

CRUDE OIL ASSAY

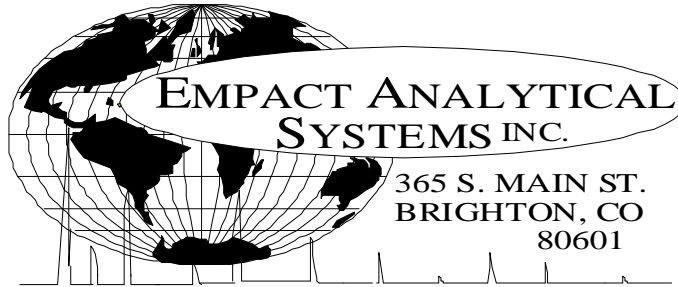
PROJECT NO. :	201403015	ANALYSIS NO. :	19
COMPANY NAME :	CARRIZO OIL & GAS	ANALYSIS DATE:	MARCH 7, 2014
ACCOUNT NO. :		SAMPLE DATE :	MARCH 4, 2014
PRODUCER :		CYLINDER NO. :	1L GLASS JAR
LEASE NO. :		SAMPLED BY :	GALE MCENDREE
NAME/DESCRIP :	TANK BATTERY @ 17:20		EMPACT
	SPEAKER 3-27-8-61		
FIELD DATA		SAMPLE TEMP. :	68
SAMPLE PRES. :		AMBIENT TEMP.:	
VAPOR PRES. :		GRAVITY :	
COMMENTS :	SPOT; TK# 271106		

<u>SPECIFICATION</u>	<u>TEST METHOD</u>	<u>UNITS</u>	<u>RESULTS</u>
API GRAVITY		API 60/60	37.2
RVP @100 DEG F	D323	PSIG	7.4
TOTAL SULFUR	D2622	WT %	N/A
TOTAL CHLORIDE	D4929	ug/g	N/A
ORGANIC CHLORIDE	D4929	ug/g	N/A
FLASH POINT	D93	° F	N/A
HEATING VALUE	D4809	BTU/ LB	N/A
VISUAL APPEARANCE			RED/BROWN
<u>BS&W</u>	D96		
Crude Oil		VOL %	N/A
Water		VOL %	N/A
Emulsion		VOL %	N/A
Sediment		VOL %	N/A
<u>DISTILLATION:</u>	D86		
INITIAL POINT		DEG F	N/A
50%		DEG F	N/A
90%		DEG F	N/A
END POINT		DEG F	N/A
<u>DISTILLATION:</u>	<u>@TEMP</u>	D445	
Average Centipoise	20°C		N/A
Average Centipoise	30°C		N/A
Average Centipoise	80°C		N/A
Kinetic Viscosity	20°C	cSt (mm2/s)	N/A
Kinetic Viscosity	30°C	cSt (mm2/s)	N/A
Kinetic Viscosity	80°C	cSt (mm2/s)	N/A

ND: NOT DETECTED

N/A: NO TEST PREFORMED FOR THIS PARAMETER

The data presented herein has been acquired by means of current analytical techniques and represents the judicious conclusion EMPACT Analytical Systems, Inc. Results of the analysis can be affected by the sampling conditions, therefore, are only warranted through proper lab protocol. EMPACT assumes no responsibility for interpretation or any consequences from application of the reported information and is the sole liability of the user. The reproduction in any media of this reported information may not be made, in portion or as a whole, without the written permission of EMPACT Analytical Systems, Inc.



