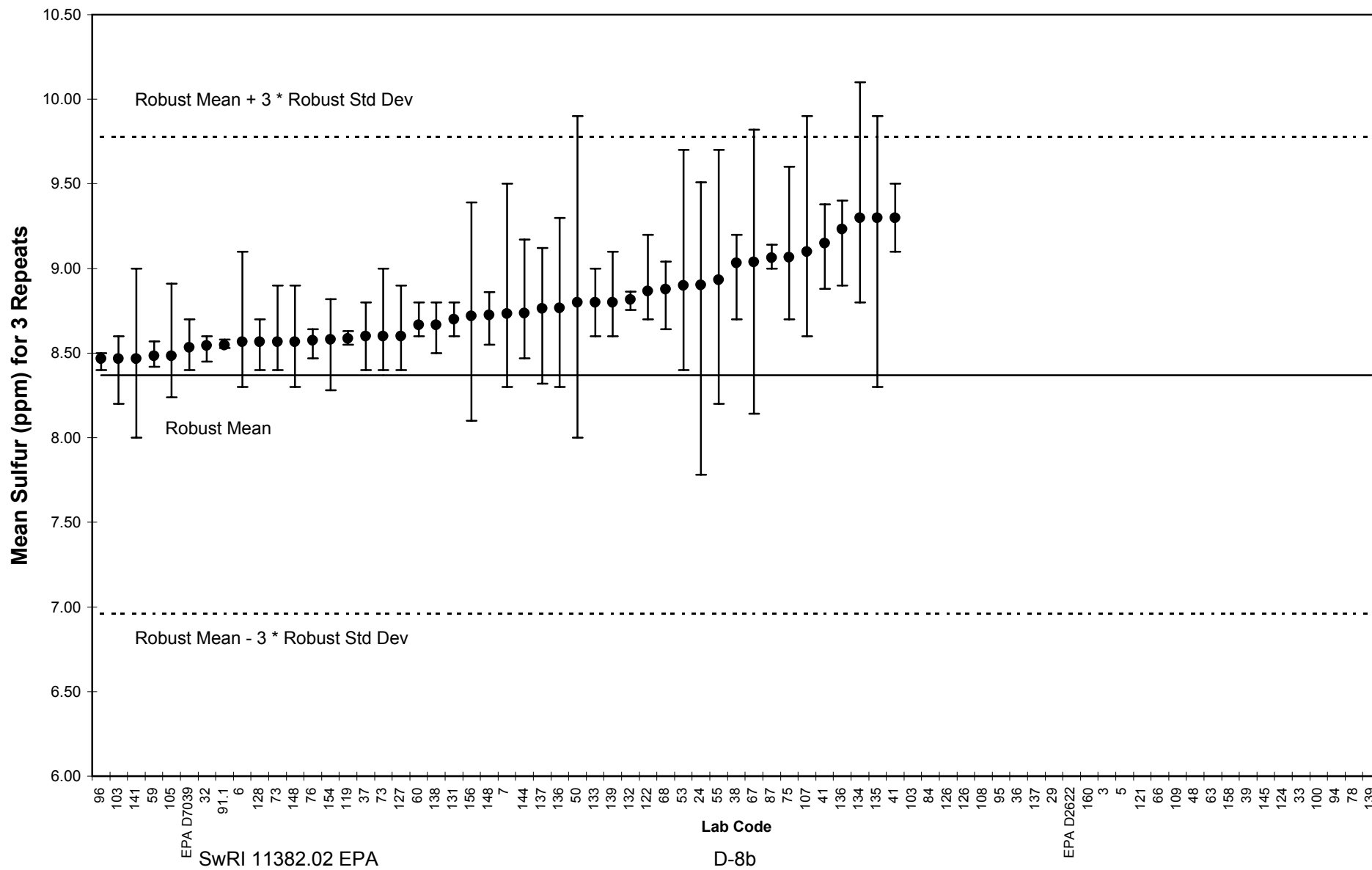
SwRI 11382.02 EPA

Lab Code  
D-7b

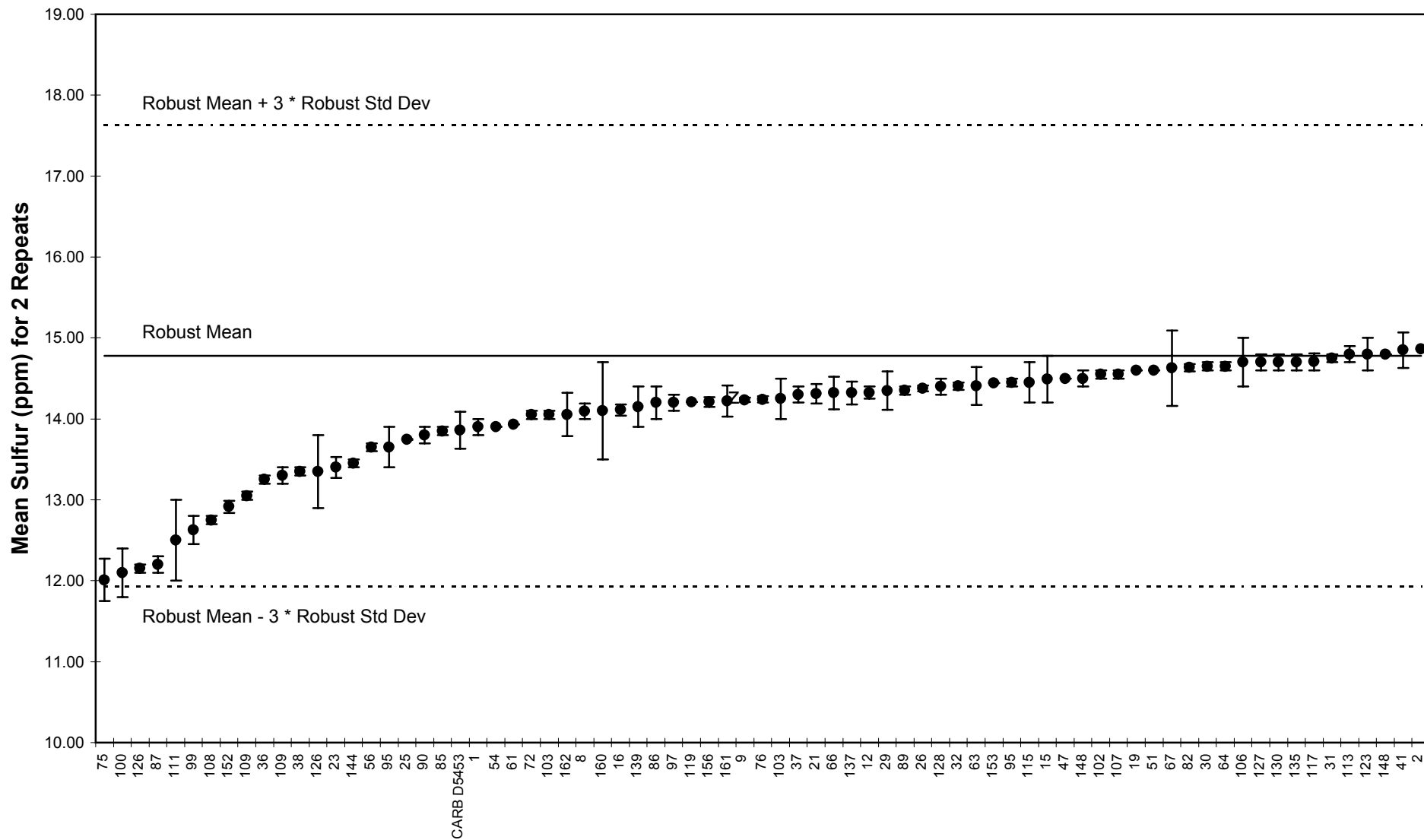
**Figure D-8a July Fuel #4, Gravimetric Outlier Deletion  
Composite Test Methods, NIST Calibration  
ANOVA Analysis, Lab Mean and Range**



**Figure D-8b July Fuel #4, Gravimetric Outlier Deletion  
Composite Test Methods, NIST Calibration  
ANOVA Analysis, Lab Mean and Range**



**Figure D-9a August Fuel #5, Robust Outlier Deletion  
Composite Test Methods, In-House Calibration  
ASTM Analysis, Lab Mean and Range**

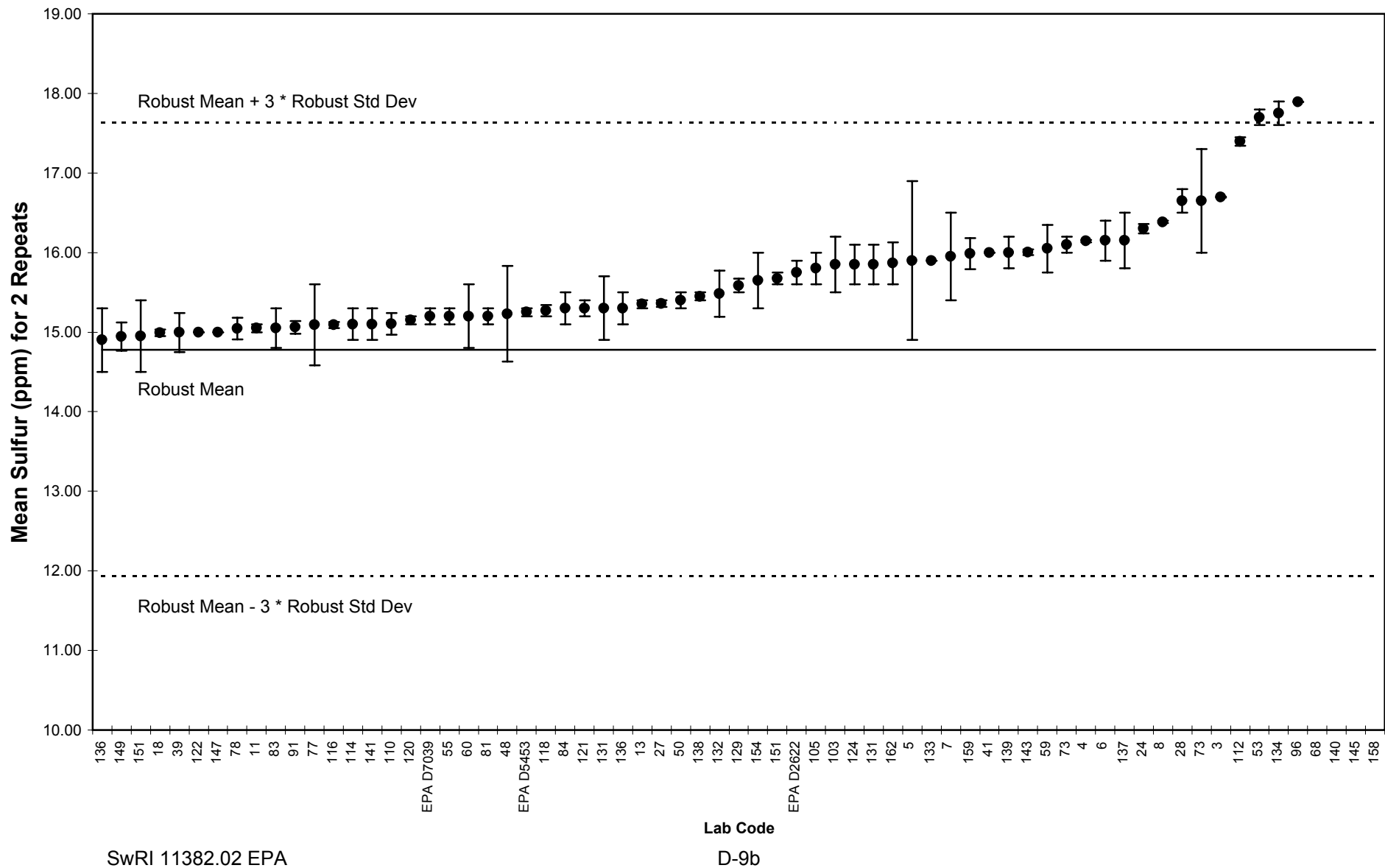


SwRI 11382.02 EPA

Lab Code

D-9a

**Figure D-9b August Fuel #5, Robust Outlier Deletion  
Composite Test Methods, In-House Calibration  
ASTM Analysis, Lab Mean and Range**

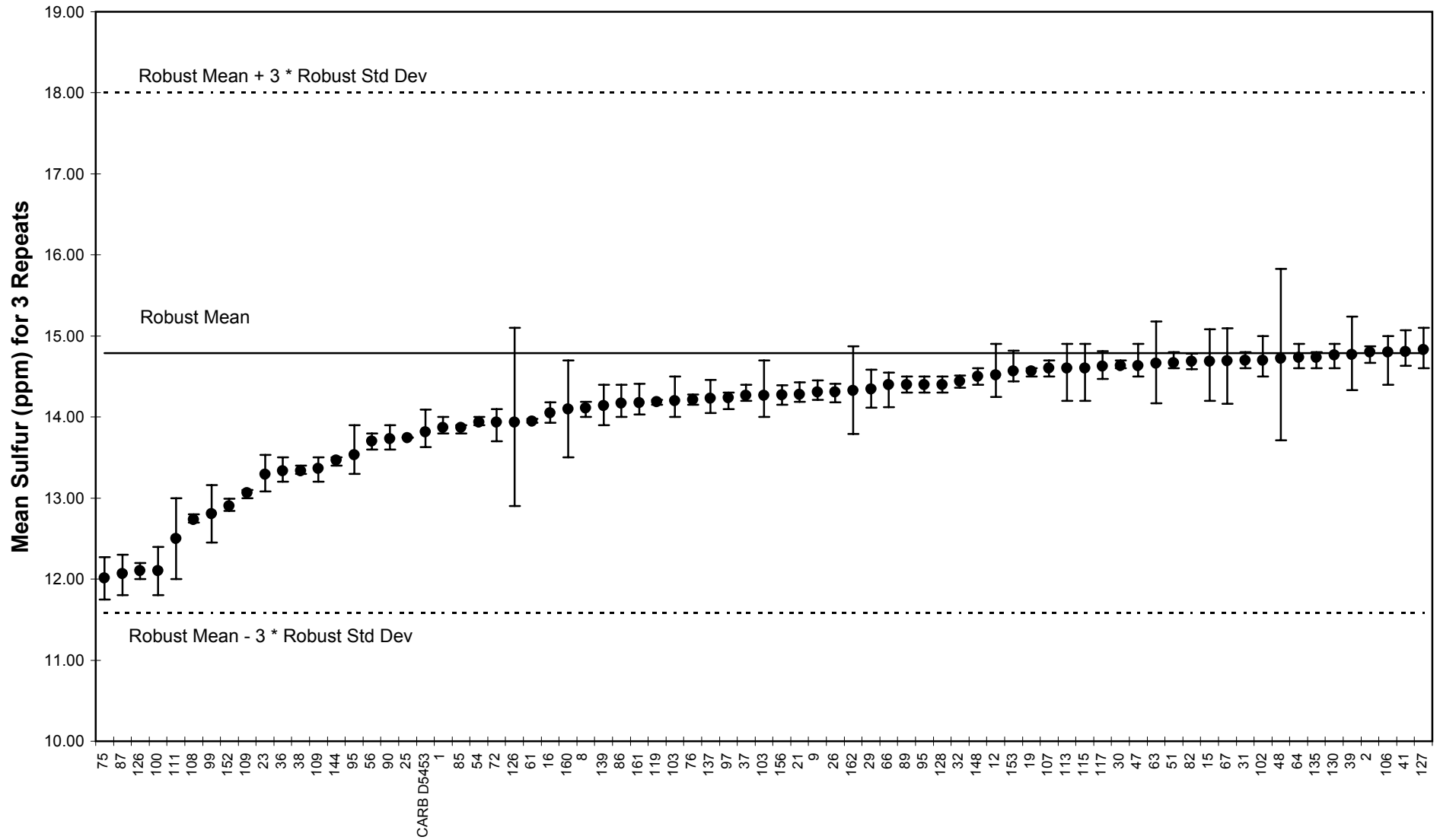


SwRI 11382.02 EPA

Lab Code

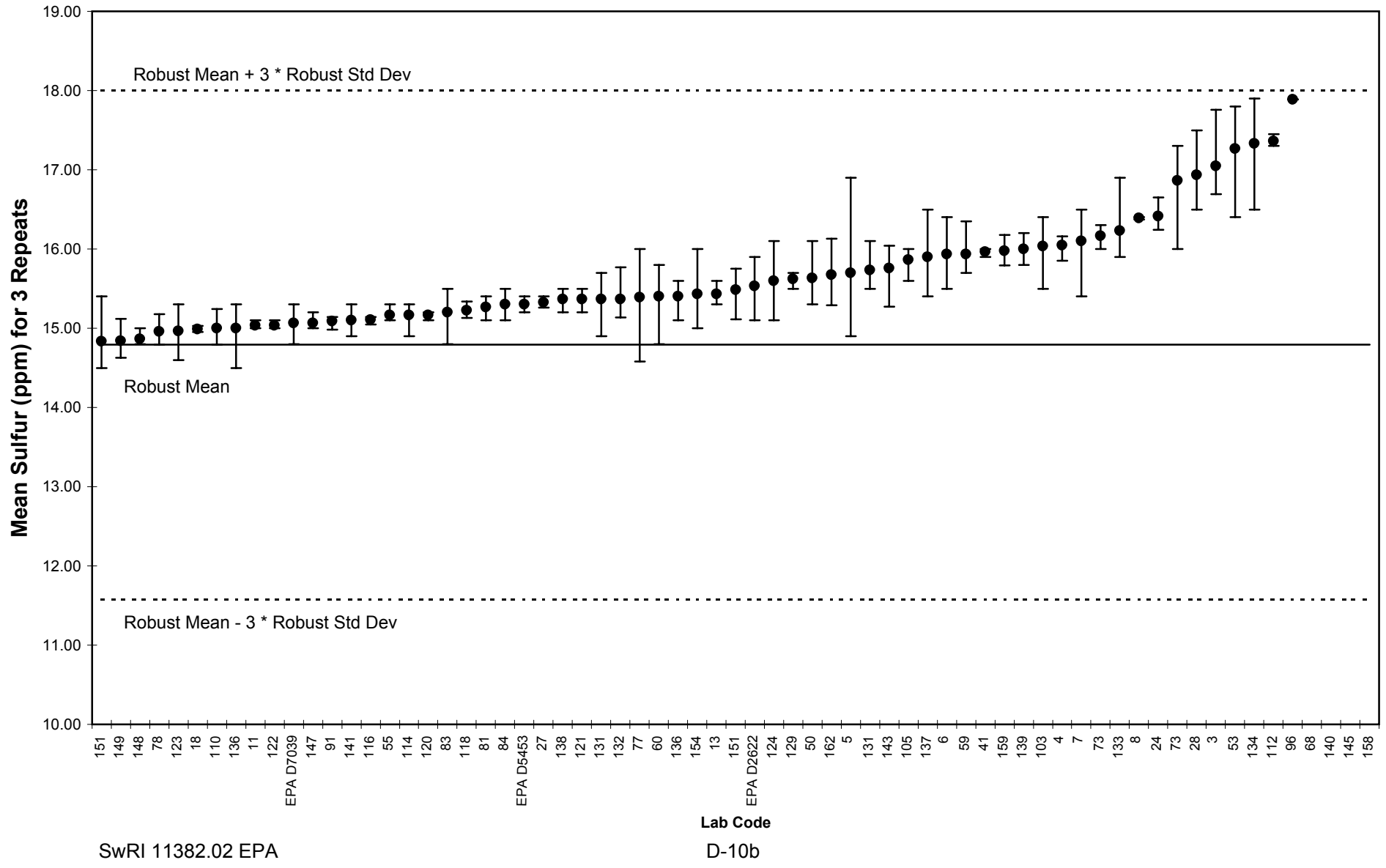
D-9b

**Figure D-10a August Fuel #5, Robust Outlier Deletion  
Composite Test Methods, In-House Calibration  
ANOVA Analysis, Lab Mean and Range**





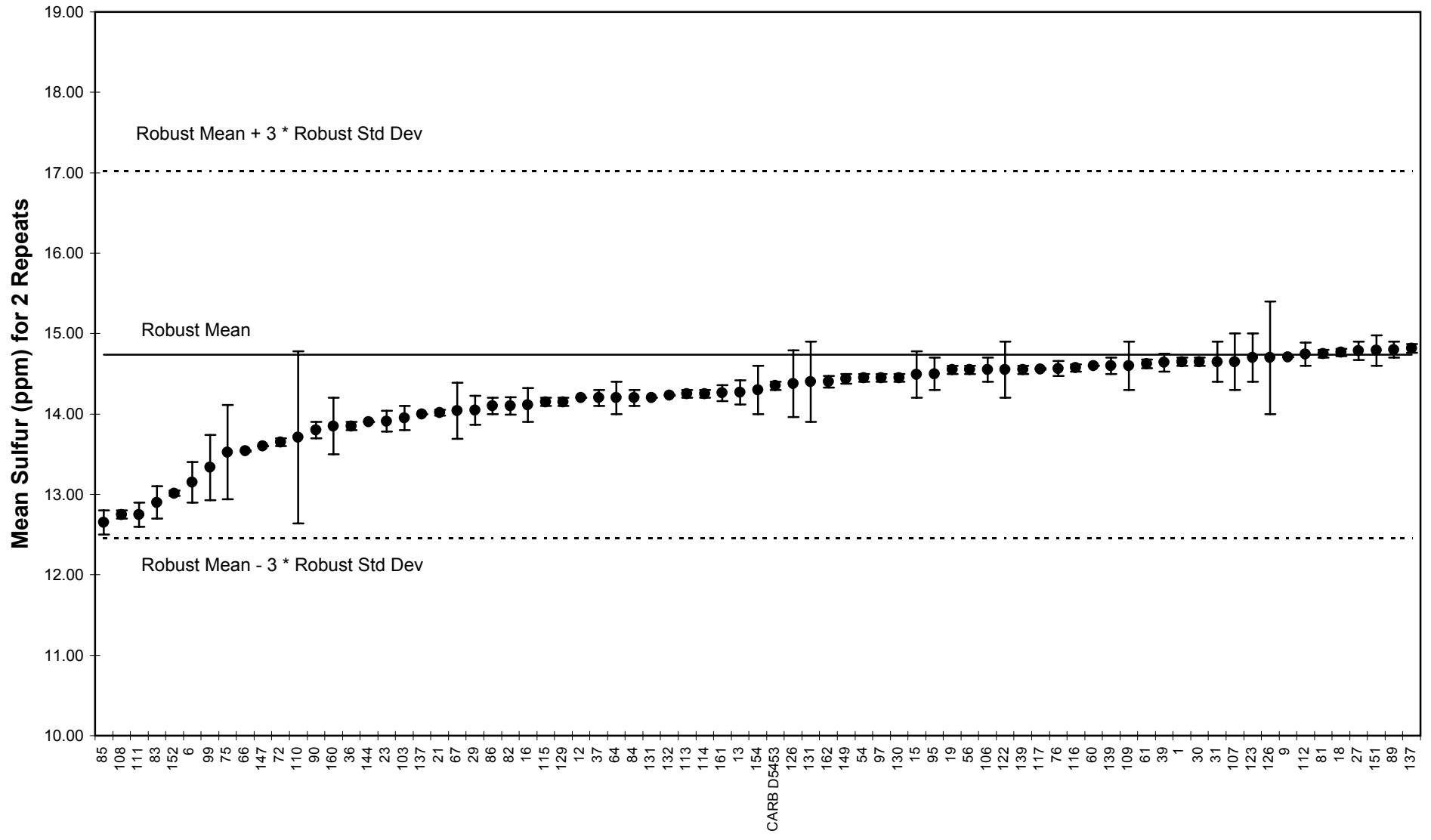
**Figure D-10b August Fuel #5, Robust Outlier Deletion  
Composite Test Methods, In-House Calibration  
ANOVA Analysis, Lab Mean and Range**



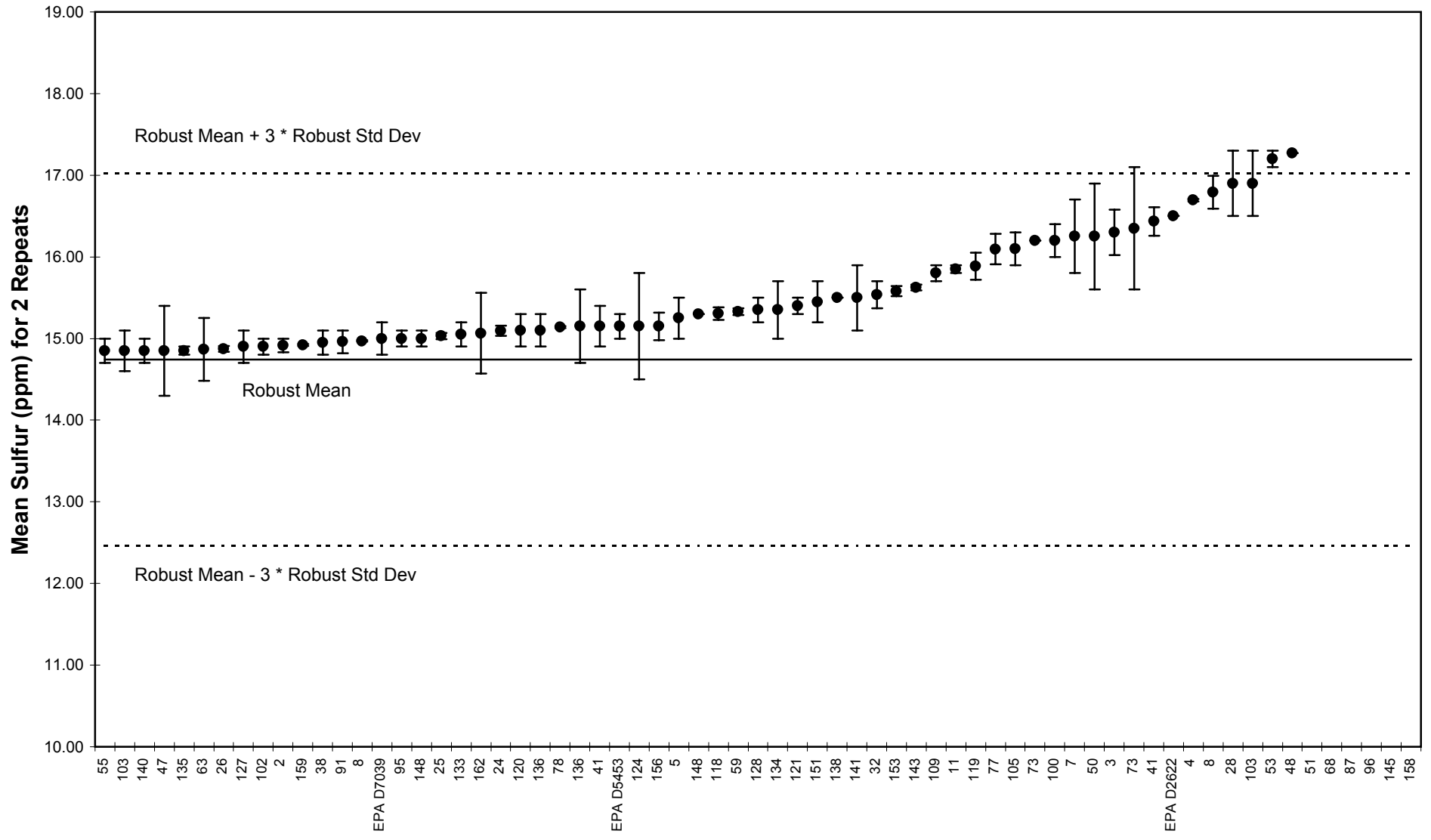
SwRI 11382.02 EPA

Lab Code  
D-10b

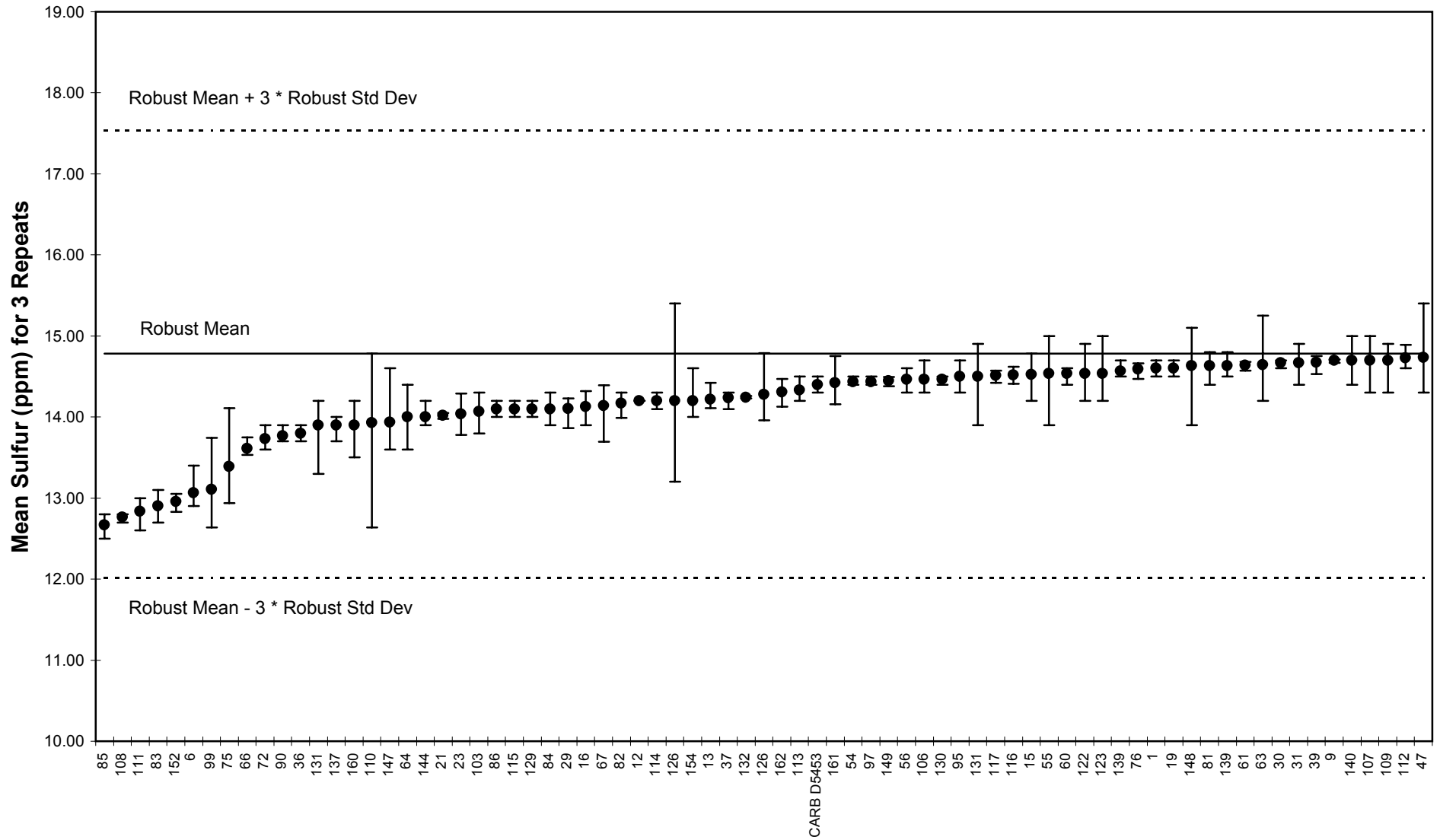
**Figure D-11a August Fuel #5, Robust Outlier Deletion  
Composite Test Methods, NIST Calibration  
ASTM Analysis, Lab Mean and Range**



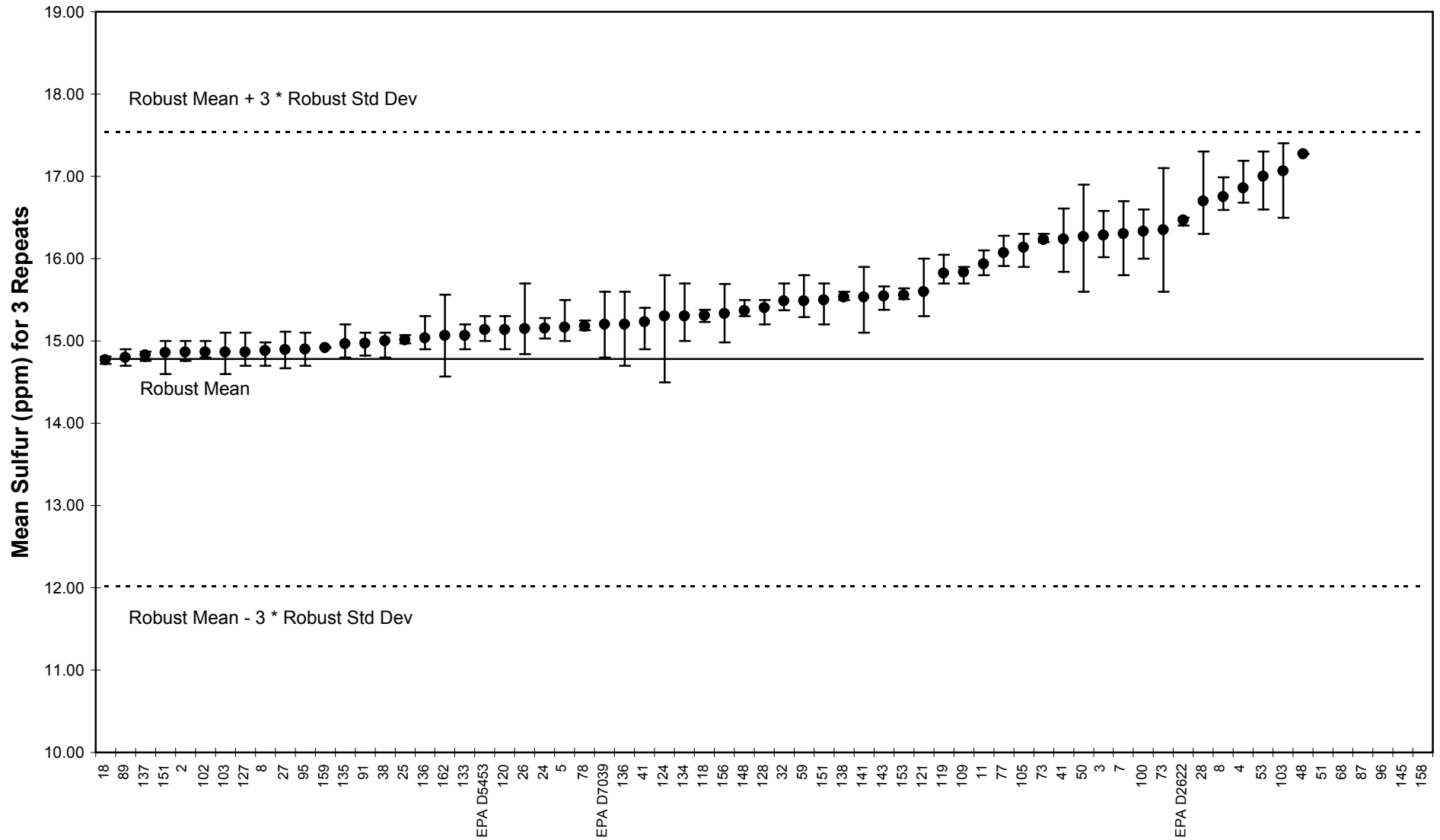
**Figure D-11b August Fuel #5, Robust Outlier Deletion  
Composite Test Methods, NIST Calibration  
ASTM Analysis, Lab Mean and Range**



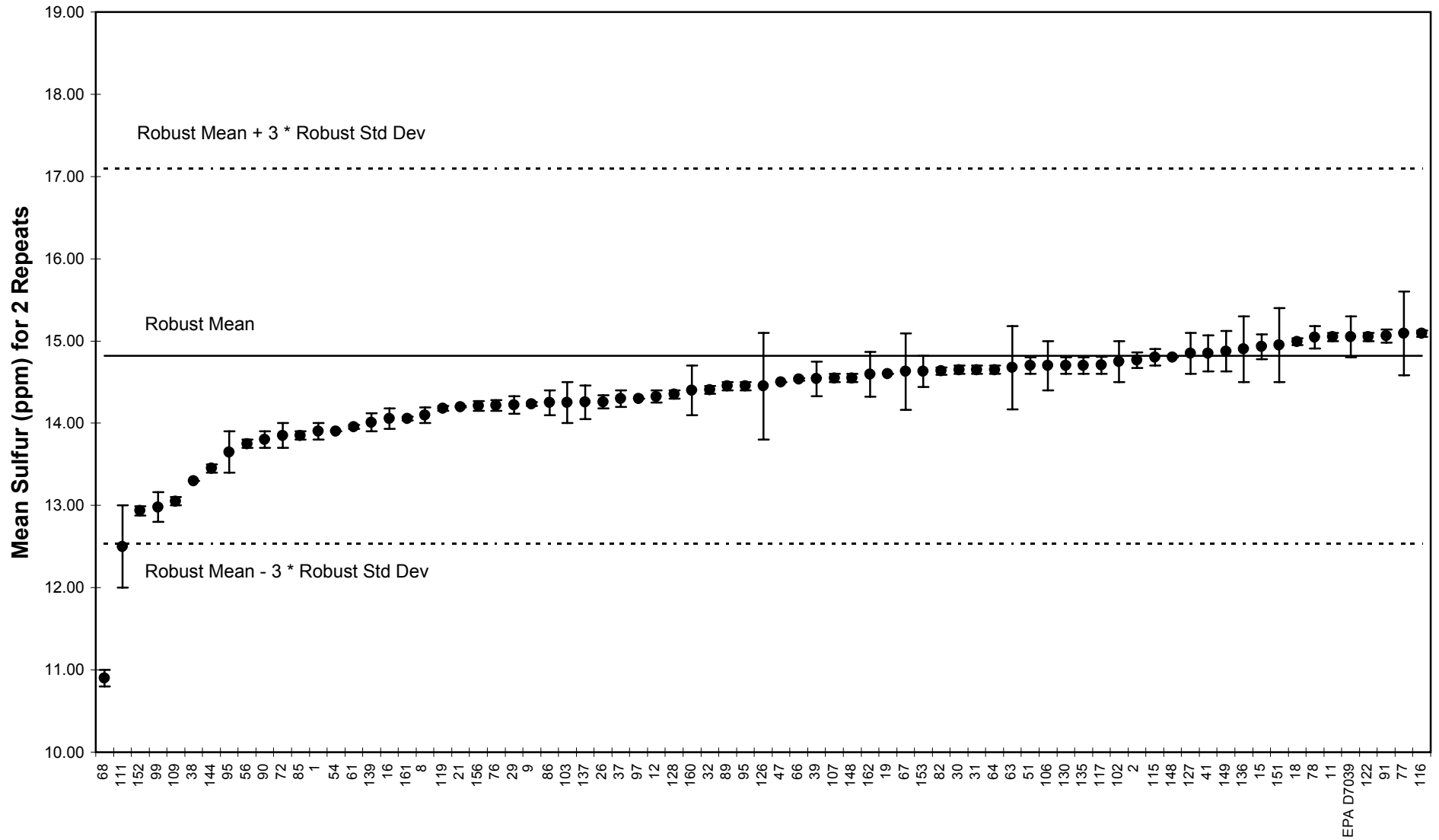
**Figure D-12a August Fuel #5, Robust Outlier Deletion  
Composite Test Methods, NIST Calibration  
ANOVA Analysis, Lab Mean and Range**



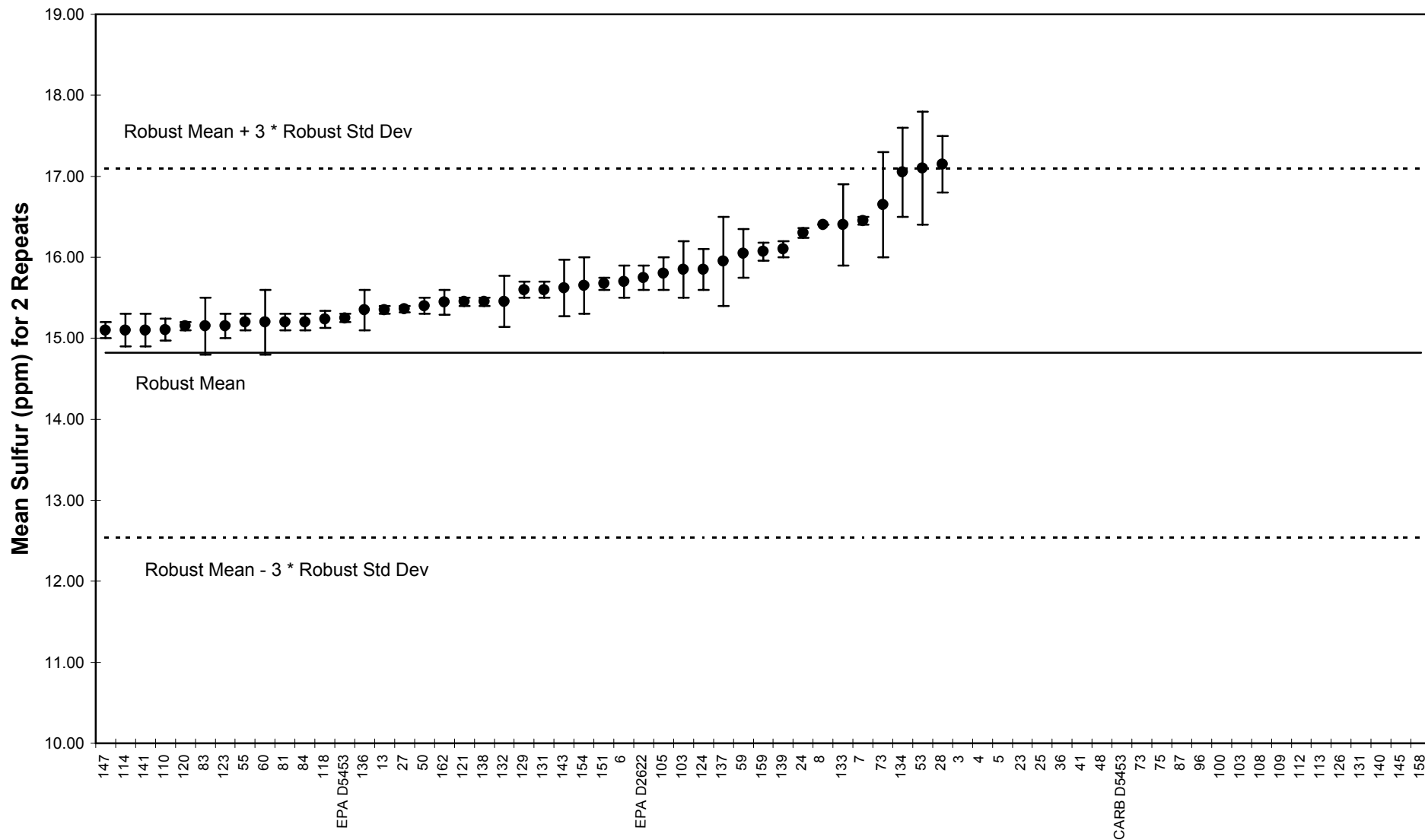
**Figure D-12b August Fuel #5, Robust Outlier Deletion  
Composite Test Methods, NIST Calibration  
ANOVA Analysis, Lab Mean and Range**



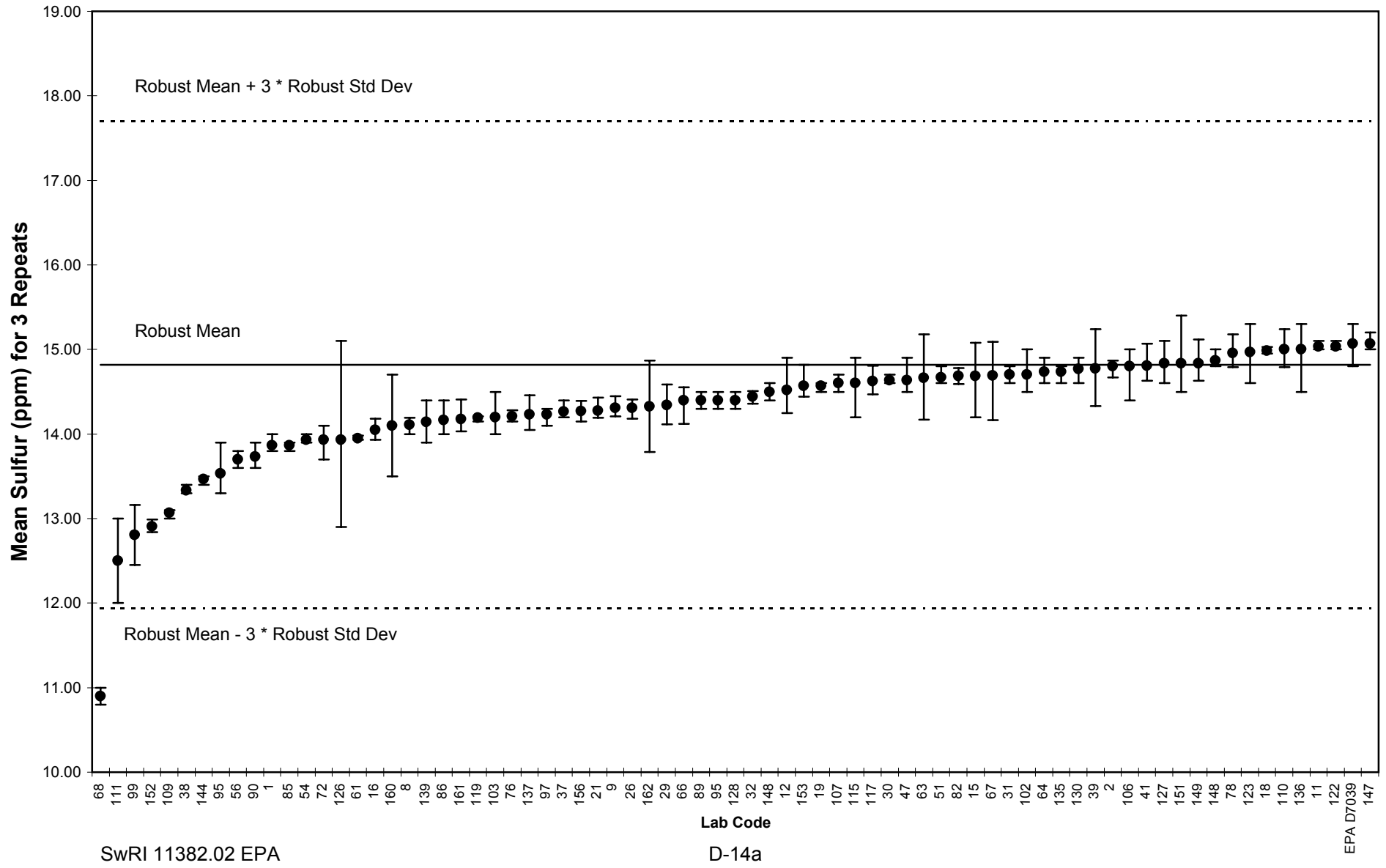
**Figure D-13a August Fuel #5, Gravimetric Outlier Deletion  
Composite Test Methods, In-House Calibration  
ASTM Analysis, Lab Mean and Range**



**Figure D-13b August Fuel #5, Gravimetric Outlier Deletion  
Composite Test Methods, In-House Calibration  
ASTM Analysis, Lab Mean and Range**

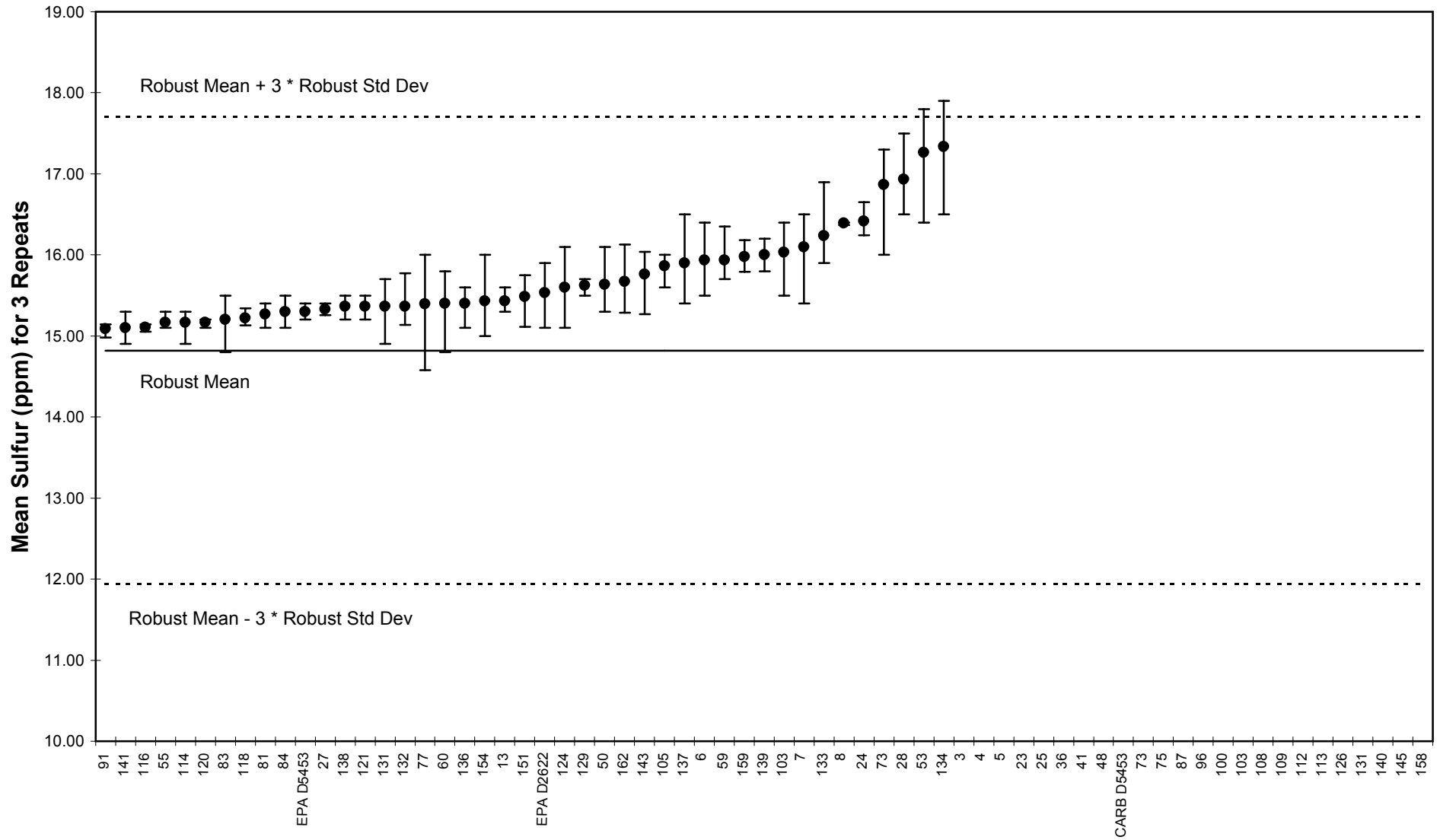


**Figure D-14a August Fuel #5, Gravimetric Outlier Deletion  
Composite Test Methods, In-House Calibration  
ANOVA Analysis, Lab Mean and Range**

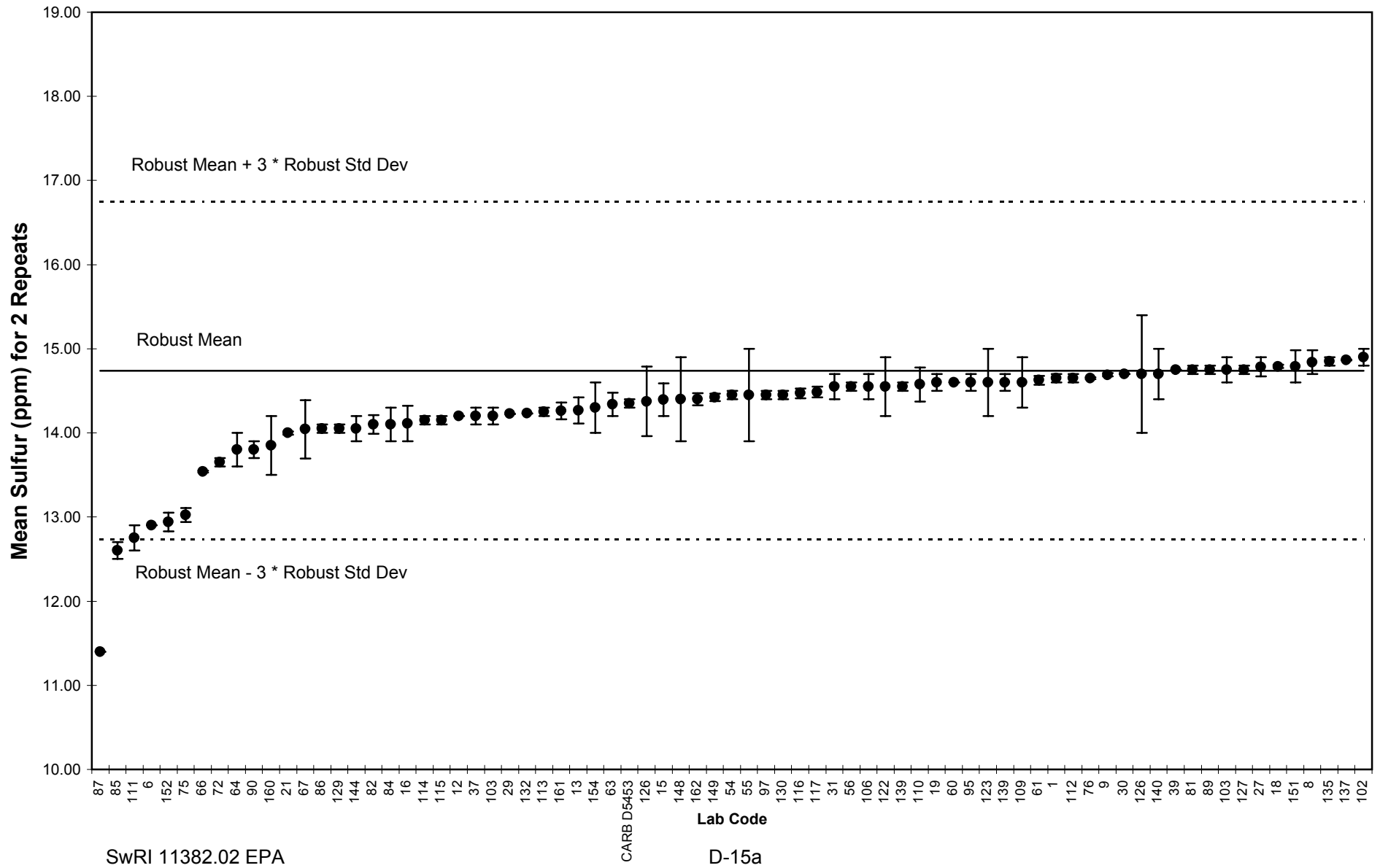




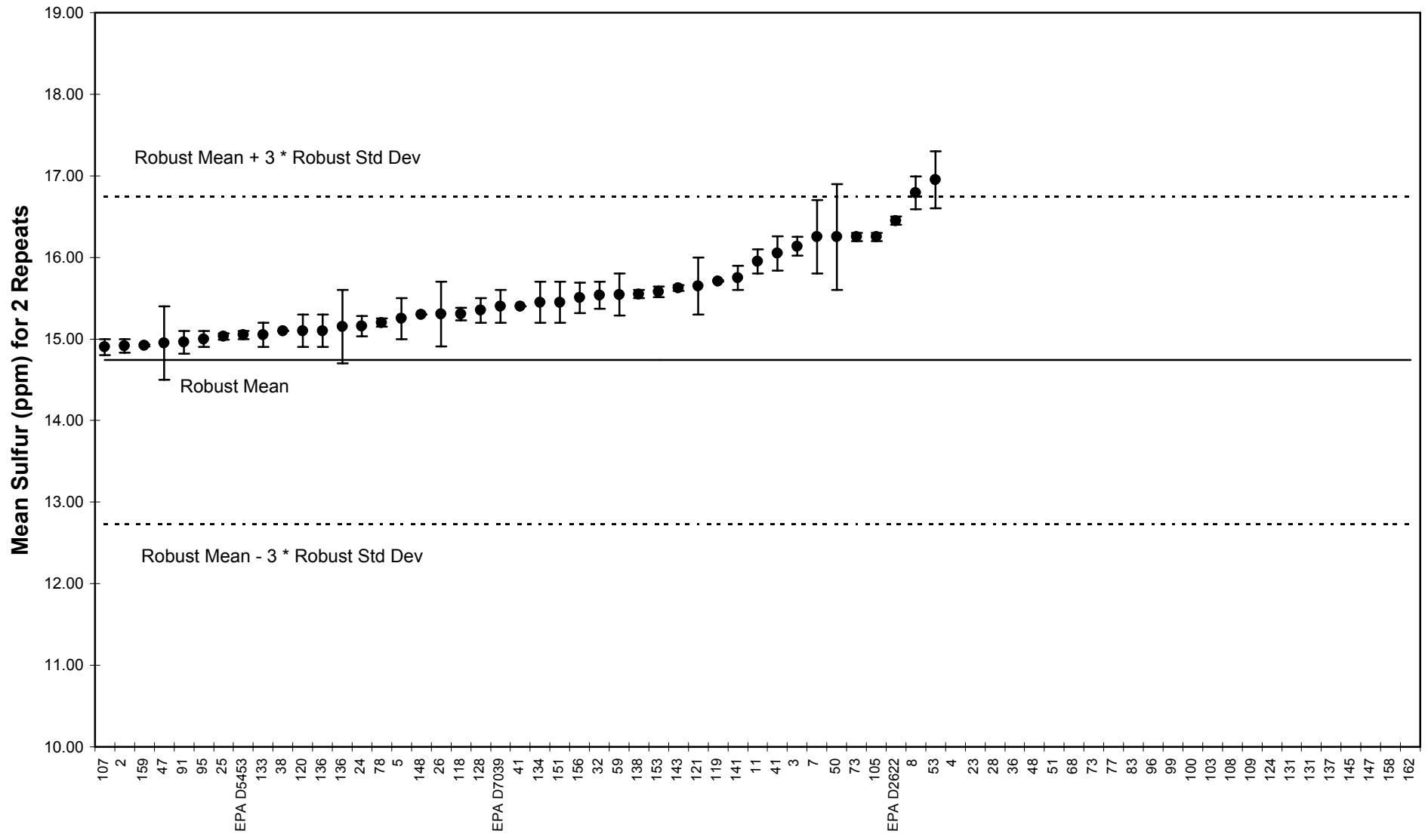
**Figure D-14b August Fuel #5, Gravimetric Outlier Deletion  
Composite Test Methods, In-House Calibration  
ANOVA Analysis, Lab Mean and Range**



