DHA052R.DHA

Detailed Hydrocarbon Analysis (DHAX)
California Air Resources Board
Southern Laboratory Branch / IAS

File: DHA052.RUN
Sample: PH2-100,062894
Method: DHA052.MTH
Processed 386 Peaks
DETAILED HC ANALYSIS OF GASOLINE

Analyzed: 18-JUL-94 8:45 PM
Reported: 07-27-1994 13:50:32
DHA DBase File: RI_B-M85.DBF
Normalized to 100.00%

Composite Report
Totals by Group Type & Carbon Number
(in Weight Percent)

	Paraffins:	I-paraffins:	Aromatics:	Naphthenes:	Olefins:	Total:
C1:	0.000	0.000	0.000	0.000	0.000	0.000
C2:	0.000	0.000	0.000	0.000	0.000	0.000
C3:	0.004	0.000	0.000	0.000	0.000	0.004
C4:	1.306	0.073	0.000	0.000	0.103	1.483
C5:	1.509	8.201	0.000	0.066	1.257	11.033
C6:	0.995	6.720	1.004	0.563	1.371	10.652
C7:	0.787	9.719	7.369	0.838	1.213	19.927
C8:	0.573	17.800	12.109	0.998	0.188	31.668
C9:	0.103	3.302	4.705	0.486	0.089	8.684
C10:	0.023	1.071	2.539	0.035	0.007	3.675
C11:	0.012	0.074	0.508	0.016	0.005	0.615
C12:	0.010	0.090	0.223	0.000	0.000	0.323
C13:	0.000	0.003	0.000	0.000	0.000	0.003
Total	5.322	47.054	28.457	3.001	4.232	88.066

Oxygenates: 11.239 Total C14+: 0.163

Total Unknowns: 0.532
Grand Total: 100.000

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Totals by Group Type & Carbon Number
(in Volume Percent)

	Paraffins:	I-paraffins:	Aromatics:	Naphthenes:	Olefins:	Total:
C1:	0.000	0.000	0.000	0.000	0.000	0.000
C2:	0.000	0.000	0.000	0.000	0.000	0.000
C3:	0.006	0.000	0.000	0.000	0.000	0.006
C4:	1.654	0.097	0.000	0.000	0.124	1.875
C5:	1.766	9.702	0.000	0.065	1.399	12.931
C6:	1.106	7.492	0.837	0.548	1.433	11.417
C7:	0.844	10.381	6.229	0.815	1.253	19.523
C8:	0.598	18.585	10.234	0.948	0.189	30.554
C9:	0.105	3.365	3.963	0.456	0.092	7.981
C10:	0.024	1.065	2.085	0.032	0.008	3.213
C11:	0.012	0.073	0.381	0.015	0.004	0.485
C12:	0.009	0.088	0.184	0.000	0.000	0.281
C13:	0.000	0.003	0.000	0.000	0.000	0.003
Total	6.123	50.852	23.913	2.878	4.503	88.268

Oxygenates: 11.120 Total C14+: 0.156 Total Unknowns: 0.456
Grand Total: 100.000

DHA052R.DHA

(in Mole Percent)

	Paraffins:	I-paraffins:	Aromatics:	Naphthenes:	Olefins:	Total:
C1:	0.000	0.000	0.000	0.000	0.000	0.000
C2:	0.000	0.000	0.000	0.000	0.000	0.000
C3:	0.008	0.000	0.000	0.000	0.000	0.008
C4:	2.179	0.123	0.000	0.000	0.179	2.481
C5:	2.028	11.024	0.000	0.091	1.741	14.884
C6:	1.120	7.562	1.246	0.648	1.586	12.163
C7:	0.762	9.407	7.756	0.828	1.200	19.953
C8:	0.486	15.112	11.061	0.863	0.160	27.683
C9:	0.078	2.497	3.796	0.373	0.068	6.812
C10:	0.016	0.730	1.860	0.024	0.005	2.635
C11:	0.007	0.046	0.340	0.010	0.003	0.407
C12:	0.005	0.051	0.133	0.000	0.000	0.190
C13:	0.000	0.001	0.000	0.000	0.000	0.001
Total	6.691	46.554	26.194	2.837	4.943	87.219

Oxygenates:	12.336	Total C14+:	0.079	Total Unknowns:	0.365
				Grand Total:	100.000

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Processed 386 Peaks Normalized to 100.00%

DETAILED HC ANALYSIS OF GASOLINE

Components Listed in Chromatographic Order

Component	Wt%	Vol%	Mol%
propane	0.004	0.006	0.008
i-butane	0.073	0.097	0.123
butene-1	0.01	0.012	0.017
isobutylene	0.008	0.009	0.013
n-butane	1.306	1.654	2.179
t-butene-2	0.038	0.046	0.066
2,2-dimethylpropane	0.016	0.020	0.021
c-butene-2	0.048	0.057	0.083
3-methylbutene-1	0.024	0.028	0.033
i-pentane	8.186	9.682	11.003
pentene-1	0.090	0.103	0.125
2-methylbutene-1	0.181	0.204	0.251
n-pentane	1.509	1.766	2.028
isoprene	0.002	0.003	0.003
t-pentene-2	0.281	0.318	0.388
3,3-dimethylbutene-1	0.004	0.004	0.005
c-pentene-2	0.156	0.175	0.216
t-butanol	0.013	0.012	0.016
2-methylbutene-2	0.448	0.496	0.620
1t,3-pentadiene	0.009	0.010	0.012
cyclopentadiene	0.002	0.002	0.003
2,2-dimethylbutane	0.563	0.636	0.634
cyclopentene	0.059	0.056	0.084
4-methylpentene-1	0.021	0.023	0.024
3-methylpentene-1	0.033	0.036	0.038
cyclopentane	0.066	0.065	0.091
2,3-dimethylbutane	1.575	1.744	1.772
methyl-t-butylether	11.019	10.905	12.123
2,3-dimethylbutene-1	0.028	0.030	0.032
2-methylpentane	3.024	3.394	3.403
4-methyl-t-pentene-2	0.075	0.082	0.086

3-methylpentane	1.557	1.718	1.753
2-methylpentene-1	0.115	0.123	0.132
hexene-1	0.074	0.080	0.085
n-hexane	0.995	1.106	1.120
t-hexene-3	0.094	0.101	0.108
c-hexene-3	0.032	0.034	0.037
t-hexene-2	0.186	0.199	0.214
2-methylpentene-2	0.243	0.257	0.279
3-methyl-c-pentene-2	0.121	0.127	0.139
3-methylcyclopentene	0.025	0.024	0.029
c-hexene-2	0.103	0.109	0.119
3,3-dimethylpentene-1	0.191	0.200	0.189
2,2-dimethylpentane	0.074	0.080	0.071
methylcyclopentane	0.497	0.487	0.573
2,4-dimethylpentane	2.450	2.669	2.371
cyclic diolefin or triolefin	0.004	0.004	0.005
2,2,3-trimethylbutane	0.036	0.038	0.035
cyclic diolefin or triolefin	0.003	0.003	0.004
O17	0.003	0.003	0.003
3,4-dimethylpentene-1	0.006	0.007	0.006
4,4-dimethyl-c-pentene-2	0.014	0.015	0.014
2,4-dimethylpentene-1	0.010	0.010	0.009
1-methylcyclopentene	0.190	0.179	0.225
benzene	1.004	0.837	1.246
3-methylhexene-1	0.015	0.016	0.015
2-methyl-c-hexene-3	0.009	0.009	0.009
3,3-dimethylpentane	0.074	0.079	0.072
5-methylhexene-1	0.020	0.021	0.020
cyclohexane	0.066	0.062	0.076
2-methyl-t-hexene-3	0.034	0.036	0.034
2-ethyl-3-methylbutene-1	0.005	0.006	0.005
4-methylhexene-1	0.021	0.022	0.021
4-methyl-t/c-hexene-2	0.062	0.064	0.061
2-methylhexane	1.157	1.249	1.120
2,3-dimethylpentane	4.505	4.750	4.360
1,1-dimethylcyclopentane	0.030	0.029	0.030
t-amylmethylether	0.208	0.203	0.197
cyclohexene	0.032	0.029	0.038
3-methylhexane	1.271	1.356	1.230
3,4-dimethyl-c-pentene-2	0.023	0.023	0.022
1c,3-dimethylcyclopentane	0.162	0.159	0.160
1t,3-dimethylcyclopentane	0.144	0.141	0.143
3-ethylpentane	0.153	0.161	0.149
1t,2-dimethylcyclopentane	0.104	0.101	0.102
2,2,4-trimethylpentane	8.663	9.177	7.355
3-methyl-c-hexene-3	0.038	0.039	0.038
t-heptene-3	0.144	0.150	0.142
n-heptane	0.787	0.844	0.762
3-methyl-c-hexene-2	0.166	0.170	0.164

3-methyl-t-hexene-3	0.059	0.062	0.058
t-heptene-2	0.074	0.077	0.073
3-ethylpentene-2	0.035	0.035	0.035
c-heptene-2	0.128	0.132	0.127
2,3-dimethylpentene-2	0.073	0.073	0.072
3-ethylcyclopentene	0.004	0.004	0.004
O29	0.009	0.010	0.009
1c,2-dimethylcyclopentane	0.093	0.093	0.091
methylcyclohexane	0.208	0.199	0.206
2,2-dimethylhexane	0.093	0.098	0.079
O35	0.007	0.007	0.006
O36	0.005	0.005	0.005
ethylcyclopentane	0.098	0.093	0.096
2,5-dimethylhexane	0.756	0.799	0.642
2,2,3-trimethylpentane	0.158	0.162	0.134
2,4-dimethylhexane	1.087	1.138	0.923
?	0.006	0.007	0.005
1c,2t,4-trimethylcyclopentane	0.071	0.068	0.061
3,3-dimethylhexane	0.054	0.056	0.046
O38	0.002	0.002	0.002
?	0.004	0.005	0.004
?	0.012	0.012	0.012
1t,2c,3-trimethylcyclopentane	0.043	0.041	0.037
O39	0.013	0.013	0.013
2,3,4-trimethylpentane	2.432	2.479	2.065
I1	0.108	0.111	0.092
O40	0.035	0.035	0.034
2,3,3-trimethylpentane	1.644	1.659	1.396
toluene	7.369	6.229	7.756
O42	0.018	0.018	0.015
O43	0.027	0.027	0.024
2,3-dimethylhexane	0.866	0.891	0.735
2-methyl-3-ethylpentane	0.056	0.057	0.047
1,1,2-trimethylcyclopentane	0.028	0.026	0.024
O44	0.043	0.043	0.037
2-methylheptane	0.632	0.664	0.536
4-methylheptane	0.283	0.294	0.240
3-methyl-3-ethylpentane	0.107	0.110	0.091
3,4-dimethylhexane	0.110	0.112	0.093
1c,3-dimethylcyclohexane	0.058	0.055	0.050
3-methylheptane	0.714	0.741	0.606
1c,2t,3-trimethylcyclopentane	0.218	0.207	0.188
3-ethylhexane	0.037	0.038	0.032
1t,4-dimethylcyclohexane	0.033	0.032	0.029
?	0.005	0.005	0.005
1,3-octadiene	0.005	0.005	0.005
1,1-dimethylcyclohexane	0.005	0.005	0.004
2,2,5-trimethylhexane	1.100	1.140	0.832
3c-ethylmethylcyclopentane	0.090	0.086	0.078

2,6-dimethylheptene-1	0.011	0.012	0.009
3t-ethylmethylcyclopentane	0.059	0.057	0.051
2t-ethylmethylcyclopentane	0.047	0.045	0.040
1,1-methylethylcyclopentane	0.017	0.016	0.015
?	0.021	0.020	0.018
2,2,4-trimethylhexane	0.025	0.025	0.019
1t,2-dimethylcyclohexane	0.061	0.058	0.053
t-octene-4	0.034	0.035	0.030
1c,2c,3-trimethylcyclopentane	0.096	0.090	0.083
1t,3-dimethylcyclohexane	0.023	0.022	0.020
n-octane	0.573	0.598	0.486
octene-2	0.041	0.042	0.035
I2	0.066	0.066	0.050
?	0.035	0.036	0.027
i-propylcyclopentane	0.049	0.046	0.042
O52	0.006	0.006	0.004
O53	0.019	0.019	0.015
N1	0.008	0.008	0.007
2,2,3,4-tetramethylpentane	0.005	0.005	0.004
2,3,4-trimethylhexane	0.188	0.186	0.142
N2	0.025	0.024	0.022
?	0.009	0.008	0.007
N3	0.024	0.022	0.021
2,3,3-trimethylhexene-1	0.012	0.012	0.009
1c,2-dimethylcyclohexane	0.016	0.015	0.014
2;3,5-trimethylhexane	0.098	0.099	0.074
1,1,4-trimethylcyclohexane	0.070	0.067	0.054
N4	0.019	0.018	0.016
2,2,3-trimethylhexane	0.062	0.063	0.047
2,4-dimethylheptane	0.009	0.009	0.007
4,4-dimethylheptane	0.034	0.035	0.025
*1c,3c,5-trimethylcyclohexane	0.007	0.007	0.005
2,5-dimethylheptane	0.186	0.191	0.141
3,3-dimethylheptane	0.039	0.039	0.029
2,6-dimethylheptane	0.011	0.012	0.009
1,1,3-trimethylcyclohexane	0.015	0.014	0.011
N8	0.007	0.007	0.006
ethylbenzene	3.093	2.615	2.826
N11	0.065	0.061	0.050
I3	0.009	0.009	0.007
2-methyloctene-1	0.012	0.012	0.009
I4	0.009	0.009	0.007
2-methyloctene-2	0.010	0.011	0.008
1,3-dimethylbenzene	4.795	4.067	4.380
1,4-dimethylbenzene	2.074	1.766	1.895
2,3-dimethylheptane	0.098	0.099	0.074
3,4-dimethylheptane	0.034	0.034	0.026
3,4-dimethylheptane	0.028	0.028	0.021
N14	0.011	0.010	0.008

I5	0.048	0.048	0.036
4-ethylheptane	0.009	0.010	0.007
4-methyloctane	0.151	0.154	0.114
2-methyloctane	0.188	0.193	0.142
N15	0.014	0.013	0.010
1c,2t,3-trimethylcyclohexane	0.010	0.010	0.008
3-ethylheptane	0.049	0.049	0.037
3-methyloctane	0.210	0.213	0.159
1c,2t,4c-trimethylcyclohexane	0.041	0.039	0.031
1,2-dimethylbenzene	2.146	1.787	1.960
?	0.011	0.009	0.010
I6	0.036	0.036	0.027
I7	0.154	0.155	0.117
N18	0.022	0.021	0.017
N19	0.019	0.018	0.015
nonene-1	0.022	0.021	0.017
I8	0.013	0.013	0.010
I9	0.267	0.268	0.202
i-butylcyclopentane	0.009	0.008	0.007
N21	0.027	0.025	0.021
N22	0.025	0.024	0.019
N23/c-nonene-2	0.006	0.006	0.005
t-nonene-3	0.017	0.018	0.013
I10	0.177	0.177	0.134
n-nonane	0.103	0.105	0.078
1,1-methylethylcyclohexane	0.021	0.019	0.016
?	0.010	0.009	0.007
N25	0.012	0.011	0.010
t-2,2,5,5-tetramethylhexene-3	0.006	0.006	0.004
i-propylbenzene	0.086	0.073	0.069
N27	0.032	0.030	0.025
I11	0.014	0.014	0.009
i-propylcyclohexane	0.010	0.009	0.007
I12	0.105	0.106	0.072
2,2-dimethyloctane	0.031	0.031	0.021
2,4-dimethyloctane	0.031	0.031	0.021
N29	0.006	0.006	0.005
2,6-dimethyloctane	0.019	0.019	0.013
2,5-dimethyloctane	0.039	0.039	0.027
n-butylcyclopentane	0.064	0.060	0.049
N30	0.011	0.011	0.008
I14	0.003	0.003	0.002
3,3-dimethyloctane	0.029	0.028	0.019
n-propylbenzene	0.366	0.311	0.295
?	0.009	0.007	0.007
3,6-dimethyloctane	0.010	0.010	0.007
3-methyl-5-ethylheptane	0.007	0.007	0.004
1,3-methylethylbenzene	1.150	0.975	0.928
1,4-methylethylbenzene	0.497	0.423	0.401

?	0.002	0.002	0.002
1,3,5-trimethylbenzene	0.544	0.461	0.439
I15	0.013	0.013	0.009
5-methylnonane	0.014	0.014	0.010
I17	0.418	0.414	0.285
1,2-methylethylbenzene	0.312	0.260	0.252
2-methylnonane	0.034	0.034	0.023
?	0.003	0.003	0.002
3-ethyloctane	0.004	0.004	0.003
3-methylnonane	0.037	0.037	0.025
I18	0.106	0.105	0.072
I19	0.006	0.006	0.004
1,2,4-trimethylbenzene	1.493	1.249	1.205
I20	0.009	0.009	0.006
i-butylcyclohexane	0.005	0.004	0.003
I21	0.028	0.028	0.019
I22	0.033	0.033	0.023
I23	0.007	0.007	0.005
N37	0.004	0.004	0.003
decene-1	0.001	0.001	0.001
I24	0.050	0.050	0.034
i-butylbenzene	0.035	0.030	0.025
I25	0.024	0.024	0.016
?	0.012	0.012	0.008
sec-butylbenzene	0.033	0.028	0.024
?	0.005	0.005	0.004
n-decane	0.023	0.024	0.016
I26	0.022	0.022	0.014
N38	0.008	0.007	0.005
1,2,3-trimethylbenzene	0.258	0.211	0.208
1,3-methyl-i-propylbenzene	0.037	0.032	0.027
1,4-methyl-i-propylbenzene	0.017	0.014	0.012
I29	0.009	0.009	0.006
2-3-dihydroindene	0.148	0.113	0.122
sec-butylcyclohexane	0.006	0.005	0.004
?	0.011	0.009	0.007
I30	0.009	0.009	0.005
1,2-methyl-i-propylbenzene	0.007	0.006	0.005
?	0.020	0.017	0.015
N40	0.014	0.012	0.008
I32	0.004	0.004	0.002
?	0.007	0.006	0.004
1,3-diethylbenzene	0.118	0.100	0.085
1,3-methyl-n-propylbenzene	0.237	0.202	0.171
I33	0.005	0.005	0.003
1,4-methyl-n-propylbenzene	0.141	0.120	0.102
n-butylbenzene	0.058	0.050	0.042
1,3-dimethyl-5-ethylbenzene	0.222	0.185	0.161
1,2-diethylbenzene	0.020	0.016	0.014

N41	0.002	0.002	0.002
1,2-methyl-n-propylbenzene	0.068	0.057	0.049
?	0.010	0.008	0.007
I37	0.012	0.012	0.007
I38	0.010	0.010	0.006
1,4,dimethyl-2-ethylbenzene	0.125	0.105	0.091
1,3-dimethyl-4-ethylbenzene	0.152	0.130	0.110
1,2-dimethyl-4-ethylbenzene	0.263	0.220	0.190
I41	0.002	0.002	0.001
1,3-dimethyl-2-ethylbenzene	0.010	0.008	0.007
I42	0.001	0.001	0.001
I43	0.001	0.001	0.000
undecene-1	0.005	0.004	0.003
1,4-methyl-t-butylbenzene	0.016	0.014	0.011
1,2-dimethyl-3-ethylbenzene	0.058	0.048	0.042
1,2-ethyl-i-propylbenzene	0.006	0.005	0.004
?	0.003	0.003	0.002
n-undecane	0.012	0.012	0.007
1,2,4,5-tetramethylbenzene	0.110	0.091	0.079
1,2,3,5-tetramethylbenzene	0.150	0.123	0.108
?	0.006	0.005	0.004
?	0.005	0.004	0.004
?	0.004	0.003	0.003
1,2-methyl-t-butylbenzene	0.003	0.003	0.002
5-methylindan	0.125	0.103	0.091
I43	0.005	0.004	0.003
4-methylindan	0.034	0.028	0.025
1,2-ethyl-n-propylbenzene	0.048	0.039	0.031
2-methylindan	0.118	0.095	0.086
1,3-methyl-n-butylbenzene	0.007	0.006	0.005
1,3-di-i-propylbenzene	0.045	0.037	0.027
s-pentylbenzene	0.029	0.024	0.019
n-pentylbenzene	0.030	0.025	0.020
?	0.013	0.011	0.008
1,2-di-i-propylbenzene	0.020	0.017	0.012
?	0.020	0.017	0.012
?	0.022	0.018	0.013
1,4-di-i-propylbenzene	0.031	0.025	0.018
tetrahydronaphthalene	0.008	0.006	0.006
?	0.034	0.026	0.025
naphthalene	0.245	0.175	0.185
1,4-ethyl-t-butylbenzene	0.019	0.016	0.011
I45	0.032	0.031	0.018
I46	0.016	0.015	0.009
I47	0.022	0.021	0.013
I48	0.016	0.016	0.009
1,3-di-n-propylbenzene	0.026	0.022	0.016
A5	0.016	0.014	0.010
A6	0.013	0.011	0.008

n-dodecane	0.010	0.009	0.005
?	0.007	0.007	0.004
?	0.007	0.007	0.004
1,3,5-triethylbenzene	0.003	0.002	0.002
?	0.004	0.003	0.002
?	0.020	0.017	0.012
?	0.016	0.013	0.010
?	0.020	0.017	0.012
?	0.007	0.006	0.004
1,2,4-triethylbenzene	0.004	0.004	0.003
?	0.006	0.005	0.004
?	0.013	0.011	0.008
1,4-methyl-n-pentylbenzene	0.036	0.029	0.021
?	0.010	0.008	0.006
?	0.003	0.003	0.002
?	0.003	0.003	0.002
?	0.005	0.004	0.003
n-hexylbenzene	0.010	0.008	0.006
?	0.034	0.028	0.020
?	0.013	0.011	0.008
?	0.004	0.003	0.002
?	0.004	0.004	0.003
?	0.011	0.009	0.007
?	0.007	0.006	0.004
I49	0.003	0.003	0.001
?	0.003	0.002	0.001
1,2,3,4,5-pentamethylbenzene	0.032	0.023	0.021
?	0.005	0.004	0.004
2-methylnaphthalene	0.232	0.167	0.157
?	0.009	0.006	0.006
?	0.007	0.005	0.005
?	0.005	0.003	0.003
1-methylnaphthalene	0.104	0.075	0.071
?	0.007	0.005	0.005
C14+	0.003	0.002	0.001
C14+	0.002	0.002	0.001
C14+	0.006	0.006	0.003
C14+	0.009	0.008	0.004
C14+	0.001	0.001	0.001
C14+	0.003	0.003	0.002
C14+	0.003	0.003	0.001
C14+	0.003	0.003	0.002
C14+	0.001	0.001	0.001
C14+	0.001	0.001	0.001
C14+	0.004	0.004	0.002
C14+	0.004	0.003	0.002
C14+	0.011	0.011	0.006
C14+	0.004	0.004	0.002
C14+	0.003	0.003	0.001

C14+	0.014	0.014	0.007
C14+	0.015	0.014	0.007
C14+	0.002	0.002	0.001
C14+	0.031	0.030	0.015
C14+	0.015	0.014	0.007
C14+	0.010	0.009	0.005
C14+	0.003	0.003	0.001
C14+	0.004	0.004	0.002
C14+	0.003	0.003	0.001
C14+	0.003	0.002	0.001
C14+	0.003	0.003	0.002
C14+	0.002	0.002	0.001

DHA054R.DHA

Detailed Hydrocarbon Analysis (DHAX)
California Air Resources Board
Southern Laboratory Branch / IAS

File: DHA054.RUN
Sample: RFA-100,071194
Method: DHA054.MTH
Processed 453 Peaks
DETAILED HC ANALYSIS OF GASOLINE

Analyzed: 18-JUL-94 11:46 PM
Reported: 07-28-1994 09:51:48
DHA DBase File: RI_B-M85.DBF
Normalized to 100.00%

Composite Report
Totals by Group Type & Carbon Number
(in Weight Percent)

	Paraffins:	I-paraffins:	Aromatics:	Naphthenes:	Olefins:	Total:
C1:	0.000	0.000	0.000	0.000	0.000	0.000
C2:	0.000	0.000	0.000	0.000	0.000	0.000
C3:	0.002	0.000	0.000	0.000	0.000	0.002
C4:	4.204	0.079	0.000	0.000	0.063	4.345
C5:	2.821	9.406	0.000	0.177	3.021	15.425
C6:	2.240	9.027	1.767	1.253	2.736	17.023
C7:	1.085	6.403	9.213	1.578	2.283	20.561
C8:	0.596	7.283	12.166	1.346	0.268	21.658
C9:	0.183	1.934	8.088	0.628	0.127	10.959
C10:	0.117	0.802	4.557	0.182	0.016	5.673
C11:	0.062	0.295	1.059	0.053	0.016	1.486
C12:	0.042	0.291	0.557	0.000	0.007	0.898
C13:	0.000	0.011	0.000	0.000	0.000	0.011
Total	11.350	35.531	37.408	5.217	8.537	98.042

Oxygenates: 0.131 Total C14+: 0.446 Total Unknowns: 1.381
Grand Total: 100.000

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California Air Resources Board
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Composite Report
Totals by Group Type & Carbon Number
(in Volume Percent)

	Paraffins:	I-paraffins:	Aromatics:	Naphthenes:	Olefins:	Total:
C1:	0.000	0.000	0.000	0.000	0.000	0.000
C2:	0.000	0.000	0.000	0.000	0.000	0.000
C3:	0.002	0.000	0.000	0.000	0.000	0.002
C4:	5.345	0.104	0.000	0.000	0.076	5.525
C5:	3.316	11.176	0.000	0.175	3.376	18.042
C6:	2.500	10.107	1.480	1.224	2.873	18.184
C7:	1.168	6.877	7.821	1.539	2.371	19.776
C8:	0.624	7.632	10.322	1.284	0.271	20.134
C9:	0.187	1.977	6.837	0.591	0.131	9.723
C10:	0.118	0.804	3.757	0.167	0.016	4.863
C11:	0.061	0.292	0.801	0.049	0.016	1.219
C12:	0.041	0.285	0.461	0.000	0.007	0.794
C13:	0.000	0.011	0.000	0.000	0.000	0.011
Total	13.363	39.265	31.477	5.029	9.137	98.271

Oxygenates: 0.130 Total C14+: 0.430 Total Unknowns: 1.168
Grand Total: 100.000

Detailed Hydrocarbon Analysis (DHAX)
California Air Resources Board
Southern Laboratory Branch / IAS

File: DHA054.RUN
Sample: RFA-100,071194
Method: DHA054.MTH
Processed 453 Peaks
DETAILED HC ANALYSIS OF GASOLINE

Analyzed: 18-JUL-94 11:46 PM
Reported: 07-28-1994 09:51:48
DHA DBase File: RI_B-M85.DBF
Normalized to 100.00%

Composite Report
Totals by Group Type & Carbon Number
(in Mole Percent)