303-637-0150

EXTENDED NATURAL GAS LIQUID ANALYSIS (*DHA)

MAIN PAGE

PROJECT NO. :	201403015	ANALYSIS NO. :	20
COMPANY NAME :	CARRIZO OIL & GAS	ANALYSIS DATE:	MARCH 6, 2014
ACCOUNT NO. :		SAMPLE DATE :	MARCH 4, 2014
PRODUCER :		CYLINDER NO. :	3707
LEASE NO. :		SAMPLED BY :	GALE MCENDREE
NAME/DESCRIP :	SEPARATOR @ 14:40		EMPACT
	SPEAKER 3-27-8-61		
FIELD DATA		SAMPLE TEMP. :	75
SAMPLE PRES. :	25	AMBIENT TEMP.:	
VAPOR PRES. :		GRAVITY :	
COMMENTS :	SPOT; NO PROBE		

<u>COMPONENT</u>	<u>MOLE %</u>	<u>MASS %</u>	<u>VOL %</u>
NITROGEN (AIR)	0.0780	0.0204	0.0186
CARBON DIOXIDE	0.0289	0.0119	0.0108
METHANE	0.1579	0.0236	0.0582
ETHANE	0.2867	0.0804	0.1669
PROPANE	1.2095	0.4976	0.7259
I-BUTANE	0.3843	0.2084	0.2738
N-BUTANE	1.9238	1.0430	1.3208
I-PENTANE	0.8993	0.6053	0.7168
N-PENTANE	1.5295	1.0294	1.2062
HEXANES PLUS	93.5021	96.4800	95.5020
TOTALS	100.0000	100.0000	100.0000

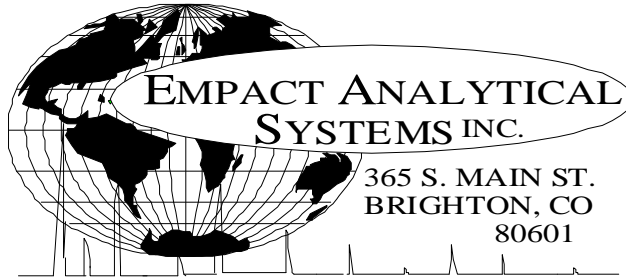
<u>BTEX COMPONENTS</u>	<u>MOLE%</u>	<u>MASS%</u>
BENZENE	1.5273	1.1128
TOLUENE	3.2014	2.7516
ETHYLBENZENE	0.5370	0.5318
XYLENE	2.0996	2.0793
TOTAL BTEX	7.3653	6.4755

(CALC: GPA STD 2145-94 & TP-17 @ 14.696 & 60 F)

	<u>TOTAL</u>	<u>C6+</u>
	<u>SAMPLE</u>	<u>FRACTION</u>
Specific Gravity (H2O=1) =	0.7398	0.7476 60/60
API Gravity =	59.77	57.77 60/60
Molecular Weight =	107.20	111.244
Absolute Density =	6.17	6.23 LBS/GAL
Heating Value Liq. Idl Gas=	125783	127057 BTU/GAL
Vapor/Liquid =	21.88	21.33 CUFT/GAL
Vapor Pressure =	15.87	1.80 PSIA @100 F

*(DETAILED HYDROCARBON ANALYSIS/NJ 1993) ; ASTM D6730

THIS DATA HAS BEEN ACQUIRED THROUGH APPLICATION OF CURRENT STATE-OF-THE-ART ANALYTICAL TECHNIQUES. THE USE OF THIS INFORMATION IS THE RESPONSIBILITY OF THE USER. EMPACT ANALYTICAL SYSTEMS, ASSUMES NO RESPONSIBILITY FOR ACCURACY OF THE REPORTED INFORMATION NOR ANY CONSEQUENCES OF ITS APPLICATION.



303-637-0150

EXTENDED NATURAL GAS LIQUID ANALYSIS (*DHA)

