



US Environmental Protection Agency
Air and Radiation
Office of Transportation and Air Quality

Oxygenate Type Analysis 1995 RFG Survey Data

*% of Samples with Majority of Oxygen from: **

AREA	MTBE	Ethanol	ETBE	TAME	Combo/Other**
Atlantic City, NJ	97.96	1.02	0.00	1.02	0.00
Baltimore, MD	99.74	0.00	0.00	0.26	0.00
Boston-Worcester, MA	95.78	0.30	0.00	3.31	0.60
Chicago-Lake Co., IL, Gary, IN	17.11	82.89	0.00	0.00	0.00
Covington, KY	66.20	32.39	1.41	0.00	0.00
Dallas-Fort Worth, TX	87.17	0.00	2.81	0.00	10.02
Hartford, CT	99.27	0.49	0.00	0.24	0.00
Houston-Galveston, TX	99.56	0.00	0.00	0.22	0.22
Knox Co. and Lincoln Co., ME	100.00	0.00	0.00	0.00	0.00
Louisville, KY	57.71	24.00	17.14	0.00	1.14
Manchester, NH	99.43	0.00	0.00	0.57	0.00
Milwaukee-Racine, WI	16.09	82.59	1.32	0.00	0.00
NY-NJ-Long Is.-CT	98.62	1.38	0.00	0.00	0.00
Norfolk-Virginia Beach, VA	98.68	0.00	0.00	1.32	0.00
Phila.-Wilm, DE-Trenton, NJ	98.45	1.29	0.00	0.26	0.00
Portland, Me	100.00	0.00	0.00	0.00	0.00
Portsmouth-Dover, NH	100.00	0.00	0.00	0.00	0.00
Poughkeepsie, NY	98.96	1.04	0.00	0.00	0.00
Queen Anne Co.-Kent Co., MD	100.00	0.00	0.00	0.00	0.00
Rhode Island	92.73	2.73	0.00	4.55	0.00
Richmond, VA	100.00	0.00	0.00	0.00	0.00
Springfield-MA	96.98	2.11	0.00	0.91	0.00
Sussex County, DE	100.00	0.00	0.00	0.00	0.00
Washington, D.C.-area	99.65	0.35	0.00	0.00	0.00

*RFG Survey samples taken at retail gasoline stations. Categorization based on the oxygenate providing more than 50% by weight of total oxygen in a sample.

**The "Other" category is composed of samples containing combinations of oxygenates with no single oxygenate providing more than 50% of total oxygen.

***Summer (VOC-controlled) and winter survey data combined.



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1995 RFG SURVEYS Oxygenate Information

Average of Survey Averages

Survey Area	No. of samples	No. of surveys	Average * Oxygen wgt. %	Average oxygenate weight percentages *				Percent of total oxygen from each oxygenate *			
				MTBE wgt. %	Ethanol wgt. %	ETBE wgt. %	TAME wgt. %	MTBE O2	Ethanol O2	ETBE O2	TAME O2
Atlantic City, NJ	98	2	2.41	12.59	0.07	0.06	0.28	94.80%	1.10%	0.40%	1.80%
Baltimore, MD	392	17	2.20	11.19	0.00	0.11	0.67	92.10%	0.00%	0.80%	4.80%
Boston-Worcester, MA	332	4	2.16	10.00	0.02	0.03	1.80	84.10%	0.30%	0.20%	13.10%
Chicago-Lake Co., IL, Gary, IN	460	17	2.85	2.05	6.97	0.01	0.02	13.00%	85.10%	0.00%	0.10%
Covington, KY	70	2	2.00	7.56	1.58	0.20	0.01	68.50%	27.40%	1.60%	0.10%
Dallas-Fort Worth, TX	499	6	2.03	9.16	0.03	0.91	1.01	81.90%	0.40%	7.10%	7.80%
Hartford, CT	411	17	2.17	10.50	0.12	0.06	0.99	88.00%	1.90%	0.50%	7.10%
Houston-Galveston, TX	468	17	2.09	10.39	0.00	0.02	0.88	90.10%	0.00%	0.10%	6.60%
Knox Co. and Lincoln Co., ME	41	2	2.18	11.78	0.00	0.01	0.02	98.00%	0.00%	0.10%	0.10%
Louisville, KY	175	2	2.01	5.57	1.49	2.48	0.11	50.30%	25.60%	19.30%	0.90%
Manchester, NH	174	4	2.10	10.30	0.00	0.02	1.15	89.20%	0.00%	0.20%	8.60%
Milwaukee-Racine, WI	388	17	2.81	2.06	6.65	0.40	0.10	13.30%	82.20%	2.20%	0.50%
NY-NJ-Long Is.-CT	434	18	2.37	11.91	0.23	0.06	0.41	91.20%	3.30%	0.40%	2.70%
Norfolk-Virginia Beach, VA	151	2	2.05	9.92	0.00	0.36	0.90	87.70%	0.00%	2.70%	6.80%
Phila.-Wilm, DE-Trenton, NJ	388	16	2.19	10.95	0.25	0.05	0.34	90.80%	3.90%	0.40%	2.50%
Portland, Me	116	2	2.21	11.92	0.00	0.00	0.06	97.70%	0.00%	0.00%	0.40%
Portsmouth-Dover, NH	71	2	2.11	10.93	0.00	0.04	0.54	93.80%	0.00%	0.30%	4.00%
Poughkeepsie, NY	96	2	2.27	11.89	0.06	0.02	0.26	95.10%	1.00%	0.10%	1.80%
Queen Anne Co.-Kent Co., MD	73	2	2.17	10.77	0.00	0.01	0.98	90.00%	0.00%	0.00%	7.10%
Rhode Island	110	2	2.25	10.83	0.12	0.01	1.15	87.30%	1.90%	0.00%	8.00%
Richmond, VA	137	2	2.14	10.49	0.00	0.02	1.08	88.90%	0.00%	0.10%	7.90%
Springfield-MA	331	3	2.15	10.24	0.12	0.05	1.23	86.30%	2.00%	0.30%	8.90%
Sussex County, DE	73	2	2.10	9.70	0.00	0.05	1.63	83.70%	0.00%	0.30%	12.10%
Washington, D.C.-area	288	4	2.28	11.15	0.02	0.04	1.05	88.90%	0.30%	0.20%	7.20%

* e.g. for Atlantic City, NJ the 'average' gallon had 2.41 wgt % oxygen. It is 12.59% MTBE by wgt., therefore about 94.8 % of its oxygen comes from MTBE since the oxygen mass fraction in MTBE is 0.1815.