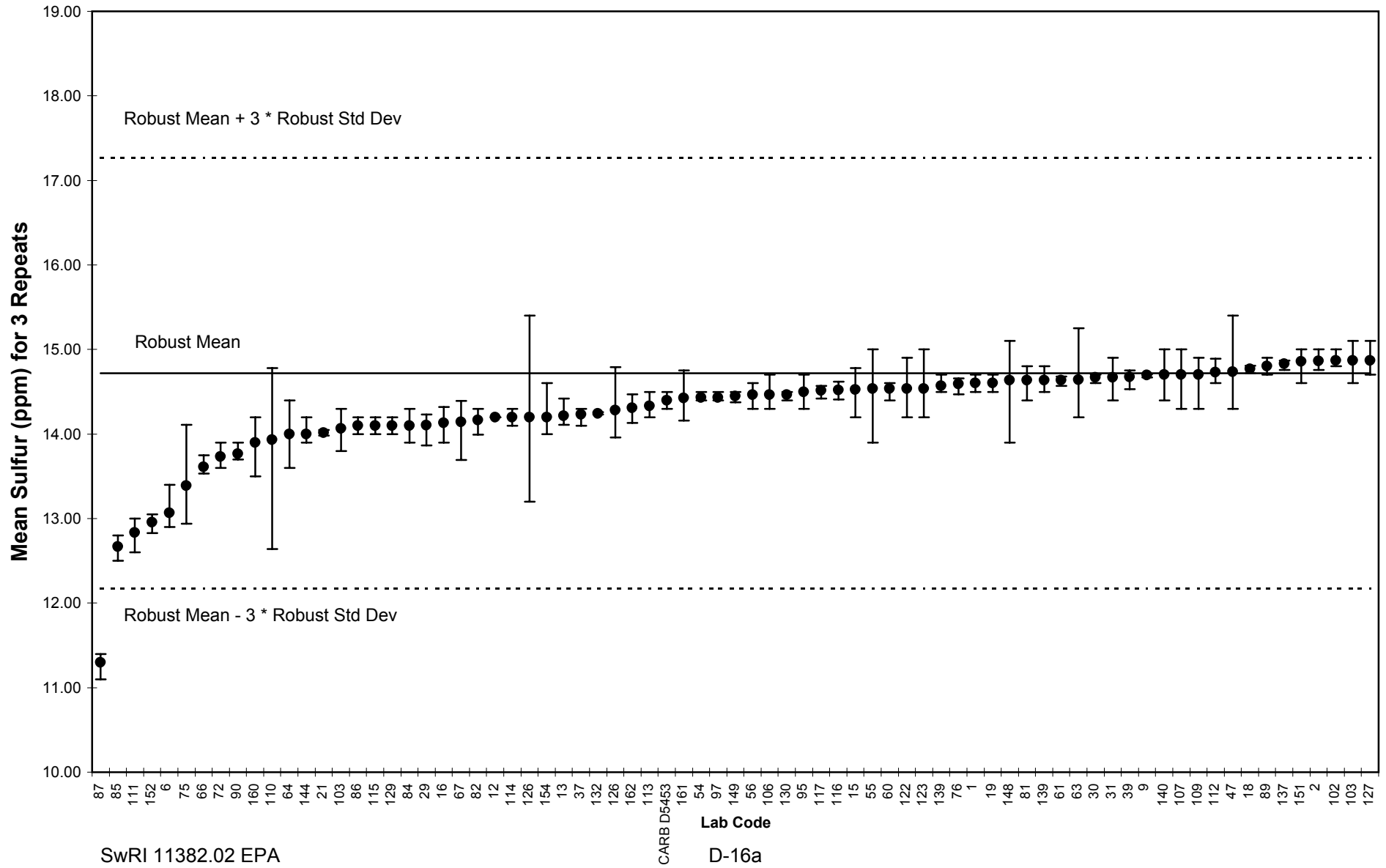
**Figure D-15a August Fuel #5, Gravimetric Outlier Deletion  
Composite Test Methods, NIST Calibration  
ASTM Analysis, Lab Mean and Range**



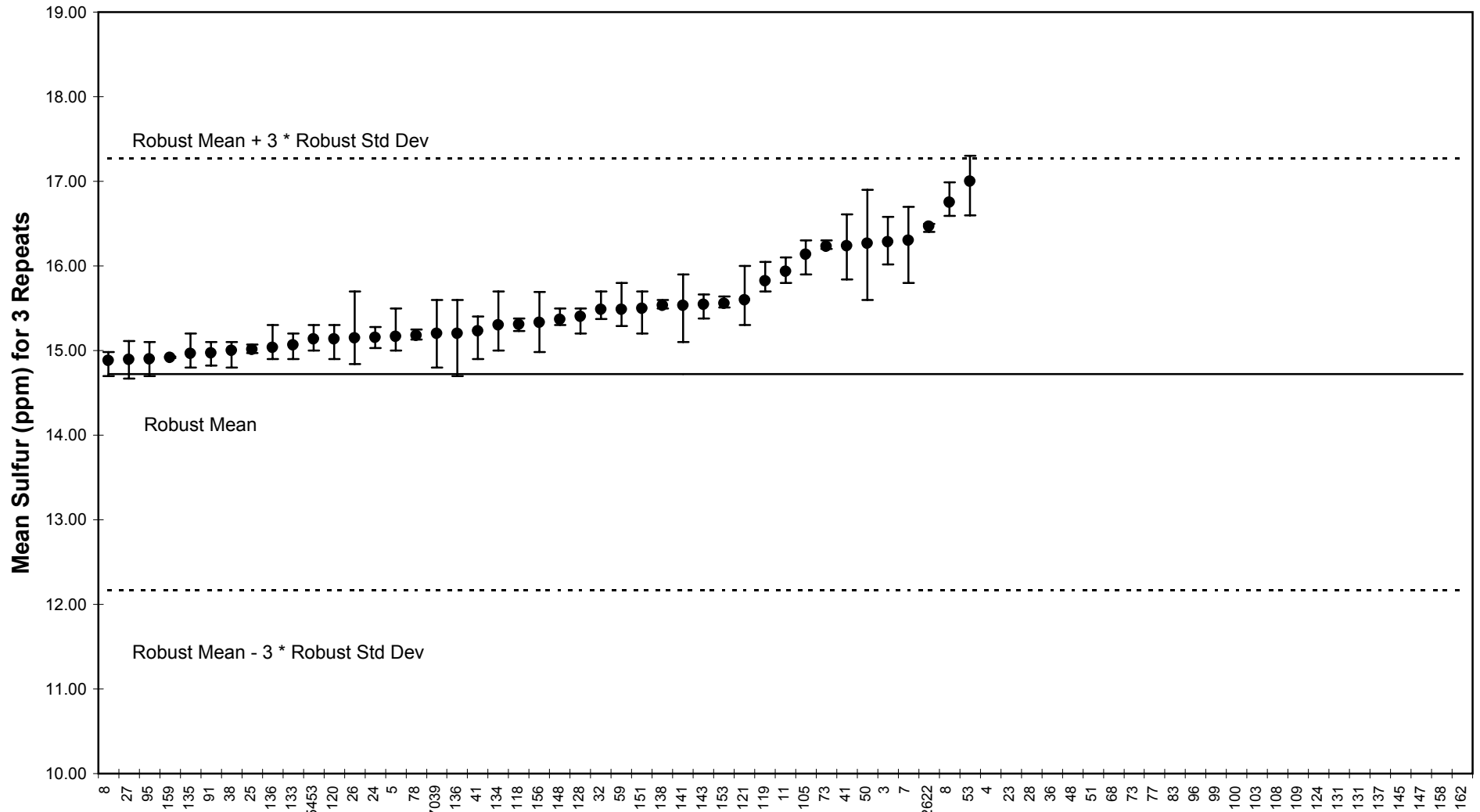
**Figure D-15b August Fuel #5, Gravimetric Outlier Deletion  
Composite Test Methods, NIST Calibration  
ASTM Analysis, Lab Mean and Range**



**Figure D-16a August Fuel #5, Gravimetric Outlier Deletion  
Composite Test Methods, NIST Calibration  
ANOVA Analysis, Lab Mean and Range**



**Figure D-16b August Fuel #5, Gravimetric Outlier Deletion  
Composite Test Methods, NIST Calibration  
ANOVA Analysis, Lab Mean and Range**



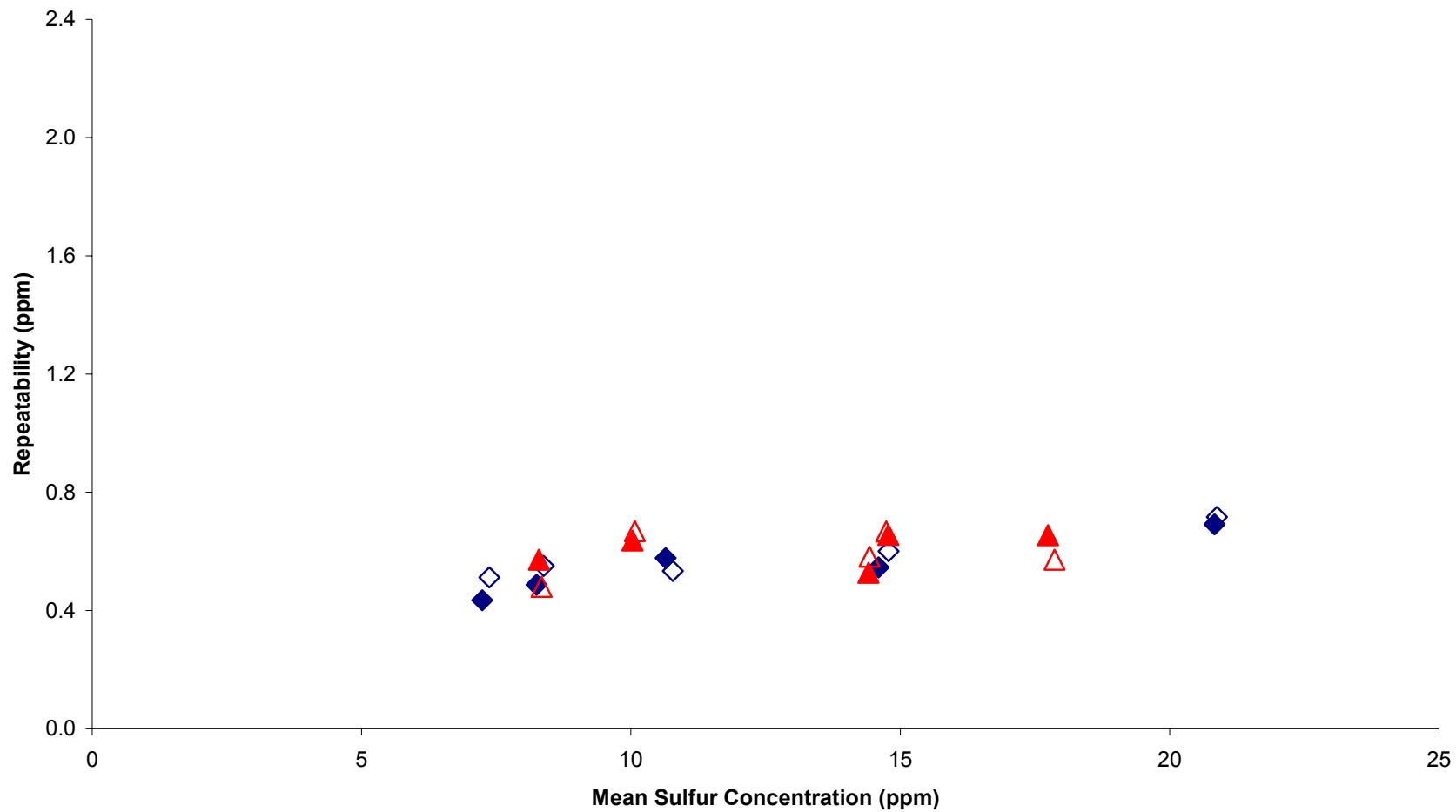
SwRI 11382.02 EPA

Lab Code  
D-16b

## **APPENDIX E**

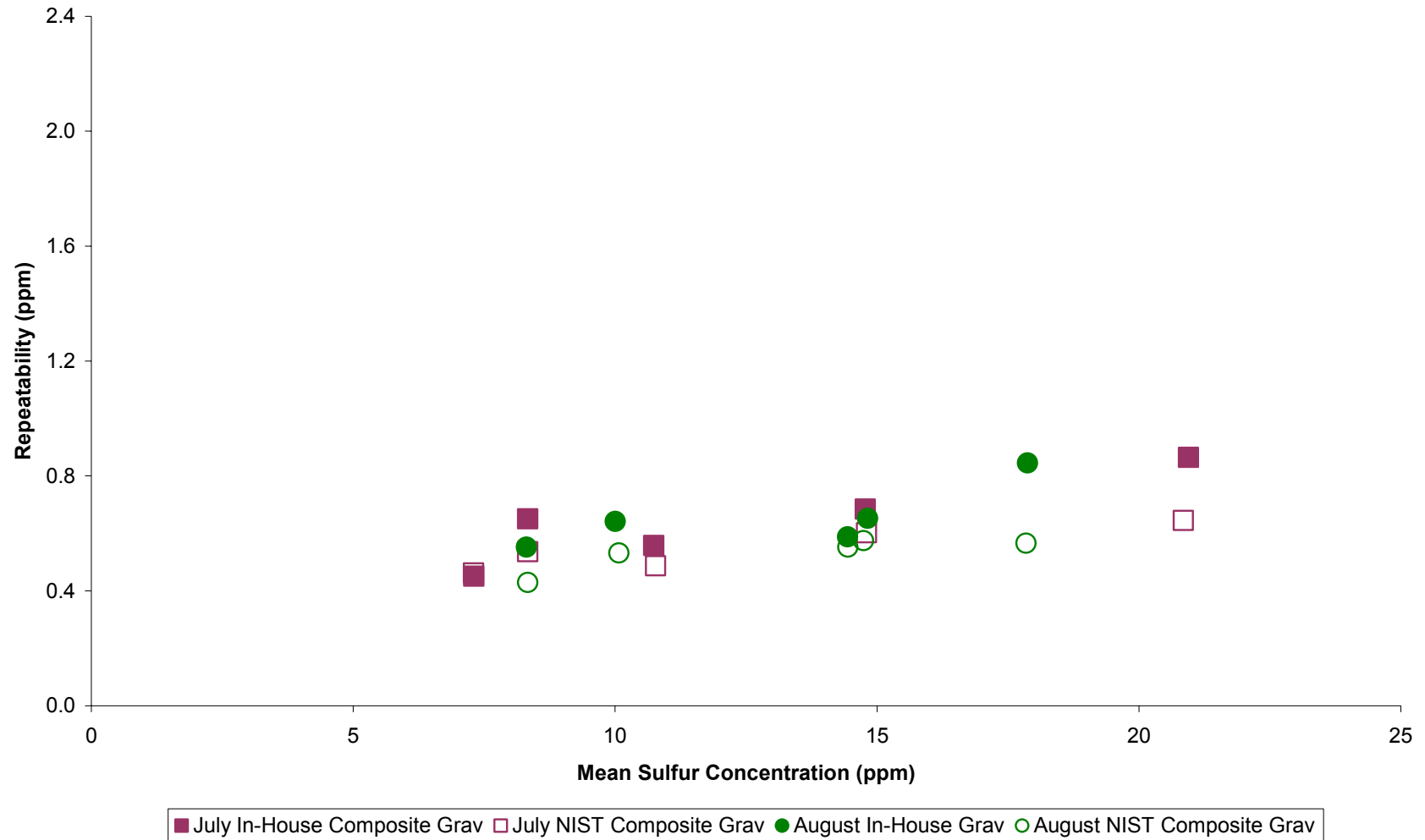
**PLOTS OF OVERALL REPEATABILITY (28 PLOTS)**

Figure E-1 Composite Test Methods, Robust Outlier, ASTM Analysis  
Comparing In-House and NIST Calibrations



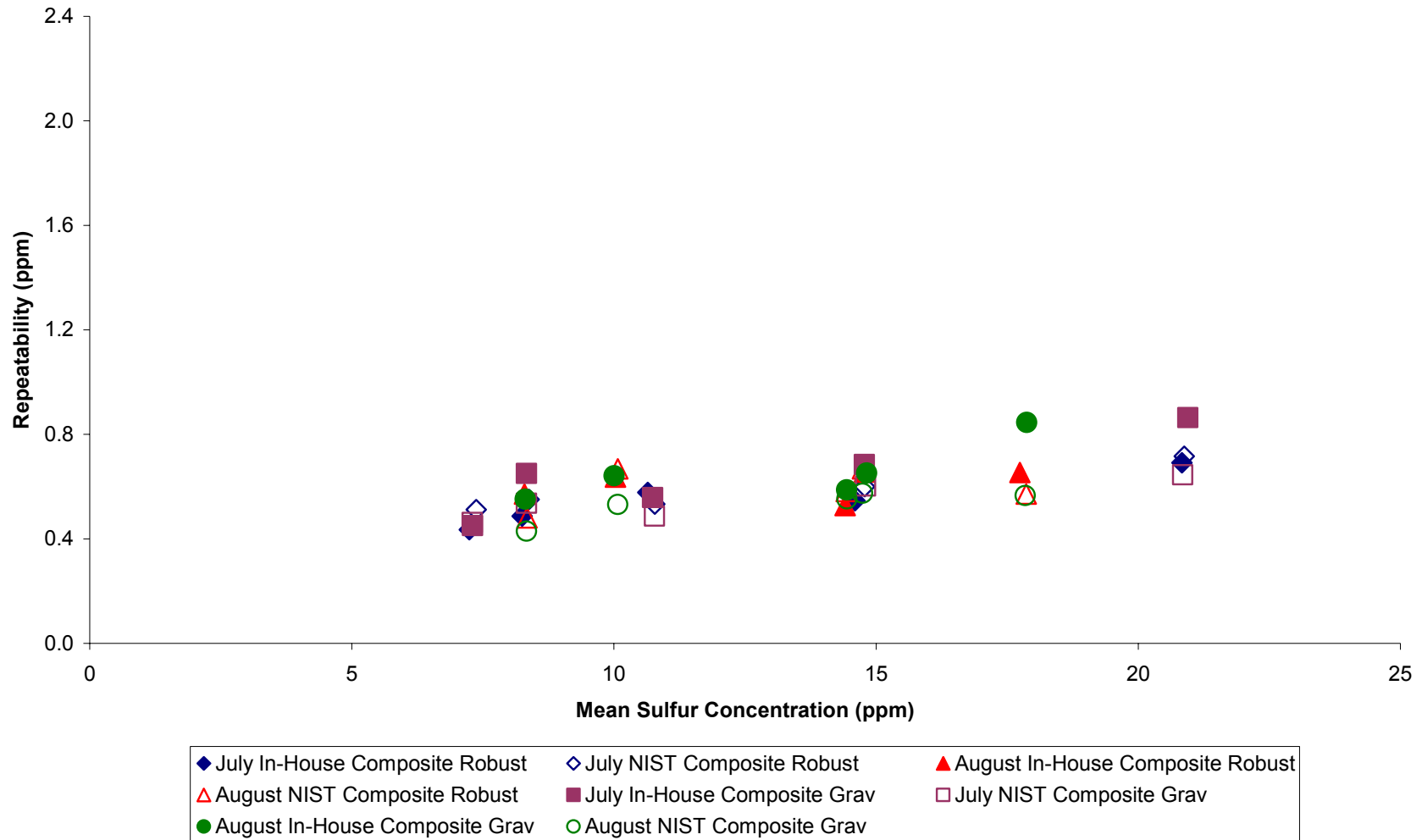
◆ July In-House Composite Robust ◇ July NIST Composite Robust ▲ August In-House Composite Robust △ August NIST Composite Robust

Figure E-2 Composite Test Methods, Gravimetric Outlier, ASTM Analysis  
Comparing In-House and NIST Calibrations





**Figure E-3 Composite Test Methods, Robust and Gravimetric Outlier, ASTM Analysis  
Comparing In-House and NIST Calibrations**



**Figure E-4 Composite Test Methods, Robust and Gravimetric Outlier, ASTM Analysis  
NIST Calibration**

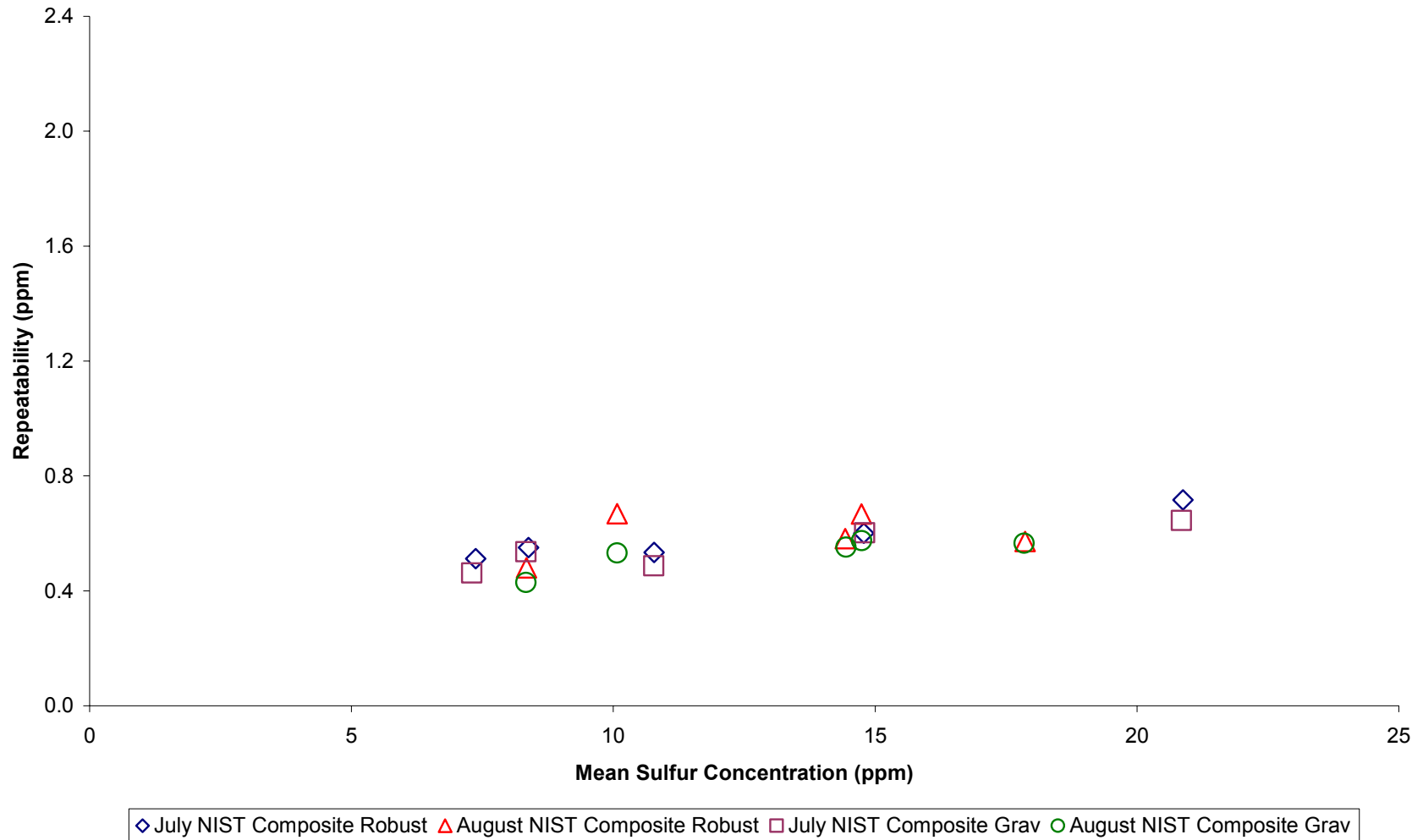


Figure E-5 Composite Test Methods, Robust and Gravimetric Outlier, ASTM Analysis  
In-House Calibration

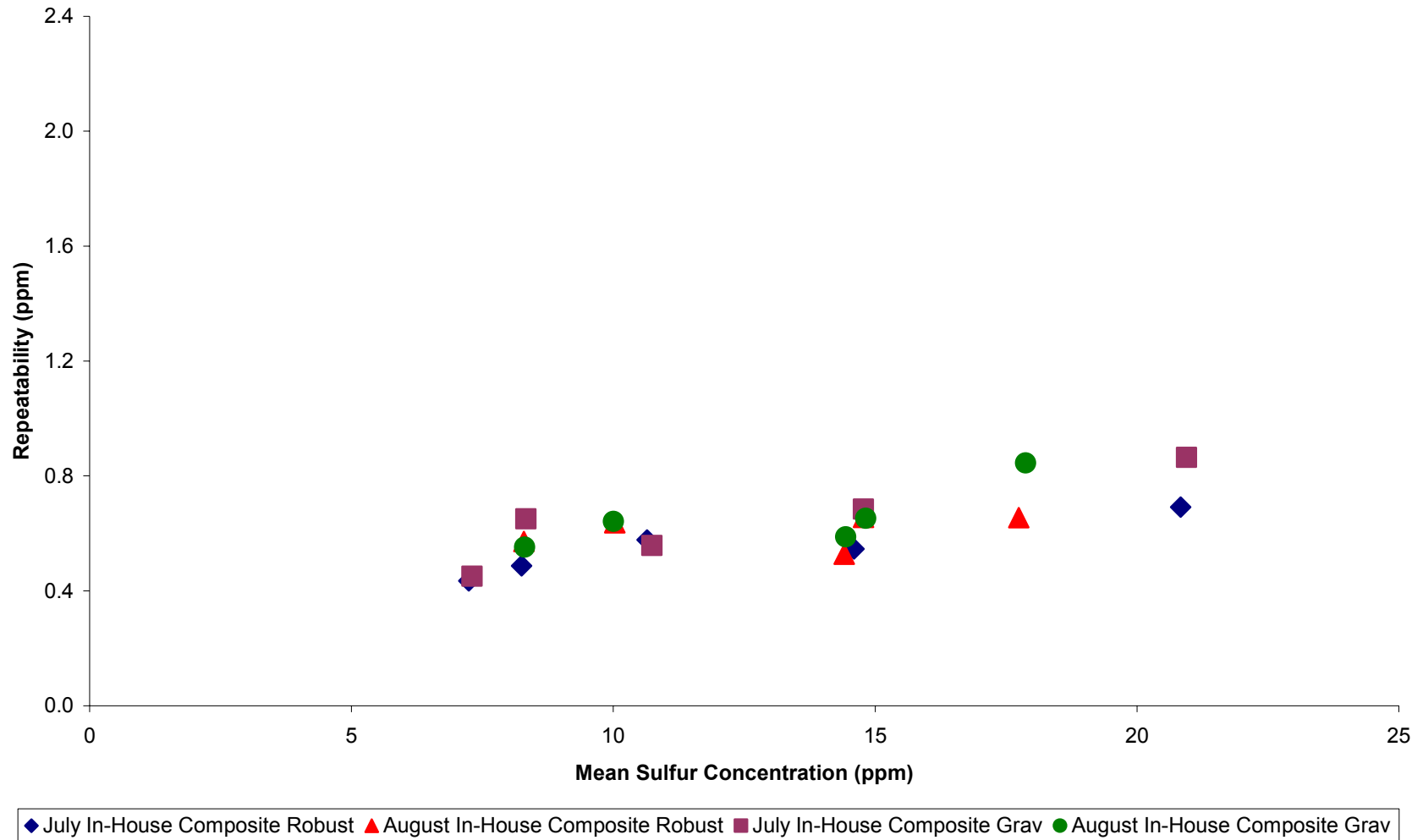
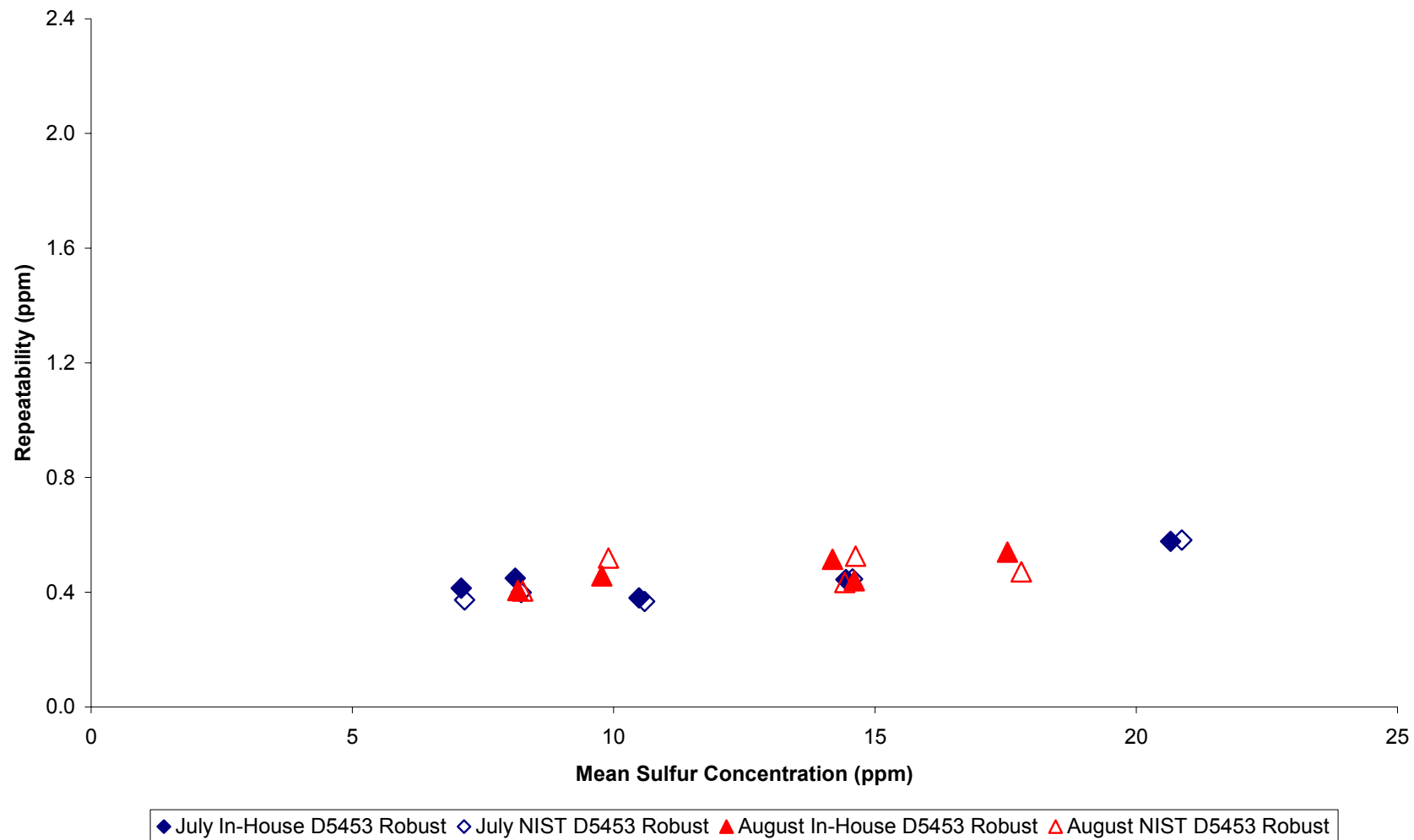
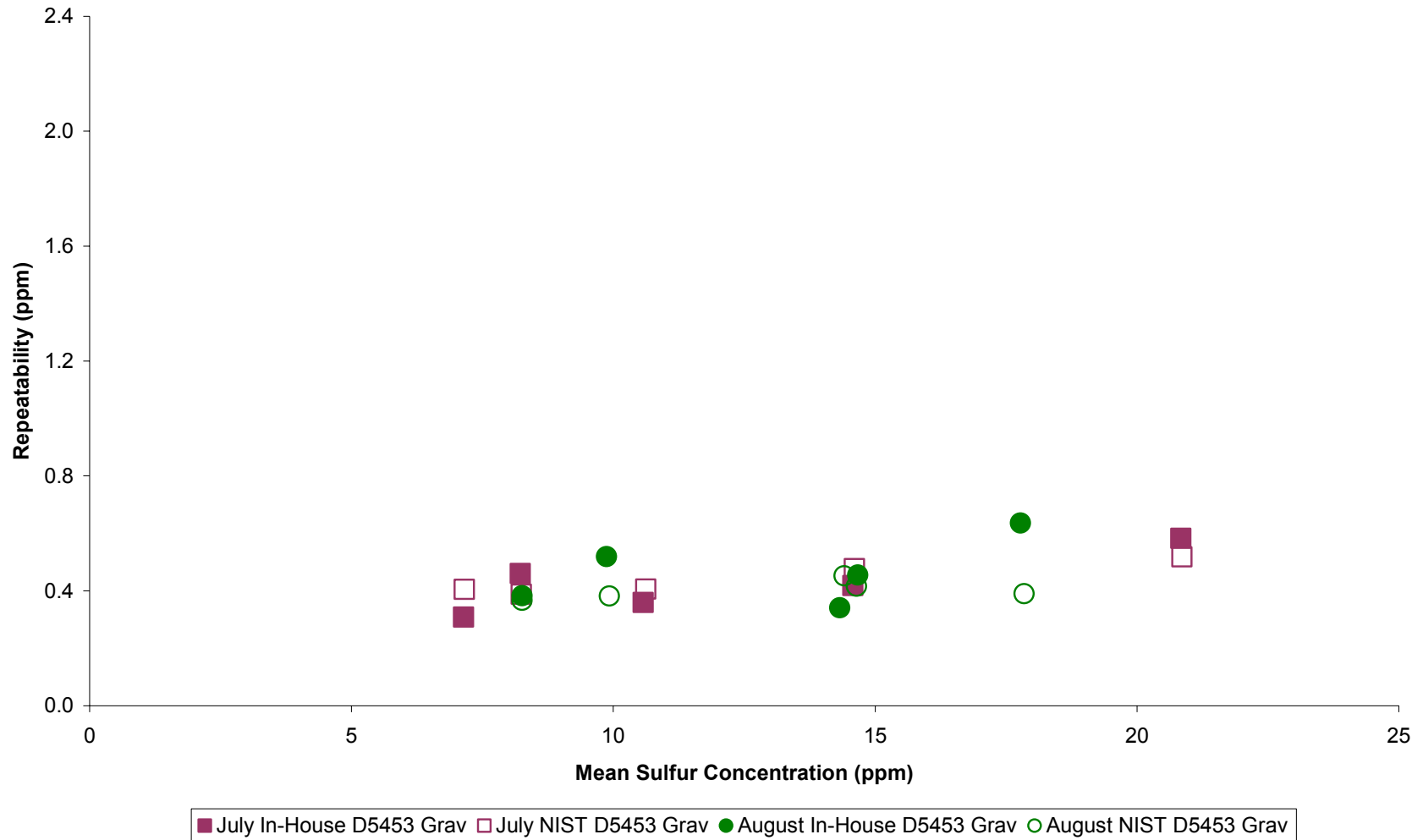


Figure E-6 D5453 Test Method, Robust Outlier, ASTM Analysis  
Comparing In-House and NIST Calibrations



**Figure E-7 D5453 Test Method, Gravimetric Outlier, ASTM Analysis  
Comparing In-House and NIST Calibrations**



**Figure E-8 D5453 Test Method, Robust and Gravimetric Outlier, ASTM Analysis  
Comparing In-House and NIST Calibrations**

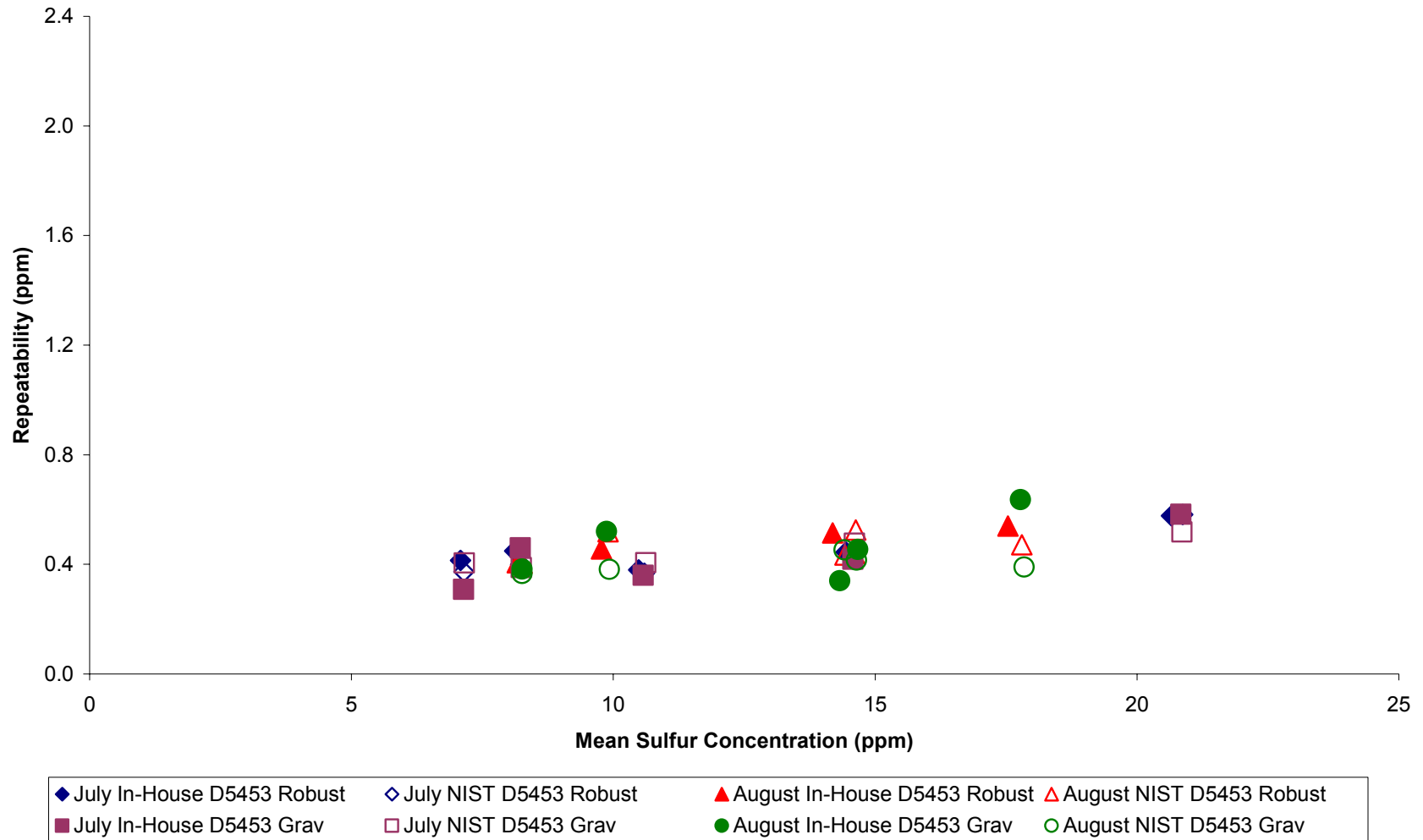


Figure E-9 D5453 Test Method, Robust and Gravimetric Outlier, ASTM Analysis  
NIST Calibration

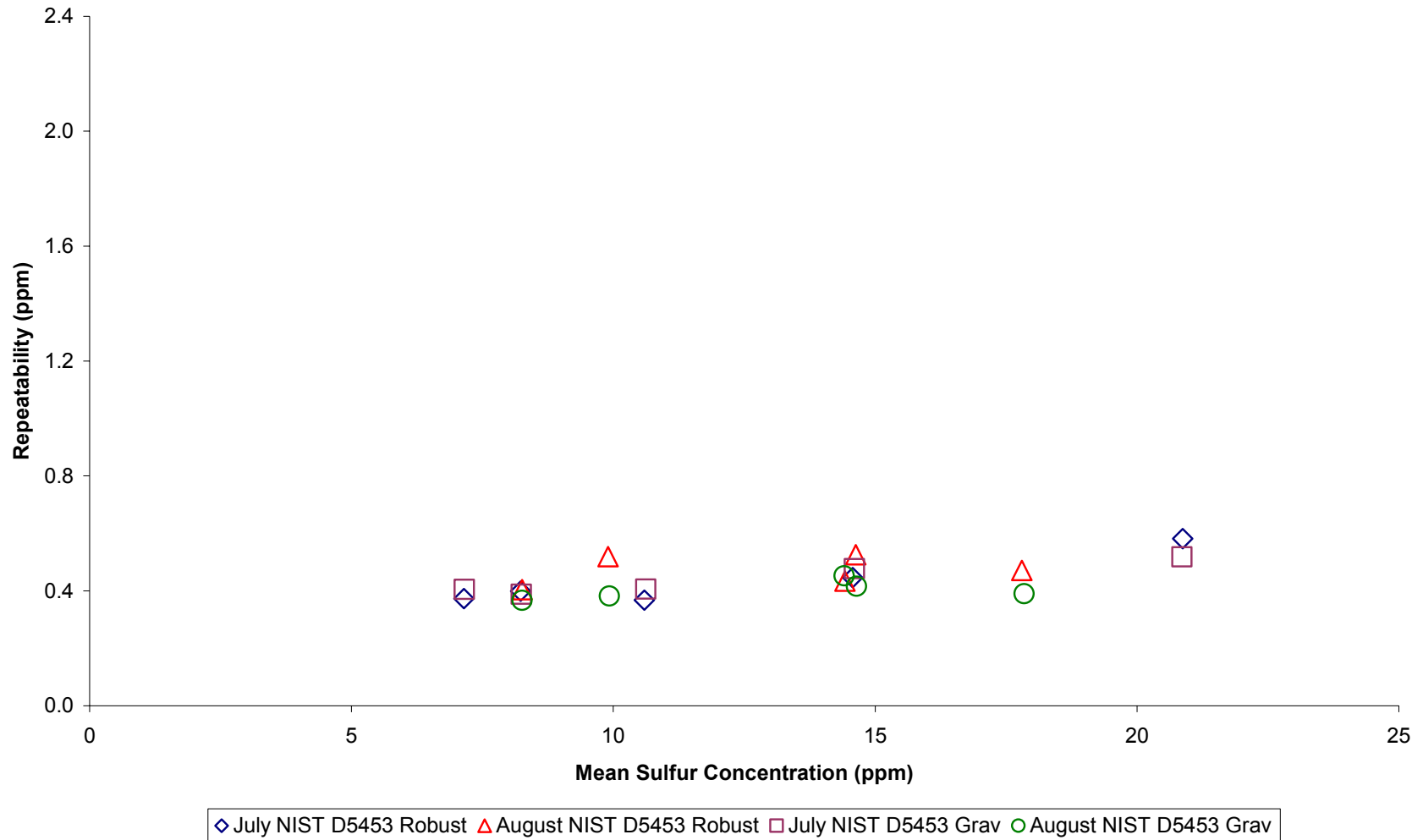


Figure E-10 D5453 Test Method, Robust and Gravimetric Outlier, ASTM Analysis  
In-House Calibration

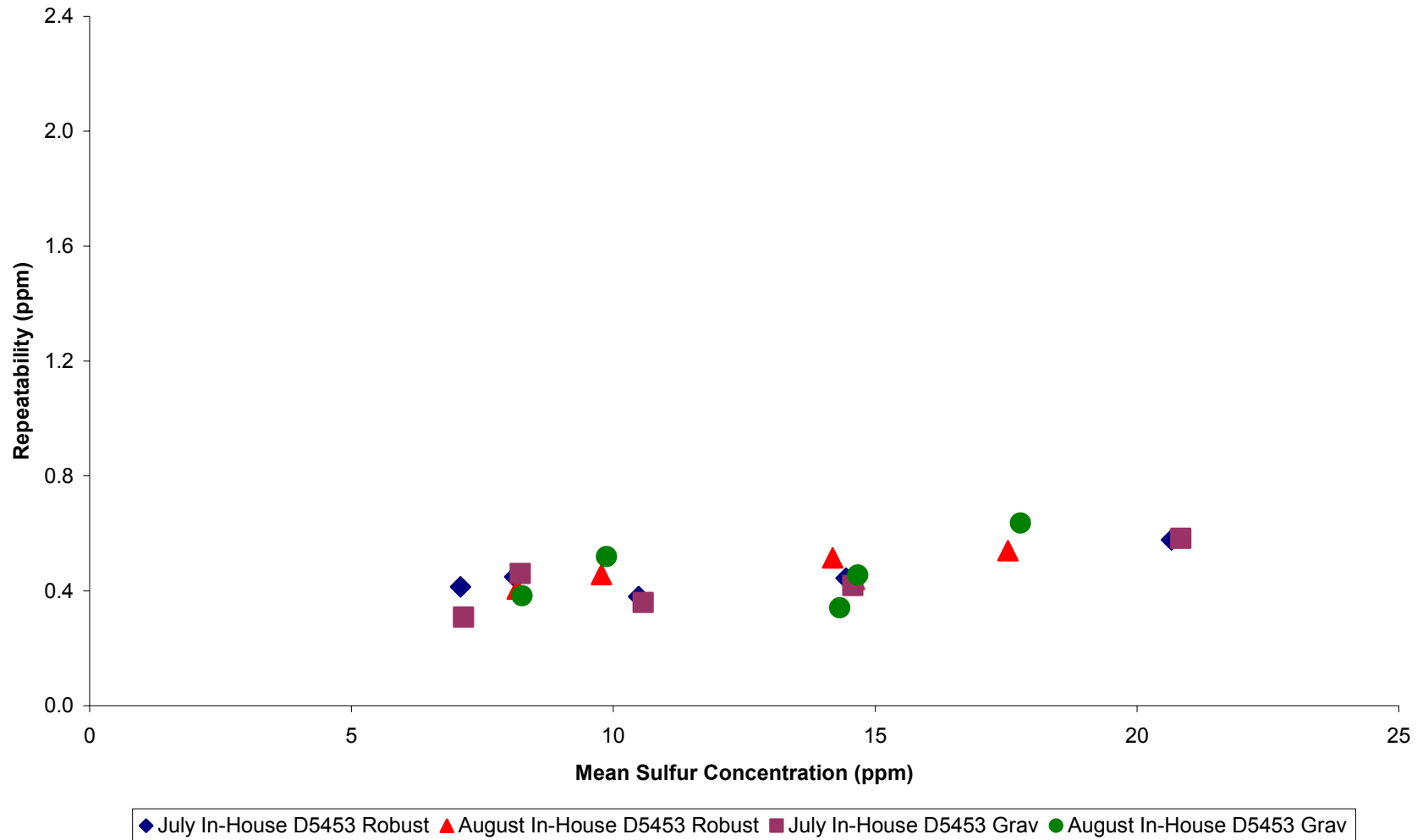




Figure E-11 D2622 Test Method, Robust Outlier, ASTM Analysis  
Comparing In-House and NIST Calibrations

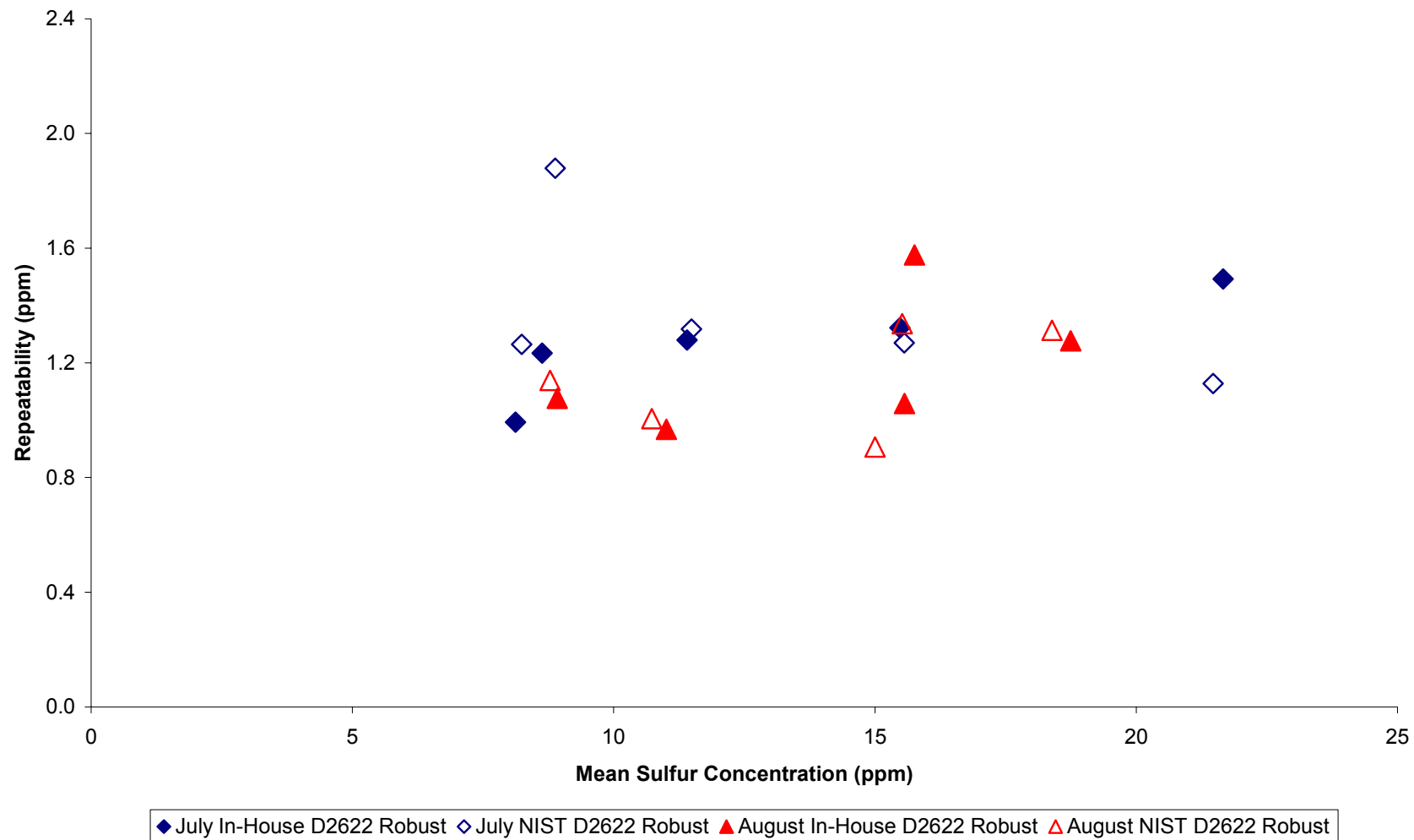
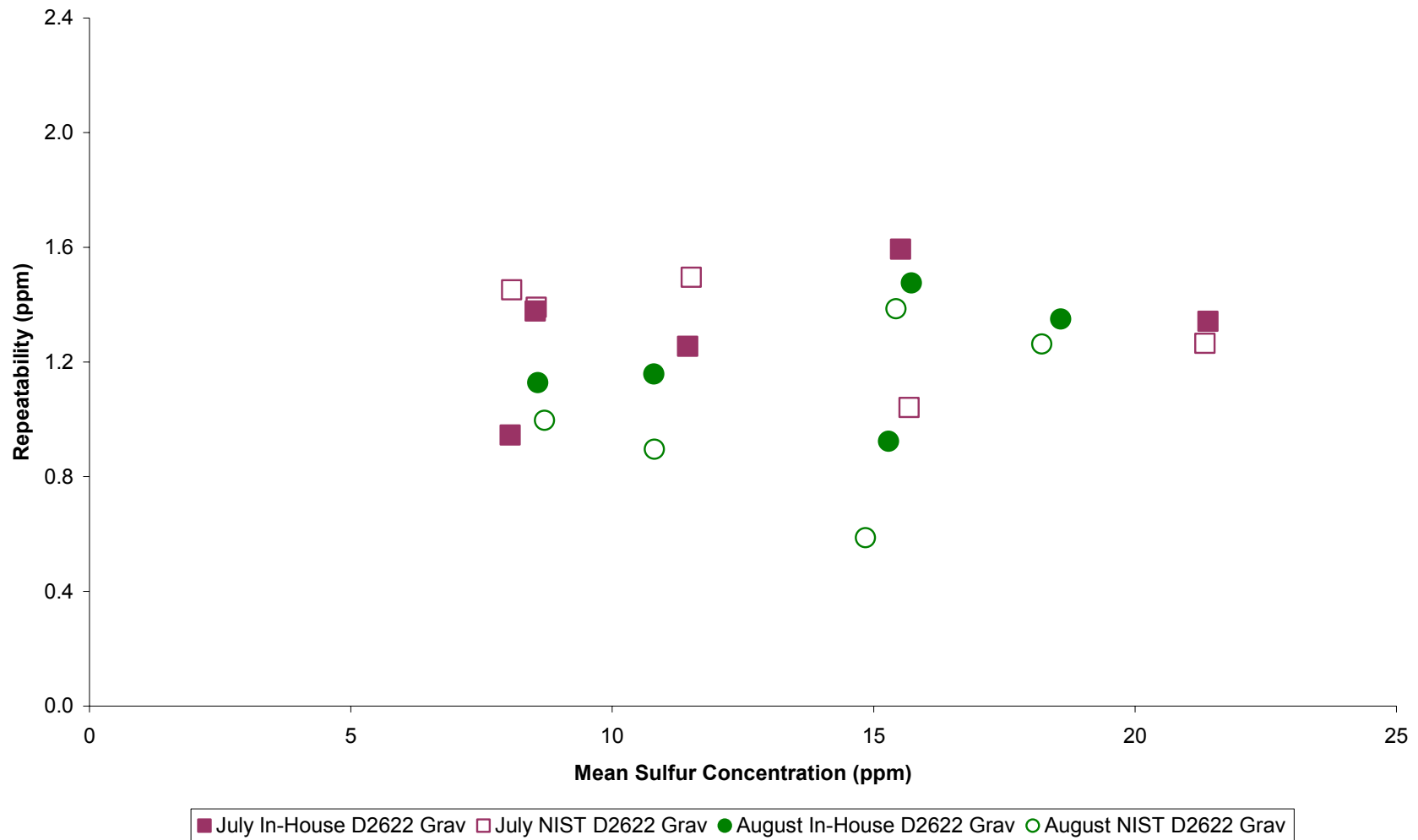


Figure E-12 D2622 Test Method, Gravimetric Outlier, ASTM Analysis  
Comparing In-House and NIST Calibrations



**Figure E-13 D2622 Test Method, Robust and Gravimetric Outlier, ASTM Analysis  
Comparing In-House and NIST Calibrations**