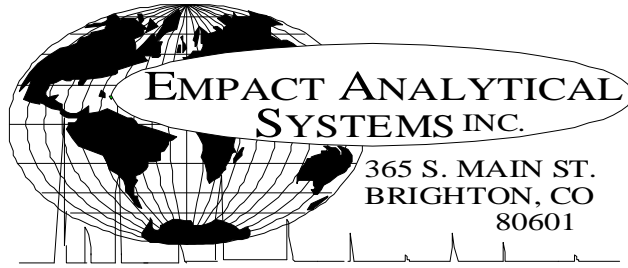
E & P TANK / GLYCALC INFORMATION

PROJECT NO. :	201403015	ANALYSIS NO. :	20
COMPANY NAME :	CARRIZO OIL & GAS	ANALYSIS DATE:	MARCH 6, 2014
ACCOUNT NO. :		SAMPLE DATE :	MARCH 4, 2014
PRODUCER :		CYLINDER NO. :	3707
LEASE NO. :		SAMPLED BY :	GALE MCENDREE
NAME/DESCRIP :	SEPARATOR @ 14:40		EMPACT
	SPEAKER 3-27-8-61		
FIELD DATA		SAMPLE TEMP. :	75
SAMPLE PRES. :	25	AMBIENT TEMP.:	
VAPOR PRES. :		GRAVITY :	
COMMENTS :	SPOT; NO PROBE		

<u>COMPONENT</u>	<u>Mole %</u>	<u>Wt %</u>	<u>LV %</u>			
CARBON DIOXIDE	0.0289	0.0119	0.0108			
NITROGEN (AIR)	0.0780	0.0204	0.0186			
METHANE	0.1579	0.0236	0.0582			
ETHANE	0.2867	0.0804	0.1669			
PROPANE	1.2095	0.4976	0.7259			
I-BUTANE	0.3843	0.2084	0.2738			
N-BUTANE	1.9238	1.0430	1.3208			
I-PENTANE	0.8993	0.6053	0.7168			
N-PENTANE	1.5295	1.0294	1.2062			
CYCLOPENTANE (N-C5)	1.4253	0.9324	0.9071			
N-HEXANE	6.9540	5.5903	6.2283			
CYCLOHEXANE (OTHER C6)	3.0883	2.4245	2.2886			
OTHER HEXANES	10.7623	8.5626	9.0588			
OTHER HEPTANES	14.7029	13.6486	14.2014			
METHYLCYCLOHEXANE (OTHER C7)	4.6623	4.2704	4.0767			
2,2,4 TRIMETHYLPENTANE	0.8915	0.8166	0.8015			
BENZENE	1.5273	1.1128	0.9321			
TOLUENE	3.2014	2.7516	2.3277			
ETHYLBENZENE	0.5370	0.5318	0.4498			
XYLENES	2.0996	2.0793	1.7607			
OTHER OCTANES	12.5121	13.3500	13.3730			
OCTANES PLUS	----	47.1783	----	57.1868	----	55.4813
NONANES	12.3362	14.6323	14.4124			
DECANES PLUS	18.8019	25.7768	24.6839			
<u>SUB TOTAL</u>	<u>100.0000</u>	<u>100.0000</u>	<u>100.0000</u>			
TOTAL	100.0000	100.0000	100.0000			

API Gravity	=	59.77	60/60
Vapor Pressure	=	15.87	PSIA & 100 F
Average Molecular Weight of Decanes plus	=	146.97	
Average Specific Gravity of Decanes plus	=	0.7710	

THE DATA PRESENTED HEREIN HAS BEEN ACQUIRED THROUGH JUDICIOUS APPLICATION OF CURRENT STATE-OF-THE ART ANALYTICAL TECHNIQUES. THE APPLICATIONS OF THIS INFORMATION IS THE RESPONSIBILITY OF THE USER. EMPACT ANALYTICAL SYSTEMS, INC. ASSUMES NO RESPONSIBILITY FOR ACCURACY OF THE REPORTED INFORMATION NOR ANY CONSEQUENCES OF IT'S APPLICATION.