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Oxygenate Type Analysis 1996 RFG Survey Data

*% of Samples with Majority of Oxygen from: **

AREA	MTBE	Ethanol	ETBE	TAME	Combo/Other**
Atlantic City, NJ	98.64	0.00	0.00	0.68	0.68
Baltimore, MD	97.42	0.00	0.32	1.94	0.32
Boston-Worcester, MA	95.63	1.31	0.00	3.06	0.00
CT - remainder	99.35	0.65	0.00	0.00	0.00
Chicago-Lake Co., IL, Gary, IN	6.05	93.95	0.00	0.00	0.00
Dallas-Fort Worth, TX	93.89	0.00	0.00	4.20	2.29
Hartford, CT	98.99	1.01	0.00	0.00	0.00
Houston-Galveston, TX	95.00	0.00	0.00	4.06	0.94
Los Angeles, CA	100.00	0.00	0.00	0.00	0.00
Louisville, KY	75.58	24.42	0.00	0.00	0.00
Milwaukee-Racine, WI	3.02	96.64	0.00	0.00	0.34
NY-NJ-Long Is.-CT	99.70	0.30	0.00	0.00	0.00
Norfolk-Virginia Beach, VA	100.00	0.00	0.00	0.00	0.00
Phila.-Wilm, DE-Trenton, NJ	97.99	0.57	0.00	0.57	0.86
Portland, ME	100.00	0.00	0.00	0.00	0.00
Portsmouth-Dover, NH	99.03	0.97	0.00	0.00	0.00
Rhode Island	97.76	1.79	0.00	0.45	0.00
Richmond, VA	100.00	0.00	0.00	0.00	0.00
Sacramento, CA	100.00	0.00	0.00	0.00	0.00
San Diego, CA	100.00	0.00	0.00	0.00	0.00
Springfield-MA	97.79	1.66	0.00	0.00	0.55
Washington, D.C.-area	99.19	0.00	0.00	0.41	0.41

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***Summer (VOC-controlled) and winter survey data combined.



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1996 RFG SURVEYS Oxygenate Information

Average of Survey Averages

Survey Area	No. of samples	No. of surveys	Average * Oxygen wgt. %	Average oxygenate weight percentages *				Percent of total oxygen from each oxygenate *			
				MTBE wgt. %	Ethanol wgt. %	ETBE wgt. %	TAME wgt. %	MTBE O2	Ethanol O2	ETBE O2	TAME O2
Atlantic City, NJ	147	4	1.89	9.83	0.00	0.02	0.37	94.40%	0.00%	0.20%	3.10%
Baltimore, MD	310	12	1.85	8.55	0.00	0.16	1.50	84.00%	0.00%	1.40%	12.70%
Boston-Worcester, MA	229	6	2.02	9.54	0.14	0.01	1.32	85.60%	2.50%	0.10%	10.20%
CT – remainder	154	5	2.03	10.07	0.07	0.01	0.91	90.10%	1.10%	0.10%	7.00%
Chicago-Lake Co., IL, Gary, IN	347	11	3.44	0.60	9.50	0.01	0.00	3.20%	96.00%	0.00%	0.00%
Dallas-Fort Worth, TX	262	6	1.88	8.90	0.00	0.03	1.37	85.80%	0.00%	0.20%	11.40%
Hartford, CT	298	11	2.05	10.03	0.19	0.02	0.74	88.90%	3.20%	0.10%	5.70%
Houston-Galveston, TX	320	12	1.85	8.68	0.00	0.02	1.42	85.20%	0.00%	0.10%	12.10%
Los Angeles, CA	90	2	2.05	10.84	0.00	0.00	0.32	95.80%	0.10%	0.00%	2.40%
Louisville, KY	258	6	2.01	7.78	1.54	0.02	0.12	70.40%	26.70%	0.20%	0.90%
Milwaukee-Racine, WI	298	11	3.14	0.29	8.79	0.05	0.01	1.70%	97.00%	0.30%	0.10%
NY-NJ-Long Is.-CT	338	11	2.23	11.57	0.05	0.01	0.43	94.10%	0.80%	0.10%	3.00%
Norfolk-Virginia Beach, VA	178	5	1.87	8.81	0.00	0.11	1.35	85.70%	0.00%	0.90%	11.30%
Phila.-Wilm, DE-Trenton, NJ	349	12	1.91	9.60	0.06	0.01	0.69	91.00%	1.00%	0.10%	5.60%
Portland, ME	134	4	2.10	11.17	0.00	0.03	0.26	96.80%	0.00%	0.20%	1.90%
Portsmouth-Dover, NH	103	4	1.99	10.37	0.08	0.00	0.38	94.50%	1.30%	0.00%	3.00%
Rhode Island	223	5	2.01	9.77	0.12	0.01	0.95	88.00%	2.10%	0.10%	7.40%
Richmond, VA	143	4	1.85	8.68	0.00	0.02	1.45	85.00%	0.00%	0.10%	12.20%
Sacramento, CA	88	2	2.11	11.55	0.00	0.00	0.02	99.20%	0.00%	0.00%	0.20%
San Diego, CA	86	2	2.02	10.55	0.00	0.00	0.54	94.60%	0.00%	0.00%	4.10%
Springfield-MA	181	5	2.05	10.12	0.15	0.00	0.79	89.80%	2.60%	0.00%	6.00%
Washington, D.C.-area	246	6	1.90	9.01	0.00	0.05	1.26	86.30%	0.00%	0.40%	10.40%

* e.g. for Atlantic City, NJ the 'average' gallon had 1.89 wgt % oxygen. It is 9.83% MTBE by wgt., therefore about 94.4 % of its oxygen comes from MTBE since the oxygen mass fraction in MTBE is 0.1815.



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Oxygenate Type Analysis 1997 RFG Survey Data

*% of Samples with Majority of Oxygen from: **

AREA	MTBE	Ethanol	ETBE	TAME	Combo/Other**
Atlantic City, NJ	97.47	1.27	0.00	1.27	0.00
Baltimore, MD	98.94	0.00	0.00	1.06	0.00
Boston-Worcester, MA	95.93	1.74	0.00	2.33	0.00
Chicago-Lake Co., IL, Gary, IN	5.84	94.16	0.00	0.00	0.00
Dallas-Fort Worth, TX	100.00	0.00	0.00	0.00	0.00
Hartford, CT	98.44	1.56	0.00	0.00	0.00
Houston-Galveston, TX	92.73	0.00	0.00	6.57	0.69
Los Angeles, CA	100.00	0.00	0.00	0.00	0.00
Louisville, KY	74.75	25.25	0.00	0.00	0.00
Manchester, NH	100.00	0.00	0.00	0.00	0.00
Milwaukee-Racine, WI	4.60	95.40	0.00	0.00	0.00
NY-NJ-Long Is.-CT	98.93	1.07	0.00	0.00	0.00
Norfolk-Virginia Beach, VA	100.00	0.00	0.00	0.00	0.00
Phila.-Wilm, DE-Trenton, NJ	98.69	0.65	0.00	0.98	0.00
Phoenix, AZ	49.18	50.82	0.00	0.00	0.00
Portland, ME	100.00	0.00	0.00	0.00	0.00
Poughkeepsie, NY	97.76	2.24	0.00	0.00	0.00
Rhode Island	98.82	1.18	0.00	0.00	0.00
Richmond, VA	100.00	0.00	0.00	0.00	0.00
Sacramento, CA	100.00	0.00	0.00	0.00	0.00
San Diego, CA	100.00	0.00	0.00	0.00	0.00
Springfield-MA	98.20	1.80	0.00	0.00	0.00
Washington, D.C.-area	98.07	0.00	0.00	1.54	0.39

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***Summer (VOC-controlled) and winter survey data combined.