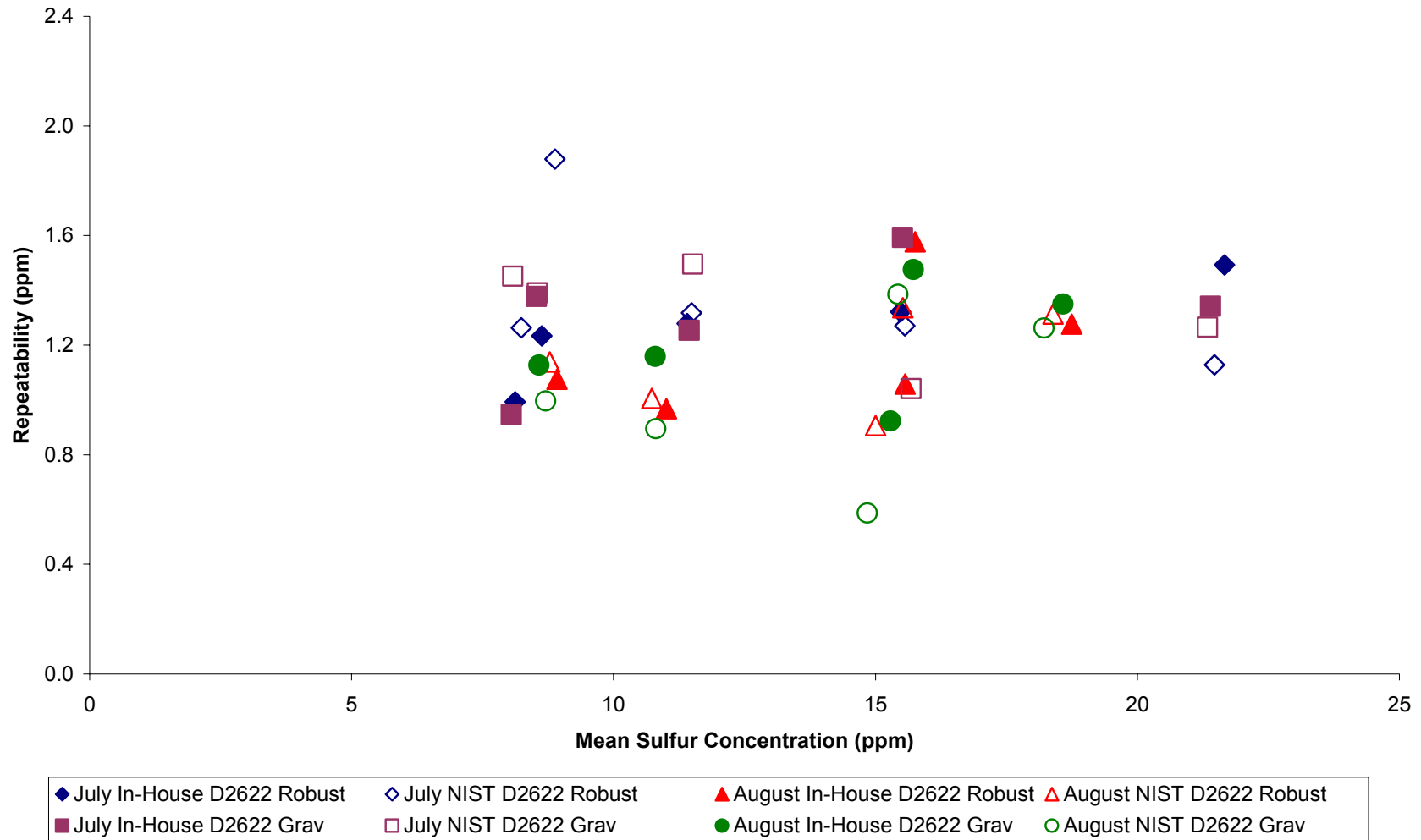


Figure E-14 D2622 Test Method, Robust and Gravimetric Outlier, ASTM Analysis  
NIST Calibration

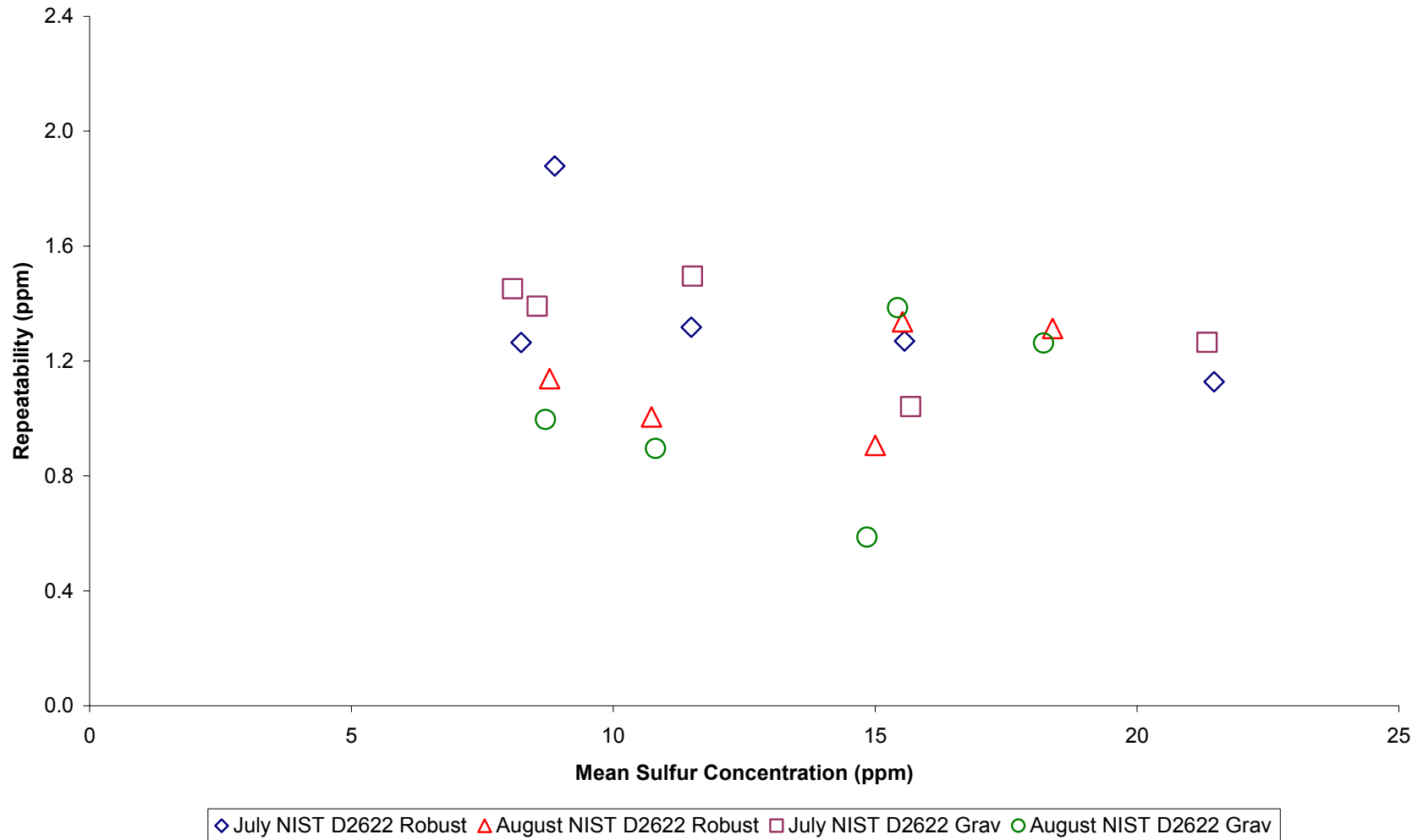


Figure E-15 D2622 Test Method, Robust and Gravimetric Outlier, ASTM Analysis  
In-House Calibration

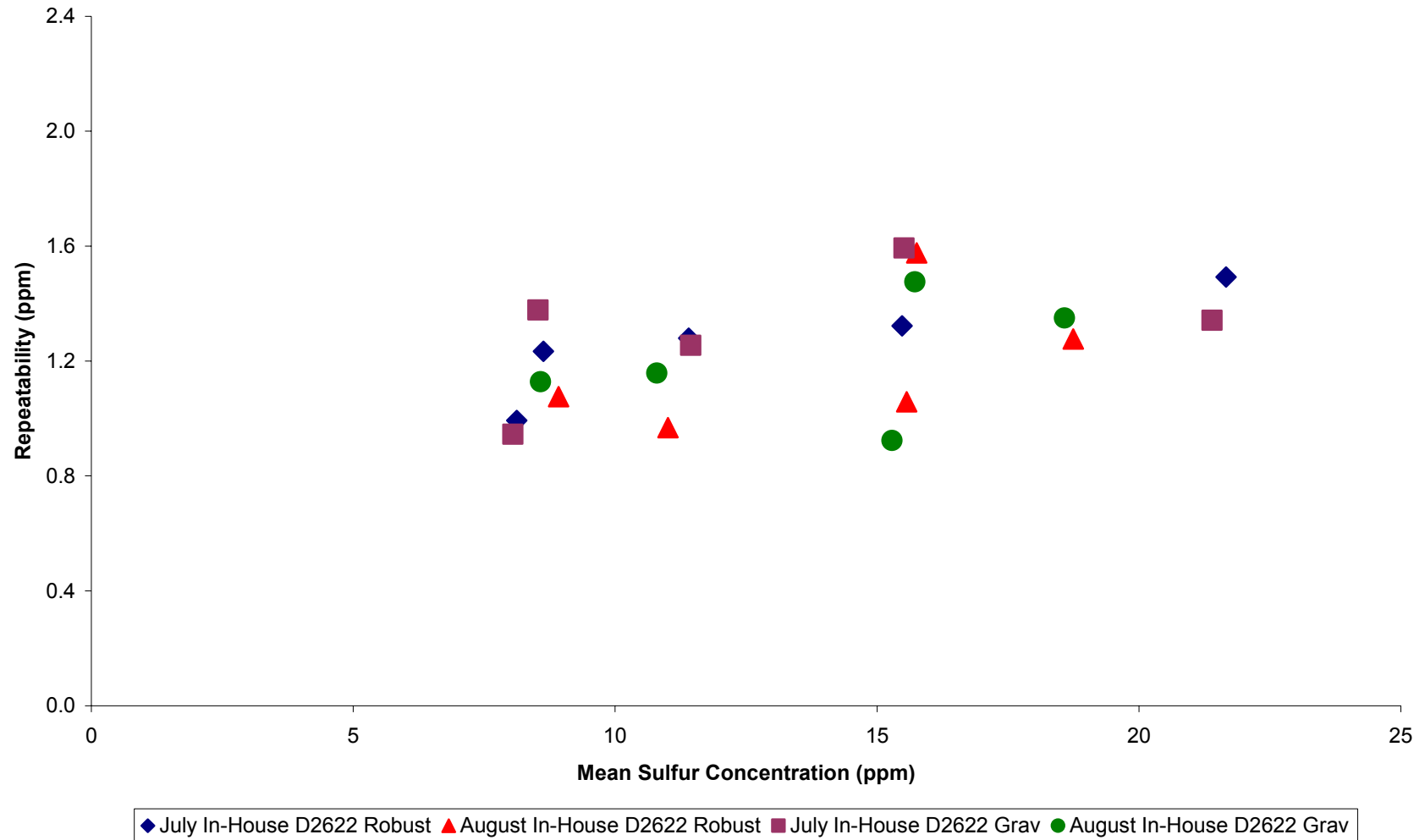


Figure E-16 D7039 Test Method, Robust Outlier, ASTM Analysis  
Comparing In-House and NIST Calibrations

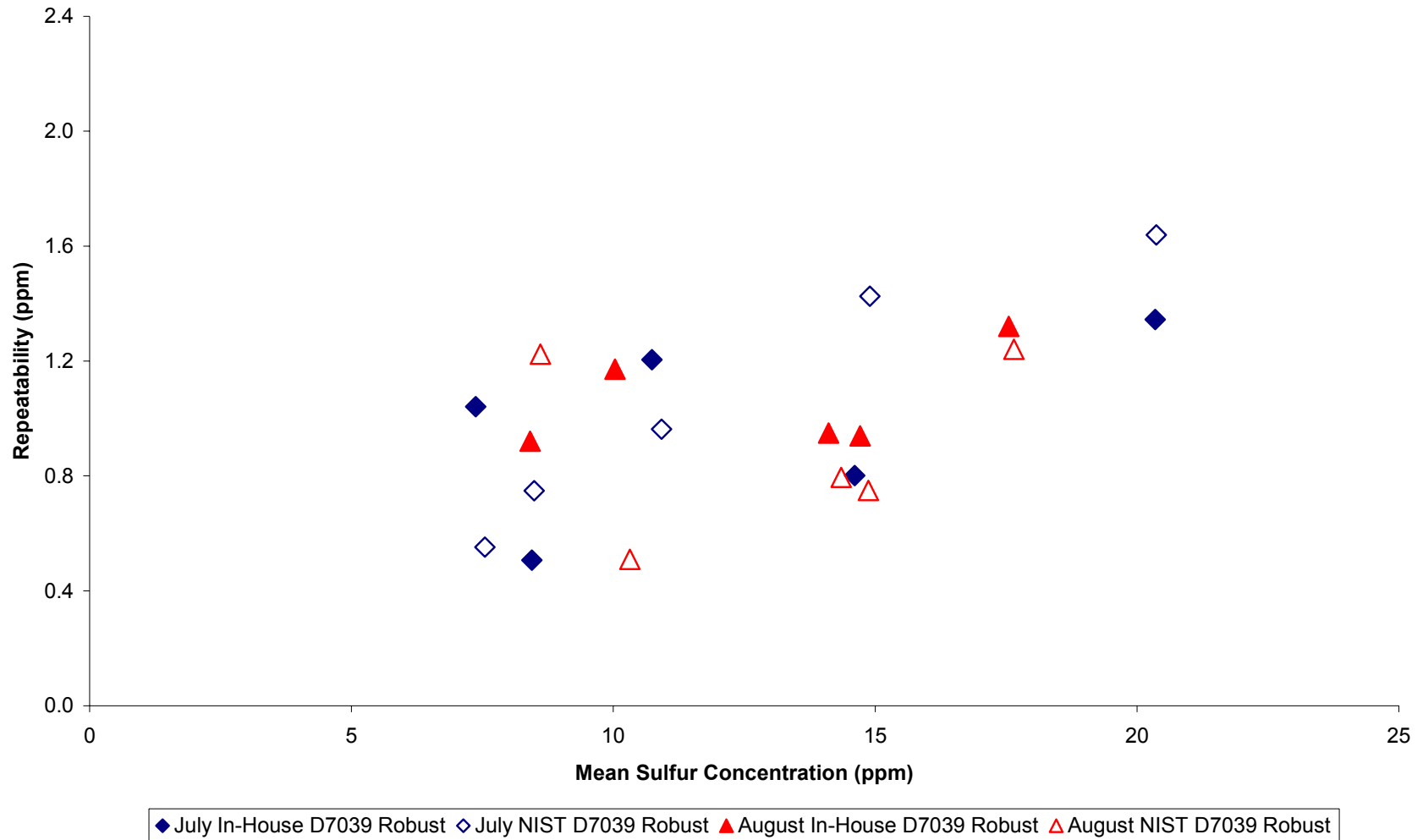
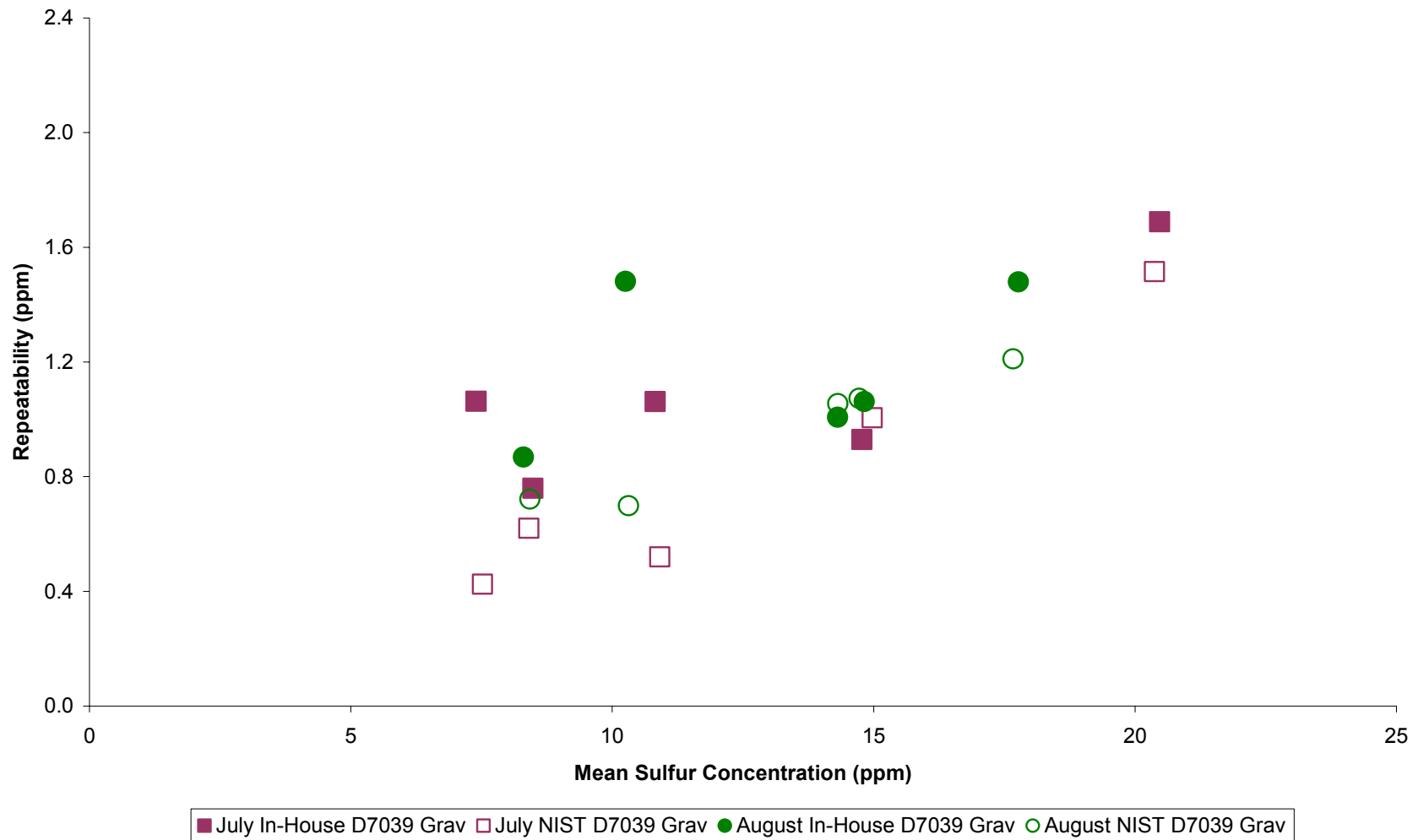


Figure E-17 D7039 Test Method, Gravimetric Outlier, ASTM Analysis  
Comparing In-House and NIST Calibrations



**Figure E-18 D7039 Test Method, Robust and Gravimetric Outlier, ASTM Analysis  
Comparing In-House and NIST Calibrations**

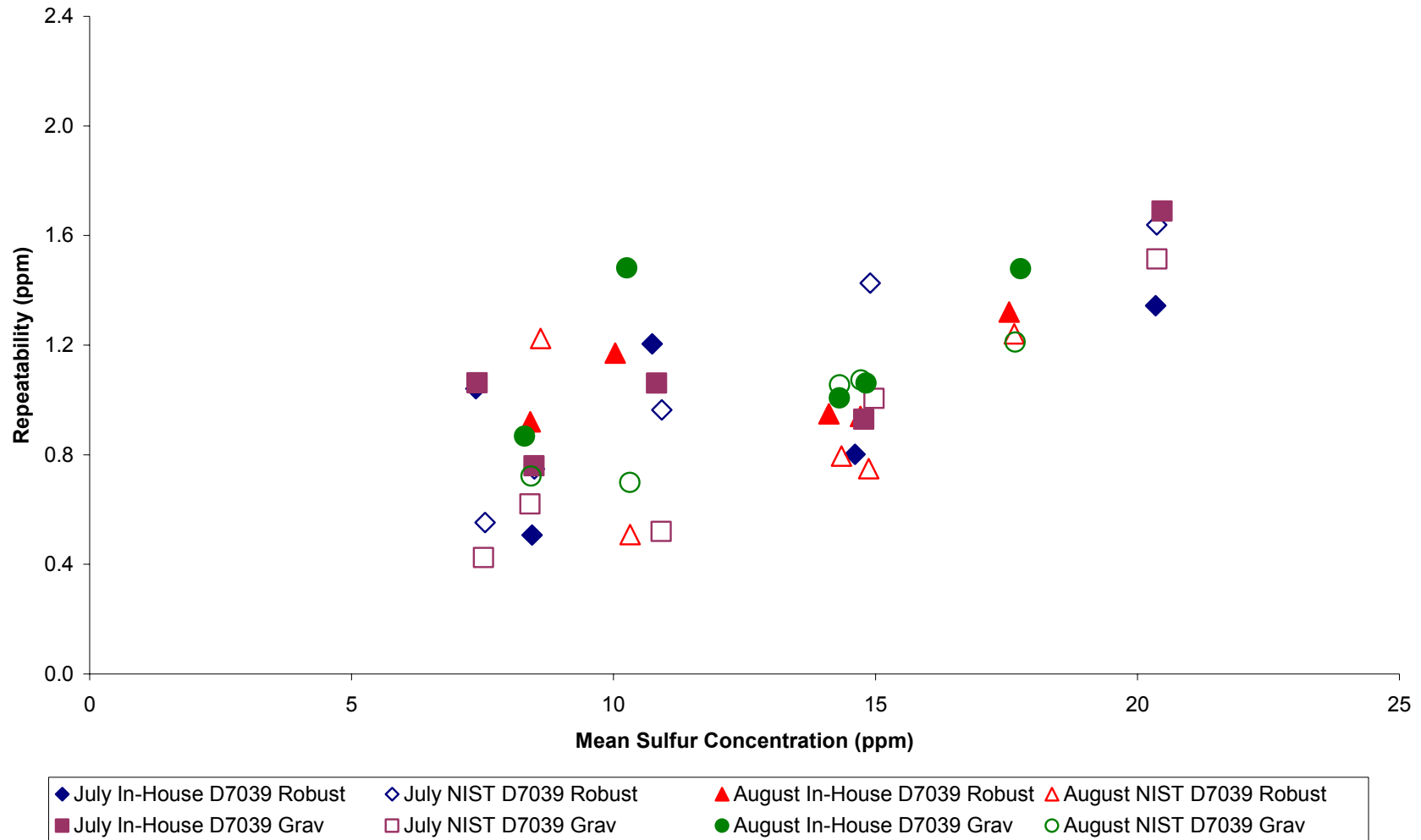
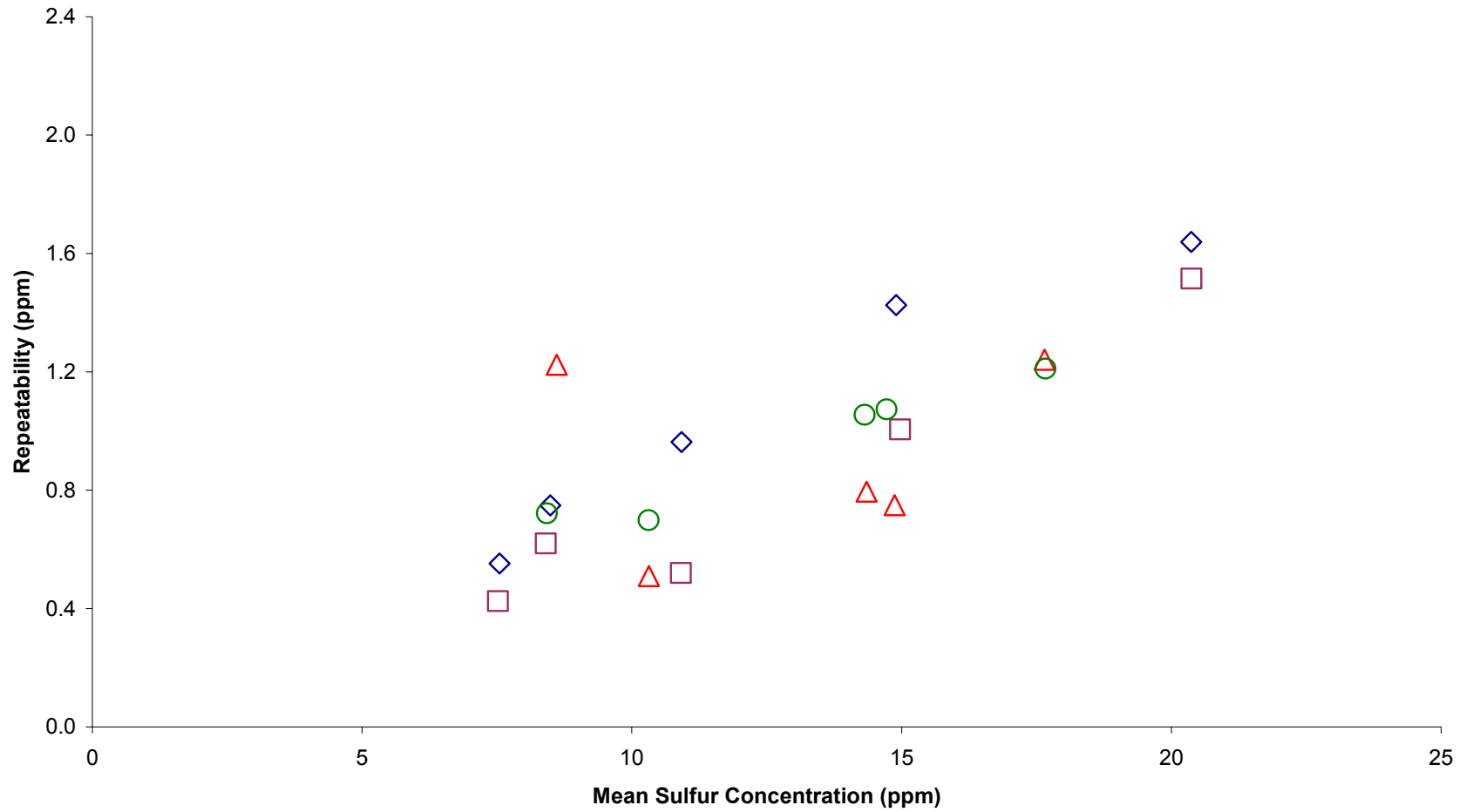




Figure E-19 D7039 Test Method, Robust and Gravimetric Outlier, ASTM Analysis  
NIST Calibration



◆ July NIST D7039 Robust ▲ August NIST D7039 Robust ◻ July NIST D7039 Grav ○ August NIST D7039 Grav

Figure E-20 D7039 Test Method, Robust and Gravimetric Outlier, ASTM Analysis  
In-House Calibration

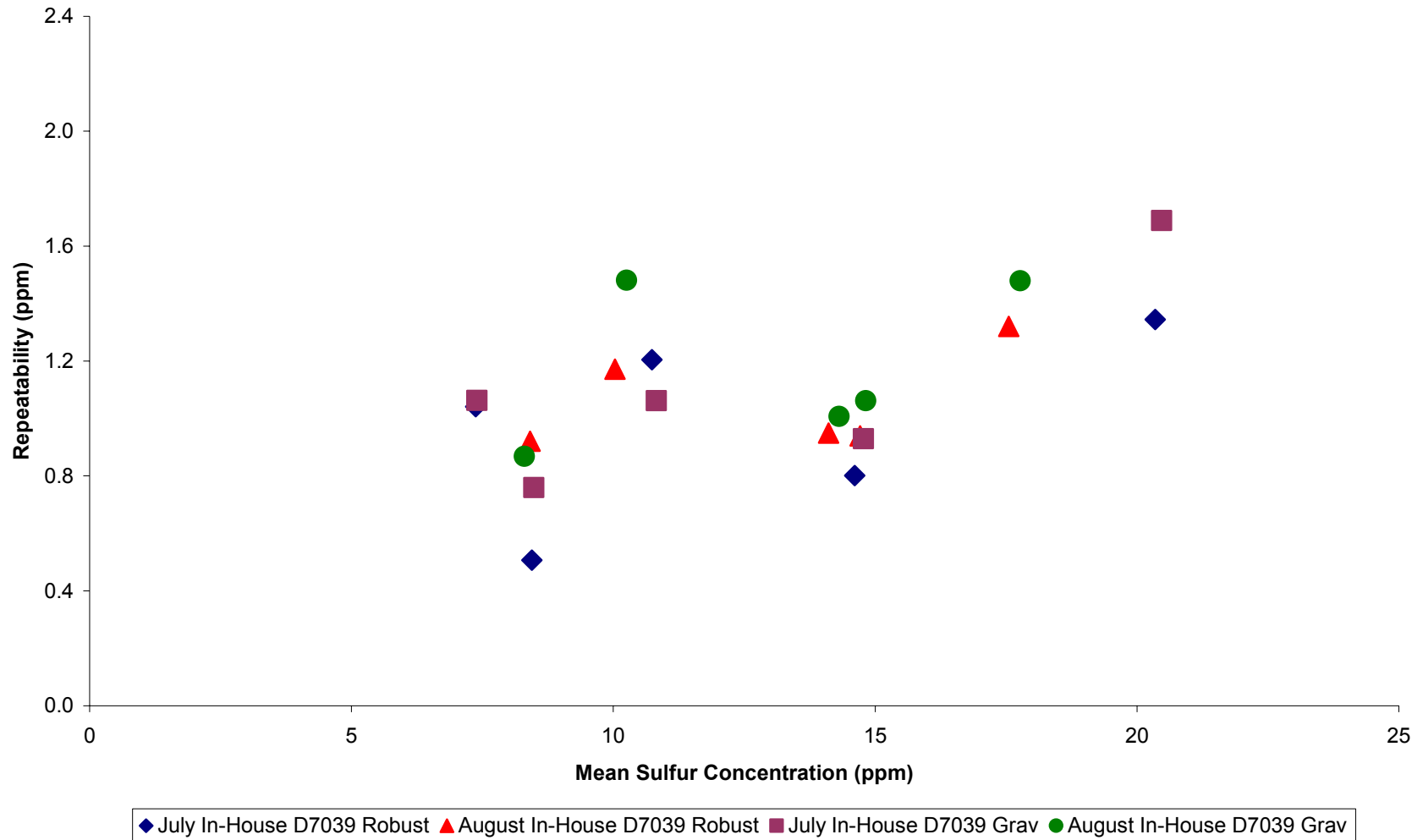


Figure E-21 EDXRF Test Method, Robust Outlier, ASTM Analysis  
Comparing In-House and NIST Calibrations

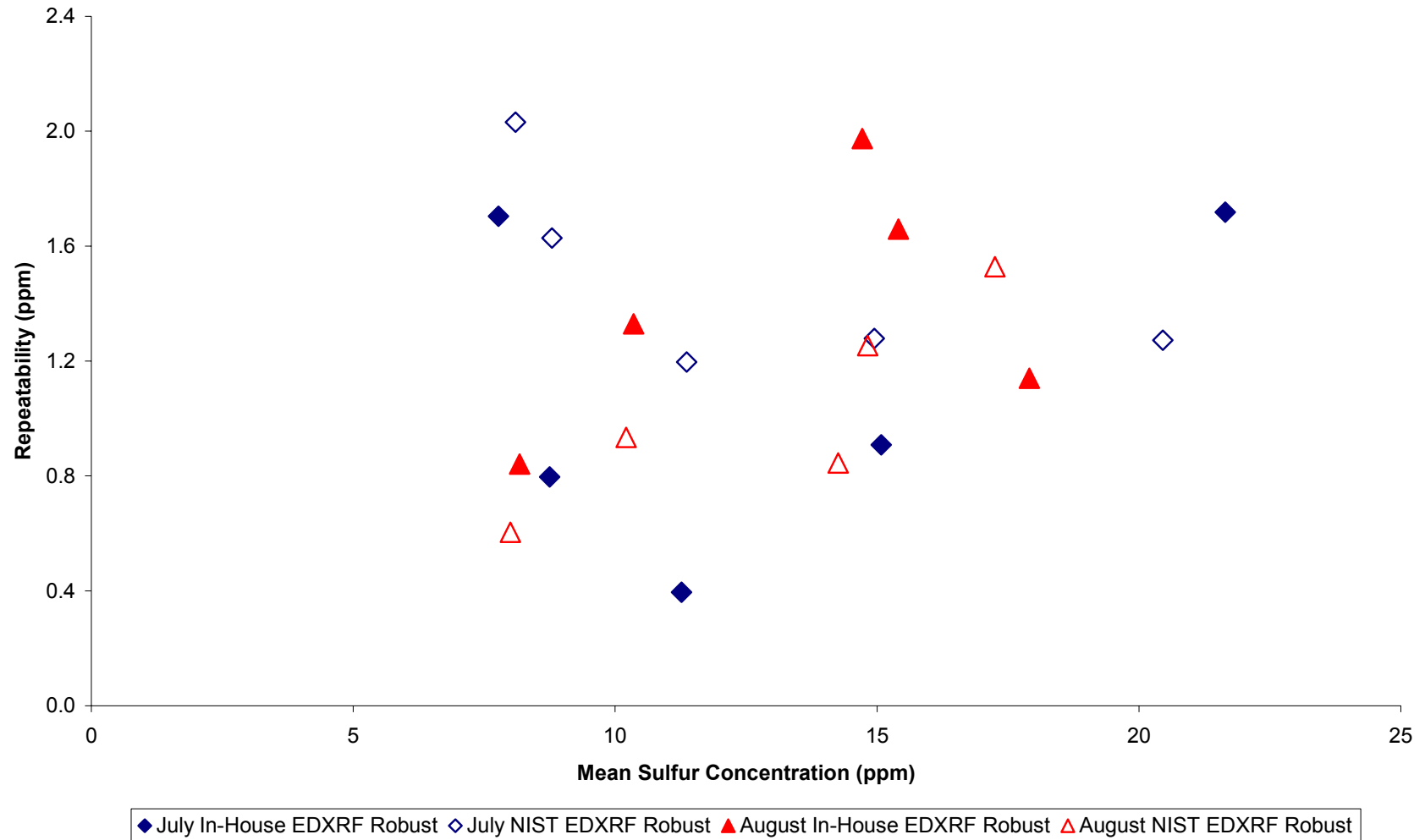
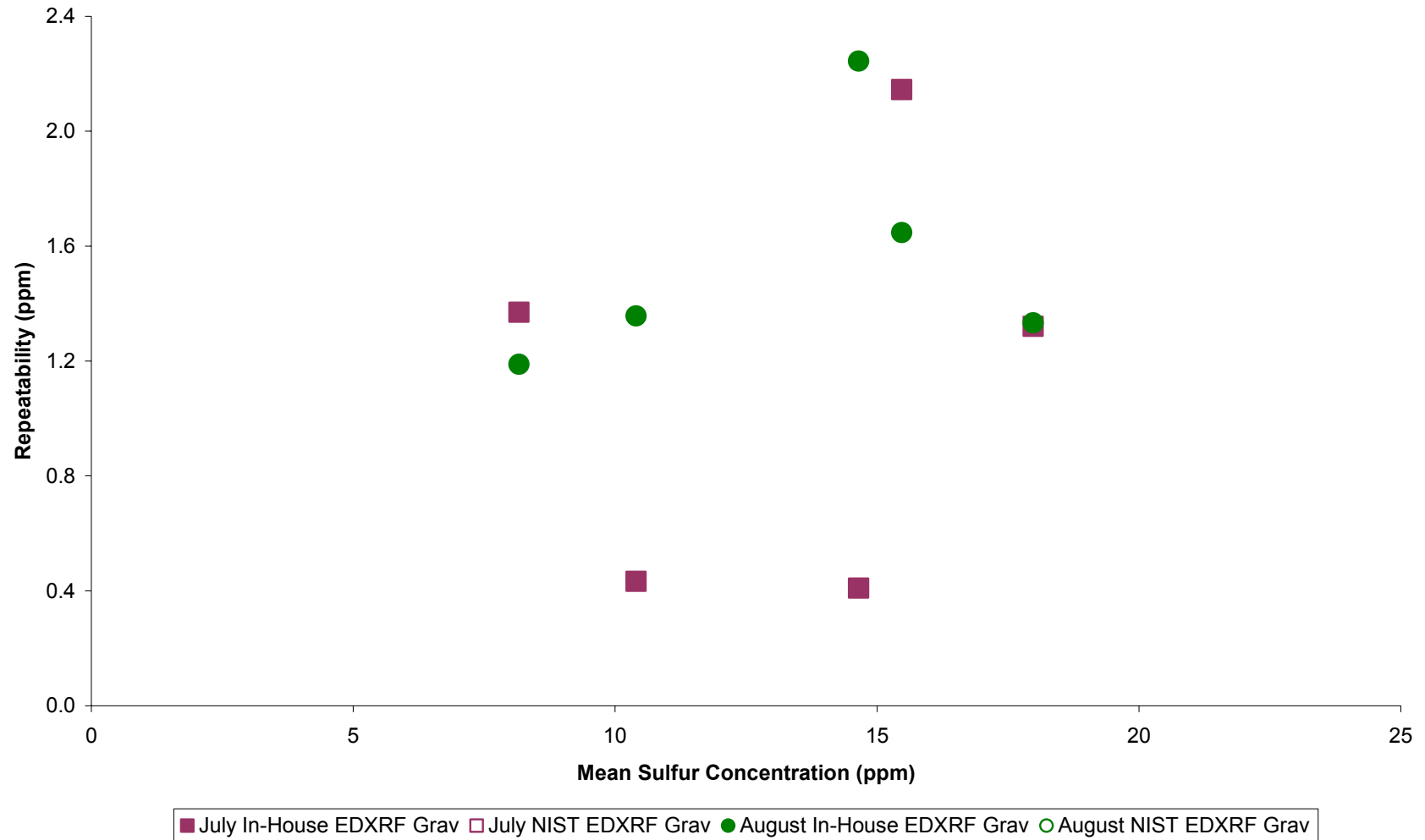


Figure E-22 EDXRF Test Method, Gravimetric Outlier, ASTM Analysis  
Comparing In-House and NIST Calibrations



**Figure E-23 EDXRF Test Method, Robust and Gravimetric Outlier, ASTM Analysis Comparing In-House and NIST Calibrations**

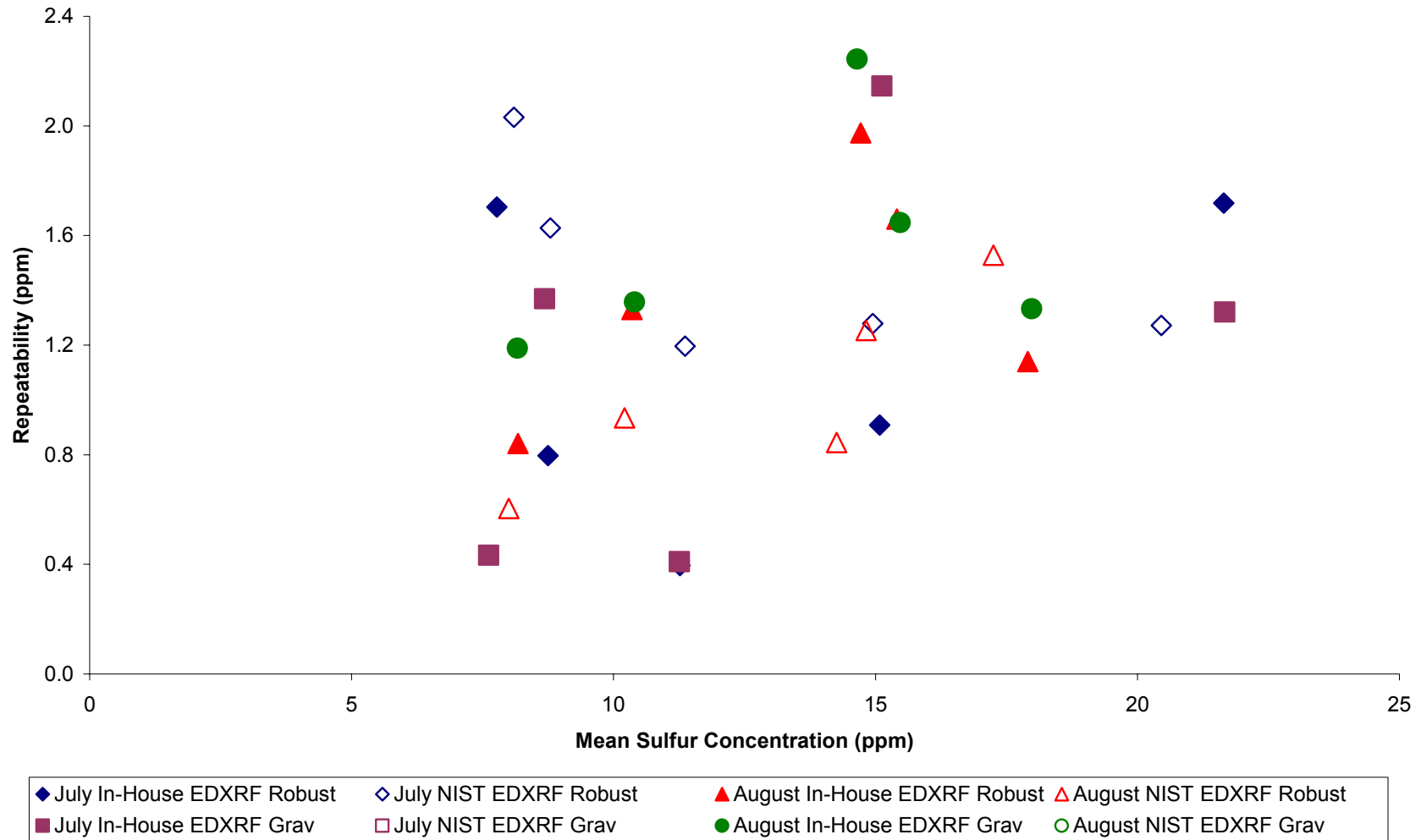


Figure E-24 EDXRF Test Method, Robust and Gravimetric Outlier, ASTM Analysis  
NIST Calibration

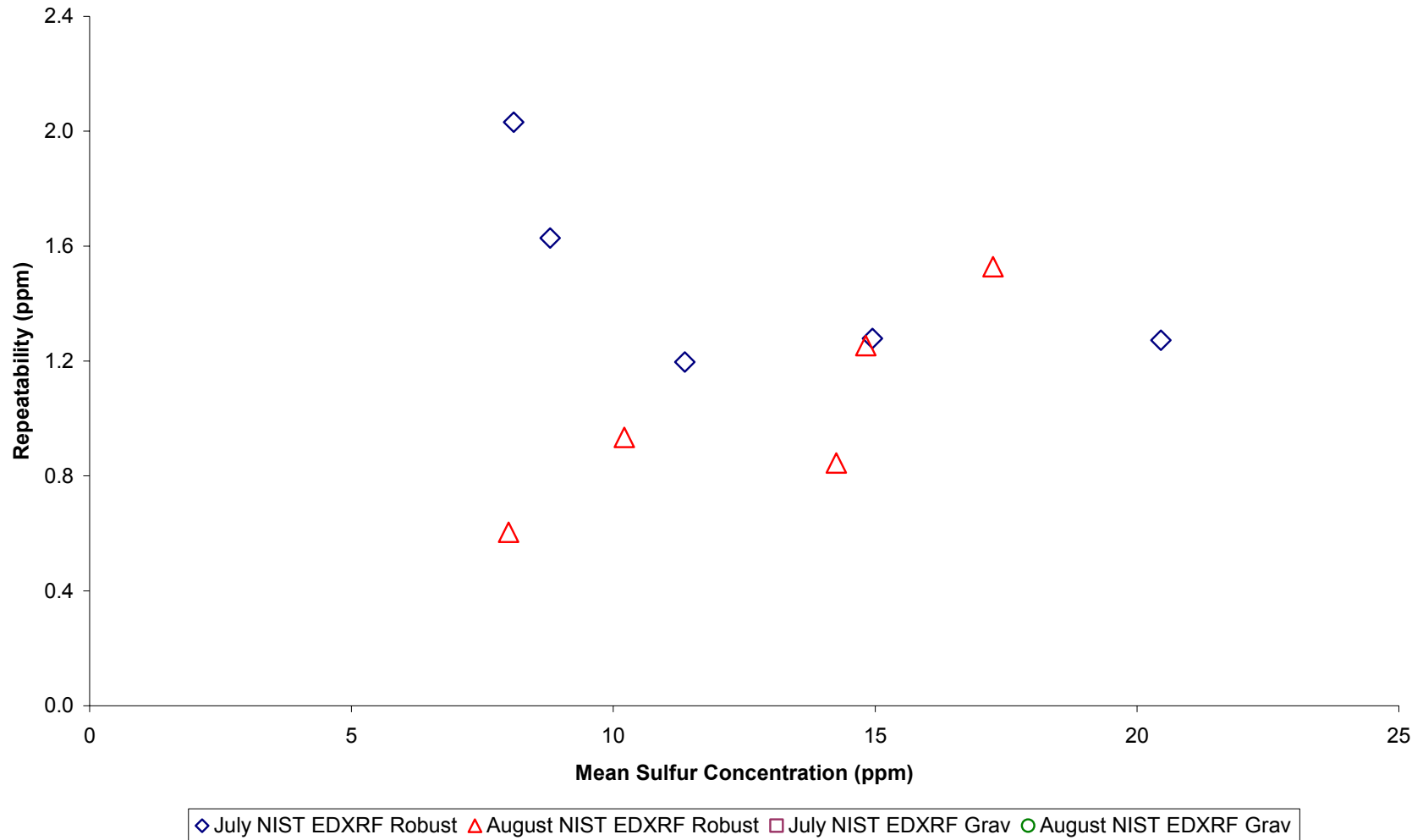


Figure E-25 EDXRF Test Method, Robust and Gravimetric Outlier, ASTM Analysis  
In-House Calibration

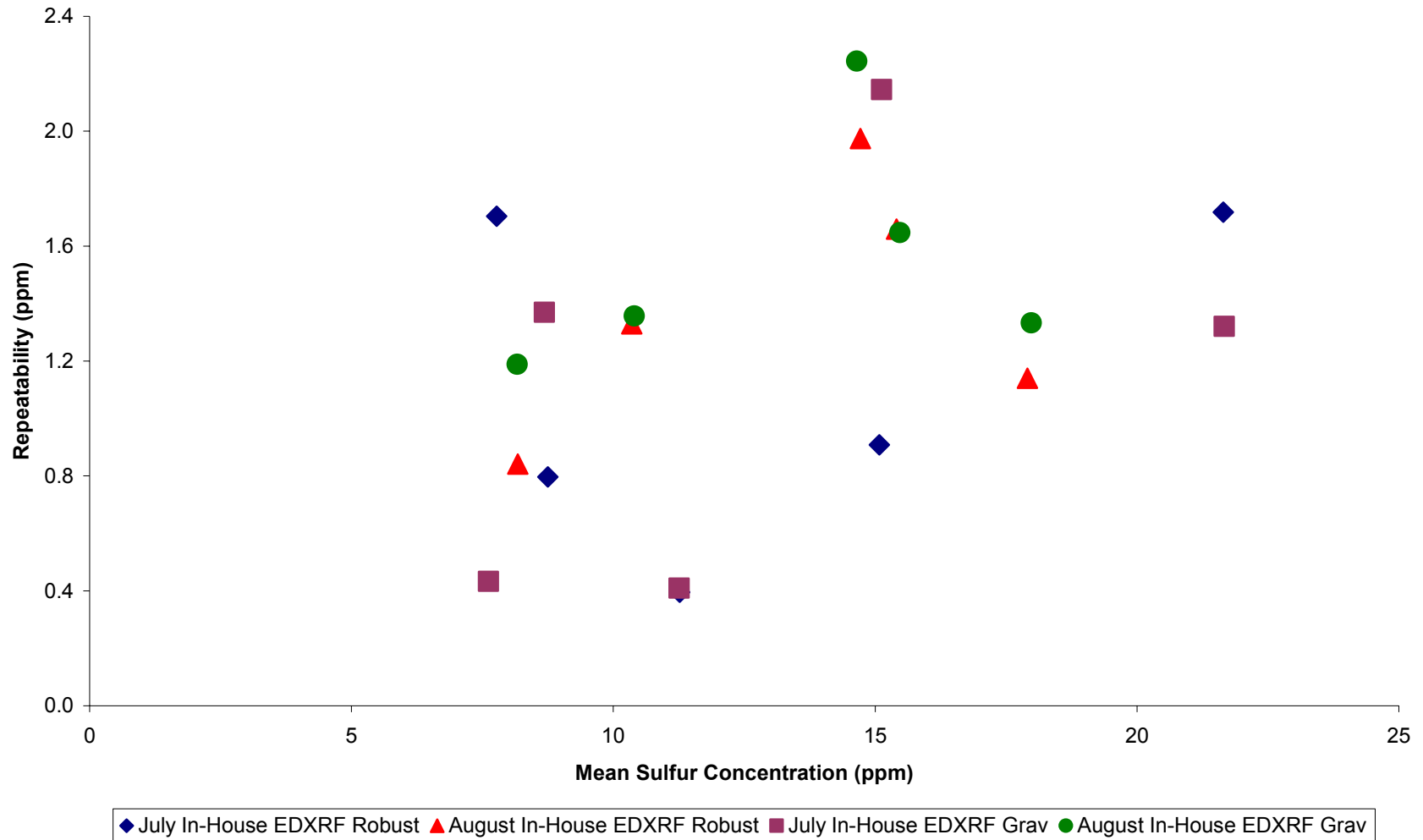


Figure E-26 D5453 Test Method, Robust Outlier, ASTM Analysis  
Comparing In-House and NIST Calibrations, Added ASTM 2004-05 Crosscheck Data

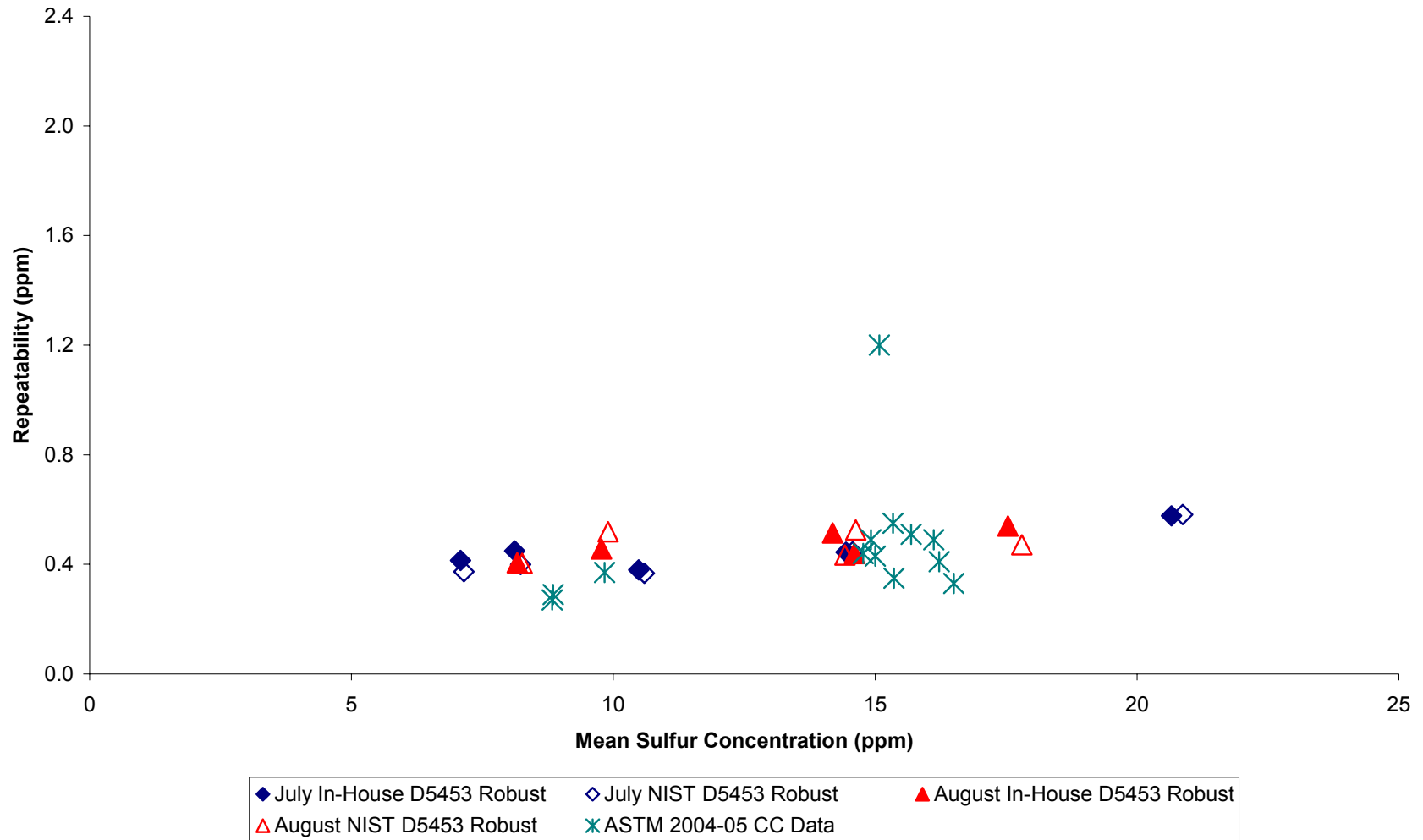




Figure E-27 D2622 Test Method, Robust Outlier, ASTM Analysis  
Comparing In-House and NIST Calibrations, Added ASTM 2004-05 Crosscheck Data

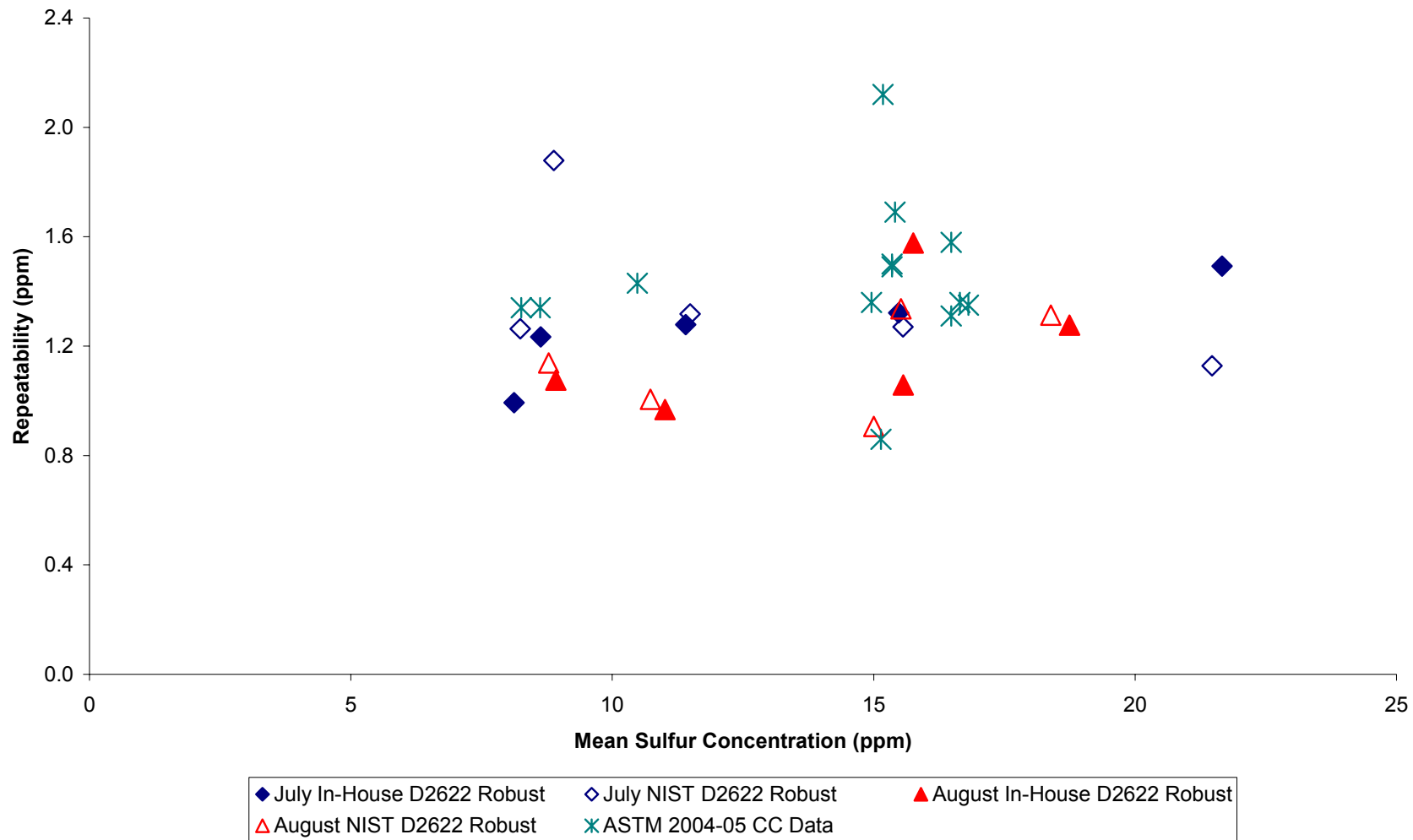
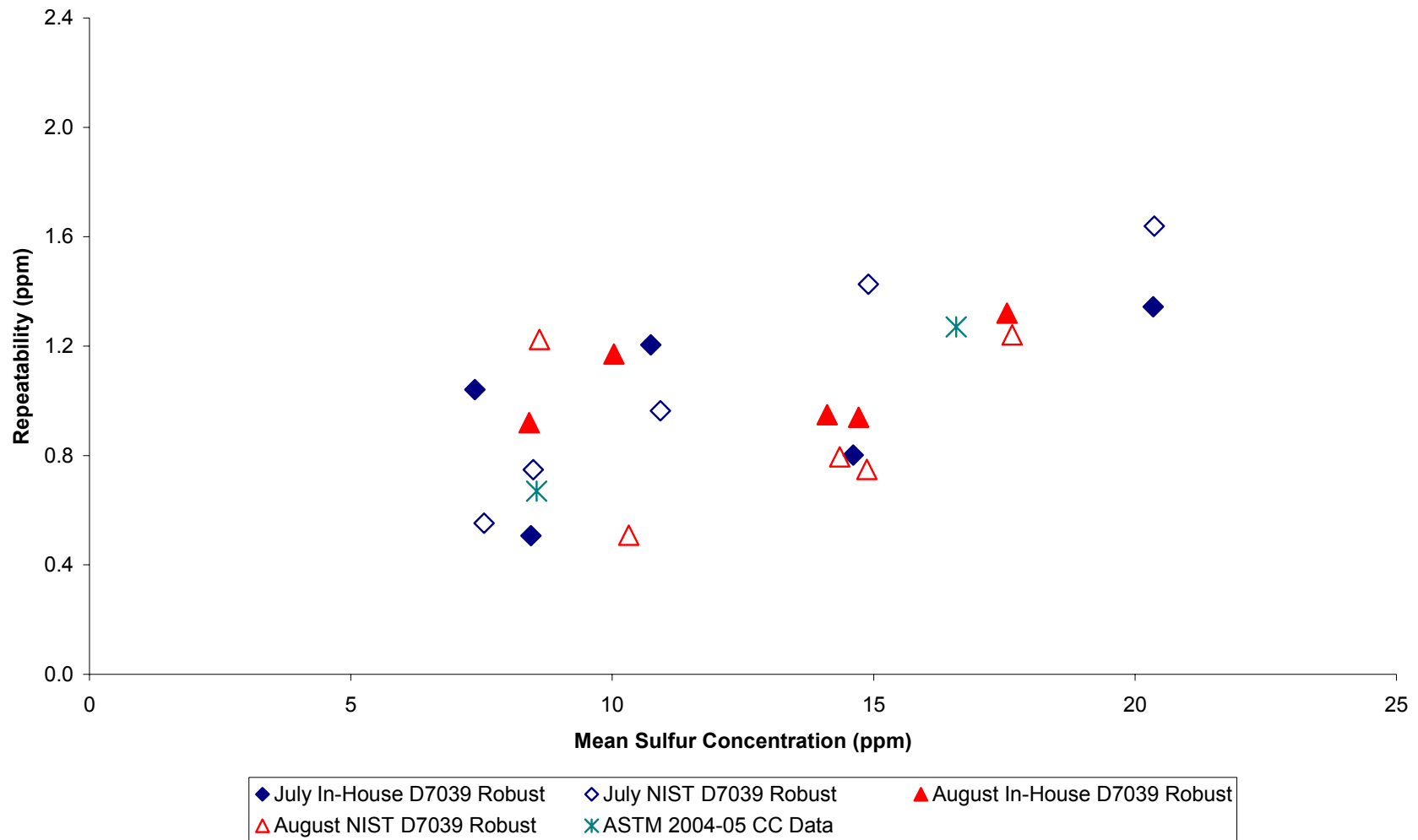


