REGULATORY SAMPLES

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REGULATORY SAMPLES

SAMPLE ACCOUNTABILITY

1. Purpose This Guide provides the Agency's procedures for the accounting of regulatory samples from receipt to destruction.

2. Policy All regulatory samples must be accounted for in accordance with the instructions contained in the Laboratory Procedures Manual (LPM), Chapter 1, Sample Accountability.

3. Procedures Chapter 1, Sample Accountability of the Laboratory Procedures Manual has been reproduced as Attachment A for easy reference. The procedures contained in this reference were developed for use in FDA Field Laboratories, however, they will serve as the basis for the procedures to be followed within the Center for Food Safety and Applied Nutrition.

   A. Sample Accountability Record

      The Sample Accountability Record (SAR) serves as the mechanism to monitor the chain of custody of the regulatory sample in CFSAN.

      1. The FDA 421 (green copy of the SAR) serves as the official record of the receipt, transfer, storage and disposition of regulatory samples. Form FDA 421 (green copy) is retained by the sample custodian located in Room SB-472 of FB-8.

      2. Form FDA 421a (orange copy of the SAR) is used to monitor the progress of the sample in the laboratory. This form is to be retained with the sample being analyzed and will also be used to record the final disposition of the sample.

B. Division Procedures

1. Any Division/Branch in the Center for Food Safety and Applied Nutrition that periodically performs analysis of regulatory samples shall include sample accountability procedures that conform to the Agency Procedures in their Division QA Plan. Internal monitoring of these procedures shall be conducted as part of the units QA inspection process.

2. Questions concerning sample accountability should be referred to the Division of Field Science, Office of Regional Operations.

CHAPTER 1

SAMPLE ACCOUNTABILITY

Purpose

1.1 Sample accountability requires a continuous record documenting that the sample's integrity has been preserved and showing continuity of handling. This section describes the approved monitoring mechanism for accountability after a sample is received in a laboratory installation and for a period after it has been destroyed.

In some districts, the sample room function is part of the administrative management branch. The details of meeting LPM requirements should be worked out by local management, i.e., the district director and the involved branch directors.

The term "sample accountability" includes requirements for sample receipt, storage, transfer of sample or sample portions between individuals or units, analysis, disposition authorization, and destruction. Records covering these transactions are part of the regulatory file.

Individuals who are responsible for sample accountability after the sample is received in a laboratory installation are:

- ☐ Sample Custodian
- ☐ Laboratory Supervisor
- ☐ Analyst, Technician
- ☐ Laboratory/Compliance Branch
- ☐ Compliance Officer

The sections that follow describe the responsibility of each position listed.

Method of Accountability 1.2

A permanent record, the Sample Accountability Record (SAR), FDA-421 and FDA-421A, achieves uniform accountability for samples in the FDA laboratory system. Its design provides a history of *(a)* sample receipt and possession, including future shipment; *(b)* storage by the sample custodian or other person in the laboratory; and *(c)* authorization for disposition and actual destruction or other approved disposal.

The Sample Accountability Record is a two-part, interleaved carbon snap-out form consisting of a green card (FDA-421) and an orange card (FDA-421A). Exhibits 1-A and 1-B are examples of SARs.

The green card serves as an official record of the receipt, transfer, and storage of regulatory samples. It may be used as evidence in a court action without the direct testimony of the individuals involved. Together with form FDA-421A, it shows the final disposition of the sample.

The orange card may be used to show sample assignment and reserve sample storage in the laboratory, to note the action taken, and to monitor and direct disposition of the sample. It is called the "Sample Disposition Notice" (SDN). Destruction of samples and exhibits stored in the laboratory rather than in the sample storeroom is shown on this card.

The SAR must be used for all domestic samples.

Use of an SAR is optional for import samples. If it is used, the protocol established for domestic samples must be used. If it is not used, the analyzing laboratory must establish a procedure to account for sample integrity and continuity of handling. The procedure must be established in writing and must be available on request.

Completing the SAR 1.2.1

The SAR shall be initiated immediately upon receipt of the sample by the person initially responsible for its custody. In most cases this is the sample custodian. If it is not the sample custodian, the person who receives the sample must complete blocks 1 and 9, and give the green card to the sample custodian and the orange card to the supervisor who assigns the sample.

A typewriter or a pen with permanent ink capable of making a legible carbon copy must be used to make entries on the SAR card.

The following paragraphs explain the information to be entered in each block of the SAR.

Block 1. **STORAGE LOCATION.** The space following caption "A" shows the first storage location of the sample. When the sample is withdrawn from storage and returned, the entry after A must be struck out and the storage location inserted after B even though the sample may be returned to the original storage location. Blocks C and D in a similar manner show any subsequent withdrawal and return.

Block 2. **NAME OF PRODUCT.** Name and kind of product, such as fresh spinach, canned tomatoes, aspirin tablets, etc., from the Collection Report (FDA-464, C/R) and Sample Package Identification (FDA-525), must be entered in this block. If the Collection Report and Sample Package Identification records do not agree, this must be brought to the attention of the supervisory investigator.

Block 3. **SAMPLE NO., CR$_x$/DEA, SPLIT SAMPLE.** The sample number, including any prefix, such as INV, DI, etc., that may precede the number from the official seal and collection report, must be entered here. If records do not agree, this must be brought to the attention of the appropriate supervisory personnel.

The C/R must be reviewed to determine if a sample is a controlled drug and/or split sample, and then the appropriate box must be checked. The CR$_x$/DEA box shows that the drug sampled is a controlled drug subject to the Drug Abuse, Prevention and Control Act enforced by the Drug Enforcement Administration (DEA). CR$_x$ stands for Controlled Registered Prescription Drug. Block 17 of the Collection Report will have this information.

Block 34 of the Collection Report will show when a portion of the sample has been sent to another laboratory.

FDA-421 (12/78) (2 Part) does not provide blocks to check "CR$_x$/DEA" and "Split Sample." When the 12/78 SAR card is used, "CR$_x$/DEA" and/or "Split Sample" must be stamped or written near the sample number when applicable.

Block 4. **NAME AND ADDRESS OF RESPONSIBLE FIRM.** The investigator identifies the responsible firm on the C/R in blocks 9, 20, 21, or 22. The name and address of the responsible firm must be placed in block 4 of the SAR.

Block 5. **DATE SAMPLE RECEIVED.** The date on which the sample is received must be entered here.

Block 6A. **BY WHOM RECEIVED.** The full name of the individual who receives the sample must be indicated. This entry requires a signature.

Block 6B. **DIST/DIV.** The duty station (district or regional laboratory/headquarters division or unit) of the person who receives the sample must be indicated.

Block 7. **DATE RECORDS RECEIVED.** The date on which the C/R is received must be noted. If a copy of the C/R is received and not the original, "copy" may be entered. Each district or installation will establish its own procedure to handle samples received without C/Rs.

Block 8. **METHOD OF SHIPMENT.** When the sample is received by personal delivery from an investigator or analyst, the name of the investigator or analyst must be entered in Box A. No other entries in block 8 are necessary.

When the shipment is received by carrier, the appropriate box describing mode of delivery, PP (parcel post), bus, freight, or air, must be indicated in Box B. Also, the city and state from which the shipment originated must be entered in Box C.

The bill of lading number (when available) will be entered in Box D.

Block 9A. **DESCRIPTION OF SHIPMENT.** The number and type of container must be entered in block 9A. If the sample was shipped frozen or iced, whether or not dry ice or wet ice remains in the container must be stated under "TYPE." The condition of the container(s) may be shown as "OK" or "Intact." If damaged, "DAMAGED" must be entered under "CONDITION" and described on the reverse side of the card. Damaged samples and/or lack of ice must be called to the attention of the laboratory supervisor immediately. When the shipping container is also the sample package, "None" may be written in the "TYPE" block.

Block 9B. **SAMPLE PACKAGES.** The number of packages must be entered in Box 9B along with the type of package, such as pasteboard carton, paper bag, etc. The condition of the package may be indicated as "OK" or "Intact." If damaged, "DAMAGED" must be entered under "CONDITION" and described on the reverse side of the card. Damaged packages must be called to the attention of the laboratory supervisor immediately.

Block 9C. **SEAL INSCRIPTION.** The seal inscription must be shown in Box 9c. The handwritten sample number including any prefix, the date, and the investigator's signature must be copied exactly as written on the official paper seal (FDA-415A). If the official metal seal has been used, "U.S. Food and Drug" followed by the numbers on the seal must be entered. The seal inscription and the identification on the package must be compared to that reported on the C/R. Discrepancies are to be resolved through the appropriate supervisory personnel.

The condition of the seal(s) may be reported as "NONE," "INTACT," or "BROKEN." If the seal is broken or there is any discrepancy among the seal, C/R, and any other package identification, this must be called to the attention of the laboratory supervisor immediately.

Blocks 10 through 18. SUBSEQUENT ENTRIES. Instructions for completing blocks 10 through 18 are found in the following sections:

Block 10	Sample Delivery	Section 1.3.1 Section 1.3.3 Section 1.5.1
Block 11	Sample Returned	Section 1.3.4 Section 1.3.5 Section 1.5.3 Section 1.5.4
Block 12	Sample Disposition	Section 1.3.6 Section 1.5.5 Section 4.6.2
Block 13	Assignment	Section 1.4.1
Block 14	Reserve Sample Storage	Section 1.4.2 Section 1.5.2
Block 15	Action	Section 1.4.3 Section 1.8
Block 16	Disposition Follow-up	Section 1.4.4 Section 1.8 Section 4.3
Block 17	Disposition	Section 1.4.4 Section 1.8 Section 4.5
Block 18	Sample Disposition (Block 14, "Other")	Section 1.4.4 Section 1.5.5 Section 4.6.2
Reverse of FDA-421A	Reason for Disposition	Section 1.7 Section 4.4

Filing the SAR 1.2.2

Two types of files, ACTIVE and CLOSED, must be maintained. Cards are filed numerically within the appropriate sample number series (or letter series prior to 1976). The sample custodian is responsible for maintaining this system.

Active File 1.2.2.1

The active category consists of three files for the green card (FDA-421). The files are for PENDING ANALYSIS, IN PROCESS, and PENDING DISPOSITION. The PENDING ANALYSIS file contains green cards for samples that are awaiting assignment. The IN PROCESS file contains cards of samples that have been withdrawn from storage or received directly by the analyst and are undergoing analysis.

The PENDING DISPOSITION file contains cards for samples that have been returned to storage to await receipt of the orange card authorizing disposition. If subsequent delivery of the sample is necessary for additional or check analysis, the green card for the sample must be refiled in the IN PROCESS file until analysis is completed.

Closed File 1.2.2.2

Green and orange cards for samples that have been destroyed are stapled together and filed numerically within the appropriate number or letter series.

The number of files to be maintained depends on the following sample types and their retention periods. The appropriate supervisor will decide on the CLOSED file structure.

FDA closed sample cards, other than those cards for samples subject to the Drug Abuse Prevention and Control Act enforced by DEA, may be retained at management's discretion for one to three years, and then destroyed.

CR/DEA closed sample cards must be retained for a minimum of two years and then destroyed. These cards may be filed with other FDA sample cards provided the retention period for non-DEA samples is not less than two years.

Established requirements do not exist on how a recipient FDA laboratory is to handle its green and orange cards for samples received from a cooperating agency. The recipient laboratory and/or district/center management will work out details with the cooperating agency if there is any prospect that regulatory action, as opposed to information, is an issue.

Procedures to consider are:

1. The routine return of all reserve sample portions to the cooperating agency may be arranged. The green card must show this transaction. Then both green and orange cards are to be filed in the FDA sample file.

2. Along with the analytical results the cooperating agency may be notified that the reserve sample portion will be destroyed within _____ days unless the laboratory is notified not to destroy the sample. The sample custodian monitors the orange card according to routine procedures and destroys the sample when the date is met. Both green and orange cards are to be filed in the FDA sample file. If notified not to destroy the sample, the sample custodian will arrange to have the sample returned to the agency and will follow instructions in 1 above.

Sample Custodian Responsibility

1.3

The sample custodian receives the majority of the samples delivered to FDA installations, and is responsible for initiation and filing of the SAR and for storage and release of samples in his or her possession.

The sample custodian will fill out the SAR card on receipt of the samples and will provide proper storage for the sample until it is removed for analysis. When the sample is returned after analysis, the sample custodian will store it properly until notified in writing to dispose of it. The sample custodian will make appropriate entries on the green card covering the custodial transactions

handled. The sample custodian will retain the green card. After receipt of a written sample disposition notice, the sample custodian will retain the completed SAR and other appropriate records for the period of time specified in Section 1.2.2.2. More detail about the sample custodian's responsibility follows.

Initial Receipt of Samples 1.3.1

The sample custodian will initiate an SAR card immediately upon receiving a sample, will enter the information required in blocks 1 through 9, and will then store the sample. The sample custodian will route the orange card with C/R and other records to the laboratory and file the green card in the PENDING ANALYSIS file. If a C/R is not received, the sample custodian will follow procedures established by the supervisor.

Instructions for initial entries on the SAR and for the filing system are in Sections 1.2.1 and 1.2.2.

Drug Enforcement Administration (CR$_x$/DEA) samples will be recorded and stored in the usual manner, with the additional requirement that "CR$_x$/DEA" is checked or written on the top of the green and orange cards.

Samples personally delivered to the analyst by other than the sample custodian require preparation of the SAR by the analyst. When the analyst delivers the green card to the sample custodian, the custodian will file the card in the IN PROCESS file.

Sample Storage 1.3.2

The sample custodian is responsible for the initial and final stages of sample storage. Upon receipt of a sample, the sample custodian will assure that the apparent physical condition is satisfactory, that the seal (if any) is unbroken, and that the identification is the same on the sample package as on the accompanying records.

The sample custodian will refer any discernible abnormalities, e.g., conflicting sample numbers; broken seals, breakage, thawing, etc., of samples to the laboratory supervisor immediately.

The sample custodian will store pre- and post-analyzed samples in locked storage areas appropriate to the type of sample and/or analysis following any special instructions given on the Sample Package Identification (FDA-525) form or received verbally from the supervisor or an analyst.

Sample Delivery 1.3.3

Upon delivery of the sample to the analyst, the sample custodian will complete the first line under the captions "DATE" and "AMOUNT" and will initial the column captioned "FROM" in block 10, "SAMPLE DELIVERY." The analyst will initial the delivery and verify the amount and acceptance of the sample in the column captioned "TO."

(*Note:* The sample custodian will record any subsequent delivery of the sample out of storage on the next available line.)

After delivery of the sample, the sample custodian will file the card in the IN PROCESS file.

Returned Samples 1.3.4

When the analyst returns the remaining portion of the sample, the sample custodian will remove the green card from the IN PROCESS file. After the analyst makes and initials entries in block 11 under "SAMPLE RETURNED," the sample custodian will complete the transaction by initialing the block captioned "TO." The sample custodian will then file the green card in the PENDING DISPOSITION file. The sample custodian will return the reserve sample to storage, and will strike out the previous storage in block 1 and enter the new one.

Sample Shipment 1.3.5

The sample custodian is often responsible for shipment of samples to other installations. The sample custodian must assure that the sample is packaged to maintain its integrity and when not certain how to package a sample, should consult a laboratory supervisor.