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1997 RFG SURVEYS Oxygenate Information

Average of Survey Averages

Survey Area	No. of samples	No. of surveys	Average * Oxygen wgt. %	Average oxygenate weight percentages *				Percent of total oxygen from each oxygenate *			
				MTBE wgt. %	Ethanol wgt. %	ETBE wgt. %	TAME wgt. %	MTBE O2	Ethanol O2	ETBE O2	TAME O2
Atlantic City, NJ	158	4	2.09	11.02	0.07	0.00	0.30	95.50%	1.20%	0.00%	2.20%
Baltimore, MD	282	9	1.94	9.39	0.00	0.00	1.34	88.00%	0.00%	0.00%	10.80%
Boston-Worcester, MA	172	4	2.06	9.95	0.05	0.00	1.36	87.80%	0.90%	0.00%	10.40%
Chicago-Lake Co., IL, Gary, IN	308	9	3.49	0.57	9.76	0.00	0.01	3.00%	97.00%	0.00%	0.00%
Dallas-Fort Worth, TX	260	6	1.96	9.91	0.00	0.00	0.89	91.90%	0.00%	0.00%	7.10%
Hartford, CT	256	9	2.09	10.31	0.23	0.00	0.72	89.70%	3.80%	0.00%	5.40%
Houston-Galveston, TX	289	9	1.94	9.31	0.00	0.00	1.38	87.20%	0.00%	0.00%	11.10%
Los Angeles, CA	178	4	2.04	10.79	0.00	0.04	0.29	96.20%	0.00%	0.30%	2.20%
Louisville, KY	198	5	2.23	7.77	2.33	0.00	0.00	63.20%	36.30%	0.00%	0.00%
Manchester, NH	114	4	2.01	10.37	0.00	0.00	0.74	93.50%	0.00%	0.00%	5.70%
Milwaukee-Racine, WI	239	8	2.97	0.47	8.30	0.00	0.00	2.90%	97.10%	0.00%	0.00%
NY-NJ-Long Is.-CT	280	9	2.35	12.14	0.15	0.00	0.44	93.70%	2.30%	0.00%	2.90%
Norfolk-Virginia Beach, VA	193	5	1.91	9.47	0.00	0.00	1.10	89.80%	0.00%	0.00%	9.00%
Phila.-Wilm, DE-Trenton, NJ	306	9	2.05	10.43	0.06	0.00	0.74	92.20%	1.10%	0.00%	5.60%
Phoenix, AZ	183	4	2.73	5.08	5.09	0.00	0.23	33.80%	64.80%	0.00%	1.30%
Portland, ME	148	4	2.10	11.37	0.00	0.00	0.17	98.10%	0.00%	0.00%	1.30%
Poughkeepsie, NY	134	4	2.24	11.51	0.16	0.00	0.51	93.20%	2.50%	0.00%	3.60%
Rhode Island	169	4	1.95	9.71	0.07	0.00	0.95	90.30%	1.20%	0.00%	7.60%
Richmond, VA	187	5	1.92	9.17	0.00	0.00	1.47	86.70%	0.00%	0.00%	12.00%
Sacramento, CA	166	4	2.03	10.85	0.00	0.00	0.37	96.90%	0.00%	0.00%	2.90%
San Diego, CA	170	4	2.09	10.87	0.00	0.06	0.58	94.50%	0.00%	0.40%	4.40%
Springfield-MA	167	4	2.06	10.40	0.10	0.00	0.67	91.70%	1.70%	0.00%	5.10%
Washington, D.C.-area	259	6	1.96	9.65	0.00	0.00	1.20	89.20%	0.00%	0.00%	9.60%

* e.g. for Atlantic City, NJ the 'average' gallon had 2.09 wgt % oxygen. It is 11.02% MTBE by wgt., therefore about 95.5 % of its oxygen comes from MTBE since the oxygen mass fraction in MTBE is 0.1815.



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OXYGENATE TYPE ANALYSIS-Summer 1998 RFG Survey Data

PERCENT OF SAMPLES WITH MAJORITY OF OXYGEN FROM:*

AREA	MTBE	Ethanol	ETBE	TAME	Combo/Other**
Baltimore, MD	99.37	0.00	0.00	0.63	0.00
Boston-Worcester, MA	99.85	0.00	0.00	0.15	0.00
CT - remainder	100.00	0.00	0.00	0.00	0.00
Chicago-Lake Co., IL, Gary, IN	4.23	95.77	0.00	0.00	0.00
Covington, KY	48.61	51.39	0.00	0.00	0.00
Dallas-Fort Worth, TX	99.25	0.00	0.00	0.15	0.60
Hartford, CT	99.91	0.09	0.00	0.00	0.00
Houston-Galveston, TX	98.84	0.14	0.00	1.02	0.00
Lewiston-Auburn, ME	100.00	0.00	0.00	0.00	0.00
Los Angeles, CA	100.00	0.00	0.00	0.00	0.00
Louisville, KY	70.54	29.46	0.00	0.00	0.00
Manchester, NH	100.00	0.00	0.00	0.00	0.00
Milwaukee-Racine, WI	3.45	96.55	0.00	0.00	0.00
NY-NJ-Long Is.-CT	100.00	0.00	0.00	0.00	0.00
Norfolk-Virginia Beach, VA	99.81	0.00	0.00	0.19	0.00
Phila.-Wilm, DE-Trenton, NJ	99.93	0.07	0.00	0.00	0.00
Portland, ME	100.00	0.00	0.00	0.00	0.00
Portsmouth-Dover, NH	100.00	0.00	0.00	0.00	0.00
Poughkeepsie, NY	100.00	0.00	0.00	0.00	0.00
Rhode Island	97.87	0.00	0.00	2.13	0.00
Richmond, VA	100.00	0.00	0.00	0.00	0.00
Sacramento, CA	100.00	0.00	0.00	0.00	0.00
San Diego, CA	100.00	0.00	0.00	0.00	0.00
Springfield-MA	100.00	0.00	0.00	0.00	0.00
Washington, D.C.-area	100.00	0.00	0.00	0.00	0.00

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				MTBE wgt. %	Ethanol wgt. %	ETBE wgt. %	TAME wgt. %	MTBE O2	Ethanol O2	ETBE O2	TAME O2
Baltimore, MD	1118	6	1.96	9.55	0.00	0.00	1.43	88.3%	0.0%	0.0%	11.2%
Boston-Worcester, MA	652	3	2.08	10.23	0.00	0.00	1.36	89.4%	0.0%	0.0%	10.1%
CT - remainder	249	2	2.01	10.13	0.00	0.00	1.00	91.5%	0.0%	0.0%	8.0%
Chicago-Lake Co., IL, Gary, IN	1866	8	3.46	0.43	9.74	0.00	0.00	2.3%	97.7%	0.0%	0.0%
Covington, KY	144	2	2.70	5.63	4.83	0.00	0.00	37.8%	62.2%	0.0%	0.0%
Dallas-Fort Worth, TX	666	3	2.07	9.87	0.00	0.00	1.73	86.5%	0.0%	0.0%	13.0%
Hartford, CT	1120	6	2.04	10.38	0.01	0.00	0.87	92.2%	0.0%	0.0%	6.9%
Houston-Galveston, TX	1470	7	2.04	10.45	0.01	0.00	0.81	93.1%	0.0%	0.0%	6.4%
Lewiston-Auburn, ME	132	2	2.22	11.69	0.00	0.00	0.52	95.5%	0.0%	0.0%	3.6%
Los Angeles, CA	78	2	2.04	11.14	0.00	0.00	0.06	99.0%	0.0%	0.0%	0.5%
Louisville, KY	241	2	2.36	7.18	3.01	0.00	0.00	55.1%	44.1%	0.0%	0.0%
Manchester, NH	198	2	2.11	11.02	0.00	0.00	0.63	94.8%	0.0%	0.0%	4.7%
Milwaukee-Racine, WI	1130	6	3.45	0.34	9.76	0.00	0.00	1.7%	98.3%	0.0%	0.0%
NY-NJ-Long Is.-CT	1589	7	2.03	10.65	0.00	0.00	0.52	95.1%	0.0%	0.0%	3.9%
Norfolk-Virginia Beach, VA	513	3	1.97	9.68	0.00	0.00	1.29	89.3%	0.0%	0.0%	10.2%
Phila.-Wilm, DE-Trenton, NJ	1493	7	2.13	11.15	0.01	0.00	0.54	94.8%	0.0%	0.0%	4.2%
Portland, ME	250	2	2.18	11.58	0.00	0.00	0.36	96.3%	0.0%	0.0%	2.8%
Portsmouth-Dover, NH	145	2	2.15	11.26	0.00	0.00	0.56	94.9%	0.0%	0.0%	4.2%
Poughkeepsie, NY	208	2	2.02	10.76	0.00	0.00	0.39	96.5%	0.0%	0.0%	3.0%
Rhode Island	329	2	2.08	10.32	0.00	0.00	1.17	89.9%	0.0%	0.0%	8.7%
Richmond, VA	311	2	1.95	9.68	0.00	0.00	1.12	90.3%	0.0%	0.0%	9.2%
Sacramento, CA	75	2	2.11	10.99	0.00	0.00	0.67	94.3%	0.0%	0.0%	4.7%
San Diego, CA	78	2	2.06	10.99	0.00	0.00	0.21	97.1%	0.0%	0.0%	1.5%
Springfield-MA	316	2	2.08	10.62	0.00	0.00	0.80	92.8%	0.0%	0.0%	6.3%
Washington, D.C.-area	612	3	1.99	9.85	0.00	0.00	1.16	89.9%	0.0%	0.0%	9.0%