Figure E-28 D7039 Test Method, Robust Outlier, ASTM Analysis  
Comparing In-House and NIST Calibrations, Added ASTM 2004-05 Crosscheck Data



## **APPENDIX F**

**PLOTS OF OVERALL REPRODUCIBILITY (63 PLOTS)**

**Figure F-1 Composite Test Methods, Robust Outlier, ASTM Analysis  
Comparing In-House and NIST Calibrations**

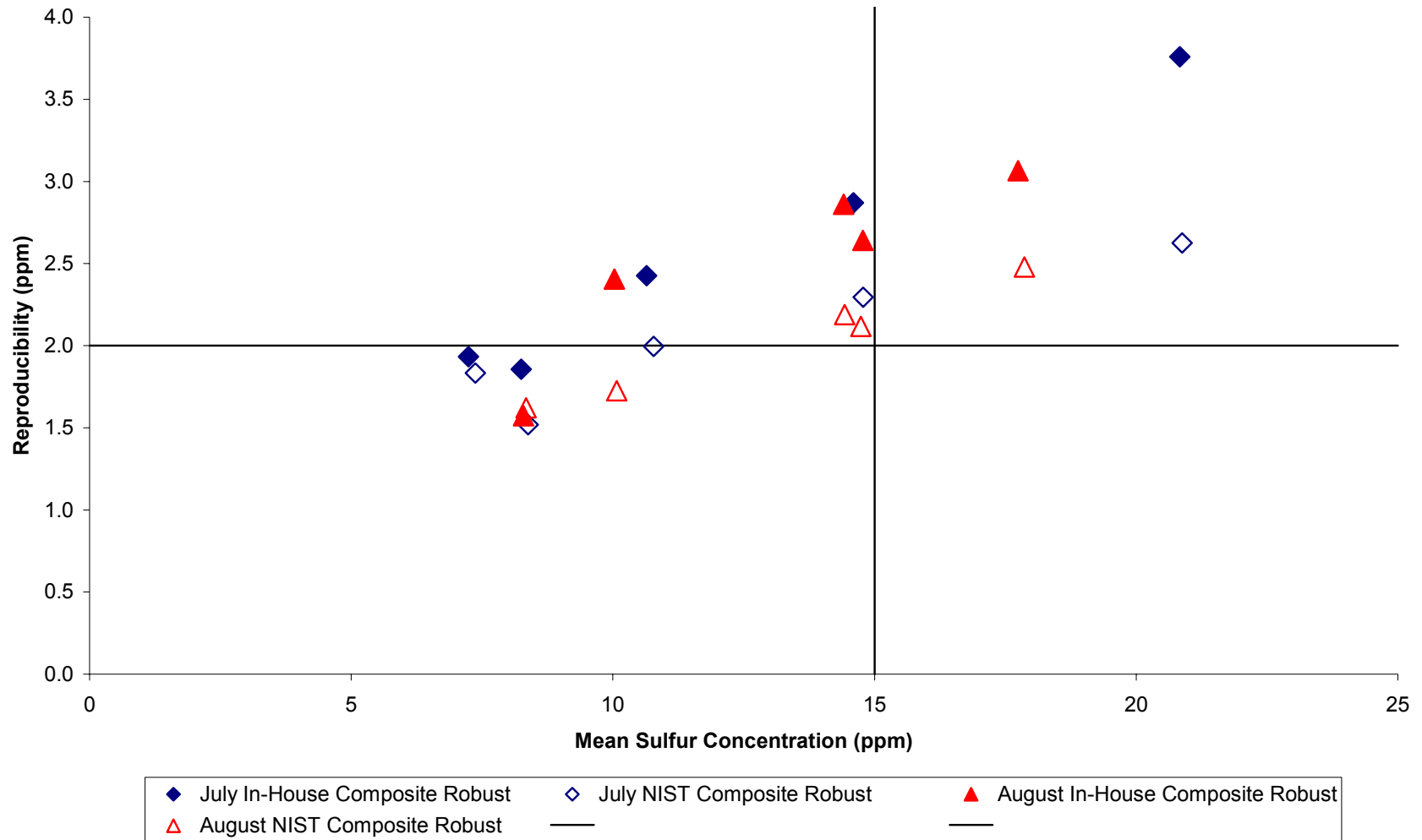
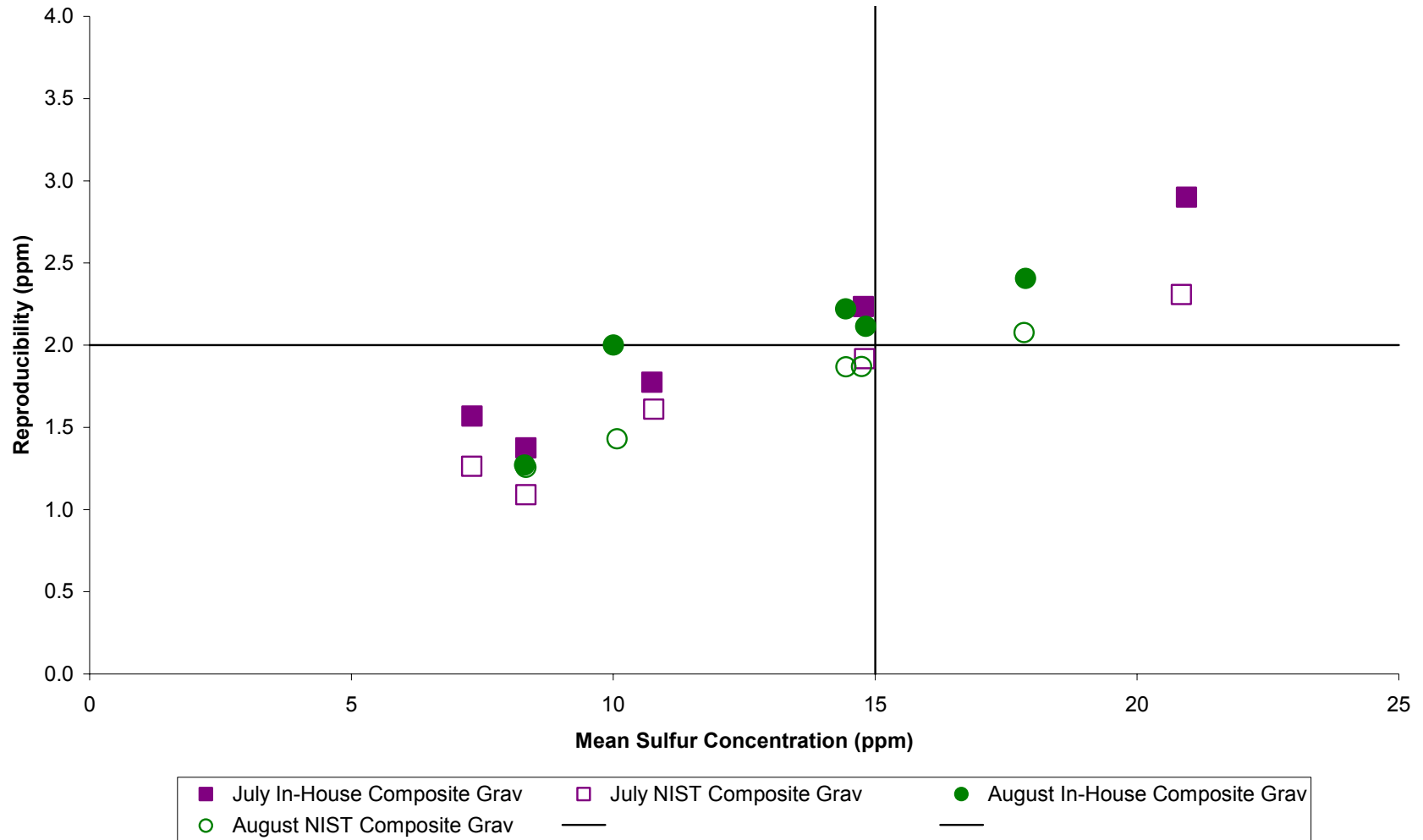
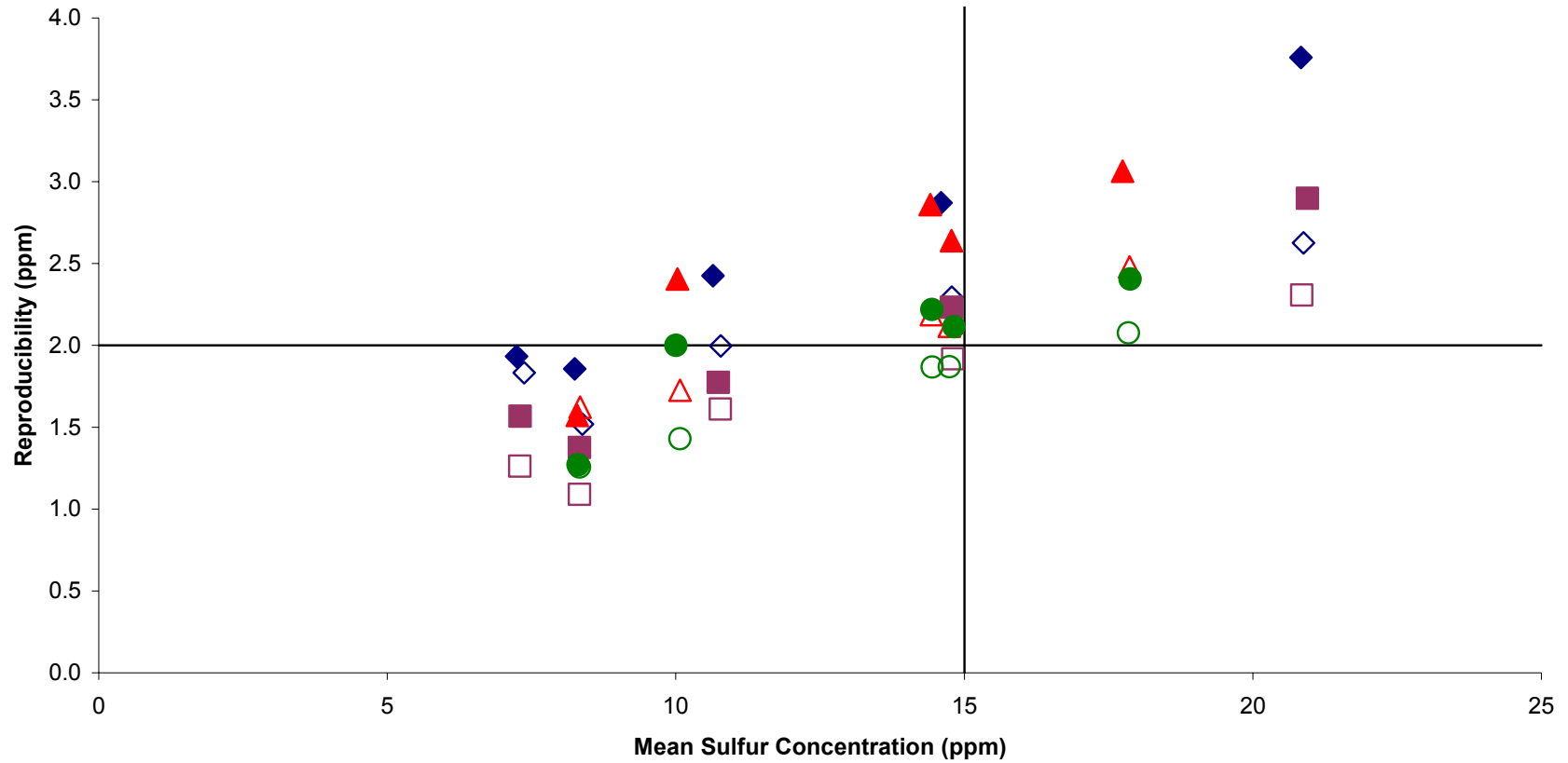


Figure F-2 Composite Test Methods, Gravimetric Outlier, ASTM Analysis  
Comparing In-House and NIST Calibrations



**Figure F-3 Composite Test Methods, Robust and Gravimetric Outlier, ASTM Analysis  
Comparing In-House and NIST Calibrations**



- ◆ July In-House Composite Robust
- ◇ July NIST Composite Robust
- ▲ August In-House Composite Robust
- △ August NIST Composite Robust
- July In-House Composite Grav
- July NIST Composite Grav
- August In-House Composite Grav
- August NIST Composite Grav

Figure F-4 Composite Test Methods, NIST Calibration, ASTM Analysis  
Comparing Robust and Gravimetric Outlier Methods

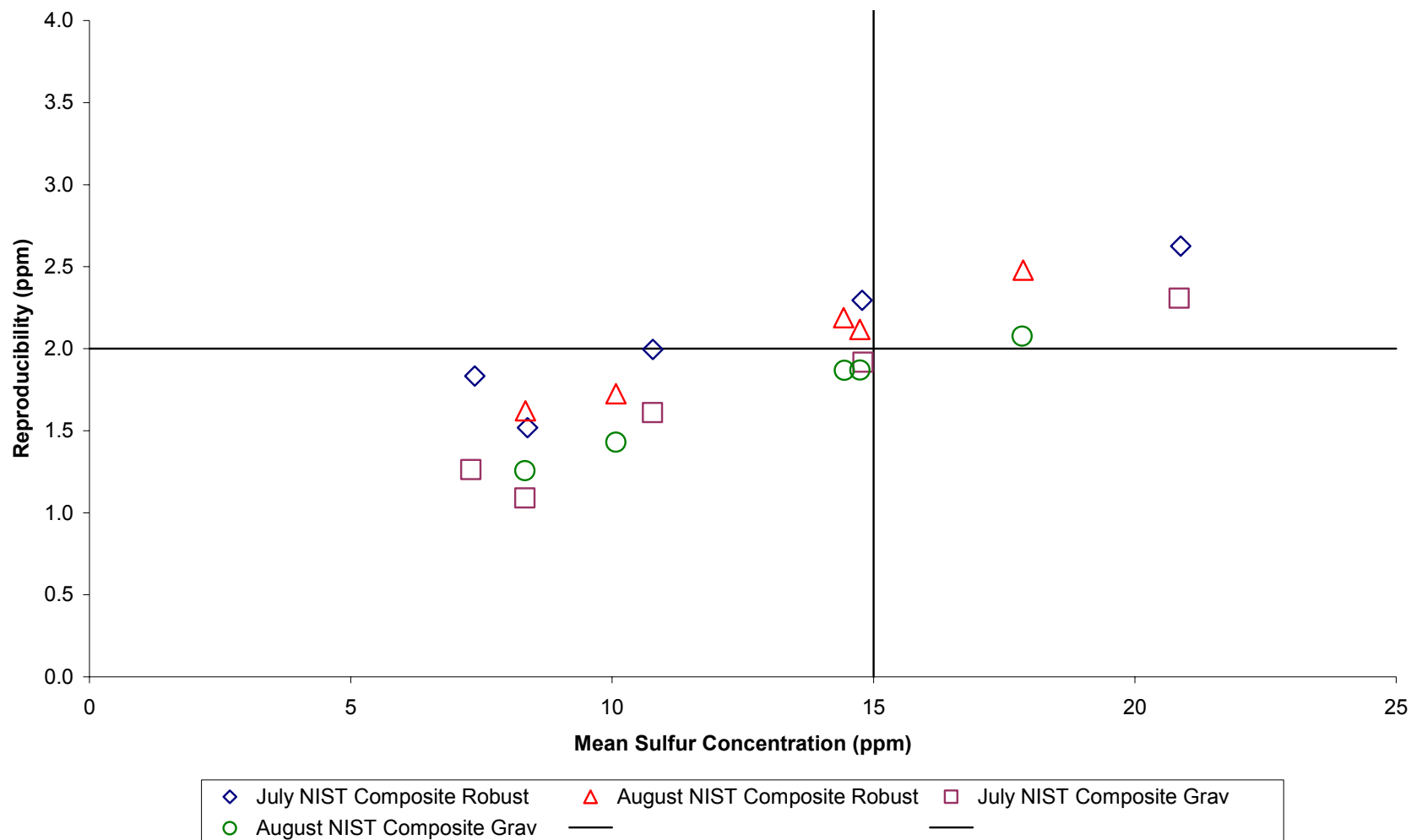
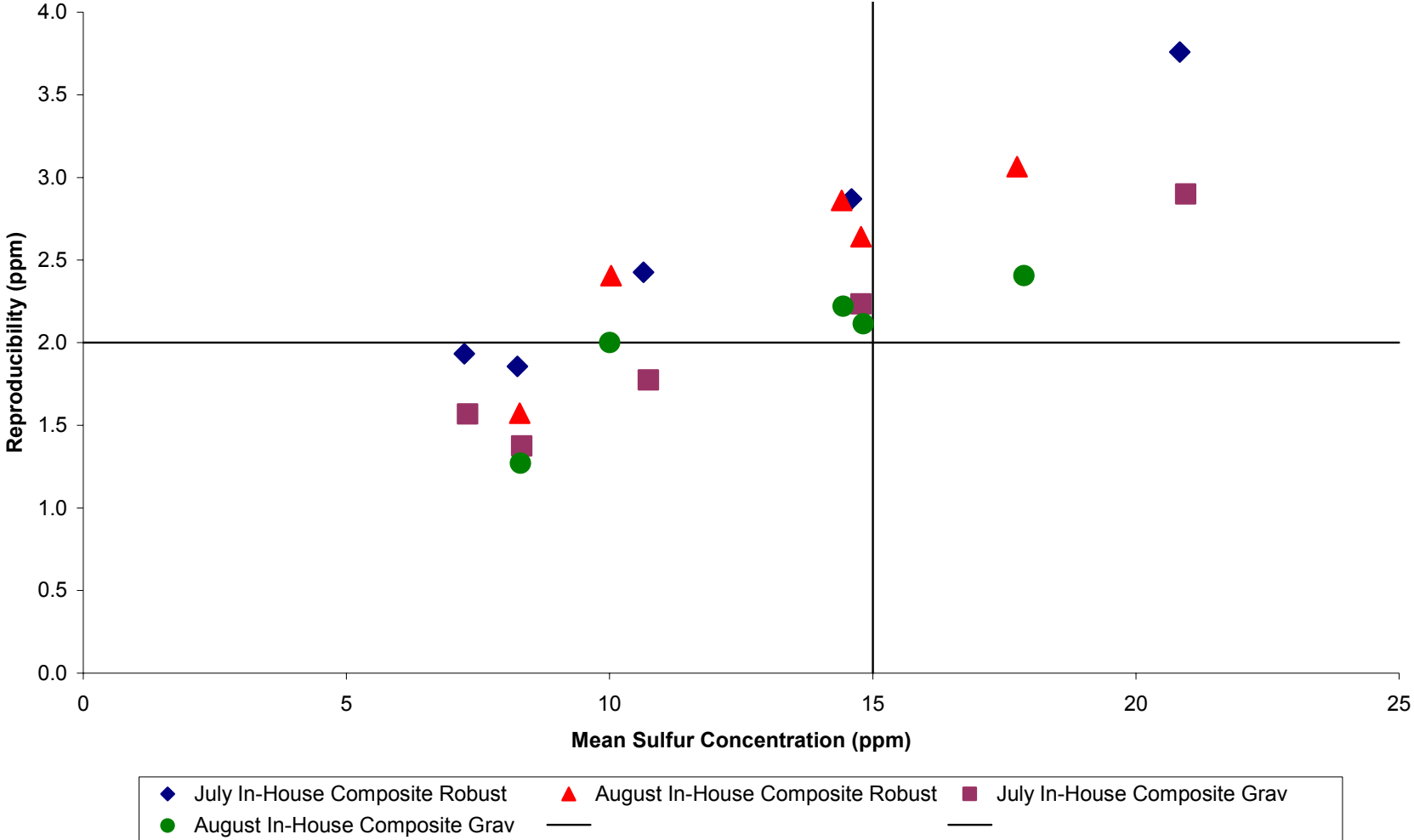
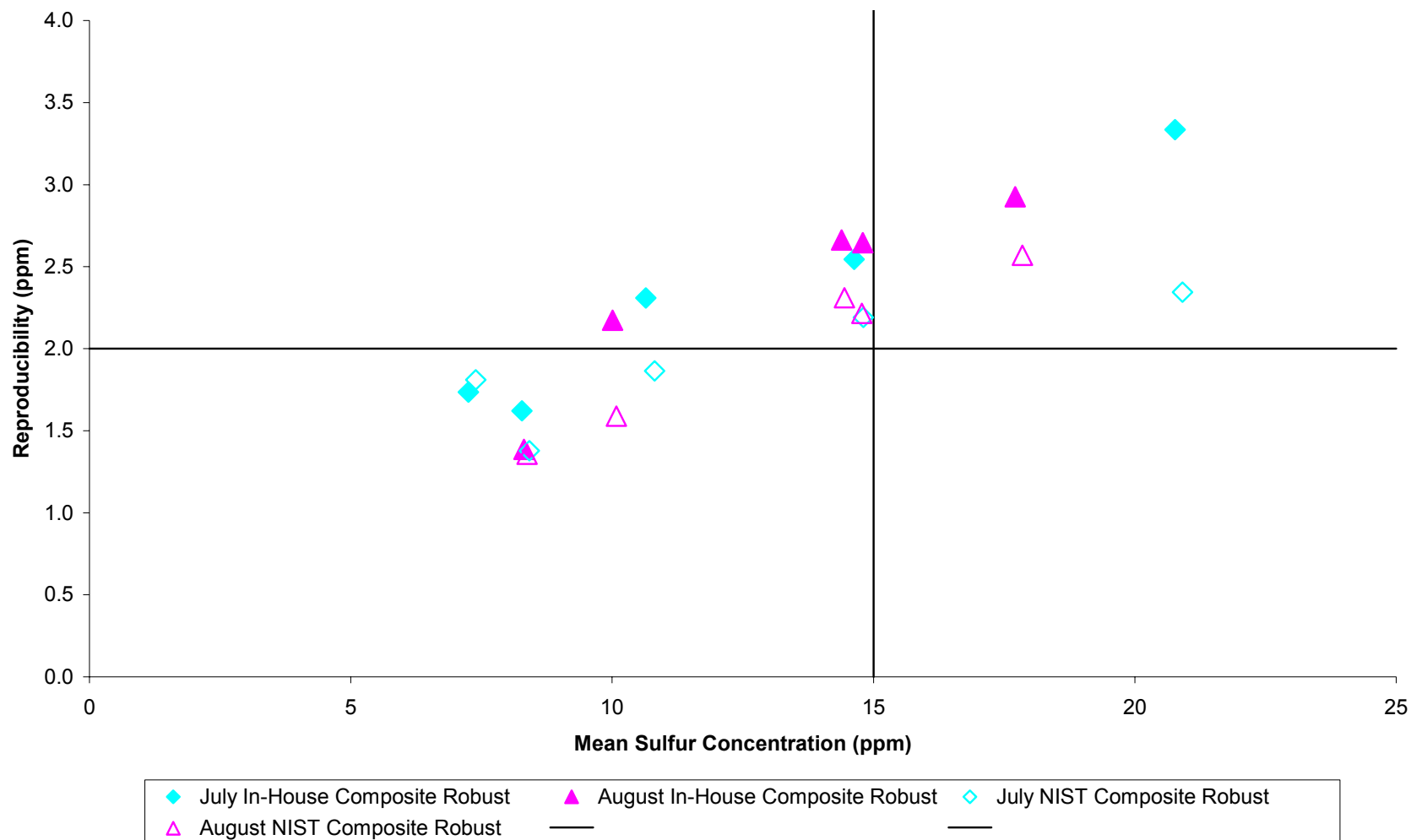


Figure F-5 Composite Test Methods, In-House Calibration, ASTM Analysis  
Comparing Robust and Gravimetric Outlier Methods

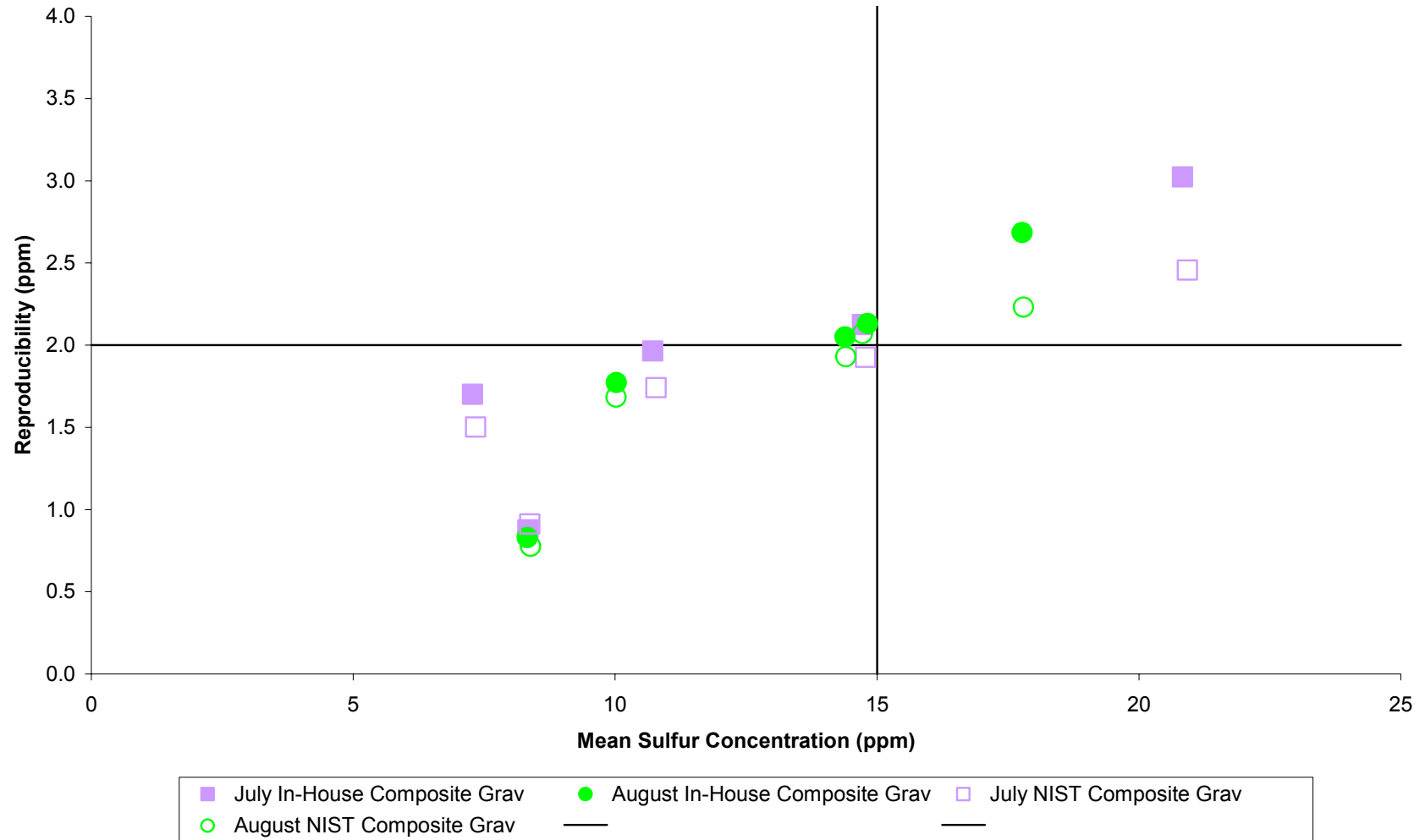




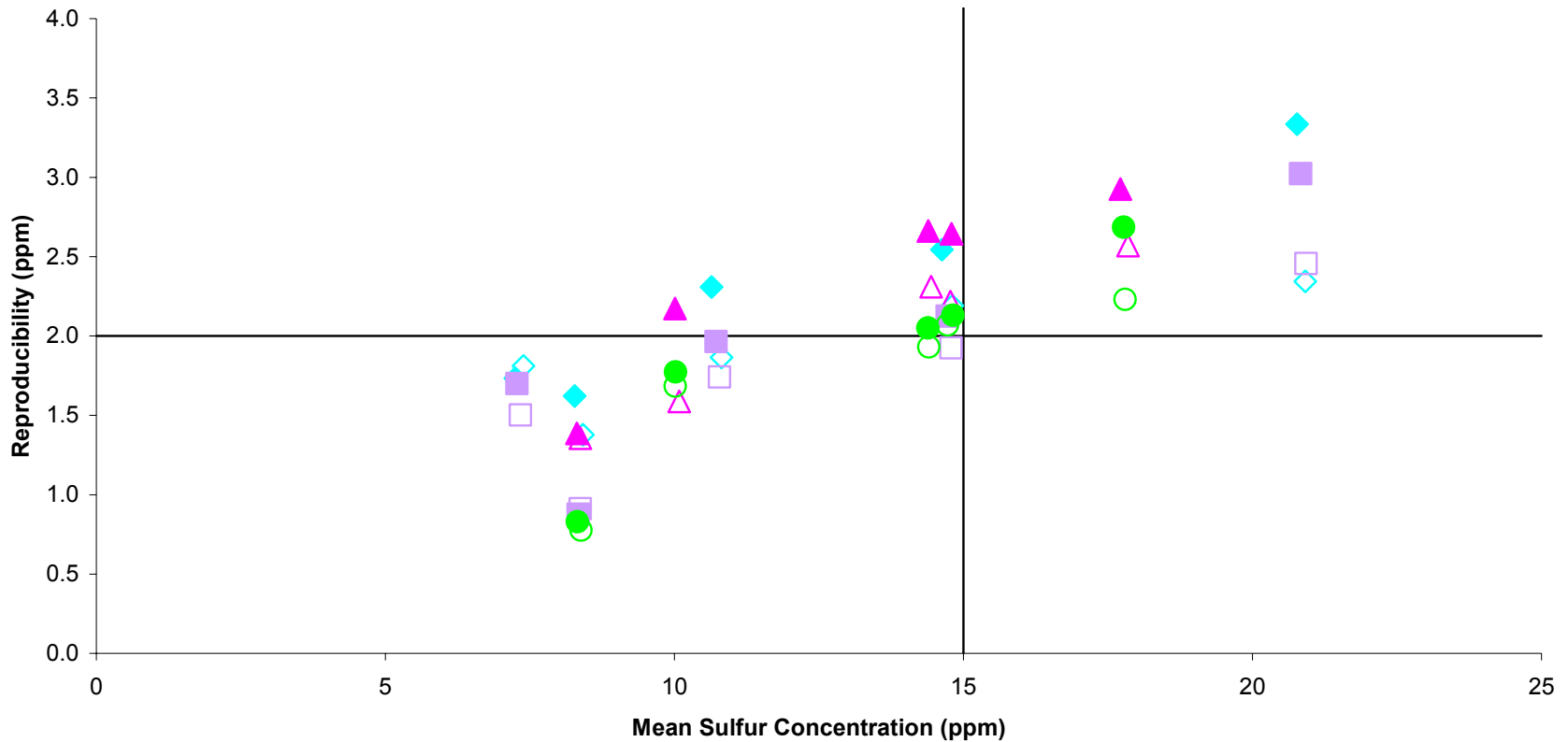
**Figure F-6 Composite Test Methods, Robust Deletion, ANOVA Analysis  
Comparing In-House and NIST Calibration**



**Figure F-7 Composite Test Methods, Gravimetric Deletion, ANOVA Analysis  
Comparing In-House and NIST Calibration**

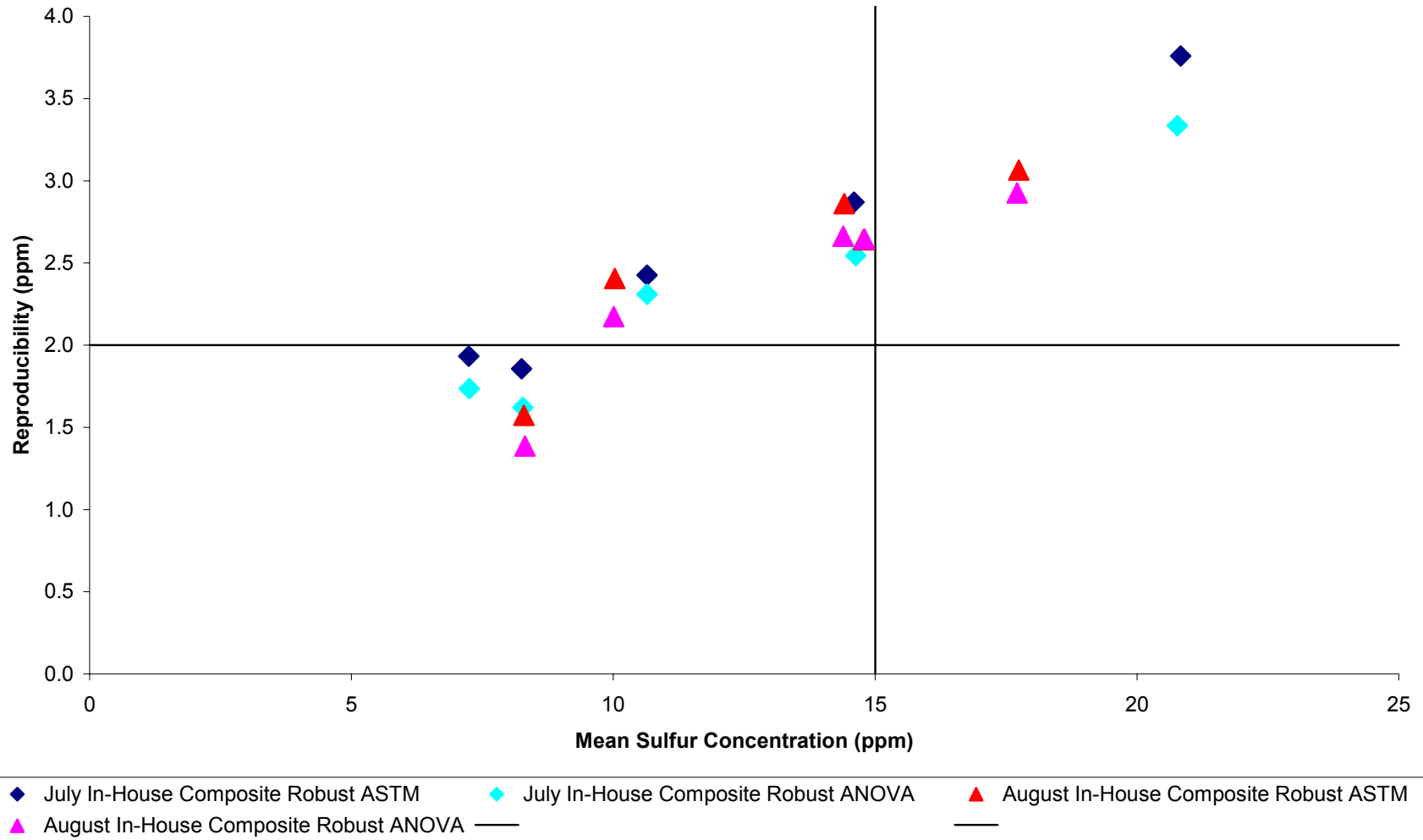


**Figure F-8 Composite Test Methods, Robust and Gravimetric Outlier, ANOVA Analysis Comparing In-House and NIST Calibrations**

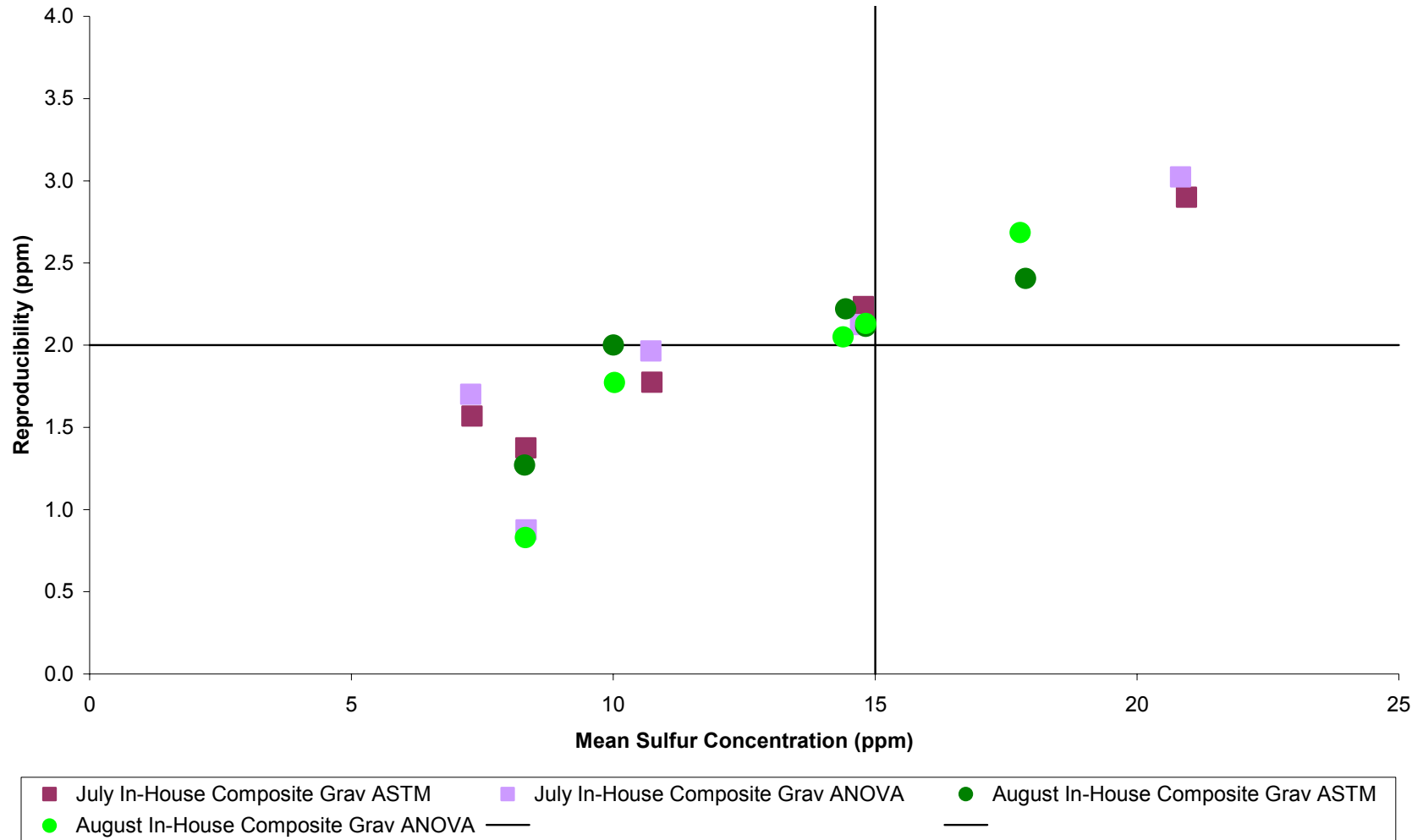


- ◆ July In-House Composite Robust
- ◇ July NIST Composite Robust
- ▲ August In-House Composite Robust
- ▲ August NIST Composite Robust
- August In-House Composite Grav
- August NIST Composite Grav
- July In-House Composite Grav
- July NIST Composite Grav

**Figure F-9 Composite Test Methods, Robust Outlier, In-House Calibration  
Comparing ASTM and ANOVA Analyses**



**Figure F-10 Composite Test Methods, Gravimetric Outlier, In-House Calibration  
Comparing ASTM and ANOVA Analyses**



**Figure F-11 Composite Test Methods, Robust Outlier, NIST Calibration  
Comparing ASTM and ANOVA Analyses**

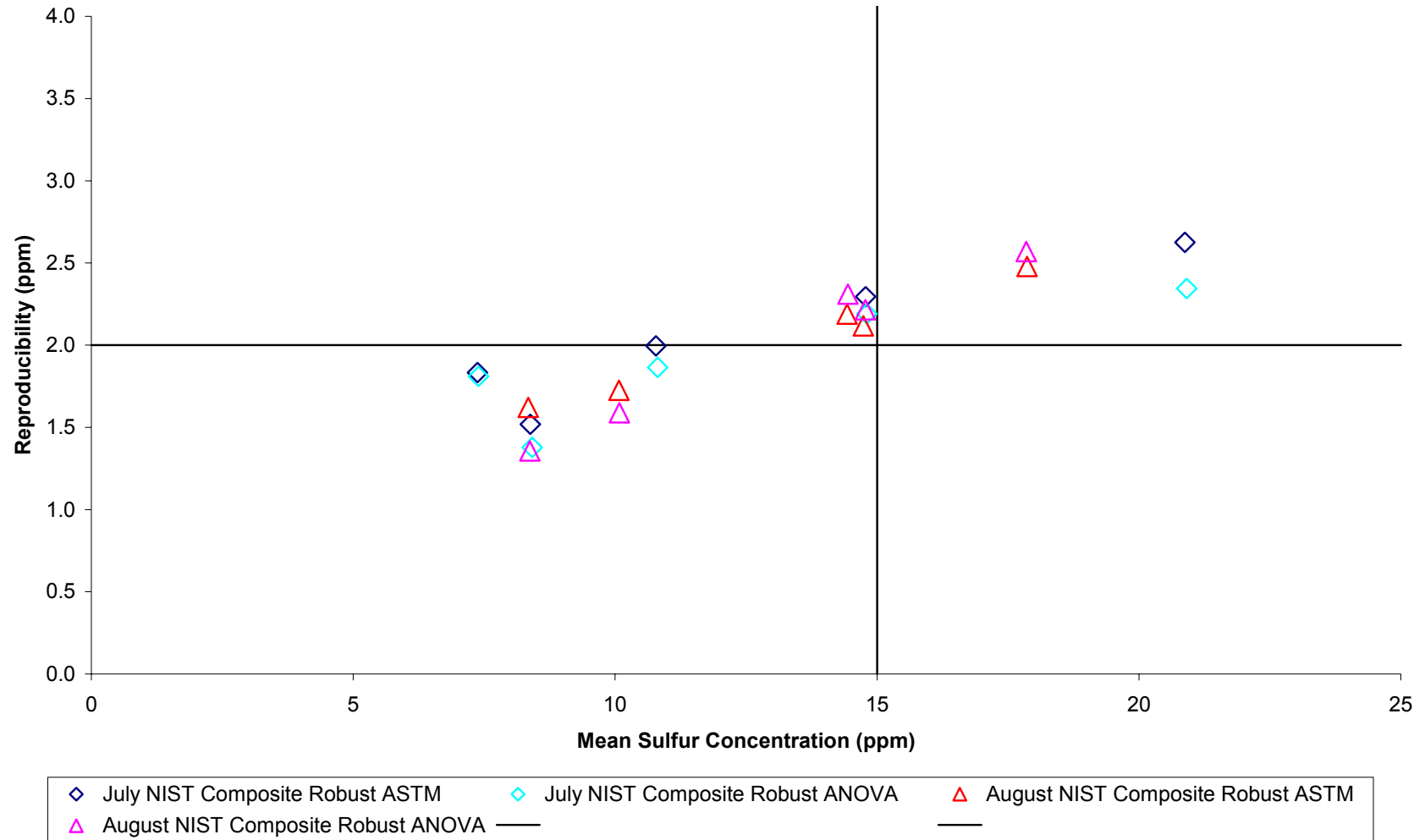


Figure F-12 Composite Test Methods, Gravimetric Outlier, NIST Calibration  
Comparing ASTM and ANOVA Analyses

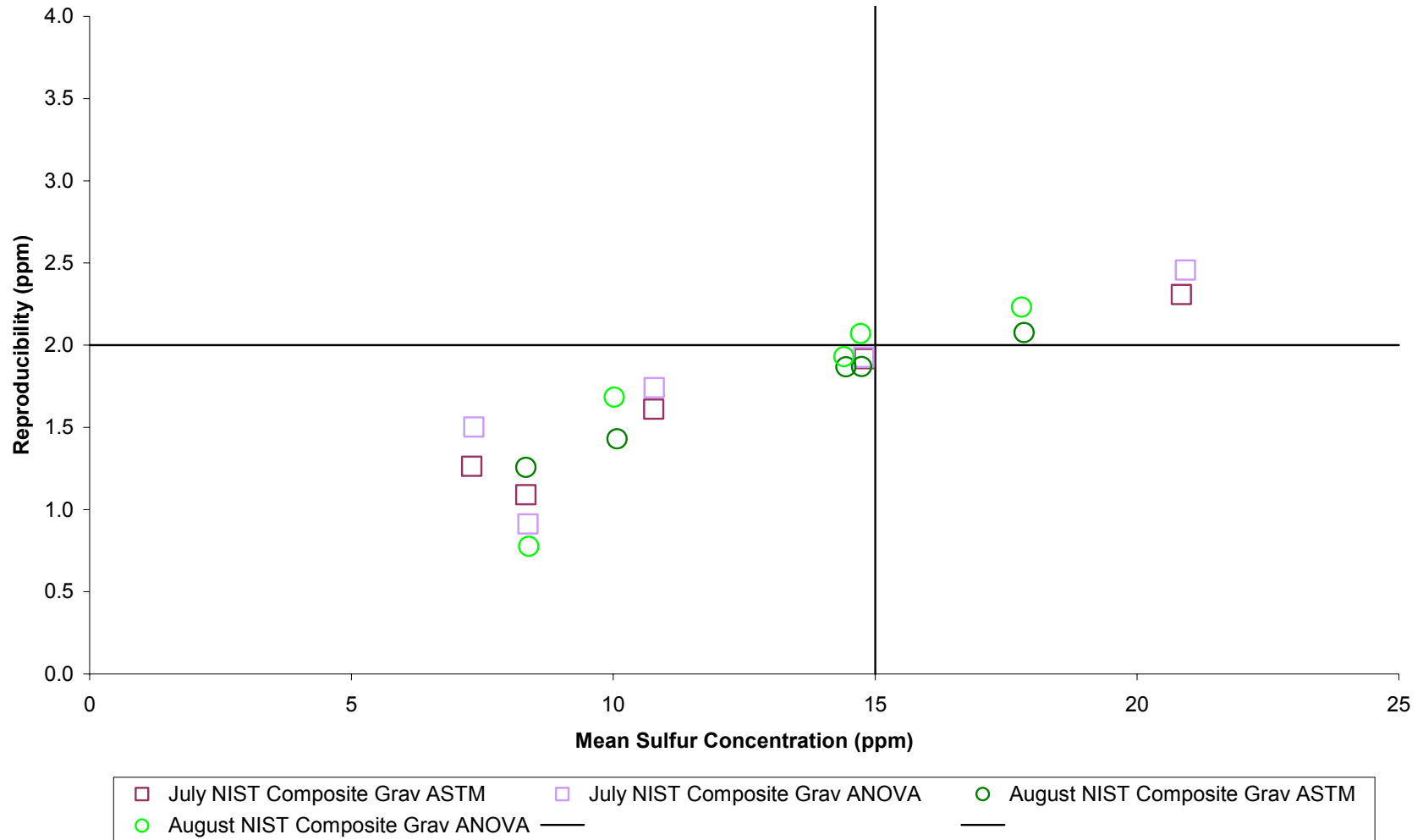


Figure F-13 D5453 Test Method, Robust Outlier, ASTM Analysis  
Comparing In-House and NIST Calibrations

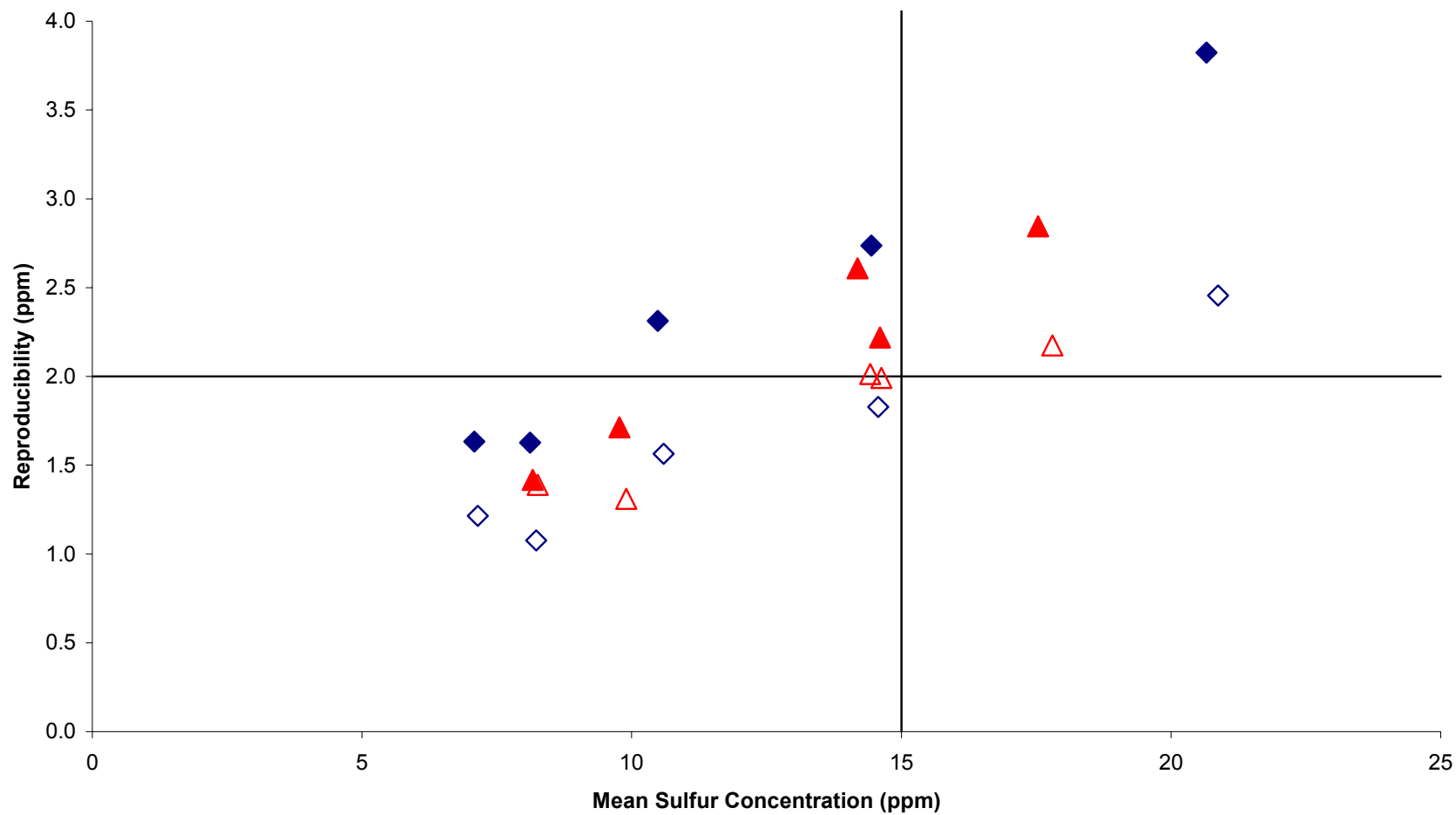
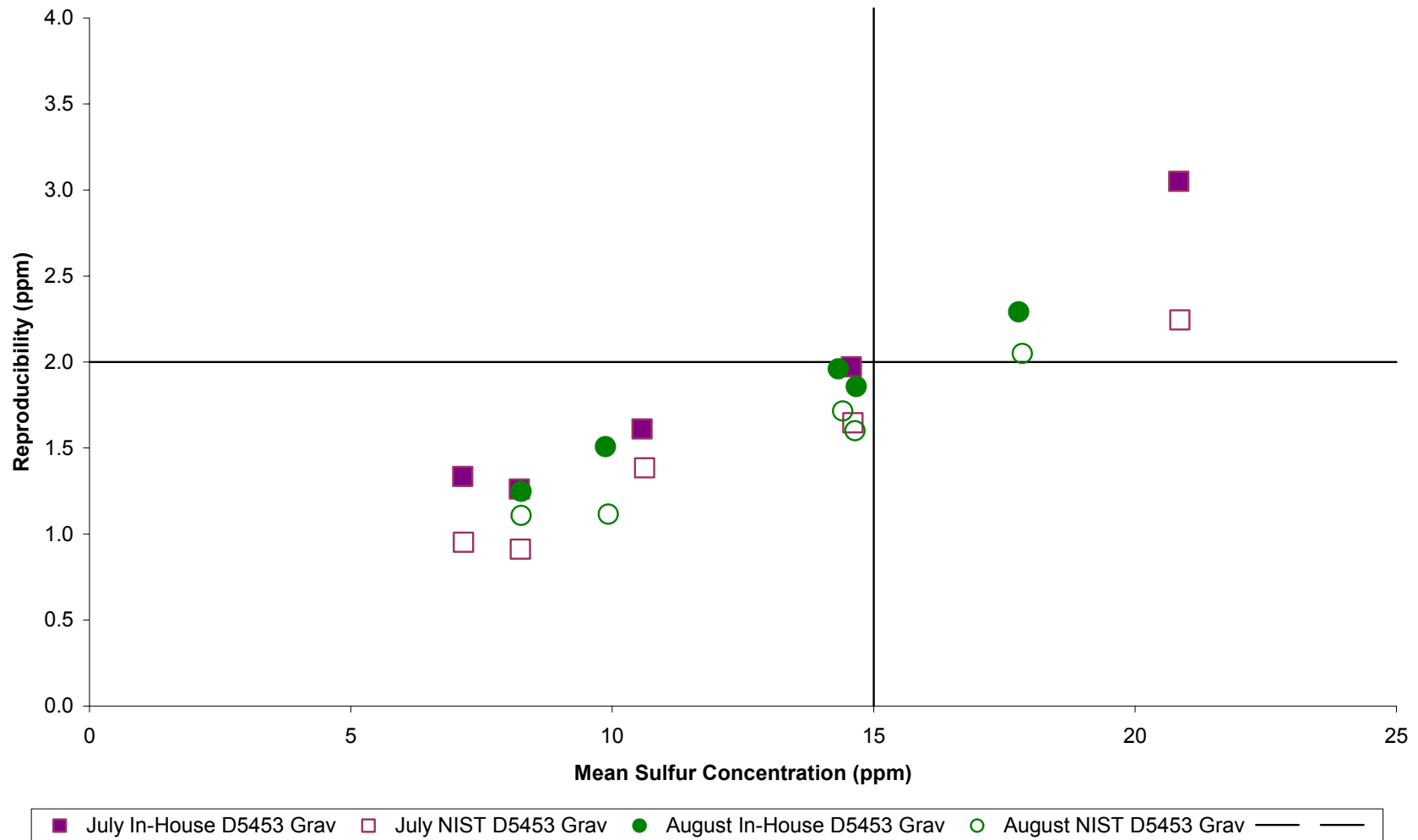