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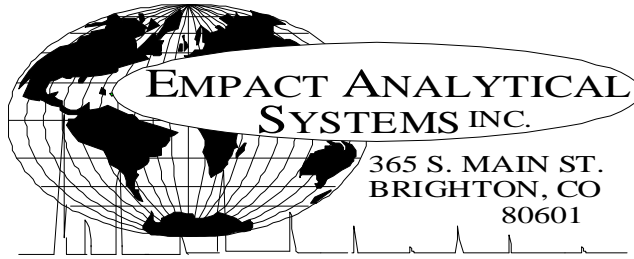
EXTENDED NATURAL GAS LIQUID ANALYSIS (*DHA)

BY CARBON NUMBER

PROJECT NO. :	201403015	ANALYSIS NO. :	20
COMPANY NAME :	CARRIZO OIL & GAS	ANALYSIS DATE:	MARCH 6, 2014
ACCOUNT NO. :		SAMPLE DATE :	MARCH 4, 2014
PRODUCER :		CYLINDER NO. :	3707
LEASE NO. :		SAMPLED BY :	GALE MCENDREE
NAME/DESCRIP :	SEPARATOR @ 14:40		EMPACT
	SPEAKER 3-27-8-61		
FIELD DATA		SAMPLE TEMP. :	75
SAMPLE PRES. :	25	AMBIENT TEMP.:	
VAPOR PRES. :		GRAVITY :	
COMMENTS :	SPOT; NO PROBE		

<u>COMPONENT / CARBON NUMBER</u>	<u>MOLE%</u>	<u>MASS %</u>	<u>VOLUME %</u>
NITROGEN	0.0780	0.0204	0.0186
CARBON DIOXIDE	0.0289	0.0119	0.0108
C1	0.1579	0.0236	0.0582
C2	0.2867	0.0804	0.1669
C3	1.2095	0.4976	0.7259
C4	2.3081	1.2514	1.5946
C5	3.8541	2.5671	2.8301
C6	22.3319	17.6902	18.5078
C7	22.5666	20.6706	20.6058
C8	16.0402	16.7777	16.3850
C9	12.3362	14.6323	14.4124
C10	10.9054	14.0098	13.4643
C11	4.5429	6.3619	6.0166
C12	1.9804	2.9875	2.8703
C13	0.8142	1.3708	1.3205
C14	0.4651	0.8607	0.8339
C15	0.0939	0.1861	0.1783
C16	0.0000	0.0000	0.0000
C17	0.0000	0.0000	0.0000
C18	0.0000	0.0000	0.0000
C19	0.0000	0.0000	0.0000
C20	0.0000	0.0000	0.0000
C21	0.0000	0.0000	0.0000
C22	0.0000	0.0000	0.0000
C23	0.0000	0.0000	0.0000
C24	0.0000	0.0000	0.0000
C25	0.0000	0.0000	0.0000
C26	0.0000	0.0000	0.0000
C27	0.0000	0.0000	0.0000
C28	0.0000	0.0000	0.0000
C29	0.0000	0.0000	0.0000
C30+	0.0000	0.0000	0.0000
<u>Total</u>	<u>100.0000</u>	<u>100.0000</u>	<u>100.0000</u>

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303-637-0150

EXTENDED NATURAL GAS LIQUID ANALYSIS (*DHA)

DHA COMPONENT LIST

PROJECT NO. :	201403015	ANALYSIS NO. :	20
COMPANY NAME :	CARRIZO OIL & GAS	ANALYSIS DATE:	MARCH 6, 2014
ACCOUNT NO. :		SAMPLE DATE :	MARCH 4, 2014
PRODUCER :		CYLINDER NO. :	3707
LEASE NO. :		SAMPLED BY :	GALE MCENDREE
NAME/DESCRIP :	SEPARATOR @ 14:40 SPEAKER 3-27-8-61		EMPACT
FIELD DATA		SAMPLE TEMP. :	75
SAMPLE PRES. :	25	AMBIENT TEMP.:	
VAPOR PRES. :		GRAVITY :	
COMMENTS :	SPOT; NO PROBE		