* e.g. for Baltimore, MD the 'average' gallon had 1.96 wgt % oxygen. It is 9.55% MTBE by wgt., therefore about 88.3% of its oxygen comes from MTBE since the oxygen mass fraction in MTBE is 0.1815.



US Environmental Protection Agency
Air and Radiation
Office of Transportation and Air Quality

OXYGENATE TYPE ANALYSIS-Winter 1998 RFG Survey Data

PERCENT OF SAMPLES WITH MAJORITY OF OXYGEN FROM:*

AREA	MTBE	Ethanol	ETBE	TAME	Combo/Other**
Baltimore, MD	100.00	0.00	0.00	0.00	0.00
Boston-Worcester, MA	94.84	4.23	0.00	0.70	0.23
CT - remainder	96.92	3.08	0.00	0.00	0.00
Chicago-Lake Co., IL, Gary, IN	0.43	99.57	0.00	0.00	0.00
Covington, KY	23.68	76.32	0.00	0.00	0.00
Dallas-Fort Worth, TX	92.52	0.00	0.00	2.49	4.98
Hartford, CT	95.87	4.13	0.00	0.00	0.00
Houston-Galveston, TX	97.76	0.00	0.00	2.24	0.00
Lewiston-Auburn, ME	100.00	0.00	0.00	0.00	0.00
Los Angeles, CA	100.00	0.00	0.00	0.00	0.00
Louisville, KY	74.44	25.56	0.00	0.00	0.00
Manchester, NH	100.00	0.00	0.00	0.00	0.00
Milwaukee-Racine, WI	0.00	100.00	0.00	0.00	0.00
NY-NJ-Long Is.-CT	96.49	3.51	0.00	0.00	0.00
Norfolk-Virginia Beach, VA	100.00	0.00	0.00	0.00	0.00
Phila.-Wilm, DE-Trenton, NJ	98.63	0.91	0.00	0.46	0.00
Portland, ME	100.00	0.00	0.00	0.00	0.00
Portsmouth-Dover, NH	100.00	0.00	0.00	0.00	0.00
Poughkeepsie, NY	95.05	4.95	0.00	0.00	0.00
Rhode Island	96.05	3.95	0.00	0.00	0.00
Richmond, VA	100.00	0.00	0.00	0.00	0.00
Sacramento, CA	100.00	0.00	0.00	0.00	0.00
San Diego, CA	100.00	0.00	0.00	0.00	0.00
Springfield-MA	96.77	3.23	0.00	0.00	0.00
Washington, D.C.-area	100.00	0.00	0.00	0.00	0.00

*RFG Survey samples taken at retail gasoline stations. Categorization based on the oxygenate providing more than 50% by weight of total oxygen in a sample.

**The "Other" category is composed of samples containing combinations of oxygenates with no single oxygenate providing more than 50% of total oxygen.



**US Environmental Protection Agency
Air and Radiation
Office of Transportation and Air Quality**

1998 Winter RFG SURVEYS Oxygenate Information

Average of Survey Averages

Survey Area	No. of samples	No. of surveys	Average * Oxygen wgt. %	Average oxygenate weight percentages *				Percent of total oxygen from each oxygenate *			
				MTBE wgt. %	Ethanol wgt. %	ETBE wgt. %	TAME wgt. %	MTBE O2	Ethanol O2	ETBE O2	TAME O2
Baltimore, MD	238	5	1.90	9.71	0.00	0.00	0.88	92.6%	0.0%	0.0%	7.4%
Boston-Worcester, MA	426	4	2.06	9.57	0.18	0.00	1.64	84.5%	2.9%	0.0%	12.6%
CT - remainder	130	2	2.03	9.67	0.23	0.00	1.11	86.7%	3.9%	0.0%	8.4%
Chicago-Lake Co., IL, Gary, IN	230	5	3.68	0.07	10.56	0.00	0.00	0.3%	99.7%	0.0%	0.0%
Covington, KY	76	2	3.32	3.28	7.85	0.00	0.00	18.1%	82.2%	0.0%	0.0%
Dallas-Fort Worth, TX	321	3	1.97	9.61	0.00	0.00	1.36	88.3%	0.0%	0.0%	10.7%
Hartford, CT	242	5	2.06	9.79	0.35	0.00	0.98	86.4%	5.8%	0.0%	7.3%
Houston-Galveston, TX	223	4	1.97	10.02	0.00	0.00	0.91	92.4%	0.0%	0.0%	7.1%
Lewiston-Auburn, ME	75	2	2.26	11.76	0.00	0.00	0.77	94.2%	0.0%	0.0%	5.3%
Los Angeles, CA	78	2	2.15	11.37	0.00	0.13	0.07	95.8%	0.0%	0.9%	0.5%
Louisville, KY	180	3	2.16	7.93	2.01	0.00	0.00	66.7%	32.4%	0.0%	0.0%
Manchester, NH	97	2	2.10	10.07	0.00	0.00	1.62	87.1%	0.0%	0.0%	11.9%
Milwaukee-Racine, WI	237	5	3.53	0.01	10.16	0.00	0.00	0.0%	100.0%	0.0%	0.0%
NY-NJ-Long Is.-CT	228	4	2.70	13.93	0.29	0.00	0.39	93.7%	3.7%	0.0%	2.2%
Norfolk-Virginia Beach, VA	251	3	1.87	9.47	0.00	0.00	0.91	92.0%	0.0%	0.0%	7.5%
Phila.-Wilm, DE-Trenton, NJ	219	4	2.04	10.68	0.05	0.00	0.43	95.1%	1.0%	0.0%	3.4%
Portland, ME	131	2	2.26	11.73	0.00	0.00	0.79	94.2%	0.0%	0.0%	5.3%
Portsmouth-Dover, NH	79	2	2.15	11.29	0.00	0.00	0.63	95.3%	0.0%	0.0%	4.7%
Poughkeepsie, NY	101	2	2.52	12.50	0.31	0.00	0.84	90.1%	4.4%	0.0%	5.2%
Rhode Island	253	3	2.05	10.12	0.25	0.00	0.71	89.8%	4.4%	0.0%	5.4%
Richmond, VA	238	3	1.91	9.81	0.00	0.00	0.81	93.2%	0.0%	0.0%	6.8%
Sacramento, CA	74	2	2.13	11.25	0.00	0.00	0.44	95.8%	0.0%	0.0%	3.3%
San Diego, CA	76	2	2.14	11.51	0.00	0.00	0.10	97.7%	0.0%	0.0%	0.9%
Springfield-MA	155	2	2.09	9.95	0.21	0.00	1.22	86.6%	3.3%	0.0%	9.1%
Washington, D.C.-area	306	3	1.91	9.58	0.00	0.00	1.05	91.1%	0.0%	0.0%	8.4%