Figure F-14 D5453 Test Method, Gravimetric Outlier, ASTM Analysis  
Comparing In-House and NIST Calibrations



**Figure F-15 D5453 Test Method, Robust and Gravimetric Outlier, ASTM Analysis  
Comparing In-House and NIST Calibrations**

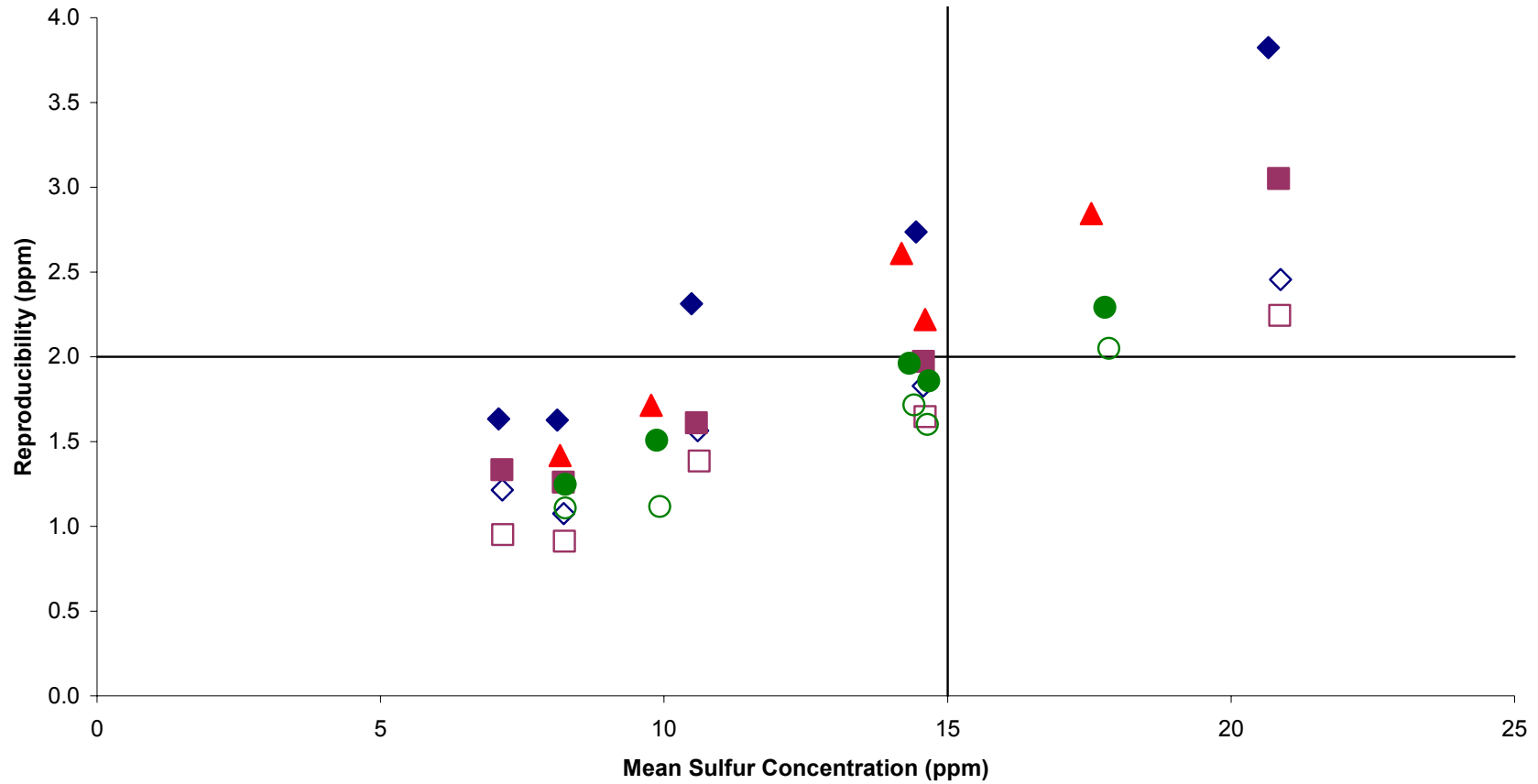


Figure F-16 D5453 Test Method, Robust and Gravimetric Outlier, ASTM Analysis  
NIST Calibration

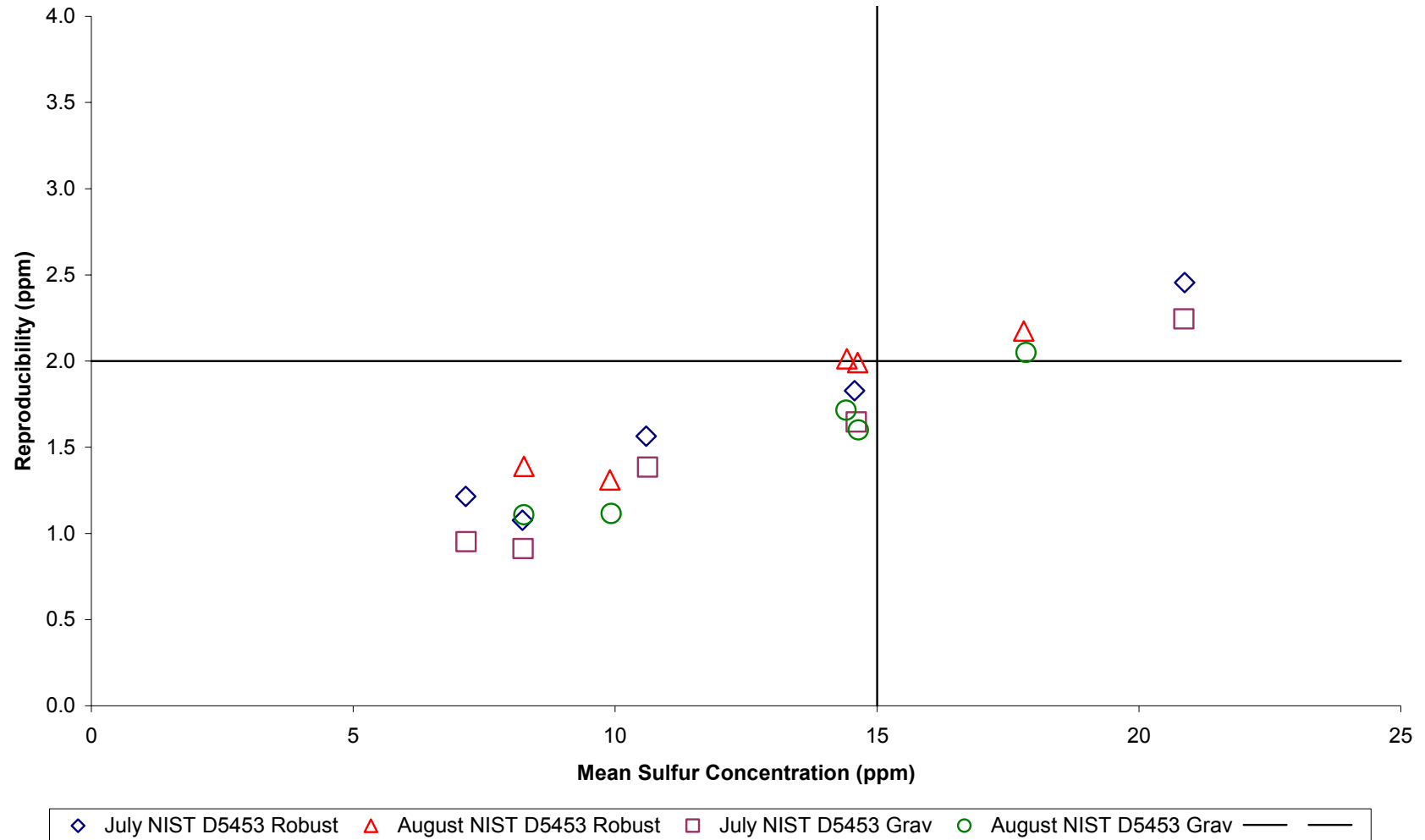
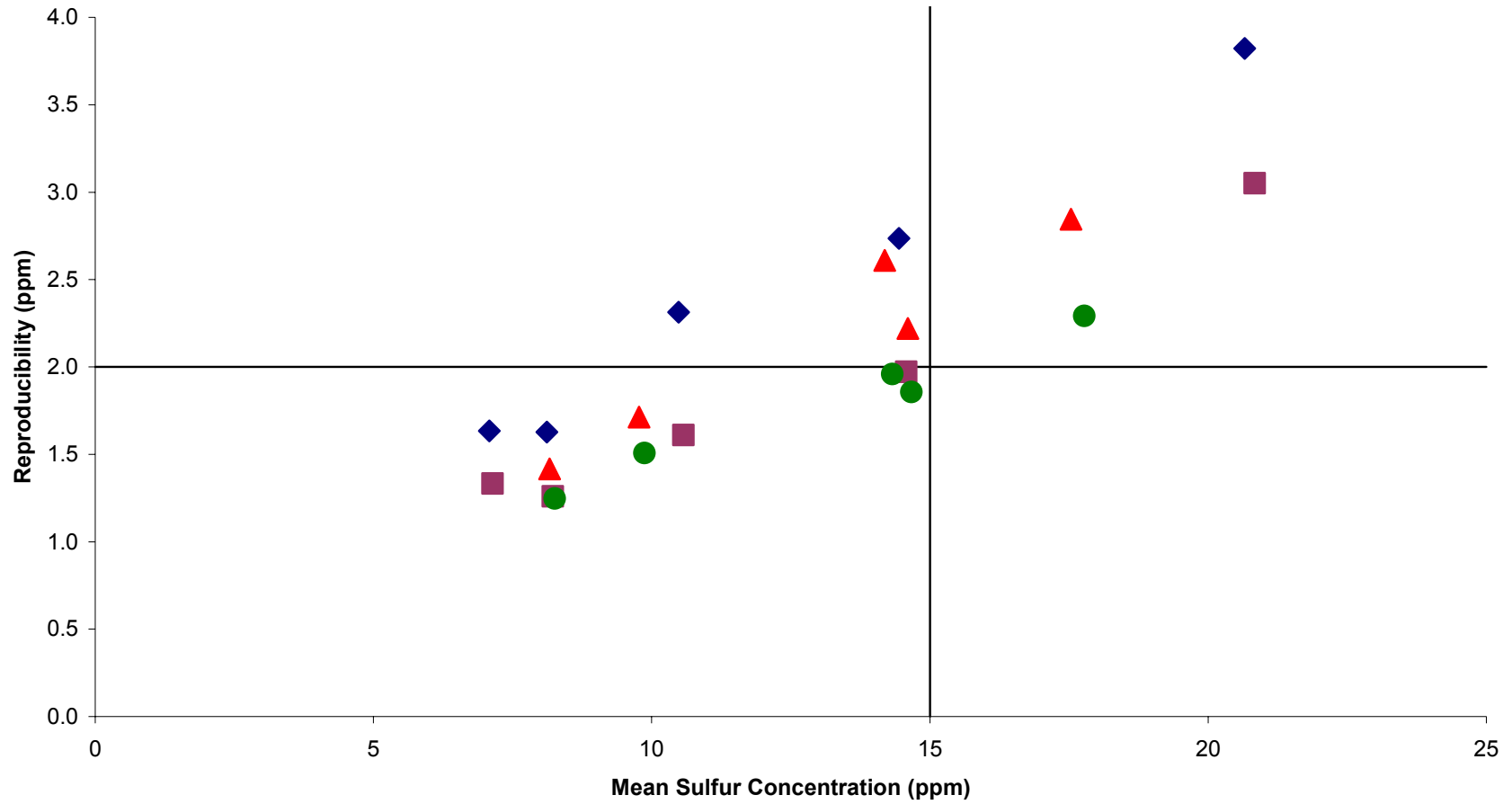
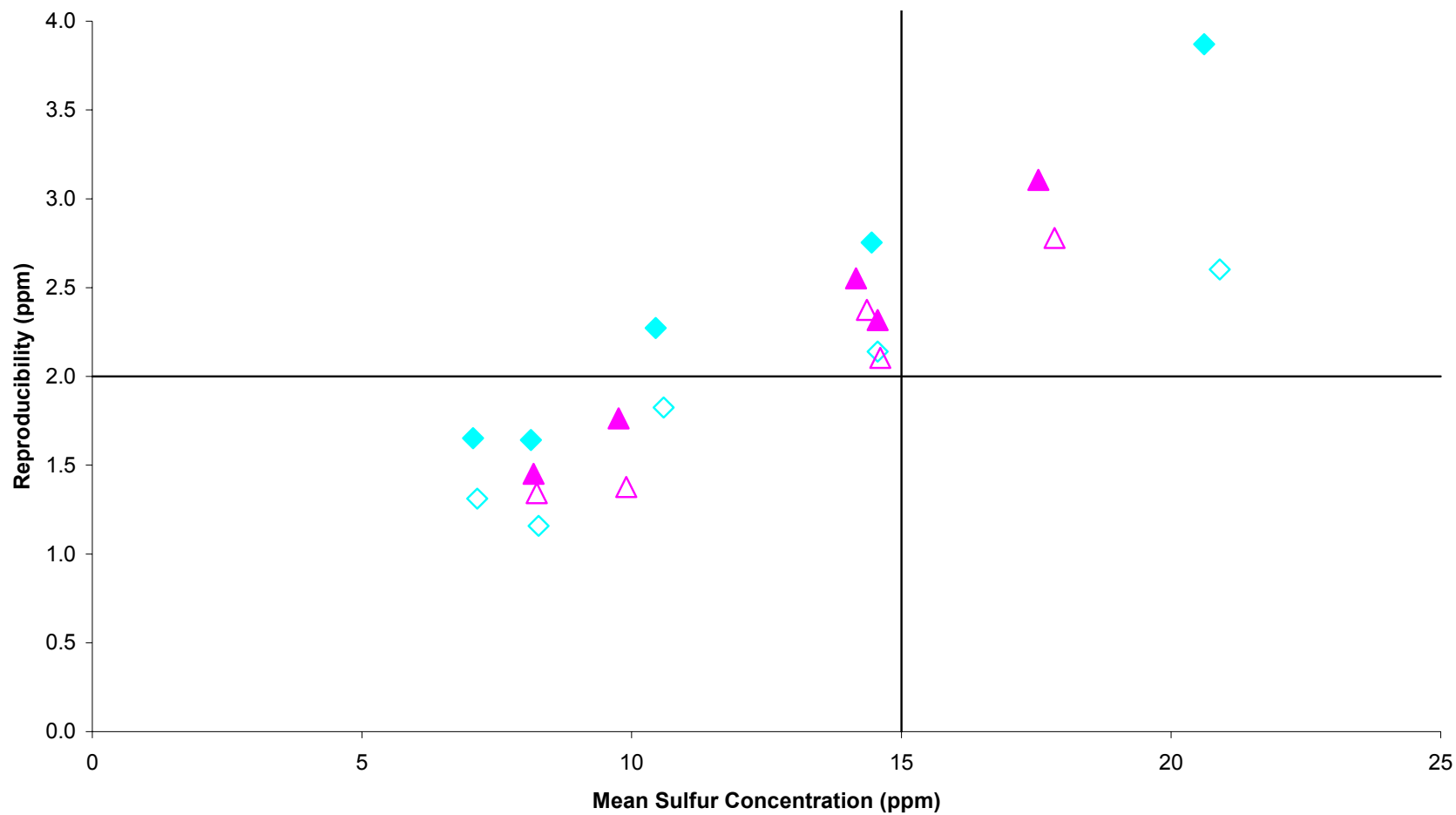


Figure F-17 D5453 Test Method, Robust and Gravimetric Outlier, ASTM Analysis In-House Calibration

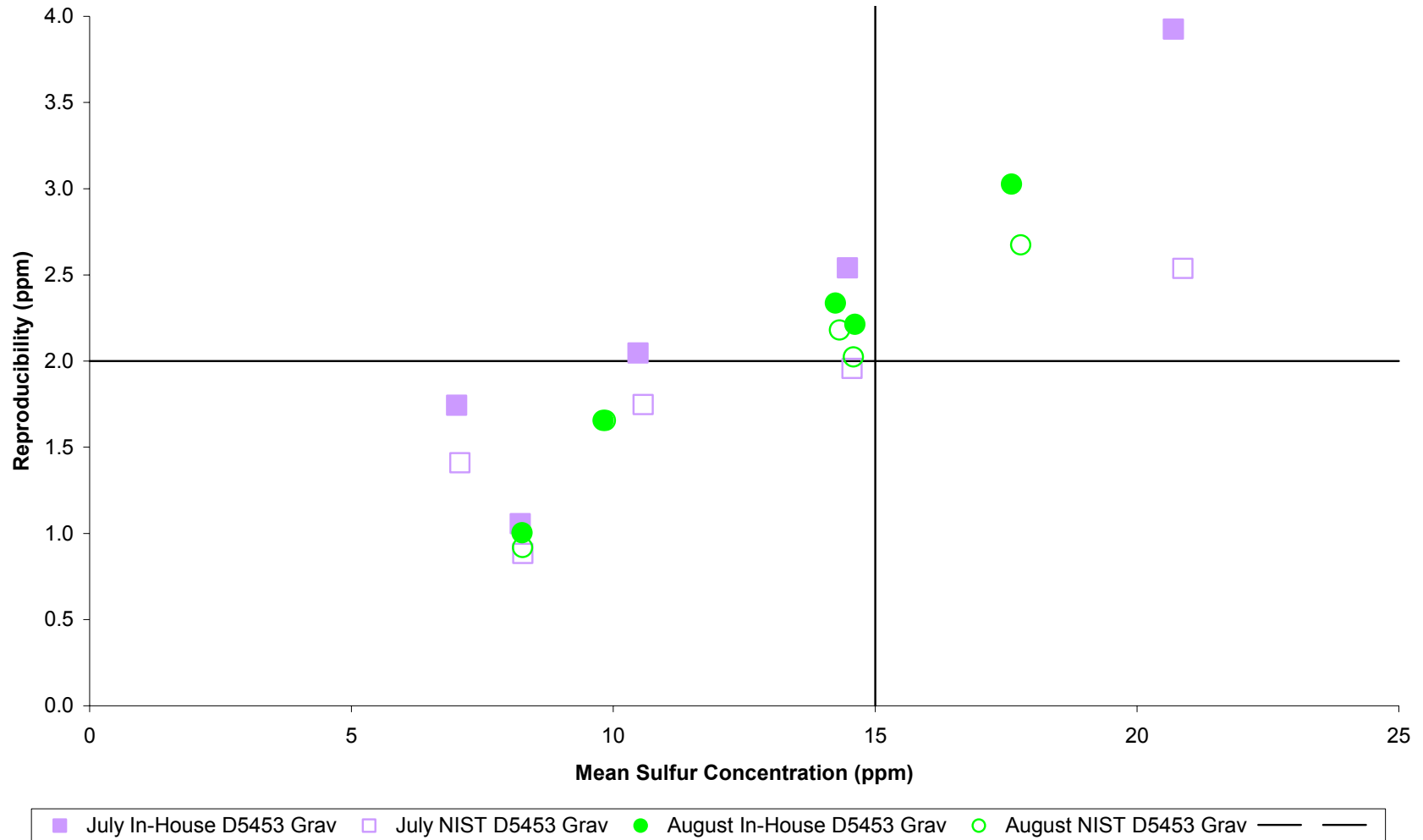


◆ July In-House D5453 Robust    ▲ August In-House D5453 Robust    ■ July In-House D5453 Grav  
● August In-House D5453 Grav

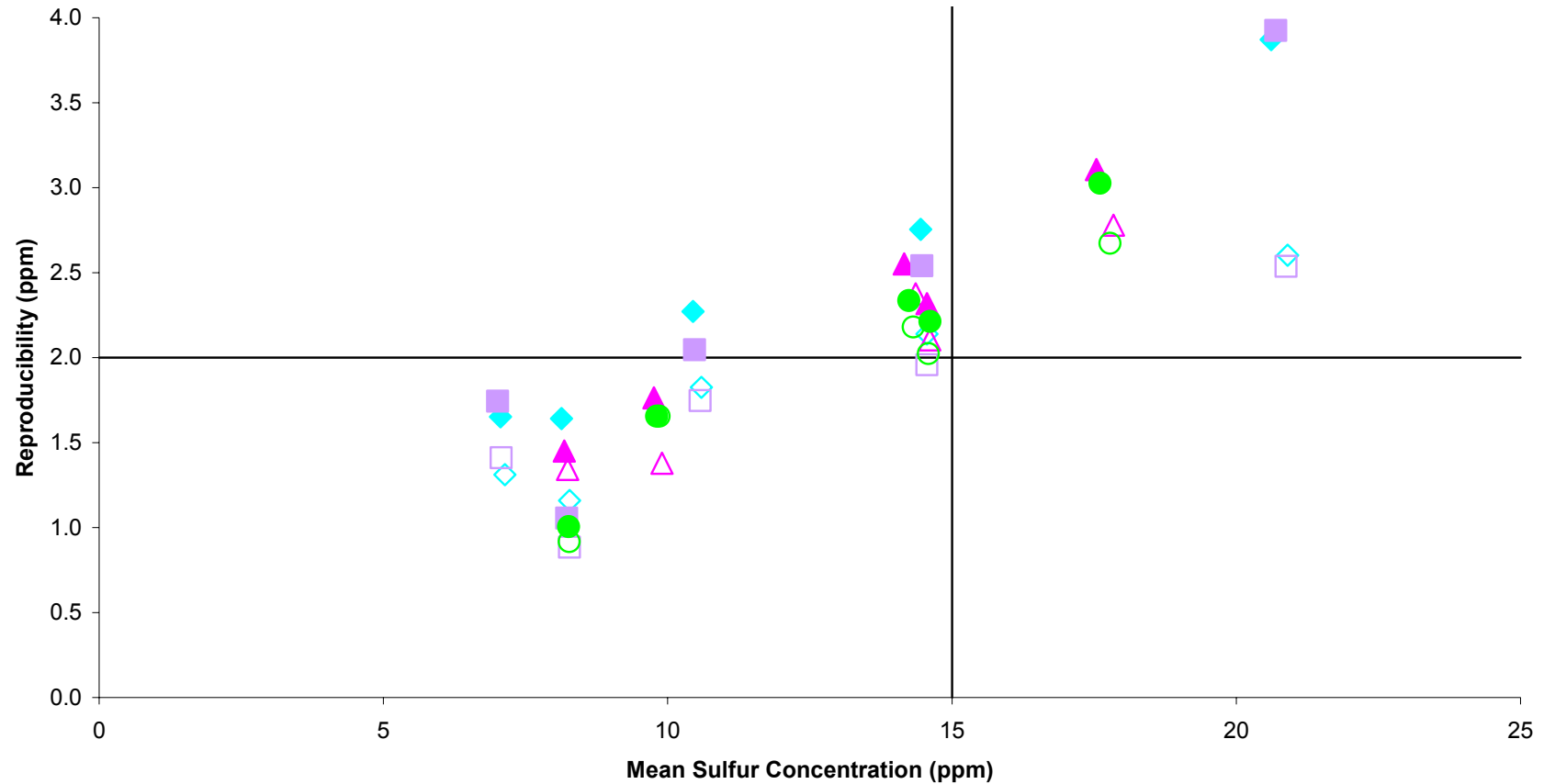
Figure F-18 D5453 Test Method, Robust Outlier, ANOVA Analysis  
Comparing In-House and NIST Calibrations



**Figure F-19 D5453 Test Method, Gravimetric Outlier, ANOVA Analysis  
Comparing In-House and NIST Calibrations**



**Figure F-20 D5453 Test Method, Robust and Gravimetric Outlier, ANOVA Analysis Comparing In-House and NIST Calibrations**



◆ July In-House D5453 Robust     ◇ July NIST D5453 Robust     ▲ August In-House D5453 Robust     △ August NIST D5453 Robust  
■ July In-House D5453 Grav     □ July NIST D5453 Grav     ● August In-House D5453 Grav     ○ August NIST D5453 Grav

Figure F-21 D5453 Test Method, Robust Outlier, In-House Calibration  
Comparing ASTM and ANOVA Analyses

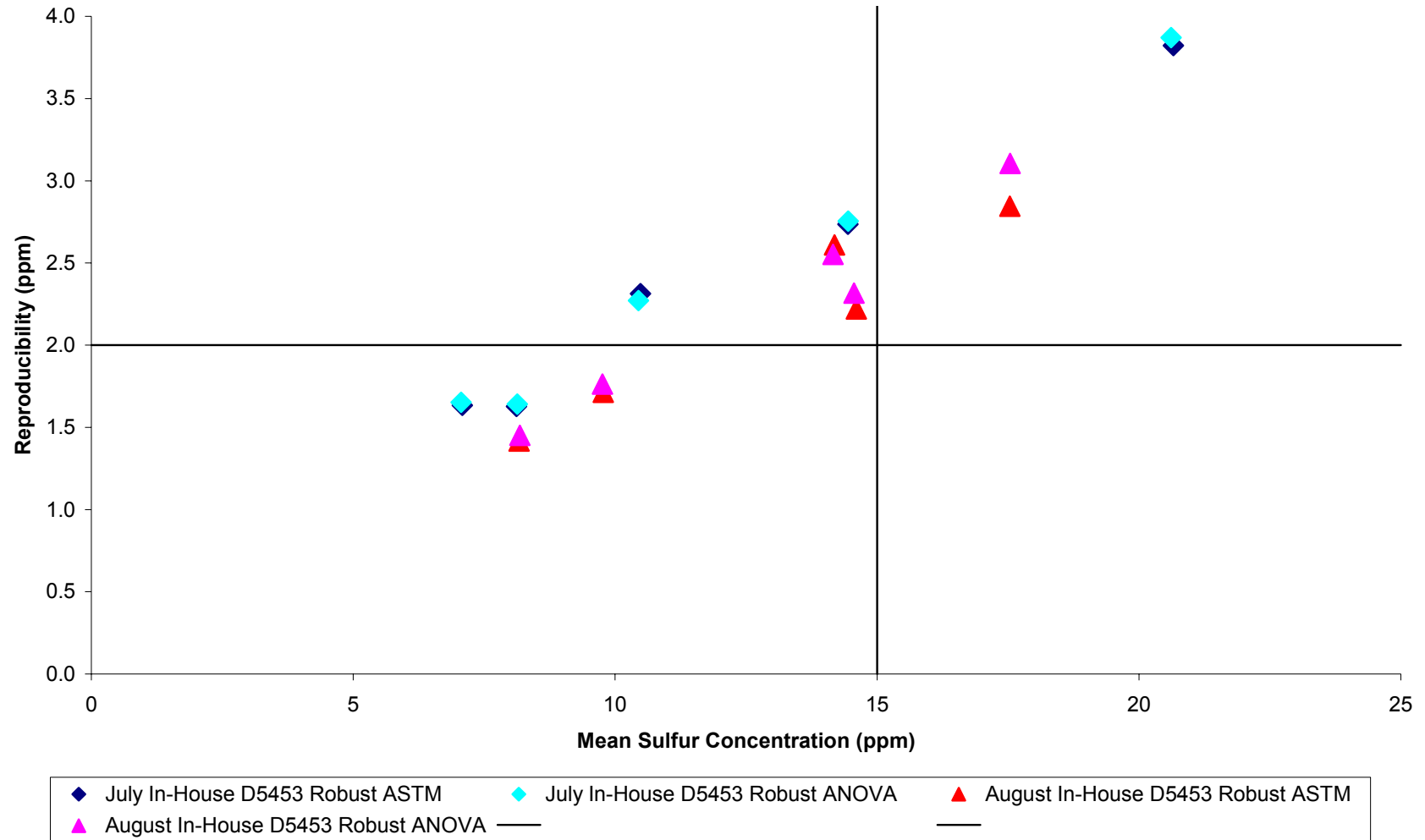




Figure F-22 D5453 Test Method, Gravimetric Outlier, In-House Calibration  
Comparing ASTM and ANOVA Analyses

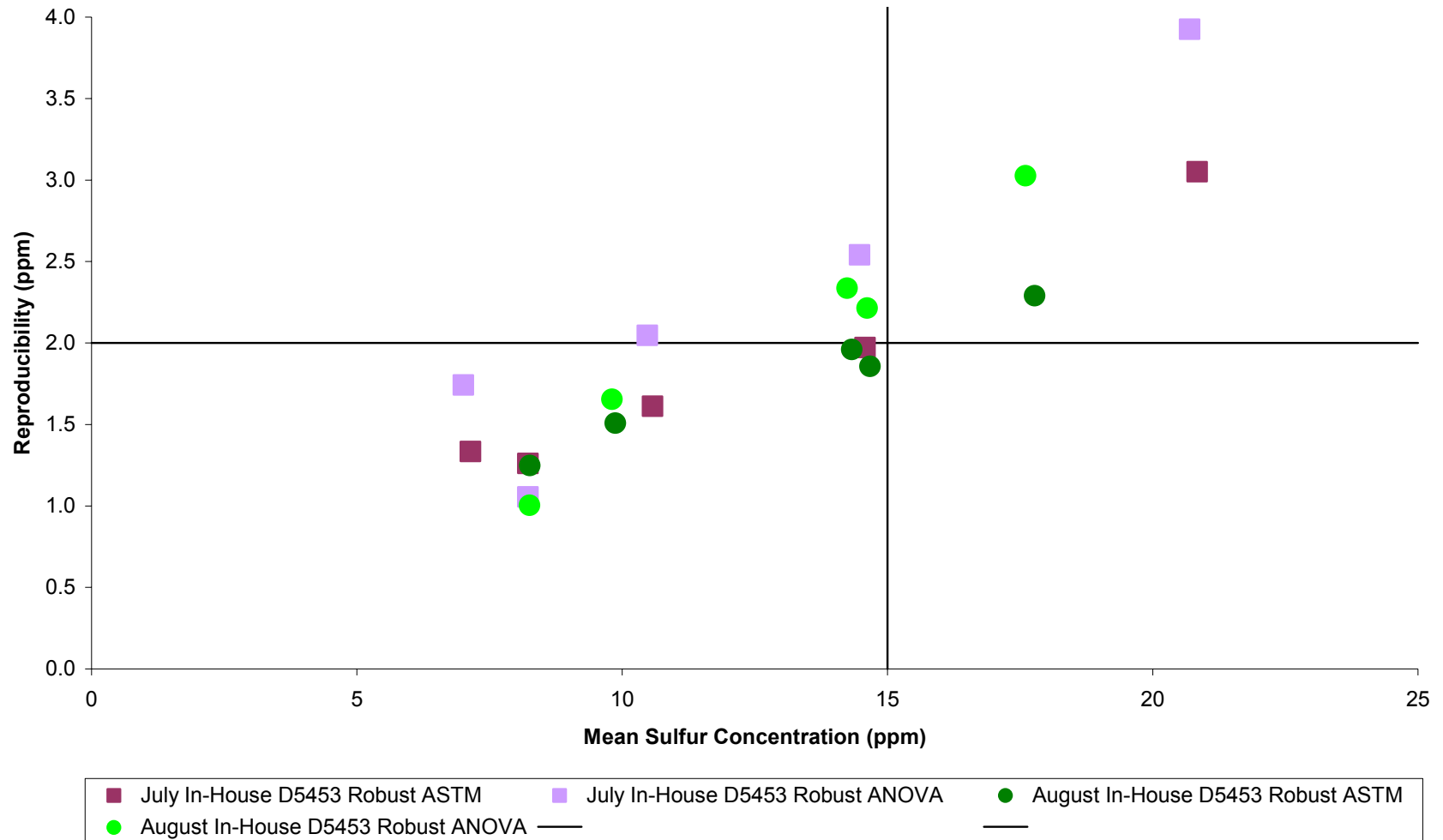


Figure F-23 D5453 Test Method, Robust Outlier, NIST Calibration  
Comparing ASTM and ANOVA Analyses

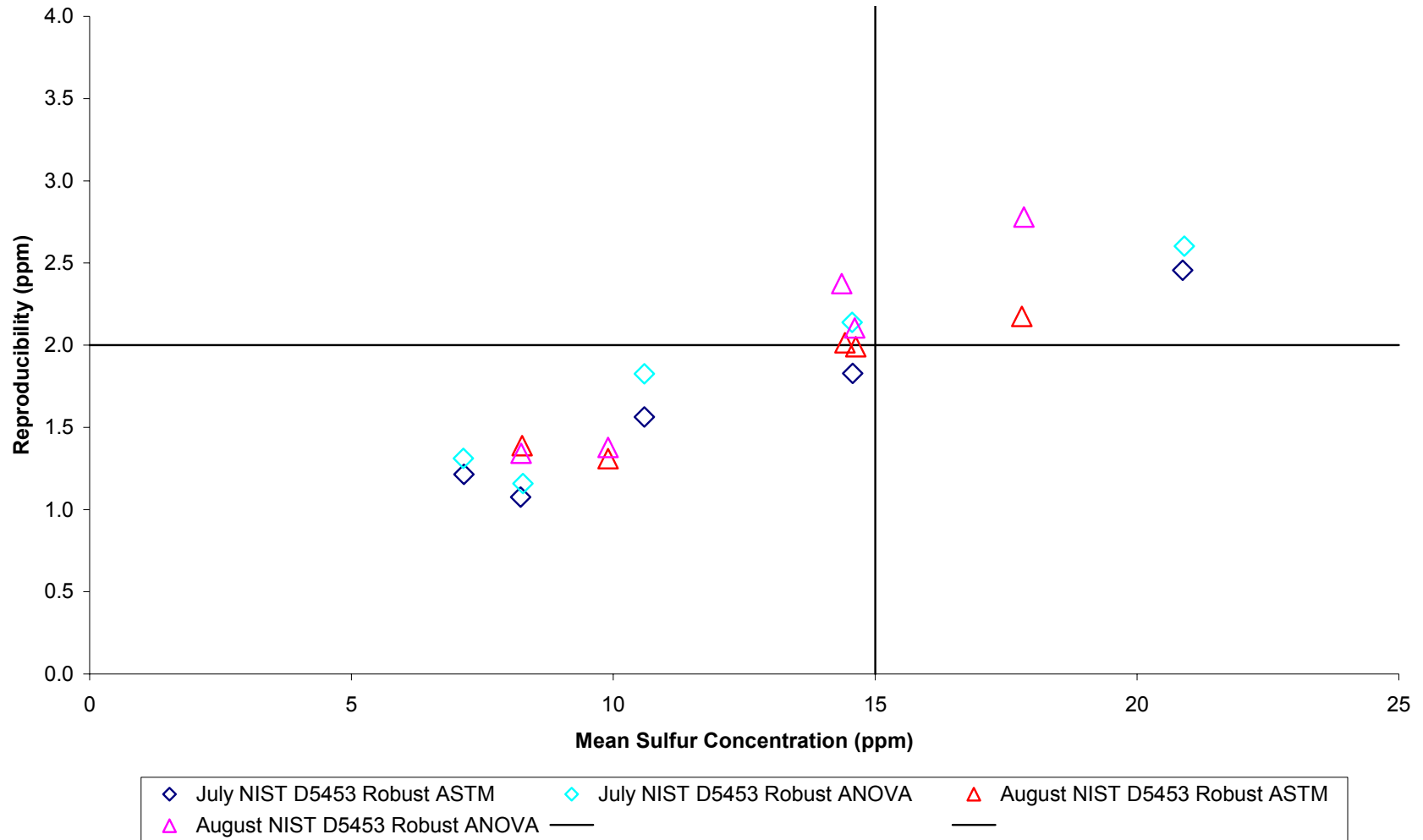


Figure F-24 D5453 Test Method, Gravimetric Outlier, NIST Calibration  
Comparing ASTM and ANOVA Analyses

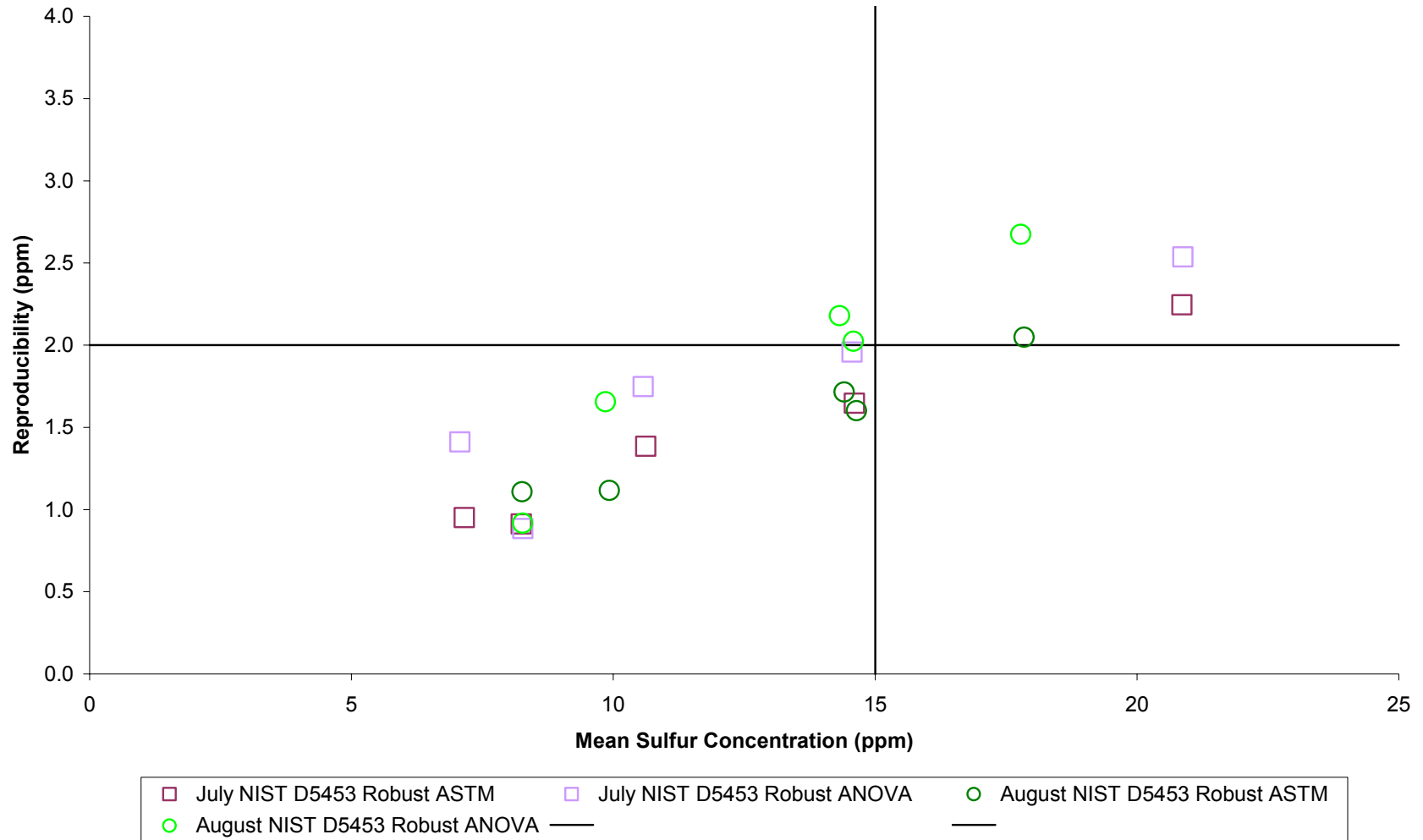


Figure F-25 D2622 Test Method, Robust Outlier, ASTM Analysis  
Comparing In-House and NIST Calibrations

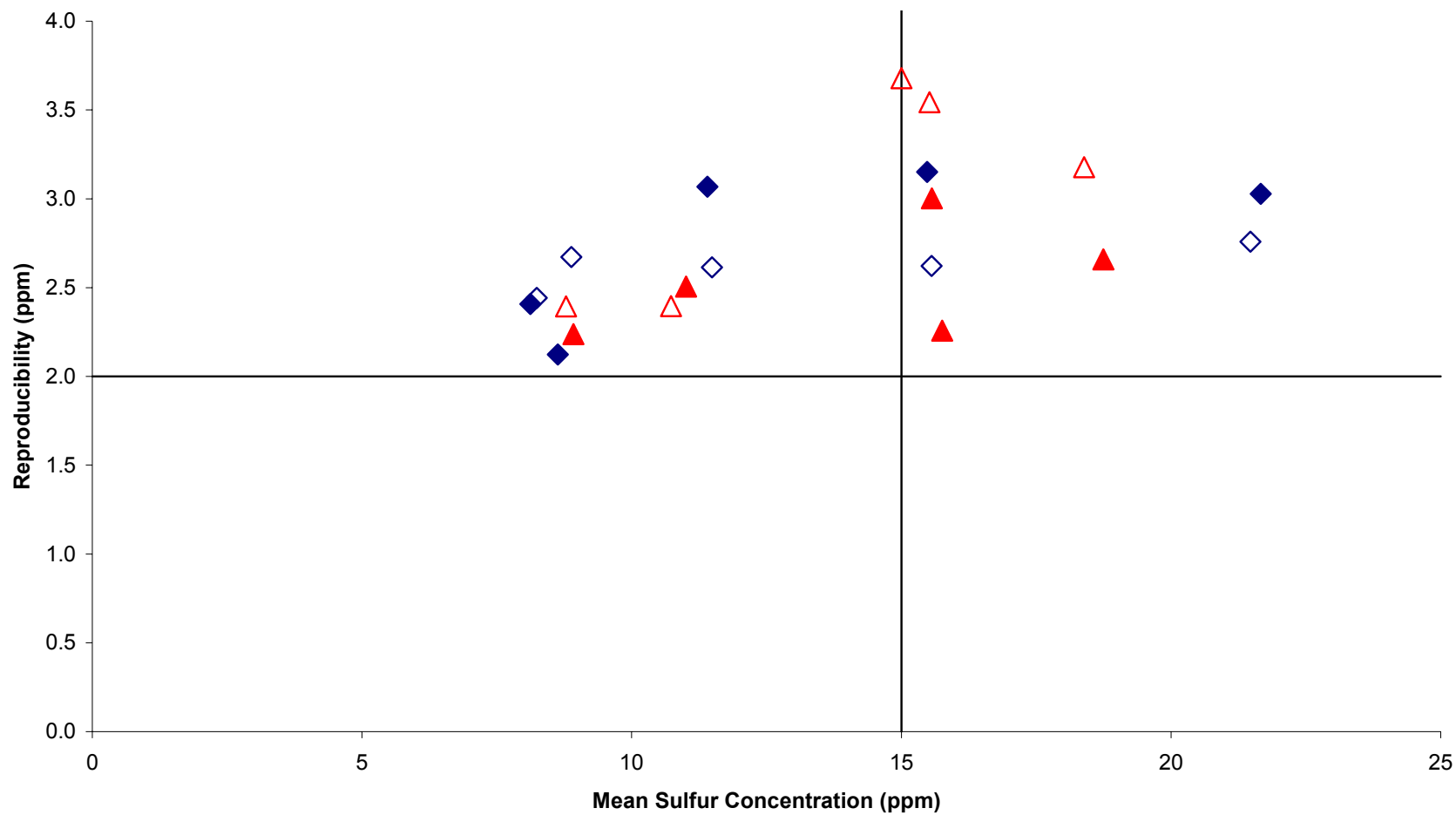
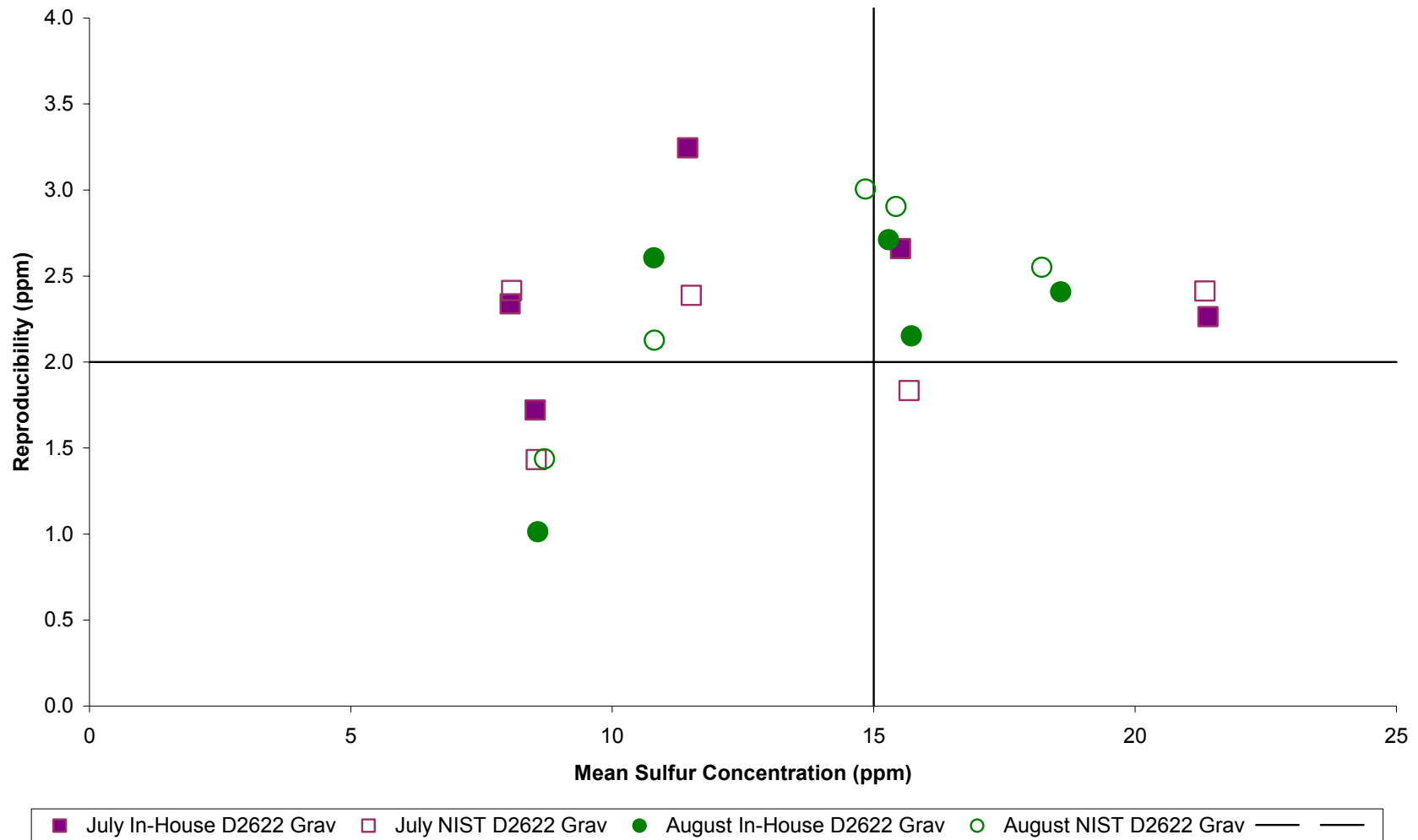
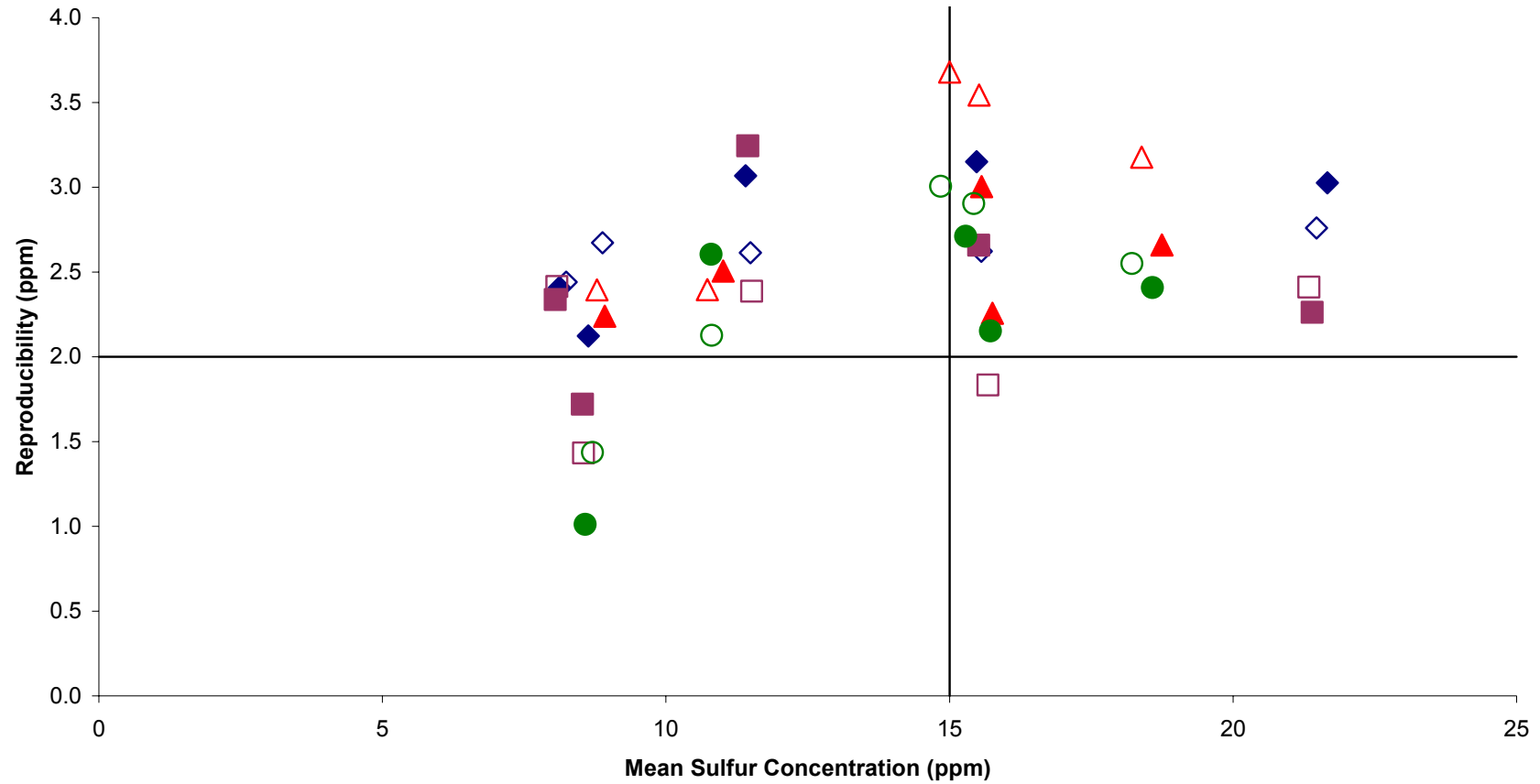


Figure F-26 D2622 Test Method, Gravimetric Outlier, ASTM Analysis  
Comparing In-House and NIST Calibrations



**Figure F-27 D2622 Test Method, Robust and Gravimetric Outlier, ASTM Analysis  
Comparing In-House and NIST Calibrations**



- ◆ July In-House D2622 Robust      ◇ July NIST D2622 Robust      ▲ August In-House D2622 Robust      △ August NIST D2622 Robust
- July In-House D2622 Grav      □ July NIST D2622 Grav      ● August In-House D2622 Grav      ○ August NIST D2622 Grav

Figure F-28 D2622 Test Method, Robust and Gravimetric Outlier, ASTM Analysis  
NIST Calibration

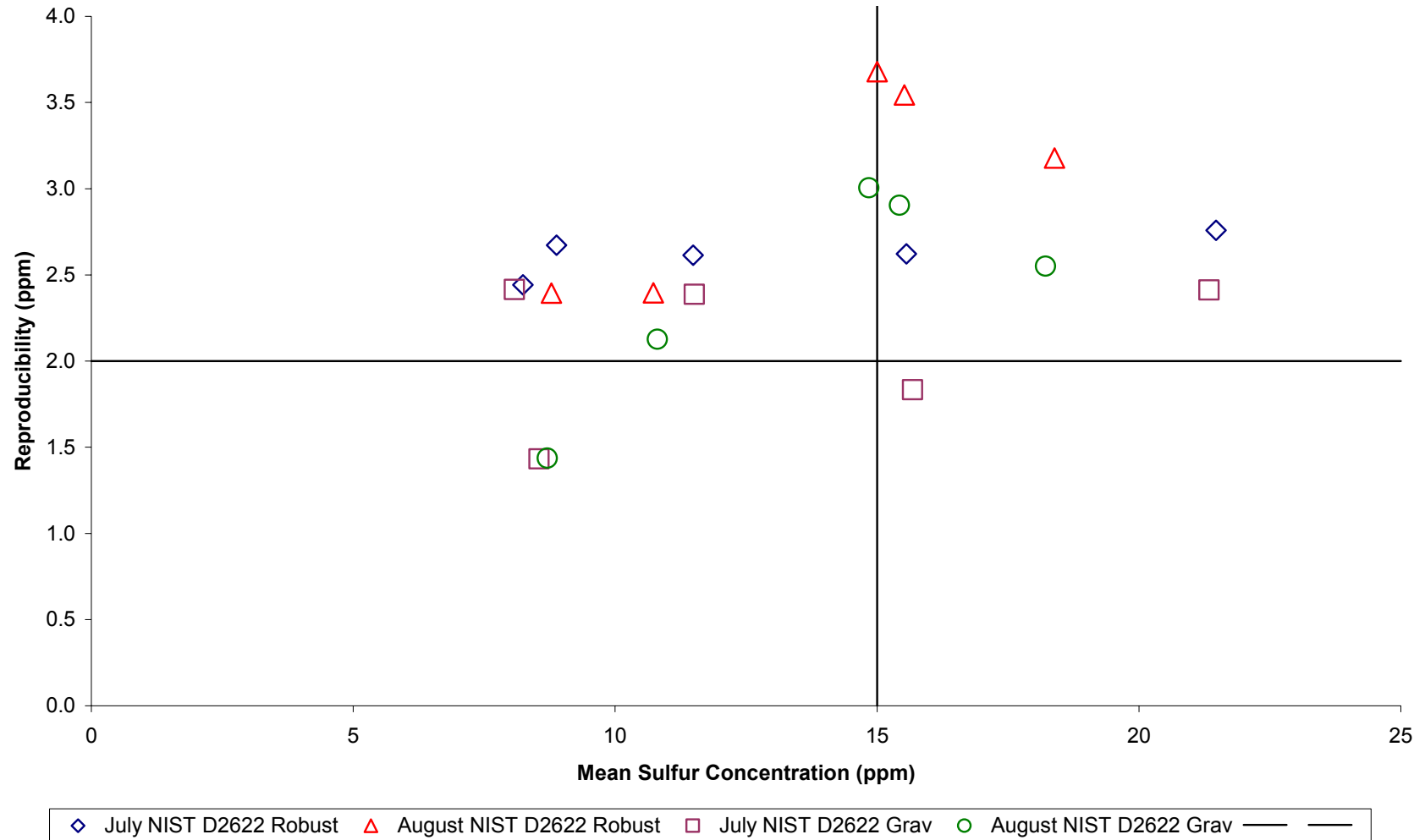


Figure F-29 D2622 Test Method, Robust and Gravimetric Outlier, ASTM Analysis  
In-House Calibration

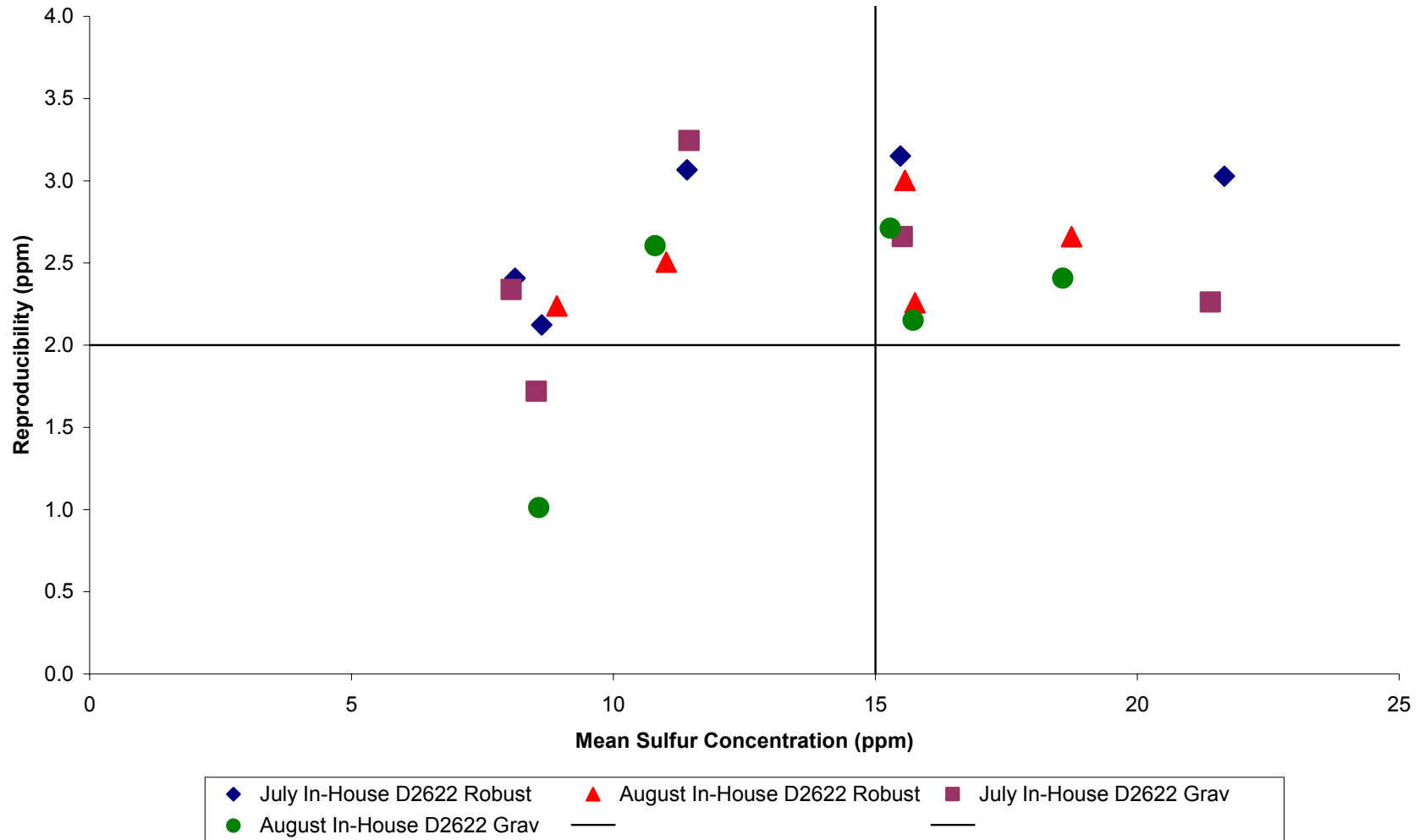




Figure F-30 D2622 Test Method, Robust Outlier, ANOVA Analysis  
Comparing In-House and NIST Calibrations