When shipping samples to other laboratories, the sample custodian will attach a form FDA-525 to the package to alert the receiving laboratory of any instructions for storage and to contain copies of records provided by the supervisor for transmittal with the sample package.

The following instructions for shipment of samples must be followed.

1. Shipment of Entire Sample to Another Laboratory

The sample may be retrieved from the storage area or received from the analyst. The custodian (and analyst) will make appropriate entries on the green card in block 10. The custodian will finally enter the amount, show the destination laboratory under "TO," initial the block headed "FROM," and file the green card in the PENDING DISPOSITION file.

The supervisor will assure that the orange card will accompany the sample records and correspondence to alert the receiving office to send back disposition instructions for the green card, i.e., removal to CLOSED SAMPLE file.

2. Shipment of Portion of Sample

When a 702(b) (claimant's) portion of a sample is to be shipped to a claimant, or an FDA portion shipped to another laboratory, the sample custodian will proceed only with written authorization, i.e., copy of memo transmitting the portion. When necessary, the analyst breaks the seals and separates the portion to be shipped.

The sample custodian and analyst will follow instructions for completing block 10 and 11 entries as appropriate. The sample custodian must finally complete block 10 in its entirety to show the person/installation to whom the portion has been shipped.

The sample portion remaining at the sending laboratory will be returned to storage. The green card will be placed in the appropriate file, depending on the status of the portion remaining in the sending laboratory.

3. Shipment of Consumer Complaint Samples

Following receipt of a Sample Disposition Notice (SDN) and transmittal memo to the consumer to return a complaint sample, the sample custodian will ship the sample, and will make the appropriate entries in block 10. Under the "TO" column, the sample custodian will enter the consumer's name. The sample custodian will file the green and orange cards in the CLOSED SAMPLE file with the copy of the transmittal memo attached.

4. Split Sample Shipments

In the case of split sample shipments, the sample custodian will forward the portion to the appropriate laboratory with the records provided. The sample custodian who receives such samples will prepare an SAR to provide accountability in the laboratory. Each sample custodian will check or write "SPLIT SAMPLE" at the top of the SAR card. The sending sample custodian will file the green card in the IN PROCESS or PENDING DISPOSITION file, depending on the status of the sample remaining in the laboratory.

Sample Disposition 1.3.6

Sample custodians are usually responsible for the correct and prompt destruction of all samples in their possession except CR/DEA controlled drug samples. Upon receipt of the orange card or other written authorization directing disposition, the sample custodian will remove the sample from storage and destroy it under proper supervision. The sample custodian will remove the corresponding green card from the PENDING DISPOSITION file and insert the appropriate entries in block 12.

Destruction of CR/DEA controlled drugs must be witnessed. Section 4.6.2, Chapter 4, describes this procedure.

The sample custodian will staple the green and orange cards together and file them in the CLOSED sample file.

Laboratory Supervisor Responsibility 1.4

The term "laboratory supervisor" includes the positions of laboratory director and first-line supervisor. The laboratory director will designate routing and review responsibility within the laboratory. The laboratory director is responsible for the accuracy and completeness of laboratory personnel entries on the SAR card and adherence to other laboratory accountability requirements.

The laboratory supervisor will receive the orange card, the collection records, and any other material pertinent to the examination of the sample. He or she will check entries on the orange card against the C/R for accuracy. Among other entries, the laboratory supervisor will assure that CR/DEA and Split Sample flags are either checked or written when required.

The laboratory supervisor will assign the samples to the appropriate laboratory section or analyst, retaining the orange card in the work file.

Upon completion of the analysis, the laboratory supervisor will review the worksheet and its attachments, insert the laboratory conclusions on the Sample Summary form, and complete blocks 14 and 15 of the orange card as

appropriate. He or she will attach the orange card on top of the worksheet and route the material to a reviewing officer for district recommendation. The laboratory supervisor may act as the final reviewing officer when delegated to do so.

If all or a portion of the sample is to be sent to another laboratory, the supervisor will assure that the appropriate records are sent to the receiving laboratory and that the sample custodian receives written authorization. Records will include the orange card when the entire sample portion has been sent.

Assigned Samples 1.4.1

The supervisor will retain the orange card. Use of the orange card to show sample assignment and as a primary work file is optional. Computer-assisted management programs may substitute.

If the laboratory supervisor elects to use the orange card to show sample assignment, the name of the analyst to whom the sample is assigned and the date the sample was assigned may be recorded in blocks 13A and 13B, respectively. Since it is not always possible to assign a sample immediately, the orange card and records are to be held in a manner that will facilitate selection for assignment.

The orange card will be placed in a suitable file by the supervisor for monitoring purposes after the sample has been assigned for analysis.

Completed Samples 1.4.2

When the analyst's worksheet has been reviewed, the supervisor will enter the reserve sample storage location. Exhibit 1-B shows this entry. The appropriate box(es) in block 14 will be checked based on the Analyst Worksheet (FDA-431) under item 11, Reserve Sample. The "NO RESERVE" box will be checked when no sample, exhibits, etc., remain. When all portions of the sample, exhibits, and data not attached to the worksheet have been returned to the sample custodian, the "SPL ROOM" box will be checked. The "Drug Vault" box will be checked when all or any portion of the sample has been returned to the laboratory's drug vault. The "Other" box may be checked when any portion of the sample, exhibits, or data not attached to the worksheet (e.g., mass spectral data) have not been returned to the sample room or to the drug vault. What remains and where it is stored must be described.

Block 14 may also be used by the laboratory supervisor to bring special attention to the reserve sample, which may be helpful to the sample custodian for disposal purposes. If, after the completion of the sample analysis, it is known that the reserve contains a highly potent poison, such as botulinum toxin, or pathogenic microorganisms, such as *Salmonella* or *Vibrio cholerae*, the supervisor may indicate this information in block 14.

Action Taken on Samples 1.4.3

The laboratory supervisor may complete blocks 15a-15d on the orange card only under certain conditions. Otherwise, when the laboratory supervisor does not have authority to draw the district conclusion for the sample, he or she will leave block 15 blank. The conditions under which a laboratory supervisor may determine the action to be taken on a sample are as follows:

1. The laboratory has the delegated authority to draw the "District Conclusion" for the specific sample type.

2. A decision for no action depends only on the results obtained in his laboratory, e.g., the sample is not a split sample; the sample does not require review by the compliance branch in conjunction with an ESTABLISHMENT INSPECTION REPORT.

3. It is clear that no regulatory action can be supported on the basis of analytical results alone, e.g., nonregulatory survey samples such as two or more items collected under one sample number.

Instructions for completing blocks 15a-15d are straightforward. The initials of the person making the decision, the date the decision was made, and the decision must be recorded. "NAI" or equivalent statement for "NO ACTION" may be recorded for the "Action" block. Any remarks that will clarify the status of the sample, e.g., "Letter to Complainant 1/15/80," "Return to OSHA," "Hold 60 days for CFSAN reply," may be included in block 15d.

Sample Disposition 1.4.4

This section is completed by the local compliance branch when it refers a violative sample to a foreign (home) district. In the instances where the laboratory may refer a worksheet to another district or headquarters, or sends the entire sample to another laboratory, the laboratory supervisor will make the entries in block 16 on the orange card. Typical entries for block 16 are in exhibit 1-B.

Except for samples referred by the laboratory to another district or headquarters, the laboratory director will direct inquiries on the status of samples pending disposition through the local compliance branch director.

Block 17 authorizes disposition of the sample. This section is completed by the laboratory supervisor for NAI regulatory samples for which the laboratory has authority and for nonregulatory survey samples. If samples must be held for a period of time before destruction, the laboratory clerk monitors the disposition date. The laboratory clerk may complete the entries, but the laboratory supervisor must sign the disposition notice. Entries for block 17 are in exhibit 2-B.

When block 14 has been checked "OTHER," the laboratory supervisor will assign an analyst to destroy this reserve sample portion. On receipt of the card with block 18 entries completed, the supervisor will send the card to the sample custodian.

When it is determined that the sample will be reported without analysis, an authorized reviewing official will write this action on the Collection Report and will sign and date the card and give the reason for the action. The official must notify the laboratory unit holding the sample to assure that the appropriate entries are made in blocks 15 and 17 of the orange card and that the card is eventually routed to the sample custodian.

Analyst Responsibility
1.5

The term "analyst" includes both professional and paraprofessional positions. The analyst is responsible for the security and proper handling of the sample while it is in his or her possession. The analyst must document all transactions on the SAR card and on the worksheets to establish a record of continuity of handling. The analyst may be assigned the responsibility to destroy any reserve sample stored in the laboratory.

Sample Receipt
1.5.1

When the analyst obtains a sample from the sample custodian, the analyst will verify what was received and then initial the "TO" column of block 10 of the green card. The analyst will check the seal inscription in block 9c of the green card against the seals on the package(s) received to confirm that there are no discrepancies between these records.

When a sample in storage is needed for check analysis, additional analysis, or preparation for shipment, the analyst will obtain the sample from the custodian. The analyst and the sample custodian will make the appropriate entries in block 10 of the green card.

When an investigator delivers a sample directly to the analyst, or the analyst receives the sample directly from a common carrier, the analyst will prepare the SAR according to Section 1.2.1. The analyst will give the orange card to the laboratory supervisor who assigns the sample and give the green card to the sample custodian.

Delivery and receipt of samples from one analyst to another within the same laboratory are not recorded on the green card. Continuity of handling is established by entries on each analyst's worksheet, which must show what is delivered (or received), how it is identified, the date, and the names of the analysts who effected the exchange.

Sample Storage
1.5.2

When the analyst receives a sample for analysis, he or she must assure that the product is given proper storage. Only that portion to be used for analysis should be withdrawn. The remainder must be stored in an appropriate, locked area. If unusual circumstances do not provide locked storage space, the analyst will maintain the reserve under seal until it is returned to the sample custodian. The analyst will submit with the worksheet any seals used to safeguard the sample while it is in his or her custody.

The analyst will refer any discernible abnormalities of the sample to the respective laboratory supervisor immediately.

Sample Return
1.5.3

Upon completion of the analysis, the analyst will return the remaining portions of the sample to the sample custodian for storage. The analyst will enter the date and the amount returned in the appropriate columns and initial the "FROM" column on the green card.

Special storage requirements may require that all or a portion of the sample, exhibits, etc., remain under laboratory control. The analyst will describe on the ANALYST WORKSHEET (FDA-431) under item 11, Reserve Sample,

what remains in the laboratory, where it is stored, and what (if any) has been returned to the sample custodian. The portion returned to the sample custodian is entered on the green card according to previous instructions.

If the entire FDA portion of the sample has been used in the analysis, the analyst, when necessary and told to do so by the supervisor, will return the empty container under seal to the sample custodian for possible use in court.

If no physical sample or exhibits remain, the analyst will write "NONE" on the ANALYST WORKSHEET, under item 11, Reserve Sample. The analyst will attach any broken official seals to the worksheet for any sample that was received with the FDA official seal.

Conditions where no reserve sample remains are usually confined to NAI import and NAI perishable samples where the laboratory supervisor has concurred in immediate destruction. No analyst is authorized to use a 702(b) sample portion in the analysis nor may the entire FDA portion be used or the remaining sample destroyed without approval from the supervisor.

Sample Shipment 1.5.4

When it is necessary to ship a portion of the sample to a claimant or to another laboratory, when possible the analyst whose name appears on the seals of the reserve sample will obtain the sample from the sample custodian, and prepare and seal the subdivision for shipment. The analyst will record the transaction in the usual manner in block 10 of the green card.

The analyst will return the reserve portion to be held at the sending installation to the sample custodian, recording the transaction in block 11. The sample custodian will initial the "TO" column. The sample custodian will make the proper entries in block 10 and ship the sample.

The analyst will document the transaction of breaking seals, preparing samples, and showing reserve sample on a new worksheet. The worksheet will be processed through normal channels to become an addition to the original worksheet.

When the entire sample is intended for shipment, the transaction is handled by the sample custodian.

Sample Disposition 1.5.5

When any portion or the entire reserve sample is stored in a location other than the sample storeroom as specified on the orange card in block 14 in "OTHER" storage, the analyst may be assigned to destroy the sample. Upon receipt of the orange card and instructions from the laboratory supervisor, the analyst will remove the sample from storage and destroy it. The completed orange card will be returned to the laboratory supervisor.

Aide Responsibility 1.6

An aide may receive samples and return samples to the sample custodian. The aide will make the required entries on the green card according to instructions in Sections 1.5.1 and 1.5.3.

The analyst who receives a sample from an aide will show the name of the aide as the person from whom the sample was received on the Analyst Worksheet, block 5.

Monitoring Samples for Disposition

1.7

Laboratory and compliance branch clerks monitor samples awaiting disposition, using the orange card for this purpose. This monitoring is under the supervision of the branch director, and no clerk is authorized to order destruction of any sample. Sample disposition notices (block 17 of the orange card) must be signed by the laboratory or compliance branch reviewing officer.

The laboratory clerk routes and monitors orange card disposition notices for NAI samples only. The compliance branch clerk routes and monitors orange card disposition notices on all other samples.

The laboratory clerk will check the orange card sample disposition notice (SDN) that is routed to or through him or her and handle the card according to conditions as described. It is sound practice to route all SDNs that do not issue from the laboratory through the laboratory director or designated supervisor for review before routing then to the sample custodian.

When block 17 on the orange card has been completed and signed by an authorized reviewing officer, box 1 on the reverse side of the SDN has been checked, and block 18 sample destruction has not been completed, the laboratory clerk routes the orange card to the laboratory supervisor if block 14 box "Drug Vault" and/or box "Other" has been checked. Otherwise, the laboratory clerk routes the orange card to the sample custodian.

When block 15 on the orange card contains instructions to hold an NAI sample for a specified period of time and block 17 has not been completed, the sample number is entered on the reverse side of the orange card and the appropriate date for disposal is written in after "Hold sample until." The sample custodian monitors the card until the due date is reached.

In some cases, a specific date cannot be set, e.g., when split sample results from another laboratory must be received before the final action and disposition decisions are made. "Hold" instructions given in block 15 by the supervisor may be entered on the reverse of the orange card.

A suitable file to monitor samples on which a due date has been set and a second file for those without a specific date may be set up. When the due date is reached, the clerk routes the card to the laboratory supervisor. A box on the reverse side of the card must be checked. Orange cards with disposal dates open are held on file until the clerk is notified by the supervisor that a decision has been made on the sample. The clerk returns the card to the supervisor. If destruction is authorized, the clerk follows previous instructions for disposal. A box on the reverse of the orange card must be checked. The laboratory supervisor must be notified periodically of samples with cards still outstanding.

The laboratory clerk may complete the section when so directed.

Compliance Branch Responsibility

1.8

The director of the compliance branch and compliance officers are responsible for completion of blocks 15-17 of the orange card for all samples routed to that branch. Only the home district compliance branch may issue the sample disposition notice for its samples.

REGULATORY SAMPLES

SAMPLE STORAGE

1. Purpose
2. Policy
3. Procedures

1. PURPOSE This Guide provide the Agency's procedures for securely storing regulatory samples so as to maintain their integrity.

2. POLICY All regulatory samples must be stored in accordance with the instruction contained in the Laboratory Procedures Manual, Chapter 1, Sections 1.3.2 and 1.5.2 (See 3004.01 Attachment A).