<u>COMPONENT</u>	<u>PIANO #</u>	<u>MOLE %</u>	<u>MASS %</u>	<u>VOL %</u>
Nitrogen	NHC	0.0780	0.0204	0.0186
Carbon Dioxide	NHC	0.0289	0.0119	0.0108
Methane	P1	0.1579	0.0236	0.0582
Ethane	P2	0.2867	0.0804	0.1669
Propane	P3	1.2095	0.4976	0.7259
i-Butane	I4	0.3843	0.2084	0.2738
n-Butane	P4	1.9238	1.0430	1.3208
2,2-Dimethylpropane	I5	0.0031	0.0021	0.0026
i-Pentane	I5	0.8962	0.6032	0.7142
n-Pentane	P5	1.5295	1.0294	1.2062
2,2-Dimethylbutane	I6	0.0355	0.0285	0.0322
Cyclopentane	N5	1.4253	0.9324	0.9071
2,3-Dimethylbutane	I6	0.3538	0.2844	0.3153
2-Methylpentane	I6	3.5425	2.8478	3.2019
3-Methylpentane	I6	2.1009	1.6889	1.8673
n-Hexane	P6	6.9540	5.5903	6.2283
2,2-Dimethylpentane	I7	0.0198	0.0185	0.0201
Methylcyclopentane	N6	4.7296	3.7130	3.6421
2,4-Dimethylpentane	I7	0.2903	0.2713	0.2967
2,2,3-Trimethylbutane	I7	0.0164	0.0153	0.0163
Benzene	A6	1.5273	1.1128	0.9321
3,3-Dimethylpentane	I7	0.0307	0.0287	0.0305
Cyclohexane	N6	3.0883	2.4245	2.2886
2-Methylhexane	I7	1.2707	1.1877	1.2873
2,3-Dimethylpentane	I7	0.8064	0.7537	0.7936
1,1-Dimethylcyclopentane	N7	0.4457	0.4082	0.3976
3-Methylhexane	I7	1.8514	1.7305	1.8473
1c,3-Dimethylcyclopentane	N7	0.9817	0.8992	0.8873
1t,3-Dimethylcyclopentane	N7	0.8915	0.8166	0.8015
3-Ethylpentane	I7	0.1488	0.1391	0.1461
1t,2-Dimethylcyclopentane	N7	1.8765	1.7188	1.6812
2,2,4-Trimethylpentane	I8	0.1482	0.1579	0.1670
n-Heptane	P7	5.2575	4.9141	5.2806
1c,2-Dimethylcyclopentane	N7	0.1664	0.1524	0.1451
Methylcyclohexane	N7	4.6623	4.2704	4.0767
2,2-Dimethylhexane	I8	0.6041	0.6437	0.6800
Ethylcyclopentane	N7	0.6491	0.5945	0.5702
2,5-Dimethylhexane	I8	0.1394	0.1485	0.1573
2,2,3-Trimethylpentane	I8	0.0391	0.0417	0.0428
2,4-Dimethylhexane	I8	0.2783	0.2965	0.3125
1c,2t,4-Trimethylcyclopentane	N8	0.4409	0.4615	0.4444
3,3-Dimethylhexane	I8	0.0617	0.0657	0.0680