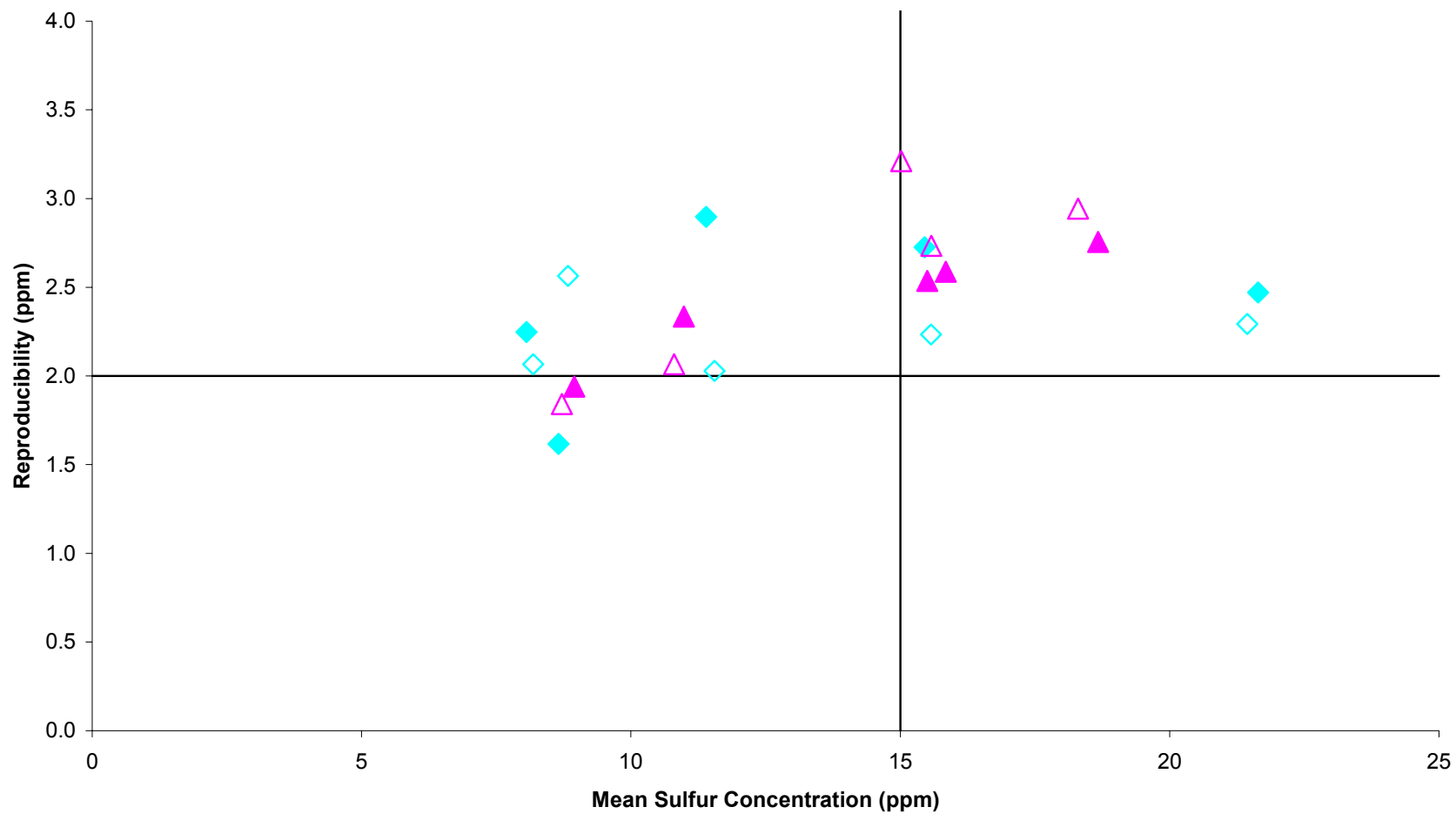
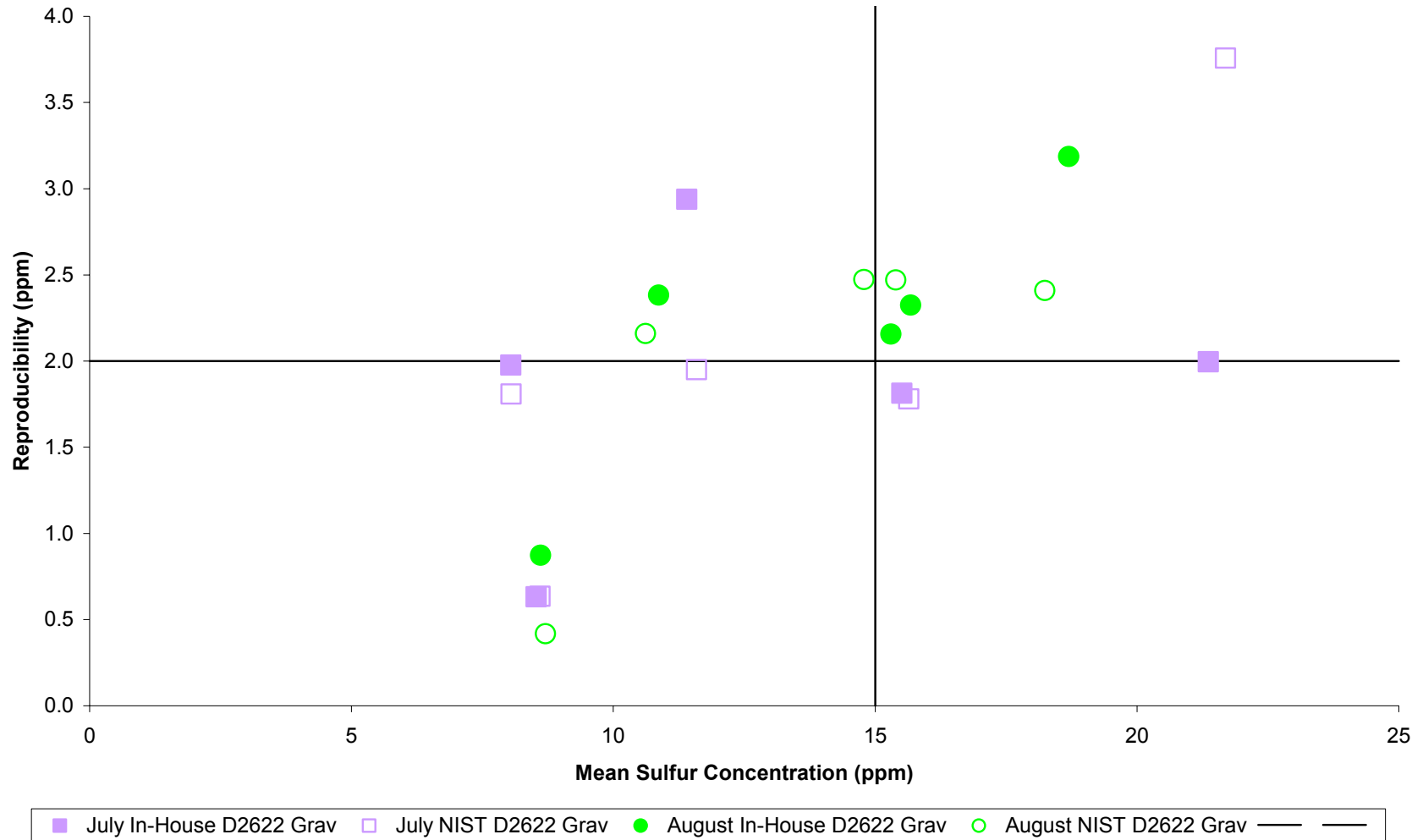


Figure F-31 D2622 Test Method, Gravimetric Outlier, ANOVA Analysis  
Comparing In-House and NIST Calibrations



**Figure F-32 D2622 Test Method, Robust and Gravimetric Outlier, ANOVA Analysis Comparing In-House and NIST Calibrations**

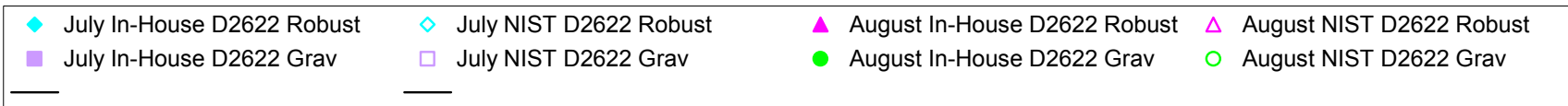
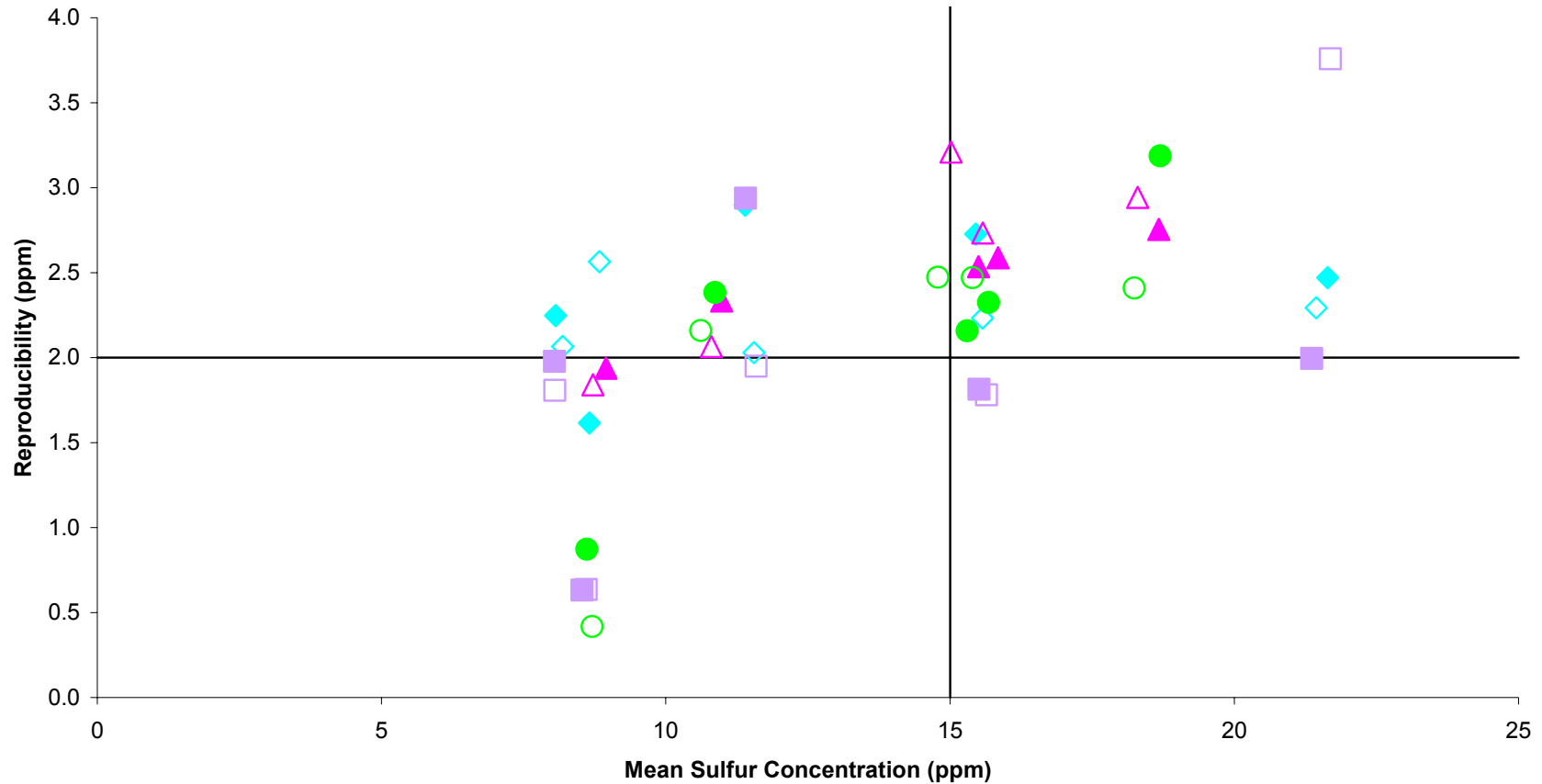
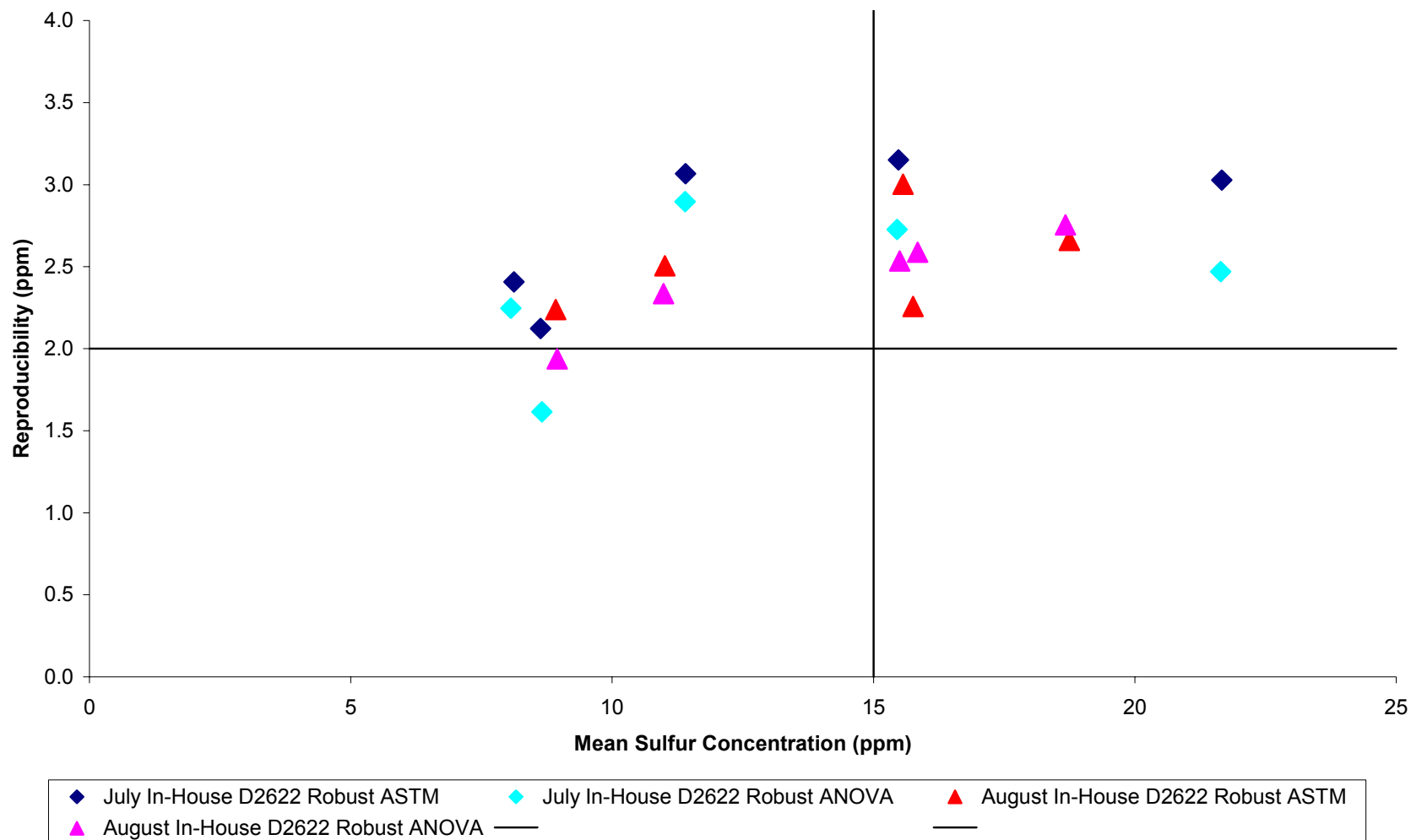


Figure F-33 D2622 Test Method, Robust Outlier, In-House Calibration  
Comparing ASTM and ANOVA Analyses



**Figure F-34 D2622 Test Method, Gravimetric Outlier, In-House Calibration  
Comparing ASTM and ANOVA Analyses**

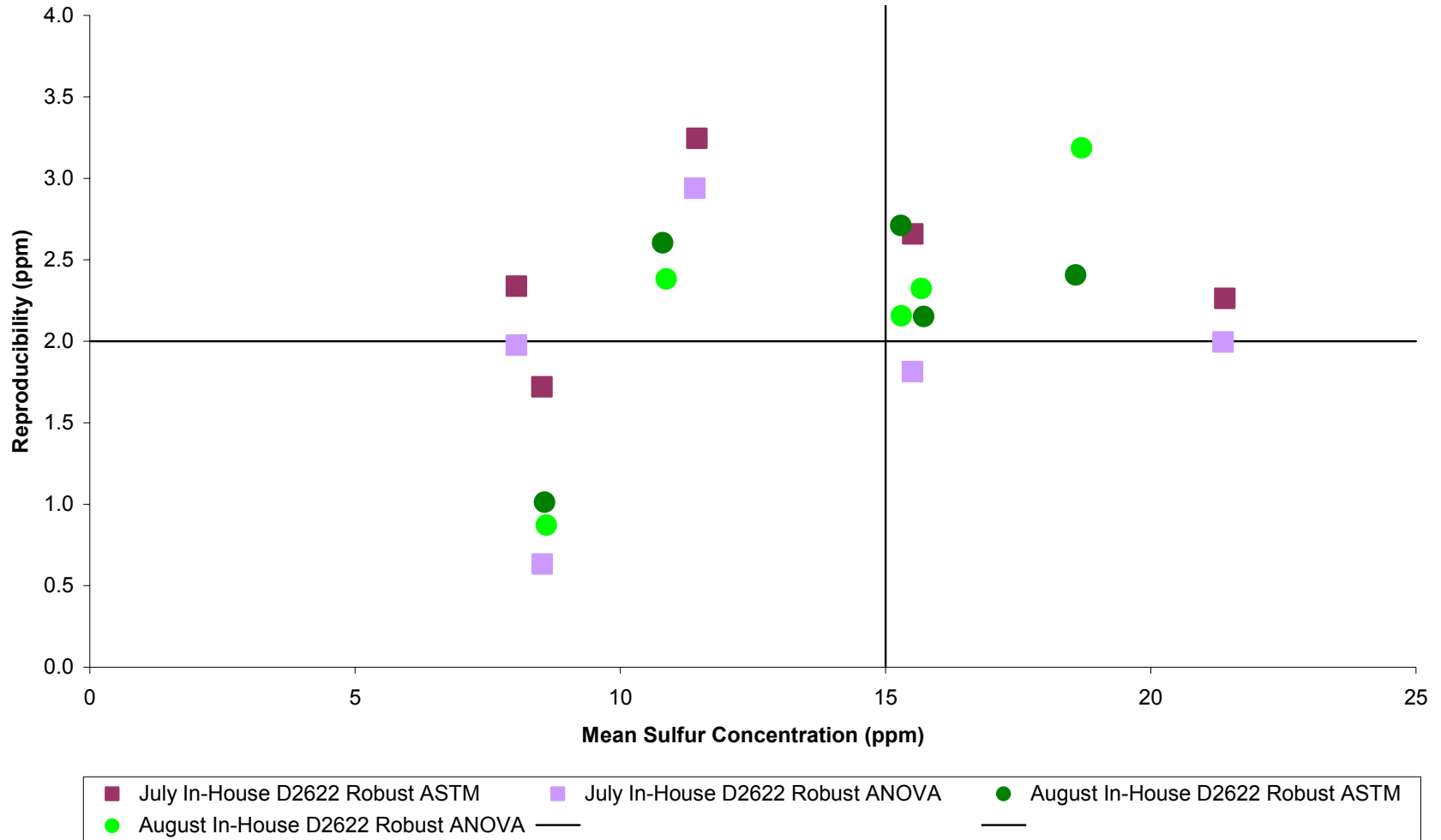


Figure F-35 D2622 Test Method, Robust Outlier, NIST Calibration  
Comparing ASTM and ANOVA Analyses

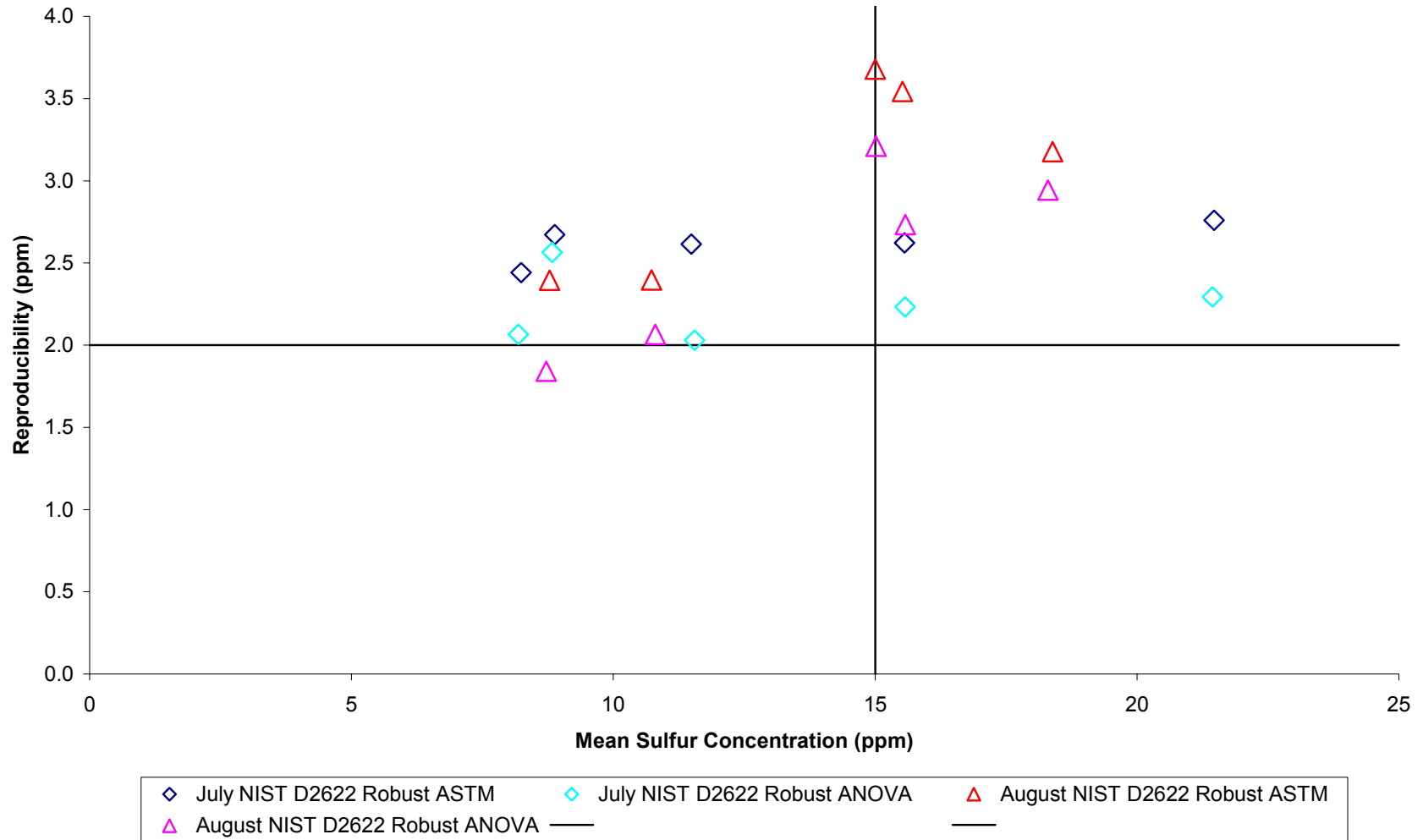


Figure F-36 D2622 Test Method, Gravimetric Outlier, NIST Calibration  
Comparing ASTM and ANOVA Analyses

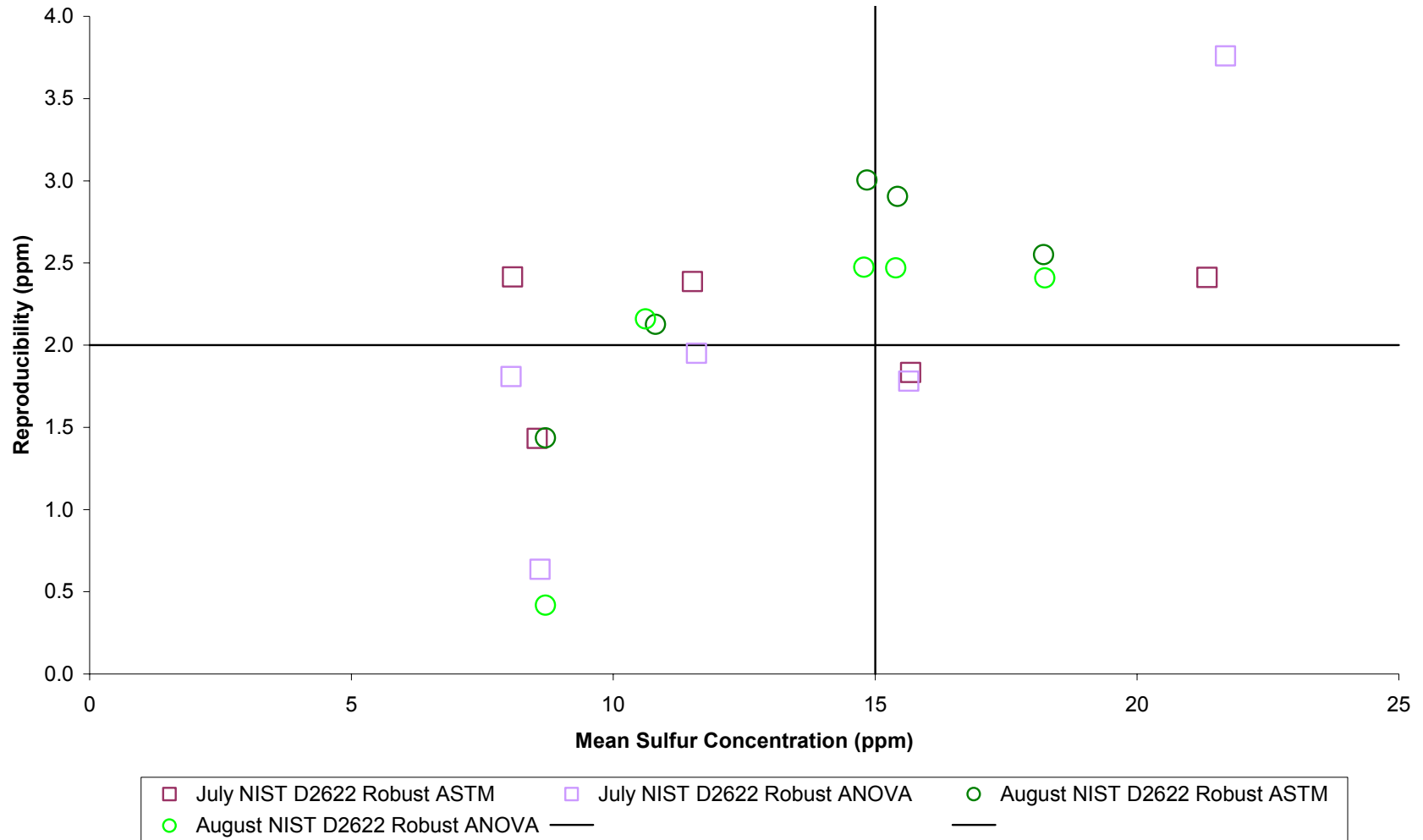


Figure F-37 D7039 Test Method, Robust Outlier, ASTM Analysis  
Comparing In-House and NIST Calibrations

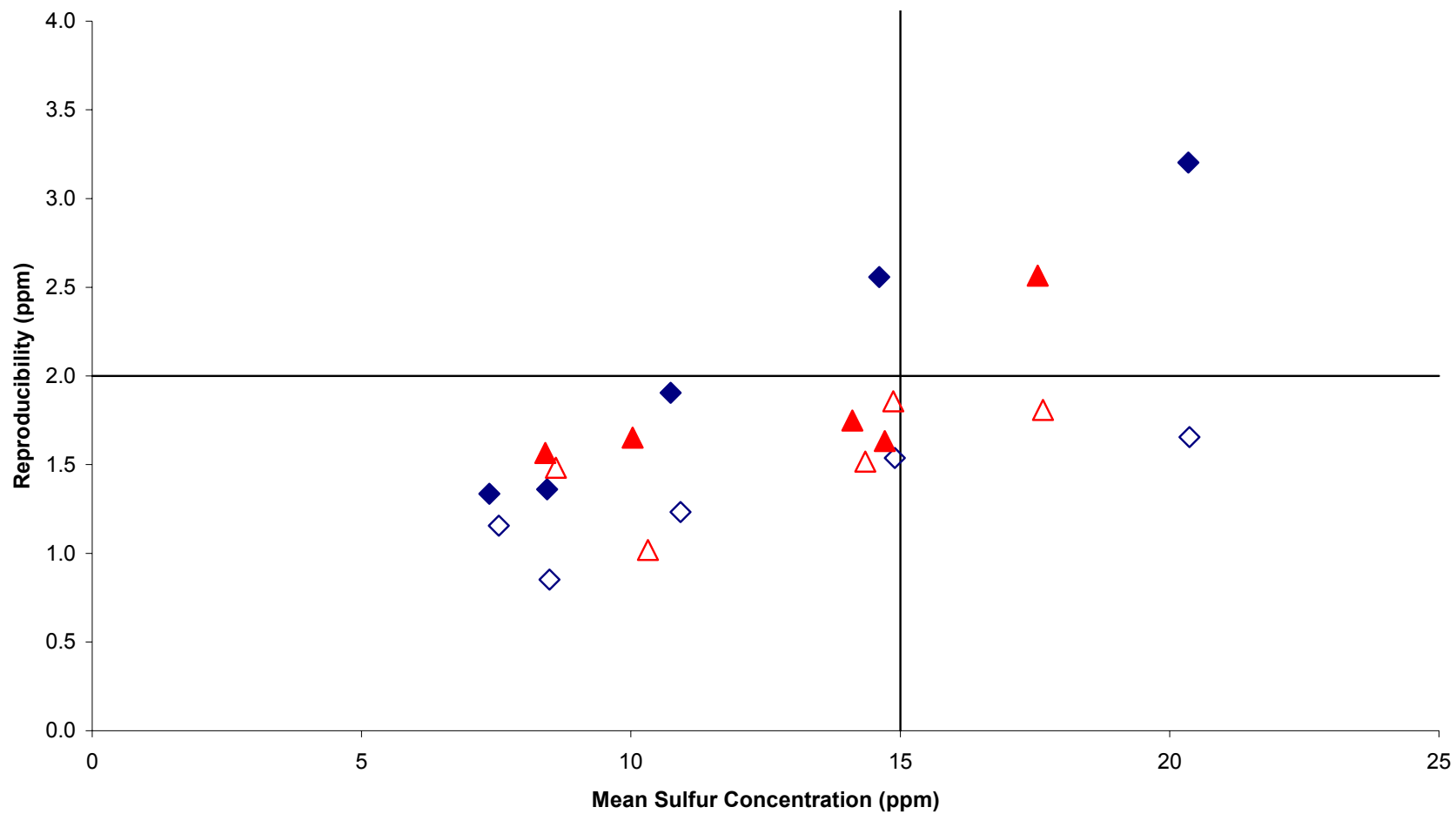
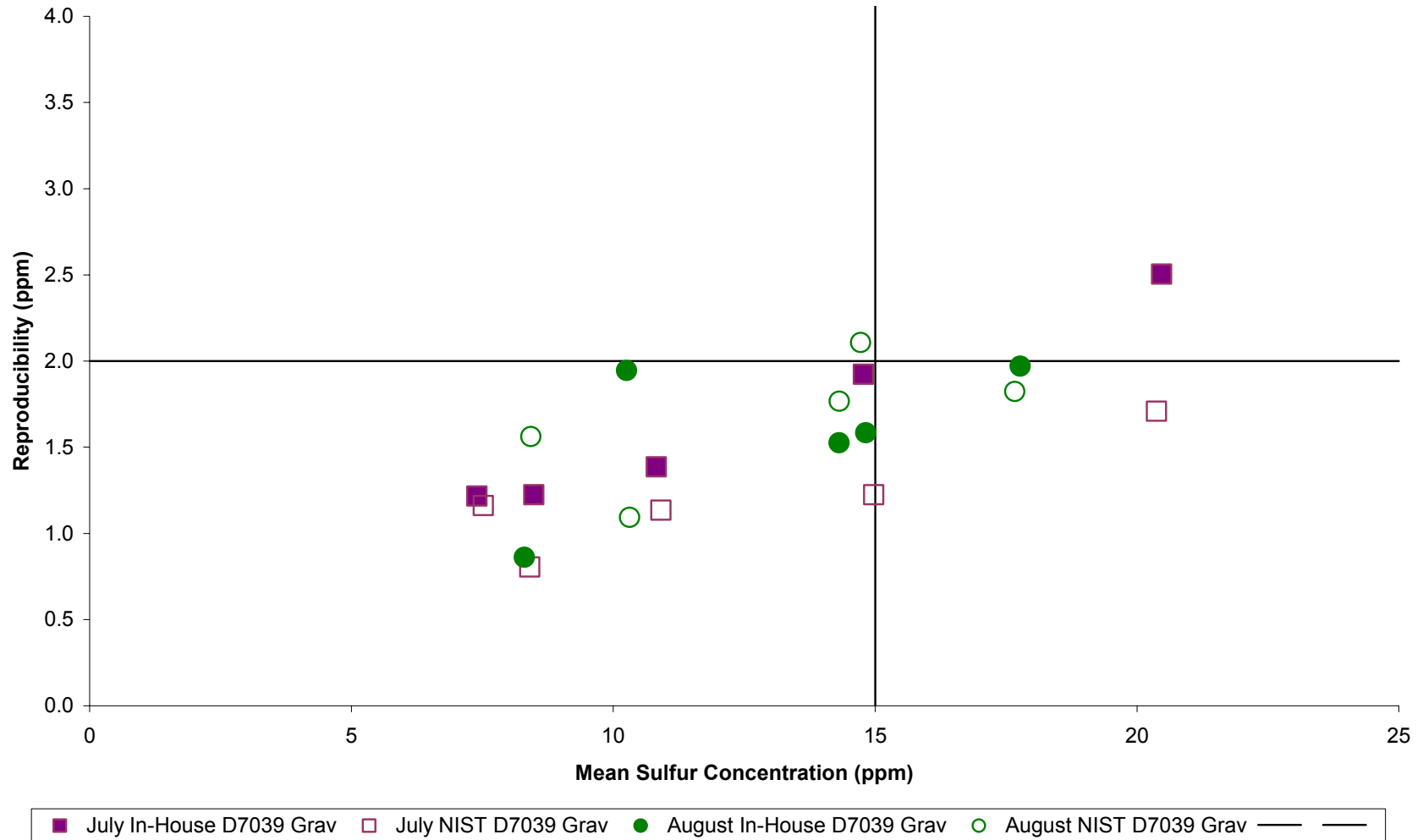




Figure F-38 D7039 Test Method, Gravimetric Outlier, ASTM Analysis  
Comparing In-House and NIST Calibrations



**Figure F-39 D7039 Test Method, Robust and Gravimetric Outlier, ASTM Analysis  
Comparing In-House and NIST Calibrations**

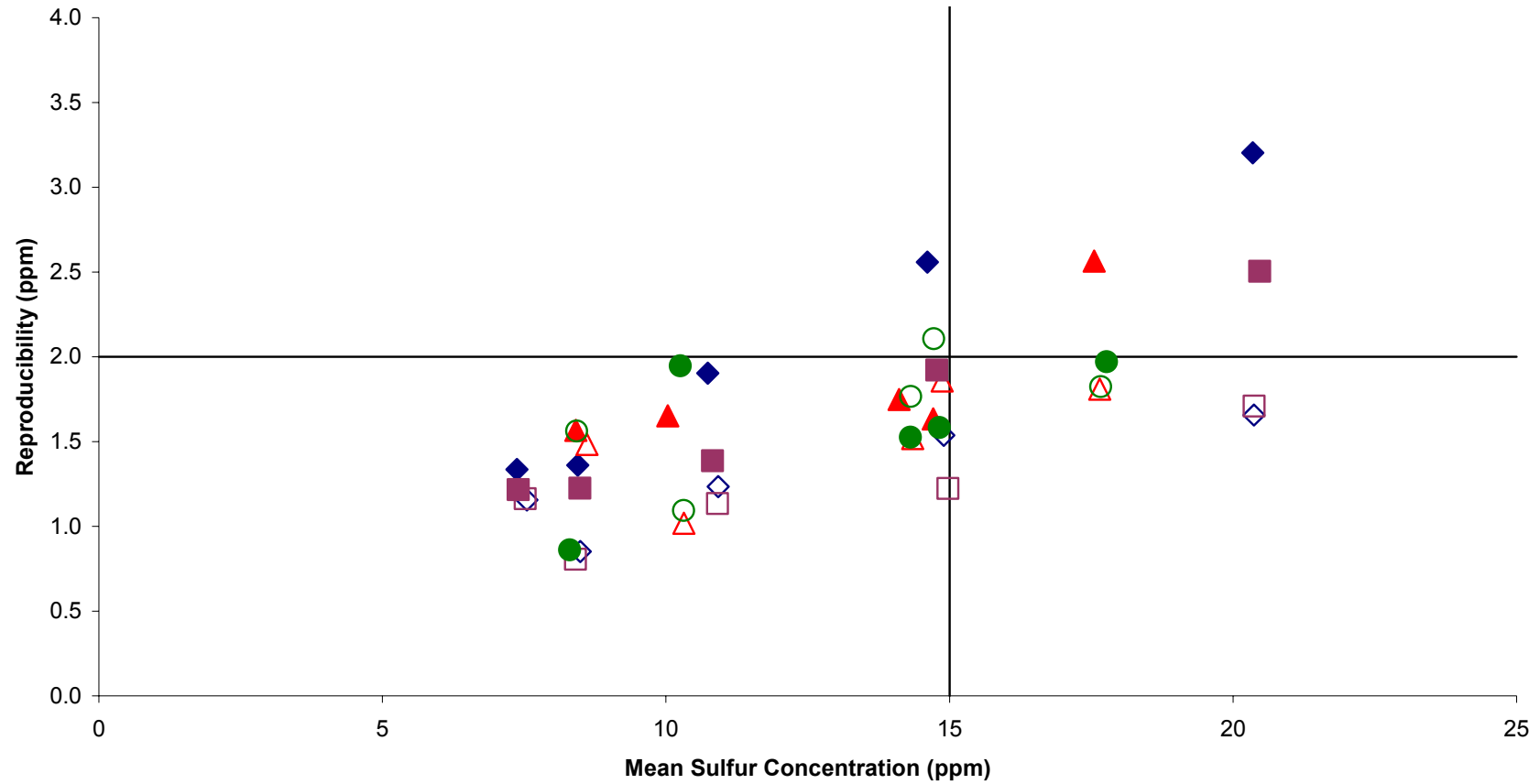


Figure F-40 D7039 Test Method, Robust and Gravimetric Outlier, ASTM Analysis  
NIST Calibration

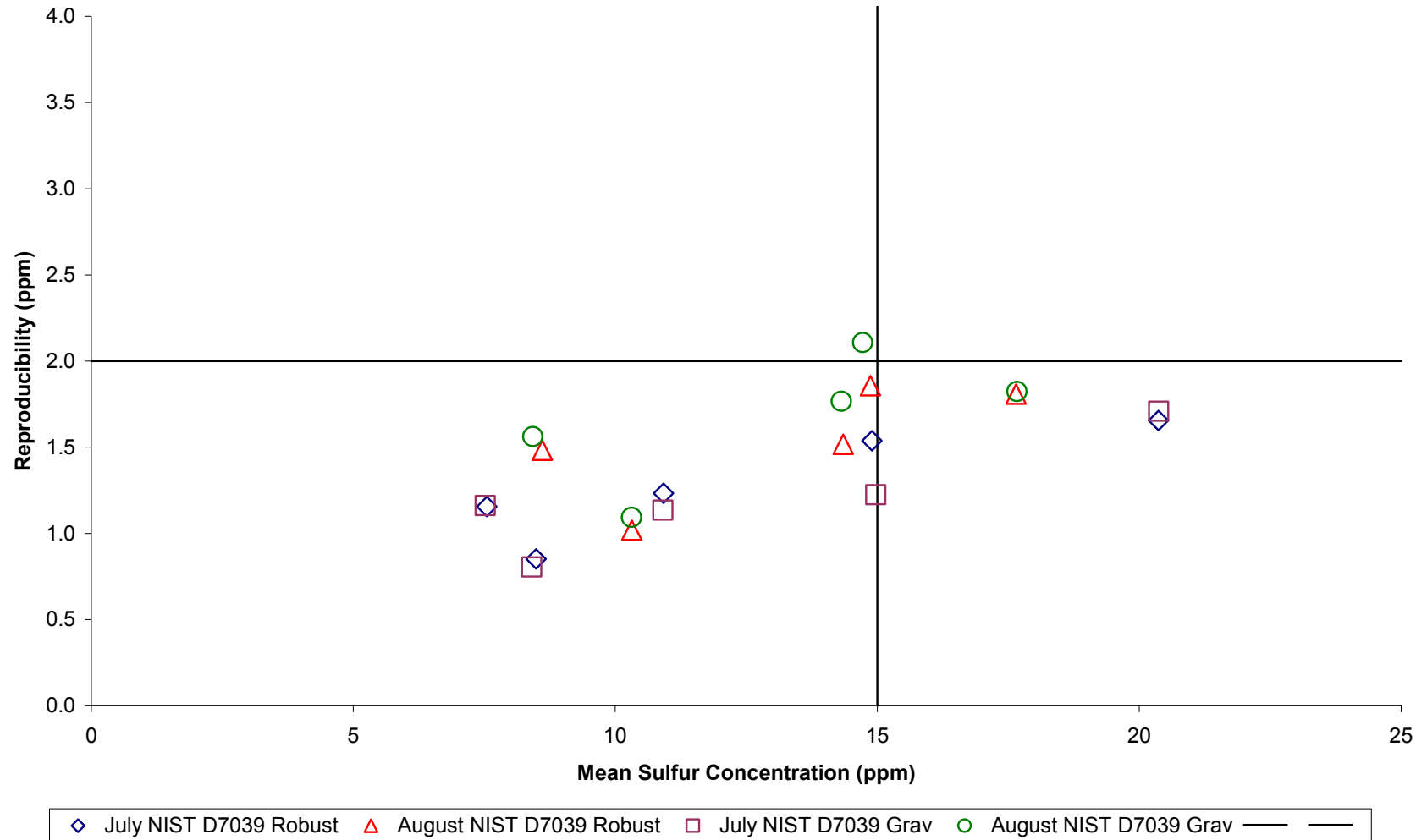


Figure F-41 D7039 Test Method, Robust and Gravimetric Outlier, ASTM Analysis  
In-House Calibration

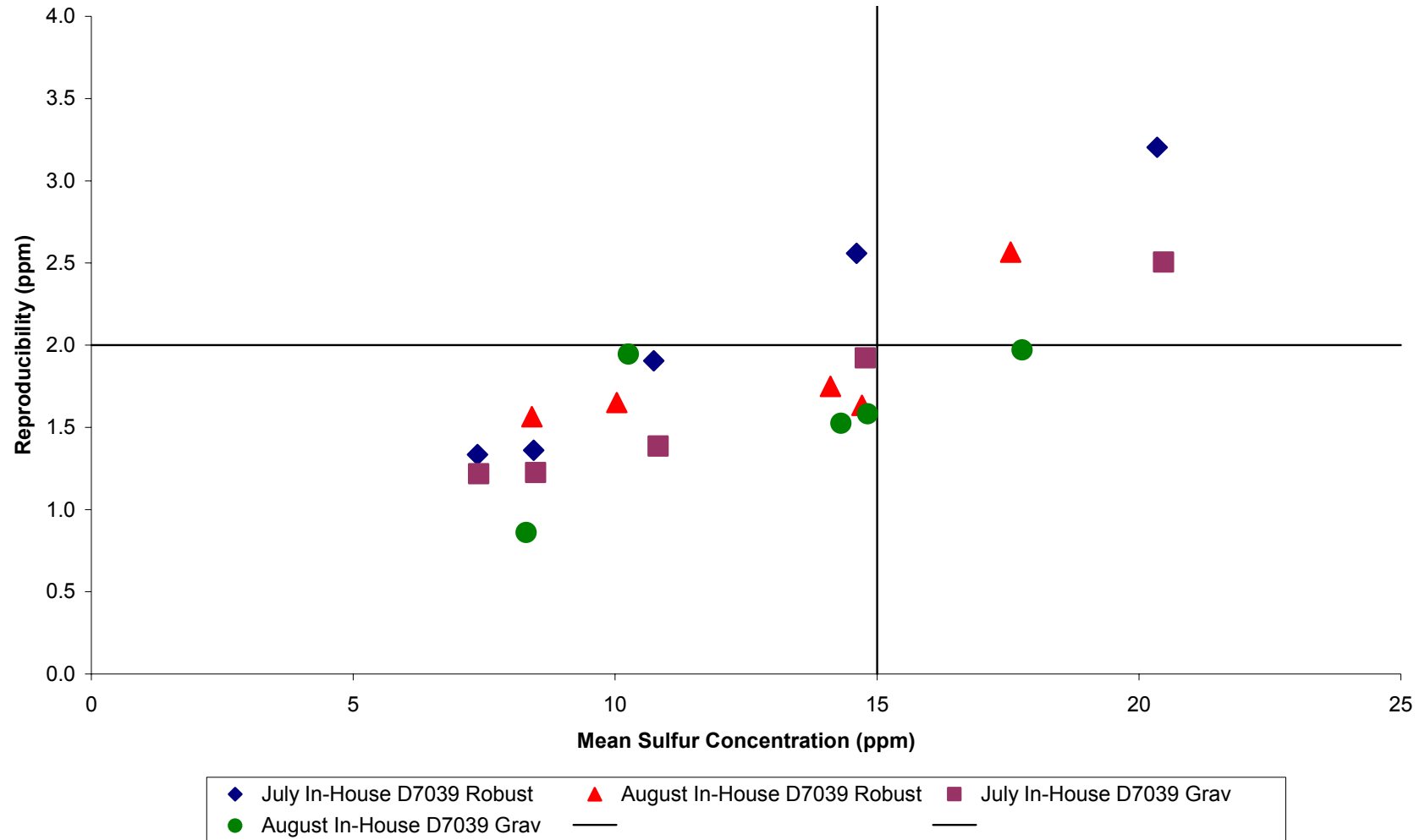


Figure F-42 D7039 Test Method, Robust Outlier, ANOVA Analysis  
Comparing In-House and NIST Calibrations

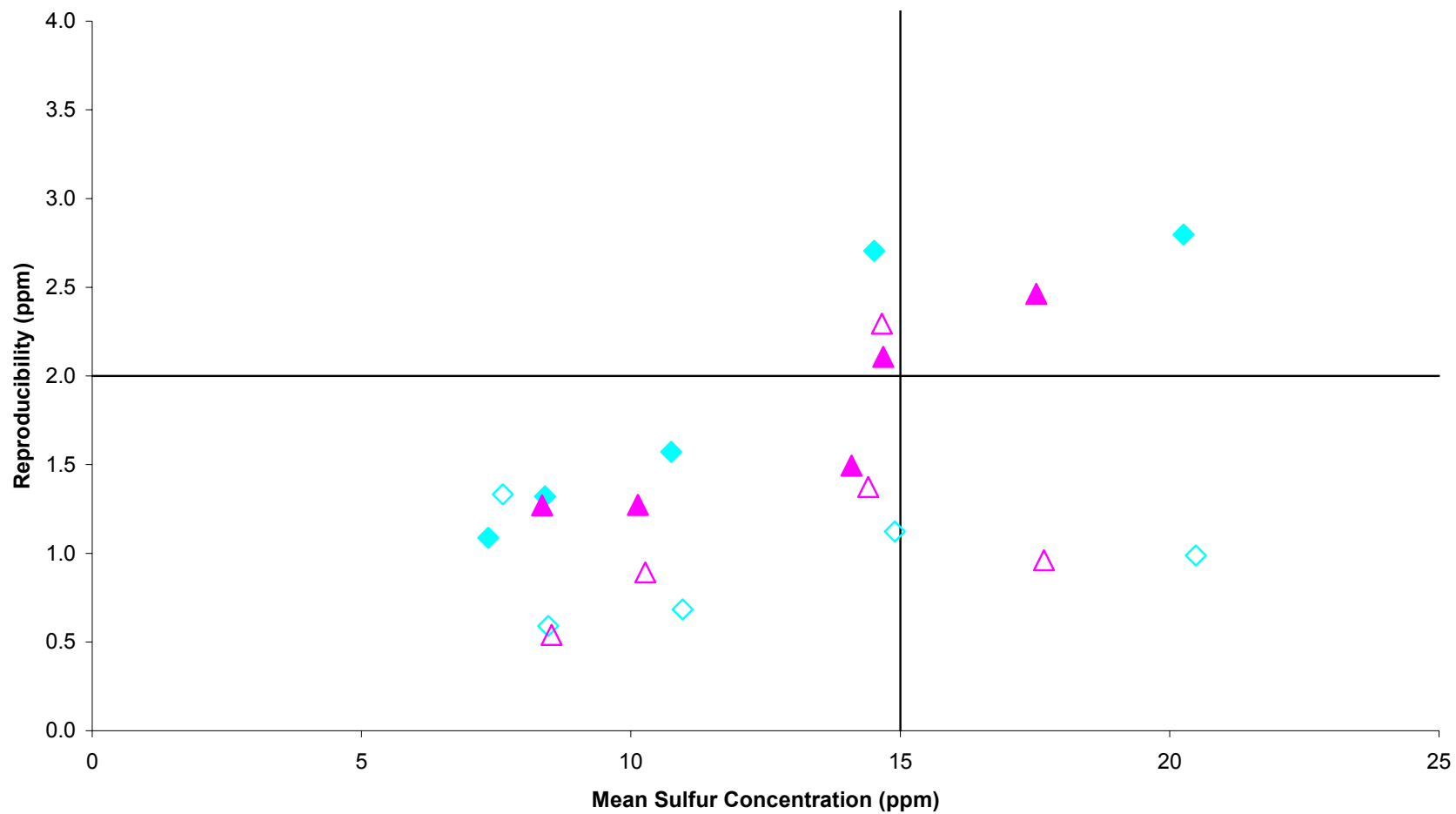
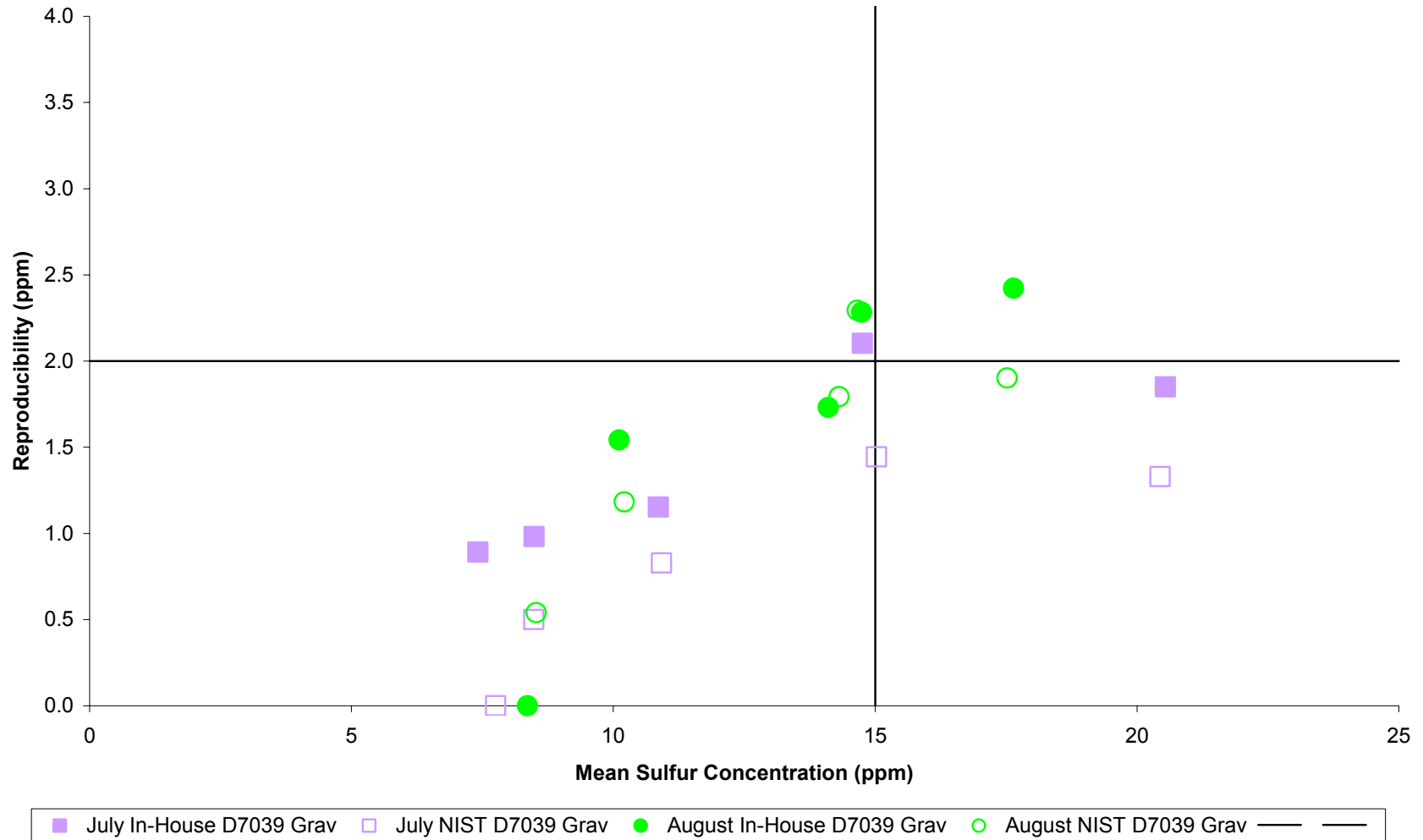
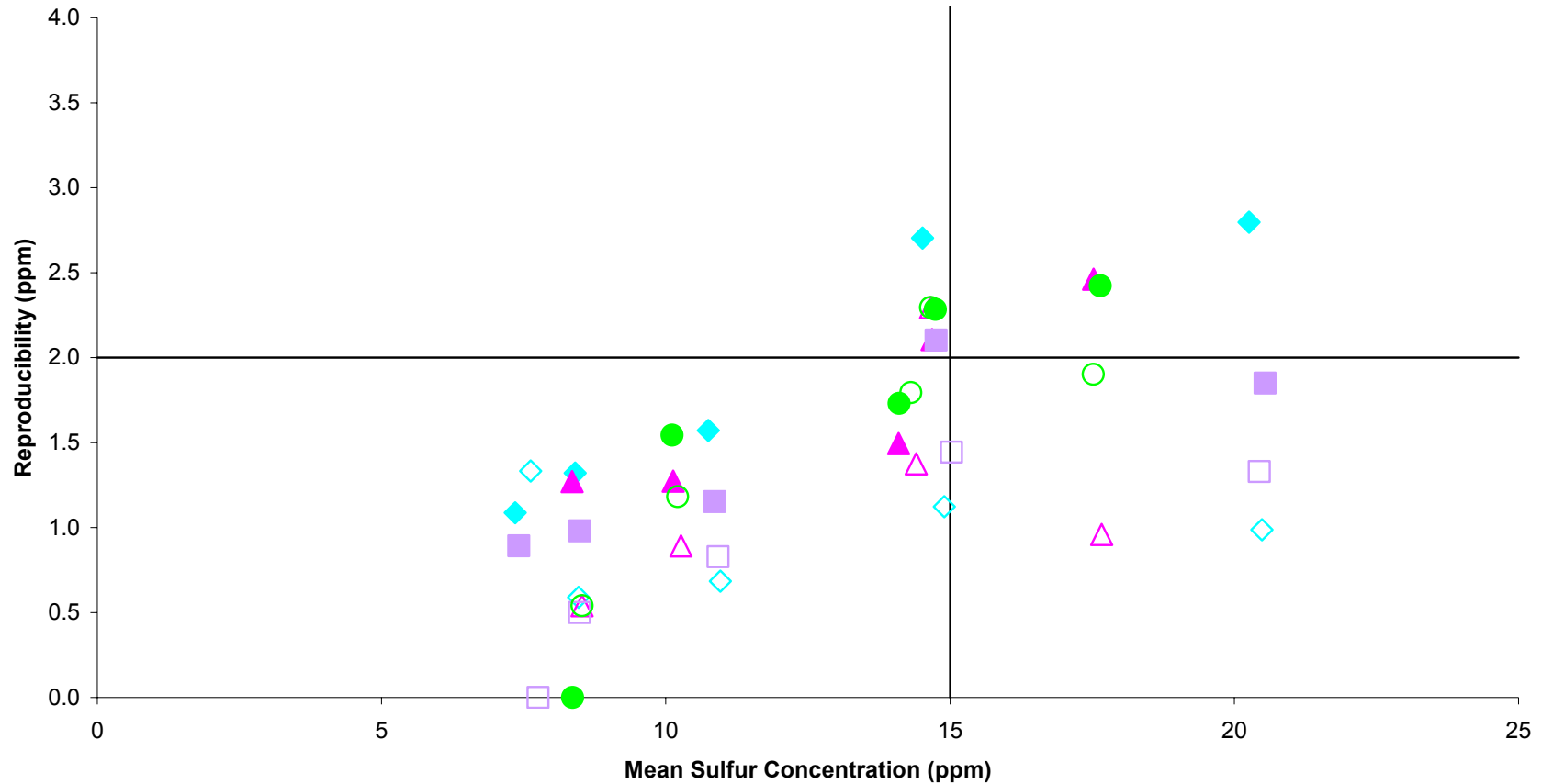