	Paraffins:	I-paraffins:	Aromatics:	Naphthenes:	Olefins:	Total:
C1:	0.000	0.000	0.000	0.000	0.000	0.000
C2:	0.000	0.000	0.000	0.000	0.000	0.000
C3:	0.003	0.000	0.000	0.000	0.000	0.003
C4:	6.800	0.127	0.000	0.000	0.106	7.033
C5:	3.676	12.258	0.000	0.237	4.057	20.228
C6:	2.443	9.849	2.127	1.400	3.069	18.889
C7:	1.018	6.008	9.401	1.511	2.190	20.128
C8:	0.490	5.995	10.774	1.128	0.222	18.609
C9:	0.134	1.417	6.327	0.468	0.094	8.441
C10:	0.078	0.530	3.239	0.122	0.010	3.978
C11:	0.037	0.178	0.687	0.032	0.010	0.944
C12:	0.023	0.161	0.323	0.000	0.004	0.511
C13:	0.000	0.006	0.000	0.000	0.000	0.006
Total	14.702	36.528	32.877	4.898	9.763	98.769

Oxygenates: 0.140 Total C14+: 0.211 Total Unknowns: 0.880
Grand Total: 100.000

Detailed Hydrocarbon Analysis (DHAX)
California Air Resources Board
Southern Laboratory Branch / IAS

File: DHA054.RUN
Sample: RFA-100,071194
Method: DHA054.MTH
Processed 453 Peaks
DETAILED HC ANALYSIS OF GASOLINE

Analyzed: 18-JUL-94 11:46 PM
Reported: 07-28-1994 09:51:48
DHA DBase File: RI_B-M85.DBF
Normalized to 100.00%

Components Listed in Chromatographic Order

Component	Wt%	Vol%	Mol%
propane	0.002	0.002	0.003
i-butane	0.079	0.104	0.127
butene-1	0.003	0.004	0.005
isobutylene	0.004	0.004	0.006
n-butane	4.204	5.345	6.800
t-butene-2	0.024	0.029	0.040
2,2-dimethylpropane	0.041	0.052	0.054
c-butene-2	0.033	0.039	0.055
3-methylbutene-1	0.049	0.057	0.065
i-pentane	9.365	11.124	12.204
pentene-1	0.219	0.252	0.294
2-methylbutene-1	0.438	0.495	0.587
n-pentane	2.821	3.316	3.676
isoprene	0.010	0.011	0.013
t-pentene-2	0.698	0.793	0.936
3,3-dimethylbutene-1	0.009	0.010	0.012
c-pentene-2	0.389	0.436	0.521
2-methylbutene-2	1.046	1.162	1.402
1t,3-pentadiene	0.014	0.015	0.020
cyclopentadiene	0.006	0.006	0.008
2,2-dimethylbutane	0.572	0.648	0.624
cyclopentene	0.145	0.138	0.200
4-methylpentene-1	0.047	0.052	0.053
3-methylpentene-1	0.073	0.081	0.081
cyclopentane	0.177	0.175	0.237
2,3-dimethylbutane	1.349	1.500	1.472
methyl-t-butylether	0.131	0.130	0.140
2,3-dimethylbutene-1	0.046	0.050	0.052
2-methylpentane	4.451	5.016	4.856
4-methyl-t-pentene-2	0.145	0.159	0.162
3-methylpentane	2.656	2.942	2.897
2-methylpentene-1	0.239	0.256	0.266
hexene-1	0.127	0.138	0.142

n-hexane	2.240	2.500	2.443
t-hexene-3	0.188	0.202	0.210
c-hexene-3	0.063	0.068	0.071
t-hexene-2	0.370	0.398	0.413
2-methylpentene-2	0.490	0.522	0.547
3-methyl-c-pentene-2	0.243	0.256	0.271
3-methylcyclopentene	0.051	0.049	0.058
c-hexene-2	0.205	0.218	0.229
O14	0.001	0.002	0.002
3,3-dimethylpentene-1	0.379	0.398	0.363
3-methyl-t-pentene-2	0.004	0.004	0.004
2,2-dimethylpentane	0.083	0.091	0.078
methylcyclopentane	1.031	1.013	1.152
2,4-dimethylpentane	1.071	1.172	1.005
cyclic diolefin or triolefin	0.007	0.007	0.008
2,2,3-trimethylbutane	0.037	0.040	0.035
?	0.005	0.005	0.004
cyclic diolefin or triolefin	0.009	0.009	0.010
O17	0.005	0.005	0.005
3,4-dimethylpentene-1	0.013	0.014	0.012
4,4-dimethyl-c-pentene-2	0.024	0.026	0.023
2,4-dimethylpentene-1	0.020	0.021	0.020
1-methylcyclopentene	0.378	0.357	0.433
benzene	1.767	1.480	2.127
3-methylhexene-1	0.029	0.030	0.028
2-methyl-c-hexene-3	0.016	0.017	0.016
3,3-dimethylpentane	0.085	0.090	0.080
5-methylhexene-1	0.035	0.037	0.033
cyclohexane	0.222	0.210	0.249
2-methyl-t-hexene-3	0.058	0.062	0.056
diolefin (hexadiene)	0.006	0.007	0.006
2-ethyl-3-methylbutene-1	0.012	0.013	0.012
4-methylhexene-1	0.040	0.042	0.038
4-methyl-t/c-hexene-2	0.113	0.119	0.109
2-methylhexane	1.462	1.586	1.372
2,3-dimethylpentane	1.926	2.039	1.807
1,1-dimethylcyclopentane	0.032	0.031	0.031
cyclohexene	0.060	0.054	0.069
3-methylhexane	1.533	1.642	1.439
3,4-dimethyl-c-pentene-2	0.042	0.043	0.041
1c,3-dimethylcyclopentane	0.303	0.299	0.290
1t,3-dimethylcyclopentane	0.262	0.257	0.251
3-ethylpentane	0.206	0.217	0.193
1t,2-dimethylcyclopentane	0.194	0.190	0.186
2,2,4-trimethylpentane	2.699	2.871	2.222
2-ethylpentene-1	0.053	0.056	0.051
O25	0.002	0.003	0.002
3-methyl-c-hexene-3	0.071	0.072	0.068
t-heptene-3	0.267	0.280	0.256

n-heptane	1.085	1.168	1.018
3-methyl-c-hexene-2	0.299	0.309	0.287
3-methyl-t-hexene-3	0.106	0.113	0.102
t-heptene-2	0.135	0.141	0.129
3-ethylpentene-2	0.064	0.065	0.061
c-heptene-2	0.229	0.237	0.219
2,3-dimethylpentene-2	0.128	0.129	0.123
3-ethylcyclopentene	0.009	0.008	0.008
O29	0.018	0.018	0.017
1c,2-dimethylcyclopentane	0.163	0.164	0.156
methylcyclohexane	0.458	0.438	0.439
2,2-dimethylhexane	0.096	0.101	0.079
O35	0.012	0.012	0.011
O36	0.009	0.009	0.009
ethylcyclopentane	0.165	0.159	0.158
2,5-dimethylhexane	0.341	0.362	0.281
2,2,3-trimethylpentane	0.051	0.053	0.042
2,4-dimethylhexane	0.534	0.561	0.440
?	0.010	0.011	0.008
O37	0.003	0.003	0.003
1c,2t,4-trimethylcyclopentane	0.110	0.106	0.092
3,3-dimethylhexane	0.039	0.041	0.032
O38	0.007	0.007	0.007
?	0.007	0.007	0.007
?	0.018	0.018	0.017
1t,2c,3-trimethylcyclopentane	0.084	0.080	0.070
O39	0.006	0.006	0.006
2,3,4-trimethylpentane	0.797	0.816	0.656
I1	0.198	0.202	0.163
O40	0.061	0.061	0.058
2,3,3-trimethylpentane	0.425	0.431	0.350
toluene	9.213	7.821	9.401
O42	0.026	0.026	0.022
?	0.010	0.010	0.009
O43	0.032	0.032	0.027
2,3-dimethylhexane	0.410	0.423	0.337
2-methyl-3-ethylpentane	0.039	0.040	0.032
1,1,2-trimethylcyclopentane	0.041	0.040	0.035
O44	0.076	0.076	0.064
2-methylheptane	0.626	0.661	0.516
4-methylheptane	0.243	0.254	0.200
3-methyl-3-ethylpentane	0.057	0.059	0.047
3,4-dimethylhexane	0.054	0.055	0.045
1c,3-dimethylcyclohexane	0.084	0.081	0.070
3-methylheptane	0.619	0.646	0.510
1c,2t,3-trimethylcyclopentane	0.228	0.218	0.191
3-ethylhexane	0.054	0.056	0.044
1t,4-dimethylcyclohexane	0.052	0.050	0.044
?	0.008	0.008	0.007

2,3-dimethylheptane	0.062	0.063	0.046
3,4-dimethylheptane	0.031	0.032	0.023
3,4-dimethylheptane	0.019	0.019	0.014
N14	0.015	0.014	0.011
I5	0.048	0.049	0.036
4-ethylheptane	0.012	0.013	0.009
4-methyloctane	0.150	0.153	0.110
2-methyloctane	0.209	0.215	0.153
N15	0.017	0.016	0.013
1c,2t,3-trimethylcyclohexane	0.016	0.016	0.012
3-ethylheptane	0.050	0.051	0.037
3-methyloctane	0.229	0.234	0.168
1c,2t,4c-trimethylcyclohexane	0.018	0.018	0.014
1,1,2-trimethylcyclohexane	0.013	0.012	0.010
1,2-dimethylbenzene	2.491	2.083	2.206
?	0.011	0.010	0.010
I6	0.020	0.020	0.014
I7	0.040	0.040	0.029
N18	0.032	0.031	0.024
N19	0.040	0.038	0.030
nonene-1	0.035	0.033	0.026
I8	0.024	0.024	0.017
I9	0.076	0.077	0.056
i-butylcyclopentane	0.013	0.012	0.010
N21	0.042	0.040	0.032
N22	0.041	0.039	0.031
N23/c-nonene-2	0.011	0.010	0.008
t-nonene-3	0.029	0.031	0.022
I10	0.026	0.027	0.019
?	0.036	0.036	0.026
n-nonane	0.183	0.187	0.134
1,1-methylethylcyclohexane	0.037	0.034	0.028
?	0.019	0.017	0.014
N25	0.023	0.021	0.017
t-2,2,5,5-tetramethylhexene-3	0.011	0.011	0.007
i-propylbenzene	0.099	0.084	0.077
N27	0.043	0.040	0.032
i-propylcyclohexane	0.018	0.016	0.013
I12	0.031	0.031	0.021
2,4-dimethyloctane	0.046	0.047	0.031
N28	0.003	0.002	0.002
N29	0.008	0.007	0.006
2,6-dimethyloctane	0.040	0.040	0.026
2,5-dimethyloctane	0.050	0.050	0.033
n-butylcyclopentane	0.024	0.022	0.018
I13	0.025	0.026	0.017
N30	0.019	0.018	0.013
I14	0.009	0.009	0.006
3,3-dimethyloctane	0.058	0.058	0.039

1,3-octadiene	0.008	0.007	0.007
1,1-dimethylcyclohexane	0.009	0.009	0.008
2,2,5-trimethylhexane	0.334	0.347	0.245
3c-ethylmethylcyclopentane	0.126	0.121	0.106
2,6-dimethylheptene-1	0.016	0.017	0.012
3t-ethylmethylcyclopentane	0.079	0.076	0.067
2t-ethylmethylcyclopentane	0.066	0.063	0.055
1,1-methylethylcyclopentane	0.025	0.023	0.021
?	0.008	0.008	0.007
2,2,4-trimethylhexane	0.034	0.034	0.025
1t,2-dimethylcyclohexane	0.094	0.089	0.079
t-octene-4	0.048	0.049	0.040
1c,2c,3-trimethylcyclopentane	0.131	0.124	0.110
1t,3-dimethylcyclohexane	0.033	0.031	0.027
n-octane	0.596	0.624	0.490
octene-2	0.056	0.057	0.047
I2	0.096	0.097	0.070
i-propylcyclopentane	0.065	0.061	0.054
O52	0.009	0.009	0.006
O53	0.022	0.022	0.016
N1	0.009	0.009	0.008
2,2,3,4-tetramethylpentane	0.007	0.006	0.005
2,3,4-trimethylhexane	0.057	0.057	0.042
N2	0.031	0.030	0.026
?	0.012	0.011	0.010
N3	0.022	0.020	0.018
2,3,3-trimethylhexene-1	0.015	0.016	0.011
1c,2-dimethylcyclohexane	0.024	0.022	0.020
2,3,5-trimethylhexane	0.064	0.065	0.047
1,1,4-trimethylcyclohexane	0.122	0.117	0.091
N4	0.013	0.012	0.011
2,2,3-trimethylhexane	0.057	0.059	0.042
2,4-dimethylheptane	0.009	0.010	0.007
4,4-dimethylheptane	0.050	0.051	0.036
n-propylcyclopentane	0.008	0.008	0.007
2,5-dimethylheptane	0.135	0.139	0.099
3,3-dimethylheptane	0.032	0.032	0.023
3,5-dimethylheptane	0.013	0.014	0.010
2,6-dimethylheptane	0.027	0.028	0.020
1,1,3-trimethylcyclohexane	0.027	0.025	0.020
N8	0.010	0.009	0.008
ethylbenzene	2.679	2.274	2.372
N11	0.063	0.060	0.047
I3	0.012	0.012	0.009
2-methyloctene-1	0.013	0.014	0.009
I4	0.010	0.010	0.007
2-methyloctene-2	0.011	0.012	0.008
1,3-dimethylbenzene	4.908	4.180	4.347
1,4-dimethylbenzene	2.088	1.785	1.849

N31	0.006	0.006	0.004
?	0.020	0.018	0.013
n-propylbenzene	0.546	0.466	0.427
?	0.017	0.015	0.014
3,6-dimethyloctane	0.018	0.018	0.012
3-methyl-5-ethylheptane	0.026	0.026	0.017
N32	0.014	0.013	0.010
1,3-methylethylbenzene	1.887	1.606	1.476
1,4-methylethylbenzene	0.812	0.694	0.635
?	0.006	0.005	0.005
N33	0.010	0.009	0.007
?	0.005	0.004	0.003
1,3,5-trimethylbenzene	0.949	0.807	0.742
I15	0.029	0.029	0.019
N34	0.009	0.008	0.006
5-methylnonane	0.048	0.048	0.032
I17	0.088	0.088	0.058
1,2-methylethylbenzene	0.586	0.490	0.459
2-methylnonane	0.104	0.106	0.069
?	0.013	0.013	0.008
3-ethyloctane	0.018	0.018	0.012
N35	0.018	0.016	0.012
3-methylnonane	0.099	0.099	0.065
?	0.009	0.009	0.006
I18	0.027	0.027	0.018
I19	0.007	0.007	0.004
1,2,4-trimethylbenzene	2.708	2.276	2.119
I20	0.010	0.010	0.006
i-butylcyclohexane	0.025	0.023	0.017
I21	0.036	0.036	0.024
I22	0.010	0.010	0.007
I23	0.006	0.006	0.004
N37	0.012	0.011	0.008
?	0.006	0.005	0.004
decene-1	0.005	0.005	0.003
1t-methyl-2-n-propylcyclohexane	0.041	0.038	0.027
i-butylbenzene	0.050	0.043	0.035
I25	0.017	0.017	0.011
sec-butylbenzene	0.053	0.045	0.037
n-decane	0.117	0.118	0.078
I26	0.008	0.008	0.005
N38	0.021	0.019	0.014
1,2,3-trimethylbenzene	0.502	0.413	0.392
1,3-methyl-i-propylbenzene	0.054	0.046	0.038
1,4-methyl-i-propylbenzene	0.025	0.021	0.017
I27	0.005	0.005	0.003
I29	0.010	0.010	0.006
2-3-dihydroindene	0.284	0.217	0.226
sec-butylcyclohexane	0.006	0.005	0.004

?	0.022	0.020	0.015
I30	0.017	0.017	0.010
1,2-methyl-i-propylbenzene	0.031	0.026	0.022
?	0.006	0.005	0.004
N40	0.045	0.042	0.028
I32	0.016	0.015	0.010
?	0.008	0.008	0.005
1,3-diethylbenzene	0.193	0.164	0.135
1,3-methyl-n-propylbenzene	0.373	0.319	0.262
I33	0.018	0.018	0.011
1,4-methyl-n-propylbenzene	0.223	0.191	0.156
n-butylbenzene	0.101	0.086	0.071
1,3-dimethyl-5-ethylbenzene	0.384	0.321	0.269
1,2-diethylbenzene	0.034	0.028	0.024
N41	0.008	0.007	0.005
1,2-methyl-n-propylbenzene	0.126	0.106	0.088
I37	0.037	0.036	0.022
?	0.002	0.002	0.001
I38	0.033	0.033	0.020
1,4,dimethyl-2-ethylbenzene	0.240	0.201	0.168
1,3-dimethyl-4-ethylbenzene	0.302	0.259	0.211
I39	0.011	0.011	0.006
?	0.003	0.003	0.002
I40	0.119	0.119	0.072
1,2-dimethyl-4-ethylbenzene	0.428	0.361	0.300
?	0.003	0.003	0.002
I41	0.006	0.006	0.004
1,3-dimethyl-2-ethylbenzene	0.023	0.019	0.016
I42	0.008	0.008	0.005
I43	0.006	0.006	0.004
?	0.007	0.007	0.004
?	0.008	0.008	0.005
undecene-1	0.016	0.016	0.010
1,4-methyl-t-butylbenzene	0.029	0.025	0.019
1,2-dimethyl-3-ethylbenzene	0.104	0.085	0.073
?	0.004	0.004	0.003
?	0.007	0.005	0.005
?	0.003	0.003	0.002
1,2-ethyl-i-propylbenzene	0.008	0.006	0.005
?	0.008	0.006	0.005
n-undecane	0.062	0.061	0.037
1,4-ethyl-i-propylbenzene	0.008	0.007	0.005
1,2,4,5-tetramethylbenzene	0.225	0.187	0.158
1,2,3,5-tetramethylbenzene	0.306	0.253	0.215
?	0.004	0.003	0.003
?	0.046	0.038	0.032
?	0.016	0.013	0.011
?	0.006	0.005	0.004
?	0.015	0.012	0.010

1,2-methyl-t-butylbenzene	0.012	0.010	0.007
?	0.002	0.002	0.001
5-methylindan	0.258	0.214	0.184
I43	0.016	0.016	0.009
4-methylindan	0.063	0.052	0.045
1,2-ethyl-n-propylbenzene	0.088	0.073	0.056
2-methylindan	0.251	0.204	0.178
1,3-methyl-n-butylbenzene	0.021	0.017	0.013
1,3-di-i-propylbenzene	0.094	0.078	0.055
s-pentylbenzene	0.069	0.057	0.044
n-pentylbenzene	0.086	0.071	0.055
?	0.031	0.026	0.020
1,2-di-i-propylbenzene	0.037	0.031	0.022
?	0.041	0.034	0.024
?	0.004	0.003	0.002
?	0.045	0.037	0.026
1,4-di-i-propylbenzene	0.069	0.057	0.040
tetrahydronaphthalene	0.030	0.023	0.022
?	0.060	0.045	0.043
naphthalene	0.398	0.285	0.292
?	0.004	0.003	0.003
1,4-ethyl-t-butylbenzene	0.064	0.053	0.037
I45	0.099	0.097	0.055
I46	0.051	0.050	0.028
I47	0.067	0.066	0.037
I48	0.057	0.056	0.032
1,3-di-n-propylbenzene	0.066	0.055	0.038
A5	0.044	0.037	0.026
dodecene-1	0.007	0.007	0.004
?	0.007	0.007	0.004
?	0.005	0.005	0.003
?	0.004	0.004	0.002
A6	0.033	0.027	0.019
n-dodecane	0.042	0.041	0.023
?	0.007	0.007	0.004
?	0.018	0.018	0.010
?	0.002	0.002	0.001
?	0.022	0.021	0.012
1,3,5-triethylbenzene	0.008	0.007	0.005
?	0.013	0.011	0.008
?	0.058	0.048	0.034
?	0.005	0.004	0.003
?	0.045	0.037	0.026
?	0.057	0.047	0.033
?	0.022	0.018	0.013
1,2,4-triethylbenzene	0.016	0.013	0.009
?	0.019	0.016	0.011
?	0.020	0.017	0.012
?	0.025	0.021	0.014

1,4-methyl-n-pentylbenzene	0.094	0.078	0.055
?	0.039	0.033	0.023
?	0.009	0.008	0.005
?	0.011	0.009	0.006
?	0.020	0.017	0.012
n-hexylbenzene	0.030	0.025	0.017
?	0.006	0.005	0.003
?	0.085	0.070	0.049
?	0.012	0.010	0.007
?	0.042	0.035	0.025
?	0.015	0.013	0.009
?	0.011	0.009	0.006
?	0.005	0.004	0.003
?	0.040	0.033	0.023
?	0.025	0.021	0.014
I49	0.011	0.011	0.006
?	0.009	0.009	0.005
1,2,3,4,5-pentamethylbenzene	0.086	0.063	0.055
?	0.004	0.003	0.003
?	0.020	0.015	0.013
2-methylnaphthalene	0.453	0.327	0.298
?	0.032	0.023	0.021
?	0.025	0.018	0.016
?	0.005	0.003	0.003
?	0.010	0.007	0.007
?	0.017	0.012	0.011
1-methylnaphthalene	0.199	0.143	0.131
?	0.033	0.024	0.022
C14+	0.012	0.011	0.005
C14+	0.007	0.007	0.003
C14+	0.025	0.024	0.012
C14+	0.017	0.017	0.008
C14+	0.018	0.017	0.008
C14+	0.005	0.005	0.002
C14+	0.016	0.015	0.007
C14+	0.013	0.013	0.006
C14+	0.015	0.014	0.007
C14+	0.002	0.002	0.001
C14+	0.021	0.021	0.010
C14+	0.005	0.005	0.002
C14+	0.006	0.006	0.003
C14+	0.005	0.005	0.002
C14+	0.010	0.009	0.005
C14+	0.005	0.004	0.002
C14+	0.004	0.004	0.002
C14+	0.012	0.011	0.006
C14+	0.002	0.002	0.001
C14+	0.009	0.009	0.004
C14+	0.011	0.011	0.005

C14+	0.008	0.007	0.004
C14+	0.008	0.007	0.004
C14+	0.008	0.008	0.004
C14+	0.006	0.006	0.003
C14+	0.004	0.003	0.002
C14+	0.016	0.015	0.007
C14+	0.007	0.006	0.003
C14+	0.003	0.003	0.001
C14+	0.008	0.008	0.004
C14+	0.002	0.002	0.001
C14+	0.021	0.020	0.010
C14+	0.010	0.010	0.005
C14+	0.008	0.008	0.004
C14+	0.018	0.017	0.008
C14+	0.018	0.018	0.009
C14+	0.010	0.010	0.005
C14+	0.033	0.032	0.016
C14+	0.015	0.015	0.007
C14+	0.008	0.007	0.004
C14+	0.002	0.002	0.001
C14+	0.003	0.003	0.001
C14+	0.002	0.002	0.001
C14+	0.002	0.002	0.001
C14+	0.002	0.002	0.001
C14+	0.002	0.002	0.001
C14+	0.002	0.002	0.001
C14+	0.002	0.002	0.001
C14+	0.002	0.002	0.001

Detailed Hydrocarbon Analysis (DHAX)
California Air Resources Board
Southern Laboratory Branch / IAS

File: DHA055.RUN
Sample: M85-PH2,071394
Method: DHA055.MTH
Processed 209 Peaks
DETAILED HC ANALYSIS OF GASOLINE

Analyzed: 19-JUL-94 2:48 AM
Reported: 07-27-1994 07:30:48
DHA DBase File: RI_B-M85.DBF
Normalized to 100.00%

Composite Report
Totals by Group Type & Carbon Number
(in Weight Percent)

	Paraffins:	I-paraffins:	Aromatics:	Naphthenes:	Olefins:	Total:
C1:	0.000	0.000	0.000	0.000	0.000	0.000
C2:	0.000	0.000	0.000	0.000	0.000	0.000
C3:	0.000	0.000	0.000	0.000	0.000	0.000
C4:	0.658	0.012	0.000	0.000	0.001	0.671
C5:	0.174	0.869	0.000	0.006	0.169	1.219
C6:	0.096	0.714	0.124	0.051	0.184	1.170
C7:	0.122	1.133	0.910	0.083	0.163	2.410
C8:	0.070	2.130	1.428	0.069	0.012	3.709
C9:	0.020	0.357	0.792	0.023	0.000	1.191
C10:	0.004	0.084	0.297	0.000	0.000	0.385
C11:	0.002	0.047	0.017	0.000	0.000	0.066
C12:	0.000	0.008	0.024	0.000	0.000	0.033
C13:	0.000	0.000	0.000	0.000	0.000	0.000
Total	1.146	5.353	3.592	0.232	0.529	10.852

Oxygenates: 89.031 Total C14+: 0.002 Total Unknowns: 0.114
Grand Total: 100.000

DHA055R.DHA

Detailed Hydrocarbon Analysis (DHAX)
California Air Resources Board
Southern Laboratory Branch / IAS

File: DHA055.RUN
Sample: M85-PH2,071394
Method: DHA055.MTH
Processed 209 Peaks
DETAILED HC ANALYSIS OF GASOLINE

Analyzed: 19-JUL-94 2:48 AM
Reported: 07-27-1994 07:30:48
DHA DBase File: RI_B-M85.DBF
Normalized to 100.00%

Composite Report
Totals by Group Type & Carbon Number
(in Volume Percent)

	Paraffins:	I-paraffins:	Aromatics:	Naphthenes:	Olefins:	Total:
C1:	0.000	0.000	0.000	0.000	0.000	0.000
C2:	0.000	0.000	0.000	0.000	0.000	0.000
C3:	0.000	0.000	0.000	0.000	0.000	0.000
C4:	0.890	0.016	0.000	0.000	0.001	0.908
C5:	0.218	1.099	0.000	0.006	0.200	1.523
C6:	0.114	0.851	0.110	0.053	0.205	1.334
C7:	0.140	1.294	0.822	0.086	0.180	2.521
C8:	0.078	2.377	1.289	0.070	0.013	3.827
C9:	0.022	0.389	0.712	0.023	0.000	1.146
C10:	0.005	0.090	0.261	0.000	0.000	0.355
C11:	0.002	0.050	0.015	0.000	0.000	0.067
C12:	0.000	0.009	0.022	0.000	0.000	0.030
C13:	0.000	0.000	0.000	0.000	0.000	0.000
Total	1.468	6.174	3.232	0.238	0.599	11.711

Oxygenates: 88.178 Total C14+: 0.002

Total Unknowns: 0.109
Grand Total: 100.000

DHA055R.DHA

Detailed Hydrocarbon Analysis (DHAX)
California Air Resources Board
Southern Laboratory Branch / IAS

File: DHA055.RUN
Sample: M85-PH2,071394
Method: DHA055.MTH
Processed 209 Peaks
DETAILED HC ANALYSIS OF GASOLINE

Analyzed: 19-JUL-94 2:48 AM
Reported: 07-27-1994 07:30:48
DHA DBase File: RI_B-M85.DBF
Normalized to 100.00%

Composite Report
Totals by Group Type & Carbon Number
(in Mole Percent)