3. PROCEDURES The Sample Custodian and the Analyst shall follow the procedures outlined in the referenced sections of Chapter 1, Laboratory Procedures Manual for proper storage of regulatory samples. Internal monitoring of this procedure shall be part of the Division Quality Assurance Plan.

REGULATORY SAMPLES

SAMPLE ANALYSIS

1. PURPOSE This Guide provides general procedures for analyzing regulatory samples and preparing analyst worksheets.

2. POLICY All regulatory samples must be analyzed according to the instructions contained in the Laboratory Procedures Manual Chapter 2, sample analysis. All raw data related to sample analysis must be recorded on worksheets as described in the Laboratory Procedures Manual, Chapter 12, Analyst Records.

3. PROCEDURES Chapter 2, Sample Analysis and Chapter 12, Analyst Records of the Laboratory Procedures Manual have been reproduced as Attachments A and B for easy reference. Copies of the appropriate worksheet (series FD-431) as well as additional information for worksheet preparation can be obtained from the Division of Field Sciences, Office of Regional Operations.

CHAPTER 2

SAMPLE ANALYSIS

General Information

2.1

Sample analysis provides the reviewing officer with evidence of a product's compliance or noncompliance with the requirements of the Food, Drug and Cosmetic (FD&C) Act and other acts enforced by FDA.

Recommendations for regulatory action based on sample analysis are not be made unless *(a)* the sample has been examined by an official or approved method and check analyzed when required; and *(b)* an intact 702(b) portion of the sample is available for the claimant when a 702(b) sample is required.

Responsibilities

2.2

The analyst is responsible for an accurate and complete analysis of the sample and for an accurate and complete written report of the analysis.

The laboratory supervisor is responsible for the accuracy and completeness of the analyses performed, the results reported, and the conclusions drawn from the analyses.

The laboratory director is ultimately responsible for all work produced from his or her laboratory.

Types of Analyses
2.3

The types of analyses performed in FDA laboratories are original, additional, and check analyses. The sample may be split among several laboratories for each of these analyses.

Original Analysis
2.3.1

The initial examination conducted on a representative portion of the sample is designated as the original analysis.

Additional Analysis
2.3.2

An additional analysis consists of additional tests conducted on a sample to perform determinations not covered by the original analysis or to resolve discrepancies in analytical results reported. Additional analysis may be performed on the original FDA composite or sample extract or on a new FDA portion of the sample.

Check Analysis
2.3.3

The check analysis is performed by a second competent and qualified analyst to confirm a finding that will be used by FDA or cooperating agencies in a regulatory action. The check analysis will usually be performed by an official procedure. When an official procedure is not available, or is unsuitable for the analysis being performed, recovery data will be obtained to support validity of the results.

Requirements for check analyses are discussed below. These are not all-inclusive. There will be circumstances when the check is not required or, conversely, when it is judged necessary on a sample usually exempt from check analysis. Individual compliance programs and Compliance Policy Guides must be consulted for special requirements. When unusual circumstances exist for particular samples, the center(s) must be consulted about the need for check analysis.

Check Analysis Required
2.3.3.1

Check analysis is necessary on violative regulatory samples, both domestic and import, and on violative samples that will be referred to a local, State, or Federal agency and that may form the basis for action by that agency.

Check analysis will be conducted by a second competent and qualified analyst and, when one is available, on a separate, intact portion of the product (e.g., intact food product; intact tablets, unopened vials or bottles of liquid products). In practice, there may be reasons for exceptions to this requirement:

1. When sample preparation instructions require compositing and comminuting or blending the entire sample (e.g., some pesticide or metal samples), the check analyst will analyze a second portion of the prepared composite. When comminution is not required for the entire composited sample, the check analyst will take a representative portion of the uncomminuted composite and subject it to the required additional preparation.

2. When program requirements do not provide an FDA reserve portion (e.g., certain medical devices, radiological health samples), where feasible, a

second analyst may observe the original analyst's work or duplicate selected segments of the analysis on the same sample.

3. When the examination is for isolated filth and extraneous material, the check analyst need only examine elements isolated by the original analyst from a sufficient number of subsamples to be assured that the original analyst has reliably identified them.

4. When visual examinations for defective units of foods, drugs, or devices are conducted by an analyst, another analyst (usually one who is more experienced) confirms the defects.

5. For samples that traditionally do not have separate portions analyzed, such analysis is not truly a check analysis, rather, it is a confirmation of the original results. Such analyses include moisture and fat determinations on dairy product subsamples prepared by the original analyst; mold counts on subsamples prepared by the analyst if no FDA reserve portion is available; organoleptic examination of subsamples analyzed by the original analyst if no FDA reserve is available and there are no instructions directing analysis of a separate intact portion.

When reagents, standards, and equipment are required in the analysis, the check analysis will be conducted independently of the original analysis. The check analyst must prepare the reagents and standards used, or must demonstrate by reanalysis (e.g., volumetric solution) or controls (e.g., media) or other objective evidence that those prepared by others have been prepared properly. When official reference standards exist [e.g., U.S. Pharmacopeia (USP); National Institute of Standards and Technology (NIST), formerly National Bureau of Standards (NBS)], a reference standard from the current official lot(s) must be used in the check analysis. When physical examinations are the issue and the same equipment must be used by the check analyst, the analyst must check the equipment to assure that it is calibrated and operating properly.

Check analysis of a sample may be requested of another district or headquarters laboratory for a specific reason. Reasons for such a request include (*a*) availability of an unusually experienced analyst who is familiar with the method or the range of analytical responses exhibited by the commodity, or (*b*) availability of specialized instrumentation. Compliance programs may also state that check examinations are to be performed by specific district or headquarters laboratories.

Check Analysis Not Required 2.3.3.2

Check analysis is not necessary in the following instances:

1. When certain types of samples are specifically exempted from the requirement for a check analysis by a compliance program or by the Compliance Policy Guides.

2. When check analysis of specific samples is waived by the center.

3. When the original analysis is performed by a national or international expert, unless specifically called for by a program or by the Compliance

Policy Guides; or when the method of analysis, instrumentation, or circumstances require check analysis by other experts. For field laboratories, this decision will be made by the director, Division of Field Science, in consultation with the laboratory director, and the appropriate center compliance unit.

4. When the original analysis using an official or reliable analytical method confirms the result of another government laboratory, and personnel from that laboratory will so attest to the results.

The following types of out-of-compliance samples do not require check analysis:

1. Microbiological samples. (*Note:* Devices for sterility and samples analyzed for antibiotic potency using microbiological techniques do not require check analysis.)

2. Samples originally examined for filth and extraneous material by an analyst recognized as qualified in the particular microanalytical identification. Isolated material must be maintained with the reserve sample.

3. Exhibits of filth and extraneous material that have been isolated and submitted by the investigator or inspector and confirmed by a qualified analyst.

4. Samples for net weight determinations when initial weighings have been made by the investigator or inspector and confirmed by a qualified analyst.

5. Samples proposed for regulatory action on the basis of labeling, and the original analysis confirms the label declaration of ingredients.

6. Selected samples of biologics analyzed by the Center for Drugs and Biologics.

Split Sample Analysis 2.3.4

A sample that requires an analysis in addition to that performed by the usual examining laboratory will be split and a portion will be shipped to the second laboratory undertaking the analysis. Each examining laboratory will handle and describe its portion of the sample as though it were an original analysis. When feasible, each examining laboratory will retain a reserve portion for FDA use. The originating or forwarding laboratory will retain an intact 702(b) (claimant's) portion when required, and will so inform the additional examining laboratory(s).

Regulatory Samples 2.4

The Regulatory Procedures Manual (RPM) Part 1, 1-01-20, defines the types of FDA samples. The term "regulatory sample" covers three general sample types:

- ☐ official, domestic, and domestic/import
- ☐ investigational/domestic
- ☐ import

All are regulatory samples, except the following:

1. Survey samples analyzed for data gathering only. Design of the survey may not permit regulatory action on the sample (e.g., no 702(b) portion, insufficient units analyzed, multiple manufacturers under one sample number).
2. Samples designated for research.
3. Samples collected to gather authentic data (e.g., food standards).
4. Samples designated as laboratory quality assurance samples.

Samples received from cooperating agencies may be regulatory or for information purposes only. They are to be handled the same as FDA samples. Section 2.9 discusses this subject.

Sample Time Frames 2.4.1

RPM Part 8, 8-01-30, lists legal action time frames established by the agency as guidelines for processing domestic regulatory actions. The total field time in working days includes collection, analysis, and handling by the compliance branch. These time frames apply to compliance samples, i.e., where there is a known or suspected regulatory problem. Time frames for field laboratory analysis of compliance samples within the agency time frames and for surveillance samples may be set by the district director.

The maximum time that may be allowed for processing import samples is stated in RPM Part 9, 9-05-10.

The laboratory must complete analyses as quickly as possible but without sacrificing good analytical results in completing its analyses and reporting. Realistic consideration must be given to those samples for which the method or scope of the problem precludes meeting established time frames.

The established time frames for both domestic and import actions may be continuously reviewed, evaluated, and revised as necessary.

Sample Handling 2.4.2

Sample handling is a critical part of the sample analysis. Handling must be kept at a minimum: (*a*) to assure sample continuity and integrity; and (*b*) to decrease the chances for error. Refer to Chapter 1, Sample Accountability.

Proper documentation of any handling is necessary to support testimony regarding the sample. Any transaction related to the sample under analysis (including any sample transfer from analyst to analyst, etc.) must be documented on the worksheet.

Sample Portions 2.4.3

The entire domestic sample of food, drugs, cosmetics, etc., must be divided into 702(b) and FDA portions by the investigator so that a portion may be used for FDA analysis and another is available for the claimant, on request, for his or her analysis or examination. Section 702(b) is not applicable to items collected that are neither food, drugs, nor cosmetics, i.e., insects, rodent pellets, bag cuttings, or other exhibit materials. No claimant's portion has to be kept for import samples. The FDA portion of the sample is for FDA use, and will usually include at least a sufficient amount for original and check analyses.

702(b) Portion 2.4.3.1

The 702(b) portion of the sample that is not to be analyzed or examined is for the claimant. In accordance with the provisions of Section 702(b) of the FD&C Act, a portion of an official sample must be available "upon request for examination or analysis by any person named on the label of the article, or the owner thereof, or his attorney or agent." 21 CFR 2.10(b) contains exceptions to the need for a 702(b) portion. The sample, no matter what its content, may be involved in a court proceeding, and, therefore, must be preserved by the best possible means available. Preservation must be accomplished until any legal or regulatory proceedings are terminated.

Reserve Sample 2.4.3.2

The reserve sample consists of (*a*) the remaining FDA portion and any exhibits, such as isolated filth, resulting from the analysis of the FDA portion, and investigator/inspector exhibits; and (*b*) the 702(b) portion. The 702(b) portion is not a reserve because it is not for FDA use. However, the analyst must include in the description of the reserve sample on the ANALYST WORKSHEET (FD-431, item 11), the 702(b) portion that remains. At the conclusion of the analysis, each portion of the reserve samples is placed in the original container(s) (when possible), sealed, and returned to the sample custodian. Section 1.53, Chapter 1, has additional instructions for sample return.

Methods 2.5

The Food, Drug and Cosmetic Act specifies official methods (USP, National Formulary (NF), Homeopathic Pharmacopeia) for analysis, and the Code of Federal Regulations prescribes the policy on methods of analysis. 21 CFR 2.19 states:

> "Where the method of analysis is not prescribed in a regulation it is the policy of the Food and Drug Administration in its enforcement programs to utilize the methods of analysis of the Association of Official Analytical Chemists (AOAC) as published in the latest edition (13th Ed., 1980) of their publication, "Official Methods of Analysis of the Association of Official Analytical Chemists," and the supplements thereto ("Changes in Methods" as published in the March issues of the "Journal of the Association of Official Analytical Chemists") which are incorporated by reference, when available and applicable. In the absence of an AOAC method, the Commissioner will furnish a copy of the particular method, or a reference to the published method, that the Food and Drug Administration will use in its enforcement program. Other methods may be used for quality control, specifications, contracts, surveys, and similar nonregulatory functions, but it is expected that they will be calibrated in terms of its enforcement program. Use of an AOAC method does not relieve the practitioner of the responsibility to demonstrate that he can perform the method properly through the use of positive and negative controls and recovery and reproducibility studies." (*Note:* The current edition of *Official Methods of Analysis* is the 14th edition, 1984. The 15th edition will be published in January 1990. "Changes in Official Methods of Analysis" is now being published in the January issue of the AOAC Journal.)

Nonofficial methods may be used for determining compliance, but official methods must be used, when available, for either the original or check analysis. Recovery data will be submitted with the worksheet when a nonofficial method is used for a sample recommended for regulatory action.

Recording Analytical Data

2.6

The sample analysis must be reported on a worksheet. The worksheet with supporting documents (e.g., instrument charts, exhibits, memo of method, controls, labels) must give a complete and accurate account of the sample handling and analysis. The ANALYST WORKSHEET (FD-431) with its GENERAL CONTINUATION SHEET (FD-431a) is the basic worksheet. Chapter 12 describes other types of worksheets available for use and gives instructions for preparing worksheets. Several basic requirements are:

1. All analytical data must be recorded on the worksheet and its accompanying records. Data must be recorded at the time it is obtained.

2. The analyst who performs the analysis must sign the worksheet. If two or more analysts work on a sample, at least the one who broke the seal and the one responsible for the overall work must sign the worksheet. All analysts and aides working on the same sample must show what part of the analysis they performed.

3. Worksheets for samples submitted for regulatory action are to be checked for method suitability, accuracy of calculations, and completeness and accuracy of data transfer from one section of the worksheet or attachments to another. The laboratory supervisor will perform these checks, or prior to his or her own review, the laboratory supervisor will assign the worksheet check to an experienced analyst. The person who performs these checks will sign and date the worksheet.

Labels and Labeling

2.7

Labels and labeling relating to the samples are to be submitted with the analyst's worksheet. The label and labeling must be carefully reviewed for correlation between analytical results and labeling statements and also for compliance with existing regulations. Any discrepancies must be noted on the worksheet by the analyst and on the SAMPLE SUMMARY (FD-465) by the laboratory supervisor.

Only under exceptional circumstances may a label be removed from a single container that represents the sample and be submitted with the worksheet. At least one unit with the original label must be retained "as is" for possible court use.

All labeling must be identified with the sample number, date, and analyst's initials.

Violative samples must have three copies of labels/labeling for review: three originals (if available); three clear and legible copies; or three handwritten or typewritten copies, which are "verified as true" by signature of the original analyst and signature of a second analyst verifying the handwritten or typewritten labels.

If, in the district's judgment, the appearance of the label or package as to vignette, color, size, etc., is a significant part of the violation, the sample, or a subdivision thereof, must be sealed so that it may be forwarded to the appropriate center compliance office with the recommendation for action. It is preferable to seal such sample/subdivision in a transparent container, so that it may be reviewed without breaking the seal(s).

Only one original or copy of the label/labeling must be submitted for nonviolative samples. In some cases, such as survey samples, submitting labels may not be necessary.