* e.g. for Baltimore, MD the 'average' gallon had 1.90 wgt % oxygen. It is 9.71% MTBE by wgt., therefore about 92.6% of its oxygen comes from MTBE since the oxygen mass fraction in MTBE is 0.1815.



US Environmental Protection Agency
Air and Radiation
Office of Transportation and Air Quality

OXYGENATE TYPE ANALYSIS-Summer 1999 RFG Survey Data

PERCENT OF SAMPLES WITH MAJORITY OF OXYGEN FROM:*

AREA	MTBE	Ethanol	ETBE	TAME	Combo/Other**
Atlantic City, NJ	100.00	0.00	0.00	0.00	0.00
Baltimore, MD	99.45	0.09	0.00	0.46	0.00
Boston-Worcester, MA	96.51	0.00	0.00	3.49	0.00
Chicago-Lake Co., IL, Gary, IN	0.00	100.00	0.00	0.00	0.00
Covington, KY	22.53	77.47	0.00	0.00	0.00
Dallas-Fort Worth, TX	100.00	0.00	0.00	0.00	0.00
Hartford, CT	99.15	0.00	0.00	0.85	0.00
Houston-Galveston, TX	97.69	0.00	0.00	1.82	0.49
Los Angeles, CA	100.00	0.00	0.00	0.00	0.00
Louisville, KY	76.25	23.75	0.00	0.00	0.00
Manchester, NH	100.00	0.00	0.00	0.00	0.00
Milwaukee-Racine, WI	0.00	100.00	0.00	0.00	0.00
NY-NJ-Long Is.-CT	100.00	0.00	0.00	0.00	0.00
Norfolk-Virginia Beach, VA	100.00	0.00	0.00	0.00	0.00
Phila.-Wilm, DE-Trenton, NJ	100.00	0.00	0.00	0.00	0.00
Portsmouth-Dover, NH	100.00	0.00	0.00	0.00	0.00
Poughkeepsie, NY	100.00	0.00	0.00	0.00	0.00
Rhode Island	100.00	0.00	0.00	0.00	0.00
Richmond, VA	100.00	0.00	0.00	0.00	0.00
Sacramento Metro, CA	100.00	0.00	0.00	0.00	0.00
San Diego, CA	100.00	0.00	0.00	0.00	0.00
Springfield, MA	98.74	0.00	0.00	1.26	0.00
St Louis, MO	80.34	19.66	0.00	0.00	0.00
Sussex County, DE	100.00	0.00	0.00	0.00	0.00
Warren County, NJ	100.00	0.00	0.00	0.00	0.00
Washington, D.C.-area	100.00	0.00	0.00	0.00	0.00

*RFG Survey samples taken at retail gasoline stations. Categorization based on the oxygenate providing more than 50% by weight of total oxygen in a sample.

**The "Other" category is composed of samples containing combinations of oxygenates with no single oxygenate providing more than 50% of total oxygen.



**US Environmental Protection Agency
Air and Radiation
Office of Transportation and Air Quality**

1999 Summer RFG SURVEYS Oxygenate Information

Average of Survey Averages

Survey Area	No. of samples	No. of surveys	Average * Oxygen wgt. %	Average oxygenate weight percentages *				Percent of total oxygen from each oxygenate *			
				MTBE wgt. %	Ethanol wgt. %	ETBE wgt. %	TAME wgt. %	MTBE O2	Ethanol O2	ETBE O2	TAME O2
Atlantic City, NJ	167	2	2.14	11.44	0.00	0.00	0.36	97.2%	0.0%	0.0%	2.8%
Baltimore, MD	1095	6	1.99	9.51	0.01	0.00	1.66	86.9%	0.0%	0.0%	13.1%
Boston-Worchester, MA	601	3	2.01	9.52	0.00	0.00	1.76	86.1%	0.0%	0.0%	13.9%
Chicago-Lake Co., IL, Gary, IN	1767	8	3.54	0.00	10.21	0.00	0.00	0.0%	100.0%	0.0%	0.0%
Covington, KY	182	2	3.05	2.52	7.46	0.00	0.01	15.1%	84.9%	0.0%	0.0%
Dallas-Fort Worth, TX	420	2	2.01	10.31	0.00	0.00	0.80	93.0%	0.0%	0.0%	6.5%
Hartford, CT	1289	7	2.02	9.08	0.00	0.00	2.36	81.7%	0.0%	0.0%	18.3%
Houston-Galveston, TX	1429	7	2.00	10.26	0.00	0.00	0.84	93.0%	0.0%	0.0%	6.5%
Los Angeles, CA	76	2	2.20	11.94	0.00	0.00	0.19	98.6%	0.0%	0.0%	1.4%
Louisville, KY	299	2	2.27	7.81	2.40	0.00	0.05	62.6%	36.6%	0.0%	0.4%
Manchester, NH	210	2	1.96	10.23	0.00	0.00	0.60	94.9%	0.0%	0.0%	4.6%
Milwaukee-Racine, WI	1254	7	3.51	0.00	10.11	0.00	0.00	0.0%	100.0%	0.0%	0.0%
NY-NJ-Long Is.-CT	1502	7	2.02	10.67	0.00	0.00	0.45	96.0%	0.0%	0.0%	3.5%
Norfolk-Virginia Beach, VA	326	2	2.03	9.96	0.00	0.00	1.40	89.2%	0.0%	0.0%	10.8%
Phila.-Wilm, DE-Trenton, NJ	1555	8	2.12	11.28	0.00	0.00	0.38	96.7%	0.0%	0.0%	2.8%
Portsmouth-Dover, NH	135	2	1.98	10.56	0.00	0.00	0.36	97.0%	0.0%	0.0%	3.0%
Poughkeepsie, NY	267	2	2.03	10.43	0.00	0.00	0.83	93.1%	0.0%	0.0%	6.4%
Rhode Island	310	2	2.07	9.95	0.00	0.00	1.62	87.4%	0.0%	0.0%	12.1%
Richmond, VA	311	2	2.00	9.72	0.00	0.00	1.41	88.0%	0.0%	0.0%	11.0%
Sacramento Metro, CA	70	2	2.13	11.54	0.00	0.00	0.23	98.1%	0.0%	0.0%	1.9%
San Diego, CA	77	2	2.19	11.89	0.00	0.00	0.17	98.6%	0.0%	0.0%	1.4%
Springfield, MA	317	2	2.08	9.68	0.00	0.00	1.94	84.6%	0.0%	0.0%	14.4%
St Louis, MO	351	2	2.22	7.91	2.00	0.00	0.55	64.9%	31.1%	0.0%	4.1%
Sussex County, DE	166	2	1.98	8.05	0.00	0.00	3.21	73.7%	0.0%	0.0%	25.3%
Warren County, NJ	86	2	2.04	10.67	0.00	0.00	0.53	95.1%	0.0%	0.0%	3.9%
Washington, D.C.-area	604	3	2.03	9.59	0.00	0.00	1.75	85.7%	0.0%	0.0%	13.3%

* e.g. for Atlantic City, NJ the 'average' gallon had 2.14 wgt % oxygen. It is 11.44% MTBE by wgt., therefore about 97.2% of its oxygen comes from MTBE since the oxygen mass fraction in MTBE is 0.1815.