2,3,4-Trimethylpentane	I8	0.1279	0.1363	0.1392
2,3,3-Trimethylpentane	I8	0.0113	0.0120	0.0122
Toluene	A7	3.2014	2.7516	2.3277
2,3-Dimethylhexane	I8	0.2691	0.2867	0.2961
2-Methyl-3-ethylpentane	I8	0.1786	0.1903	0.1944
1,1,2-Trimethylcyclopentane	N8	0.0058	0.0061	0.0058
2-Methylheptane	I8	1.3625	1.4518	1.5260
4-Methylheptane	I8	0.5517	0.5879	0.6031
3-Methyl-3-ethylpentane	I8	0.0966	0.1029	0.1040
3,4-Dimethylhexane	I8	0.1004	0.1070	0.1093
1c,2c,4-Trimethylcyclopentane	N8	0.0489	0.0512	0.0488
1c,3-Dimethylcyclohexane	N8	0.0366	0.0383	0.0368
3-Methylheptane	I8	0.5945	0.6335	0.6602
1c,2t,3-Trimethylcyclopentane	N8	1.0715	1.1216	1.0704
3-Ethylhexane	I8	0.1881	0.2004	0.2066
1t,4-Dimethylcyclohexane	N8	0.6354	0.6651	0.6413
1,1-Dimethylcyclohexane	N8	0.1495	0.1565	0.1474
3c-Ethylmethylcyclopentane	N8	0.0051	0.0053	0.0051
3t-Ethylmethylcyclopentane	N8	0.2251	0.2356	0.2259
2t-Ethylmethylcyclopentane	N8	0.1806	0.1890	0.1807
1,1-Methylethylcyclopentane	N8	0.6748	0.7063	0.6651
2,2,4-Trimethylhexane	I9	0.0845	0.1011	0.1039
1t,2-Dimethylcyclohexane	N8	0.6880	0.7201	0.6826
1t,3-Dimethylcyclohexane	N8	0.0136	0.0142	0.0133
n-Octane	P8	2.4805	2.6431	2.7651
1c,4-Dimethylcyclohexane	N8	0.7670	0.8028	0.7541
i-Propylcyclopentane	I8	0.0816	0.0854	0.0809
2,4,4-Trimethylhexane	I9	0.0208	0.0249	0.0254
2,2,3,4-Tetramethylpentane	I9	0.0194	0.0232	0.0237
2,3,4-Trimethylhexane	I9	0.0231	0.0276	0.0281
1c,2-Dimethylcyclohexane	N8	0.2327	0.2436	0.2250
2,3,5-Trimethylhexane	I9	0.0951	0.1138	0.1159
2,2-Dimethylheptane	I9	0.0220	0.0263	0.0272
1,1,4-Trimethylcyclohexane	N9	1.0194	1.2005	1.1438
2,2,3-Trimethylhexane	I9	0.5375	0.6431	0.6484
2,4-Dimethylheptane	I9	0.0475	0.0568	0.0584
4,4-Dimethylheptane	I9	0.1132	0.1354	0.1391
Ethylcyclohexane	N8	0.6348	0.6645	0.6204
n-Propylcyclopentane	N8	0.2357	0.2467	0.2336
1c,3c,5-Trimethylcyclohexane	N9	0.0568	0.0669	0.0637
2,5-Dimethylheptane	I9	0.0926	0.1108	0.1137
3,3-Dimethylheptane	I9	0.1049	0.1255	0.1287
3,5-Dimethylheptane	I9	0.0751	0.0898	0.0921
2,6-Dimethylheptane	I9	0.0565	0.0676	0.0701
1,1,3-Trimethylcyclohexane	N9	0.1116	0.1314	0.1252
Ethylbenzene	A8	0.5370	0.5318	0.4498
1c,2t,4t-Trimethylcyclohexane	N9	0.3903	0.4596	0.4295
2,3-Dimethylheptane	I9	0.0085	0.0102	0.0103
1,3-Dimethylbenzene (m-Xylene)	A8	0.4462	0.4419	0.3759
1,4-Dimethylbenzene (p-Xylene)	A8	0.9301	0.9211	0.7861
3,4-Dimethylheptane	I9	0.1772	0.2120	0.2131
3,4-Dimethylheptane (2)	I9	0.2543	0.3042	0.3058
4-Ethylheptane	I9	0.0527	0.0630	0.0647
4-Methyloctane	I9	0.2708	0.3240	0.3306
2-Methyloctane	I9	0.3949	0.4725	0.4869
1c,2t,4c-Trimethylcyclohexane	I9	0.0971	0.1162	0.1177
3-Ethylheptane	I9	0.1000	0.1196	0.1210
3-Methyloctane	I9	0.4462	0.5339	0.5447
3,3-Diethylpentane	I9	0.0581	0.0695	0.0677
1c,2t,3-Trimethylcyclohexane	N9	0.1219	0.1436	0.1342
1,1,2-Trimethylcyclohexane	N9	0.0443	0.0522	0.0488
1,2-Dimethylbenzene (o-Xylene)	A8	0.7233	0.7163	0.5987
i-Butylcyclopentane	N9	0.2299	0.2707	0.2549
UnknownC8s	U8	0.0440	0.0469	0.0491
n-Nonane	P9	1.7303	2.0702	2.1211
1,1-Methylethylcyclohexane	N9	0.5498	0.6578	0.6760
i-Propylbenzene	A9	0.3454	0.3873	0.3298
i-Propylcyclohexane	N9	0.1330	0.1566	0.1436
2,2-Dimethyloctane	I10	0.0743	0.0986	0.0981
2,4-Dimethyloctane	I10	0.0819	0.1087	0.1081
2,6-Dimethyloctane	I10	0.0146	0.0194	0.0199
2,5-Dimethyloctane	I10	0.0379	0.0503	0.0500
n-Butylcyclopentane	N9	0.2787	0.3647	0.3357
3,3-Dimethyloctane	I10	0.1009	0.1339	0.1332