Document Assembly

2.8

Once the analysis is complete, all documents related to the sample in question may be assembled for review in this sequence:

1. Completed worksheet and continuation sheets.
2. Memorandum of analysis (if applicable).
3. Instrumental material (spectra, charts, etc.) or other analytical attachments/computer generated printouts.
4. Labeling.
5. Collection Report (C/R).
6. Attachments to the Collection Report (C/R).

The analyst who completes the analysis or the analyst responsible for the analysis will assemble the documents. The laboratory supervisor is responsible for ensuring the assembly when the analytical package leaves the laboratory.

Analyses for Other Agencies

2.9

When FDA, either locally or at the headquarters level, agrees to do sample analyses for another government agency, the samples are to be assigned FDA sample numbers (C/R to be prepared) and handled in the same manner as any other sample. Only methods that have been validated or that are official (including those specified in an applicable legal contract or purchase agreement) are to be used, and check analyses will be made when necessary. When a specific analysis by an unofficial or unvalidated method is requested and agreed to by FDA, the record must indicate (where possible) the uncertainty of the methodology and/or results.

Results may be reported to the requesting agency on special forms if that is part of the agreement, but form FD-431 containing the original data must be prepared in the same manner as for FDA samples.

CHAPTER 12

ANALYST RECORDS

Purpose

12.1 This chapter provides instructions for the preparation of scientists' records, procedural steps for completing these records, and general recommendations for completing Analysts' Worksheets. These are not the only acceptable procedures. Just as important are the quality control procedures used by the field scientist and management. Optional procedures will be indicated.

If the laboratory has Standard Operating Procedures (SOPs) that deviate from the instructions in this chapter, these SOPs must be in writing with a copy

filed in the appropriate Laboratory Procedures Manual section. Modifications for unique situations can be made only with the approval of the supervisor.

Where policies are broad or have not been defined, the laboratory's SOP and the supervisor may be consulted for guidance. Additional guidance is found in the Regulatory Procedures Manual (RPM), Chapter 7. Specific references are given within this chapter.

Records Covered in this Chapter
12.1.1

Section 12.2 lists the records used to document sample accountability and integrity and also describes the scientist's preparation and use of the Sample Accountability Record (FD-421/421A), and official seals (FD 415a, metal seal). Section 12.5 gives detailed instructions on how to report results of an analysis on the FD-431 worksheet series and attachments. Section 12.6 describes policy on use and contents of the laboratory notebook.

The FDA Data Codes Manual is the source for most coding information used in Laboratory Management System (LMS) and Program Operation Data System (PODS) reporting. Each supervisor has a copy available for employees.

Other Records
12.1.2

In the course of your work, you will engage in operations outside the routine laboratory scope, such as sample collections, establishment inspections, workshops, court appearances, etc. Consult other pertinent manuals (e.g., Inspector Operations Manual, Data Codes Manual) and procedural guides on how and when to report these operations. When necessary, ask your supervisor for direction to the appropriate source of information.

Sample Accountability
12.2

Records must be prepared that demonstrate the continuity of sample handling and how sample integrity was maintained. This includes records showing receipt, storage, transfer of sample or sample portions between individuals, analysis, disposition authorization, and destruction. Records covering these transactions are part of the regulatory file.

Samples in the scientist's possession must be kept in locked storage when not under the scientist's control. This applies to portions that constitute the original and/or reserve portions. There are no reporting requirements to show that the scientist follows routine storage requirements; however, any exceptions must be reported.

Records to Document Sample Accountability
12.2.1

The following records document sample accountability:

1. Collection Report (FD-464)
2. Official Seal (FD-415a or FDA metal seal)
3. Sample Accountability Record (FD-421/FD-421A)
4. Analyst Worksheet (FD-431 series)
5. Import Sample Summary (FD-716)

Not all records are used for each sample. Domestic samples collected by FDA for analysis require the Collection Report, Official Seal, Sample Accountability Record, and Analyst Worksheet. If there is no physical sample (i.e., the sample is a "documentary" sample), only the Collection Report is needed, although some districts may require a worksheet be written for such samples.

Import samples require a number of forms, one of which, the Import Sample Summary (FD-716), is an accountability record that reaches the scientist. The FD-716 serves as a combined Collection Report, Analyst Worksheet, and reporting form. Each district may design its own accountability system for imports within limits prescribed in the Regulatory Procedures Manual, Chapter 7, Section 10–22.

Some samples are not regulatory in the sense that no legal action can be taken on these samples per se. These are survey (investigational) samples that provide information FDA needs for its future regulatory activities. Records for these analyses must be as accurate and complete as those on which a regulatory action may be taken, with certain exceptions, (See Abbreviated Worksheets under 12.5.2).

Records Agreement 12.2.2

The agency (through its scientists, investigators and other agents) must be able to reconcile each record for a sample with any other record for the same sample. There must be no disagreement between any record and the sample, and there must be no breaks in the continuity chain. When you receive, analyze, and return a sample you must have assured yourself, and be able to clearly show others, that the records are accurate and clear. Any discrepancies between the sample you receive and the Collection Report or investigator's seals, must be called to your supervisor's attention immediately. Any condition which might compromise sample continuity or integrity, such as broken seals or damaged samples or sample packages, must also be reported.

Sample Accountability Record 12.3

The Sample Accountability Record is a two-part, interleaved carbon snapout form consisting of an original green card (FD-421) and an orange copy (FD-421A). The sample custodian usually prepares FD-421/421A. Under certain circumstances the scientist initiates the form. The sample custodian initiates the form when the sample is received from the investigator or by carrier; the scientist initiates the form when the sample is received personally from the investigator, supervisor, carrier or other person.

Receipt of samples personally by the scientist is discouraged and should occur only under extraordinary circumstances.

The FD-421 serves as an official record of the receipt, handling, storage, and final disposition of a sample. Any corrections or changes made on the

FD-421 must be initialed and dated. It may provide evidence in court actions in place of testimony by the sample custodian. The card is kept in the possession of the sample custodian.

The FD-421A may be used by the laboratory supervisor to monitor progress of a sample through the laboratory. The laboratory supervisor will complete the reserve sample storage section indicating whether a reserve is present and if a portion of that reserve remains in laboratory storage. The FD-421A is used by designated personnel to direct disposition of sample reserve portions.

The scientist will use the Sample Accountability Record when:

1. Receiving or returning a sample to the sample custodian.

2. Receiving a sample personally from the sample collector.

3. Receiving a sample from a common carrier.

4. There is no reserve sample.

Specific instructions for use and completion of the Sample Accountability Record are contained in Chapter 1.

Official Seals
12.4

The usual Official Seal is the paper seal (FD-415a). On rare occasions, the investigator will submit a sample sealed with a numbered metal seal embossed with "U.S. Food and Drug."

Breaking Official Seals
12.4.1

The seal must be initialed and dated in ink in the space provided and, when possible, must be broken across the section showing the sample number, date and signature.

Instructions in the Inspection Operations Manual permit the investigator to wrap a strip of gummed tape completely around a package and to affix the Official Seal (FD-415a) at the point where the tape ends overlap. In this situation the tape is considered an extension of the Official Seal, and the FD-415a may not be at the point where the package would normally be entered and the seal broken. In this case, both the seal and the point of entry of the tape must be initialed and dated. If the FD-415a is removed from the sample package, the tape must be included to document how the package was sealed. When breaking a metal seal, a sharp metal tool is used to scratch initials and date on the seal.

Removing Official Seals
12.4.2

Generally, a seal should not be removed from the sample package. If removed, the broken seal must be submitted with the ANALYST WORKSHEET, as an attachment, and the fact that the original seal is attached to the worksheet must be noted on the worksheet under item 11, Reserve Sample. The entire

seal may be mounted on a sheet of heavy mounting paper, and this sheet must be identified with the sample number, date, initials, and attachment letter in the upper right corner. Mount seal so the investigator's inscription and scientist's initials and date are easily visible. (See section 12.5.3.1)

Sealing Samples 12.4.3

The reserve portion of all domestic samples must be returned under seal to the sample storeroom. Each laboratory's requirements must be followed for import samples.

The paper seal (FD-415a) must be used for sealing samples. The seal must be affixed so that it actually seals the sample package and provides evidence (when the sample package is intact) that the sample has not been tampered with. More than one seal may be required.

The original broken seal must not be defaced or hidden when resealing a sample, but must remain in view. This gives visibility to the continuity chain, i.e., the investigator's sealing the sample and your breaking that seal, should the sample be introduced as a court exhibit.

Quoting Official Seals 12.4.4

When quoting a paper seal (FD-415a), the handwritten sample number, date and signature, in that order (e.g., "95-101-198 10/4/94 Sidney H. Rogers"), must be quoted verbatim. The scientist must quote the seal exactly as written, including any mistakes and corrections.

When quoting a metal seal, "U.S. Food and Drug" and the number on the seal must be quoted. The seal quote must be in quotation marks.

Temporary Sealing of Samples 12.4.5

In extraordinary circumstances when locked storage is not available and a reserve sample is not ready for return to the sample custodian under final official seal, a "temporary seal" must be used to demonstrate that sample integrity was maintained. The "temporary seal" is an Official Seal (FD-415a), used for the purpose of securing a sample for a short period of time while the sample is under analysis or is being handled for other reasons. The seal must be initialed and dated when broken. It must either remain affixed to the sample package or be submitted with the worksheet as an attachment. The worksheet must state that a temporary seal was used, how it was used, and the seal quoted.

Analyst Worksheets 12.5

The ANALYST WORKSHEET (FD-431) accounts for the domestic sample from the time it is originally received by a scientist to the time the reserve portion is returned to the sample storeroom by the scientist. However, if the scientist receives the sample personally, the record starts with the FD-421/FD-421A, as described in chapter 2. Section 12.5.3 has instructions on completing the worksheet.

For import samples, use of the ANALYST WORKSHEET (FD-431) is optional. The back of the Import Sample Summary (FD-716) may be used.

The laboratory's SOP must be consulted for instructions on which worksheets are used for import samples.

Importance of the ANALYST WORKSHEET

12.5.1

The ANALYST WORKSHEET (FD-431 and specialized continuation worksheets) with supporting documents is prepared to provide a complete, accurate, and legible account of sample handling and analysis to support regulatory action. Timely reporting of sample analysis is the responsibility of the scientist and must be given proper consideration without sacrificing completeness and accuracy in reporting analytical results. However, sample analyses indicating violations of the law are to be expedited.

The worksheet provides the written account of analytical findings that either support regulatory action or serve to classify the sample as non-actionable. Reviewing officers must have the facts correctly, completely, and legibly presented in writing in order to make the proper regulatory decision. There must be no doubt about what was done, how it was done, who did it, and with what accuracy and precision the work was accomplished. The worksheet must present a complete picture that can be understood by reviewers, even those not technically or scientifically trained, and not a part of the analyzing science unit.

When the worksheet is used in court testimony, it is subject to examination by opposing counsel. Scientists may be called upon to testify or answer questions months or years after the analysis was performed. The scientist must be able to reconstruct, from the worksheet, details of sample handling and analysis.

A copy of the worksheet will be released to anyone who requests it under the Freedom of Information Act. There are some exceptions, but this is the general rule.

The importance of this record cannot be overstated. The ANALYST WORKSHEET is the record of scientific credibility. Thus, the scientists must be particularly conscious of the impact, positive or negative, that the worksheet will have. Many issues, problems, or deficiencies may affect the significance of the worksheet. Some of these may be construed mainly as issues of personal preference. The reasons why individuals approach a problem in different ways are as diverse as the persons involved. It is expected that open and honest communications will easily solve these kinds of differences.

There are other issues and problems that can legitimately be viewed as deficiencies. Some, although not devastating to a regulatory action, may significantly weaken FDA's credibility. If they are present in sufficient quantity or reinforce each other, the net effect could invalidate the intended regulatory effort.

Errors, inconsistencies, and omissions are destructive to the credibility of a scientist. It is an impossible task to explain or give guidance to every analytical situation to be encountered. What is expected is that scientists view work objectively, in such a way that satisfactorily answers the question, "Have I done the best work possible?"

Types of Worksheets
12.5.2

The ANALYST WORKSHEET (FD-431) with its General Continuation Sheet (FD-431a) is the basic worksheet. Special adaptations of the ANALYST WORKSHEET, such as the Industrial Chemicals Worksheet (FD-431e) and the Quantity of Contents Worksheet (FD-431f), as well as adaptations of the General Continuation Sheet, such as the Salmonella Record (FD-431g) or the Canned Food Continuation Sheet (FD-431i), are used for reporting specific types of examinations. There are thirteen worksheets issued by headquarters in all. They are:

1. ANALYST WORKSHEET, FD-431
2. General Continuation Sheet, FD-431a
3. Bacteriological Record, FD-431d
4. Industrial Chemicals Worksheet, FD-431e
5. Quantity of Contents, FD-431f
6. Salmonella Record, FD-431g
7. Shigella Record, FD-431h
8. Canned Food Continuation Sheet, FD-431i
9. Botulism Continuation Sheet, FD-431j
10. Shellfish Bacteriological Record, FD-431k
11. Elemental Analysis Worksheet, FD-431m
12. Import Sample Summary, FD-716
13. Summary of Bacteriological Results, FD-1570

Summary of Bacteriological Results (FD-1570) is not a worksheet. It was originally designed to report results of frozen food analyses to firms. However, laboratories found the form useful, so if was adopted as a continuation sheet for summarizing frozen food results and similar analyses.

The record of analysis of imported products may be reported on the ANALYST WORKSHEET (FD-431) or the Import Sample Summary (FD-716) or both, according to established written procedures in each individual laboratory. Instruction for FD-716 are in section 12.5.6.

Locally formatted worksheets may be adaptations of the FD-431a, or other continuation sheets designed by an individual laboratory. Formatted worksheets must be typed or clearly written, to ensure copies are legible.

Hard copy reports from computers, analytical instruments, or other data processing equipment may substitute for the primary ANALYST WORKSHEET or serve as continuation pages to the ANALYST WORKSHEET (FD-431). When using a computer generated worksheet as the primary worksheet in place of the FD-431, all information that documents the continuity and integrity of the sample must be included.

Abbreviated worksheets may be used to document surveillance samples analyses (i.e., tampering, domestic pesticide, domestic aflatoxin, domestic drug, Mexican produce, etc.) when a high volume, short time frame, and more expeditious operation is desirable. Its use is optional and must be approved by the laboratory director. A copy of the specific worksheet and justification of its use must be included in the laboratory's SOP.

Abbreviated worksheets may take many different formats depending upon specific district utilization; however, basic minimum criteria must be met. For non-actionable samples, the document must show the sample number, product name, analytical method reference(s), analytical findings, and supervisory approval. For violative samples, the document must meet the additional requirements of showing sample continuity, sample preparation, and who did what when and its proper order. Attached documents (chromatograms, computer printouts, calculator tapes, etc.) must allow independent verification of the results reported. Violative samples will have a check analysis according to the instructions in chapter 2.

In some districts the abbreviated worksheet may be a computer generated worksheet meeting the above requirements. Field Management Directive No. 77 (2/81) authorizes abbreviated reporting procedures for survey samples collected for informational purposes and not for regulatory actions.