US Environmental Protection Agency
Air and Radiation
Office of Transportation and Air Quality

OXYGENATE TYPE ANALYSIS-Winter 1999 RFG Survey Data

PERCENT OF SAMPLES WITH MAJORITY OF OXYGEN FROM:*

AREA	MTBE	Ethanol	ETBE	TAME	Combo/Other**
Atlantic City, NJ	96.84	2.11	0.00	1.05	0.00
Baltimore, MD	99.44	0.00	0.00	0.56	0.00
Boston-Worcester, MA	91.67	4.41	0.00	3.92	0.00
Chicago-Lake Co., IL, Gary, IN	0.00	100.00	0.00	0.00	0.00
Covington, KY	25.51	74.49	0.00	0.00	0.00
Dallas-Fort Worth, TX	94.15	0.00	0.00	5.85	0.00
Hartford, CT	95.00	4.00	0.00	1.00	0.00
Houston-Galveston, TX	99.53	0.00	0.00	0.47	0.00
Los Angeles, CA	100.00	0.00	0.00	0.00	0.00
Louisville, KY	72.61	27.39	0.00	0.00	0.00
Manchester, NH	99.16	0.00	0.00	0.84	0.00
Milwaukee-Racine, WI	0.00	100.00	0.00	0.00	0.00
NY-NJ-Long Is.-CT	98.14	1.86	0.00	0.00	0.00
Norfolk-Virginia Beach, VA	100.00	0.00	0.00	0.00	0.00
Phila.-Wilm, DE-Trenton, NJ	98.55	1.45	0.00	0.00	0.00
Portsmouth-Dover, NH	100.00	0.00	0.00	0.00	0.00
Poughkeepsie, NY	95.14	4.86	0.00	0.00	0.00
Rhode Island	97.52	2.48	0.00	0.00	0.00
Richmond, VA	100.00	0.00	0.00	0.00	0.00
Sacramento Metro, CA	100.00	0.00	0.00	0.00	0.00
San Diego, CA	100.00	0.00	0.00	0.00	0.00
Springfield, MA	95.83	4.17	0.00	0.00	0.00
St Louis, MO	54.95	45.05	0.00	0.00	0.00
Sussex County, DE	100.00	0.00	0.00	0.00	0.00
Warren County, NJ	100.00	0.00	0.00	0.00	0.00
Washington, D.C.-area	100.00	0.00	0.00	0.00	0.00

*RFG Survey samples taken at retail gasoline stations. Categorization based on the oxygenate providing more than 50% by weight of total oxygen in a sample.

**The "Other" category is composed of samples containing combinations of oxygenates with no single oxygenate providing more than 50% of total oxygen.



**US Environmental Protection Agency
Air and Radiation
Office of Transportation and Air Quality**

1999 Winter RFG SURVEYS Oxygenate Information

Average of Survey Averages

Survey Area	No. of samples	No. of surveys	Average * Oxygen wgt. %	Average oxygenate weight percentages *				Percent of total oxygen from each oxygenate *			
				MTBE wgt. %	Ethanol wgt. %	ETBE wgt. %	TAME wgt. %	MTBE O2	Ethanol O2	ETBE O2	TAME O2
Atlantic City, NJ	95	2	2.14	10.87	0.16	0.00	0.70	92.1%	2.3%	0.0%	5.1%
Baltimore, MD	178	4	1.95	9.49	0.00	0.00	1.41	88.2%	0.0%	0.0%	11.3%
Boston-Worchester, MA	204	2	2.10	8.96	0.32	0.00	2.26	77.6%	5.2%	0.0%	16.7%
Chicago-Lake Co., IL, Gary, IN	223	5	3.69	0.00	10.61	0.00	0.00	0.0%	100.0%	0.0%	0.0%
Covington, KY	98	2	3.14	2.90	7.48	0.00	0.04	16.9%	82.8%	0.0%	0.3%
Dallas-Fort Worth, TX	205	2	1.94	9.43	0.00	0.00	1.40	88.1%	0.0%	0.0%	11.3%
Hartford, CT	200	4	2.10	8.85	0.41	0.00	2.18	76.7%	6.7%	0.0%	16.2%
Houston-Galveston, TX	215	4	1.99	10.33	0.00	0.00	0.67	94.0%	0.0%	0.0%	5.0%
Los Angeles, CA	74	2	2.16	11.82	0.00	0.00	0.09	99.1%	0.0%	0.0%	0.5%
Louisville, KY	157	2	2.40	7.83	2.69	0.00	0.14	59.2%	38.8%	0.0%	0.8%
Manchester, NH	119	2	2.10	10.28	0.00	0.00	1.44	89.0%	0.0%	0.0%	11.0%
Milwaukee-Racine, WI	180	4	3.55	0.00	10.23	0.00	0.00	0.0%	100.0%	0.0%	0.0%
NY-NJ-Long Is.-CT	215	4	2.19	11.23	0.18	0.00	0.53	93.2%	2.7%	0.0%	3.7%
Norfolk-Virginia Beach, VA	168	2	1.96	9.92	0.00	0.00	0.97	91.8%	0.0%	0.0%	7.7%
Phila.-Wilm, DE-Trenton, NJ	207	4	1.95	10.24	0.15	0.00	0.21	95.4%	2.6%	0.0%	1.5%
Portsmouth-Dover, NH	76	2	2.12	9.98	0.00	0.00	1.83	85.4%	0.0%	0.0%	13.7%
Poughkeepsie, NY	144	2	2.25	11.01	0.38	0.00	0.73	88.9%	5.8%	0.0%	4.9%
Rhode Island	161	2	2.08	9.25	0.25	0.00	1.99	80.8%	4.3%	0.0%	14.9%
Richmond, VA	147	2	1.98	9.53	0.00	0.00	1.55	87.4%	0.0%	0.0%	12.1%
Sacramento Metro, CA	67	2	2.09	11.12	0.00	0.00	0.46	96.7%	0.0%	0.0%	3.3%
San Diego, CA	76	2	2.17	11.71	0.00	0.00	0.28	97.7%	0.0%	0.0%	1.8%
Springfield, MA	144	2	2.18	9.02	0.36	0.00	2.63	75.2%	5.5%	0.0%	18.8%
St Louis, MO	182	2	2.69	5.45	4.73	0.00	0.33	36.8%	61.0%	0.0%	1.9%
Sussex County, DE	89	2	1.89	8.90	0.00	0.00	1.71	85.7%	0.0%	0.0%	14.3%
Warren County, NJ	50	2	2.36	12.48	0.00	0.00	0.56	95.8%	0.0%	0.0%	3.8%
Washington, D.C.-area	208	2	2.01	9.87	0.00	0.00	1.26	89.1%	0.0%	0.0%	10.0%

* e.g. for Atlantic City, NJ the 'average' gallon had 2.14 wgt % oxygen. It is 10.87% MTBE by wgt., therefore about 92.1% of its oxygen comes from MTBE since the oxygen mass fraction in MTBE is 0.1815.