	Paraffins:	I-paraffins:	Aromatics:	Naphthenes:	Olefins:	Total:
C1:	0.000	0.000	0.000	0.000	0.000	0.000
C2:	0.000	0.000	0.000	0.000	0.000	0.000
C3:	0.000	0.000	0.000	0.000	0.000	0.000
C4:	0.395	0.007	0.000	0.000	0.001	0.402
C5:	0.084	0.420	0.000	0.003	0.084	0.592
C6:	0.039	0.289	0.055	0.021	0.077	0.481
C7:	0.043	0.394	0.344	0.029	0.058	0.868
C8:	0.021	0.650	0.469	0.021	0.004	1.166
C9:	0.005	0.097	0.230	0.006	0.000	0.339
C10:	0.001	0.021	0.078	0.000	0.000	0.100
C11:	0.000	0.010	0.004	0.000	0.000	0.015
C12:	0.000	0.002	0.005	0.000	0.000	0.007
C13:	0.000	0.000	0.000	0.000	0.000	0.000
Total	0.589	1.890	1.186	0.081	0.223	3.969

Oxygenates: 96.004 Total C14+: 0.000 Total Unknowns: 0.026
Grand Total: 100.000

Detailed Hydrocarbon Analysis (DHAX)			
California Air Resources Board			
Southern Laboratory Branch / IAS			
File: DHA055.RUN	Analyzed: 19-JUL-94 2:48 AM		
Sample: M85-PH2,071394	Reported: 07-27-1994 07:30:48		
Method: DHA055.MTH	DHA DBase File: RI_B-M85.DBF		
Processed 209 Peaks	Normalized to 100.00%		
DETAILED HC ANALYSIS OF GASOLINE			
Components Listed in Chromatographic Order			
Component	Wt%	Vol%	Mol%
i-butane	0.012	0.016	0.007
methanol	87.731	86.803	95.490
n-butane	0.658	0.890	0.395
t-butene-2	0.000	0.000	0.000
2,2-dimethylpropane	0.009	0.012	0.004
c-butene-2	0.001	0.001	0.000
3-methylbutene-1	0.002	0.002	0.001
i-pentane	0.861	1.088	0.416
pentene-1	0.011	0.013	0.005
2-methylbutene-1	0.023	0.027	0.011
n-pentane	0.174	0.218	0.084
isoprene	0.001	0.001	0.000
t-pentene-2	0.037	0.044	0.018
c-pentene-2	0.021	0.025	0.010
2-methylbutene-2	0.060	0.071	0.030
?	0.003	0.003	0.001
1t,3-pentadiene	0.005	0.006	0.003
2,2-dimethylbutane	0.073	0.088	0.030
cyclopentene	0.010	0.010	0.005
4-methylpentene-1	0.003	0.003	0.001
3-methylpentene-1	0.005	0.005	0.002
cyclopentane	0.006	0.006	0.003
2,3-dimethylbutane	0.152	0.180	0.061
methyl-t-butylether	1.301	1.375	0.515
2,3-dimethylbutene-1	0.005	0.006	0.002
2-methylpentane	0.320	0.384	0.129
4-methyl-t-pentene-2	0.010	0.011	0.004
3-methylpentane	0.169	0.200	0.069
2-methylpentene-1	0.015	0.017	0.006
hexene-1	0.008	0.010	0.004
n-hexane	0.096	0.114	0.039
t-hexene-3	0.012	0.014	0.005
c-hexene-3	0.004	0.005	0.002

t-hexene-2	0.024	0.027	0.010
2-methylpentene-2	0.032	0.037	0.013
3-methyl-c-pentene-2	0.015	0.017	0.006
3-methylcyclopentene	0.004	0.004	0.002
c-hexene-2	0.013	0.015	0.005
3,3-dimethylpentene-1	0.024	0.027	0.009
2,2-dimethylpentane	0.014	0.016	0.005
methylcyclopentane	0.044	0.046	0.018
2,4-dimethylpentane	0.291	0.339	0.101
2,2,3-trimethylbutane	0.005	0.005	0.002
4,4-dimethyl-c-pentene-2	0.002	0.002	0.001
2,4-dimethylpentene-1	0.002	0.002	0.001
1-methylcyclopentene	0.029	0.029	0.012
benzene	0.124	0.110	0.055
3-methylhexene-1	0.003	0.003	0.001
3,3-dimethylpentane	0.014	0.016	0.005
5-methylhexene-1	0.002	0.003	0.001
cyclohexane	0.007	0.007	0.003
2-methyl-t-hexene-3	0.005	0.005	0.002
4-methylhexene-1	0.003	0.003	0.001
4-methyl-t/c-hexene-2	0.008	0.009	0.003
2-methylhexane	0.150	0.173	0.052
2,3-dimethylpentane	0.462	0.521	0.161
1,1-dimethylcyclopentane	0.004	0.004	0.001
cyclohexene	0.005	0.005	0.002
3-methylhexane	0.175	0.199	0.061
3,4-dimethyl-c-pentene-2	0.003	0.003	0.001
1c,3-dimethylcyclopentane	0.015	0.016	0.005
1t,3-dimethylcyclopentane	0.014	0.014	0.005
3-ethylpentane	0.021	0.024	0.007
1t,2-dimethylcyclopentane	0.011	0.011	0.004
2,2,4-trimethylpentane	1.062	1.202	0.324
heptene-1	0.004	0.005	0.001
3-methyl-c-hexene-3	0.005	0.006	0.002
t-heptene-3	0.021	0.023	0.007
n-heptane	0.122	0.140	0.043
3-methyl-c-hexene-2	0.023	0.025	0.008
3-methyl-t-hexene-3	0.008	0.009	0.003
t-heptene-2	0.010	0.012	0.004
3-ethylpentene-2	0.005	0.005	0.002
c-heptene-2	0.021	0.023	0.007
2,3-dimethylpentene-2	0.010	0.011	0.004
1c,2-dimethylcyclopentane	0.010	0.011	0.004
methylcyclohexane	0.019	0.020	0.007
2,2-dimethylhexane	0.011	0.012	0.003
ethylcyclopentane	0.010	0.010	0.003
2,5-dimethylhexane	0.095	0.107	0.029
2,2,3-trimethylpentane	0.023	0.025	0.007
2,4-dimethylhexane	0.137	0.153	0.042

1c,2t,4-trimethylcyclopentane	0.006	0.007	0.002
3,3-dimethylhexane	0.008	0.009	0.003
2,3,4-trimethylpentane	0.282	0.307	0.086
I1	0.015	0.017	0.005
O40	0.004	0.005	0.002
2,3,3-trimethylpentane	0.176	0.190	0.054
toluene	0.910	0.822	0.344
2,3-dimethylhexane	0.097	0.107	0.030
2-methyl-3-ethylpentane	0.006	0.007	0.002
O44	0.006	0.007	0.002
2-methylheptane	0.073	0.082	0.022
4-methylheptane	0.033	0.037	0.010
3-methyl-3-ethylpentane	0.013	0.015	0.004
3,4-dimethylhexane	0.013	0.015	0.004
3-methylheptane	0.083	0.092	0.025
1c,2t,3-trimethylcyclopentane	0.027	0.027	0.008
2,2,5-trimethylhexane	0.121	0.134	0.033
3t-ethylmethylcyclopentane	0.004	0.004	0.001
2t-ethylmethylcyclopentane	0.004	0.004	0.001
2,2,4-trimethylhexane	0.003	0.003	0.001
1t,2-dimethylcyclohexane	0.007	0.007	0.002
1c,2c,3-trimethylcyclopentane	0.012	0.012	0.004
n-octane	0.070	0.078	0.021
octene-2	0.006	0.006	0.002
I2	0.010	0.010	0.003
i-propylcyclopentane	0.008	0.008	0.002
2,3,4-trimethylhexane	0.019	0.020	0.005
2,3,5-trimethylhexane	0.013	0.014	0.004
1,1,4-trimethylcyclohexane	0.007	0.007	0.002
2,2,3-trimethylhexane	0.007	0.008	0.002
2,5-dimethylheptane	0.027	0.030	0.007
ethylbenzene	0.373	0.337	0.123
1,3-dimethylbenzene	0.537	0.487	0.177
1,4-dimethylbenzene	0.238	0.217	0.078
2,3-dimethylheptane	0.012	0.013	0.003
I5	0.006	0.007	0.002
4-methyloctane	0.019	0.021	0.005
2-methyloctane	0.024	0.026	0.006
3-ethylheptane	0.006	0.007	0.002
3-methyloctane	0.028	0.030	0.008
1,2-dimethylbenzene	0.279	0.248	0.092
I7	0.017	0.018	0.005
I9	0.028	0.030	0.008
N22	0.004	0.004	0.001
I10	0.017	0.018	0.005
n-nonane	0.020	0.022	0.005
i-propylbenzene	0.016	0.014	0.005
N27	0.005	0.005	0.001
I12	0.009	0.010	0.002

2,2-dimethyloctane	0.003	0.003	0.001
2,4-dimethyloctane	0.004	0.005	0.001
2,6-dimethyloctane	0.002	0.002	0.000
2,5-dimethyloctane	0.005	0.005	0.001
n-butylcyclopentane	0.007	0.007	0.002
3,3-dimethyloctane	0.005	0.005	0.001
n-propylbenzene	0.062	0.056	0.018
1,3-methylethylbenzene	0.185	0.168	0.054
1,4-methylethylbenzene	0.083	0.075	0.024
1,3,5-trimethylbenzene	0.085	0.077	0.025
I15	0.002	0.002	0.001
5-methylnonane	0.002	0.002	0.001
I17	0.025	0.026	0.006
1,2-methylethylbenzene	0.061	0.054	0.018
2-methylnonane	0.006	0.006	0.001
3-methylnonane	0.006	0.006	0.001
I18	0.006	0.007	0.002
1,2,4-trimethylbenzene	0.251	0.224	0.073
I21	0.002	0.002	0.001
I22	0.003	0.003	0.001
I24	0.004	0.005	0.001
i-butylbenzene	0.006	0.005	0.001
sec-butylbenzene	0.005	0.004	0.001
n-decane	0.004	0.005	0.001
I26	0.001	0.002	0.000
1,2,3-trimethylbenzene	0.049	0.043	0.014
1,3-methyl-i-propylbenzene	0.008	0.007	0.002
1,4-methyl-i-propylbenzene	0.004	0.003	0.001
2-3-dihydroindene	0.021	0.017	0.006
?	0.002	0.002	0.001
1,3-diethylbenzene	0.017	0.015	0.004
1,3-methyl-n-propylbenzene	0.038	0.035	0.010
1,4-methyl-n-propylbenzene	0.022	0.020	0.006
n-butylbenzene	0.011	0.010	0.003
1,3-dimethyl-5-ethylbenzene	0.034	0.030	0.009
1,2-diethylbenzene	0.004	0.003	0.001
1,2-methyl-n-propylbenzene	0.011	0.010	0.003
?	0.003	0.002	0.001
I38	0.001	0.001	0.000
1,4,dimethyl-2-ethylbenzene	0.020	0.018	0.005
1,3-dimethyl-4-ethylbenzene	0.024	0.022	0.006
I40	0.044	0.047	0.010
1,3-dimethyl-2-ethylbenzene	0.002	0.002	0.001
1,4-methyl-t-butylbenzene	0.002	0.002	0.001
1,2-dimethyl-3-ethylbenzene	0.009	0.008	0.002
n-undecane	0.002	0.002	0.000
?	0.018	0.019	0.004
?	0.025	0.026	0.005
5-methylindan	0.015	0.013	0.004

4-methylindan	0.004	0.003	0.001
1,2-ethyl-n-propylbenzene	0.006	0.005	0.001
2-methylindan	0.016	0.013	0.004
1,3-di-i-propylbenzene	0.006	0.006	0.001
s-pentylbenzene	0.004	0.004	0.001
n-pentylbenzene	0.005	0.004	0.001
?	0.002	0.002	0.001
1,2-di-i-propylbenzene	0.002	0.002	0.001
?	0.002	0.002	0.001
?	0.003	0.002	0.001
1,4-di-i-propylbenzene	0.004	0.003	0.001
?	0.005	0.004	0.001
naphthalene	0.026	0.020	0.007
1,4-ethyl-t-butylbenzene	0.003	0.003	0.001
I45	0.004	0.004	0.001
I46	0.002	0.002	0.000
I48	0.003	0.003	0.001
1,3-di-n-propylbenzene	0.004	0.004	0.001
A5	0.003	0.002	0.001
A6	0.002	0.001	0.000
?	0.002	0.001	0.000
?	0.002	0.002	0.000
?	0.005	0.004	0.001
?	0.004	0.004	0.001
?	0.001	0.001	0.000
?	0.004	0.003	0.001
?	0.024	0.021	0.005
?	0.011	0.009	0.002
C14+	0.002	0.002	0.000

DHA068.DHA

Detailed Hydrocarbon Analysis (DHAX)
California Air Resources Board
Southern Laboratory Branch / IAS

File: DHA068.RUN
Sample: E85-PH2
Method: DHA068.MTH
Processed 223 Peaks
DETAILED HC ANALYSIS OF GASOLINE

Analyzed: 26-JUL-94 3:45 PM
Reported: 07-29-1994 12:33:16
DHA DBase File: RI_E-RFA.DBF
Normalized to 100.00%

Composite Report
Totals by Group Type & Carbon Number
(in Weight Percent)

	Paraffins:	I-paraffins:	Aromatics:	Naphthenes:	Olefins:	Total:
C1:	0.000	0.000	0.000	0.000	0.000	0.000
C2:	0.000	0.000	0.000	0.000	0.000	0.000
C3:	0.000	0.000	0.000	0.000	0.000	0.000
C4:	1.992	0.028	0.000	0.000	0.014	2.034
C5:	0.500	1.173	0.000	0.033	0.143	1.849
C6:	0.290	0.979	0.141	0.208	0.159	1.777
C7:	0.129	1.227	0.935	0.162	0.176	2.629
C8:	0.074	2.201	1.495	0.092	0.009	3.871
C9:	0.016	0.354	0.604	0.057	0.000	1.030
C10:	0.003	0.121	0.324	0.003	0.000	0.451
C11:	0.002	0.005	0.063	0.000	0.000	0.069
C12:	0.001	0.010	0.026	0.000	0.000	0.038
C13:	0.000	0.000	0.000	0.000	0.000	0.000
Total	3.007	6.099	3.589	0.554	0.501	13.750

Oxygenates: 86.209 Total C14+: 0.011 Total Unknowns: 0.030
Grand Total: 100.000

Detailed Hydrocarbon Analysis (DHAX)
California Air Resources Board
Southern Laboratory Branch / IAS

File: DHA068.RUN
Sample: E85-PH2
Method: DHA068.MTH
Processed 223 Peaks
DETAILED HC ANALYSIS OF GASOLINE

Analyzed: 26-JUL-94 3:45 PM
Reported: 07-29-1994 12:33:16
DHA DBase File: RI_E-RFA.DBF
Normalized to 100.00%

Composite Report
Totals by Group Type & Carbon Number
(in Volume Percent)

	Paraffins:	I-paraffins:	Aromatics:	Naphthenes:	Olefins:	Total:
C1:	0.000	0.000	0.000	0.000	0.000	0.000
C2:	0.000	0.000	0.000	0.000	0.000	0.000
C3:	0.001	0.000	0.000	0.000	0.000	0.001
C4:	2.668	0.039	0.000	0.000	0.018	2.724
C5:	0.619	1.469	0.000	0.035	0.168	2.290
C6:	0.341	1.155	0.124	0.212	0.177	2.009
C7:	0.146	1.386	0.836	0.166	0.191	2.725
C8:	0.082	2.431	1.336	0.093	0.010	3.951
C9:	0.017	0.382	0.538	0.056	0.000	0.993
C10:	0.003	0.128	0.282	0.003	0.000	0.415
C11:	0.002	0.005	0.050	0.000	0.000	0.056
C12:	0.001	0.011	0.023	0.000	0.000	0.035
C13:	0.000	0.000	0.000	0.000	0.000	0.000
Total	3.879	7.004	3.188	0.565	0.564	15.200

Oxygenates: 84.761 Total C14+: 0.011

Total Unknowns: 0.028
Grand Total: 100.000

DHA068.DHA

Detailed Hydrocarbon Analysis (DHAX)
California Air Resources Board
Southern Laboratory Branch / IAS

File: DHA068.RUN
Sample: E85-PH2
Method: DHA068.MTH
Processed 223 Peaks

Analyzed: 26-JUL-94 3:45 PM
Reported: 07-29-1994 12:33:16
DHA DBase File: RI_E-RFA.DBF
Normalized to 100.00%

(in Mole Percent)

	Paraffins:	I-paraffins:	Aromatics:	Naphthenes:	Olefins:	Total:
C1:	0.000	0.000	0.000	0.000	0.000	0.000
C2:	0.000	0.000	0.000	0.000	0.000	0.000
C3:	0.001	0.000	0.000	0.000	0.000	0.001
C4:	1.701	0.024	0.000	0.000	0.013	1.738
C5:	0.344	0.807	0.000	0.024	0.101	1.276
C6:	0.167	0.564	0.090	0.122	0.094	1.037
C7:	0.064	0.608	0.504	0.082	0.086	1.344
C8:	0.032	0.956	0.699	0.041	0.004	1.732
C9:	0.006	0.137	0.249	0.022	0.000	0.415
C10:	0.001	0.042	0.122	0.001	0.000	0.166
C11:	0.000	0.001	0.022	0.000	0.000	0.024
C12:	0.000	0.003	0.008	0.000	0.000	0.011
C13:	0.000	0.000	0.000	0.000	0.000	0.000
Total	2.317	3.143	1.693	0.292	0.299	7.744

Oxygenates: 92.243 Total C14+: 0.003 Total Unknowns: 0.011
Grand Total: 100.000

Detailed Hydrocarbon Analysis (DHAX)			
California Air Resources Board			
Southern Laboratory Branch / IAS			
File: DHA068.RUN	Analyzed: 26-JUL-94 3:45 PM		
Sample: E85-PH2	Reported: 07-29-1994 12:33:16		
Method: DHA068.MTH	DHA DBase File: RI_E-RFA.DBF		
Processed 223 Peaks	Normalized to 100.00%		
DETAILED HC ANALYSIS OF GASOLINE			
Components Listed in Chromatographic Order			
Component	Wt%	Vol%	Mol%
propane	0.000	0.001	0.001
i-butane	0.028	0.039	0.024
methanol	0.069	0.067	0.106
butene-1	0.004	0.005	0.003
isobutylene	0.002	0.002	0.002
n-butane	1.992	2.668	1.701
t-butene-2	0.004	0.005	0.004
2,2-dimethylpropane	0.020	0.026	0.014
c-butene-2	0.005	0.006	0.004
ethanol	71.298	70.031	76.819
ethanol	7.989	7.847	8.607
ethanol	5.546	5.448	5.976
i-pentane	1.153	1.442	0.793
pentene-1	0.011	0.013	0.008
2-methylbutene-1	0.021	0.025	0.015
n-pentane	0.500	0.619	0.344
t-pentene-2	0.033	0.039	0.023
c-pentene-2	0.018	0.021	0.013
2-methylbutene-2	0.050	0.059	0.035
1t,3-pentadiene	0.003	0.004	0.002
2,2-dimethylbutane	0.071	0.084	0.041
cyclopentene	0.007	0.007	0.005
4-methylpentene-1	0.003	0.003	0.001
3-methylpentene-1	0.004	0.004	0.002
?	0.004	0.005	0.002
cyclopentane	0.033	0.035	0.024
2,3-dimethylbutane	0.196	0.230	0.113
methyl-t-butylether	1.278	1.338	0.720
2,3-dimethylbutene-1	0.004	0.004	0.002
2-methylpentane	0.464	0.550	0.267
4-methyl-t-pentene-2	0.009	0.010	0.005
3-methylpentane	0.248	0.290	0.143
2-methylpentene-1	0.013	0.015	0.008

hexene-1	0.009	0.010	0.005
n-hexane	0.290	0.341	0.167
t-hexene-3	0.011	0.012	0.006
c-hexene-3	0.003	0.004	0.002
t-hexene-2	0.022	0.025	0.013
2-methylpentene-2	0.031	0.035	0.018
3-methyl-c-pentene-2	0.015	0.016	0.009
3-methylcyclopentene	0.003	0.003	0.002
c-hexene-2	0.012	0.013	0.007
3,3-dimethylpentene-1	0.022	0.025	0.011
2,2-dimethylpentane	0.011	0.013	0.005
methylcyclopentane	0.141	0.146	0.083
2,4-dimethylpentane	0.300	0.345	0.148
2,2,3-trimethylbutane	0.004	0.005	0.002
4,4-dimethyl-c-pentene-2	0.001	0.001	0.001
1-methylcyclopentene	0.022	0.022	0.013
benzene	0.141	0.124	0.090
3-methylhexene-1	0.002	0.002	0.001
3,3-dimethylpentane	0.010	0.011	0.005
5-methylhexene-1	0.002	0.002	0.001
cyclohexane	0.066	0.066	0.039
2-methyl-t-hexene-3	0.004	0.004	0.002
4-methylhexene-1	0.002	0.003	0.001
4-methyl-t/c-hexene-2	0.007	0.008	0.004
2-methylhexane	0.154	0.176	0.076
2,3-dimethylpentane	0.559	0.623	0.277
1,1-dimethylcyclopentane	0.009	0.010	0.005
t-amylmethylether	0.030	0.031	0.015
3-methylhexane	0.170	0.192	0.084
3,4-dimethyl-c-pentene-2	0.003	0.003	0.001
1c,3-dimethylcyclopentane	0.028	0.029	0.014
1t,3-dimethylcyclopentane	0.025	0.025	0.012
3-ethylpentane	0.019	0.021	0.009
1t,2-dimethylcyclopentane	0.026	0.027	0.013
2,2,4-trimethylpentane	1.081	1.211	0.470
2-ethylpentene-1	0.004	0.004	0.002
3-methyl-c-hexene-3	0.005	0.005	0.002
t-heptene-3	0.017	0.019	0.009
n-heptane	0.129	0.146	0.064
3-methyl-c-hexene-2	0.020	0.022	0.010
3-methyl-t-hexene-3	0.007	0.008	0.004
t-heptene-2	0.009	0.010	0.004
3-ethylpentene-2	0.004	0.005	0.002
c-heptene-2	0.015	0.017	0.008
2,3-dimethylpentene-2	0.009	0.010	0.005
1c,2-dimethylcyclopentane	0.011	0.011	0.005
methylcyclohexane	0.050	0.051	0.025
2,2-dimethylhexane	0.013	0.014	0.006
O34	0.038	0.040	0.017

ethylcyclopentane	0.013	0.013	0.007
2,5-dimethylhexane	0.093	0.104	0.041
2,2,3-trimethylpentane	0.021	0.023	0.009
2,4-dimethylhexane	0.136	0.150	0.059
1c,2t,4-trimethylcyclopentane	0.010	0.010	0.004
3,3-dimethylhexane	0.007	0.008	0.003
1t,2c,3-trimethylcyclopentane	0.007	0.007	0.003
2,3,4-trimethylpentane	0.305	0.329	0.133
I1	0.013	0.014	0.005
O40	0.003	0.003	0.002
2,3,3-trimethylpentane	0.178	0.190	0.077
toluene	0.935	0.836	0.504
2,3-dimethylhexane	0.109	0.118	0.047
2-methyl-3-ethylpentane	0.006	0.007	0.003
O44	0.005	0.005	0.002
2-methylheptane	0.081	0.090	0.035
4-methylheptane	0.036	0.039	0.016
3-methyl-3-ethylpentane	0.013	0.015	0.006
3,4-dimethylhexane	0.014	0.016	0.006
3-methylheptane	0.089	0.098	0.039
1c,2t,3-trimethylcyclopentane	0.029	0.029	0.013
3-ethylhexane	0.004	0.004	0.002
1t,4-dimethylcyclohexane	0.004	0.004	0.002
2,2,5-trimethylhexane	0.141	0.154	0.054
3c-ethylmethylcyclopentane	0.009	0.009	0.004
3t-ethylmethylcyclopentane	0.006	0.006	0.003
2t-ethylmethylcyclopentane	0.005	0.005	0.002
2,2,4-trimethylhexane	0.002	0.002	0.001
1t,2-dimethylcyclohexane	0.008	0.008	0.003
1c,2c,3-trimethylcyclopentane	0.010	0.010	0.005
n-octane	0.074	0.082	0.032
octene-2	0.004	0.005	0.002
I2	0.008	0.008	0.003
?	0.004	0.004	0.002
i-propylcyclopentane	0.005	0.005	0.002
2,3,4-trimethylhexane	0.024	0.025	0.009
2,3,5-trimethylhexane	0.015	0.016	0.006
1,1,4-trimethylcyclohexane	0.009	0.009	0.003
2,2,3-trimethylhexane	0.008	0.008	0.003
2,5-dimethylheptane	0.022	0.024	0.008
ethylbenzene	0.378	0.338	0.177
1,3-dimethylbenzene	0.592	0.531	0.277
1,4-dimethylbenzene	0.260	0.234	0.122
2,3-dimethylheptane	0.013	0.014	0.005
I5	0.005	0.006	0.002
4-methyloctane	0.018	0.019	0.007
2-methyloctane	0.022	0.024	0.009
3-ethylheptane	0.006	0.006	0.002
3-methyloctane	0.026	0.028	0.010

1,2-dimethylbenzene	0.264	0.233	0.124
I6	0.003	0.003	0.001
I7	0.020	0.021	0.008
N20	0.034	0.034	0.013
N22	0.003	0.003	0.001
I10	0.022	0.023	0.008
n-nonane	0.016	0.017	0.006
i-propylbenzene	0.011	0.010	0.004
N27	0.003	0.003	0.001
I12	0.013	0.014	0.005
2,2-dimethyloctane	0.004	0.004	0.001
2,4-dimethyloctane	0.003	0.004	0.001
2,6-dimethyloctane	0.002	0.002	0.001
2,5-dimethyloctane	0.005	0.005	0.002
n-butylcyclopentane	0.008	0.008	0.003
3,3-dimethyloctane	0.004	0.004	0.001
n-propylbenzene	0.045	0.041	0.019
1,3-methylethylbenzene	0.147	0.132	0.061
1,4-methylethylbenzene	0.064	0.057	0.026
1,3,5-trimethylbenzene	0.069	0.062	0.029
5-methylnonane	0.002	0.002	0.001
I17	0.055	0.058	0.019
1,2-methylethylbenzene	0.041	0.036	0.017
2-methylnonane	0.005	0.005	0.002
3-methylnonane	0.004	0.004	0.001
I18	0.015	0.015	0.005
1,2,4-trimethylbenzene	0.192	0.170	0.079
i-butylcyclohexane	0.003	0.003	0.001
I21	0.004	0.005	0.002
I24	0.007	0.007	0.002
i-butylbenzene	0.004	0.004	0.002
sec-butylbenzene	0.003	0.003	0.001
n-decane	0.003	0.003	0.001
I26	0.002	0.002	0.001
1,2,3-trimethylbenzene	0.034	0.030	0.014
1,3-methyl-i-propylbenzene	0.005	0.004	0.002
2-3-dihydroindene	0.018	0.015	0.008
?	0.003	0.002	0.001
1,3-diethylbenzene	0.015	0.013	0.006
1,3-methyl-n-propylbenzene	0.032	0.029	0.012
1,4-methyl-n-propylbenzene	0.018	0.016	0.007
n-butylbenzene	0.008	0.007	0.003
1,3-dimethyl-5-ethylbenzene	0.029	0.025	0.011
1,2-diethylbenzene	0.002	0.002	0.001
1,2-methyl-n-propylbenzene	0.008	0.007	0.003
?	0.001	0.001	0.000
I37	0.001	0.001	0.000
I38	0.001	0.001	0.000
1,4,dimethyl-2-ethylbenzene	0.017	0.015	0.006