Reporting Analyses on the ANALYST WORKSHEET

12.5.3

These instructions, while not complete for every FDA sample analysis, will be suitable for the majority of analyses. It is impossible to write instructions to completely cover all samples. Worksheets must be written and supporting documents prepared so that the history of the sample can be reconstructed with confidence, including details on which the scientist may be queried or challenged months or years later.

Some general considerations for writing an analytical worksheet follow.

1. The scientist must start the worksheet upon receipt of the sample by filling in as many entries as possible at that time, using black (or other reproducible color) indelible ink.

2. The supervisor must be consulted if the Collection Report is not consistent with the sample. Despite good scientific effort, errors or discrepancies regarding sample number, dates, subs, seals, etc., weaken the regulatory package.

Front of Worksheet

12.5.3.1

FLAG (optional). The ANALYST WORKSHEET may be flagged at the top of the page. The flag alerts the supervisor and subsequent recipients of the report that special attention is needed. It may emphasize that other reports are related or may call attention to a reporting need. Many FDA compliance programs require worksheets to be flagged. Some routinely used flags are:

1. Check Analysis
2. Additional Analysis
3. Consumer Complaint
4. Follow-up to Consumer Complaint, often denoted "F/U to CC"
5. Dealer Holding
6 Split Sample

A **check analysis** usually follows violative findings from an original analysis and is very important to a regulatory package.

An **additional analysis**, as the name implies, gives additional information about a sample previously analyzed.

A **consumer complaint sample** is a sample collected from a complainant who is entitled to a consumer letter.

A **follow-up to a consumer complaint** is a sample collected as a result of a complaint but not collected from the complainant.

A **dealer holding sample** indicates the dealer is holding the lot sampled. Normally, the dealer would like to be notified of the analytical results as soon as possible.

A **split sample** indicates one portion of the sample is in the possession of one science unit (usually for analysis), and another portion has been sent to another science unit.

ITEM 1, **Product.** The product name must be specified on the worksheet and be consistent, as much as possible, with the terminology used in block 17 of the Collection Report.

ITEM 2, **Sample Number.** The number assigned to the sample, including any prefix such as DI (Domestic Import), INV (Investigational Sample), etc., must be inserted here.

ITEM 3, **Sample Seals.** The appropriate box must be checked to show the seal is either "Intact" or "Broken" upon receipt of the sample. "None" is checked when the sample does not have a seal.

3. The worksheet must be written legibly and neatly. The size of the handwriting should be such that it is easily read and can be clearly photocopied. Permanent black ink is preferred for writing and for instrument charts, since other colors, notably blue, may not reproduce clearly.

Reproductions of the worksheet are often sent to headquarters, to other districts, and to those who have gone through the appropriate legal process to obtain copies. Recipients must be furnished with easily legible copies of the analytical report.

4. All sample information and analytical data must be recorded directly on the worksheet as soon as observed. Scratch paper, notebooks, or logs must not be used to record data identified with a specific sample. These data could be called into court as evidence and may contain errors or discrepancies.

5. The left margin on the front of the worksheet and the right margin on the back of the form must be left clear. If these margins are used, data may be hidden or punched out when the analytical package is filed in binders.

6. Errors must not be erased or overwritten. A line must be drawn through an incorrect entry and the correct figure or word written nearby and initialed.

7. Significant data must not be discarded without explanation. To discard analytical data, the data must be crossed out, initialed, and the reason for discarding the data explained. Nothing arouses suspicions more than unexplained elimination of "bad" data, replaced by additional analysis that gives "good" data.

8. Only common abbreviations can be used. Any abbreviations not reasonably expected to be known to reviewing officers must be explained. Association of Official Analytical Chemists (AOAC), U.S. Pharmacopeia (USP), etc., rules may be applied.

9. Whenever a seal is broken on a sample to perform a check analysis, to remove a portion for shipment to another laboratory, or to obtain a label, etc., a new worksheet will be necessary.

10. All numerical units will be in metric terms (cm, gm, etc.) unless the English representation (in, oz, etc.) is required to provide a valid comparison of data and results to the product or the accepted convention for reporting the value is in English terms.

The sections that follow explain, step-by-step, how to complete an analytical report, starting with the front of the ANALYST WORKSHEET (FD-431). These instructions will serve as guidance in reporting analytical data.

ITEM 4, **Date Received.** The date the physical sample is received for analysis is indicated here.

ITEM 5, **Received From.** The name of the person who delivered the sample must be recorded in this box, or the location, if the sample was obtained directly from storage.

ITEM 6, **District or Laboratory.** The common abbreviation for the laboratory is placed in this box.

ITEM 7, **Description of Sample.** A complete description of the sample received, including the seal inscription and seal condition if damaged or broken, collector's identification of subsamples and assigned subnumbers. types and the number of containers, must be given. The condition of the sample or subsamples must be described when pertinent, as when a damaged sample is received. The description must be consistent with the Collection Report. Any discrepancies must be recorded and reported to the supervisor.

ITEM 8, **Net Contents.** The label declaration of net contents must be recorded. "Not Applicable" must be checked if there is no label. "Not Determined" must be checked if the sample was not analyzed for net contents. When applicable, the number of subsamples examined for net contents must be indicated in the space to the left of "Units Examined." Also, the average amount found must be indicated, in units as declared on the label. The percent of declared must be indicated in the appropriate space.

ITEM 9, **Labeling.** In the appropriate space the number of original labels and/or copies submitted must be entered. Copies may be photocopies, photographs, handwritten copies "verified as true," etc. "None" must be checked if there is no product label. The number of original and/or copies of label(s) must be submitted as described in chapter 2, Sample Analysis. Violative samples require submission of three labels, and non-violative samples require at least one label. A "label" may be a single unit such as a paper label surrounding a can or a set of separate panels such as those found on cartons. The label from a single unit sample must not be stripped. See chapter 2, section 2.7, for additional instructions regarding submitting labels.

ITEM 10, **Summary of Analysis.** The following information must be summarized in concise and specific language in the suggested order starting at the top:

1. Container

2. Labeling

3. Code

4. Product

5. Analysis (Purpose)

6. Method

7. Results

Further clarification of each item follows.

Container. The immediate commercial container holding the product and the retail container(s) enclosing the immediate container must be described. A description of the latter is not necessary if it is submitted as labeling. It must be indicated on the worksheet that the labeling has been submitted.

The size, type, color, and closure(s) of the immediate container must be described. Color and closure may not be pertinent for some products but are always required for drugs. Any abnormalities or unusual conditions associated with the container, such as opened can, abnormal can, evidence of leakage, or broken commercial seal must also be described.

Containers furnished by FDA and used by the collector such as "Inspector's glass vials," "Whirl-pak bag," or "Mason jar," need not be described in detail.

Labeling. All labeling associated with the sample, including shipping cartons, inserts, direct printing, and wrappers attached to sample units must be described as appropriate. If a handwritten or a traced copy of the labeling is submitted, it must be verified by writing or typing the label on paper. The format and approximate type size must be duplicated as much as possible. The scientist must write on the copy "True and exact copy of label for sample ____." initial, and date the statement. Another scientist must compare the copy with the original and mark it "Verified," followed with their signature and the date.

Select labeling to submit with the sample that already has the sample collector's identification if available and scientist's identification. This reinforces sample integrity. All original labeling submitted must be identified with the sample number, date, and the scientist's initials on the label itself. Where an original label cannot be submitted, the scientist must identify the original label prior to copying. If the labeling has been submitted by the sample collector, where it is stored may be stated on the worksheet.

Code. Codes must be reported, if present, including the type and location of the code on the sample. The code should include the expiration date. If a code is not present, but is given on the Collection Report, the Collection Report must be referenced.

When there is more than one code in the sample, all the codes must be recorded and the number of units per code given and/or correlated with the sample collector's subsample numbers. When there is a discrepancy between the observed code(s) and code(s) cited on the Collection Report, the discrepancy must be reported on the worksheet.

Product. A complete and accurate description of the product, including, as applicable, color, odor, and general appearance, must be given using lay language. Samples may consist of raw materials, in-line products, finished products, and environmental samples. Each of these subsamples must be described in detail.

Any apparent abnormalities of the product, such as acetic acid odor in aspirin bottles, broken tablets, discoloration, mold, etc., must be noted on the worksheet.

The word "normal" by itself must not be used to describe a product. It may be used to describe a characteristic of that product, such as "normal appearance of. . ."

In describing drugs in solid dosage form, "Identification Guide for Solid Dosage Form," *Journal of American Medical Association* (JAMA), provides descriptive terminology that may be helpful in describing drug products.

Some products, such as devices, may be difficult to describe. A written description may be supplemented with a drawing or photograph whenever an illustration will enhance the product description. The illustration must be referenced in the description, and the attached illustration must be identified.

Analysis (Purpose). The purpose of the analysis must be indicated here along with the number of units being tested. Item number 18 on the Collection Report, "Reason For Collection," may be helpful in preparing this statement. Remember that subsequent reviewers may not be familiar with the specifics of the case or analysis therefore, the rationale for a specific analysis is necessary and important.

Method (of Analysis). A complete method reference, including page number and edition or date of any revision, must be clearly and explicitly recorded. Any modifications of the method must also be stated. Reference methods from official compendia, such as FDA manuals, *United States Pharmacopeial/National Formulary* (USP/NF), *Official Methods of Analysis of the Association of Official Analytical Chemists* (AOAC), journals, etc., must be identified.

If the scientist develops a method or develops validation data for a method not published, the complete method must be written on the worksheet or attached as a memorandum to accompany the worksheet. The worksheet must reference the memo as "attached memo of ____" and be numbered as part of the worksheet pages. Experimental work for validation studies may be written on the back of the worksheet.

Many methods do not spell out sample preparation or are vague about details. In such cases, selection and preparation of the analytical sample must be described carefully and completely.

Results. Analytical findings must be presented to expedite proper interpretation of the results, especially by non-technical, non-scientific personnel. The

proper unit identification (e.g., mg, oz, nm) must be given for all analytical data and must be the same units or terms declared on the product label. Whenever possible, the analytical data should be tabulated. Also, if subsamples with differing codes were individually examined, the results must be clearly recorded for each code because regulatory action may be based on the results of a particular code exclusive of other codes.

If the analysis has been performed in duplicate, triplicate, etc., each individual result and the average of all results must also be shown. Results must reflect the correct number of significant figures since a larger number of digits than warranted by the limitations of the method gives an erroneous impression of the accuracy of the method. If computer calculated results are presented in final report form, a statement on the report of the correct number of significant figures will suffice when the number of figures presented for the results exceeds the capability of the method. Statistical or other data reflecting accuracy and precision should be included as necessary.

Analytical results are to be compared with the label, labeling declarations, published tolerances and standards, or any manufacturer's specifications. When discrepancies are found between analytical results and labeling statements or other specifications, these facts must be set out clearly in the analytical report. FDA administrative guidelines are not to be quoted on the analytical worksheet.

ITEM 11, **Reserve Sample.** A clear description of the reserve sample must be given for accountability purposes. The amount of reserve remaining must be compatible with the amount received and the amount used in the analysis, or an explanation given for any discrepancy.

At the conclusion of the analysis, each portion of the reserve sample is placed in its original container, if possible, sealed and returned to the sample custodian. Reserve portions of all domestic samples must be officially sealed. Instructions about sealing import reserve samples vary; refer to the laboratory's SOP. Any seal put on the reserve sample must be quoted on the worksheet.

If the reserve sample is not returned to the sample custodian, how and where the reserve is stored, with an explanation as to why it was not returned to normal storage must be recorded. "NONE," "NO RESERVE," etc. must be stated when no reserve remains.

If a portion of the sample is to be sent to another party outside the science unit, it must be stated what was provided, how much, to whom, how it was sealed and a short explanation given as to why the sample was sent.

If all or a portion of the sample is transferred to a scientist within the laboratory for a check or additional analysis, the following information must be provided on the wordsheet: (1) what was provided, (2) to whom, (3) date and (4) brief explanation of the reason for the transfer.

Developed x-rays, videotapes, and computer records or tapes, due to their bulk and storage condition requirements, may be either returned to the sample

custodian as part of the sample reserve or submitted as attachments to the analytical report.

ITEM 12, **Analyst(s) Signature.** If more than one scientist is involved in the analysis, the worksheet must clearly show "who broke the seal" and "who did what," and the date(s) various activities occurred. The scientist who broke the seal must sign in space 12a and check the appropriate box. Other participating scientists must also sign the front of the worksheet. Technicians and aides participating in team analysis need not sign the front of the worksheet but must clearly identify and initial their work. The worksheet must contain the full names of all participating scientists/technicians to aid reviewers in determining who did what.

ITEM 13, **Worksheet Check.** Worksheets are checked for method suitability, accuracy of calculations, accuracy of data transferred from one section of the worksheet or attachment to another, and completeness. The person who performs these checks will sign and date the blocks in this section.

If an error is found during a worksheet check, the error must be brought to the attention of the scientist or supervisor for correction.

ITEM 14, **Date Reported.** The date the completed worksheet is given to the supervisor is inserted here.

Pages. Worksheet pages include the FD-431, continuation sheets, any memoranda to accompany worksheet and attachments including: spectra, photographs, labeling, computer generated printouts, etc. Worksheet pages must be numbered in consecutive order and attachments listed on the front. The FD-431, continuation sheets, and memoranda receive page numbers. Pages may be numbered in series such as "1 of 6, 2 of 6. . .6 of 6" to show the total number of pages submitted. Attachments are not given page numbers.

Back of Worksheet
12.5.3.2

The back of the FD-431 and other worksheets may be used to record raw analytical data, calculations, method validations, controls, calibrations, etc. When using the back of the worksheet, the following instructions will be helpful.

1. The sample number must appear in the upper right hand corner on the back of each worksheet on which an entry is made.

2. Subnumbers assigned by the scientist that differ from the collector's subnumbers must be correlated. The correlation may be shown on the back of the worksheet in a side-by-side listing.

3. Method validations, controls, calibrations, standardizations, etc., run with the sample must be shown on the worksheet. This information may be recorded on the back of the worksheet, submitted on a separate form, or submitted in the manner specified by the laboratory's quality assurance programs.

When using a standard, the name of the standard, type of standard, or supplier (USP, NIST, Working, etc.) and lot number of standard or district reference control number must be recorded. Also, drying or other treatment of the standard not described in the method must be described on the back of the worksheet.

4. Data entered on the back of worksheet must be in logical sequence and may be abbreviated, but must be clearly identified.

5. If data has been generated for a series of similar samples with different sample numbers (e.g., standard curve, standardization of solution, TLC plate), and the data are not recorded on or attached to each individual worksheet, the sample worksheet containing the original data must be referenced in each analytical report. However, if one of the samples is violative, a copy of the original data must be attached to the report of the violative samples. The sample number containing the original data must be referenced.

6. When the name and date of latest revision of a computer program used to generate computer results are not shown on the computer generated sheet or a continuation sheet, this information must be recorded on the back of a worksheet.

7. When showing calculations on the back of a worksheet, the formulas given in the method must be used whenever possible and any factors used in the calculation that are not evident in the method or from common knowledge must also be explained.

Attachments to Worksheets

12.5.3.3

The worksheet records include instrument charts, computer printouts, chromatograms, spectra, standard curves, photographs, exhibits, etc. These records must be submitted with the analytical report when possible. They may be submitted as attachments or with page numbers. Each attachment must be titled and directly identified with sample number, date, and initials. If the attachment is less than the size of a page or of awkward shape the record may be mounted securely on heavy mounting paper, leaving a one inch left margin. If mounting paper is used, it must also be identified with the sample, date, and scientist's initials. Attachments are normally included at the end of the report and are not given page numbers.