n-Propylbenzene	A9	0.2409	0.2701	0.2301
3,6-Dimethyloctane	I10	0.2869	0.3808	0.3787
3-Methyl-5-ethylheptane	I10	0.5102	0.6104	0.6185
1,3-Methylethylbenzene	A9	0.2199	0.2466	0.2083
1,4-Methylethylbenzene	A9	0.1362	0.1527	0.1290
1,3,5-Trimethylbenzene	A9	0.1275	0.1430	0.1216
2,3-Dimethyloctane	I10	0.0726	0.0964	0.0959
5-Methylnonane	I10	0.2481	0.3293	0.3306
1,2-Methylethylbenzene	A9	0.3284	0.3682	0.3094
2-Methylnonane	I10	0.2024	0.2686	0.2719
3-Ethylheptane	I10	0.1174	0.1558	0.1549
3-Methylnonane	I10	0.2464	0.3270	0.3279
1,2,4-Trimethylbenzene	A9	0.0246	0.0276	0.0232
t-Butylbenzene	A10	0.3640	0.4557	0.3871
i-Butylcyclohexane	N10	0.2703	0.3537	0.3205
1t-Methyl-2-n-propylcyclohexane	I10	0.0470	0.0562	0.0569
i-Butylbenzene	A10	0.0789	0.0988	0.0852
sec-Butylbenzene	A10	0.1207	0.1511	0.1290
UnknownC9s	U9	2.9399	3.5174	3.6039
n-Decane	P10	1.4729	1.9549	1.9693
1,2,3-Trimethylbenzene	A9	0.1554	0.1742	0.1434
1,3-Methyl-i-propylbenzene	A10	0.1090	0.1222	0.1027
1,4-Methyl-i-propylbenzene	A10	0.0834	0.0935	0.0786
Sec-Butylcyclohexane	N10	0.2870	0.3755	0.3398
1,2-Methyl-i-propylbenzene	A10	0.1343	0.1681	0.1411
3-Ethylnonane	I10	0.0764	0.1014	0.1027
1,3-Diethylbenzene	A10	0.1370	0.1715	0.1461
1,3-Methyl-n-propylbenzene	A10	0.0496	0.0621	0.0531
1,4-Diethylbenzene	A10	0.0969	0.1213	0.1036
1,4-Methyl-n-propylbenzene	A10	0.0768	0.0962	0.0825
n-Butylbenzene	A10	0.0969	0.1213	0.1036
1,3-Dimethyl-5-ethylbenzene	A10	0.0792	0.0992	0.0844
1,2-Diethylbenzene	A10	0.1446	0.1810	0.1514
1,2-Methyl-n-propylbenzene	A10	0.1024	0.1282	0.1080
1,4-Dimethyl-2-ethylbenzene	A10	0.1381	0.1729	0.1450
1,3-Dimethyl-4-ethylbenzene	A10	0.0233	0.0292	0.0245
1,2-Dimethyl-4-ethylbenzene	A10	0.1727	0.2162	0.1819
1,3-Dimethyl-2-ethylbenzene	A10	0.2313	0.2896	0.2394
1t,2c,4-Trimethylcyclopentane	A10	0.5251	0.5496	0.5407
1,2-Dimethyl-3-ethylbenzene	A10	0.1189	0.1489	0.1228
1,2-Ethyl-i-propylbenzene	A10	0.0799	0.1000	0.0839
1,4-Methyl-t-butylbenzene	A11	0.1377	0.1724	0.1447