1,3-dimethyl-4-ethylbenzene	0.020	0.018	0.007
1,2-dimethyl-4-ethylbenzene	0.035	0.031	0.013
1,3-dimethyl-2-ethylbenzene	0.001	0.001	0.000
1,4-methyl-t-butylbenzene	0.002	0.002	0.001
1,2-dimethyl-3-ethylbenzene	0.007	0.006	0.003
n-undecane	0.002	0.002	0.000
1,2,4,5-tetramethylbenzene	0.015	0.013	0.005
1,2,3,5-tetramethylbenzene	0.020	0.017	0.007
5-methylindan	0.016	0.014	0.006
4-methylindan	0.004	0.004	0.002
1,2-ethyl-n-propylbenzene	0.006	0.005	0.002
2-methylindan	0.015	0.013	0.006
1,3-di-i-propylbenzene	0.005	0.005	0.002
s-pentylbenzene	0.003	0.003	0.001
n-pentylbenzene	0.004	0.003	0.001
?	0.002	0.001	0.001
1,2-di-i-propylbenzene	0.002	0.002	0.001
?	0.002	0.002	0.001
?	0.003	0.002	0.001
1,4-di-i-propylbenzene	0.004	0.003	0.001
?	0.004	0.004	0.001
naphthalene	0.032	0.024	0.012
1,4-ethyl-t-butylbenzene	0.002	0.002	0.001
I45	0.004	0.004	0.001
I46	0.002	0.002	0.001
I47	0.003	0.003	0.001
I48	0.002	0.002	0.001
1,3-di-n-propylbenzene	0.004	0.003	0.001
A5	0.002	0.002	0.001
A6	0.002	0.002	0.001
n-dodecane	0.001	0.001	0.000
?	0.002	0.002	0.000
?	0.002	0.002	0.001
1,4-methyl-n-pentylbenzene	0.005	0.004	0.001
?	0.003	0.002	0.001
1,2,3,4,5-pentamethylbenzene	0.004	0.003	0.001
2-methylnaphthalene	0.031	0.023	0.011
1-methylnaphthalene	0.014	0.010	0.005
C14+	0.001	0.001	0.000
C14+	0.002	0.002	0.000
C14+	0.002	0.002	0.000
C14+	0.004	0.004	0.001
C14+	0.002	0.002	0.000

DHA028.DHA

Detailed Hydrocarbon Analysis (DHAX)
California Air Resources Board
Southern Lab Branch / Inorganic Analysis Section

File: DHA028.RUN
Sample: E-85/JP 110394
Method: DHA028.MTH
Processed 232 Peaks
Analyst: R.P.Papa

Analyzed: 18-NOV-94 10:23 AM
Reported: 11-21-1994 11:32:12
DHA DBase File: RI_E85JP.DBF
Normalized to 100.00%
Requested By MSD / J.Purnell

Composite Report
Totals by Group Type & Carbon Number
(in Weight Percent)

	Paraffins:	I-paraffins:	Aromatics:	Naphthenes:	Olefins:	Total:
C1:	0.000	0.000	0.000	0.000	0.000	0.000
C2:	0.000	0.000	0.000	0.000	0.000	0.000
C3:	0.000	0.000	0.000	0.000	0.000	0.000
C4:	1.869	0.025	0.000	0.000	0.015	1.910
C5:	0.487	1.143	0.000	0.031	0.142	1.804
C6:	0.287	0.969	0.143	0.206	0.161	1.766
C7:	0.129	1.224	0.937	0.161	0.174	2.625
C8:	0.076	2.203	0.965	0.094	0.008	3.346
C9:	0.021	0.527	0.423	0.129	0.000	1.099
C10:	0.003	0.160	0.320	0.078	0.012	0.574
C11:	0.002	0.004	0.062	0.000	0.000	0.068
C12:	0.000	0.008	0.026	0.000	0.000	0.034
C13:	0.001	0.000	0.000	0.000	0.000	0.001
Total	2.876	6.264	2.876	0.700	0.513	13.228

Oxygenates: 86.36 Total C14+: 0.008 Total Unknowns: 0.405
Grand Total: 100.000

Detailed Hydrocarbon Analysis (DHAX)
California Air Resources Board
Southern Lab Branch / Inorganic Analysis Section

File: DHA028.RUN
Sample: E-85/JP 110394
Method: DHA028.MTH
Processed 232 Peaks
Analyst: R.P.Papa

Analyzed: 18-NOV-94 10:23 AM
Reported: 11-21-1994 11:32:12
DHA DBase File: RI_E85JP.DBF
Normalized to 100.00%
Requested By MSD / J.Purnell

Composite Report
Totals by Group Type & Carbon Number
(in Volume Percent)

	Paraffins:	I-paraffins:	Aromatics:	Naphthenes:	Olefins:	Total:
C1:	0.000	0.000	0.000	0.000	0.000	0.000
C2:	0.000	0.000	0.000	0.000	0.000	0.000
C3:	0.001	0.000	0.000	0.000	0.000	0.001
C4:	2.502	0.035	0.000	0.000	0.019	2.557
C5:	0.603	1.431	0.000	0.032	0.167	2.233
C6:	0.337	1.143	0.126	0.210	0.178	1.994
C7:	0.146	1.382	0.838	0.165	0.189	2.720
C8:	0.084	2.433	0.864	0.095	0.008	3.484
C9:	0.023	0.566	0.376	0.128	0.000	1.092
C10:	0.004	0.168	0.278	0.076	0.013	0.539
C11:	0.002	0.004	0.049	0.000	0.000	0.055
C12:	0.000	0.008	0.023	0.000	0.000	0.031
C13:	0.001	0.000	0.000	0.000	0.000	0.001
Total	3.701	7.170	2.552	0.707	0.575	14.706

Oxygenates: 84.88 Total C14+: 0.008 Total Unknowns: 0.406
Grand Total: 100.000

DHA028.DHA

Detailed Hydrocarbon Analysis (DHAX)
California Air Resources Board
Southern Lab Branch / Inorganic Analysis Section

File: DHA028.RUN
Sample: E-85/JP 110394
Method: DHA028.MTH
Processed 232 Peaks
Analyst: R.P.Papa

Analyzed: 18-NOV-94 10:23 AM
Reported: 11-21-1994 11:32:12
DHA DBase File: RI_E85JP.DBF
Normalized to 100.00%
Requested By MSD / J.Purnell

Composite Report
Totals by Group Type & Carbon Number
(in Mole Percent)

	Paraffins:	I-paraffins:	Aromatics:	Naphthenes:	Olefins:	Total:
C1:	0.000	0.000	0.000	0.000	0.000	0.000
C2:	0.000	0.000	0.000	0.000	0.000	0.000
C3:	0.000	0.000	0.000	0.000	0.000	0.000
C4:	1.591	0.022	0.000	0.000	0.013	1.626
C5:	0.334	0.784	0.000	0.022	0.101	1.241
C6:	0.165	0.557	0.090	0.121	0.095	1.028
C7:	0.064	0.604	0.503	0.081	0.086	1.338
C8:	0.033	0.954	0.450	0.042	0.003	1.482
C9:	0.008	0.203	0.174	0.050	0.000	0.436
C10:	0.001	0.056	0.120	0.028	0.004	0.208
C11:	0.001	0.001	0.021	0.000	0.000	0.023
C12:	0.000	0.002	0.008	0.000	0.000	0.010
C13:	0.000	0.000	0.000	0.000	0.000	0.000
Total	2.197	3.184	1.366	0.344	0.303	7.394

Oxygenates: 92.446 Total C14+: 0.002 Total Unknowns: 0.158
Grand Total: 100.000

Detailed Hydrocarbon Analysis (DHAX)			
California Air Resources Board			
Southern Lab Branch / Inorganic Analysis Section			
File: DHA028.RUN		Analyzed: 18-NOV-94 10:23 AM	
Sample: E-85/JP 110394		Reported: 11-21-1994 11:32:12	
Method: DHA028.MTH		DHA DBase File: RI_E85JP.DBF	
Processed 232 Peaks		Normalized to 100.00%	
Analyst: R.P.Papa		Requested By MSD / J.Purnell	
Components Listed in Chromatographic Order			
Component	Wt%	Vol%	Mol%
propane	0.000	0.001	0.000
i-butane	0.025	0.035	0.022
methanol	0.770	0.754	1.189
butene-1	0.003	0.004	0.003
isobutylene	0.003	0.004	0.003
n-butane	1.869	2.502	1.591
?	0.007	0.010	0.006
t-butene-2	0.004	0.005	0.003
2,2-dimethylpropane	0.019	0.025	0.013
c-butene-2	0.005	0.006	0.004
ethanol	84.280	82.756	90.526
i-pentane	1.125	1.406	0.771
pentene-1	0.010	0.013	0.007
2-methylbutene-1	0.021	0.026	0.015
n-pentane	0.487	0.603	0.334
t-pentene-2	0.032	0.039	0.023
c-pentene-2	0.018	0.021	0.013
2-methylbutene-2	0.050	0.058	0.035
1t,3-pentadiene	0.004	0.004	0.003
2,2-dimethylbutane	0.069	0.083	0.040
cyclopentene	0.007	0.007	0.005
4-methylpentene-1	0.002	0.003	0.001
3-methylpentene-1	0.004	0.004	0.002
?	0.004	0.004	0.002
cyclopentane	0.031	0.032	0.022
2,3-dimethylbutane	0.194	0.228	0.112
methyl-t-butylether	1.285	1.344	0.721
2,3-dimethylbutene-1	0.004	0.004	0.002
2-methylpentane	0.459	0.545	0.264
4-methyl-t-pentene-2	0.008	0.010	0.005
3-methylpentane	0.247	0.288	0.142
2-methylpentene-1	0.014	0.016	0.008
hexene-1	0.009	0.010	0.005
n-hexane	0.287	0.337	0.165

t-hexene-3	0.011	0.012	0.006
c-hexene-3	0.003	0.004	0.002
t-hexene-2	0.021	0.024	0.013
2-methylpentene-2	0.031	0.034	0.018
3-methyl-c-pentene-2	0.014	0.016	0.008
3-methylcyclopentene	0.003	0.003	0.002
c-hexene-2	0.012	0.014	0.007
3,3-dimethylpentene-1	0.023	0.025	0.011
2,2-dimethylpentane	0.011	0.013	0.005
methylcyclopentane	0.141	0.146	0.083
2,4-dimethylpentane	0.299	0.344	0.148
cyclic diolefin or triolefin	0.004	0.004	0.002
4,4-dimethyl-c-pentene-2	0.001	0.001	0.000
1-methylcyclopentene	0.022	0.022	0.013
benzene	0.143	0.126	0.090
3-methylhexene-1	0.001	0.001	0.001
3,3-dimethylpentane	0.010	0.011	0.005
5-methylhexene-1	0.002	0.002	0.001
cyclohexane	0.065	0.065	0.038
2-methyl-t-hexene-3	0.003	0.004	0.002
4-methylhexene-1	0.002	0.002	0.001
4-methyl-t/c-hexene-2	0.007	0.008	0.004
2-methylhexane	0.155	0.176	0.076
2,3-dimethylpentane	0.559	0.623	0.276
1,1-dimethylcyclopentane	0.009	0.009	0.005
t-amylmethylether	0.025	0.026	0.012
cyclohexene	0.003	0.003	0.002
3-methylhexane	0.171	0.192	0.084
3,4-dimethyl-c-pentene-2	0.003	0.003	0.001
1c,3-dimethylcyclopentane	0.028	0.029	0.014
1t,3-dimethylcyclopentane	0.025	0.026	0.012
3-ethylpentane	0.019	0.022	0.010
1t,2-dimethylcyclopentane	0.026	0.026	0.013
2,2,4-trimethylpentane	1.085	1.215	0.470
3-methyl-c-hexene-3	0.005	0.005	0.002
t-heptene-3	0.018	0.019	0.009
n-heptane	0.129	0.146	0.064
2-methyl-2-hexene	0.021	0.022	0.010
3-methyl-t-hexene-3	0.007	0.008	0.004
t-heptene-2	0.009	0.009	0.004
3-ethylpentene-2	0.004	0.004	0.002
c-heptene-2	0.015	0.017	0.008
2,3-dimethylpentene-2	0.009	0.009	0.004
1c,2-dimethylcyclopentane	0.011	0.011	0.005
methylcyclohexane	0.050	0.050	0.025
2,2-dimethylhexane	0.013	0.015	0.006
O33	0.038	0.040	0.017
ethylcyclopentane	0.013	0.013	0.006
2,5-dimethylhexane	0.092	0.103	0.040

2,2,3-trimethylpentane	0.022	0.024	0.010
2,4-dimethylhexane	0.137	0.151	0.059
1c,2t,4-trimethylcyclopentane	0.009	0.009	0.004
3,3-dimethylhexane	0.006	0.007	0.003
1t,2c,3-trimethylcyclopentane	0.003	0.003	0.001
2,3,4-trimethylpentane	0.306	0.330	0.133
I1	0.013	0.014	0.006
O40	0.003	0.003	0.002
2,3,3-trimethylpentane	0.179	0.191	0.077
toluene	0.937	0.838	0.503
2,3-dimethylhexane	0.108	0.118	0.047
2-methyl-3-ethylpentane	0.006	0.006	0.003
O44	0.005	0.005	0.002
2-methylheptane	0.081	0.090	0.035
4-methylheptane	0.036	0.039	0.015
3-methyl-3-ethylpentane	0.013	0.014	0.006
3,4-dimethylhexane	0.015	0.016	0.006
1c,3-dimethylcyclohexane	0.006	0.006	0.003
3-methylheptane	0.088	0.097	0.038
1c,2t,3-trimethylcyclopentane	0.029	0.029	0.013
3-ethylhexane	0.004	0.005	0.002
1t,4-dimethylcyclohexane	0.004	0.004	0.002
2,2,5-trimethylhexane	0.138	0.152	0.053
3c-ethylmethylcyclopentane	0.008	0.008	0.004
3t-ethylmethylcyclopentane	0.006	0.006	0.003
2t-ethylmethylcyclopentane	0.004	0.005	0.002
2,2,4-trimethylhexane	0.002	0.002	0.001
1t,2-dimethylcyclohexane	0.008	0.008	0.003
1c,2c,3-trimethylcyclopentane	0.011	0.011	0.005
1t,3-dimethylcyclohexane	0.003	0.003	0.001
n-octane	0.076	0.084	0.033
octene-2	0.003	0.003	0.001
I2	0.007	0.007	0.003
i-propylcyclopentane	0.004	0.004	0.002
2,4,4-trimethylhexane	0.005	0.005	0.002
2,3,4-trimethylhexane	0.025	0.026	0.009
2,3,5-trimethylhexane	0.008	0.008	0.003
1,1,4-trimethylcyclohexane	0.007	0.007	0.003
2,2,3-trimethylhexane	0.008	0.008	0.003
4,4-dimethylheptane	0.004	0.005	0.002
2,5-dimethylheptane	0.021	0.023	0.008
1,1,3-trimethylcyclohexane	0.002	0.002	0.001
ethylbenzene	0.375	0.335	0.175
1,3-dimethylbenzene	0.589	0.528	0.275
2,3-dimethylheptane	0.277	0.296	0.107
?	0.012	0.013	0.005
I5	0.005	0.005	0.002
2-methyloctane	0.018	0.019	0.007
N15	0.022	0.022	0.009

3-methyloctane	0.005	0.005	0.002
1c,2t,4c-trimethylcyclohexane	0.025	0.025	0.010
?	0.287	0.288	0.112
I7	0.004	0.004	0.001
N18	0.019	0.019	0.007
i-butylcyclopentane	0.033	0.033	0.013
N23/c-nonene-2	0.003	0.003	0.001
I10	0.001	0.001	0.000
n-nonane	0.021	0.023	0.008
3,7-dimethyloctene-1	0.012	0.013	0.004
N27	0.011	0.011	0.004
i-propylcyclohexane	0.003	0.003	0.001
2,2-dimethyloctane	0.014	0.015	0.005
?	0.004	0.004	0.001
N28	0.003	0.003	0.001
2,5-dimethyloctane	0.001	0.001	0.000
?	0.004	0.004	0.001
N30	0.007	0.007	0.003
N31	0.004	0.003	0.001
?	0.048	0.047	0.017
1,4-methylethylbenzene	0.147	0.132	0.060
N33	0.068	0.065	0.024
I15	0.074	0.077	0.026
I17	0.002	0.002	0.001
1,2-methylethylbenzene	0.051	0.045	0.021
2-methylnonane	0.044	0.047	0.015
?	0.005	0.005	0.002
?	0.004	0.004	0.001
I19	0.013	0.013	0.004
1,2,4-trimethylbenzene	0.192	0.169	0.079
I22	0.003	0.003	0.001
I23	0.003	0.004	0.001
I24	0.006	0.006	0.002
i-butylbenzene	0.003	0.003	0.001
sec-butylbenzene	0.002	0.002	0.001
n-decane	0.003	0.004	0.001
I26	0.003	0.003	0.001
1,2,3-trimethylbenzene	0.034	0.029	0.014
1,3-methyl-i-propylbenzene	0.006	0.005	0.002
?	0.001	0.001	0.000
2-3-dihydroindene	0.018	0.015	0.008
?	0.002	0.002	0.001
1,3-diethylbenzene	0.015	0.013	0.005
1,3-methyl-n-propylbenzene	0.030	0.027	0.011
1,4-methyl-n-propylbenzene	0.018	0.016	0.007
n-butylbenzene	0.008	0.007	0.003
1,3-dimethyl-5-ethylbenzene	0.029	0.025	0.011
1,2-diethylbenzene	0.002	0.002	0.001
1,2-methyl-n-propylbenzene	0.008	0.007	0.003

I38	0.001	0.001	0.000
1,4,dimethyl-2-ethylbenzene	0.017	0.015	0.006
1,3-dimethyl-4-ethylbenzene	0.020	0.018	0.007
1,2-dimethyl-4-ethylbenzene	0.034	0.030	0.012
1,3-dimethyl-2-ethylbenzene	0.001	0.001	0.000
1,4-methyl-t-butylbenzene	0.002	0.002	0.001
1,2-dimethyl-3-ethylbenzene	0.007	0.006	0.003
n-undecane	0.002	0.002	0.001
1,2,4,5-tetramethylbenzene	0.014	0.013	0.005
1,2,3,5-tetramethylbenzene	0.020	0.017	0.007
?	0.001	0.001	0.000
5-methylindan	0.016	0.014	0.006
4-methylindan	0.004	0.004	0.002
1,2-ethyl-n-propylbenzene	0.006	0.005	0.002
2-methylindan	0.015	0.013	0.006
1,3-di-i-propylbenzene	0.006	0.005	0.002
s-pentylbenzene	0.004	0.003	0.001
n-pentylbenzene	0.004	0.003	0.001
?	0.001	0.001	0.000
?	0.003	0.002	0.001
1,2-di-i-propylbenzene	0.002	0.002	0.001
?	0.003	0.002	0.001
1,4-di-i-propylbenzene	0.004	0.004	0.001
tetrahydronaphthalene	0.001	0.001	0.000
?	0.005	0.004	0.002
naphthalene	0.032	0.024	0.012
1,4-ethyl-t-butylbenzene	0.003	0.002	0.001
I45	0.004	0.004	0.001
I46	0.002	0.002	0.001
I47	0.002	0.002	0.001
?	0.002	0.002	0.001
1,3-di-n-propylbenzene	0.004	0.003	0.001
A5	0.002	0.002	0.001
A6	0.001	0.001	0.000
?	0.002	0.002	0.001
?	0.003	0.002	0.001
1,4-methyl-n-pentylbenzene	0.004	0.004	0.001
?	0.004	0.003	0.001
?	0.001	0.001	0.000
1,2,3,4,5-pentamethylbenzene	0.003	0.002	0.001
2-methylnaphthalene	0.030	0.023	0.010
1-methylnaphthalene	0.013	0.010	0.005
n-tridecane	0.001	0.001	0.000
?	0.001	0.001	0.000
?	0.002	0.002	0.001
C14+	0.002	0.003	0.001
C14+	0.004	0.004	0.001
C14+	0.001	0.001	0.000

Vapor Composition
Average Comparison

	E85-DR	E85-VW	M85-DR	M85-VW	PH2-DR	PH2-VW	RFA-DR	RFA-VH	E85-DR	E85-VW	M85-DR	M85-VW	PH2-DR	PH2-VW	RFA-DR	RFA-VH
	AVE	AVE	AVE	AVE	AVE	AVE	AVE	AVE	AVE	AVE	AVE	AVE	AVE	AVE	AVE	AVE
LIGHT END HYDROCARBONS																
COMPOUND	NET	NET	NET	NET	NET	NET	NET	NET	% of	% of	% of	% of	% of	% of	% of	% of
	PPBC	PPBC	PPBC	PPBC	PPBC	PPBC	PPBC	PPBC	Total	Total	Total	Total	Total	Total	Total	Total
ethane	0	0	0	0	7	0	3	0	0%	0%	0%	0%	0%	0%	0%	0%
ethene	0	1	0	0	0	0	11	0	0%	0%	0%	0%	0%	0%	0%	0%
propane	8	11	19	6	46	21	12	10	0%	0%	0%	0%	0%	0%	0%	0%
propene	0	0	0	0	0	0	0	0	0%	0%	0%	0%	0%	0%	0%	0%
methylpropane	225	294	105	143	130	205	189	168	1%	1%	1%	1%	1%	1%	1%	1%
ethyne	0	2	0	0	63	0	0	0	0%	0%	0%	0%	0%	0%	0%	0%
n-butane	10371	14248	3628	5135	2218	2484	6530	5895	56%	59%	28%	22%	13%	11%	33%	29%
propadiene	0	0	0	0	0	0	0	0	0%	0%	0%	0%	0%	0%	0%	0%
trans-2-butene	13	23	0	0	62	66	33	31	0%	0%	0%	0%	0%	0%	0%	0%
1-butene	0	0	0	0	10	13	0	0	0%	0%	0%	0%	0%	0%	0%	0%
2-methylpropene	0	0	3	0	28	24	0	0	0%	0%	0%	0%	0%	0%	0%	0%
cis-2-butene	20	26	0	0	69	76	42	40	0%	0%	0%	0%	0%	0%	0%	0%
2,2-dimethylpropane	89	118	46	63	22	25	51	48	0%	0%	0%	0%	0%	0%	0%	0%
methylbutane	2823	3700	2417	3530	5474	6586	5738	5502	15%	15%	19%	15%	32%	30%	29%	27%
1-propyne	0	0	0	0	0	0	0	0	0%	0%	0%	0%	0%	0%	0%	0%
n-pentane	966	1223	398	605	755	916	1257	1230	5%	5%	3%	3%	4%	4%	6%	6%
1,3-butadiene	0	0	0	0	0	0	0	0	0%	0%	0%	0%	0%	0%	0%	0%
3-methyl-1-butene	0	0	12	25	20	4	37	62	0%	0%	0%	0%	0%	0%	0%	0%
cyclopentene	6	7	0	0	17	40	43	17	0%	0%	0%	0%	0%	0%	0%	0%
trans-2-pentene	52	67	65	98	137	158	289	291	0%	0%	1%	0%	1%	1%	1%	1%
2-methyl-2-butene	65	88	90	135	200	205	375	381	0%	0%	1%	1%	1%	1%	2%	2%
1-pentene	23	28	24	37	38	67	122	121	0%	0%	0%	0%	0%	0%	1%	1%
2-methyl-1-butene	41	48	45	66	103	121	218	216	0%	0%	0%	0%	1%	1%	1%	1%
cis-2-pentene	29	35	36	53	73	85	159	159	0%	0%	0%	0%	0%	0%	1%	1%
1-buten-3-yne	0	0	0	0	0	0	0	0	0%	0%	0%	0%	0%	0%	0%	0%
2-butyne	0	0	0	0	0	0	0	0	0%	0%	0%	0%	0%	0%	0%	0%
1-butyne	0	24	0	0	0	0	21	20	0%	0%	0%	0%	0%	0%	0%	0%
Light-end-unidentified-1	0	0	0	0	0	0	0	0	0%	0%	0%	0%	0%	0%	0%	0%
Light-end-unidentified-2	0	0	0	0	0	0	0	0	0%	0%	0%	0%	0%	0%	0%	0%
Light-end-unidentified-3	0	0	0	0	0	0	0	0	0%	0%	0%	0%	0%	0%	0%	0%
Light-end-unidentified-4	0	0	0	0	0	0	0	0	0%	0%	0%	0%	0%	0%	0%	0%
Light-end-unidentified-5	0	0	0	0	0	0	0	0	0%	0%	0%	0%	0%	0%	0%	0%
Light-end-unidentified-6	0	0	0	0	0	0	0	0	0%	0%	0%	0%	0%	0%	0%	0%
Light-end-unidentified-7	0	0	0	0	0	0	0	0	0%	0%	0%	0%	0%	0%	0%	0%
Light-end-unidentified-8	0	0	0	0	0	0	0	0	0%	0%	0%	0%	0%	0%	0%	0%
Light-end-unidentified-9	0	0	0	0	0	0	0	0	0%	0%	0%	0%	0%	0%	0%	0%
Light-end-unidentified-10	0	0	0	0	0	0	0	0	0%	0%	0%	0%	0%	0%	0%	0%
Light-end-unidentified-11	0	0	0	0	0	0	0	0	0%	0%	0%	0%	0%	0%	0%	0%
Light End	14732	19942	6889	9896	9473	11096	15127	14191	80%	82%	53%	43%	55%	51%	76%	69%
MID-RANGE HYDROCARBONS																
COMPOUND	NET	NET	NET	NET	NET	NET	NET	NET	% of	% of	% of	% of	% of	% of	% of	% of
	PPBC	PPBC	PPBC	PPBC	PPBC	PPBC	PPBC	PPBC	Total	Total	Total	Total	Total	Total	Total	Total
2-methyl-1,3-butadiene	0	0	3	0	0	0	0	0	0%	0%	0%	0%	0%	0%	0%	0%
3,3-dimethyl-1-butene	0	0	0	0	0	0	0	0	0%	0%	0%	0%	0%	0%	0%	0%
1,3-pentadiene	0	0	0	0	0	0	0	0	0%	0%	0%	0%	0%	0%	0%	0%
cyclopentadiene	0	0	0	0	0	0	0	0	0%	0%	0%	0%	0%	0%	0%	0%
2,2-dimethylbutane	79	89	104	133	173	228	158	188	0%	0%	1%	1%	1%	1%	1%	1%
3-methyl-1-pentene	0	0	0	5	12	8	19	38	0%	0%	0%	0%	0%	0%	0%	0%