Figure F-43 D7039 Test Method, Gravimetric Outlier, ANOVA Analysis  
Comparing In-House and NIST Calibrations



**Figure F-44 D7039 Test Method, Robust and Gravimetric Outlier, ANOVA Analysis Comparing In-House and NIST Calibrations**



- ◆ July In-House D7039 Robust      ◇ July NIST D7039 Robust      ▲ August In-House D7039 Robust      △ August NIST D7039 Robust
- July In-House D7039 Grav      □ July NIST D7039 Grav      ● August In-House D7039 Grav      ○ August NIST D7039 Grav

Figure F-45 D7039 Test Method, Robust Outlier, In-House Calibration  
Comparing ASTM and ANOVA Analyses

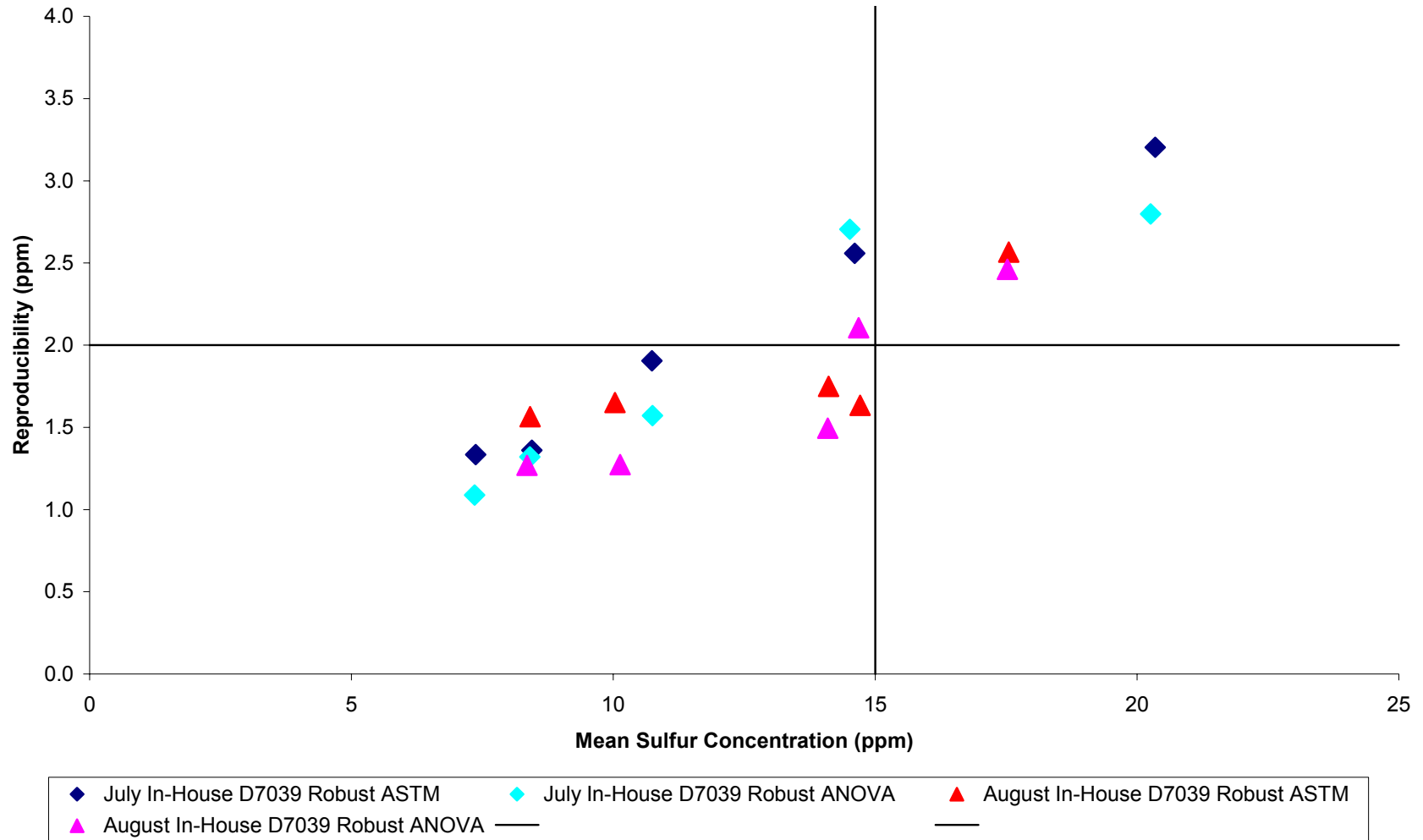




Figure F-46 D7039 Test Method, Gravimetric Outlier, In-House Calibration  
Comparing ASTM and ANOVA Analyses

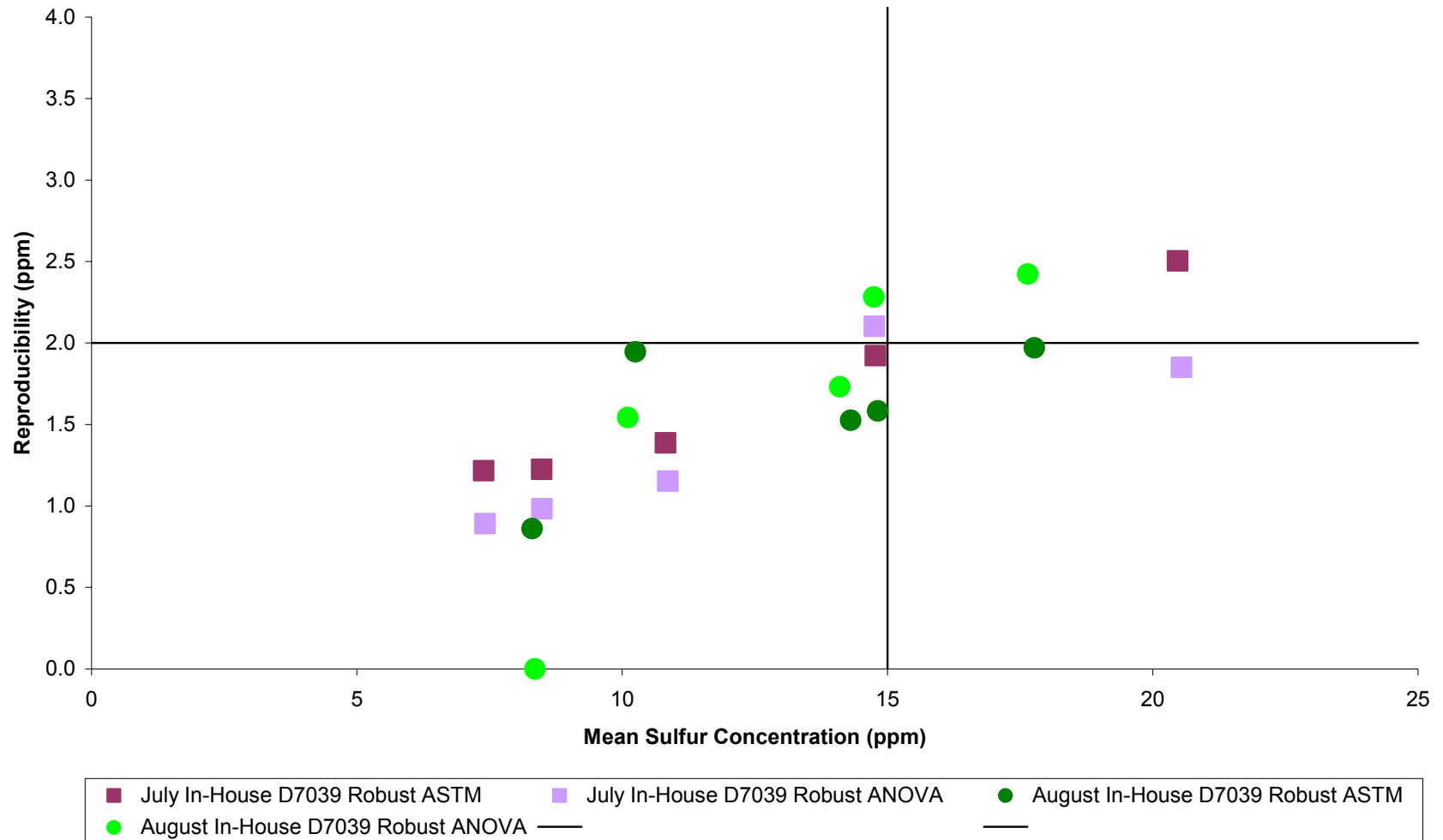


Figure F-47 D7039 Test Method, Robust Outlier, NIST Calibration  
Comparing ASTM and ANOVA Analyses

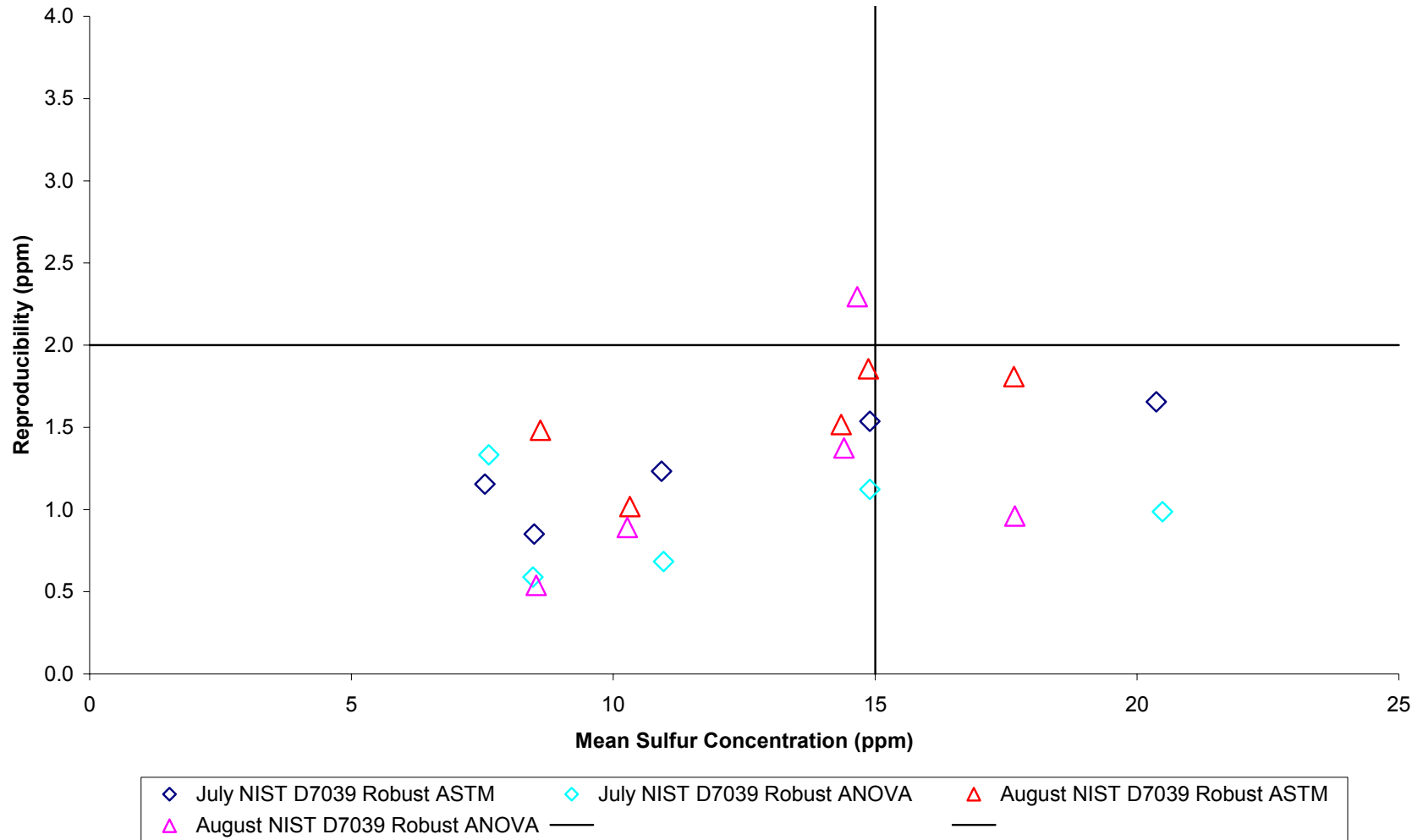


Figure F-48 D7039 Test Method, Gravimetric Outlier, NIST Calibration  
Comparing ASTM and ANOVA Analyses

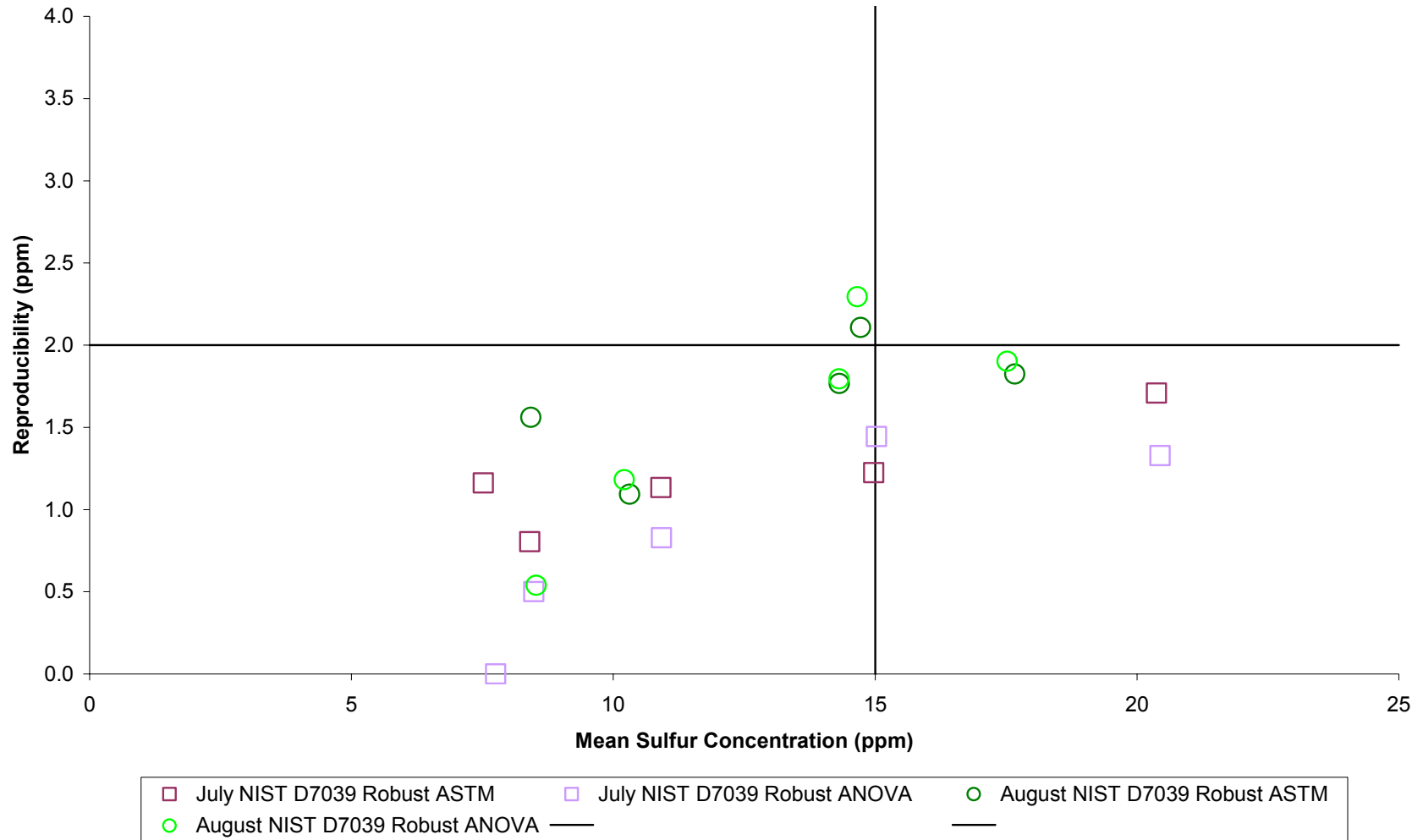


Figure F-49 EDXRF Test Method, Robust Outlier, ASTM Analysis  
Comparing In-House and NIST Calibrations

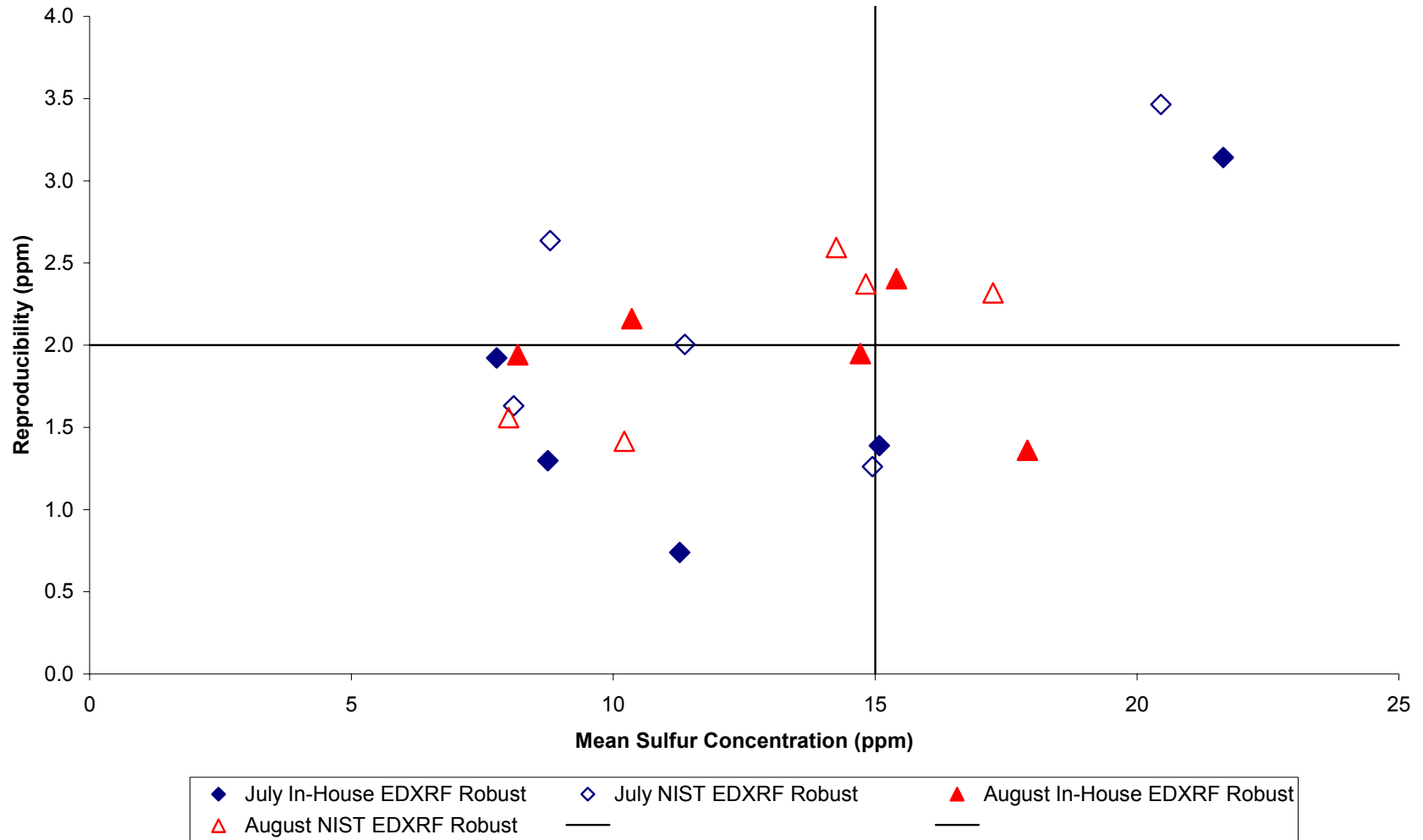
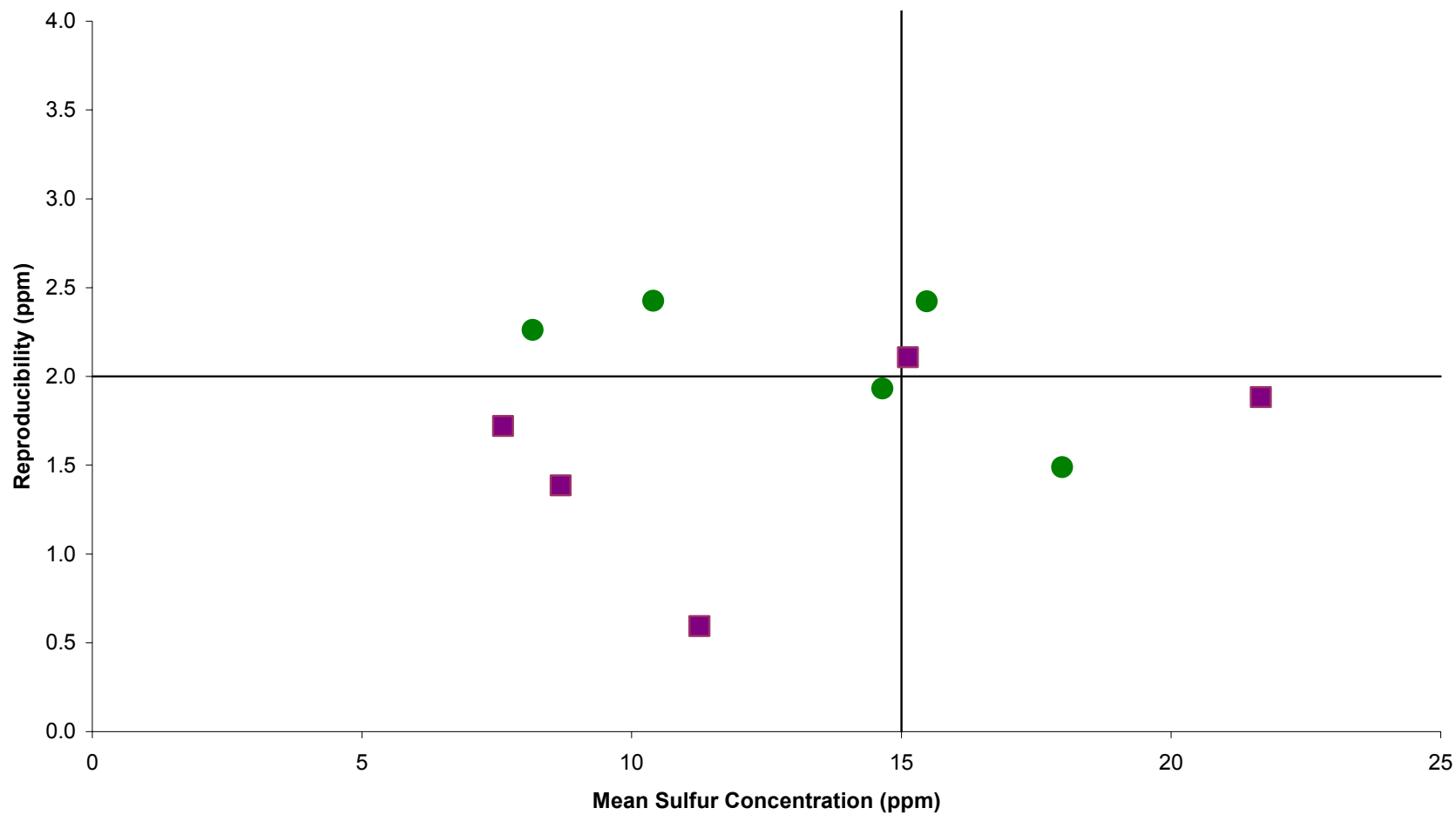


Figure F-50 EDXRF Test Method, Gravimetric Outlier, ASTM Analysis  
Comparing In-House and NIST Calibrations



**Figure F-51 EDXRF Test Method, Robust and Gravimetric Outlier, ASTM Analysis  
Comparing In-House and NIST Calibrations**

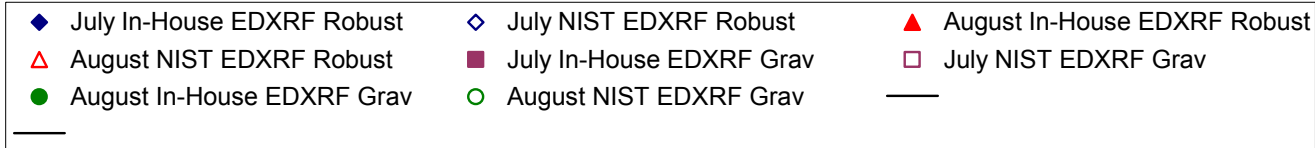
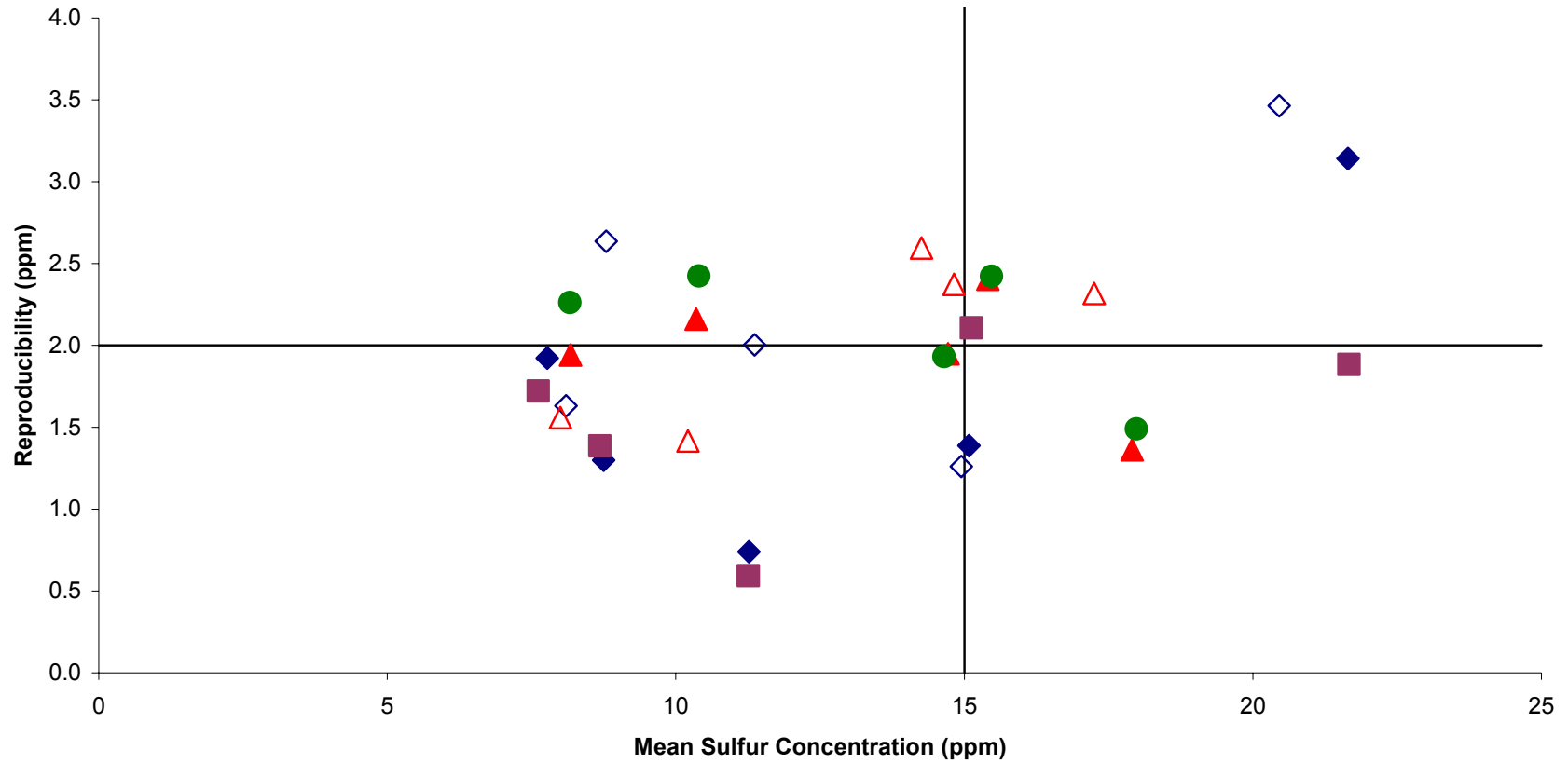


Figure F-52 EDXRF Test Method, Robust and Gravimetric Outlier, ASTM Analysis  
NIST Calibration

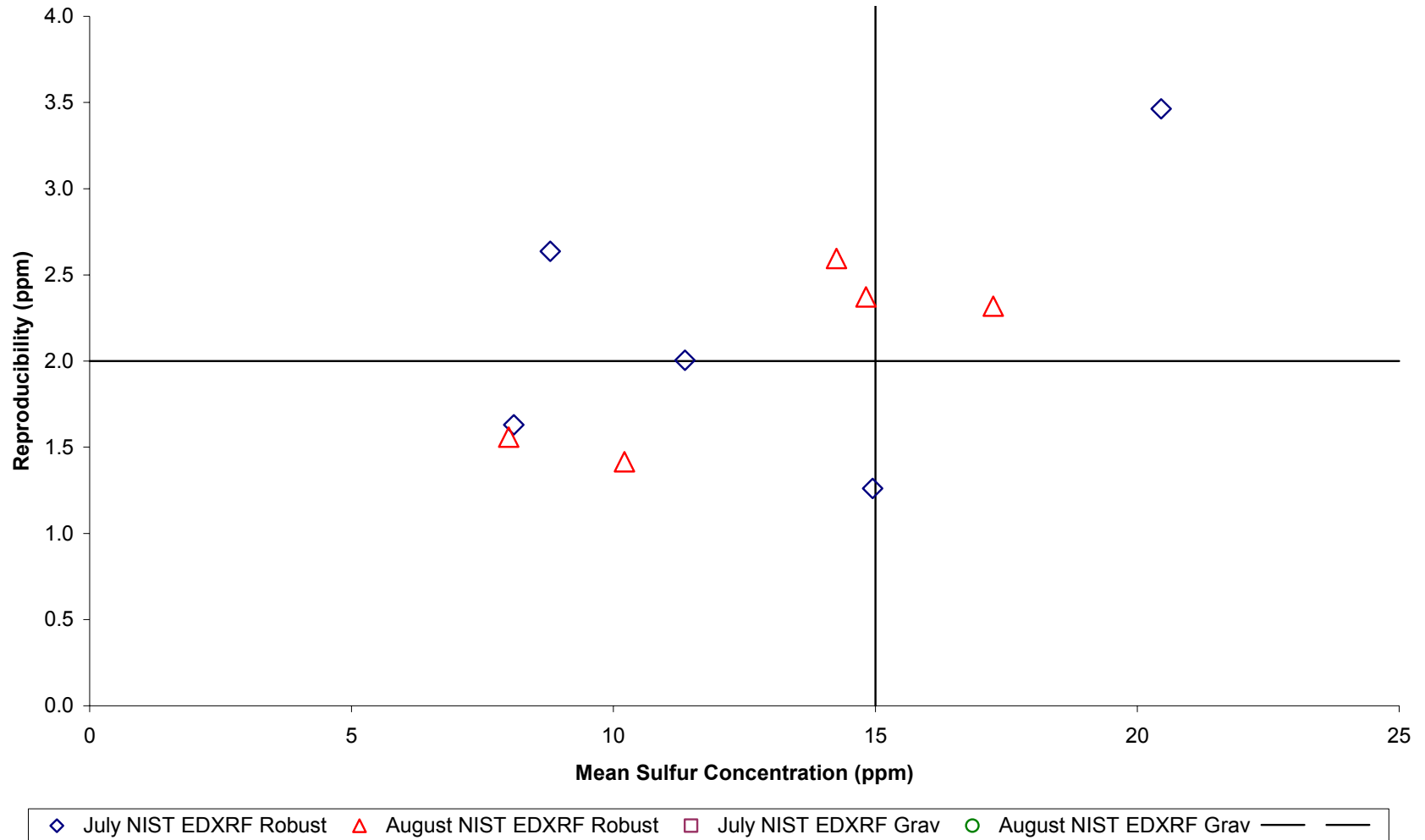


Figure F-53 EDXRF Test Method, Robust and Gravimetric Outlier, ASTM Analysis  
In-House Calibration

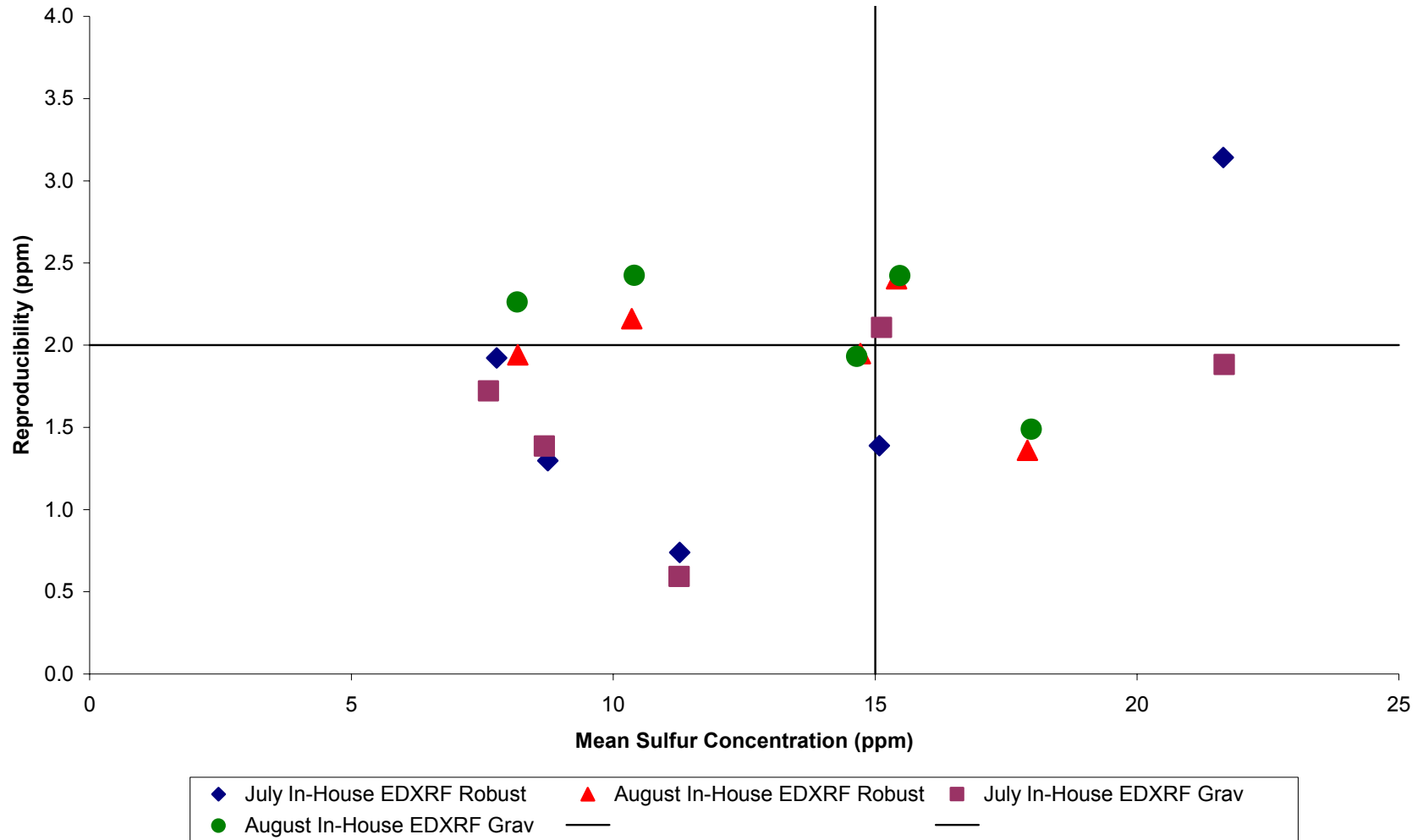




Figure F-54 EDXRF Test Method, Robust Outlier, ANOVA Analysis  
Comparing In-House and NIST Calibrations

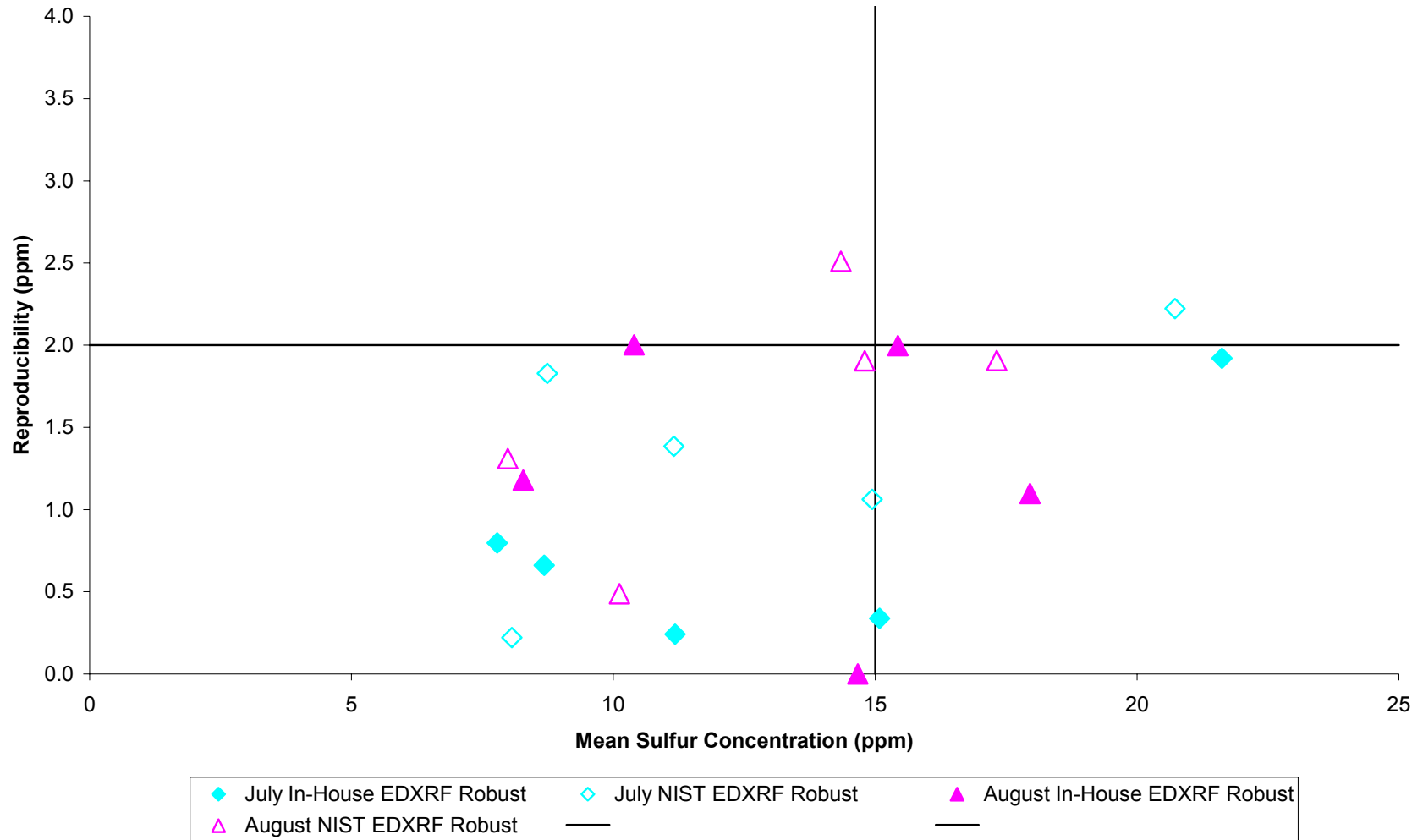
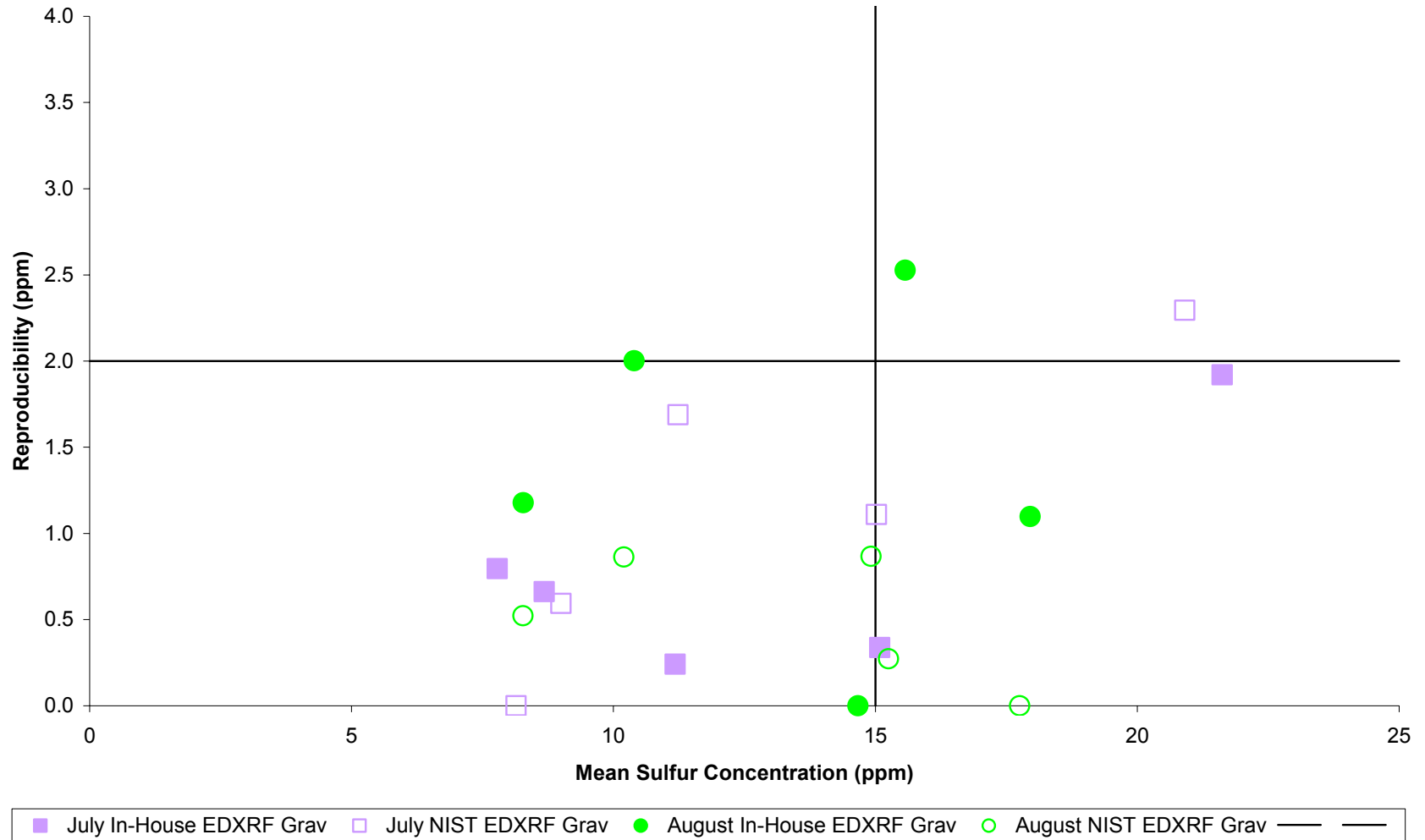


Figure F-55 EDXRF Test Method, Gravimetric Outlier, ANOVA Analysis  
Comparing In-House and NIST Calibrations



**Figure F-56 EDXRF Test Method, Robust and Gravimetric Outlier, ANOVA Analysis Comparing In-House and NIST Calibrations**

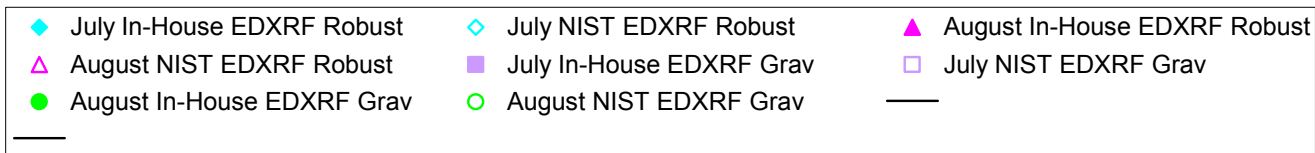
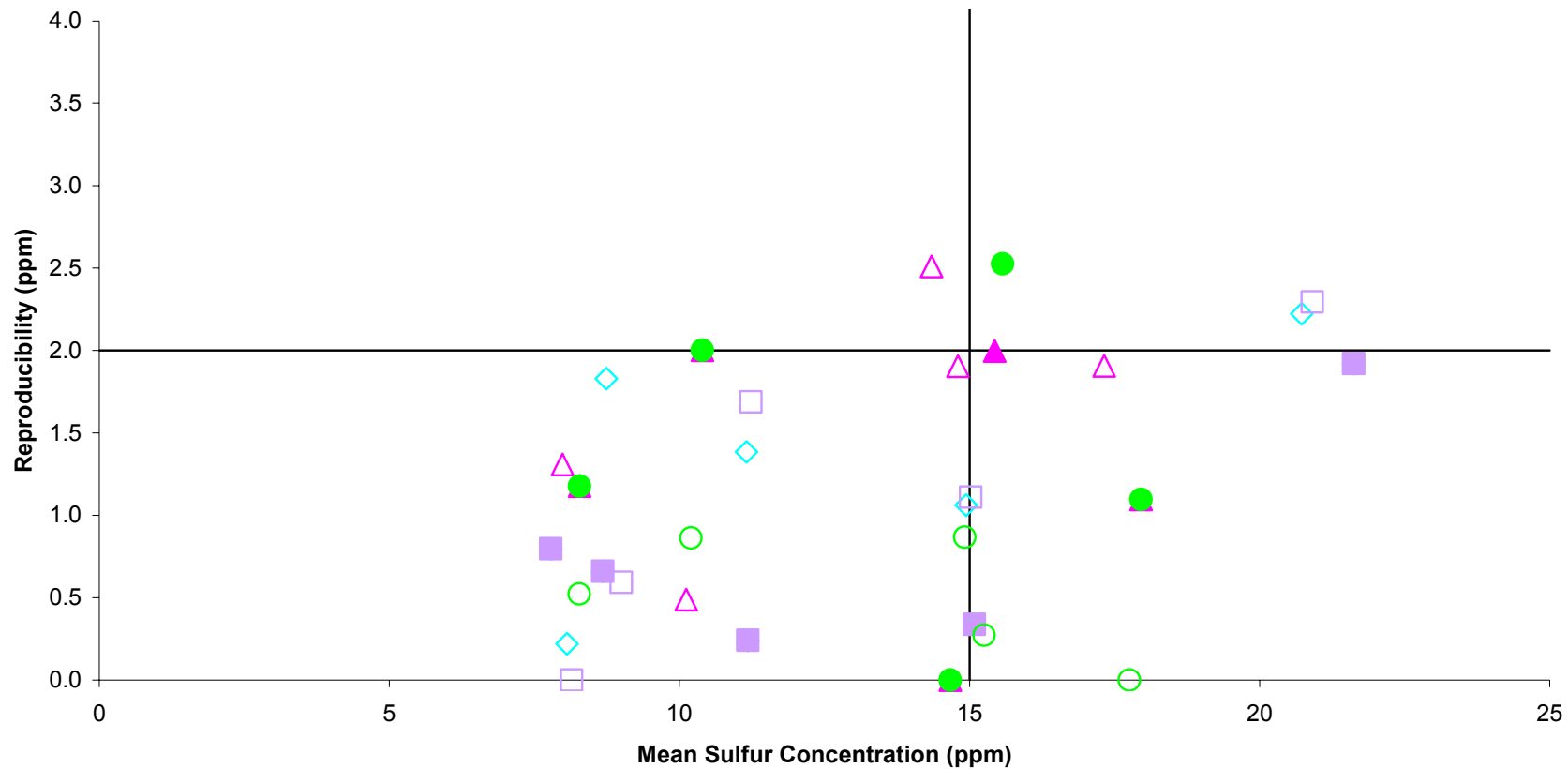
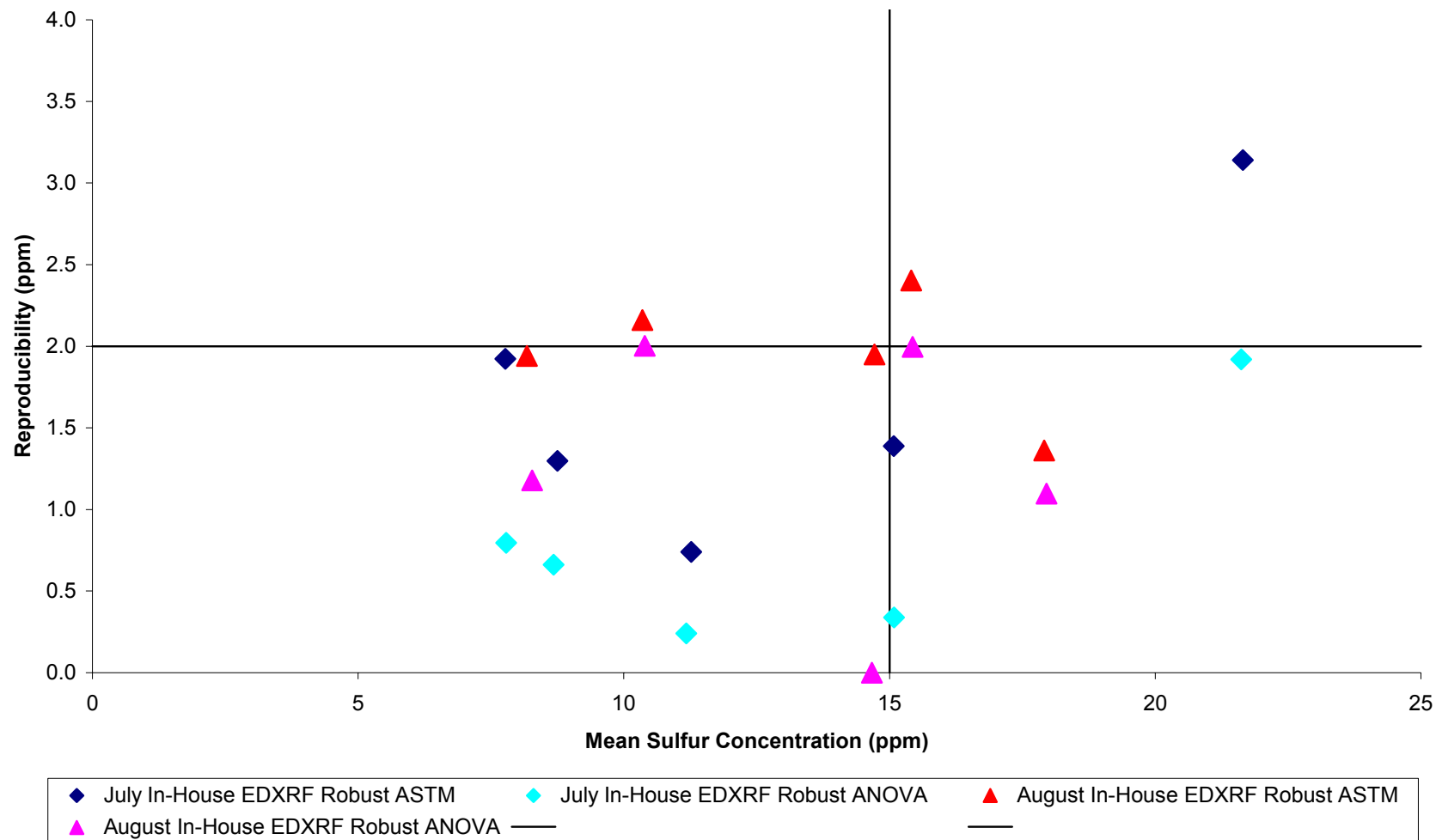


Figure F-57 EDXRF Test Method, Robust Outlier, In-House Calibration  
Comparing ASTM and ANOVA Analyses



**Figure F-58 EDXRF Test Method, Gravimetric Outlier, In-House Calibration  
Comparing ASTM and ANOVA Analyses**

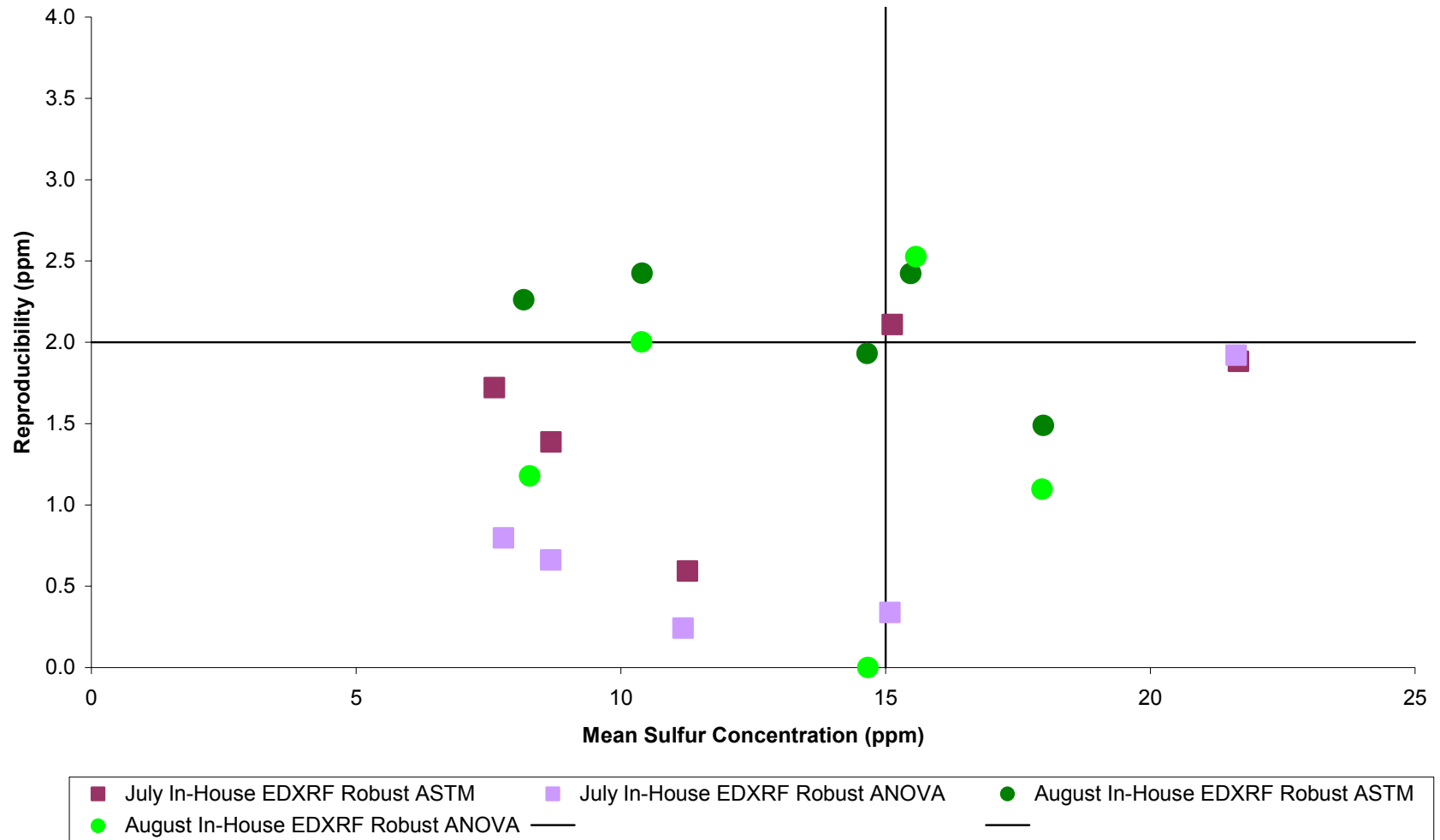


Figure F-59 EDXRF Test Method, Robust Outlier, NIST Calibration  
Comparing ASTM and ANOVA Analyses