Scientists must indicate operational parameters on instrument generated charts. Prepared stamps, when available, may be used. The constituent being determined and not just the product must be stated. The charts must be annotated with all necessary information such as wavelength maxima read, retention times, wavelengths scanned, etc. Calculations may be shown on instrument charts, but the information in summary form must be transferred to the worksheet in sufficient detail to show calculation of results and correlation with method requirements.

Photographs, x-rays, and videotapes may be used to illustrate labeling, to assist in describing the product, or to show an analytical finding. Photo-

graphic negatives, developed x-rays, and videotapes are part of the scientist's records and may be submitted as attachments to the ANALYST WORKSHEET. Because the size of an object may not be evident from the photograph or photocopy, it is advisable include a ruler along with the object in such cases. If enlargement or reduction was done when the object was photocopied, indicate on photocopy or mounting sheet the percent enlargement or reduction.

Whenever computers are used for data acquisition and/or processing, the following hard copy reports are required.

1. An instrument chart recording of all data must be submitted with the worksheet even though calculations are performed by the computer. This is necessary so that the scientist and subsequent reviewers can observe peak shapes, baseline noise, etc., that may have affected the accuracy of the computer calculations. The only exception to this is computerized mass spectrometer data. It is not practical to reproduce the hundreds of spectra recorded during a GC/MS run in a hard copy report. However, any MS spectra, chromatograms, or selected ion monitoring recordings that are used to form analytical conclusions must be attached to the worksheet in a hard copy format.

2. All data elements used in the calculation of results (e.g., absorbances, peak areas, retention times) must be printed out and attached to the worksheet.

Reporting Analyses on the Industrial Chemical Worksheet

12.5.4

The Industrial Chemicals Worksheet (FD-431c) is used to report analyses for pesticide and industrial chemical residues, such as polychlorinated biphenyls (PCBs) and phthalates recovered by pesticide residue methods.

ITEM 10, **Summary of Analysis**, does not contain space to describe the container, labeling, code, and product. When this information is applicable to a product analyzed for pesticide residues, it must be recorded and may be entered under item 10d, **Additional Information**, on a continuation sheet, or under **Sample Description** item 11.

The method employed must be fully referenced with the latest revisions and modifications. A description of sample preparation is necessary if the sample is not received fully prepared for direct analysis. The box "Received Prepared" may be checked in the latter case. The sample preparation description must include how the sample was treated before compositing (washed, thawed, scaled, filleted, etc.) and the approximate amount of sample used for the composite including the number of subsamples and the amount of each subsample.

The name of the residue(s) for which an examination was conducted and/or those found must be entered in block 10c. The *Glossary of Pesticide Chemicals* contains the preferred names of residues.

If any program, assignment, or pesticide-use-information directs or indicates that the sample should be analyzed for a specific residue(s), the name(s) of this (these) residue(s) must be included on the front of the worksheet.

Reporting Analyses on the Elemental Analysis Worksheet
12.5.5

The Elemental Analysis Worksheet (FD-431m) is used to report analyses for any metal. General instructions cited for the ANALYSTS WORKSHEET (FD-431) and instructions for sample preparation and reporting of analytical results described in the previous section are applicable.

The amount found for each metal residue listed must be entered under each determinative step used. The data system assumes ppm unless otherwise stated. Negative findings are shown by writing "None" under the determinative step used. The blank column may be used for any determinative step not printed on the worksheet. The mode(s) for each detector used must be entered in the space below the detector abbreviation. Confirmation studies must be referenced on the worksheet.

Reporting Analyses on the Import Sample Summary (FD-716)
12.5.6

The Import Sample Summary (FD-716) may be used to report the analyses of imports in lieu of the ANALYST WORKSHEET (FD-431). Information required for domestic regulatory samples must also be reported for import samples, except the description of the sample requires verification by the scientist by only initialing the laboratory box on FD-716. If there is a conflict, the sample is described in detail. Sample accountability information, analytical data, and summary of analysis may be recorded on the back of FD-716, if the laboratory SOP permits. If the Import Sample Summary (FD-716) is used, the scientist must sign and date it in the appropriate spaces near the bottom of the page.

Reporting Analyses on the Continuation Sheets for Microbiological Analysis
12.5.7

Many preprinted forms are available to the microbiologist for use in recording raw data. These include:

1. Bacteriological Record (FD-431d)
2. Shellfish Bacteriological Record (FD-431k)
3. Salmonella Record (FD-431g)
4. Canned Food Continuation Sheet (FD-431i)
5. Botulism Continuation Sheet (FD-431j)
6. Summary of Bacteriological Results (FD-1570)
7. Bacteriological Definitions
8. Shigella Record (FD-431h)

Common abbreviations used are "+," "−" (these may be circled to indicate 48 hour reaction); "A" for acid; "K" for alkaline; and "G" or "g" for gas

production. Any other abbreviations must be explained. The use of these forms is not mandatory, but is recommended.

Sometimes the scientist is required to complete a Summary of Bacteriological Results (FD-1570) and to include it in the sample report. The Bacteriological Definitions should accompany the FD-1570 in transmiting laboratory reports outside FDA.

Reporting Check and Additional Analyses 12.5.8

Usually a new FD-431 is started when a check or additional analysis is requested. If so, it is a good practice to flag the new FD-431 accordingly. Instructions for reporting analyses are the same, but items 8 and 9 need not be repeated. Description of the container, labeling, code, etc., under item 10 need not be repeated unless necessary for a special sample. Item 7 must be very specific in description to demonstrate continuity of sample handling. A new numbering series is used to show the number of pages for the check or additional analysis.

If analytical findings are confirmed rather than check analyzed (for example: confirmation of TLC spots that fade rapidly, identification of isolated filth elements, organoleptic confirmation and so forth) a signed statement must be added on the front of the original worksheet stating what was confirmed and by whom. When appropriate, confirmed findings must be initialed on the back of the worksheet.

Reporting Filth and Quantity of Contents Analyses 12.5.9

A suggested format for reporting the results for filth analysis is given at the beginning of the chapter on Extraneous Materials Isolation in *Official Methods of Analysis of AOAC*. This format may be used for reporting filth analyses, otherwise, the laboratory's SOP for reporting results must be followed. All other items are reported on the ANALYST WORKSHEET, as already discussed.

FDA By-lines article, "**Quantity of Contents Compendium**", which contains analytical instructions and formats for reporting volume, net weight, and deceptive container determinations, may be used as a guide.

Notebooks 12.6

Notebooks are kept by the scientist to record analytical data and observations exclusive of those generated during a sample analysis. Sample analysis data must be on or accompany the worksheet. The notebook must not contain data, observations, and results applying to specific sample numbers. Sample data in notebooks may be used as evidence in litigation, in addition to the worksheet.

In addition, the notebook may be used as a diary or log to record program data, e.g., samples analyzed, hours spent; however, it is preferred that this type of data be kept separate from scientific data recorded in the notebook.

Notebooks are the property of the Food and Drug Administration.

Typical Uses of Notebooks 12.6.1

A bound book must be used if a scientist chooses to keep a notebook, and pages must be hand-numbered, if not preprinted with numbers.

The notebook may be used for:

1. Calibration of weights, glassware and equipment, other than for specific sample analysis.
2. Standardization of solutions and testing of reagents, other than for a specific sample analysis.
3. Data on instrument checks and other quality assurance work, other than for a specific sample analysis.
4. Method development work, other than for a specific sample analysis.
5. Research references and data.
6. Comments, observations and ideas that may be helpful in research work, other than in reference to a particular sample. The record might include method techniques, charts, graphs, spectra, etc.
7. Notes, drawing, chemical reactions, etc., prepared during training or during seminars, for the scientist to refer to later.
8. A sample diary or log of work performed including sample number, product, data received, data completed and hours for analyses, but excluding results and comment on the work performed. This type of recordkeeping is optional and informal. It is not subject to instructions in section 12.6.2 below. Preferably, this log book should be kept separate from other notebooks.

The laboratory may require that all or part of the information in items 1–3 be recorded in a notebook reserved for this purpose under its quality assurance program. The supervisor must be consulted on this matter. Instructions 1–6, section 12.6.2, apply to the "laboratory" notebook as well as to scientists' personal notebooks.

Keeping the Notebook 12.6.2

General instructions for keeping a notebook follow.

1. Entries must be legible, accurate, neat, and in ink.
2. Original data and observations must be immediately and directly entered into the notebook.
3. All results, references, etc., must be recorded in a systematic and orderly manner.

4. Entries may be brief but must include details necessary for the analyst or another person to duplicate work recorded. Figures and calculations must be labeled.

5. Errors must not be erased. A single line drawn through an erroneous entry is preferred, with initials and the correct entry nearby.

6. Pages of the notebook must not be removed.

7. As an aid in searching for data in the notebook, it is helpful to use the first pages for a "Table of Contents."

8. If assignments include time for research (methods development, etc.), a notebook may be kept specifically for this work.

REGULATORY SAMPLES

REPORTING LABORATORY FINDINGS

1. Purpose
2. Policy
3. Procedures

Attachment A - Chapter 3, Laboratory Reporting, Laboratory Procedures Manual.

1. PURPOSE This Guide provides the Agency's procedures for reporting laboratory findings.

2. POLICY All results of analysis must be made in accordance with the instructions contained in the Laboratory Procedures Manual, Chapter 3, Laboratory Reporting.

3. PROCEDURES Chapter 3, Laboratory Reporting of the Laboratory Procedures Manual has been reproduced as Attachment A for easy reference. This reference serves as the basis for the procedures to be followed within the Center for Food Safety and Applied Nutrition. Questions concerning the reporting of laboratory findings shall be directed to the Division of Field Science, Office of Regional Operations.

CHAPTER 3

LABORATORY REPORTING

General Information

3.1

Within FDA, a written report of analytical results must support regulatory decisions. Reports of results are also made outside FDA to comply with the law, to provide information to the industry on a cooperative basis, and to afford protection to the consumer.

Laboratory Responsibility

3.2

Timely reporting of complete and accurate results is the responsibility of the examining laboratory.

Analysts report results of FDA samples analysis on the ANALYST WORKSHEET (FDA-431 series) or IMPORT SAMPLE SUMMARY (FDA-716). Exceptions will be noted in compliance programs or assignments. Generally, labeling is to be submitted with the worksheet. Chapter 2 contains instructions for submitting labels.

The laboratory supervisor reviews the results provided by the analyst and draws a laboratory conclusion based on the report of analysis. The supervisor writes the laboratory conclusion on the SAMPLE SUMMARY REPORT (FDA-465) for domestic samples. Section 3.4.1 describes this procedure. The supervisor completes blocks 1, 2, and 3 of form FDA-465 for each regulatory sample worksheet and block 4 when delegated the authority to do so. For import samples, the supervisor will complete the block captioned "LAB CONCLUSIONS" on form FDA-716.

The field laboratory supervisor also has the responsibility of assembling the documents of the analytical package and forwarding it according to district/regional policy. A headquarters laboratory will forward the analytical package to the home district through channels prescribed by center procedures.

The first-line supervisory analyst is normally responsible for the preparation of reports of analysis distributed to persons or firms outside FDA. The signature on these reports will be designated by the district director (DD).

The laboratory director is responsible for the accuracy and completeness of the analytical report, and may review the package assembled by the laboratory supervisor. The laboratory director will review all actionable samples. When the laboratory director reviews any laboratory conclusions and classifications made by the first-line supervisor and concurs, he or she will initial and date the laboratory conclusion. If the laboratory director does not concur, the *laboratory director* (supervisor) will change the conclusion and/or classification and the laboratory director will date and initial the change. The laboratory director may sign the laboratory conclusion for actionable samples routinely if this is district policy.

Document Assembly

3.3

The supervisor will assemble the documents in an analytical package before forwarding it to the next reviewer. The suggested order of documents is as follows from top to bottom:

1. SAMPLE ACCOUNTABILITY RECORD (orange card) with block 14 completed, and entries for blocks 15 and 16 completed when authorized. If a field supervisor has the delegated authority to decide that no action will be taken, he or she will not attach the orange card but will handle the orange card according to procedures described in Section 1.4.3, Chapter 1, and Section 4.4, Chapter 4. Headquarters laboratory supervisors will routinely send the orange card to the home district.

2. SAMPLE SUMMARY REPORT (FDA-465).

3. ANALYST WORKSHEET (FDA-431 series) with attachments such as recorder charts, memo to accompany the analysis, exhibits, etc.

4. LABEL AND LABELING.

5. COLLECTION REPORT with attachments. It is recommended that the analytical package be assembled so that the Collection Report (C/R) is the last piece of paper in the package, faces outward, and is upside down with

respect to the analytical documents. The C/R attachments are also upside down and between the C/R and the analytical documents. The purpose of this assembly is to facilitate review of the analyst's worksheet (sample number, description of sample, etc.) against the same items reported on the C/R.

Sample Summary Report
3.4

Every completed domestic regulatory sample analysis must have a SAMPLE SUMMARY REPORT (FDA-465). The supervisor or a designee prepares the form but only a supervisor or acting supervisor may sign the form. The Sample Summary Report serves to record (*a*) laboratory conclusions, and (*b*) program assignment codes and sample classification codes related to the conclusions drawn.

Completing the Report
3.4.1

The current form FDA-465 lists blocks 4a-d for district use. Since there is no longer a district conclusion in the data system (PODS), completion of these blocks is optional at district discretion. The following is a guide for completing the FDA-465 block by block:

Block 1. **PRODUCT.** This block contains the name of the product. The name must be the same as that entered on the worksheet and the Collection Report for the product.

Block 2. **SAMPLE NO.** The sample number with any prefix goes in this block.

Block 3a. **SAMPLE CLASSIFICATION.** The appropriate one-digit sample classification code goes in the code block. The FDA Data Codes Manual lists the codes.

The PAC No. block contains the Program Assignment Code (PAC) number(s) for the program(s) under which analysis was made. The Collection Report will list the PAC numbers for a particular sample, and the FDA Data Codes Manual lists all PAC numbers. Headquarters laboratories may leave block 3a blank. When necessary, the home district will enter the data.

Block 3b. **LABORATORY CONCLUSIONS.** This block has the summary of the results of the analysis. The analytical results must relate to codes, current laws, and regulations where pertinent. If more space is needed another FDA-465 form may be used. Another alternative for more complex sample analyses is to summarize the analytical results in a memorandum and refer to the memo in block 3b.

Block 3c. **NAME AND TITLE.** The supervisor or acting supervisor making the conclusion prints, stamps, or types their name and title here.

Block 3d. **SIGNATURE.** The first-line supervisor, acting supervisor, or laboratory director must sign this block. This applies to both field and headquarters laboratories.

Block 3e. **DATE.** The supervisor or acting supervisor places in this block the date the conclusions are made and the form is signed.

Block 4a-d (Optional). DISTRICT CONCLUSIONS. The district director or a designee completes and signs this section. Instructions are similar to those already discussed.

No Action Samples 3.4.1.1

This is an optional procedure.