cyclopentane	35	44	4	11	27	39	54	60	0%	0%	0%	0%	0%	0%	0%	0%
2,3-dimethylbutane	158	189	165	208	351	436	275	324	1%	1%	1%	1%	2%	2%	1%	2%
1-methyl-tert-butyl-ether	214	299	190	276	2073	1668	0	0	1%	1%	1%	1%	12%	8%	0%	0%
2-methylpentane	362	414	333	447	747	1893	762	988	2%	2%	3%	2%	4%	9%	4%	5%
4-methyl-cis-2-pentene	0	0	8	12	28	0	27	35	0%	0%	0%	0%	0%	0%	0%	0%
3-methylpentane	176	190	158	241	629	372	417	522	1%	1%	1%	1%	4%	2%	2%	3%
2-methyl-1-pentene	0	0	18	26	27	31	31	68	0%	0%	0%	0%	0%	0%	0%	0%
n-hexane	167	206	83	123	121	97	168	332	1%	1%	1%	1%	1%	0%	1%	2%
trans-3-hexene	0	0	3	13	14	13	10	28	0%	0%	0%	0%	0%	0%	0%	0%
trans-2-hexene	0	20	17	29	13	6	0	51	0%	0%	0%	0%	0%	0%	0%	0%
2-methyl-2-pentene	0	0	11	24	20	19	24	56	0%	0%	0%	0%	0%	0%	0%	0%
3-methylcyclopentene	0	0	3	17	15	20	21	39	0%	0%	0%	0%	0%	0%	0%	0%
cis-2-hexene	0	0	0	5	11	5	0	22	0%	0%	0%	0%	0%	0%	0%	0%
3-methyl-cis-2-pentene	0	0	4	20	9	0	0	36	0%	0%	0%	0%	0%	0%	0%	0%
2,2-dimethylpentane	0	0	0	0	0	0	0	0	0%	0%	0%	0%	0%	0%	0%	0%
methylcyclopentane	81	95	44	59	95	120	160	177	0%	0%	0%	0%	1%	1%	1%	1%
2,4-dimethylpentane	135	160	175	218	261	309	82	122	1%	1%	1%	1%	2%	1%	0%	1%
2,2,3-trimethylbutane	0	0	0	0	0	0	0	0	0%	0%	0%	0%	0%	0%	0%	0%
3,4-dimethyl-1-pentene	0	0	0	0	0	0	0	0	0%	0%	0%	0%	0%	0%	0%	0%
1-methylcyclopentene	0	0	0	0	0	0	0	0	0%	0%	0%	0%	0%	0%	0%	0%
benzene	69	53	46	58	133	161	148	268	0%	0%	0%	0%	1%	1%	1%	1%
3-methyl-1-hexene	0	0	0	0	0	0	0	0	0%	0%	0%	0%	0%	0%	0%	0%
3,3-dimethylpentane	0	0	0	0	5	21	21	11	0%	0%	0%	0%	0%	0%	0%	0%
cyclohexane	21	0	0	0	0	0	0	0	0%	0%	0%	0%	0%	0%	0%	0%
4-methyl-trans-2-hexene	0	0	0	0	0	0	0	0	0%	0%	0%	0%	0%	0%	0%	0%
2-methylhexane	0	0	0	0	158	0	0	0	0%	0%	0%	0%	1%	0%	0%	0%
2,3-dimethylpentane	224	264	252	341	277	545	160	267	1%	1%	2%	1%	2%	2%	1%	1%
cyclohexene	0	0	0	0	7	11	0	0	0%	0%	0%	0%	0%	0%	0%	0%
3-methylhexane	65	65	68	99	88	117	54	103	0%	0%	1%	0%	1%	1%	0%	1%
1-heptene	0	0	0	0	0	0	0	0	0%	0%	0%	0%	0%	0%	0%	0%
trans-1,3-dimethylcyclopentane	0	0	0	0	19	27	19	29	0%	0%	0%	0%	0%	0%	0%	0%
cis-1,3-dimethylcyclopentane	0	0	0	0	5	17	14	21	0%	0%	0%	0%	0%	0%	0%	0%
3-ethylpentane	0	10	3	18	13	15	8	18	0%	0%	0%	0%	0%	0%	0%	0%
2,2,4-trimethylpentane	266	321	349	463	540	769	104	167	1%	1%	3%	2%	3%	4%	1%	1%
3-methyl-trans-3-hexene	0	0	5	14	0	0	0	13	0%	0%	0%	0%	0%	0%	0%	0%
n-heptane	38	39	59	78	28	30	6	60	0%	0%	0%	0%	0%	0%	0%	0%
2-methyl-trans-2-hexene	0	0	0	0	0	8	0	0	0%	0%	0%	0%	0%	0%	0%	0%
trans-2-heptene	0	0	0	0	0	5	0	0	0%	0%	0%	0%	0%	0%	0%	0%
2-methyl-cis-2-hexene	0	0	0	0	0	0	0	5	0%	0%	0%	0%	0%	0%	0%	0%
cis-2-heptene	0	0	0	0	0	0	0	0	0%	0%	0%	0%	0%	0%	0%	0%
2,4-dimethyl-2-pentene	0	0	0	0	0	0	0	0	0%	0%	0%	0%	0%	0%	0%	0%
methylcyclohexane	11	19	3	13	24	33	26	39	0%	0%	0%	0%	0%	0%	0%	0%
2,2-dimethylhexane	0	0	0	0	0	0	0	0	0%	0%	0%	0%	0%	0%	0%	0%
2,4,4-trimethyl-2-pentene	0	0	0	0	0	0	0	0	0%	0%	0%	0%	0%	0%	0%	0%
2,5-dimethylhexane	9	26	26	41	40	46	0	13	0%	0%	0%	0%	0%	0%	0%	0%
2,4-dimethylhexane	9	28	25	41	51	67	0	14	0%	0%	0%	0%	0%	0%	0%	0%
3,3-dimethylhexane	0	0	0	0	0	9	0	0	0%	0%	0%	0%	0%	0%	0%	0%
2,3,4-trimethylpentane	38	56	59	78	117	157	15	35	0%	0%	0%	0%	1%	1%	0%	0%
toluene	110	135	119	180	439	981	383	446	1%	1%	1%	1%	3%	4%	2%	2%
2,3,3-trimethylpentane	0	0	0	0	0	0	0	0	0%	0%	0%	0%	0%	0%	0%	0%
2,3-dimethylhexane	10	14	16	27	58	116	6	5	0%	0%	0%	0%	0%	1%	0%	0%
2-methylheptane	0	8	17	38	55	90	15	31	0%	0%	0%	0%	0%	0%	0%	0%
3-methylheptane	0	22	20	31	41	73	20	31	0%	0%	0%	0%	0%	0%	0%	0%
2,2,5-trimethylhexane	0	21	15	26	44	68	0	5	0%	0%	0%	0%	0%	0%	0%	0%
1-methyl-trans-3-ethylcyclopentane	0	0	0	0	0	9	0	0	0%	0%	0%	0%	0%	0%	0%	0%

octenes	0	0	0	0	0	0	0	0	0%	0%	0%	0%	0%	0%	0%	0%
n-octane	0	5	6	18	15	28	5	13	0%	0%	0%	0%	0%	0%	0%	0%
trans-2-octene	0	0	0	0	0	14	0	0	0%	0%	0%	0%	0%	0%	0%	0%
trans-1,3-dimethylcyclohexane	0	0	0	0	0	0	0	0	0%	0%	0%	0%	0%	0%	0%	0%
cis-2-octene	0	0	0	0	0	0	0	0	0%	0%	0%	0%	0%	0%	0%	0%
2,3,5-trimethylhexane	0	0	0	0	5	11	0	0	0%	0%	0%	0%	0%	0%	0%	0%
2,4-dimethylheptane	0	0	0	0	0	4	0	0	0%	0%	0%	0%	0%	0%	0%	0%
2,6-dimethylheptane	0	0	0	0	0	10	7	11	0%	0%	0%	0%	0%	0%	0%	0%
3,5-dimethylheptane	0	0	0	0	6	10	0	0	0%	0%	0%	0%	0%	0%	0%	0%
ethylbenzene	0	42	24	68	148	393	123	129	0%	0%	0%	0%	1%	2%	1%	1%
2,3-dimethylheptane	0	0	0	0	0	0	0	0	0%	0%	0%	0%	0%	0%	0%	0%
m- & p-xylene	53	66	47	128	320	862	322	341	0%	0%	0%	1%	2%	4%	2%	2%
4-methyloctane	0	0	0	0	13	41	7	9	0%	0%	0%	0%	0%	0%	0%	0%
3-methyloctane	0	0	0	0	0	0	0	0	0%	0%	0%	0%	0%	0%	0%	0%
styrene (ethenylbenzene)	0	0	0	0	6	21	6	7	0%	0%	0%	0%	0%	0%	0%	0%
o-xylene	0	29	12	54	101	275	125	138	0%	0%	0%	0%	1%	1%	1%	1%
2,2,4-trimethylheptane	0	0	0	0	9	23	0	0	0%	0%	0%	0%	0%	0%	0%	0%
1-methyl-4-ethylcyclohexane	0	0	0	0	0	0	0	0	0%	0%	0%	0%	0%	0%	0%	0%
n-nonane	0	0	0	0	5	20	6	8	0%	0%	0%	0%	0%	0%	0%	0%
(1-methylethyl)benzene	0	0	0	0	0	7	4	5	0%	0%	0%	0%	0%	0%	0%	0%
2,2-dimethyloctane	0	0	0	0	0	0	0	0	0%	0%	0%	0%	0%	0%	0%	0%
2,5-dimethyloctane	0	0	0	0	0	0	0	0	0%	0%	0%	0%	0%	0%	0%	0%
2,4-dimethyloctane	0	0	0	0	0	0	0	0	0%	0%	0%	0%	0%	0%	0%	0%
2,6-dimethyloctane	0	0	0	0	0	0	0	0	0%	0%	0%	0%	0%	0%	0%	0%
n-propylbenzene	0	0	0	13	17	38	38	41	0%	0%	0%	0%	0%	0%	0%	0%
1-methyl-3-ethylbenzene	0	20	7	62	45	109	108	153	0%	0%	0%	0%	0%	0%	1%	1%
1-methyl-4-ethylbenzene	0	6	3	0	24	56	61	65	0%	0%	0%	0%	0%	0%	0%	0%
1,3,5-trimethylbenzene	1	7	21	19	22	44	71	75	0%	0%	0%	0%	0%	0%	0%	0%
1-methyl-2-ethylbenzene	0	6	5	29	10	51	53	75	0%	0%	0%	0%	0%	0%	0%	0%
1,2,4-trimethylbenzene	0	26	13	62	41	116	227	222	0%	0%	0%	0%	0%	1%	1%	1%
n-decane	38	0	7	0	0	0	5	7	0%	0%	0%	0%	0%	0%	0%	0%
(2-methylpropyl)benzene	0	0	0	0	0	0	0	0	0%	0%	0%	0%	0%	0%	0%	0%
(1-methylpropyl)benzene	0	0	0	0	0	0	0	0	0%	0%	0%	0%	0%	0%	0%	0%
1-methyl-3-(1-methylethyl)benzene	0	0	0	0	0	0	0	0	0%	0%	0%	0%	0%	0%	0%	0%
1,2,3-trimethylbenzene	0	0	3	13	14	21	51	40	0%	0%	0%	0%	0%	0%	0%	0%
1-methyl-4-(1-methylethyl)benzene	0	0	0	0	0	0	0	0	0%	0%	0%	0%	0%	0%	0%	0%
2,3-dihydroindene (indan)	0	0	0	5	6	8	26	24	0%	0%	0%	0%	0%	0%	0%	0%
1,3-diethylbenzene	0	0	0	0	0	5	18	16	0%	0%	0%	0%	0%	0%	0%	0%
1-methyl-2-(1-methylethyl)benzene	0	0	0	0	0	0	0	0	0%	0%	0%	0%	0%	0%	0%	0%
1,4-diethylbenzene	0	0	0	5	0	7	30	26	0%	0%	0%	0%	0%	0%	0%	0%
1-methyl-3-n-propylbenzene	0	0	0	7	6	9	36	32	0%	0%	0%	0%	0%	0%	0%	0%
(1,1-dimethylethyl)benzene	0	0	0	7	11	10	39	34	0%	0%	0%	0%	0%	0%	0%	0%
1-methyl-2-n-propylbenzene	0	0	0	0	0	0	12	10	0%	0%	0%	0%	0%	0%	0%	0%
1,4-dimethyl-2-ethylbenzene	0	0	0	9	0	0	18	16	0%	0%	0%	0%	0%	0%	0%	0%
1,3-dimethyl-4-ethylbenzene	0	0	0	0	0	6	27	24	0%	0%	0%	0%	0%	0%	0%	0%
1,2-dimethyl-4-ethylbenzene	0	6	0	8	6	8	48	42	0%	0%	0%	0%	0%	0%	0%	0%
1,3-dimethyl-2-ethylbenzene	0	0	0	0	0	0	0	0	0%	0%	0%	0%	0%	0%	0%	0%
n-undecane (hendecane)	0	0	0	0	1	0	0	0	0%	0%	0%	0%	0%	0%	0%	0%
1,2-dimethyl-3-ethylbenzene	0	0	0	0	0	0	12	10	0%	0%	0%	0%	0%	0%	0%	0%
1,2,4,5-tetramethylbenzene	0	0	0	0	0	0	20	17	0%	0%	0%	0%	0%	0%	0%	0%
1,2,3,5-tetramethylbenzene	0	0	0	5	0	0	23	20	0%	0%	0%	0%	0%	0%	0%	0%
C11 aromatic	0	0	4	0	0	0	30	30	0%	0%	0%	0%	0%	0%	0%	0%
1-methyl-2-n-butylbenzene	0	0	0	0	0	0	24	21	0%	0%	0%	0%	0%	0%	0%	0%
n-pentylbenzene	0	0	0	0	0	0	0	0	0%	0%	0%	0%	0%	0%	0%	0%
1-(1,1-dimethylethyl)-3,5-DMbenzene	0	0	0	0	5	0	0	0	0%	0%	0%	0%	0%	0%	0%	0%

naphthalene	0	6	0	0	0	0	6	8	0%	0%	0%	0%	0%	0%	0%	0%
n-dodecane	0	0	12	0	12	0	0	2	0%	0%	0%	0%	0%	0%	0%	0%
1-ethyl-tert-butyl-ether	0	0	0	0	0	0	0	0	0%	0%	0%	0%	0%	0%	0%	0%
4-methyl-t-2-pentene	0	0	0	0	0	0	0	0	0%	0%	0%	0%	0%	0%	0%	0%
4-methyl-1-pentene	0	0	0	0	0	0	0	0	0%	0%	0%	0%	0%	0%	0%	0%
1-hexene	0	0	0	0	0	0	0	0	0%	0%	0%	0%	0%	0%	0%	0%
cis-3-hexene	0	0	0	0	0	0	0	0	0%	0%	0%	0%	0%	0%	0%	0%
3-methyl-t-2-pentene	0	0	0	0	0	0	0	0	0%	0%	0%	0%	0%	0%	0%	0%
trans-3-heptene	0	0	0	0	0	0	0	0	0%	0%	0%	0%	0%	0%	0%	0%
3-ethyl-c-2-pentene	0	0	0	0	0	0	0	0	0%	0%	0%	0%	0%	0%	0%	0%
2,3-dimethyl-2-pentene	0	0	0	0	0	0	0	0	0%	0%	0%	0%	0%	0%	0%	0%
2,4,4-trimethyl-1-pentene	0	0	0	0	0	0	0	0	0%	0%	0%	0%	0%	0%	0%	0%
4-methylheptane	0	0	0	0	0	0	0	0	0%	0%	0%	0%	0%	0%	0%	0%
1-cis,2-trans,3-trimethylcyclopentane	0	0	0	0	0	0	0	0	0%	0%	0%	0%	0%	0%	0%	0%
cis-1,3-dimethylcyclohexane	0	0	0	0	0	0	0	0	0%	0%	0%	0%	0%	0%	0%	0%
trans-1,4-dimethylcyclohexane	0	0	0	0	0	0	0	0	0%	0%	0%	0%	0%	0%	0%	0%
1-octene	0	0	0	0	0	0	0	0	0%	0%	0%	0%	0%	0%	0%	0%
trans-4-octene	0	0	0	0	0	0	0	0	0%	0%	0%	0%	0%	0%	0%	0%
cis-1,2-dimethylcyclohexane	0	0	0	0	0	0	0	0	0%	0%	0%	0%	0%	0%	0%	0%
ethylcyclohexane	0	0	0	0	0	0	0	0	0%	0%	0%	0%	0%	0%	0%	0%
1-nonene	0	0	0	0	0	0	0	0	0%	0%	0%	0%	0%	0%	0%	0%
1-methyl-4-n-propylbenzene	0	0	0	0	0	0	0	0	0%	0%	0%	0%	0%	0%	0%	0%
1,2-diethylbenzene	0	0	0	0	0	0	0	0	0%	0%	0%	0%	0%	0%	0%	0%
1-methyl-2-n-propylbenzene	0	0	0	0	0	0	0	0	0%	0%	0%	0%	0%	0%	0%	0%
1,2,3,5-tetramethylbenzene	0	0	0	0	0	0	0	0	0%	0%	0%	0%	0%	0%	0%	0%
1-(1,1-dimethylethyl)-2-methylbenzene***	0	0	0	0	0	0	0	0	0%	0%	0%	0%	0%	0%	0%	0%
1,2,3,4-tetramethylbenzene	0	0	0	0	0	0	0	0	0%	0%	0%	0%	0%	0%	0%	0%
trans-1,2-dimethylcyclopentane	0	0	0	0	0	0	0	0	0%	0%	0%	0%	0%	0%	0%	0%
Mid-Range	2369	3007	2568	3924	7617	10836	4787	6339	13%	12%	20%	17%	45%	49%	24%	31%
NMHC	17101	22949	9457	13820	17090	21932	19914	20530	93%	94%	73%	60%	100%	100%	100%	100%
ALCOHOLS																
COMPOUND	NET	NET	NET	NET	NET	NET	NET	NET	% of	% of	% of	% of	% of	% of	% of	% of
	PPBC	PPBC	PPBC	PPBC	PPBC	PPBC	PPBC	PPBC	Total	Total	Total	Total	Total	Total	Total	Total
Methanol	0	0	2955	9118	0	0	0	0	0%	0%	23%	40%	0%	0%	0%	0%
Ethanol	1294	1399	0	0	0	0	0	0	7%	6%	0%	0%	0%	0%	0%	0%
Alcohols	1294	1399	2955	9118	0	0	0	0	7%	6%	23%	40%	0%	0%	0%	0%
CARBONYLS																
COMPOUND																
Formaldehyde	0	0	0	0	0	0	0	0	0%	0%	0%	0%	0%	0%	0%	0%
Acetaldehyde	0	0	0	0	0	0	0	0	0%	0%	0%	0%	0%	0%	0%	0%
Acrolein (Propenal)	0	0	0	0	0	0	0	0	0%	0%	0%	0%	0%	0%	0%	0%
Acetone (2-Propanone)	0	0	0	0	0	0	0	0	0%	0%	0%	0%	0%	0%	0%	0%
Propionaldehyde (Propanal)	0	0	0	0	0	0	0	0	0%	0%	0%	0%	0%	0%	0%	0%
Butyraldehyde (Butanal)	0	0	0	0	0	0	0	0	0%	0%	0%	0%	0%	0%	0%	0%
Methyl Ethyl Ketone	0	0	0	0	0	0	0	0	0%	0%	0%	0%	0%	0%	0%	0%
Methacrolein	0	0	0	0	0	0	0	0	0%	0%	0%	0%	0%	0%	0%	0%
Benzaldehyde	0	0	0	0	0	0	0	0	0%	0%	0%	0%	0%	0%	0%	0%
Crotonaldehdye	0	0	0	0	0	0	0	0	0%	0%	0%	0%	0%	0%	0%	0%
Valeraldehyde	0	0	0	0	0	0	0	0	0%	0%	0%	0%	0%	0%	0%	0%
m-Tolualdehyde	0	0	0	0	0	0	0	0	0%	0%	0%	0%	0%	0%	0%	0%

Vapor Composition
Average Comparison

Hexanal	0	0	0	0	0	0	0	0	0%	0%	0%	0%	0%	0%	0%	0%
Carbonyls	0	0	0	0	0	0	0	0	0%	0%	0%	0%	0%	0%	0%	0%
																0%
Total NMOG	18395	24347	12899	22938	17090	21932	19914	20530	100%	100%	100%	100%	100%	100%	100%	100%

SPECIATION DATA SET 2

- Vapor and Liquid Gasoline Speciation (Harley, 1992)
- Vapor and Liquid Gasoline and Indolene Speciation (Furey, 1986)
- ARCO Gasoline Speciations (Boekhaus, Mar. 1991)
- EPA SPECIATE Data Base, Related Process Emissions
- Surrogate for diesel fuel composition based on analysis by hydrocarbon class
- ARB Specific Reactivity Data Base
- Ozone Potential Factors - for SAPRC and CBM mechanisms

Harley, etal. 1992 "Respeciation of Orga. Emissions and the Detect. of Excess Unburned Gasoline in the Atmosph."					Vapors	Liquid
Acurex #	Name	MIR	MOR		% wt	% wt
				% of total	97.11	101.32
			Specific MIR		2.03	3.20
			Specific MOR		1.02	1.20
1	Methane	0.0148	0.0100		0	0
2	Ethane	0.2500	0.1700		0.2	0
3	Propane	0.4800	0.3100		2.1	0
4	n-Butane	1.0200	0.6600		30	3.3
5	n-Pentane	1.0400	0.6800		6.3	2.7
6	n-Hexane	0.9800	0.6500		1.1	2
7	n-Heptane	0.8100	0.5300		0.2	2
8	n-Octane	0.6100	0.4100		0	1
9	n-Nonane	0.5400	0.3600		0.1	4.9
10	n-Decane	0.4700	0.3100		0	1.2
11	n-Undecane	0.4200	0.2800		0	0.2
12	n-Dodecane	0.3800	0.2500		0	0
13	2-Methylpropane	1.2100	0.7300		11.4	0.8
14	2,2-Dimethylpropane	0.3700	0.2200			
15	2-Methylbutane	1.3800	0.8700		22.3	6.9
16	2,2-Dimethylbutane	0.8200	0.5100		0.3	0.2
17	2,3-Dimethylbutane	1.0700	0.6700		1.1	1.1
18	2-Methylpentane	1.5300	0.9000		2.8	3.3
19	3-Methylpentane	1.5200	0.9400		1.6	2.1
20	2,2,3-Trimethlybutane	1.3200	0.7900		0.26	1.26
21	2,2-Dimethylpentane	1.4000	0.8300		0.26	1.26
22	2,3-Dimethylpentane	1.5100	0.9000		0.26	1.26
23	2,4-Dimethylpentane	1.7800	0.9900		0.26	1.26
24	3,3-Dimethylpentane	0.7100	0.4600		0.26	1.26
25	2-Methylhexane	1.0800	0.6800		0.26	1.26
26	3-Methylhexane	1.4000	0.8300		0.26	1.26
27	2,2,4-Trimethylpentane	0.9300	0.5400		0.08	0.94
28	2,3,4-Trimethylpentane	1.6000	0.9200		0.08	0.94
29	2,2-Dimethylhexane	1.2000	0.7000		0.08	0.94
30	2,3-Dimethylhexane	1.3200	0.7800		0.08	0.94
31	2,4-Dimethylhexane	1.5000	0.8600		0.08	0.94
32	2,5-Dimethylhexane	1.6300	0.9300		0.08	0.94
33	3,3-Dimethylhexane	1.2000	0.7000		0.08	0.94
34	2-Methylheptane	0.9600	0.6000		0.08	0.94
35	3-Methylheptane	0.9900	0.6200		0.08	0.94
36	4-Methylheptane	1.2000	0.7000		0.08	0.94
37	2,3-Dimethylheptane	1.1400	0.6400			
38	2,4-Dimethylheptane	1.3400	0.7500			
39	3,5-Dimethylheptane	1.1400	0.6400			
40	2,2,5-Trimethylhexane	0.9700	0.5800			
41	2,3,5-Trimethylhexane	1.1400	0.6400			
42	3-MethylOctane	1.1400	0.6400			
43	4-MethylOctane	1.1400	0.6400			
44	2,2-Dimethyloctane	1.0100	0.5600			
45	2,4-Dimethyloctane	1.0100	0.5600			
46	Cyclopentane	2.3800	1.4100		0.5	0.5
47	Methylcyclopentane	2.8200	1.5500		1.1	2.5
48	Cyclohexane	1.2800	0.7400		0.3	0.6
49	1c,3-Dimethylcyclopentane	2.5500	1.3900			
50	1t,2-Dimethylcyclopentane	1.8500	1.3900			
51	Methylcyclohexane	1.8500	1.0000		0.1	1
52	Ethylcyclopentane	2.3100	1.3000			

Harley, etal. 1992 "Respeciation of Orga. Emissions and the Detect. of Excess Unburned Gasoline in the Atmosph."					Vapors	Liquid
Acurex #	Name	MIR	MOR		% wt	% wt
53	1c,2t,3-Trimethylcyclopentane	1.9400	1.0200			
54	1c,2-Dimethylcyclohexane	1.9400	1.0200			
55	1t,3-Dimethylcyclohexane	1.9400	1.0200			
56	1c,3-Dimethylcyclohexane	1.9400	1.0200			
57	1t,4-Dimethylcyclohexane	1.9400	1.0200			
58	Ethylcyclohexane	1.9400	1.0200			
59	Ethene	7.2900	3.1600		0	0
60	Propene	9.4000	3.7700		0	0
61	1-Butene	8.9100	3.5100		1.3	0.1
62	2t-Butene	9.9400	3.7600		1.1	0.1
63	2c-Butene	9.9400	3.7600		1.4	0.1
64	2-Methylpropene	5.3100	1.9300			
65	1-Pentene	6.2200	2.4600		1.7	0.8
66	2t-Pentene	8.8000	3.3000		1.7	0.8
67	2c-Pentene	8.8000	3.3000		1.7	0.8
68	2-Methyl-1-Butene	4.9000	1.9000		0.13	0.9
69	3-Methyl-1-Butene	6.2200	2.4600		0.13	0.9
70	2-Methyl-2-Butene	6.4100	2.3000		0.13	0.9
71	1-Hexene	4.4200	1.7400		0.55	1
72	2t-Hexene	6.6900	2.5000		0.1	0.15
73	2c-Hexene	6.6900	2.5000		0.55	1
74	3t-Hexene	6.6900	2.5000		0.1	0.15
75	3c-Hexene	6.6900	2.5000			
76	2-Methyl-1-Pentene	4.4200	1.7400			
77	3-Methyl-1-Pentene	4.4200	1.7400			
78	4-Methyl-1-Pentene	4.4200	1.7400			
79	2-Methyl-2-Pentene	6.6900	2.5000			
80	3-Methyl-2t-Pentene	6.6900	2.5000			
81	4-Methyl-2c-Pentene	6.6900	2.5000			
82	4-Methyl-2t-Pentene	6.6900	2.5000			
83	3,3-Dimethyl-1-Butene	4.4200	1.7400		0	0.3
84	1-Heptene	3.4800	1.3800		0.1	0
85	2c-Heptene	5.5300	2.0700			
86	2t-Heptene	5.5300	2.0700			
87	3t-Heptene	5.5300	2.0700			
88	3-Ethyl-2c-Pentene	5.5300	2.0700			
89	2,3-Dimethyl-2-Pentene	5.5300	2.0700			
90	3-Methyl-1-Hexene	3.4800	1.3800			
91	2-Methyl-2-Hexene	5.5300	2.0700			
92	3-Methyl-3t-Hexene	5.5300	2.0700			
93	1-Octene	2.6900	1.0700		0	0.8
94	2c-Octene	5.2900	1.9900			
95	2t-Octene	5.2900	1.9900			
96	4t-Octene	5.2900	1.9900			
97	2,4,4-Trimethyl-1-Pentene	2.6900	1.0700			
98	2,4,4-Trimethyl-2-Pentene	5.2900	1.9900			
99	1-Nonene	2.2300	0.8900		0	1
100	Propadiene	7.2900	2.3400			
101	1,3-Butadiene	10.8900	4.1600		0	0
102	2-Methyl-1,3-Butadiene	9.0800	3.4100			
103	Cyclopentadiene	7.6600	3.5000			
104	Cyclopentene	7.6600	2.7800		0.3	0.2
105	3-Methylcyclopentene	5.6700	2.2000			
106	Cyclohexene	5.6700	2.2000		0.1	0.5
107	Ethyne	0.5000	0.3300			
108	Propyne	4.1000	2.1700			
109	1-Butyne	9.2400	3.6400			