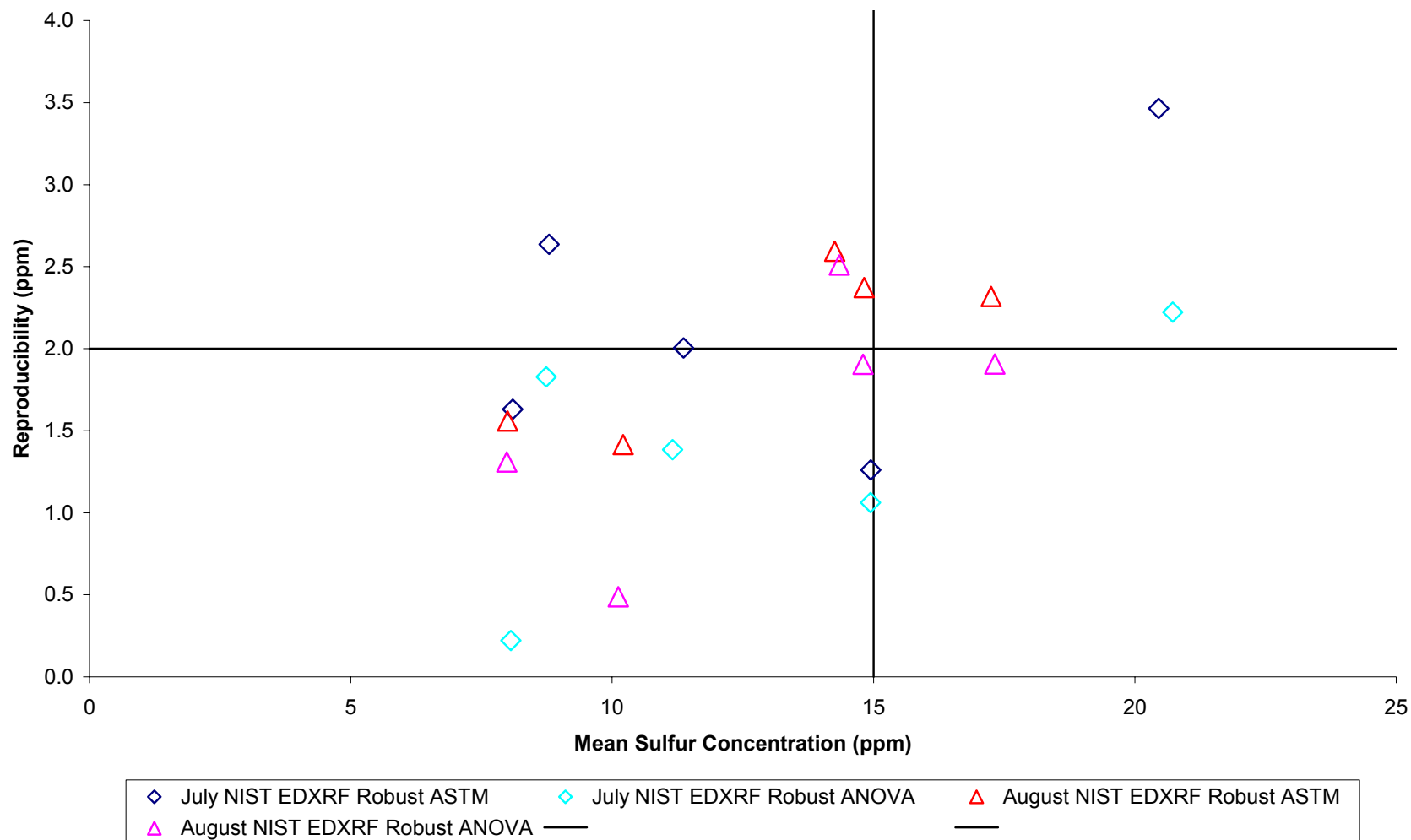
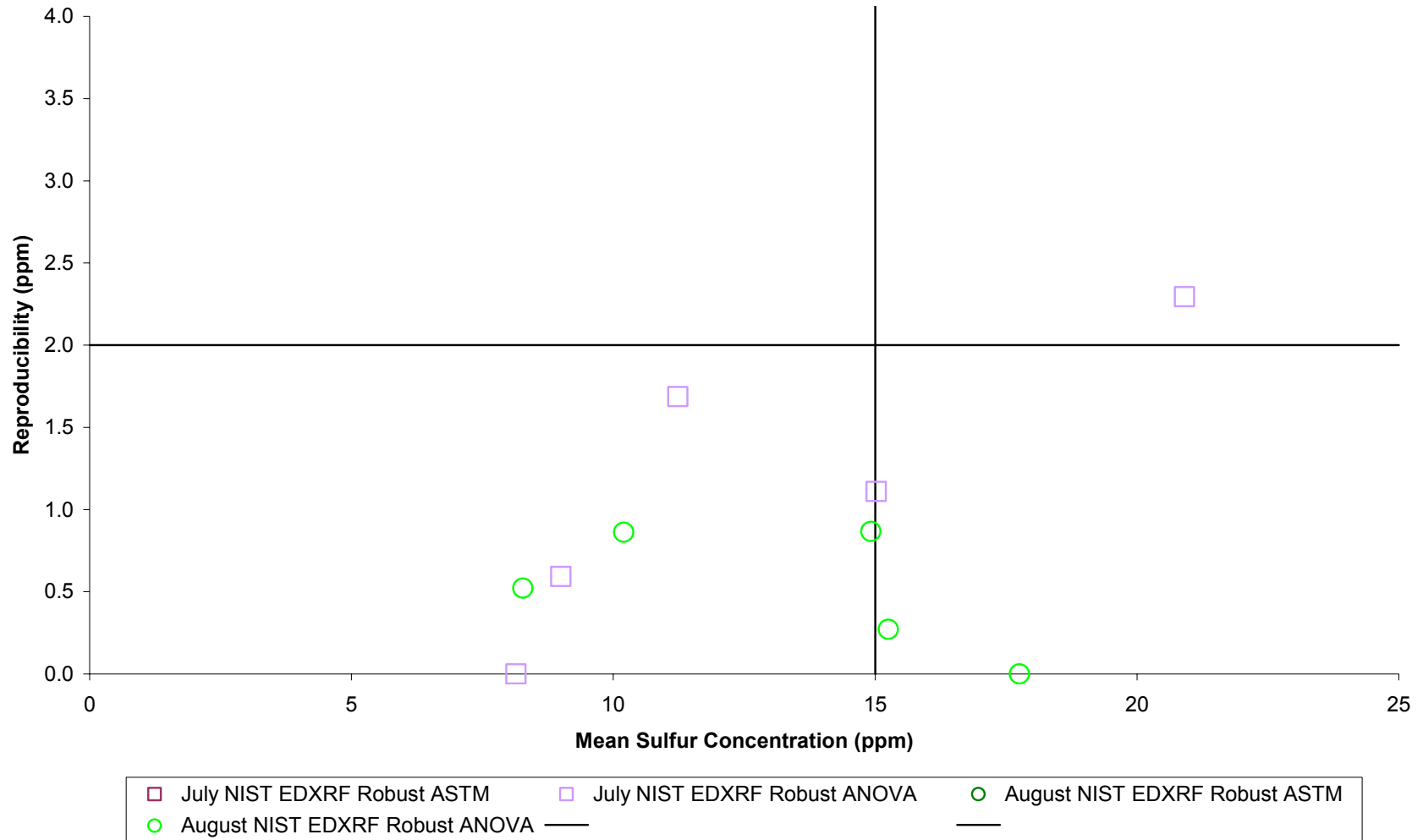
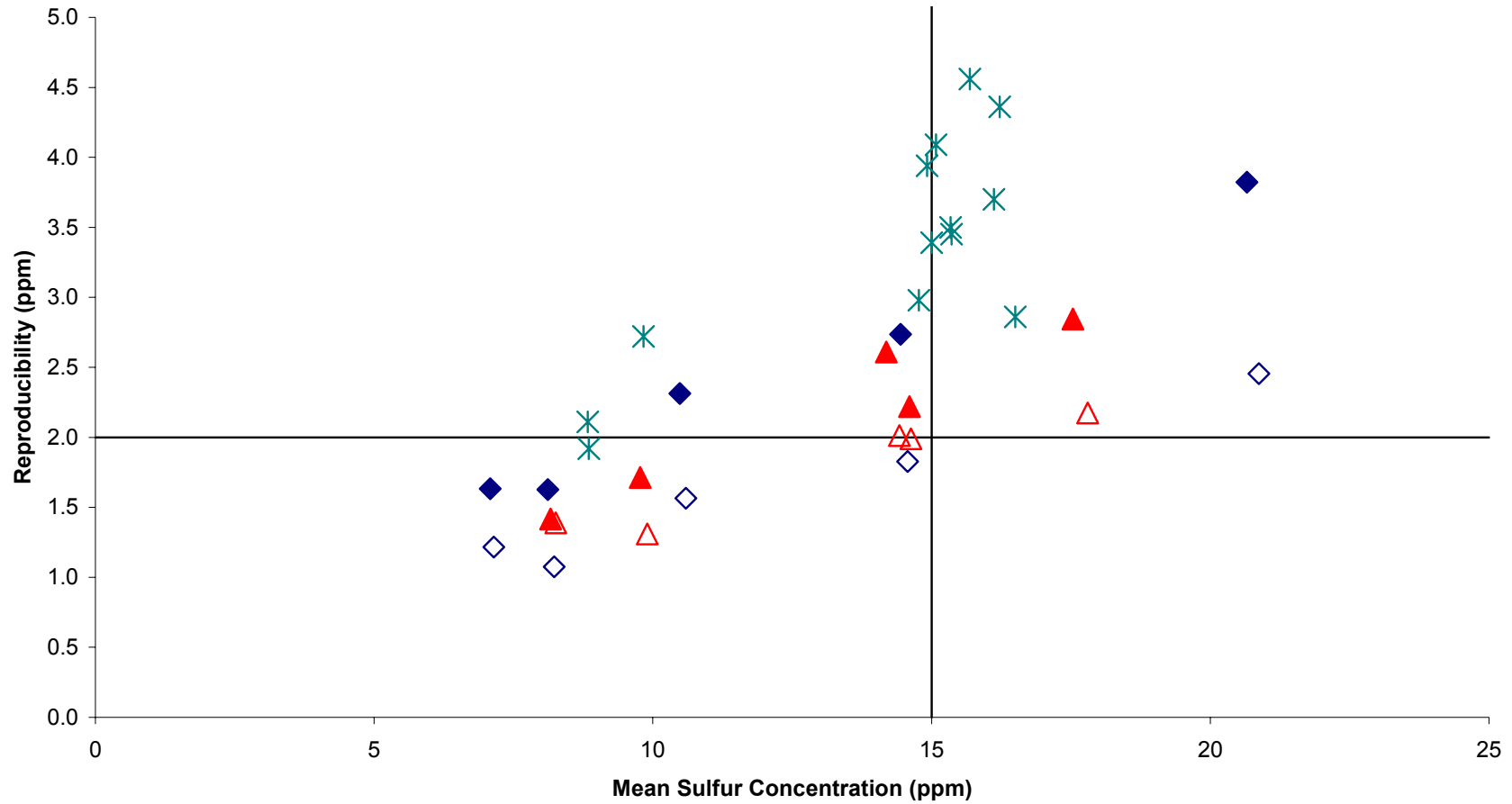


Figure F-60 EDXRF Test Method, Gravimetric Outlier, NIST Calibration  
Comparing ASTM and ANOVA Analyses



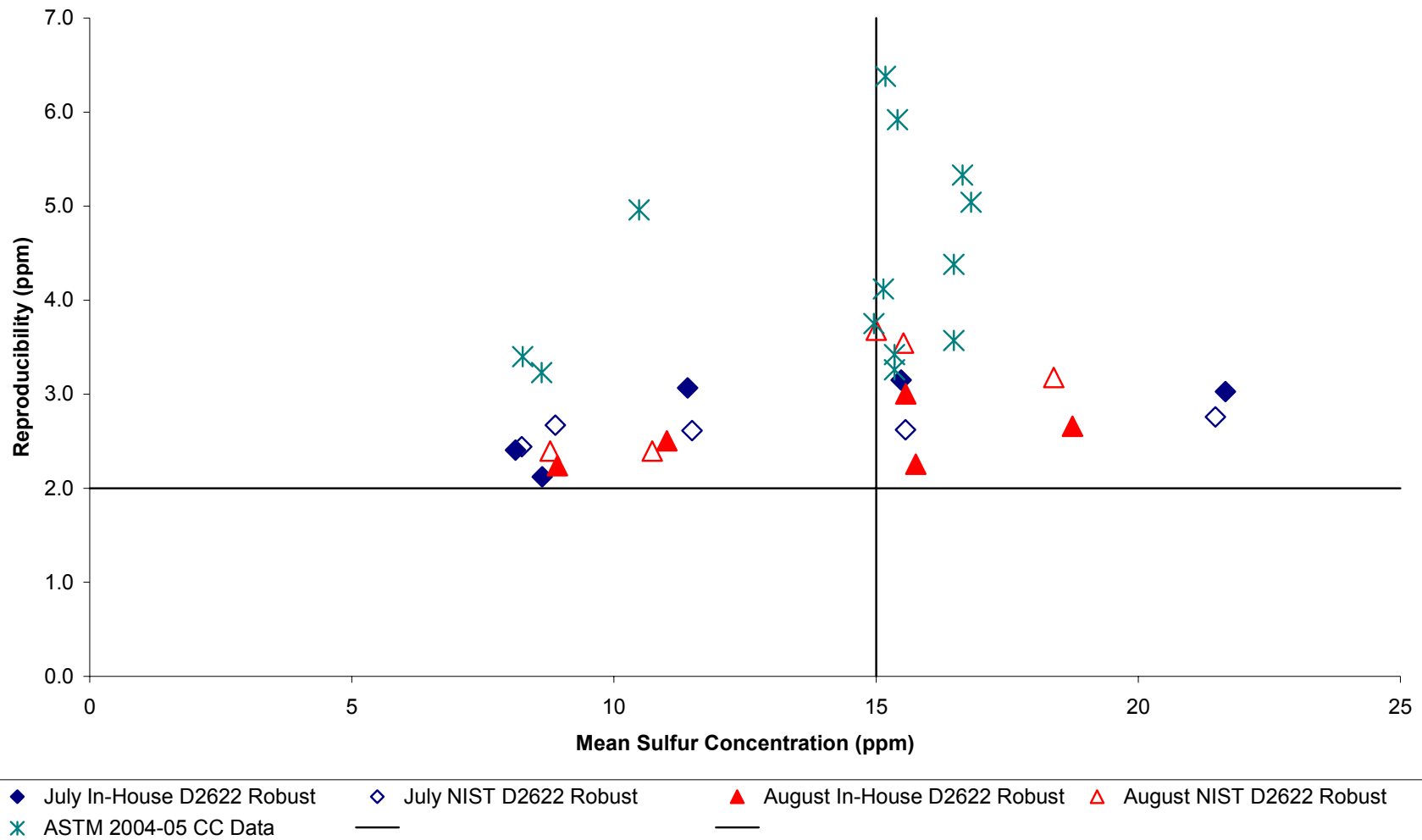
**Figure F-61 D5453 Test Method, Robust Outlier, ASTM Analysis  
Comparing In-House and NIST Calibrations, Added ASTM 2004-05 Crosscheck Data**



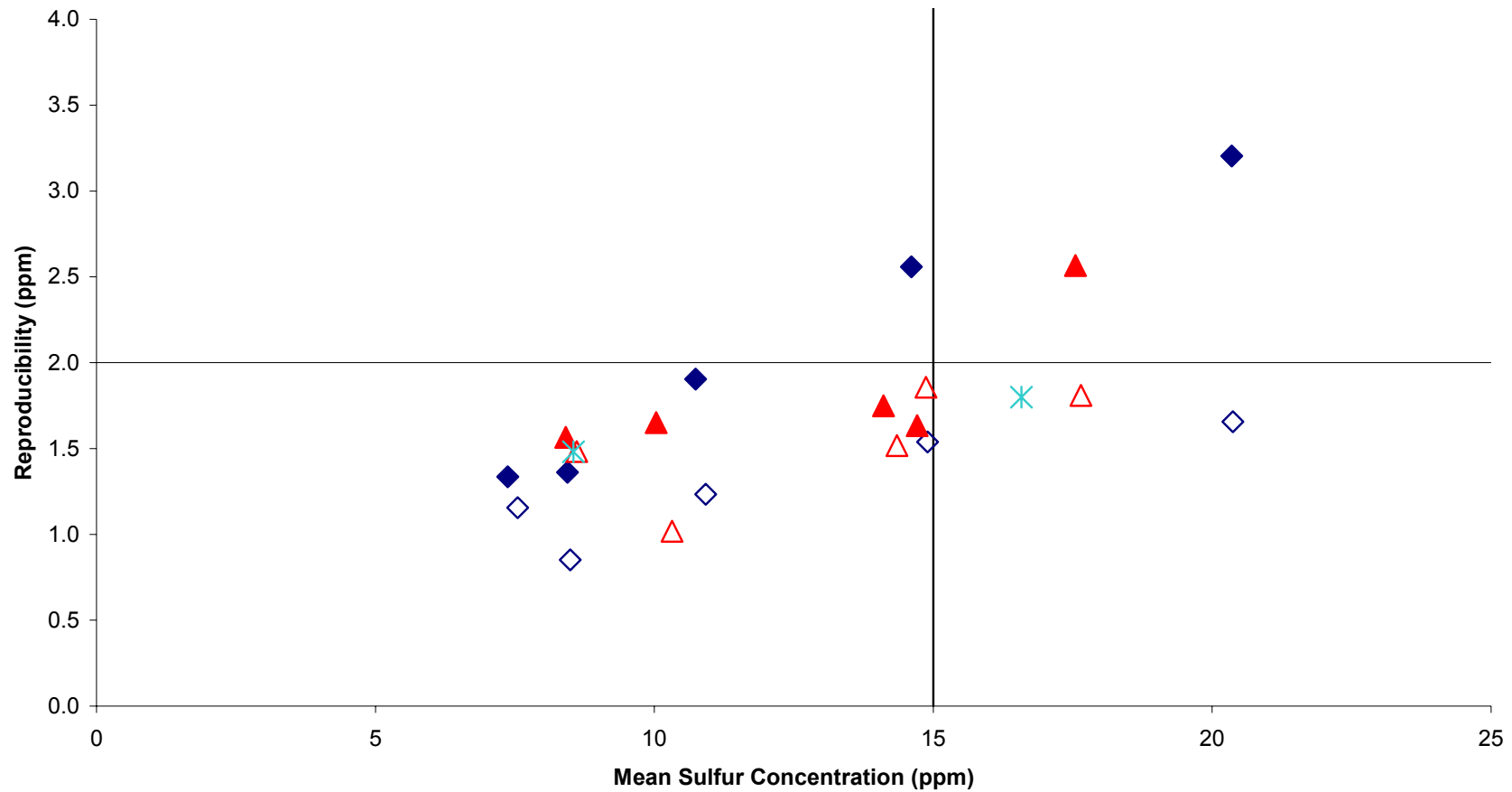
◆ July In-House D5453 Robust    
◇ July NIST D5453 Robust    
▲ August In-House D5453 Robust    
△ August NIST D5453 Robust  
✱ ASTM 2004-05 CC Data



**Figure F-62 D2622 Test Method, Robust Outlier, ASTM Analysis  
Comparing In-House and NIST Calibrations, Added ASTM 2004-05 Crosscheck Data**



**Figure F-63 D7039 Test Method, Robust Outlier, ASTM Analysis  
Comparing In-House and NIST Calibrations, Added ASTM 2004-05 Crosscheck Data**



◆ July In-House D7039 Robust    
 ◇ July NIST D7039 Robust    
 ▲ August In-House D7039 Robust    
 △ August NIST D7039 Robust  
✱ ASTM 2004-05 CC Data

## **APPENDIX G**

**Robust Mean, Robust Standard Deviation,  
Reproducibility and Repeatability**

**Table G.1. Mean\*, Standard Deviation\*, Reproducibility and Repeatability for July Fuels for Test Method D5453**

In-House Calibration				
	Robust Deletion		Gravimetric Deletion	
	ANOVA	ASTM	ANOVA	ASTM
Fuel 1				
Valid Results	285	191	225	143
Mean	7.06	7.08	7.01	7.14
Std Dev	0.62	0.59	0.65	0.48
Reproducibility	1.65	1.63	1.74	1.33
Repeatability	0.47	0.41	0.50	0.31
Fuel 2				
Valid Results	289	194	225	144
Mean	10.44	10.48	10.47	10.57
Std Dev	0.86	0.83	0.77	0.58
Reproducibility	2.27	2.31	2.05	1.61
Repeatability	0.73	0.38	0.63	0.36
Fuel 3				
Valid Results	285	190	225	148
Mean	20.61	20.66	20.69	20.84
Std Dev	1.42	1.38	1.43	1.10
Reproducibility	3.87	3.82	3.93	3.05
Repeatability	0.77	0.58	0.74	0.58

NIST Calibration				
	Robust Deletion		Gravimetric Deletion	
	ANOVA	ASTM	ANOVA	ASTM
Fuel 1				
Valid Results	273	179	249	158
Mean	7.14	7.15	7.07	7.15
Std Dev	0.51	0.44	0.54	0.34
Reproducibility	1.31	1.22	1.41	0.95
Repeatability	0.55	0.37	0.50	0.40
Fuel 2				
Valid Results	275	178	249	160
Mean	10.59	10.59	10.57	10.62
Std Dev	0.70	0.56	0.69	0.50
Reproducibility	1.82	1.56	1.75	1.38
Repeatability	0.67	0.37	0.78	0.41
Fuel 3				
Valid Results	273	178	249	162
Mean	20.90	20.87	20.88	20.86
Std Dev	1.00	0.88	0.97	0.81
Reproducibility	2.60	2.46	2.54	2.24
Repeatability	0.99	0.58	0.90	0.52

\*For ANOVA analysis, mean and standard deviation are unadjusted estimates.

\*For ASTM analysis, mean and standard deviation are robust estimates.

In-House Calibration				
	Robust Deletion		Gravimetric Deletion	
	ANOVA	ASTM	ANOVA	ASTM
Fuel 4				
Valid Results	286	190	225	150
Mean	8.13	8.12	8.23	8.22
Std Dev	0.62	0.59	0.43	0.45
Reproducibility	1.64	1.63	1.06	1.26
Repeatability	0.55	0.45	0.57	0.46
Fuel 5				
Valid Results	284	190	225	146
Mean	14.45	14.44	14.47	14.58
Std Dev	1.02	0.98	0.94	0.71
Reproducibility	2.75	2.74	2.54	1.97
Repeatability	0.66	0.44	0.65	0.42

NIST Calibration				
	Robust Deletion		Gravimetric Deletion	
	ANOVA	ASTM	ANOVA	ASTM
Fuel 4				
Valid Results	266	171	249	161
Mean	8.27	8.23	8.27	8.24
Std Dev	0.49	0.39	0.41	0.33
Reproducibility	1.16	1.08	0.88	0.91
Repeatability	0.73	0.40	0.71	0.39
Fuel 5				
Valid Results	265	173	249	163
Mean	14.56	14.57	14.56	14.61
Std Dev	0.79	0.66	0.75	0.59
Reproducibility	2.14	1.83	1.96	1.65
Repeatability	0.56	0.45	0.71	0.48

\*For ANOVA analysis, mean and standard deviation are unadjusted estimates.

\*For ASTM analysis, mean and standard deviation are robust estimates.

**Table G.2. Mean\*, Standard Deviation\*, Reproducibility and Repeatability for August for Test Method D5453**

In-House Calibration				
	Robust Deletion		Gravimetric Deletion	
	ANOVA	ASTM	ANOVA	ASTM
Fuel 1				
Valid Results	266	177	231	149
Mean	9.76	9.77	9.81	9.87
Std Dev	0.67	0.62	0.63	0.54
Reproducibility	1.76	1.71	1.65	1.51
Repeatability	0.62	0.46	0.59	0.52
Fuel 2				
Valid Results	267	178	231	151
Mean	14.16	14.19	14.24	14.33
Std Dev	0.96	0.94	0.87	0.70
Reproducibility	2.55	2.61	2.34	1.96
Repeatability	0.75	0.51	0.62	0.34
Fuel 3				
Valid Results	267	177	231	148
Mean	17.54	17.54	17.60	17.77
Std Dev	1.15	1.02	1.12	0.82
Reproducibility	3.11	2.85	3.03	2.29
Repeatability	0.81	0.54	0.79	0.64

NIST Calibration				
	Robust Deletion		Gravimetric Deletion	
	ANOVA	ASTM	ANOVA	ASTM
Fuel 1				
Valid Results	254	170	234	148
Mean	9.90	9.90	9.85	9.93
Std Dev	0.53	0.47	0.63	0.40
Reproducibility	1.38	1.31	1.65	1.12
Repeatability	0.51	0.52	0.55	0.38
Fuel 2				
Valid Results	262	171	234	151
Mean	14.36	14.43	14.32	14.41
Std Dev	0.90	0.72	0.84	0.62
Reproducibility	2.37	2.01	2.18	1.71
Repeatability	0.82	0.43	0.82	0.45
Fuel 3				
Valid Results	261	168	234	150
Mean	17.84	17.80	17.78	17.84
Std Dev	1.02	0.78	1.00	0.74
Reproducibility	2.78	2.17	2.67	2.05
Repeatability	0.58	0.47	0.82	0.39

\*For ANOVA analysis, mean and standard deviation are unadjusted estimates.

\*For ASTM analysis, mean and standard deviation are robust estimates.

In-House Calibration				
	Robust Deletion		Gravimetric Deletion	
	ANOVA	ASTM	ANOVA	ASTM
Fuel 4				
Valid Results	267	177	231	153
Mean	8.18	8.16	8.26	8.26
Std Dev	0.57	0.51	0.43	0.45
Reproducibility	1.45	1.42	1.00	1.25
Repeatability	0.64	0.41	0.65	0.38
Fuel 5				
Valid Results	262	174	231	152
Mean	14.56	14.60	14.62	14.67
Std Dev	0.87	0.80	0.83	0.67
Reproducibility	2.32	2.22	2.21	1.86
Repeatability	0.70	0.44	0.63	0.46

NIST Calibration				
	Robust Deletion		Gravimetric Deletion	
	ANOVA	ASTM	ANOVA	ASTM
Fuel 4				
Valid Results	267	181	234	156
Mean	8.24	8.26	8.27	8.26
Std Dev	0.58	0.50	0.39	0.40
Reproducibility	1.34	1.39	0.92	1.11
Repeatability	0.91	0.40	0.56	0.37
Fuel 5				
Valid Results	260	174	234	152
Mean	14.61	14.63	14.58	14.64
Std Dev	0.80	0.72	0.77	0.58
Reproducibility	2.10	1.99	2.02	1.60
Repeatability	0.70	0.53	0.67	0.42

\*For ANOVA analysis, mean and standard deviation are unadjusted estimates.

\*For ASTM analysis, mean and standard deviation are robust estimates.

**Table G.3. Mean\*, Standard Deviation\*, Reproducibility and Repeatability for July Fuels for Test Method D2622**

In-House Calibration				
	Robust Deletion		Gravimetric Deletion	
	ANOVA	ASTM	ANOVA	ASTM
Fuel 1				
Valid Results	74	50	60	40
Mean	8.06	8.12	8.04	8.05
Std Dev	0.92	0.86	0.80	0.83
Reproducibility	2.25	2.41	1.98	2.34
Repeatability	1.26	0.99	1.07	0.95
Fuel 2				
Valid Results	75	50	60	40
Mean	11.39	11.40	11.41	11.44
Std Dev	1.14	1.10	1.14	1.16
Reproducibility	2.90	3.07	2.94	3.24
Repeatability	1.32	1.28	1.29	1.25
Fuel 3				
Valid Results	74	50	60	40
Mean	21.64	21.66	21.36	21.40
Std Dev	1.08	1.08	0.96	0.81
Reproducibility	2.47	3.03	2.00	2.26
Repeatability	1.75	1.49	1.79	1.34

NIST Calibration				
	Robust Deletion		Gravimetric Deletion	
	ANOVA	ASTM	ANOVA	ASTM
Fuel 1				
Valid Results	75	50	48	32
Mean	8.19	8.24	8.05	8.08
Std Dev	0.88	0.87	0.77	0.86
Reproducibility	2.07	2.44	1.81	2.41
Repeatability	1.35	1.26	1.17	1.45
Fuel 2				
Valid Results	75	50	48	32
Mean	11.55	11.49	11.59	11.51
Std Dev	0.90	0.94	0.84	0.85
Reproducibility	2.03	2.61	1.95	2.39
Repeatability	1.51	1.32	1.34	1.50
Fuel 3				
Valid Results	72	49	48	31
Mean	21.44	21.47	21.69	21.34
Std Dev	1.00	0.99	1.71	0.86
Reproducibility	2.29	2.76	3.76	2.41
Repeatability	1.62	1.13	2.98	1.27

\*For ANOVA analysis, mean and standard deviation are unadjusted estimates.

\*For ASTM analysis, mean and standard deviation are robust estimates.



In-House Calibration				
	Robust Deletion		Gravimetric Deletion	
	ANOVA	ASTM	ANOVA	ASTM
Fuel 4				
Valid Results	75	50	60	40
Mean	8.66	8.63	8.53	8.53
Std Dev	0.79	0.76	0.57	0.62
Reproducibility	1.62	2.12	0.63	1.72
Repeatability	1.49	1.23	1.46	1.38
Fuel 5				
Valid Results	75	50	60	40
Mean	15.46	15.48	15.51	15.51
Std Dev	1.16	1.13	0.91	0.95
Reproducibility	2.73	3.15	1.81	2.66
Repeatability	1.75	1.32	1.77	1.59

NIST Calibration				
	Robust Deletion		Gravimetric Deletion	
	ANOVA	ASTM	ANOVA	ASTM
Fuel 4				
Valid Results	74	48	48	32
Mean	8.83	8.88	8.60	8.55
Std Dev	1.06	0.96	0.58	0.52
Reproducibility	2.56	2.67	0.64	1.43
Repeatability	1.47	1.88	1.48	1.39
Fuel 5				
Valid Results	74	50	48	32
Mean	15.57	15.56	15.65	15.68
Std Dev	0.91	0.94	0.75	0.65
Reproducibility	2.23	2.62	1.78	1.83
Repeatability	1.22	1.27	1.12	1.04

\*For ANOVA analysis, mean and standard deviation are unadjusted estimates.

\*For ASTM analysis, mean and standard deviation are robust estimates.

**Table G.4. Mean\*, Standard Deviation\*, Reproducibility and Repeatability for August Fuels for Test Method D2622**

In-House Calibration				
	Robust Deletion		Gravimetric Deletion	
	ANOVA	ASTM	ANOVA	ASTM
Fuel 1				
Valid Results	71	48	54	36
Mean	10.99	11.01	10.87	10.80
Std Dev	0.94	0.90	1.05	0.93
Reproducibility	2.33	2.51	2.38	2.60
Repeatability	1.22	0.97	1.74	1.16
Fuel 2				
Valid Results	72	48	54	36
Mean	15.50	15.57	15.30	15.29
Std Dev	1.05	1.07	0.89	0.97
Reproducibility	2.54	3.00	2.16	2.71
Repeatability	1.50	1.06	1.28	0.92
Fuel 3				
Valid Results	69	46	54	35
Mean	18.67	18.75	18.70	18.58
Std Dev	1.13	0.95	1.89	0.86
Reproducibility	2.75	2.66	3.19	2.41
Repeatability	1.54	1.28	4.20	1.35

NIST Calibration				
	Robust Deletion		Gravimetric Deletion	
	ANOVA	ASTM	ANOVA	ASTM
Fuel 1				
Valid Results	70	47	51	32
Mean	10.80	10.73	10.62	10.81
Std Dev	0.86	0.86	0.98	0.76
Reproducibility	2.07	2.40	2.16	2.13
Repeatability	1.26	1.01	1.69	0.90
Fuel 2				
Valid Results	72	48	51	34
Mean	15.02	15.00	14.78	14.85
Std Dev	1.24	1.31	1.03	1.07
Reproducibility	3.21	3.68	2.47	3.00
Repeatability	1.36	0.91	1.50	0.59
Fuel 3				
Valid Results	71	48	51	34
Mean	18.30	18.39	18.24	18.22
Std Dev	1.16	1.14	0.96	0.91
Reproducibility	2.94	3.18	2.41	2.55
Repeatability	1.40	1.31	1.21	1.26

\*For ANOVA analysis, mean and standard deviation are unadjusted estimates.

\*For ASTM analysis, mean and standard deviation are robust estimates.

In-House Calibration				
	Robust Deletion		Gravimetric Deletion	
	ANOVA	ASTM	ANOVA	ASTM
Fuel 4				
Valid Results	70	47	54	35
Mean	8.95	8.92	8.61	8.57
Std Dev	0.83	0.80	0.50	0.37
Reproducibility	1.94	2.24	0.87	1.01
Repeatability	1.26	1.08	1.09	1.13
Fuel 5				
Valid Results	68	44	54	36
Mean	15.85	15.76	15.68	15.72
Std Dev	1.06	0.81	0.97	0.77
Reproducibility	2.59	2.26	2.32	2.15
Repeatability	1.47	1.58	1.40	1.48

NIST Calibration				
	Robust Deletion		Gravimetric Deletion	
	ANOVA	ASTM	ANOVA	ASTM
Fuel 4				
Valid Results	70	47	51	34
Mean	8.72	8.78	8.71	8.70
Std Dev	0.85	0.86	0.59	0.51
Reproducibility	1.84	2.39	0.42	1.44
Repeatability	1.50	1.14	1.59	1.00
Fuel 5				
Valid Results	69	47	51	34
Mean	15.57	15.52	15.39	15.43
Std Dev	1.09	1.27	0.97	1.04
Reproducibility	2.73	3.54	2.47	2.90
Repeatability	1.39	1.34	1.18	1.39

\*For ANOVA analysis, mean and standard deviation are unadjusted estimates.

\*For ASTM analysis, mean and standard deviation are robust estimates.

**Table G.5. Mean\*, Standard Deviation\*, Reproducibility and Repeatability for July Fuels for Test Method D7039**

In-House Calibration				
	Robust Deletion		Gravimetric Deletion	
	ANOVA	ASTM	ANOVA	ASTM
Fuel 1				
Valid Results	46	31	42	28
Mean	7.35	7.37	7.42	7.39
Std Dev	0.50	0.48	0.45	0.44
Reproducibility	1.09	1.34	0.89	1.22
Repeatability	0.87	1.04	0.89	1.06
Fuel 2				
Valid Results	46	31	42	28
Mean	10.75	10.74	10.86	10.82
Std Dev	0.65	0.68	0.53	0.50
Reproducibility	1.57	1.90	1.15	1.39
Repeatability	0.92	1.20	0.95	1.06
Fuel 3				
Valid Results	48	32	42	28
Mean	20.26	20.35	20.55	20.47
Std Dev	1.12	1.14	0.84	0.89
Reproducibility	2.80	3.20	1.85	2.50
Repeatability	1.46	1.34	1.49	1.69

NIST Calibration				
	Robust Deletion		Gravimetric Deletion	
	ANOVA	ASTM	ANOVA	ASTM
Fuel 1				
Valid Results	47	31	45	29
Mean	7.62	7.55	7.75	7.52
Std Dev	0.55	0.41	1.47	0.41
Reproducibility	1.33	1.16	0.00	1.16
Repeatability	0.78	0.55	4.27	0.43
Fuel 2				
Valid Results	47	32	45	30
Mean	10.96	10.92	10.92	10.91
Std Dev	0.40	0.44	0.44	0.40
Reproducibility	0.68	1.23	0.83	1.13
Repeatability	0.88	0.96	0.93	0.52
Fuel 3				
Valid Results	47	32	45	30
Mean	20.49	20.37	20.44	20.37
Std Dev	0.62	0.60	0.67	0.61
Reproducibility	0.99	1.66	1.33	1.71
Repeatability	1.41	1.64	1.34	1.51

\*For ANOVA analysis, mean and standard deviation are unadjusted estimates.

\*For ASTM analysis, mean and standard deviation are robust estimates.

In-House Calibration				
	Robust Deletion		Gravimetric Deletion	
	ANOVA	ASTM	ANOVA	ASTM
Fuel 4				
Valid Results	45	30	42	28
Mean	8.40	8.44	8.49	8.48
Std Dev	0.53	0.48	0.43	0.44
Reproducibility	1.32	1.36	0.98	1.22
Repeatability	0.71	0.51	0.73	0.76
Fuel 5				
Valid Results	48	32	42	28
Mean	14.51	14.61	14.76	14.78
Std Dev	1.01	0.91	0.82	0.68
Reproducibility	2.70	2.56	2.10	1.92
Repeatability	0.92	0.80	0.96	0.93

NIST Calibration				
	Robust Deletion		Gravimetric Deletion	
	ANOVA	ASTM	ANOVA	ASTM
Fuel 4				
Valid Results	45	32	45	29
Mean	8.46	8.49	8.48	8.40
Std Dev	0.32	0.31	0.38	0.29
Reproducibility	0.59	0.85	0.50	0.80
Repeatability	0.68	0.75	0.94	0.62
Fuel 5				
Valid Results	46	31	45	28
Mean	14.90	14.90	15.02	14.97
Std Dev	0.61	0.55	0.77	0.44
Reproducibility	1.12	1.54	1.44	1.22
Repeatability	1.29	1.43	1.62	1.01

\*For ANOVA analysis, mean and standard deviation are unadjusted estimates.

\*For ASTM analysis, mean and standard deviation are robust estimates.

**Table G.6. Mean\*, Standard Deviation\*, Reproducibility and Repeatability for August Fuels for Test Method D7039**

In-House Calibration				
	Robust Deletion		Gravimetric Deletion	
	ANOVA	ASTM	ANOVA	ASTM
Fuel 1				
Valid Results	46	31	42	27
Mean	10.13	10.03	10.11	10.25
Std Dev	0.65	0.59	0.79	0.70
Reproducibility	1.27	1.65	1.54	1.95
Repeatability	1.32	1.17	1.60	1.48
Fuel 2				
Valid Results	46	31	42	27
Mean	14.10	14.11	14.10	14.31
Std Dev	0.68	0.62	0.78	0.54
Reproducibility	1.49	1.75	1.73	1.53
Repeatability	1.18	0.95	1.33	1.01
Fuel 3				
Valid Results	47	32	42	27
Mean	17.53	17.55	17.65	17.77
Std Dev	0.95	0.91	0.95	0.71
Reproducibility	2.46	2.57	2.42	1.97
Repeatability	1.03	1.32	1.15	1.48

NIST Calibration				
	Robust Deletion		Gravimetric Deletion	
	ANOVA	ASTM	ANOVA	ASTM
Fuel 1				
Valid Results	46	31	48	31
Mean	10.27	10.32	10.21	10.31
Std Dev	0.40	0.36	0.49	0.39
Reproducibility	0.89	1.02	1.18	1.09
Repeatability	0.70	0.51	0.74	0.70
Fuel 2				
Valid Results	46	31	48	31
Mean	14.40	14.35	14.31	14.32
Std Dev	0.60	0.54	0.74	0.63
Reproducibility	1.37	1.52	1.79	1.77
Repeatability	0.96	0.79	1.07	1.05
Fuel 3				
Valid Results	45	30	48	30
Mean	17.67	17.65	17.52	17.67
Std Dev	0.56	0.65	0.80	0.65
Reproducibility	0.96	1.81	1.90	1.82
Repeatability	1.24	1.24	1.21	1.21

\*For ANOVA analysis, mean and standard deviation are unadjusted estimates.

\*For ASTM analysis, mean and standard deviation are robust estimates.

In-House Calibration				
	Robust Deletion		Gravimetric Deletion	
	ANOVA	ASTM	ANOVA	ASTM
Fuel 4				
Valid Results	44	30	42	25
Mean	8.35	8.41	8.36	8.30
Std Dev	0.54	0.56	0.90	0.31
Reproducibility	1.27	1.57	0.00	0.86
Repeatability	0.85	0.92	2.83	0.87
Fuel 5				
Valid Results	47	31	42	27
Mean	14.68	14.71	14.74	14.82
Std Dev	0.83	0.58	0.89	0.57
Reproducibility	2.11	1.63	2.28	1.58
Repeatability	1.02	0.94	1.08	1.06

NIST Calibration				
	Robust Deletion		Gravimetric Deletion	
	ANOVA	ASTM	ANOVA	ASTM
Fuel 4				
Valid Results	48	32	48	32
Mean	8.53	8.61	8.53	8.43
Std Dev	0.54	0.53	0.54	0.56
Reproducibility	0.54	1.48	0.54	1.56
Repeatability	1.42	1.22	1.42	0.72
Fuel 5				
Valid Results	48	31	48	32
Mean	14.66	14.87	14.66	14.72
Std Dev	0.88	0.66	0.88	0.75
Reproducibility	2.29	1.86	2.29	2.11
Repeatability	0.96	0.75	0.96	1.07

\*For ANOVA analysis, mean and standard deviation are unadjusted estimates.

\*For ASTM analysis, mean and standard deviation are robust estimates.

**Table G.7. Mean\*, Standard Deviation\*, Reproducibility and Repeatability for July Fuels for Test Method EDXRF (Shaded boxes are based on <6 labs)**

In-House Calibration				
	Robust Deletion		Gravimetric Deletion	
	ANOVA	ASTM	ANOVA	ASTM
Fuel 1				
Valid Results	18	12	18	12
Mean	7.78	7.77	7.78	7.61
Std Dev	0.60	0.69	0.60	0.59
Reproducibility	0.80	1.92	0.80	1.72
Repeatability	1.50	1.70	1.50	0.43
Fuel 2				
Valid Results	18	12	18	11
Mean	11.18	11.27	11.18	11.26
Std Dev	0.35	0.26	0.35	0.21
Reproducibility	0.24	0.74	0.24	0.59
Repeatability	0.93	0.40	0.93	0.41
Fuel 3				
Valid Results	18	12	18	12
Mean	21.62	21.65	21.62	21.67
Std Dev	0.85	1.10	0.85	0.66
Reproducibility	1.92	3.14	1.92	1.88
Repeatability	1.53	1.72	1.53	1.32

NIST Calibration				
	Robust Deletion		Gravimetric Deletion	
	ANOVA	ASTM	ANOVA	ASTM
Fuel 1				
Valid Results	18	12	15	10
Mean	8.06	8.10	8.14	8.16
Std Dev	0.56	0.60	0.54	0.43
Reproducibility	0.22	1.63	0.00	1.11
Repeatability	1.55	2.03	1.52	1.66
Fuel 2				
Valid Results	18	12	15	10
Mean	11.16	11.36	11.23	11.35
Std Dev	0.77	0.70	0.69	0.80
Reproducibility	1.38	2.00	1.69	2.32
Repeatability	1.71	1.20	1.12	0.88
Fuel 3				
Valid Results	18	12	15	10
Mean	20.73	20.46	20.91	20.84
Std Dev	1.11	1.20	1.03	0.89
Reproducibility	2.22	3.46	2.29	2.59
Repeatability	2.26	1.27	1.89	0.99

\*For ANOVA analysis, mean and standard deviation are unadjusted estimates.

\*For ASTM analysis, mean and standard deviation are robust estimates.



In-House Calibration				
	Robust Deletion		Gravimetric Deletion	
	ANOVA	ASTM	ANOVA	ASTM
Fuel 4				
Valid Results	18	12	18	12
Mean	8.68	8.75	8.68	8.68
Std Dev	0.39	0.45	0.39	0.50
Reproducibility	0.66	1.30	0.66	1.39
Repeatability	0.89	0.80	0.89	1.37
Fuel 5				
Valid Results	18	12	18	12
Mean	15.08	15.08	15.08	15.13
Std Dev	0.63	0.49	0.63	0.76
Reproducibility	0.34	1.39	0.34	2.11
Repeatability	1.70	0.91	1.70	2.15

NIST Calibration				
	Robust Deletion		Gravimetric Deletion	
	ANOVA	ASTM	ANOVA	ASTM
Fuel 4				
Valid Results	18	12	15	10
Mean	8.74	8.79	9.00	9.10
Std Dev	0.82	0.92	0.60	0.54
Reproducibility	1.83	2.64	0.59	1.59
Repeatability	1.48	1.63	1.57	0.53
Fuel 5				
Valid Results	18	12	15	10
Mean	14.94	14.95	15.02	15.09
Std Dev	0.51	0.46	0.50	0.52
Reproducibility	1.06	1.26	1.11	1.49
Repeatability	1.02	1.28	0.92	1.12

\*For ANOVA analysis, mean and standard deviation are unadjusted estimates.

\*For ASTM analysis, mean and standard deviation are robust estimates.

**Table G.8. Mean\*, Standard Deviation\*, Reproducibility and Repeatability for August Fuels for Test Method EDXRF (Shaded boxes are based on <6 labs)**

In-House Calibration				
	Robust Deletion		Gravimetric Deletion	
	ANOVA	ASTM	ANOVA	ASTM
Fuel 1				
Valid Results	18	12	18	12
Mean	10.39	10.35	10.39	10.40
Std Dev	0.80	0.76	0.80	0.85
Reproducibility	2.00	2.16	2.00	2.42
Repeatability	1.16	1.33	1.16	1.36
Fuel 2				
Valid Results	18	12	18	12
Mean	14.67	14.72	14.67	14.65
Std Dev	0.64	0.70	0.64	0.71
Reproducibility	0.00	1.95	0.00	1.93
Repeatability	1.83	1.97	1.83	2.24
Fuel 3				
Valid Results	18	12	18	12
Mean	17.96	17.91	17.96	17.98
Std Dev	0.51	0.48	0.51	0.53
Reproducibility	1.10	1.36	1.10	1.49
Repeatability	0.98	1.14	0.98	1.33

NIST Calibration				
	Robust Deletion		Gravimetric Deletion	
	ANOVA	ASTM	ANOVA	ASTM
Fuel 1				
Valid Results	18	12	12	8
Mean	10.12	10.21	10.20	10.21
Std Dev	0.46	0.50	0.41	0.53
Reproducibility	0.49	1.42	0.86	1.51
Repeatability	1.20	0.93	0.83	1.17
Fuel 2				
Valid Results	18	12	12	8
Mean	14.34	14.26	14.92	14.89
Std Dev	0.95	0.90	0.51	0.57
Reproducibility	2.51	2.59	0.87	1.64
Repeatability	1.19	0.85	1.19	1.27
Fuel 3				
Valid Results	18	12	12	8
Mean	17.32	17.25	17.76	17.75
Std Dev	0.81	0.81	0.52	0.32
Reproducibility	1.91	2.32	0.00	0.89
Repeatability	1.34	1.53	1.45	0.86

\*For ANOVA analysis, mean and standard deviation are unadjusted estimates.

\*For ASTM analysis, mean and standard deviation are robust estimates.

In-House Calibration				
	Robust Deletion		Gravimetric Deletion	
	ANOVA	ASTM	ANOVA	ASTM
Fuel 4				
Valid Results	18	12	18	12
Mean	8.28	8.18	8.28	8.17
Std Dev	0.66	0.67	0.66	0.79
Reproducibility	1.18	1.94	1.18	2.26
Repeatability	1.46	0.84	1.46	1.19
Fuel 5				
Valid Results	17	12	18	12
Mean	15.44	15.41	15.57	15.47
Std Dev	0.80	0.85	0.97	0.85
Reproducibility	2.00	2.40	2.53	2.42
Repeatability	1.20	1.66	1.28	1.65

NIST Calibration				
	Robust Deletion		Gravimetric Deletion	
	ANOVA	ASTM	ANOVA	ASTM
Fuel 4				
Valid Results	18	12	12	7
Mean	7.98	8.00	8.28	8.36
Std Dev	0.49	0.54	0.29	0.11
Reproducibility	1.31	1.56	0.52	0.18
Repeatability	0.57	0.60	0.66	0.65
Fuel 5				
Valid Results	18	12	12	8
Mean	14.80	14.82	15.25	15.30
Std Dev	0.75	0.83	0.38	0.52
Reproducibility	1.90	2.37	0.27	1.48
Repeatability	1.04	1.25	1.02	1.20

\*For ANOVA analysis, mean and standard deviation are unadjusted estimates.

\*For ASTM analysis, mean and standard deviation are robust estimates.

**Table G.9. Mean\*, Standard Deviation\*, Reproducibility and Repeatability for July Fuels for Composite Test Methods**

In-House Calibration				
	Robust Deletion		Gravimetric Deletion	
	ANOVA	ASTM	ANOVA	ASTM
Fuel 1				
Valid Results	435	290	348	222
Mean	7.25	7.24	7.28	7.30
Std Dev	0.77	0.70	0.77	0.56
Reproducibility	1.73	1.93	1.70	1.57
Repeatability	1.23	0.43	1.10	0.45
Fuel 2				
Valid Results	436	294	348	221
Mean	10.64	10.64	10.72	10.74
Std Dev	0.93	0.87	0.88	0.64
Reproducibility	2.31	2.43	1.96	1.77
Repeatability	1.19	0.58	1.27	0.56
Fuel 3				
Valid Results	434	290	348	228
Mean	20.77	20.83	20.84	20.95
Std Dev	1.39	1.35	1.31	1.04
Reproducibility	3.34	3.76	3.02	2.90
Repeatability	1.93	0.69	1.32	0.86

NIST Calibration				
	Robust Deletion		Gravimetric Deletion	
	ANOVA	ASTM	ANOVA	ASTM
Fuel 1				
Valid Results	431	289	363	228
Mean	7.39	7.37	7.34	7.30
Std Dev	0.75	0.66	0.84	0.45
Reproducibility	1.81	1.83	1.50	1.26
Repeatability	1.03	0.51	1.72	0.46
Fuel 2				
Valid Results	426	282	363	234
Mean	10.81	10.78	10.78	10.77
Std Dev	0.82	0.72	0.77	0.58
Reproducibility	1.86	2.00	1.74	1.61
Repeatability	1.29	0.53	1.19	0.49
Fuel 3				
Valid Results	420	278	363	237
Mean	20.91	20.88	20.93	20.85
Std Dev	1.03	0.95	1.11	0.83
Reproducibility	2.34	2.63	2.46	2.31
Repeatability	1.62	0.72	1.64	0.65

\*For ANOVA analysis, mean and standard deviation are unadjusted estimates.

\*For ASTM analysis, mean and standard deviation are robust estimates.

In-House Calibration				
	Robust Deletion		Gravimetric Deletion	
	ANOVA	ASTM	ANOVA	ASTM
Fuel 4				
Valid Results	437	292	348	232
Mean	8.27	8.25	8.34	8.33
Std Dev	0.70	0.67	0.48	0.50
Reproducibility	1.62	1.86	0.88	1.38
Repeatability	1.06	0.49	0.89	0.65
Fuel 5				
Valid Results	432	288	348	227
Mean	14.63	14.59	14.72	14.78
Std Dev	1.07	1.03	0.98	0.80
Reproducibility	2.54	2.87	2.12	2.23
Repeatability	1.54	0.55	1.36	0.68

NIST Calibration				
	Robust Deletion		Gravimetric Deletion	
	ANOVA	ASTM	ANOVA	ASTM
Fuel 4				
Valid Results	413	275	363	237
Mean	8.42	8.38	8.37	8.33
Std Dev	0.63	0.55	0.47	0.39
Reproducibility	1.38	1.52	0.91	1.09
Repeatability	1.07	0.55	0.96	0.54
Fuel 5				
Valid Results	417	274	363	235
Mean	14.81	14.78	14.78	14.80
Std Dev	0.93	0.83	0.83	0.69
Reproducibility	2.19	2.29	1.93	1.92
Repeatability	1.35	0.60	1.22	0.60

\*For ANOVA analysis, mean and standard deviation are unadjusted estimates.

\*For ASTM analysis, mean and standard deviation are robust estimates.

**Table G.10. Mean\*, Standard Deviation\*, Reproducibility and Repeatability for August Fuels for Composite Test Methods**

In-House Calibration				
	Robust Deletion		Gravimetric Deletion	
	ANOVA	ASTM	ANOVA	ASTM
Fuel 1				
Valid Results	420	282	354	234
Mean	10.01	10.03	10.02	10.00
Std Dev	0.91	0.87	0.83	0.72
Reproducibility	2.17	2.41	1.77	2.00
Repeatability	1.28	0.64	1.37	0.64
Fuel 2				
Valid Results	416	280	354	232
Mean	14.39	14.41	14.39	14.44
Std Dev	1.08	1.03	0.94	0.80
Reproducibility	2.66	2.86	2.05	2.22
Repeatability	1.40	0.53	1.41	0.59
Fuel 3				
Valid Results	410	274	354	228
Mean	17.71	17.74	17.77	17.87
Std Dev	1.17	1.10	1.29	0.87
Reproducibility	2.93	3.06	2.68	2.41
Repeatability	1.40	0.65	2.05	0.85

NIST Calibration				
	Robust Deletion		Gravimetric Deletion	
	ANOVA	ASTM	ANOVA	ASTM
Fuel 1				
Valid Results	402	268	354	224
Mean	10.08	10.07	10.02	10.07
Std Dev	0.69	0.62	0.72	0.51
Reproducibility	1.59	1.73	1.68	1.43
Repeatability	1.06	0.67	1.03	0.53
Fuel 2				
Valid Results	408	267	354	228
Mean	14.44	14.43	14.40	14.44
Std Dev	0.96	0.79	0.86	0.67
Reproducibility	2.31	2.19	1.93	1.87
Repeatability	1.32	0.58	1.23	0.55
Fuel 3				
Valid Results	407	270	354	228
Mean	17.85	17.87	17.80	17.84
Std Dev	1.04	0.89	0.98	0.75
Reproducibility	2.57	2.48	2.23	2.08
Repeatability	1.34	0.57	1.27	0.57

\*For ANOVA analysis, mean and standard deviation are unadjusted estimates.

\*For ASTM analysis, mean and standard deviation are robust estimates.

In-House Calibration				
	Robust Deletion		Gravimetric Deletion	
	ANOVA	ASTM	ANOVA	ASTM
Fuel 4				
Valid Results	405	271	354	231
Mean	8.31	8.29	8.32	8.31
Std Dev	0.63	0.57	0.54	0.46
Reproducibility	1.39	1.57	0.83	1.27
Repeatability	1.07	0.57	1.25	0.55
Fuel 5				
Valid Results	410	270	354	229
Mean	14.79	14.78	14.82	14.82
Std Dev	1.07	0.95	0.96	0.76
Reproducibility	2.64	2.64	2.13	2.11
Repeatability	1.35	0.66	1.27	0.65

NIST Calibration				
	Robust Deletion		Gravimetric Deletion	
	ANOVA	ASTM	ANOVA	ASTM
Fuel 4				
Valid Results	415	278	354	235
Mean	8.37	8.34	8.38	8.33
Std Dev	0.62	0.58	0.47	0.45
Reproducibility	1.36	1.62	0.78	1.26
Repeatability	1.05	0.48	1.01	0.43
Fuel 5				
Valid Results	404	267	354	229
Mean	14.78	14.74	14.72	14.74
Std Dev	0.92	0.76	0.85	0.67
Reproducibility	2.22	2.12	2.07	1.87
Repeatability	1.25	0.67	1.02	0.57

\*For ANOVA analysis, mean and standard deviation are unadjusted estimates.

\*For ASTM analysis, mean and standard deviation are robust estimates.