When the conclusion for sample analysis is NAI (No Action Indicated), certain procedures may be followed depending on the circumstances. If the examining district is the home district, the district director designee may close the file by placing a "no action" or "NAI" endorsement in block 4a of the Sample Summary Report. The designee sends the package to file. Section 4.4, Chapter 4, gives instructions for disposition and exceptions.

When the examining laboratory is in a district other than the home district, such as the headquarters laboratory, the district director designee or director of a headquarters unit may enter a "no action" or "NAI" endorsement in block 4a.

The designee forwards the Sample Summary, Analyst Worksheet, Collection Report, and other records to the home district. The examining district will retain the orange card; the headquarters laboratory will send the orange card with the analytical package. Section 4.4, Chapter 4, gives disposition instructions and exceptions.

The district director designee of the home district may show concurrence with the "NAI" conclusion by signing and dating the notation in block 4a. If there is no concurrence, the designee must promptly notify the examining laboratory to hold the sample. Section 4.4 has additional instructions.

When an examining district or headquarters laboratory determines not to perform an analysis of a sample, this action may be reported (*a*) by appropriate conspicuous notation on the Collection Report; or (*b*) by a brief memorandum attached to the Collection Report and records. For either method used, the reviewing officer must give reason for no analysis, date, and signature, with a flag thereon to show "SAMPLE REPORTED WITHOUT ANALYSIS."

On receipt of such report by the home district from a foreign laboratory, the action will be reviewed and if the home district concurs, the appropriate officer will sign and date the report to close the file. If the home district decides that analysis is indicated, it will promptly notify the examining field or headquarters laboratory.

When a sample is split and sent to different laboratories for examination, each portion of the sample will be designated as "SPLIT SAMPLE." The Sample Summary and orange card for each portion of a split sample must be conspicuously flagged "SPLIT SAMPLE."

When the entire sample is submitted to one laboratory for examination and the decision is subsequently made to send a portion to another district or headquarters laboratory for analysis, a copy of the C/R and cover memorandum stating the reason for the requested analysis will accompany the sample. A copy of the cover memorandum will be sent to the home district.

Examining laboratories will forward the Sample Summary, orange card, worksheet, and accompanying records to the home district. The home district will hold the file open until all worksheets are received. The sample will be processed as a single unit.

When a nonactionable sample is processed, the Collection Report will be examined and the collecting district will be promptly advised of negative results when circumstances, such as a lot withheld from sale, require immediate attention.

Regardless of why samples are shipped to other laboratories or locations, the Sample Accountability Record (SAR, FD-421) should be appropriately annotated.

Actionable Samples 3.4.1.2

The examining laboratory will forward the analytical package to the home district for action by the appropriate reviewing officer. Local procedures will determine if routing should be through the examining laboratory's compliance office. The district director designee will enter the district conclusion and complete block 4 of the Sample Summary Report.

When the product is violative and dangerous to health and seizure or recall is indicated, the examining laboratory must promptly seek the assistance of its nearest compliance office to notify the home district and other concerned offices and to process the worksheets.

Labeling Violations 3.4.1.3

The laboratory supervisor will report discrepancies in the labeling under "Laboratory Conclusion." When any original labeling (including labels, circulars, booklets, books, etc.) or any physical sample is to be forwarded to a headquarters office with a recommendation for legal action, it is to be flagged, e.g., "Sample to be forwarded to (name) district after administrative review" or "Labeling to be forwarded to (name) district after administrative review."

Reports Outside FDA 3.5

Analytical reports sent outside FDA include (*a*) reports required by law [section 704(d) of the Act]; (*b*) reports required by agreement or issued as "cooperation with industry;" (*c*) consumer complaint reports. Sections 3.5.1, 3.5.2, and 3.5.3, respectively, explain under which circumstances these reports are sent, information the reports must contain, and the suggested format and/or form to use.

Factory Food Letters 3.5.1

Section 704(d) under Factory Inspection of the FD&C Act requires the following:

> "Whenever in the course of any such inspection of a factory or other establishment where food is manufactured, processed, or packed, the officer or employee making the inspection obtains a sample of any such food, and an analysis is made of such sample for the purpose of ascertaining whether such food consists in whole or in part of any filthy, putrid, or decomposed substance, or is otherwise unfit for food, a copy of the results of such analysis shall be furnished promptly to the owner, operator, or agent in charge."

Requirements for Letter 3.5.1.1

A written report of the results of analysis of a sample of food obtained from an establishment where food is manufactured, processed, or packed shall be issued pursuant to Section 704(d) with the following clarifications:

1. The firm receives a 704(d) report even though the investigator has reported to the firm the results of a field examination of the same sample on form FDA-483 (Inspectional Observations). A brief description of the sub or sample taken and the results of any laboratory analyses are in the report.

2. The report must contain the results of microbiological analysis conducted within the parameters of 704(d).

3. When smoked fish are analyzed for salt content, the report will include these data based on the findings of individual fish and not on the average of the total.

The term food includes both medicated and nonmedicated animal feeds. A report issues whenever these foods are collected and analyzed for filth within the parameters of 704(d). Section 3.5.2.2 explains further the details of this report.

The phrase "unfit for food" is to be given the same interpretation as it has historically been given in Section 402(a)(3) of the Act. "Unfit for food" has been used to describe and charge foods that have an abnormal odor (not decomposition), abnormal color, are contained in abnormal containers (swollen cans), etc. It has also been used in charging fish infested with copepods or other parasites. Any product that may be rejected by the consumer may also be considered unfit for food for purposes of 704(d).

If a food is analyzed, regardless of the findings, for the purpose of determining whether the food was in compliance with 402(a)(3), a factory food report is sent. If no analysis is made, a report is not sent.

Preparation of Letter 3.5.1.2

Analytical reports on factory food samples shall provide the following descriptions:

1. The nature of the sample, the number and size of units examined, and the code marks of the subdivisions examined.

2. The findings in simple terms and wherever possible in lay language. For instance, instead of reporting the percentage of Class 3 cream or Class 2 fish, the percentage of decomposed cream or fish is reported.

   The interpretation of microbiological findings is often difficult and, at times, findings may need clarification if they are to be of any value to the firm. Analytical results are reported on form FDA-1570, SUMMARY OF BACTERIOLOGICAL RESULTS, when this form is appropriate for summarizing the analyses performed. Form FDA-1551, REPORT OF SAMPLE ANALYSIS (see Section 3.6 and following), is used as the cover for form FDA-1570 or as the report form when FDA-1570 does not apply. Form FDA-1570A, BACTERIOLOGICAL DEFINITIONS, must be with

the report to explain microbiological findings that are shown on forms FDA-1570 or FDA-1551.

3. When reporting sanitation analyses, the appropriate phrase is "no filth found" rather than "free of filth."

Analytical reports shall not

- ☐ Give the method employed in the analysis.
- ☐ Show the conclusions drawn from the analysis.
- ☐ Set forth in detail the manner in which the sample was handled prior to analysis, or an explanation of the type of examination made.
- ☐ Give the results of examination for factors other than filth, decomposition, or those causing the food to be unfit for food.
- ☐ Be mailed to other than the owner and/or manufacturer, processor, or packer from whom the sample was collected.
- ☐ State that the finding of no filth or decomposition in the product does not necessarily mean that it complies with Section 402(a)(4).

Scope of Report 3.5.1.3

Details should be given concerning any factors in the analysis when they are significant in terms of a possible violation. Where they are not significant, a general summary may be provided. Guesswork must not be recorded on either the analyst's worksheet or the report.

Reports Issued in Cooperation with Industry 3.5.2

Unsolicited analytical results on any product may be sent to any firm, individual, or cooperating agency that, in the judgment of the district, has a legitimate interest in the result and when a useful purpose will be served. This section provides guidance to the extent that unsolicited reports should be issued. This guidance does not set absolute limits but does establish some general parameters to avoid issuing a report on every analysis performed. Specific requests for reports of analysis will be responded to following current Freedom of Information procedures.

Pesticide and Aflatoxin Samples 3.5.2.1

The background for pesticide and aflatoxin samples is as follows:

In 1960, the Food and Drug Administration agreed to furnish growers and other interested parties results of analysis on domestic samples of raw agricultural products. This was a result of various requests by trade associations for such information. Again in 1970, similar requests were received from various organizations requesting results of analysis on domestic samples analyzed for aflatoxins.

Although there is no legal precedent for such letters, the agency deemed it appropriate to further consumer protection goals. Over the years since its inception, the policy of issuing letters has been reviewed. The policy has again been evaluated, and it has been determined that such a policy of routine reporting of results of analysis on pesticide residues and aflatoxins is no longer cost effective.

Results of analysis will be reported on types of samples where (*a*) the results are either at or above an action or tolerance level, or (*b*) no action or tolerance level exists and the results are of regulatory significance.

Pesticide results on raw agricultural products exclusive of milk, meat, fish, and eggs will be reported to growers, processors who are responsible for spray operations, and appropriate cooperating officials. An agency receives a report when the raw agricultural product is owned by a Federal agency. If the grower or processor is not known, a report is not necessary.

Results on milk, meat, fish, eggs, and processed or manufactured foods or feeds are not required to be reported routinely. Results on milk and dairy products must be brought to the attention of cooperating officials when actionable residues are found.

Aflatoxin results for grains, nuts, feeds, and finished products must be reported for violative samples. The report will be sent to the grower and processor or other responsible firm as well as to appropriate State cooperating officials.

Pesticide results will be reported on form FDA-1551a and aflatoxin results on form FDA-1551b. Exhibits 3c and 3d are examples.

When pesticide results are at or above the action or tolerance level, the block captioned "Residue(s) found may be of regulatory significance . . ." must be checked. The quantitative results must be reported only after a check analysis confirms the original findings. The lower quantitative result, whether the original or check analysis result, will be reported. Whenever quantitative results are given, the report must include the tolerance or a note that no tolerance has been established.

When a check analysis confirms aflatoxins in excess of the current tolerance, the lower quantitative result, whether the original or check analysis result, must be reported on form FDA-1551b.

Medicated and Nonmedicated Feeds 3.5.2.2

Although reports of analytical findings for drug cross-contamination residues in feeds or feed components are not required under Section 704(d), FDA chooses to report such residues routinely to the animal grower from whom a sample was collected.

When animal feeds are collected for drug residue analysis, the grower and appropriate cooperating officials will receive a report of analytical results if the amount found is of regulatory significance. As for pesticide/aflatoxin reporting, it is not cost-effective to routinely report where either no contaminant is found or the amount found is not of regulatory significance. In this case, a letter is not sent.

The report will not contain results of potency analyses or any other analyses not related to the determination of cross contaminants. A quantitative result for drug residue will be reported after confirmation by check analysis. The lower quantitative result, whether the original or the check analysis result,

will be reported on form FDA-1551. The "Reason for Submission of Report" will be "Other."

Common Carrier Food Samples 3.5.2.3

When common carriers such as railcars, trucks, etc., are inspected while loading or unloading at food manufacturing or processing establishments and a RECEIPT FOR SAMPLE form (FDA-484m) is issued, a report of analysis (FDA-1551) for examined samples collected will be sent to the manufacturer or processor. A separate form FDA-1551 covering only the portion of the sample collected from the carrier will be sent to the carrier with a copy to the food processor. A footnote on the carrier's copy pointing out that the carrier supplied the vehicle for loading of food and that the report is being provided for their information and guidance is strongly recommended. The format mentioned in Section 3.5.1.2 is to be used. A report does not issue in the case of carriers examined at locations not directly associated with a food manufacturing establishment.

Filth Exhibits 3.5.2.4

Results of analyses of materials collected, such as clarifier sludge, in-line plant filters, rodent pellets, insect-tunneled material from a grain chute, bacteriological swabbings from equipment, or other evidence collectively referred to as "filth exhibits," can have a bearing on the adequacy of the firm's operations involving filth and decomposition. The results reported may assist the industry in correcting conditions that may result in contamination of foods or other commodities.

Foreign District Sample Requests 3.5.2.5

A report must be sent to a supplier of raw food when raw materials are collected from the manufacturer, packer, processor, or repacker due to a request for regulatory follow-up. For example, SAN-DO asks NYK-DO to collect a sample of raisins for filth examination from a shipment to a New York City bakery that uses raisins in its cakes. A report will be sent to the bakery.

Poisons Used in Food Plants 3.5.2.6

The careless use of pesticides or other poisons in food processing establishments results in an adulteration within the meaning of Section 402(a)(4). If samples are collected and an analysis is made, results must be reported to the firm.

Consumer Complaint Reports 3.5.3

A complainant is to be informed of FDA's findings when a sample is examined. When the examination is completed (or if no examination is made), an inquiry must be made to determine if the consumer wishes the sample returned.

There may be rare occasions when an intact complaint sample will serve as the basis for legal actions. On these occasions, the compliance branch must be consulted before an offer to return the remaining sample is made.

A letter must be sent to the complainant advising the individual of the general nature of the findings and, when interpretation is indicated, an explanation of the findings. If an examination has not been made, the complainant should be informed and given the reason(s). Do not offer to return the sample if it is needed for FDA regulatory purposes or if it has been purchased from the complainant.

Sufficient copies of the consumer complaint letter must be provided for distribution to (*a*) the complainant (original), (*b*) the home district and collecting district, if different from the examining district (1 copy each), (*c*) the sample custodian for monitoring sample disposition (1 copy).

The letter to the complainant will be sent by certified mail, return receipt requested, to establish a clear record of the transaction. If the complainant requests the sample, the sample must be returned and an appropriate record maintained. Return must be documented on the FDA-421 green card. Complaint samples must be held for at least 30 days from the time the letter is sent. If sample return is not requested by the complainant during this period, the sample may be destroyed.

Cosmetic injury complaint reports will be handled by the Center for Food Safety and Applied Nutrition.

Report of Sample Analysis
3.6

Form FDA-1551 (Report of Sample Analysis) will be used to report all analyses required except those in response to the consumer complaint letter.

Every effort must be made to issue the report within a reasonable time from the date of sample collection. For 704(d) samples, the reporter must strive to meet the time frames set forth in current instructions. Certain microbiological and chemical analyses may require additional time, depending on the analysis and site of the analyzing laboratory.

All reports will be prepared by the examining laboratory with these exceptions:

1. Results of headquarters analyses will be reported by the home district.
2. Results of analyses done by a field centralized laboratory (e.g., Mycotoxin Analytical Center, Denver Veterinary Analytical Section) will be reported by the home district.
3. Results for split samples will be distributed in a report prepared by a designated laboratory or district employee for the signature of the district director or his designee. Section 3.6.1 has further clarification.

Distribution of Report
3.6.1

For Factory Food Sample reports, the original of form FDA-1551 will be sent to the owner, operator, or agent in charge of the establishment from which the sample was collected, with a copy to the home district if different from the analyzing laboratory district.

If the ESTABLISHMENT INSPECTION REPORT (EIR) is submitted to headquarters, a copy of form FDA-1551, identified as page 1(b) must be attached to the EIR. When the EIR is filed without headquarters review, a copy of form FDA-1551 will not be sent to headquarters.

Form FDA-1570, SUMMARY OF BACTERIOLOGICAL RESULTS, may be used when appropriate, in conjunction with form FDA-1551, to simplify

reporting microbiological results. Form FDA-1551 may be used to interpret results that are not clearly obvious or otherwise defined. Section 3.5.1.2 has additional instructions.