Harley, etal. 1992 "Respeciation of Orga. Emissions and the Detect. of Excess Unburned Gasoline in the Atmosph."					Vapors	Liquid
Acurex #	Name	MIR	MOR		% wt	% wt
110	2-Butyne	9.2400	3.6400			
111	Benzene	0.4200	0.1400		0.7	1.9
112	Toluene	2.7300	0.6300		0.7	10.2
113	Ethylbenzene	2.7000	0.6300		0	1.9
114	o-Xylene	6.4600	1.9500		0	3.1
115	m&p-Xylenes	7.3800	2.3000		0.1	8.3
116	n-Propylbenzene	2.1200	0.4900		0	0.28
117	i-Propylbenzene	2.2400	0.5200		0	0.28
118	1-Methyl-3-ethylbenzene	7.2000	2.1600		0	0.28
119	1-Methyl-4-ethylbenzene	7.2000	2.1600		0	0.28
120	1-Ethyl-2-methylbenzene	7.2000	2.1600		0	0.28
121	1,2,3-Trimethylbenzene	8.8500	2.6700		0.1	0.9
122	1,2,4-Trimethylbenzene	8.8300	2.6700		0.3	3.2
123	1,3,5-Trimethylbenzene	10.1200	3.0500		0	1.2
124	Indan (C9H10)	1.0600	0.1400			
125	n-Butylbenzene	1.8700	0.4300			
126	s-Butylbenzene	1.8900	0.4400			
127	1,2-Diethylbenzene	6.4500	1.9400		0	0.5
128	1,3-Diethylbenzene	6.4500	1.9400			
129	1,4-Diethylbenzene	6.4500	1.9400			
130	1,2,3,4-Tetramethylbenzene	9.0700	2.7300			
131	1,2,3,5-Tetramethylbenzene	9.0700	2.7300			
132	1,2,4,5-Tetramethylbenzene	9.0700	2.7300			
133	1-Methyl-4-Isobutylbenzene	5.8400	1.7600		0	3.7
134	Styrene	2.2200	-0.3000			
135	Naphthalene	1.1800	0.0900			
136	Benzaldehyde	-0.5500	-1.2300			
137	p-Tolualdehyde	3.3200	-1.0900			
138	Methanol	0.5600	0.2800			
139	Ethanol	1.3400	0.7300			
140	Formaldehyde	7.1500	2.0800		0	0
141	Acetaldehyde	5.5200	2.1700		0	0
142	Propionaldehyde	6.5300	2.4900		0	0
143	Acrolein	6.7700	2.5800		0	0
144	n-Butyraldehyde	5.2600	2.0100			
145	Crotonaldehyde	5.4200	2.0700		0	0
146	Pentanaldehyde	4.4100	1.6800			
147	Hexanaldehyde	3.7900	1.4500			
148	Methyl t-Butyl Ether	0.6200	0.4000			
149	Ethyl t-Butyl Ether	1.9800	1.0300			
150	Acetone	0.5600	0.2000		0	0
151	Butanone	1.1800	0.5500		0	0

Furey, 1986+A1 SAE Paper No. 860086										
				MIR	MOR					
Fuels:	Chevron Vapor in tank (CV)			1.41	0.82					
	Chevron Gasoline (RUL)			2.94	1.12					
	Indolene Vapor in tank (IV)			1.41	0.79					
	Indolene Gasoline (IG)			2.64	0.96					
CV			RUL			IV			IG	
Acurex	Composition		Acurex	Composition		Acurex	Composition		Acurex	Composition
No.	(wt%)		No.	(wt%)		No.	(wt%)		No.	(wt%)
% ID	193.0122			237.9182			198.64			189.79
1	0.03		1	0.002		1	0.017		2	0.005
2	0.202		2	0.004		2	0.332		3	0.061
3	4.642		3	0.164		3	1.883		13	0.45
13	18.996		13	1.639		13	6.097		4	5.274
4	21.4		4	2.728		4	47.623		15	4.921
15	28.293		15	9.559		15	17.644		5	1.211
5	5.261		5	2.465		5	3.125		16	0.01
16	0.617		16	0.343		16	0.572		17	2.202
17	1.023		17	1.004		17	2.632		18	1.809
18	3.992		18	4.517		18	1.937		19	1.282
15	2.301		19	2.93		19	1.213		6	1.281
6	1.127		6	1.617		6	0.94		23	1.778
0	0.003		23	0.771		23	0.869		0	0.003
21	0.135		20	0.006		22	0.053		21	0.03
24	1.08		21	0.335		21	0.053		24	3.789
26	0.653		24	3.855		24	1.225		26	1.295
27	0.275		26	0.625		26	0.375		27	9.12
7	0.282		22	0.742		0	0.018		7	0.968
0	0.004		27	0.937		32	0.048		29	0.043
29	0.015		7	1.497		27	2.181		27	0.51
27	0.019		29	0.073		7	0.212		32	1.322
33	0.019		28	0.004		0	0.005		31	0.002
28	0.086		27	0.077		29	0.013		28	5.41
32	0.084		32	0.402		27	0.078		30	1.205
34	0.047		31	0.003		32	0.187		0	0.36
36	0.11		33	0.147		28	0.677		34	0.277
40	0.017		28	0.441		30	0.129		0	0.398
8	0.031		30	0.384		0	0.035		40	0.946
37	0.002		36	0.943		34	0.027		0	0.006
38	0.009		34	0.504		0	0.036		8	0.252
42	0.006		0	1.183		40	0.076		37	0.034
Paraffins	90.755		35	0.003		8	0.017		38	0.115
46	0.0256		40	0.164		Paraffins	90.329		37	0.041
47	1.201		0	0.114		46	0.134		43	0.012
53	0.034		8	0.475		47	0.288		42	0.063
52	0.004		37	0.066		49	0.022		9	0.178
57	0.002		38	0.183		51	0.025		10	0.613
55	0.002		37	0.055		58	0.141		11	0.03
53	0.004		43	0.139		0	0.011		12	0.017
53	0.003		42	0.152		Naphtens	0.621		0	0.008
Naphtens	1.2756		0	0.003		61	0.45		0	0.004
61	0.302		9	0.0139		62	0.541		Paraffins	47.335
62	0.391		10	1.111		63	0.532		46	0.09
63	0.391		11	0.099		65	0.29		47	0.469
65	0.283		12	0.022		68	0.465		50	0.12
68	0.441		0	0.053		66	0.019		51	0.093
66	0.015		0	0.017		67	0.502		52	0.014
67	0.557		Paraffins	42.5709		70	0.267		52	0.003
70	0.305		46	0.205		77	0.434		58	0.99
77	0.285		47	2.209		78	0.068		57	0.002
81	0.044		49	0.576		81	0.04		55	0.009
76	0.035		51	1.379		0	0.029		0	0.173
71	0.003		52	0.174		74	0.033		0	0.036
74	0.057		58	0.509		0	0.059		Naphtens	1.999
83	0.1		57	0.018		80	0.05		61	0.049
81	0.044		55	0.025		89	0.037		62	0.027
72	0.068		0	0.03		72	0.024		63	0.072
84	0.012		0	0.059		84	0.01		65	0.094

87	0.022		Naphtens	5.184		87	0.005		68	0.157
85	0.009		61	0.034		87	0.007		66	0.118
86	0.012		63	0.061		0	0.005		67	0.207
88	0.017		65	0.108		0	0.016		70	0.114
90	0.059		68	0.178		Olefins	3.883		78	0.04
92	0.005		66	0.004		111	1.523		81	0.029
94	0.004		67	0.273		112	2.284		0	0.047
Olefins	3.461		70	0.0152		113	0.086		84	0.014
111	0.711		77	0.2		115	0.121		87	0.031
112	0.957		81	0.046		115	0.05		87	0.019
113	0.063		0	0.05		114	0.056		86	0.011
115	0.145		74	0.156		118	0.012		85	0.002
115	0.06		0	0.121		123	0.003		0	0.023
114	0.087		80	0.09		0	0.012		0	0.036
Aromatics	2.023		81	0.072		Aromatics	4.147		0	0.004
			72	0.119		0	0.34		0	0.014
Unnamed	2.4		84	0.035		0	0.09		94	0.042
			87	0.08		0	0.02		Olefins	1.15
			0	0.037		0	0.02		111	2.899
			86	0.033		0	0.01		112	18.006
			0	0.045		0	0.2		113	2.357
			0	0.312		Unnamed	0.68		115	4.202
			0	0.013					115	1.612
			0	0.08					114	2.472
			94	0.056					117	0.081
			0	0.003					116	0.611
			0	0.482					0	0.016
			Olefins	2.7032					118	1.63
			111	1.517					123	0.747
			112	7.058					122	2.782
			113	1.099					122	0.068
			115	2.967					126	0.072
			115	1.218					0	0.009
			114	2.052					0	0.008
			117	0.032					128	0.301
			116	0.825					0	0.528
			118	1.511					0	0.276
			121	5.474					129	0.026
			122	0.014					127	0.238
			0	0.016					0	0.025
			0	0.008					0	0.173
			0	0.611					0	0.029
			128	0.754					0	0.116
			0	0.8					0	0.035
			125	0.872					132	0.019
			129	0.015					131	0.02
			127	1.609					130	0.011
			0	0.051					0	0.005
			0	0.017					0	0.003
			0	0.011					0	0.004
			0	0.003					Aromatics	39.381
			0	0.23					0	1.02
			0	0.516					0	0.56
			132	0.012					0	0.26
			131	0.053					0	3.21
			130	0.009					0	3.74
			0	0.004					0	1.27
			0	29.358					Unnamed	10.06
			Aromatics	58.716						
			0	0.36						
			0	3.17						
			0	1.16						
			0	7.51						
			0	4.08						
			0	3.29						
			Unnamed	19.57						

ARCO - Clean Fuels Report 91-03					ARCO Clean Fuels Report 91-02				
Fuel(s):	URP (unreformulated premium)				Fuels:	ULR (unleaded regular)			
	EC-P Production (reformulated premium)					EC1 (reformulated gasoline)			
MIR	MOR		MIR	MOR		MIR:	MOR:	MIR:	MOR:
3.6220	1.3169		3.3566	1.2039		2.3768	1.0368	3.0736	1.1560
	URP		EC-P				ULR	EC1	
Acurex #	90.921	Acurex #	85.988	vol % ID	Acurex #	ARCO #	79.518	70.703	wt % ID
	(wt %)		(wt %)				(wt%)	(wt%)	
2	0	2	0.003636		2	3	0	0	
3	0.00343241	3	0.08550708		3	5	0.078	0	
4	3.90505966	4	1.94136609		4	9	1.961	4.4	
5	1.03816858	5	1.48037532		5	21	1.027	3.03	
6	0.57207342	6	0.76030893		6	53	0.55	1.9	
7	0.98276342	7	0.70435186		7	118	0.609	1.42	
8	0.72529523	9	0.24714801		8	186	0.393	0.71	
9	0.23817446	10	0.20002867		9	255	0.251	0.027	
10	0.24207193	11	0.16859984		10	311	0.247	0.046	
11	0.07126392	12	0.14863328		11	357	0.183	0.16	
12	0	13	0.24617206		13	6	0.436	0.26	
13	0.05490749	14	0.00612087		15	17	9.709	6.12	
14	0.03770782	15	6.76756084		16	31	0.025	0.28	
15	9.08024077	16	0.05953106		17	39	1.747	0.9	
16	0.10157653	17	1.19793212		18	42	3.364	3.71	
17	0.61137573	18	2.88777883		19	47	1.962	2.26	
18	0.7771563	19	1.64598171		20	73	0.085		
19	0.53854728	20	0.05343359		21	67	0.011		
20	0.01782791	21	0.21130556		22	96	0.961		
21	0.15376571	22	1.11967658		23	70	1.226	0.66	
22	5.23471946	23	1.05774219		24	86	0.013		
23	1.78501928	24	0.03035999		25	95	1.329	1.06	
24	0.07131163	25	1.34312613		26	102	1.205	1.06	
25	0.69305992	26	1.22775816		27	110	6.321	1.42	
26	0.8234265	27	10.7429043		27	142	1.31	0.63	
27	12.3846383	28	10.3123575		27	152	3.053	0.38	
28	5.07325593	29	0.01245955		27	158	0.099	0.2	
29	0.10161754	30	1.00507068		28	149	2.511	0.38	
30	1.1114419	31	0.07198853		29	134	0.082		
31	0	34	0.60913375		30	157	0.792	0.34	
33	0.1054282	35	0.56621751		30	164	0.08	1.24	
34	0.75196983	36	0.20765923		31	143	0.049	0.73	
35	0.91963878	37	0.14766705		32	141	2.168		
36	0.36963382	38	0.04041414		34	162	0.484	0.35	
37	0.04278583	39	0.26113752		35	166	0.422	0.09	
38	0	40	0.41346774		36	163	0.157	0.16	
39	0.19824102	41	0.02797902		37	199	0.103		
40	0.82006177	42	0.72279135		37	226	0.027		
41	0.15830758	43	0.2642463		37	228	0.036		
42	0.47777512	44	0.18968236		38	205	0.267		
43	0.21107677	46	0.0314491		38	227	0.033		
44	0.1139162	47	1.52281628		39	211	0		
46	0.04367302	48	0.31211104		40	172	2.31	0.56	
47	0.10668695	49	0.86272523		41	195	0.026		
48	0.01029435	50	0.73420892		42	230	0.247		

49	0.07533596	51	0.56880367		42	236	0.274		
50	0.03712207	53	0.97373205		43	229	0.189		
51	0.05459127	54	0.24479297		44	285	0.057		
53	0.42425218	57	0.13463614		45	266	0.021		
54	0	62	0.1461958		45	270	0.077		
57	0	63	0.17951485		46	440	0		
62	0	65	0.49298585		47	69	2.184	2.4	
63	0.08110703	66	1.07776906		48	89	0.366		
65	0	67	0.64343153		49	129	0.257		
66	0	68	0.73097902		50	98	0.034		
67	0.00857863	69	0.17594495		51	106	0.586		
68	0	70	1.55035549		51	107	0.506		
69	0.19652858	71	0.18665464		51	109	0.424		
70	2.03703438	72	0.41512808		51	130	0.834	1.02	
71	3.5019522	73	0.07343789		53	145	0.14		
72	0	74	0.20399414		53	148	0.178		
73	0	75	0.08159766		53	165	0.103		
74	0	76	0.3100711		53	185	0.018		
75	0	77	0.09791719		54	170	0.092		
76	0	78	0.07445786		54	181	0.044		
77	0	79	0.46918653		54	201	0.295		
78	0	80	0.00917974		56	187	0.141		
79	0	81	0.06162451		57	168	0.232		
80	0	85	0.08448757		58	207	0.053		
81	0	86	0.07377788		59	2	0.006		
85	0	88	0.1463658		60	4	0		
86	0	89	1.07334919		61	8	0	0.03	
88	0	90	0.35341985		62	10	0.199	0.19	
89	0	91	0.21419385		63	12	0.218	0.2	
90	0	92	0.41886798		64	439	0		
91	0	93	0.07888387		65	19	0.25	0.42	
92	0	96	0.0557584		66	23	0.69	0.33	
93	0	99	0.19721134		67	25	0.435	0.54	
96	0.12166055	104	0.2138153		68	20	0.45	0.33	
99	0	105	0.47387552		69	14	0.073	0.1	
104	0	111	0.94382895		70	26	0.934	1.35	
105	0	112	5.12772146		71	49	0.113		
111	1.68159813	113	1.44234496		71	452	0		
112	10.3604432	115	6.5071712		72	56	0.3		
113	2.53698951	116	0.56081191		73	60	0.051		
114	2.3861046	117	0.09468253		74	54	0.147		
115	8.88016125	118	1.85432095		75	55	0.058		
116	0.83131499	119	0.73706709		76	48	0.198		
117	0.14835364	121	0.56372522		77	37	0.059	0	
118	2.76793143	122	2.56225495		78	36	0.043	0.19	
119	1.26434724	123	1.13671774		79	57	0.314	0.29	
121	1.07857106	125	0.18706469		80	63	0.006		
122	4.91037183	126	0.08458577		81	41	0		
123	2.02278226	127	0.04717283		83	40	0.042		
125	0.41939091	128	0.47498164		85	125	0.11		
126	0.40894345	131	0.40015576		86	122	0.113		
127	0.09402714	132	0.2862903		88	123	0.053		
128	0.48953815	135	0.55426929		89	59	0.301		
131	0.77311207	148	11.4937409		89	64	0.309		
132	0.59102776				89	75	0.011		
135	0.5085569				89	78	0.009		

					89	87	0.011	1.46	
					89	127	0.008		
					90	81	0.019		
					90	91	0.013		
					90	485	0		
					91	82	0.39		
					91	85	0.041		
					91	88	0.024		
					91	105	0.034		
					91	120	0.203		
					92	94	0.093		
					92	113	0.409		
					92	121	0.087		
					92	124	0.111		
					93	179	0.056		
					96	182	0.067		
					96	184	0.087		
					97	483	0		
					97	484	0		
					98	486	0		
					99	233	0.016		
					99	245	0	0	
					101	13	0		
					102	451	0		
					104	35	0.189	0	
					105	80	0.021		
					106	97	0		
					107	436	0		
					111	83	0.858	1.95	
					112	153	2.122	8.18	
					113	218	0.641	1.87	
					114	240	1.027	2.3	
					115	224	1.682	6.42	
					115	225	0.56		
					115	472	0		
					116	278	0.263	1.78	
					118	282	0.868	0.89	
					118	293	0.306	0.09	
					119	283	0.331		
					121	315	0.358	0.19	
					122	301	1.326	2.31	
					123	286	0.368	0.76	
					124	482	0		
					125	335	0.108		
					125	464	0		
					126	310	0.036		
					127	337	0		
					128	330	0		
					131	361	0.263		
					132	359	0.025		
					135	379	0.465		
					148	38	5.477		

COMPOSITION OF EMISSION PROFILES FROM "SPECIATE" DATABASE					
PROFILE NUMBER	SAROAD NUMBER	CAS NUMBER	NAME OF SPECIES	MOLECULAR WEIGHT	PERCENT WEIGHT
7	43201	74-82-8	METHANE	16.04	70
7	43502	50-00-0	FORMALDEHYDE	30.03	30
51	43201	74-82-8	METHANE	16.04	20
51	43202	74-84-0	ETHANE	30.07	30
51	43204	74-98-6	PROPANE	44.09	30
51	43502	50-00-0	FORMALDEHYDE	30.03	20
297	43105		ISOMERS OF HEXANE	86.17	5.1
297	43106		ISOMERS OF HEPTANE	100.2	5
297	43107		ISOMERS OF OCTANE	114.23	0.4
297	43122		ISOMERS OF PENTANE	72.15	11.2
297	43201	74-82-8	METHANE	16.04	8.8
297	43202	74-84-0	ETHANE	30.07	2.7
297	43204	74-98-6	PROPANE	44.09	16.1
297	43212	106-97-8	N-BUTANE	58.12	20.8
297	43214	75-28-5	ISO-BUTANE	58.12	9.3
297	43220	109-66-0	N-PENTANE	72.15	10.1
297	43231	110-54-3	HEXANE	86.17	4.7
297	43232	142-82-5	HEPTANE	100.2	2
297	45201	71-43-2	BENZENE	78.11	2.4
297	45202	108-88-3	TOLUENE	92.13	1.4
305	43201	74-82-8	METHANE	16.04	2.6
305	43202	74-84-0	ETHANE	30.07	3.7
305	43204	74-98-6	PROPANE	44.09	15.8
305	43212	106-97-8	N-BUTANE	58.12	30.2
305	43220	109-66-0	N-PENTANE	72.15	18.5
305	43231	110-54-3	HEXANE	86.17	8.8
305	43232	142-82-5	HEPTANE	100.2	10.8
305	43233	111-65-9	OCTANE	114.23	9.6
1001	43105		ISOMERS OF HEXANE	86.17	0.02
1001	43106		ISOMERS OF HEPTANE	100.2	0.04
1001	43107		ISOMERS OF OCTANE	114.23	0.02
1001	43108		ISOMERS OF NONANE	128.25	0.01
1001	43109		ISOMERS OF DECANE	142.28	0.02
1001	43120		ISOMERS OF BUTENE	56.1	0.26
1001	43122		ISOMERS OF PENTANE	72.15	0.13
1001	43124		C9 OLEFINS	126.24	0.04
1001	43125		C10 OLEFINS	140.27	0.02
1001	43201	74-82-8	METHANE	16.04	76.69
1001	43202	74-84-0	ETHANE	30.07	14
1001	43203	74-85-1	ETHYLENE	28.05	0.63
1001	43204	74-98-6	PROPANE	44.09	2.91
1001	43205	115-07-1	PROPENE	42.08	1.69

COMPOSITION OF EMISSION PROFILES FROM "SPECIATE" DATABASE					
PROFILE NUMBER	SAROAD NUMBER	CAS NUMBER	NAME OF SPECIES	MOLECULAR WEIGHT	PERCENT WEIGHT
1001	43206	74-86-2	ACETYLENE	26.04	0.32
1001	43212	106-97-8	N-BUTANE	58.12	1
1001	43214	75-28-5	ISO-BUTANE	58.12	0.43
1001	43215	115-11-7	ISOBUTYLENE	56.1	0.02
1001	43216	624-64-6	T-2-BUTENE	56.11	0.13
1001	43217	590-18-1	CIS-2-BUTENE	56.11	0.02
1001	43220	109-66-0	N-PENTANE	72.15	0.13
1001	43224	109-67-1	1-PENTENE	70.13	0.01
1001	43226	646-04-8	TRANS-2-PENTENE	70.13	0.01
1001	43228	513-35-9	2-METHYL-2-BUTENE	70.13	0.01
1001	43230	96-14-0	3-METHYL PENTANE	86.17	0.02
1001	43231	110-54-3	HEXANE	86.17	0.02
1001	43232	142-82-5	HEPTANE	100.2	0.02
1001	43233	111-65-9	OCTANE	114.23	0.02
1001	43235	111-84-2	NONANE	128.25	0.01
1001	43238	124-18-5	N-DECANE	142.28	0.01
1001	43241	1120-21-4	N-UNDECANE	156.31	0.01
1001	43242	287-92-3	CYCLOPENTANE	70.14	0.02
1001	43247	108-08-7	2,4-DIMETHYLPENTANE	100.2	0.01
1001	43248	110-82-7	CYCLOHEXANE	84.16	0.01
1001	43261	108-87-2	METHYLCYCLOHEXANE	98.21	0.02
1001	43262	96-37-7	METHYLCYCLOPENTANE	84.16	0.04
1001	43264		HEPTENE	98.18	0.01
1001	43265	111-66-0	OCTENE	112.21	0.01
1001	43269	124-11-8	1-NONENE	126.24	0.01
1001	43291	75-83-2	2,2-DIMETHYLBUTANE	86.17	0.01
1001	43295	589-34-4	3-METHYLHEXANE	100.2	0.01
1001	43298		3-METHYLHEPTANE	114.23	0.02
1001	43502	50-00-0	FORMALDEHYDE	30.03	0.81
1001	43503	75-07-0	ACETALDEHYDE	44.05	0.03
1001	43511	78-84-2	ISOBUTYRALDEHYDE	72.11	0.02
1001	45102	1330-20-7	ISOMERS OF XYLENE	106.16	0.02
1001	45109		C3/C4/C5 ALKYLBENZENE	134.21	0.01
1001	45110		C10 AROMATIC	134.22	0.01
1001	45201	71-43-2	BENZENE	78.11	0.11
1001	45202	108-88-3	TOLUENE	92.13	0.04
1001	45203	100-41-4	ETHYLBENZENE	106.16	0.01
1001	45204	95-47-6	O-XYLENE	106.16	0.01
1001	45205	108-38-3	M-XYLENE	106.16	0.01
1001	45207	108-67-8	1,3,5-TRIMETHYLBENZENE	120.19	0.02
1001	45208	95-63-6	1,2,4-TRIMETHYLBENZENE	120.19	0.01
1001	45211	611-14-3	O-ETHYLTOLUENE	120.19	0.01
1001	45212	620-14-4	M-ETHYLTOLUENE	120.19	0.01
1001	45225	526-73-8	1,2,3-TRIMETHYLBENZENE	120.19	0.01
1001	98040	763-29-1	2-METHYL-1-PENTENE	84.16	0.02