US Environmental Protection Agency
Air and Radiation
Office of Transportation and Air Quality

OXYGENATE TYPE ANALYSIS-Summer 2000 RFG Survey Data

PERCENT OF SAMPLES WITH MAJORITY OF OXYGEN FROM:*

AREA	MTBE	Ethanol	ETBE	TAME	Combo/Other**
Atlantic City, NJ	100.00	0.00	0.00	0.00	0.00
Baltimore, MD	100.00	0.00	0.00	0.00	0.00
Boston-Worcester, MA	100.00	0.00	0.00	0.00	0.00
Chicago-Lake Co., IL, Gary, IN	0.10	99.90	0.00	0.00	0.00
Covington, KY	28.57	71.43	0.00	0.00	0.00
Dallas-Fort Worth, TX	94.64	0.00	0.00	4.76	0.60
Hartford, CT	98.42	0.00	0.00	1.58	0.00
Houston-Galveston, TX	100.00	0.00	0.00	0.00	0.00
Los Angeles, CA	100.00	0.00	0.00	0.00	0.00
Louisville, KY	77.89	22.11	0.00	0.00	0.00
Manchester, NH	100.00	0.00	0.00	0.00	0.00
Milwaukee-Racine, WI	0.00	100.00	0.00	0.00	0.00
NY-NJ-Long Is.-CT	97.99	0.00	0.00	2.01	0.00
Norfolk-Virginia Beach, VA	100.00	0.00	0.00	0.00	0.00
Phila.-Wilm, DE-Trenton, NJ	100.00	0.00	0.00	0.00	0.00
Portsmouth-Dover, NH	100.00	0.00	0.00	0.00	0.00
Poughkeepsie, NY	100.00	0.00	0.00	0.00	0.00
Rhode Island	95.88	0.00	0.00	4.12	0.00
Richmond, VA	100.00	0.00	0.00	0.00	0.00
Sacramento Metro, CA	100.00	0.00	0.00	0.00	0.00
San Diego, CA	100.00	0.00	0.00	0.00	0.00
Springfield, MA	95.83	0.00	0.00	4.17	0.00
St. Louis, MO	86.63	13.37	0.00	0.00	0.00
Sussex County, DE	100.00	0.00	0.00	0.00	0.00
Warren County, NJ	100.00	0.00	0.00	0.00	0.00
Washington, D.C.-area	100.00	0.00	0.00	0.00	0.00

*RFG Survey samples taken at retail gasoline stations. Categorization based on the oxygenate providing more than 50% by weight of total oxygen in a sample.

**The "Other" category is composed of samples containing combinations of oxygenates with no single oxygenate providing more than 50% of total oxygen.



**US Environmental Protection Agency
Air and Radiation
Office of Transportation and Air Quality**

2000 Summer RFG SURVEYS Oxygenate Information

Average of Survey Averages

Survey Area	No. of samples	No. of surveys	Average * Oxygen wgt. %	Average oxygenate weight percentages *				Percent of total oxygen from each oxygenate *			
				MTBE wgt. %	Ethanol wgt. %	ETBE wgt. %	TAME wgt. %	MTBE O2	Ethanol O2	ETBE O2	TAME O2
Atlantic City, NJ	186	2	2.23	11.47	0.00	0.00	0.93	93.3%	0.0%	0.0%	6.7%
Baltimore, MD	549	7	2.06	10.12	0.00	0.00	1.39	89.3%	0.0%	0.0%	10.7%
Boston-Worchester, MA	240	2	2.17	10.59	0.00	0.00	1.51	88.5%	0.0%	0.0%	11.1%
Chicago-Lake Co., IL, Gary, IN	987	8	3.51	0.01	10.11	0.00	0.00	0.0%	100.0%	0.0%	0.0%
Covington, KY	105	2	3.06	3.49	6.95	0.00	0.04	20.6%	78.8%	0.0%	0.3%
Dallas-Fort Worth, TX	168	2	2.03	10.16	0.00	0.00	1.09	90.6%	0.0%	0.0%	8.4%
Hartford, CT	569	6	2.13	9.21	0.00	0.00	2.86	78.4%	0.0%	0.0%	21.1%
Houston-Galveston, TX	641	7	2.11	11.01	0.00	0.00	0.67	94.8%	0.0%	0.0%	5.2%
Los Angeles, CA	72	2	2.01	10.94	0.00	0.00	0.15	99.0%	0.0%	0.0%	1.0%
Louisville, KY	190	2	2.27	8.15	2.20	0.00	0.09	65.2%	33.9%	0.0%	0.4%
Manchester, NH	104	2	2.18	11.10	0.00	0.00	1.00	92.7%	0.0%	0.0%	7.3%
Milwaukee-Racine, WI	887	7	3.49	0.00	10.05	0.00	0.00	0.0%	100.0%	0.0%	0.0%
NY-NJ-Long Is.-CT	1440	8	2.03	10.26	0.00	0.00	1.00	91.6%	0.0%	0.0%	7.9%
Norfolk-Virginia Beach, VA	192	2	2.07	10.33	0.00	0.00	1.20	90.3%	0.0%	0.0%	9.2%
Phila.-Wilm, DE-Trenton, NJ	1190	7	2.20	11.49	0.00	0.00	0.63	95.0%	0.0%	0.0%	4.5%
Portsmouth-Dover, NH	56	2	2.21	11.82	0.00	0.00	0.42	97.3%	0.0%	0.0%	3.2%
Poughkeepsie, NY	169	2	2.04	10.21	0.00	0.00	1.12	90.7%	0.0%	0.0%	8.8%
Rhode Island	170	2	2.07	9.53	0.00	0.00	2.07	83.6%	0.0%	0.0%	15.5%
Richmond, VA	73	2	2.13	10.52	0.00	0.00	1.24	89.7%	0.0%	0.0%	8.9%
Sacramento Metro, CA	66	2	2.18	11.46	0.00	0.00	0.62	95.4%	0.0%	0.0%	4.6%
San Diego, CA	78	2	2.09	11.32	0.00	0.00	0.23	98.1%	0.0%	0.0%	1.9%
Springfield, MA	216	2	2.12	9.90	0.01	0.00	1.97	84.9%	0.0%	0.0%	14.6%
St. Louis, MO	374	2	2.20	9.07	1.35	0.00	0.53	75.0%	21.4%	0.0%	3.6%
Sussex County, DE	177	2	2.01	9.10	0.00	0.00	2.12	82.1%	0.0%	0.0%	16.4%
Warren County, NJ	79	2	2.17	10.93	0.00	0.00	1.11	91.2%	0.0%	0.0%	7.8%
Washington, D.C.-area	208	3	2.11	10.43	0.00	0.00	1.19	89.6%	0.0%	0.0%	9.0%

* e.g. for Atlantic City, NJ the 'average' gallon had 2.23 wgt % oxygen. It is 11.47% MTBE by wgt., therefore about 93.3% of its oxygen comes from MTBE since the oxygen mass fraction in MTBE is 0.1815.