UnknownC10s	U10	3.5240	4.6771	4.7115
n-Undecane	P11	1.1373	1.6583	1.6473
1,4-Ethyl-i-propylbenzene	A11	0.1067	0.1336	0.1122
1,2,4,5-Tetramethylbenzene	A11	0.1051	0.1316	0.1093
1,2-Methyl-n-butylbenzene	A11	0.0918	0.1149	0.0965
1,2,3,5-Tetramethylbenzene	A11	0.0625	0.0783	0.0647
1,2-Methyl-t-butylbenzene	A11	0.1110	0.1390	0.1167
5-Methylindan	A11	0.0246	0.0391	0.0384
4-Methylindan	A11	0.0111	0.0176	0.0173
1,2-Ethyl-n-propylbenzene	A11	0.1011	0.1266	0.1063
2-Methylindan	A11	0.0720	0.1144	0.1124
1,3-Methyl-n-butylbenzene	A11	0.0817	0.1023	0.0859
1,3-Di-i-propylbenzene	A11	0.0539	0.0675	0.0567
sec-Pentylbenzene	A11	0.0767	0.0960	0.0806
n-Pentylbenzene	A11	0.0432	0.0597	0.0512
1t-M-2-(4MP)cyclopentane	P12	0.0710	0.1128	0.1108
1,2-Di-n-propylbenzene	A11	0.0905	0.1133	0.0951
1,4-Di-i-propylbenzene	A11	0.0776	0.0972	0.0816
Tetrahydronaphthalene	A10	0.0774	0.0969	0.0813
t-Decahydronaphthalene	A10	0.1167	0.1461	0.1226
Naphthalene	A10	0.0771	0.0922	0.0774
1-t-Butyl-3,5-dimethylbenzene	A12	0.0306	0.0383	0.0321
1,4-Ethyl-t-butylbenzene	A11	0.0998	0.1250	0.1049
UnknownC11s	U11	1.8571	2.7078	2.6899
n-Dodecane	P12	0.4478	0.7115	0.6990
1,3-Di-n-propylbenzene	A12	0.0280	0.0351	0.0295
1,3,5-Triethylbenzene	A12	0.0744	0.0834	0.0709
1,2,4-Triethylbenzene	A12	0.1975	0.2214	0.1859
1,4-Methyl-n-pentylbenzene	A12	0.0283	0.0354	0.0297
n-Hexylbenzene	A12	0.0351	0.0531	0.0456
1,2,3,4,5-Pentamethylbenzene	A13	0.0628	0.0786	0.0660
2-Methylnaphthalene	A11	0.0769	0.1020	0.0856

1-Methylnaphthalene	A11	0.1246	0.1653	0.1193
UnknownC12s	U12	1.0677	1.6965	1.6668
n-Tridecane	P13	0.1615	0.2777	0.2696
UnknownC13s	U13	0.5899	1.0145	0.9849
n-Tetradecane	P14	0.1003	0.1856	0.1798
UnknownC14s	U14	0.3648	0.6751	0.6541
n-Pentadecane	P15	0.0016	0.0032	0.0031
<u>UnknownC15s</u>	<u>U15</u>	<u>0.0923</u>	<u>0.1829</u>	<u>0.1752</u>
<u>TOTAL</u>		<u>100.0000</u>	<u>100.0000</u>	<u>100.0000</u>

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