COMPOSITION OF EMISSION PROFILES FROM "SPECIATE" DATABASE					
PROFILE NUMBER	SAROAD NUMBER	CAS NUMBER	NAME OF SPECIES	MOLECULAR WEIGHT	PERCENT WEIGHT
1011	43105		ISOMERS OF HEXANE	86.17	9.9
1011	43106		ISOMERS OF HEPTANE	100.2	11.6
1011	43107		ISOMERS OF OCTANE	114.23	8.7
1011	43115		C-7 CYCLOPARAFFINS	98.19	1.6
1011	43116		C-8 CYCLOPARAFFINS	112.23	0.6
1011	43122		ISOMERS OF PENTANE	72.15	5.6
1011	43201	74-82-8	METHANE	16.04	37.6
1011	43202	74-84-0	ETHANE	30.07	6.4
1011	43204	74-98-6	PROPANE	44.09	10.1
1011	43212	106-97-8	N-BUTANE	58.12	7.4
1011	43214	75-28-5	ISO-BUTANE	58.12	0.4
1011	45201	71-43-2	BENZENE	78.11	0.1
1012	43105		ISOMERS OF HEXANE	86.17	5.2
1012	43106		ISOMERS OF HEPTANE	100.2	6.1
1012	43107		ISOMERS OF OCTANE	114.23	4.6
1012	43115		C-7 CYCLOPARAFFINS	98.19	0.9
1012	43116		C-8 CYCLOPARAFFINS	112.23	0.3
1012	43122		ISOMERS OF PENTANE	72.15	2.1
1012	43201	74-82-8	METHANE	16.04	61.3
1012	43202	74-84-0	ETHANE	30.07	7.9
1012	43204	74-98-6	PROPANE	44.09	7
1012	43212	106-97-8	N-BUTANE	58.12	4.3
1012	43214	75-28-5	ISO-BUTANE	58.12	0.2
1012	45201	71-43-2	BENZENE	78.11	0.1
1014	43105		ISOMERS OF HEXANE	86.17	4.78
1014	43106		ISOMERS OF HEPTANE	100.2	1.53
1014	43107		ISOMERS OF OCTANE	114.23	0.05
1014	43108		ISOMERS OF NONANE	128.25	0.02
1014	43120		ISOMERS OF BUTENE	56.1	1.11
1014	43122		ISOMERS OF PENTANE	72.15	26.79
1014	43124		C9 OLEFINS	126.24	0.03
1014	43125		C10 OLEFINS	140.27	0
1014	43202	74-84-0	ETHANE	30.07	0.08
1014	43204	74-98-6	PROPANE	44.09	1.25
1014	43212	106-97-8	N-BUTANE	58.12	22.95
1014	43214	75-28-5	ISO-BUTANE	58.12	9.83
1014	43216	624-64-6	T-2-BUTENE	56.11	1.21
1014	43217	590-18-1	CIS-2-BUTENE	56.11	0.98
1014	43220	109-66-0	N-PENTANE	72.15	8.56
1014	43223	563-45-1	3-METHYL-1-BUTENE	70.13	0.4
1014	43224	109-67-1	1-PENTENE	70.13	1.02
1014	43225	563-46-2	2-METHYL-1-BUTENE	70.13	1.93
1014	43226	646-04-8	TRANS-2-PENTENE	70.13	1.61
1014	43227	627-20-3	CIS-2-PENTENE	70.13	0.79

COMPOSITION OF EMISSION PROFILES FROM "SPECIATE" DATABASE					
PROFILE NUMBER	SAROAD NUMBER	CAS NUMBER	NAME OF SPECIES	MOLECULAR WEIGHT	PERCENT WEIGHT
1014	43228	513-35-9	2-METHYL-2-BUTENE	70.13	1.04
1014	43230	96-14-0	3-METHYL PENTANE	86.17	2.34
1014	43231	110-54-3	HEXANE	86.17	1.84
1014	43232	142-82-5	HEPTANE	100.2	0.32
1014	43233	111-65-9	OCTANE	114.23	0.02
1014	43242	287-92-3	CYCLOPENTANE	70.14	0.72
1014	43245	592-41-6	1-HEXENE	84.16	0.27
1014	43247	108-08-7	2,4-DIMETHYLPENTANE	100.2	0.51
1014	43248	110-82-7	CYCLOHEXANE	84.16	0.26
1014	43250	540-84-1	2,2,4-TRIMETHYLPENTANE	114.22	0.49
1014	43252	565-75-3	2,3,4-TRIMETHYLPENTANE	114.22	0.08
1014	43261	108-87-2	METHYLCYCLOHEXANE	98.21	0.13
1014	43262	96-37-7	METHYLCYCLOPENTANE	84.16	1.66
1014	43270	922-61-2	3-METHYL-T-2-PENTENE	84.16	0.09
1014	43271		3,5,5-TRIMETHYLHEXANE	128.26	0.1
1014	43278	592-13-2	2,5-DIMETHYLHEXANE	114.22	0.11
1014	43289		C6 OLEFINS	84.16	0.06
1014	43291	75-83-2	2,2-DIMETHYLBUTANE	86.17	1.23
1014	43292	142-29-0	CYCLOPENTENE	68.11	0.25
1014	43293	27236-46-0	4-METHYL-T-2-PENTENE	84.18	0.25
1014	43294		C7 OLEFINS	98.18	0.06
1014	43295	589-34-4	3-METHYLHEXANE	100.2	0.49
1014	43298		3-METHYLHEPTANE	114.23	0.07
1014	43299		1-METHYLCYCLOHEXENE	96.17	0.05
1014	45102	1330-20-7	ISOMERS OF XYLENE	106.16	0.15
1014	45110		C10 AROMATIC	134.22	0.01
1014	45201	71-43-2	BENZENE	78.11	0.77
1014	45202	108-88-3	TOLUENE	92.13	0.66
1014	45203	100-41-4	ETHYLBENZENE	106.16	0.04
1014	45204	95-47-6	O-XYLENE	106.16	0.05
1014	45207	108-67-8	1,3,5-TRIMETHYLBENZENE	120.19	0.02
1014	45208	95-63-6	1,2,4-TRIMETHYLBENZENE	120.19	0.06
1014	45211	611-14-3	O-ETHYLTOLUENE	120.19	0.05
1014	45215	98-06-6	TERT-BUTYLBENZENE	134.21	0
1014	45218	141-93-5	M-DIETHYLBENZENE	134.22	0
1014	45225	526-73-8	1,2,3-TRIMETHYLBENZENE	120.19	0.05
1014	46712	95-13-6	INDENE	116.16	0.01
1014	98033		2,2,5-TRIMETHYLHEXANE	128.26	0.02
1014	98034	40504-55-7	T-2-HEXENE	84.16	0.3
1014	98035	592-43-8	C-2-HEXENE	84.16	0.42
1014	98054	107-39-1	2,4,4-TRIMETHYL-1-PENTE	112.22	0.02
1070	43201	74-82-8	METHANE	16.04	86.71
1070	43301	67-56-1	METHYL ALCOHOL	32.04	1.54
1070	43350	115-10-6	DIMETHYLETHER	46.07	11.75

COMPOSITION OF EMISSION PROFILES FROM "SPECIATE" DATABASE					
PROFILE NUMBER	SAROAD NUMBER	CAS NUMBER	NAME OF SPECIES	MOLECULAR WEIGHT	PERCENT WEIGHT
1071	43301	67-56-1	METHYL ALCOHOL	32.04	1.73
1071	43350	115-10-6	DIMETHYLETHER	46.07	98.27
1190	43105		ISOMERS OF HEXANE	86.17	0.1
1190	43109		ISOMERS OF DECANE	142.28	0.1
1190	43110		ISOMERS OF UNDECANE	156.3	0
1190	43110		ISOMERS OF UNDECANE	156.3	0.09
1190	43111		ISOMERS OF DODECANE	170.32	0.05
1190	43111		ISOMERS OF DODECANE	170.32	0
1190	43113		ISOMERS OF TETRADECA	198.38	0.02
1190	43115		C-7 CYCLOPARAFFINS	98.19	0.05
1190	43124		C9 OLEFINS	126.24	0.01
1190	43124		C9 OLEFINS	126.24	0
1190	43124		C9 OLEFINS	126.24	0.08
1190	43124		C9 OLEFINS	126.24	0.01
1190	43125		C10 OLEFINS	140.27	0
1190	43125		C10 OLEFINS	140.27	0.04
1190	43135		C10 PARAFFINS	142.28	0
1190	43135		C10 PARAFFINS	142.28	0
1190	43135		C10 PARAFFINS	142.28	0
1190	43136		C9 PARAFFIN	128.25	0.48
1190	43138		C-8 OLEFINS	112.23	0.21
1190	43138		C-8 OLEFINS	112.23	0
1190	43141		C8 PARAFFIN	114.23	3.84
1190	43142		C7 PARAFFINS	100.2	0.04
1190	43143		C5 OLEFIN	70.13	1.91
1190	43144		C5 PARAFFIN	72.15	2.09
1190	43145		C5 PARAFFIN/OLEFIN	70.13	1.08
1190	43146		C11 OLEFINS	154.29	0
1190	43146		C11 OLEFINS	154.29	0.04
1190	43146		C11 OLEFINS	154.29	0.01
1190	43148		ISOMERS OF C9H16	124.23	0
1190	43148		ISOMERS OF C9H16	124.23	0.02
1190	43148		ISOMERS OF C9H16	124.23	0
1190	43149		C8H14	110.2	0
1190	43213	106-98-9	BUTENE	56.1	0.14
1190	43214	75-28-5	ISO-BUTANE	58.12	2.65
1190	43215	115-11-7	ISOBUTYLENE	56.1	0.14
1190	43231	110-54-3	HEXANE	86.17	3.91
1190	43232	142-82-5	HEPTANE	100.2	1.84
1190	43242	287-92-3	CYCLOPENTANE	70.14	0.16
1190	43261	108-87-2	METHYLCYCLOHEXANE	98.21	0.21
1190	43262	96-37-7	METHYLCYCLOPENTANE	84.16	0.68
1190	43264		HEPTENE	98.18	0.03
1190	43272	693-89-0	METHYLCYCLOPENTENE	82.14	0.45
1190	43273	110-83-8	CYCLOHEXENE	82.14	0.04

COMPOSITION OF EMISSION PROFILES FROM "SPECIATE" DATABASE					
PROFILE NUMBER	SAROAD NUMBER	CAS NUMBER	NAME OF SPECIES	MOLECULAR WEIGHT	PERCENT WEIGHT
1190	43288	1678-91-7	ETHYLCYCLOHEXANE	112.23	0.08
1190	43292	142-29-0	CYCLOPENTENE	68.11	0.18
1190	43395		C7H12O	112.17	0.04
1190	43565		DIMETHYLCYCLOBUTANO	98.14	0.05
1190	45105		ISOMERS OF BUTYLBENZ	134.22	3.18
1190	45105		ISOMERS OF BUTYLBENZ	134.22	0.03
1190	45106		ISOMERS OF DIETHYLBEN	134.21	0.02
1190	45107	25551-13-7	TRIMETHYLBENZENE	120.19	4.29
1190	45108		ISOMERS OF PROPYLBEN	120.19	0.76
1190	45111		C10H12	132.22	0.04
1190	45112		ISOMERS OF C10H10	130.19	0
1190	45112		ISOMERS OF C10H10	130.19	0
1190	45201	71-43-2	BENZENE	78.11	3.25
1190	45202	108-88-3	TOLUENE	92.13	15.22
1190	45203	100-41-4	ETHYLBENZENE	106.16	4.07
1190	45204	95-47-6	O-XYLENE	106.16	6.41
1190	45209	103-65-1	N-PROPYLBENZENE	120.19	0.92
1190	45210	98-82-8	CUMENE (ISOPROPYL BE	120.2	0.33
1190	45220	100-42-5	STYRENE	104.14	0.17
1190	45221	25013-15-4	METHYL STYRENE	118.19	0.05
1190	45238		ETHYLTOLUENE	120.19	3.61
1190	45243		ETHYLDIMETHYLBENZENE	134.22	1.24
1190	45244		TETRAMETHYLBENZENE	134.22	1.03
1190	45245		C5-ALKYLBENZENES	148.24	0.35
1190	45245		C5-ALKYLBENZENES	148.24	0.04
1190	45245		C5-ALKYLBENZENES	148.24	0.83
1190	45245		C5-ALKYLBENZENES	148.24	0.09
1190	45245		C5-ALKYLBENZENES	148.24	0.02
1190	45245		C5-ALKYLBENZENES	148.24	0.05
1190	45245		C5-ALKYLBENZENES	148.24	0.05
1190	45246		C5-ALKYLBENZENES (UNS	146.25	0.05
1190	45247		C6-ALKYLBENZENE	162.27	0
1190	45247		C6-ALKYLBENZENE	162.27	0
1190	45247		C6-ALKYLBENZENE	162.27	0.02
1190	45247		C6-ALKYLBENZENE	162.27	0.06
1190	45247		C6-ALKYLBENZENE	162.27	0
1190	45247		C6-ALKYLBENZENE	162.27	0.03
1190	45248		C4-ALKYLSTYRENES	160.26	0.04
1190	45248		C4-ALKYLSTYRENES	160.26	0
1190	45248		C4-ALKYLSTYRENES	160.26	0.01
1190	45248		C4-ALKYLSTYRENES	160.26	0.02
1190	45249		C7-ALKYLBENZENE	176.3	0
1190	45501	100-52-7	BENZALDEHYDE	106.13	0
1190	45801	108-90-7	CHLOROBENZENE	112.56	0.03
1190	46115		DIMETHYLNAPHTHYRIDIN	158.2	0.01
1190	46701	91-20-3	NAPTHALENE	128.17	0.8

COMPOSITION OF EMISSION PROFILES FROM "SPECIATE" DATABASE					
PROFILE NUMBER	SAROAD NUMBER	CAS NUMBER	NAME OF SPECIES	MOLECULAR WEIGHT	PERCENT WEIGHT
1190	46702		METHYL NAPHTHALENES	142.2	0.64
1190	46746		C2-ALKYLNAPHTHALENE	156.23	0.1
1190	46747		METHYLINDANS	132.21	0.52
1190	46747		METHYLINDANS	132.21	0.01
1190	46747		METHYLINDANS	132.21	0
1190	46749		METHYLDIHYDRONAPHTH	144.22	0.01
1190	46750		DIMETHYLINDANS	146.23	0.42
1190	46750		DIMETHYLINDANS	146.23	0
1190	46750		DIMETHYLINDANS	146.23	0
1190	46751		DIHYDRONAPTHALENE	130.19	0.06
1190	46752		DIMETHYLINDENE	144.22	0.01
1190	46754		ETHYLINDAN	146.23	0.04
1190	46755		TRIMETHYLINDAN	160.26	0.06
1190	90010		M-XYLENE AND P-XYLENE	106.16	15.28
1190	90023		METHYLBUTENE	70.13	0.06
1190	90024		METHYLBUTADIENE	68.12	0.01
1190	90025		METHYLPENTENES	84.16	0.41
1190	90025		METHYLPENTENES	84.16	0.48
1190	90026		METHYLPENTANE	86.17	1.76
1190	90027		METHYLCYCLOPENTADIE	80.14	0.04
1190	90028		METHYLHEXANE	100.2	1.68
1190	90029		METHYLHEXENES	98.18	0
1190	90029		METHYLHEXENES	98.18	0.03
1190	90039		METHYLHEXADIENE	96.17	0.25
1190	90041	4313-57-9	METHYLCYCLOHEXADIEN	94.15	0.02
1190	90043		METHYLHEXANAL	114.19	0.92
1190	90044		METHYLHEPTYNE	110.2	0.02
1190	90045		METHYLHEPTANE	114.23	0.35
1190	90046		METHYLCYCLOHEXENE	96.17	0.14
1190	90047		METHYLNONANE	142.28	0.21
1190	90048		METHYLDECANES	156.32	0.12
1190	90054		PENTENYNE	66.1	0.03
1190	90056		HEXENE	84.16	0.4
1190	90058	142-83-6	HEXADIENAL	96.14	0.03
1190	90059	5910-85-9	HEPTADIENAL	110.17	0.02
1190	90060	79-29-8	DIMETHYLBUTANE	86.18	2.29
1190	90061		DIMETHYLBUTENE	84.16	0.3
1190	90062		DIMETHYLPENTANE	100.2	0.36
1190	90063		DIMETHYLPENTENE	98.19	0.02
1190	90064		DIMETHYLCYCLOPENTAN	98.19	0.15
1190	90065		DIMETHYLCYCLOPENTEN	96.17	0.22
1190	90065		DIMETHYLCYCLOPENTEN	96.17	0.09
1190	90067		DIMETHYLHEXANES	114.23	0.48
1190	90067		DIMETHYLHEXANES	114.23	0.28
1190	90068		DIMETHYLHEXADIENE	110.2	0.1
1190	90069		DIMETHYLETHYLCYCLOH	140.26	0.09

COMPOSITION OF EMISSION PROFILES FROM "SPECIATE" DATABASE					
PROFILE NUMBER	SAROAD NUMBER	CAS NUMBER	NAME OF SPECIES	MOLECULAR WEIGHT	PERCENT WEIGHT
1190	90070		DIMETHYLOCTANES	142.28	0.04
1190	90070		DIMETHYLOCTANES	142.28	0.02
1190	90071		DIMETHYLUNDECANE	184.36	0
1190	90074		DIMETHYLDECANE	170.34	0.07
1190	90078		ETHYLPENTENE	98.19	0.03
1190	90079		ETHYLCYCLOPENTENE	96.17	0.06
1190	90080		ETHYLMETHYLCYCLOPEN	112.21	0.12
1190	90081		ETHYLHEXANE	114.23	0.24
1190	90082		ETHYLMETHYLHEXANE	128.26	0.21
1190	90083		ETHYLMETHYLCYCLOHEX	126.24	0.04
1190	90083		ETHYLMETHYLCYCLOHEX	126.24	0.02
1190	90084		ETHYLHEPTANE	128.26	0.02
1190	90085		ETHYLMETHYLOCTANE	156.31	0.02
1190	90086		ETHYLBICYCLOHEPTANE	223.42	0.01
1190	90087		ETHYLDIMETHYLPENTANE	128.26	0.13
1190	90091		TETRAMETHYLCYCLOBUT	110.19	0.04
1190	90092		TRIMETHYLPENTANE	114.22	0.68
1190	90093		TRIMETHYLPENTADIENE	110.2	0.05
1190	90094		TRIMETHYLHEPTANES	142.29	0.09
1190	90094		TRIMETHYLHEPTANES	142.29	0.05
1190	90095		TRIMETHYLHEXENE	126.24	0.04
1190	90096		TRIMETHYLOCTANES	156.31	0.07
1190	90097		TRIMETHYLDECANE	184.36	0.03
1190	90099		OCTATRIENE	108.19	0.01
1190	90100	124-11-8	NONENE	126.24	0.03
1190	90103		PENTADIENE	68.13	0.04
1190	90104		METHYLOCTANES	128.26	0.55
1190	98044	496-11-7	INDANE	118.18	0.44
1190	98058		TRIMETHYLCYCLOPENTA	112.16	0.09
1190	98059		DIMETHYLCYCLOHEXANE	112.24	0.1
1190	98060	3073-66-3	TRIMETHYLCYCLOHEXAN	126.27	0.02
1190	98091		DIMETHYLHEPTANES	128.26	0.16
1190	99999		UNIDENTIFIED	86	0
1207	43202	74-84-0	ETHANE	30.07	6.51
1207	43204	74-98-6	PROPANE	44.09	17.48
1207	43212	106-97-8	N-BUTANE	58.12	16.77
1207	43220	109-66-0	N-PENTANE	72.15	8.33
1207	43229	107-83-5	2-METHYLPENTANE	86.17	2.4
1207	43230	96-14-0	3-METHYL PENTANE	86.17	1.42
1207	43231	110-54-3	HEXANE	86.17	3.37
1207	43232	142-82-5	HEPTANE	100.2	1.8
1207	43233	111-65-9	OCTANE	114.23	1.04
1207	43242	287-92-3	CYCLOPENTANE	70.14	0.7
1207	43247	108-08-7	2,4-DIMETHYLPENTANE	100.2	0.18
1207	43248	110-82-7	CYCLOHEXANE	84.16	1.11

COMPOSITION OF EMISSION PROFILES FROM "SPECIATE" DATABASE					
PROFILE NUMBER	SAROAD NUMBER	CAS NUMBER	NAME OF SPECIES	MOLECULAR WEIGHT	PERCENT WEIGHT
1207	43261	108-87-2	METHYLCYCLOHEXANE	98.21	1.63
1207	43262	96-37-7	METHYLCYCLOPENTANE	84.16	2.44
1207	43263	591-76-4	2-METHYL HEXANE	100.2	0.57
1207	43274	565-59-3	2,3 DIMETHYL PENTANE	100.2	0.25
1207	43276	79-29-8	2,3 DIMETHYLBUTANE	86.17	0.24
1207	43288	1678-91-7	ETHYLCYCLOHEXANE	112.23	0.37
1207	43291	75-83-2	2,2-DIMETHYLBUTANE	86.17	0.08
1207	43295	589-34-4	3-METHYLHEXANE	100.2	0.8
1207	43296	592-27-8	2-METHYLHEPTANE	114.23	0.73
1207	43298		3-METHYLHEPTANE	114.23	0.35
1207	43910	75-28-5	2-ME-PROPANE	58.1	5.42
1207	43911	78-78-4	2-ME-BUTANE	72.2	6.36
1207	43912	540-84-1	2,2,4-TRIME-PENTANE	114.2	1.07
1207	45201	71-43-2	BENZENE	78.11	0.28
1207	45202	108-88-3	TOLUENE	92.13	0.38
1207	45203	100-41-4	ETHYLBENZENE	106.16	0.54
1207	45204	95-47-6	O-XYLENE	106.16	0.7
1207	90010		M-XYLENE AND P-XYLENE	106.16	1.98
	Estimate of Liquid Diesel Surrogate Composition				
Diesel Surrogate			DODECANE	170.3	25
Diesel Surrogate			CYCLOPARAFFIN	112.2	35
Diesel Surrogate			NAPTHALENE	128.2	30
Diesel Surrogate			NONENE	126.2	10
					100

TABLE 1

MAXIMUM INCREMENTAL REACTIVITY
FOR ORGANIC GAS PROFILES ..
5/23/96

PROFILE	PNAME	NMOG MIR (BY WEIGHT)	NMOG MOIR (BY WEIGHT)	AVERAGE MOLECULAR WEIGHT (NMOG)
3	External combustion boiler - natural gas	2.2723	.9116	53.13
4	External combustion boiler - process gas	2.7739	1.1613	40.64
5	External combustion boiler- coke oven gas	5.2306	2.2722	30.45
9	Industrial ice- distillate oil	6.5976	2.7137	36.32
11	Coke oven stack gas - primary metals	4.3623	1.8708	34.75
13	Iron sintering - primary metals	3.0511	1.3550	28.22
16	Primary metals - steel production - basic oxygen furnace	.4800	.3100	44.09
21	Asphalt roofing - blowing operation	.8568	.4990	103.00
22	Asphalt roofing - dipping	1.1609	.6983	65.92
24	Asphalt roofing - tar kettle	2.2327	1.0469	59.92
29	Refinery co boiler - fcc	6.0940	1.8583	34.22
31	Refinery- fugitive emissions from covered drainage/separation pits	1.0806	.6779	66.34
35	Refinery cooling towers fugitive emissions	1.3800	.8700	72.15
51	Refinery flares- natural gas	2.1002	.7102	34.04
53	Petroleum industry - refinery catalytic reformer - fugitive emissions	.8483	.5038	48.77
66	Varnish manufacturing	.8094	.3498	68.57
72	Printing ink cooking- general	1.1555	.5419	70.37
76	Pesticide use- composite domestic & commercial	2.4605	.8956	93.29
78	Ethylene dichloride manufacturing	.5700	.3600	99.00
79	Flares- chemical manufacturing	3.9157	1.5487	46.43
85	Perchloroethylene cleaning solvent	.0300	.0200	165.85
86	Stoddard cleaning solvent	1.0512	.5861	138.20
87	1,1,1-trichloroethane cleaning solvent	.0000	.0000	133.42
90	Degreasing- toluene	2.7300	.6300	92.13
96	Surface coating solvent- general	1.1918	.5240	84.48
100	Jet fuel evaporation (jet a)	.3960	.2659	165.18
122	Bar screen waste incinerator- solid waste	3.7340	1.6043	37.74
127	Surface coating evaporation- general varnish/shellac	.8094	.3498	68.57
182	Evaporation- gravure printing- general solvent	1.7553	.7671	92.95
196	Architectural surface coatings- composite solvent	1.3251	.6188	76.26
197	Domestic solvents- general composite	1.0875	.5152	55.52
202	Class II sanitary land fills	1.7443	.6550	71.56
203	Animal waste decomposition	.8117	.3910	35.93
211	Beer fermentation- ethanol	1.3400	.7300	46.07
217	Coke oven blast furnace- process gas	2.6068	1.0317	61.97
219	Acetone- paint solvent	.3400	.1400	58.08
220	Surface coating evaporation- ethyl acetate	.3100	.2300	88.10
221	Surface coating evaporation- methyl ethyl ketone	1.1800	.5500	72.10
223	Surface coating evaporation- xylene solvent	8.1600	2.4500	106.16

PROFILE	PNAME	NMOG MIR (BY WEIGHT)	NMOG MOIR (BY WEIGHT)	WEIGHT (NMOG)
224	Propylene oxide emissions	.3100	.1900	58.08
226	Surface coating solvent- ethyl alcohol	1.3400	.7300	46.07
227	Surface coating evaporation- solvent- isopropyl alcohol	.5400	.3200	60.09
228	Surface coating evaporation- solvent- isopropyl acetate	.8700	.5100	104.00
230	Petro storage- fixed roof- hexane	.9800	.6500	86.17
271	Trichloroethylene cleaning solvent	.4400	.2700	131.40
274	Syntheic rubber auto tire production	2.0500	1.1450	84.16
280	Surface coating primer- water based auto paint spray booth	.5658	.1826	63.80
289	Surface coating evaporation- solvent- butyl alcohol	2.6900	1.3000	74.12
290	Surface coating evaporation- solvent- cellosolve	3.3100	1.4400	90.12
297	Crude oil evaporation- vapor composite from fixed roof tanks	1.0216	.6243	60.76
298	Petro storage- fixed roof- benzene	.4200	.1400	78.11
299	Petro storage- fixed roof- cyclohexane	1.2800	.7400	84.16
301	Petro storage- fixed roof- heptane	.8100	.5300	100.20
303	Petro storage- fixed roof- pentane	1.0400	.6800	72.15
304	Evaporation- flexographic printing press- n-propyl alcohol	.8425	.4575	62.92
306	Open hearth with oxygen lance- steel production	1.2963	.4970	91.50
307	Forest fires	4.5354	1.9572	30.10
316	Refinery- pipes, valves & flanges- composite	.9656	.5956	57.41
321	Refinery- pump seals- composite	1.0989	.6231	83.81
500	Catalyst light duty vehicles- exhaust (Black's data)	3.3314	1.3336	58.80
502	Non-catalyst light duty vehicles- exhaust (Black's data)	4.0785	1.6135	51.21
504	External combustion boilers- distillate or residual	2.1820	.9704	76.73
506	Halogenated cleaning solvents- mixed	.0107	.0071	143.44
508	Jet exhaust- composite	4.2846	1.4414	113.26
510	Plastics mfg- vinyl chloride	2.2000	1.2400	62.50
511	Plastics mfg- polypropylene	9.4000	3.7700	42.08
512	Organic solvent- dichloromethane	.0500	.0300	84.94
513	Surface coating evaporation- methyl isobutyl ketone	.8500	.4000	100.16
514	Evaporation- Chevron weed oil	3.6348	.9431	160.16
515	Composite industrial degreasers	.3803	.2190	140.99
516	Composite dry-cleaning solvents	.0180	.0120	151.15
517	Printing evaporation loss- general	1.6177	.7409	81.15
518	Aerosol sprays- non-synthetic	.7947	.5082	49.70
520	Composite natural gas	.3140	.2089	32.19
521	Composite LPG	.6514	.3790	44.14
522	Formica manufacturing	.8486	.2039	36.03
523	Open burning dump- landscape/pruning (modified KVB 121)	4.8025	2.1154	41.44
524	Methylene chloride	.0500	.0300	84.94
526	1979 exhaust composite 50/50 (aldehydes in emissions)	3.6716	1.4568	55.32
527	Non-catalyst exhaust (aldehydes in emissions) Black's data	4.0784	1.6135	51.21
528	OCS production platform fugitives	.8741	.5689	60.27