US Environmental Protection Agency
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Office of Transportation and Air Quality

OXYGENATE TYPE ANALYSIS-Winter 2000 RFG Survey Data

PERCENT OF SAMPLES WITH MAJORITY OF OXYGEN FROM:*

AREA	MTBE	Ethanol	ETBE	TAME	Combo/Other**
Atlantic City, NJ	93.14	5.88	0.00	0.00	0.98
Baltimore, MD	100.00	0.00	0.00	0.00	0.00
Boston-Worcester, MA	95.65	4.35	0.00	0.00	0.00
Chicago-Lake Co., IL, Gary, IN	0.00	100.00	0.00	0.00	0.00
Covington, KY	31.48	68.52	0.00	0.00	0.00
Dallas-Fort Worth, TX	96.39	0.00	0.00	2.41	1.20
Hartford, CT	94.79	4.17	0.00	1.04	0.00
Houston-Galveston, TX	100.00	0.00	0.00	0.00	0.00
Los Angeles, CA	100.00	0.00	0.00	0.00	0.00
Louisville, KY	75.00	25.00	0.00	0.00	0.00
Manchester, NH	100.00	0.00	0.00	0.00	0.00
Milwaukee-Racine, WI	0.00	100.00	0.00	0.00	0.00
NY-NJ-Long Is.-CT	95.91	4.09	0.00	0.00	0.00
Norfolk-Virginia Beach, VA	100.00	0.00	0.00	0.00	0.00
Phila.-Wilm, DE-Trenton, NJ	98.28	1.72	0.00	0.00	0.00
Portsmouth-Dover, NH	100.00	0.00	0.00	0.00	0.00
Poughkeepsie, NY	92.68	7.32	0.00	0.00	0.00
Rhode Island	95.35	4.65	0.00	0.00	0.00
Richmond, VA	100.00	0.00	0.00	0.00	0.00
Sacramento Metro, CA	100.00	0.00	0.00	0.00	0.00
San Diego, CA	100.00	0.00	0.00	0.00	0.00
Springfield, MA	93.20	6.80	0.00	0.00	0.00
St. Louis, MO	52.38	47.62	0.00	0.00	0.00
St. Louis, MO (w/o 3/20/00) ***	54.50	45.50	0.00	0.00	0.00
Sussex County, DE	98.94	0.00	0.00	0.00	1.06
Warren County, NJ	100.00	0.00	0.00	0.00	0.00
Washington, D.C.-area	100.00	0.00	0.00	0.00	0.00

*RFG Survey samples taken at retail gasoline stations. Categorization based on the oxygenate providing more than 50% by weight of total oxygen in a sample.

**The "Other" category is composed of samples containing combinations of oxygenates with no single oxygenate providing more than 50% of total oxygen.

*** EPA allowed conventional gasoline in St. Louis during the period of the 3/20/00 survey because of a pipeline break.



**US Environmental Protection Agency
Air and Radiation
Office of Transportation and Air Quality**

2000 Winter RFG SURVEYS Oxygenate Information

Average of Survey Averages

Survey Area	No. of samples	No. of surveys	Average * Oxygen wgt. %	Average oxygenate weight percentages *				Percent of total oxygen from each oxygenate *			
				MTBE wgt. %	Ethanol wgt. %	ETBE wgt. %	TAME wgt. %	MTBE O2	Ethanol O2	ETBE O2	TAME O2
Atlantic City, NJ	102	2	2.08	9.86	0.54	0.00	0.64	86.1%	9.1%	0.0%	4.8%
Baltimore, MD	84	4	1.98	9.58	0.00	0.00	1.43	87.9%	0.0%	0.0%	11.1%
Boston-Worchester, MA	115	2	2.14	9.80	0.29	0.00	1.58	83.2%	4.7%	0.0%	11.7%
Chicago-Lake Co., IL, Gary, IN	104	4	3.70	0.00	10.66	0.00	0.00	0.0%	100.0%	0.0%	0.0%
Covington, KY	54	2	3.02	3.67	6.76	0.00	0.03	22.2%	77.8%	0.0%	0.3%
Dallas-Fort Worth, TX	83	2	1.99	9.89	0.00	0.00	1.13	89.9%	0.0%	0.0%	9.0%
Hartford, CT	96	4	2.12	9.01	0.43	0.00	2.05	77.4%	7.1%	0.0%	15.1%
Houston-Galveston, TX	87	4	2.04	10.52	0.00	0.00	0.77	93.6%	0.0%	0.0%	5.9%
Los Angeles, CA	74	2	2.23	12.11	0.00	0.00	0.16	98.7%	0.0%	0.0%	1.3%
Louisville, KY	96	2	2.24	7.25	2.54	0.00	0.14	58.9%	39.3%	0.0%	0.9%
Manchester, NH	55	2	2.04	10.04	0.00	0.00	1.36	89.2%	0.0%	0.0%	10.3%
Milwaukee-Racine, WI	128	4	3.65	0.00	10.51	0.00	0.00	0.0%	100.0%	0.0%	0.0%
NY-NJ-Long Is.-CT	220	5	1.99	9.87	0.36	0.00	0.44	89.9%	6.0%	0.0%	3.5%
Norfolk-Virginia Beach, VA	97	2	2.00	9.90	0.00	0.00	1.24	90.0%	0.0%	0.0%	9.5%
Phila.-Wilm, DE-Trenton, NJ	174	4	2.06	10.33	0.18	0.00	0.73	91.3%	2.9%	0.0%	5.3%
Portsmouth-Dover, NH	31	2	2.24	10.96	0.00	0.00	1.44	88.8%	0.0%	0.0%	10.3%
Poughkeepsie, NY	82	2	2.12	9.78	0.71	0.00	0.55	83.5%	11.8%	0.0%	4.2%
Rhode Island	86	2	2.20	9.81	0.48	0.00	1.45	80.9%	7.7%	0.0%	10.5%
Richmond, VA	67	2	1.94	9.43	0.00	0.00	1.43	88.1%	0.0%	0.0%	11.3%
Sacramento Metro, CA	70	2	2.14	11.34	0.00	0.00	0.45	96.3%	0.0%	0.0%	3.3%
San Diego, CA	78	2	2.20	11.96	0.00	0.00	0.17	98.6%	0.0%	0.0%	1.4%
Springfield, MA	103	2	2.22	9.39	0.71	0.00	1.63	76.6%	11.3%	0.0%	11.7%
St. Louis, MO	273	3	2.72	5.23	4.94	0.00	0.31	34.9%	63.2%	0.0%	1.8%
St. Louis, MO (w/o 3/20/00) **	189	2	2.71	5.59	4.72	0.00	0.30	37.3%	60.5%	0.0%	1.8%
Sussex County, DE	94	2	2.00	8.12	0.00	0.00	3.21	73.5%	0.0%	0.0%	25.0%
Warren County, NJ	54	2	1.98	10.32	0.01	0.00	0.49	94.4%	0.0%	0.0%	4.0%
Washington, D.C.-area	71	2	1.98	9.71	0.00	0.00	1.21	88.9%	0.0%	0.0%	9.6%

* e.g. for Atlantic City, NJ the 'average' gallon had 2.08 wgt % oxygen. It is 9.86% MTBE by wgt., therefore about 86.1% of its oxygen comes from MTBE since the oxygen mass fraction in MTBE is 0.1815.

** EPA allowed conventional gasoline in St. Louis during the period of the 3/20/00 survey because of a pipeline break.