All pesticide and aflatoxin reports will be made by the examining district except for survey samples analyzed by the Mycotoxin Analytical Center (MAC). Reports of results on survey samples analyzed by MAC will be made by the home district.

If the examining district is also the home district, sufficient copies of the pesticide or aflatoxin report must be prepared to provide for the following distribution:

- ☐ Original to the grower or other establishment.
- ☐ One copy to the cooperating State regulatory official in the state where the product was grown.
- ☐ One copy to the appropriate center office when the results are of regulatory significance.
- ☐ One copy for the district file.

If the examining district is not the home district, sufficient copies of the report must be prepared to provide for the following distribution:

- ☐ Original to the grower or other establishment.
- ☐ Two copies to the home district. The home district will forward one copy to the cooperating State regulatory official.
- ☐ One copy to the appropriate center office when the results are of regulatory significance.
- ☐ One copy for the district file.

For medicated and nonmedicated feeds analyzed for drug residues, all reports will be made by the home district. The home district will determine appropriate distribution to headquarters and cooperating officials.

When it is necessary to send a portion of a sample to another laboratory (including headquarters), each examining laboratory will forward the results to the home district where the Report of Analysis will be prepared. The examining laboratory will show on the SAMPLE SUMMARY (FDA-465) that a report of analysis has not been issued.

Preparation of Report

3.6.2

The captions on the upper portion of both forms FDA-1551 and 1551a and b are identical. Make the following entries in the appropriate sections:

FROM. Insert district address.

TO. The identification of the addressee will be placed in this blank. It is strongly recommended that the name of an official (i.e., president) of the firm be specified along with the name of the firm.

FDA SAMPLE NUMBER. The Collection Report/ANALYST WORKSHEET will have the sample number.

DATE SAMPLE COLLECTED AND COLLECTING INSPECTOR. This information is on the Collection Report.

DESCRIPTION OF SAMPLE. Sufficient description of the product must be provided to identify the sample accurately. Using information provided by the Collection Report, the reporter inserts the name of the product and description of the lot sampled.

ESTABLISHMENT WHERE SAMPLE COLLECTED. If sample was collected from an establishment other than the addressee (compare entry on C/R with the name of addressee), the name and address of dealer must be indicated.

REASONS FOR SUBMISSION OF REPORT. For factory food samples, the box designating Section 704(d) of the FD&C Act must be checked on form FDA-1551. "Other" will be checked on FDA-1551 as appropriate for aflatoxin, pesticide, and other instances when we are providing the data as a courtesy.

REPORT OF ANALYSIS. Analytical findings will be reported in this space. If the results require additional space, "continued on page 2" will be inserted at the bottom right of page 1, and the report will be continued on white bond paper. The bond paper will be identified "Results of Analysis-Continued," and given a sample number and page number. Reporting instructions for factory food samples are in Section 3.5.1. Instructions for reporting results for pesticide/aflatoxin and animal feed drug residue samples are in Section 3.5.2.

Include the following statements as necessary:

> "If you have any questions regarding the analytical results please call _____ on _____ ."
>
> "Any other questions should be addressed to _____ on _____ ."

DATE, SIGNATURE, TITLE. At the bottom of the page, the date the form was prepared will be entered. The authorized reviewing officer will sign the report, and the title of the reviewing officer will be given.

Distribution of the "Report of Sample Analysis" must be shown at the bottom of the page, for example:

> cc: NC State Department of Agriculture
> BLT-DO File

Forms FDA-1551 and 1551a or b may be used with standard 4⅛ × 9½" window envelopes.

REGULATORY SAMPLES

SAMPLE DISPOSITION

1. Purpose
2. Policy
3. Procedures

Attachment A - Chapter 4, Sample Disposition, Laboratory Procedures Manual

1. Purpose This Guide provides the Agency procedure for the retention of reserve samples until all pending actions have been terminated and for the systematic disposal of samples no longer required.

2. Policy The disposition of all regulatory samples shall conform to the instructions contained in the Laboratory Procedures Manual, Chapter 4, Sample Disposition.

3. Procedures Chapter 4, Sample Disposition, Laboratory Procedures Manual has been reproduced as Attachment A for easy reference. This reference serves as the basis for the procedures to be followed within the Center for Food Safety and Applied Nutrition. Questions regarding the disposition of regulatory samples should be directed to the Division of Field Sciences, Office of Regional Operations.

CHAPTER 4

SAMPLE DISPOSITION

General Requirements 4.1

The laboratory reserve sample must be kept until all legal or other action requiring the sample is closed. The reserve sample consists of the 702(b) claimant's portion (when required) and remaining FDA portion and exhibits.

When it is no longer needed, it is important to dispose of the sample systematically and promptly. The Sample Accountability Record, FDA-421A (orange card), provides the accountability system: entries in block 16 inform the responsible FDA unit that a sample is being held; entries in block 17 authorize disposition; entries in block 18 of the orange card and block 12 of the green card document that the sample has been destroyed or disposed of according to accepted procedures.

Only the home district may authorize disposition of its samples that are not in compliance. See Regulatory Procedures Manual (RPM) 1-01-10-1 for definition of "home district."

The Sample Disposition Notice (SDN) must be in writing.

Responsibility 4.2

Laboratory and other branch directors are responsible for correct and prompt disposition of samples. In some districts, the sample room function is part of the administrative management branch. The details of meeting LPM requirements should be worked out by local management, i.e., the district director and the involved branch directors. Authority to issue the SDN may be delegated to laboratory supervisors, supervisory investigators, and compliance officers according to local district policy. Under direct supervision, clerical personnel may monitor, route, and make entries on the orange card, but only an authorized reviewing officer may sign the SDN.

The local compliance branch will assist the laboratory and sample custodian in determining the status of old samples for which no SDN has been received.

The sample custodian or a designated analyst is responsible for proper destruction of a sample after written authorization is received to do so. Con-

trolled drugs (CR,/DEA) regulations require that the destruction of reserve samples for which the agency has no further need must be witnessed. The destruction of the sample(s) by the sample custodian must be observed by a supervisor. The appropriate records should reflect who did what.

Sample Disposition Follow-Up
4.3

Disposition follow-up takes place in two situations:

1. When a worksheet is sent to the home district or to headquarters or when the laboratory has shipped the entire sample to another laboratory. Entries in block 16 of the orange card inform the receiving unit where to send the disposition notice. This is a routine follow-up procedure.

2. When the sample custodian or other responsible persons question the status of old samples in the storeroom or laboratory.

Procedures for each situation follow.

Routine disposition follow-up requires filling out block 16 of the orange Sample Accountability Record (FDA-421A) with the following entries:

TO. The name and routing symbol of the home district or headquarters unit (District/Division) to which the worksheet is sent will be entered here.

FROM. The name and routing symbol of the field or headquarters laboratory (District/Division) that holds the sample is to be indicated.

SAMPLE. The appropriate box (or boxes when the sample is a split sample) is to be checked.

REFERRED. Sample worksheet is being sent to the home district for the district conclusions.

INFORMATION. Worksheet is being sent to headquarters for review of authentic data or other type of information (e.g., food standards).

SPLIT. Sample has been split between laboratories and the worksheet of an examining laboratory is being sent to the home district.

ACTION. Legal or other regulatory action has been taken or appears warranted for the sample.

OTHER. A brief description is to be written for a sample that does not fit the categories described above or that needs more explanation.

This block may be used to enter "FDA-421" or "green card" when the entire sample is shipped by the laboratory to another laboratory.

DATE. The date the entries are made is noted.

SIGNATURE. The reviewing officer or clerk signs here.

The orange card must be attached to the front of the worksheet, and the analytical package is sent to the home district or headquarters unit specified under TO.

If the entire sample is shipped by one laboratory to another and only the shipping laboratory's green card remains, the orange card will be attached to the sample transmittal memo sent to the receiving laboratory for inclusion of the card with the latter's sample records. Under OTHER it must be specified that the green card remains for disposition authorization.

Inventory of sample storage areas may disclose old samples for which the status is unknown. Any inquiry into the status of an old sample must be in writing and under the signature of the laboratory director whose unit analyzed the sample. The laboratory director will route the inquiry to the apparent home district through the local compliance branch. The local compliance branch director will review this notification for information within the compliance branch that bears on the request before sending it forward to the home and/or other affected district(s).

The laboratory director will await response from the home district and the Sample Destruction Notices (SDN) before concurring in disposition. A memo from the home district may be substituted for the orange card SDN if all efforts to locate the card have failed.

Reasons for Disposition 4.4

The reasons for disposing of samples are on the reverse of the orange card. An authorized field reviewing officer will check the appropriate box at the time the SDN issues. When the SDN may issue depends on the actions described in the sections that follow.

If the home district indicates the sample is "NAI" (no action), the SDN may be issued immediately. If the sample is "split," reports on all portions must be received before issuing the SDN to all laboratories involved, provided all results are non-actionable.

If the examining laboratory indicates that the sample is NAI and the home district concurs (30-day grace period expired), a sample disposal date of 30 days from the date of district conclusion is set for NAI samples. The home district must reply within 30 days if it disagrees with the examining laboratory (district) NAI conclusion. If the home district does not respond during the grace period, the SDN may be issued when the disposition date is reached. Exceptions are as follows:

1. SDNs may be issued immediately for NAI pesticide and mycotoxin surveillance samples.

2. If the sample is split, the orange card is sent to the home district for disposal authorization.

3. For complaint samples, the disposition date is set 30 days from the date the complainant is notified by certified letter of results (or no analysis) and is

asked if the remaining sample should be returned. If no reply is received, the SDN may be issued when the disposal date is reached.

4. Headquarters laboratories will send the orange card with the worksheet, etc., to the home district for sample disposition instructions.

5. The examining laboratory indicates the sample is NAI and the home district does not concur. If the home district's review of the findings from an examining laboratory results in reversal of the NAI (no action) conclusion, the home district must immediately (within the 30-day grace period) request the examining laboratory to stop disposition of the reserve sample. This must be accomplished by a telephone call and confirmed in writing.

6. On receipt of the "hold" request, the laboratory or compliance branch will remove the orange card from the "awaiting disposition" file, complete block 16 of the card, and forward it to the home district.

7. Only the home district for the responsible firm has the authority to decide when official violative samples and investigational samples that support a violation may be destroyed.

Sample Disposition Notice

4.5

When it is time to dispose of the sample, the reason must be checked on the reverse of the orange card. Entries in block 17 must be completed and the orange card routed to the laboratory holding the sample.

On occasion the orange card may be lost. A memorandum from the home district compliance branch director authorizing disposition and the reason therefore will serve as a substitute for the orange card SDN. The sample custodian will attach the memo to the green card for filing in the CLOSED sample file.

Sample Destruction

4.6

Sample destruction must be carried out in a manner that assures destruction or denaturing of the entire reserve sample to the point that the material is rendered unusable. Immediate sample containers must be empty when placed in a waste receptacle. Methods such as incineration (in the proper locations), decharacterization, chemical destruction, land fill disposal, and autoclaving are among those to be used. The type of destruction will depend on the individual sample. **Proper safety precautions must be used.** Also, every consideration must be given to producing minimal environmental impact in the disposal process.

With the approval of the laboratory or compliance branch director, the reserve sample may be used for FDA purposes rather than destroyed (e.g., research, working standard, exhibit).

Sample destruction or other authorized disposition must be documented on the green card and, when appropriate, on the orange card.

Responsibility 4.6.1

Determining the method of destruction is the responsibility of the laboratory director and, when necessary, the local safety officer. The responsibility may be delegated to a senior analyst in specific situations.

Actual destruction will usually be made by the sample custodian under the general supervision of the immediate supervisor. Destruction of certain types of samples or sample portions stored in the laboratory may be made by an assigned analyst. The laboratory director must assure that destruction of controlled drugs (CR,/DEA) is witnessed.

Accountability 4.6.2

Destruction or other authorized disposition is the last step in accountability for the sample and must be documented on the SAR card. Entries on the Sample Accountability card are made by the sample custodian and/or the analyst who has been assigned by the laboratory supervisor to destroy the reserve sample.

When any portion of the reserve sample or the entire reserve sample is stored in the laboratory (block 14, OTHER), the Sample Disposition Notice must be routed to the laboratory supervisor. The supervisor will assign the SDN to an analyst with instructions for destruction of that portion of the sample specified on the orange card in block 14.

The analyst will remove the sample from storage and dispose of it according to procedures correct for the type of sample. The analyst will make the following entries in block 18 of the orange card:

Block 18A. **DATE DESTROYED.** The date the sample is destroyed is entered in this block.

Block 18B. **DESTRUCTION METHOD.** This block indicates the method of destruction. When necessary, details may be given on the back of the card.

Block 18C. **AMOUNT DESTROYED.** The amount of sample destroyed is noted here. This entry must agree with the amount shown in block 14, in Other Storage. When necessary, details may be given on the back of the card.

Block 18D. **BY WHOM.** The analyst initials this block. A witness will also place a signature near here when a witness is required.

Block 18E. **REASON.** The number preceding the box checked on the reverse of the orange card must be entered.

The completed orange card must be returned to the laboratory supervisor for review and routing to the sample custodian.

Before destroying a reserve sample stored in the sample storeroom, the sample custodian must receive the orange card SDN or a directive in writing authorizing him or her to destroy the sample.

Upon receipt of the orange card or memorandum authorizing disposition, the sample custodian will remove the green card from the PENDING DISPOSI-

TION file, and will remove the sample from storage and dispose of it according to established procedures and guidelines. The sample custodian will make the following entries in block 12 of the green card:

BLOCK 12A. DATE SDN. The date shown on the line captioned "DATE" in block 17 of the orange card or on the memo received must be entered.

BLOCK 12B. DATE DESTROYED. The date the sample is destroyed or disposed of for authorized FDA use and not prior to that time must be entered.

BLOCK 12C. DESTRUCTION METHOD. Method of destruction/disposition is entered here. When necessary, details may be given on the back of the card.

BLOCK 12D. AMOUNT DESTROYED. Amount of sample destroyed/disposed of must be indicated. This entry must agree with the amount shown on hand in block 11. When necessary, details may be given on the back of the card.

BLOCK 12E. BY WHOM. The initials of the sample custodian or individual who made the disposition are placed here. A witness will also place a signature near here when a witness is required.

BLOCK 12F. REASON. The number preceding the box checked on the reverse of the orange card must be entered.

When NO RESERVE is checked in block 14, the sample custodian will write "no reserve" under AMOUNT in block 11 of the green card and complete blocks 12A and E only.

The sample custodian is responsible for disposal of DEA samples. When the required storage time has elapsed, the sample custodian will remove the sample(s) for disposal. Any disposition must be witnessed by a designated supervisor. The method of disposal is entered on the green card. Both the sample custodian and the supervisor will sign the card. Both the green and orange cards, stapled together, will be filed in a CLOSED FDA/DEA file. These cards will be retained for two years. This requirement will cover the two-year inventory period required by DEA regulations. The compliance investigations division of DEA approves of this method of disposal and documentation in lieu of the individual clearances required by regulation Section 1307.21. This method will also satisfy HHS Audit Regulations.

Whenever questionable samples are encountered, the regional DEA director or local DEA agent must be consulted.