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TABLE 1

MAXIMUM INCREMENTAL REACTIVITY
FOR ORGANIC GAS PROFILES
5/23/96

PROFILE	PNAME	NMOG MIR (BY WEIGHT)	NMOG MOIR (BY WEIGHT)	AVERAGE MOLECULAR WEIGHT (NMOG)
529	Oil & gas extraction - pipeline valves & fittings	1.0194	.6232	60.78
530	Oil & gas extraction - pump seals	1.0219	.6241	60.70
531	Oil & gas extraction - compressor seals	1.0203	.6240	60.71
532	Oil & gas extraction - well heads & cellars/oil&water separator	1.0229	.6244	60.73
533	Daytime biogenic profile- Kern county crops	5.1268	1.8120	56.11
534	Nighttime biogenic profile - Kern county crops	3.9631	1.3288	53.45
535	Coal combustion - bituminous - fluidized bed	2.3375	1.0566	29.44
537	Crude oil - sumps, wells, hots - Kern county	.3498	.2012	16.08
546	Crude oil - storage tanks - Kern county	1.0215	.6243	60.76
547	Propane	.4800	.3100	44.09
548	Butane	1.0200	.6600	58.12
549	Red oak combustion - wood stove (w/o catalyst)	2.8108	1.1889	59.36
550	OCS - gas seeps	.7628	.4860	46.13
551	OCS - oil seeps - volatile fraction	1.1968	.6898	101.50
552	Phenol	1.1300	-.4700	94.11
553	Ethylene dichloride	.5700	.3600	99.00
554	Ethylene dibromide	.3000	.1900	187.88
556	Vinyl acetate	5.8100	2.2900	86.09
557	Methyl acrylate	5.8100	2.2900	86.09
558	Acrylonitrile	1.9500	1.0000	53.06
559	Ethane	.2500	.1700	30.07
560	On-road diesel hot exhaust (aldehydes not in emissions) EPA 4/88	2.7881	1.1245	65.62
561	On-road disel hot exhaust EPA 4/88	2.7865	1.1241	65.65
562	Geysers power plant main steam	1.2411	.6154	55.91
563	Jet fuel evaporation (jp-4)	.6797	.3344	158.08
564	Gasoline - catalyst - cold start exhaust - auto/oil	3.8296	1.4360	61.90
565	Gasoline - catalyst - stabilized exhaust - auto oil	2.1565	.8681	51.19

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TABLE 1

MAXIMUM INCREMENTAL REACTIVITY
FOR ORGANIC GAS PROFILES
5/23/96

PROFILE	PNAME	NMOG MIR (BY WEIGHT)	NMOG MOIR (BY WEIGHT)	AVERAGE MOLECULAR WEIGHT (NMOG)
566	Gasoline - catalyst - hot start exhaust - auto oil	2.8009	1.1464	62.36
567	RF-A fuel - tlev catalyst - cold start exhaust - 10/7/92	3.7430	1.4161	60.72
568	RF-A fuel - tlev catalyst - stabilized exhaust - 10/7/92	2.6543	1.0117	62.44
569	RF-A fuel - tlev catalyst - hot start exhaust - 10/7/92	2.6697	1.1057	59.46
570	M85/RF-A - tlev catalyst - cold start exhaust - 10/7/92	1.1685	.4686	33.69
571	M85/RF-A - tlev catalyst - stabilized exhaust - 10/7/92	3.7865	1.2425	41.40
572	M85/RF-A - tlev catalyst - hot start exhaust - 10/7/92	2.3160	.8303	45.28
573	Phase 2 - tlev catalyst - cold start exhaust - 10/7/92	3.6168	1.3592	64.14
574	Phase 2 - tlev catalyst - stabilized exhaust - 10/7/92	4.1991	1.4479	61.36
575	Phase 2 - tlev catalyst - hot start exhaust - 10/7/92	2.8882	1.1030	58.47
576	RF-A - lev catalyst - cold start exhaust - 11/20/92	3.3075	1.2586	67.48
577	RF-A - lev catalyst - stabilized exhaust - 11/20/92	3.9276	1.3839	51.60
578	RF-A - lev catalyst - hot start exhaust - 11/20/92	2.8203	1.0656	56.38
582	Phase 2 - lev catalyst - cold start exhaust - 11/20/92	3.2435	1.2718	64.23
583	Phase 2 - lev catalyst - stabilized exhaust - 11/20/92	4.0057	1.3950	50.26
584	Phase 2 - lev catalyst - hot start exhaust - 11/20/92	3.3165	1.1809	46.59
585	Methanol fuel 100% - assumed profile - 3/28/94	2.5370	.8200	31.41
586	Composite jet exhaust (EPA 1097-1099)	5.8608	2.2019	39.03
600	Species unknown- all category composite	1.5098	.7677	61.20
709	Liquid gasoline-composite of product-summer blend	3.0540	1.1564	91.72
710	Gasoline vapors-composite of product-summer blend	1.9339	.9998	67.45
711	Industrial surface coating-composite laquer	2.1601	.7292	97.04
712	Industrial surface coating-composite enamel	3.1857	1.0050	94.38
713	Industrial surface coating-composite primer	2.4144	.7977	101.28
714	Industrial surface coating-composite adhesive	1.3000	.7233	72.57
715	Slow cure asphalt	2.5813	.8584	154.30
716	Medium cure asphalt	2.9509	.9676	120.76

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TABLE 1

MAXIMUM INCREMENTAL REACTIVITY
FOR ORGANIC GAS PROFILES
5/23/96

PROFILE	PNAME	NMOG MIR (BY WEIGHT)	NMOG MOIR (BY WEIGHT)	AVERAGE MOLECULAR WEIGHT (NMOG)
717	Architectural surface coating-water based paint	1.2560	.6648	127.86
719	ICE-reciprocating-natural gas	1.5318	.6678	33.44
729	Liquid gasoilne-composite of product-winter blend	3.0898	1.1638	90.47
730	Gasoline vapors-composite of product-winter blend	1.9502	.9784	68.46
753	Styrene	2.2200	-.3000	104.14
754	Chlorosolve	.4370	.2400	67.78
756	Oil & gas production fugitives-liquid service	1.0644	.6463	62.59
757	Oil & gas production fugitives-gas service	.9312	.5680	54.29
758	Oil & gas production fugitives-valves-unspecified	1.0323	.6275	60.30
760	Evaporative emissions-distillate fuel	.8585	.5508	82.22
763	Phthalic anhydride mfg.-xylene oxidation	6.4600	1.9500	106.16
772	Ortho-xylene	6.4600	1.9500	106.16
774	Isobutyl acetate	1.1000	.6500	116.16
775	Isobutyl alcohol	1.9200	.9400	74.12
776	Isobutyl isobutyrate	.7400	.4700	144.21
777	Methyl amyl ketone	.7500	.3500	114.19
778	Methyl isobutyl ketone	.8500	.4000	100.16
779	N-butyl acetate	.6700	.4400	116.16
780	N-propyl acetate	.9300	.5700	102.13
781	N-propyl alcohol	2.2600	1.1300	60.09
783	Industrial surface coating-solvent based paint	2.5430	.8321	99.18
784	Synthetic rubber mfg-styrene-butadiene rubber	7.4220	2.3760	66.96
785	Ethylene oxide	.0400	.0300	44.05
786	Methyl alcohol	.5600	.2800	32.04
787	Carbon black manufacturing	.7304	.4268	26.26
790	Methyl acetate	.0800	.0500	74.08
791	Varsol	1.2512	.3959	130.19

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TABLE 1

MAXIMUM, INCREMENTAL REACTIVITY
FOR ORGANIC GAS PROFILES
5/23/96

PROFILE	PNAME	NMOG MIR (BY WEIGHT)	NMOG MOIR (BY WEIGHT)	AVERAGE MOLECULAR WEIGHT (NMOG)
792	Turpentine	3.6331	1.4019	136.24
793	Cyclopentane	2.3800	1.4100	70.14
794	Isooctane	.6100	.4100	114.23
795	Glycol ethers	1.5000	.0000	62.07
796	Methyl bromide	.0100	.0100	94.95
800	Catalyst ldv exhaust - no aldehydes in emissions - Sigby's data	3.4830	1.3475	60.83
801	Catalyst ldv exhaust - aldehydes in emissions - Sigby's data	3.4829	1.3475	60.84
802	Composite mineral spirit (naphthas or lactol spirits)	2.1127	.8987	136.91
803	Carbon bond 4 group *par*	.2600	.1700	16.00
804	Carbon bond 4 group *ole*	8.9000	3.1700	32.00
805	Carbon bond 4 group *ald2*	5.5200	2.1700	44.05
806	Isoprene	9.0800	3.4100	68.11
807	Monoterpenes	3.6600	.0000	136.24
808	Myrcene	3.6600	.0000	136.24
809	Alpha pinene	3.2800	1.2800	136.24
810	Beta pinene	4.4100	1.6700	136.24
811	Limonene	3.6600	.0000	136.24
812	Carene	3.2800	1.2800	136.23
813	OVOC other biogenics	1.1695	.4858	16.89
814	EPA composite consumer products 9/29/95	1.5380	.6481	63.60
815	Utility gasoline engine hot exhaust	3.8124	1.4139	59.59
816	Farm equipment diesel hot exhaust	4.6066	1.7157	43.49
817	Utility gasoline engine hot exhaust - (aldehyedes not in emissions)	3.8124	1.4139	59.59
818	Farm equipment diesel hot exhaust - (aldehydes not in emissions)	4.6071	1.7203	43.49
819	Heavy duty diesel hot exhaust - CalPoly 1991	4.6072	1.7212	43.49
820	Heavy duty diesel hot exhaust - CalPoly 1991 (aldehydes not in ems)	4.6071	1.7203	43.49

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OBS	Chemical Abstracts Service number	Chemical Name	Non - California SAROAD code	California SAROAD code	SAPRC Max. Inc. React. g O3/ g 11/91	SAPRC Max. Oz. React. g O3/ g 11/91	CBM Max. Inc. React. g O3/ g 04/94	CBM Max. Oz. React. g O3/ g 04/94
1	00100-01-0	CBM Olefins			13.700	5.3600	17.100	6.310
2	00100-02-0	CBM Paraffins			1.020	0.6600	1.140	0.671
3	00100-03-0	CBM Toluene			2.730	0.6300	1.870	-0.215
4	00100-04-0	CBM Xylene			7.640	2.3000	8.620	2.380
5	00100-06-0	CBM Aldehydes			5.520	2.1700	6.550	2.450
6	00100-12-0	CBM Non-Reactive			0.000	0.0000	0.000	0.000
7	00630-08-0	Carbon Monoxide	42101	42101	0.054	0.0380	0.051	0.033
8	00074-82-8	Methane	43201	43201	0.015	0.0093	0.010	0.006
9	00067-56-1	Methanol	43301	43301	0.560	0.2800	0.614	0.272
10	00064-17-5	Ethanol	43302	43302	1.340	0.7300	1.390	0.726
11	00074-85-1	Ethene	43203	43203	7.29	3.16	7.970	3.230
12	00074-86-2	Ethyne	43206	43206	0.50	0.33	0.637	0.374
13	00074-84-0	Ethane	43202	43202	0.25	0.17	0.221	0.130
14	00115-07-1	Propene	43205	43205	9.40	3.77	11.400	4.290
15	00074-98-6	Propane	43204	43204	0.48	0.31	0.565	0.331
16	00463-49-0	Propadiene	43208	43208	7.29	2.34	17.400	6.390
17	00074-99-7	Propyne	43209	43209	4.10	2.17	7.620	2.930
18	00075-28-5	2M-Propane	90021	90021	1.21	0.73	1.140	0.671
19	00115-11-7	2M-Propene	90022	90022	5.31	1.93	5.820	1.900
20	00106-98-9	1-Butene	43213	43213	8.91	3.51	8.860	3.390
21	00106-99-0	1,3-Butadiene	43218	43218	10.89	4.16	17.100	6.310
22	00106-97-8	Butane	43212	43212	1.02	0.66	1.140	0.671
23	00624-64-6	t-2-Butene	43216	43216	9.94	3.76	10.300	3.840
24	00463-82-1	2,2-DM-Propane	43222	98130	0.37	0.22	0.920	0.540
25	00107-00-6	1-Butyne	43281	43219	9.24	3.64	5.950	2.350
26	00590-18-1	c-2-Butene	43217	43217	9.94	3.76	10.300	3.840
27	00563-45-1	3M-1-Butene	43223	43223	6.22	2.46	7.320	2.850
28	00078-78-4	2M-Butane	43221	98132	1.38	0.87	1.150	0.675
29	00503-17-3	2-Butyne	43282	98133	9.24	3.64	5.950	2.350
30	00109-67-1	1-Pentene	43224	43224	6.22	2.46	7.320	2.850
31	00563-46-2	2M-1-Butene	43225	43225	4.90	1.90	4.900	1.660

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32	00109-66-0	Pentane	43220	43220	1.04	0.68	1.150	0.675
33	00078-79-5	2M-1,3-Butadiene	90024	98134	9.08	3.41	15.400	5.100
34	00646-04-8	t-2-Pentene	43226	43226	8.80	3.30	8.470	3.210
35	00558-37-2	3,3-DM-1-Butene	90061	90061	4.42	1.74	6.100	2.380
36	00627-20-3	c-2-Pentene	43227	43227	8.80	3.30	8.470	3.210
37	00513-35-9	2M-2-Butene	43228	43228	6.41	2.30	4.830	1.950
38	00542-92-7	Cyclopentadiene	90103	90103	7.66	3.50	14.300	5.310
39	00075-83-2	2,2-DM-Butane	43291	43291	0.82	0.51	0.963	0.565
40	00142-29-0	Cyclopentene	43292	43292	7.66	2.78	8.720	3.310
41	00691-37-2	4M-1-Pentene	90007	98135	4.42	1.74	6.300	2.490
42	00760-20-3	3M-1-Pentene	43211	43211	4.42	1.74	6.300	2.490
43	00287-92-3	Cyclopentane	43242	43242	2.38	1.41	1.180	0.695
44	00079-29-8	2,3-DM-Butane	43276	98001	1.07	0.67	1.160	0.678
45	01634-04-4	MTBE	43376	43376	0.62	0.41	0.637	0.380
46	00691-38-3	4M-c-2-Pentene	90025	90025	6.69	2.50	7.250	2.790
47	00107-83-5	2M-Pentane	43229	43229	1.53	0.90	1.160	0.678
48	00674-76-0	4M-t-2-Pentene	43293	43293	6.69	2.50	7.250	2.790
49	00096-14-0	3M-Pentane	43230	43230	1.52	0.94	1.160	0.678
50	00763-29-1	2M-1-Pentene	98040	98040	4.42	1.74	4.280	1.500
51	00592-41-6	1-Hexene	43245	43245	4.42	1.74	6.300	2.490
52	00110-54-3	Hexane	43231	43231	0.98	0.65	1.160	0.678
53	13269-52-8	t-3-Hexene	90042	98136	6.69	2.50	7.250	2.790
54	07642-09-3	c-3-Hexene	43283	98003	6.69	2.50	7.250	2.790
55	04050-45-7	t-2-Hexene	98034	98034	6.69	2.50	7.250	2.790
56	00616-12-6	3M-t-2-Pentene	43270	43270	6.69	2.50	4.220	1.740
57	00625-27-4	2M-2-Pentene	43284	98004	6.69	2.50	4.220	1.740
58	01120-62-3	3M-Cyclopentene	43272	43272	5.67	2.20	7.430	2.860
59	07688-21-3	c-2-Hexene	98035	98035	6.69	2.50	7.250	2.790
60	00992-62-3	3M-C-2-Pentene	43270	43270	6.69	2.50	4.220	1.740
61	00590-35-2	2,2-DM-Pentane	90062	43106	1.40	0.83	0.994	0.583
62	00096-37-7	M-Cyclopentane	43262	43262	2.82	1.55	1.180	0.695
63	00108-08-7	2,4-DM-Pentane	43247	43271	1.78	0.99	1.160	0.681

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64	00464-06-2	2,2,3-TM-Butane	43106	43106	1.32	0.79	0.994	0.583
65	07385-78-6	3,4-DM-1-Pentene	43956	43956	3.48	1.38	5.570	2.230
66	00693-89-0	1M-Cyclopentene	43959	43959	5.67	2.20	7.430	2.860
67	00071-43-2	Benzene	45201	45201	0.42	0.14	0.212	0.125
68	03404-61-3	3M-1-Hexene	90029	90029	3.48	1.38	5.570	2.230
69	00562-49-2	3,3-DM-Pentane	90040	90040	0.71	0.46	0.994	0.583
70	00110-82-7	Cyclohexane	43248	43248	1.28	0.74	1.180	0.695
71	00591-76-4	2M-Hexane	43263	43275	1.08	0.68	1.160	0.681
72	00565-59-3	2,3-DM-Pentane	43274	43274	1.51	0.90	1.160	0.681
73	00110-83-8	Cyclohexene	43273	43273	5.67	2.20	7.430	2.860
74	00589-34-4	3M-Hexane	43295	43295	1.40	0.83	1.160	0.681
75	02532-58-3	c-1,3-DM-CycloPentane	90064	90064	2.55	1.39	1.180	0.695
76	00617-78-7	3E-Pentane	43957	43957	1.40	0.83	1.160	0.681
77	00822-50-4	t-1,2-DM-CycloPentane	90064	90064	1.85	1.39	1.180	0.695
78	00592-76-7	1-Heptene	90057	98005	3.48	1.38	5.570	2.230
79	00540-84-1	2,2,4-TM-Pentane	43250	43276	0.93	0.54	1.020	0.597
80	14686-14-7	t-3-Heptene	98041	98041	5.53	2.07	6.390	2.490
81	00142-82-5	Heptane	43232	43232	0.81	0.53	1.160	0.681
82	02738-19-4	2M-2-Hexene	90029	90029	5.53	2.07	3.790	1.590
83	03899-36-3	3M-t-3-Hexene	90029	90029	5.53	2.07	3.790	1.590
84	14686-13-6	t-2-Heptene	43264	98005	5.53	2.07	6.390	2.490
85	00816-79-5	3E-c-2-Pentene	43294	43294	5.53	2.07	3.790	1.590
86	00107-39-1	2,4,4-TM-1-Pentene	98054	98054	2.69	1.07	3.360	1.210
87	10574-37-5	2,3-DM-2-Pentene	43294	90063	5.53	2.07	3.790	1.590
88	06443-92-1	c-2-Heptene	43264	98005	5.53	2.07	6.390	2.490
89	00108-87-2	M-Cyclohexane	43261	43261	1.85	1.00	1.180	0.695
90	00590-73-8	2,2-DM-Hexane	43287	98138	1.20	0.70	1.020	0.597
91	00107-40-4	2,4,4-TM-2-Pentene	43138	98055	5.29	1.99	3.310	1.400
92	00592-13-2	2,5-DM-Hexane	43278	43278	1.63	0.93	1.160	0.682
93	00589-43-5	2,4-DM-Hexane	43277	43277	1.50	0.86	1.160	0.682
94	00563-16-6	3,3-DM-Hexane	90067	90067	1.20	0.70	1.020	0.597
95	00565-75-3	2,3,4-TM-Pentane	43252	43279	1.60	0.92	1.160	0.682

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96	00560-21-4	2,3,3-TM-Pentane	43280	43280	1.20	0.54	1.020	0.597
97	00108-88-3	Toluene	45202	45202	2.73	0.63	1.870	-0.215
98	00584-94-1	2,3-DM-Hexane	43290	98139	1.32	0.78	1.160	0.682
99	00592-27-8	2M-Heptane	43296	98140	0.96	0.60	1.160	0.682
100	00589-53-7	4M-Heptane	43297	43297	1.20	0.70	1.160	0.682
101	00589-81-1	3M-Heptane	43298	43298	0.99	0.62	1.160	0.682
102	15890-40-1	1c,2t,3-TM-CycPentane	98058	98058	1.94	1.02	1.180	0.695
103	00638-04-0	c-1,3-DM-CycHexane	98059	98059	1.94	1.02	1.180	0.695
104	02207-04-7	t-1,4-DM-CycHexane	98059	98059	1.94	1.02	1.180	0.695
105	03522-94-9	2,2,5-TM-Hexane	98033	98033	0.97	0.58	1.040	0.608
106	00111-66-0	1-Octene	43265	43265	2.69	1.07	5.020	2.040
107	14850-23-8	t-4-Octene	43265	43265	5.29	1.99	5.740	2.270
108	00111-65-9	Octane	43233	43233	0.61	0.41	1.020	0.597
109	13389-42-9	t-2-Octene	43265	43265	5.29	1.99	5.740	2.270
110	02207-03-6	t-1,3-DM-CycHexane	98059	98059	1.94	1.02	1.180	0.695
111	07642-04-8	c-2-Octene	90013	43266	5.29	1.99	5.740	2.270
112	01069-53-0	2,3,5-TM-Hexane	90002	98141	1.14	0.64	1.170	0.684
113	02213-23-2	2,4-DM-Heptane	90003	98142	1.34	0.75	1.170	0.684
114	02207-01-4	1c-2-DM-CycloHexane	98059	98059	1.94	1.02	1.180	0.695
115	01678-91-7	E-CycHexane	43288	43288	1.94	1.02	1.180	0.695
116	00926-82-9	3,5-DM-Heptane	90004	98144	1.14	0.64	1.170	0.684
117	00100-41-4	E-Benzene	45203	45203	2.70	0.63	1.780	-0.095
118	03074-71-3	2,3-DM-Heptane	90006	98145	1.14	0.64	1.170	0.684
119	00108-38-3	m&p-Xylene	45205	45205	7.38	2.30	8.620	2.380
120	03221-61-2	2M-Octane	90008	90008	1.14	0.64	1.170	0.684
121	02216-33-3	3M-Octane	90015	90015	1.14	0.64	1.170	0.684
122	00100-42-5	Styrene	45220	45220	2.22	-0.30	3.880	0.629
123	00095-47-6	o-Xylene	45204	45204	6.46	1.95	8.620	2.380
124	00124-11-8	1-Nonene	43269	43267	2.23	0.89	4.590	1.890
125	00111-84-2	Nonane	43235	43235	0.54	0.36	0.906	0.532
126	00098-82-8	i-PropBenzene	45210	98043	2.24	0.52	1.710	-0.003
127	15869-87-1	2,2-DM-Octane	90070	43109	1.01	0.56	1.050	0.616

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128	04032-94-4	2,4-DM-Octane	99910	98149	1.01	0.56	1.170	0.685
129	00103-65-1	n-PropBenzene	45209	45209	2.12	0.49	1.710	-0.003
130	00620-14-4	1M-3E-Benzene	99912	99912	7.20	2.16	7.750	2.190
131	00622-96-8	1M-4E-Benzene	45238	45238	7.20	2.16	7.750	2.190
132	00108-67-8	1,3,5-TM-Benzene	45207	45207	10.12	3.05	7.750	2.190
133	00611-14-3	1E-2M-Benzene	45211	45211	7.20	2.16	7.750	2.190
134	00095-63-6	1,2,4-TM-Benzene	45208	45208	8.83	2.67	7.750	2.190
135	00124-18-5	Decane	43238	43238	0.47	0.31	0.817	0.479
136	00538-93-2	i-ButylBenzene	99915	99915	1.90	0.43	1.660	0.070
137	00135-98-8	s-ButBenzene	45216	45216	1.89	0.44	1.660	0.070
138	00535-77-3	1M-3-i-PropBenzene	99917	99917	6.45	1.90	7.070	2.030
139	00576-73-8	1,2,3-TM-Benzene	45225	45225	8.85	2.67	7.750	2.190
140	00099-87-6	1M-4-i-PropBenzene	45255	45255	6.45	1.90	7.070	2.030
141	00496-11-7	Indan	98044	98044	1.06	0.14	7.880	2.220
142	00527-84-4	1M-2-i-PropBenzene	45256	45256	6.45	1.90	7.070	2.030
143	00141-93-5	1,3-DE-Benzene	45106	45106	6.45	1.94	7.070	2.030
144	00105-05-5	1,4-DE-Benzene	45106	45106	6.45	1.94	7.070	2.030
145	01074-43-7	1M-3-n-PropBenzene	99916	99916	6.45	1.90	7.070	2.030
146	01074-55-1	1M-4-n-PropBenzene	45258	45258	6.45	1.90	7.070	2.030
147	00135-01-3	1,2-DE-Benzene	45217	98154	6.45	1.94	7.070	2.030
148	01074-17-5	1M-2-n-PropBenzene	45259	45219	6.45	1.90	7.070	2.030
149	01758-88-9	1,4-DM-2-E-Benzene	45260	45260	9.07	2.70	7.070	2.030
150	00874-41-9	1,3-DM-4-E-Benzene	45261	45261	9.07	2.70	7.070	2.030
151	00934-80-5	1,2-DM-4-E-Benzene	45262	45262	9.07	2.70	7.070	2.030
152	02870-04-4	1,3-DM-2-E-Benzene	45263	45263	9.07	2.70	7.070	2.030
153	01120-21-4	Undecane	43241	43241	0.42	0.28	0.849	0.499
154	00933-98-2	1,2-DM-3-E-Benzene	45264	45264	9.07	2.70	7.070	2.030
155	00095-93-2	1,2,4,5-TetMBenzene	45244	45232	9.07	2.73	7.070	2.030
156	03968-85-2	2M-ButylBenzene	45265	45265	5.84	1.80	6.510	1.900
157	00527-53-7	1,2,3,5-TetMBenzene	45244	45232	9.07	2.73	7.070	2.030
158	27138-21-2	tert-1B-2M-Benzene	45266	45266	5.84	1.80	6.400	1.840
159	00488-23-3	1,2,3,4-TetMBenzene	45237	45232	9.07	2.73	7.070	2.030

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160	00538-68-1	n-PentBenzene	45267	45267	1.70	0.39	1.610	0.129
161	00098-19-1	tert-1B-3,5-DM-Benz	45268	45268	7.50	2.30	5.950	1.740
162	00091-20-3	Naphthalene	46701	98046	1.18	0.09	7.400	2.130
163	00112-40-3	Dodecane	43255	43255	0.38	0.25	0.780	0.458
164	00050-00-0	FORMALDEHYDE	43502	43502	7.15	2.08	9.230	2.580
165	00075-07-0	ACETALDEHYDE	43503	43503	5.52	2.17	6.550	2.450
166	00107-02-8	ACROLEIN	43505	43505	6.77	2.58	9.290	3.450
167	00067-64-1	ACETONE	43551	43551	0.56	0.20	0.857	0.503
168	00123-38-6	PROPIONALDEHYDE	43504	43504	6.53	2.49	5.260	2.020
169	00123-73-9	CROTONALDEHYDE	43515	98156	5.42	2.07	10.700	3.970
170	00123-72-8	n-BUTYRALDEHYDE	43510	43510	5.26	2.01	4.460	1.770
171	00078-93-3	BUTANONE	43552	43552	1.18	0.55	0.921	0.541
172	00100-52-7	BENZALDEHYDE	45501	98157	-0.55	-1.23	0.000	0.000
173	00110-62-3	PENTANALDEHYDE	98056	98056	4.41	1.68	3.930	1.590
174	00104-87-0	p-TOLUALDEHYDE	45502	98158	3.32	-1.09	0.000	0.000
175	00066-25-1	HEXANALDEHYDE	43512	98159	3.79	1.45	3.550	1.470
176	00078-85-3	Methacrolein	43515	43515	5.41	2.10	10.700	3.970