Detailed Hydrocarbon Analysis Summary Report -

Report Date: 3/19/2019 6:42:06 PM

RawFile: C:\HPCHEM\4\DATA\03-19-19\04138-60.D\04138-60.CDF
Sample: 04138-6
Processed 245 Peaks
Reference File: C:\HPCHEM\4\Refs\PONA-VII_09282018.DHA
Comments:

Acquired: 81/91/92 32:00:57
Analyzed: 3/19/2019 6:42:06 PM

Normalized to 100.0000%

SUMMARY REPORT

Group Type	Total(Mass%)	Total(Vol%)	Total(Mol%)
Paraffins:	35.3800	37.4626	39.0323
I-Paraffins:	43.2817	44.2969	41.4519
Olefins:	0.8453	0.8219	0.8738
Napthenes:	13.3025	11.7934	12.1456
Aromatics:	6.8710	5.3287	6.2465
Total C15+:	0.0076	0.0066	0.0030
Total Unknowns:	0.3119	0.2898	0.2470

Oxygenates:

Total:	0.0000(Mass%)	0.0000(Vol%)
Total Oxygen Content:	0.0000(Mass%)	

Multisubstituted Aromatics: 1.8730(Mass%) 1.4572(Vol%)

Average Molecular Weight: 83.9031

Relative Density: 0.6754

Reid Vapor Pressure @ 100F: 12.1053

Calculated Octane Number: 72.9185

	IBP	T10	T50	T90	FBP
BP by Mass (Deg F)	10.90	82.11	155.71	243.88	519.80
BP by Vol (Deg F)	10.90	82.11	155.71	243.77	519.80

Percent Carbon: 84.5871 Percent Hydrogen: 15.4129

Bromine Number (Calc): 1.6156

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Yield: 100.0000%
Int Std: NONE
Int Std Amt: 0.0000
Sample Wt: 1.0000 Sample Den: 1.0000

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

	Paraffins	I-Paraffins	Olefins	Napthenes	Aromatics	Unknowns	Total
C1	0.00166	0.00000	0.00000	0.00000	0.00000	0.00000	0.00166
C2	0.00201	0.00000	0.00000	0.00000	0.00000	0.00000	0.00201
C3	0.00290	0.00000	0.00000	0.00000	0.00000	0.00000	0.00290
C4	7.17720	0.58838	0.12068	0.00000	0.00000	0.02878	7.91504
C5	12.73555	12.78004	0.01484	0.66659	0.00000	0.00873	26.20576
C6	9.25149	11.92714	0.50390	5.84771	2.01513	0.00764	29.55302
C7	3.63967	11.44003	0.16824	4.69294	2.68943	0.00564	22.63596
C8	1.61503	3.98874	0.00459	1.45604	1.46974	0.00550	8.53964
C9	0.67361	1.83827	0.03303	0.56712	0.52916	0.11923	3.76042
C10	0.20667	0.59516	0.00000	0.07205	0.12539	0.10907	1.10835
C11	0.05343	0.11984	0.00000	0.00000	0.02719	0.01275	0.21321
C12	0.01247	0.00409	0.00000	0.00000	0.01498	0.01458	0.04613
C13	0.00438	0.00000	0.00000	0.00000	0.00000	0.00000	0.00438
C14	0.00397	0.00000	0.00000	0.00000	0.00000	0.00000	0.00397
Total:	35.38003	43.28170	0.84529	13.30246	6.87103	0.31193	99.68050

Oxygenates 0.00000 Total C15+: 0.00756
Total Unknowns: 0.31193 Grand Total: 100.00000

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

	Paraffins	I-Paraffins	Olefins	Napthenes	Aromatics	Unknowns	Total
C1	0.00374	0.00000	0.00000	0.00000	0.00000	0.00000	0.00374
C2	0.00381	0.00000	0.00000	0.00000	0.00000	0.00000	0.00381
C3	0.00386	0.00000	0.00000	0.00000	0.00000	0.00000	0.00386
C4	8.29739	0.70608	0.13376	0.00000	0.00000	0.03765	9.17489
C5	13.63776	13.80842	0.01494	0.60398	0.00000	0.01009	28.07519
C6	9.47570	12.25083	0.47634	5.20281	1.54850	0.00782	28.96200
C7	3.59538	11.30597	0.16058	4.15703	2.09503	0.00545	21.31944
C8	1.55268	3.83810	0.00431	1.27629	1.14616	0.00527	7.82281
C9	0.63397	1.72735	0.03200	0.49268	0.41037	0.10921	3.40559
C10	0.19121	0.54799	0.00000	0.06063	0.09655	0.09243	0.98881
C11	0.04850	0.10854	0.00000	0.00000	0.02073	0.01077	0.18854
C12	0.01118	0.00367	0.00000	0.00000	0.01137	0.01107	0.03729
C13	0.00391	0.00000	0.00000	0.00000	0.00000	0.00000	0.00391
C14	0.00351	0.00000	0.00000	0.00000	0.00000	0.00000	0.00351
Total:	37.46261	44.29695	0.82193	11.79342	5.32871	0.28976	99.70362

Oxygenates 0.00000 Total C15+: 0.00662
Total Unknowns: 0.28976 Grand Total: 100.00000

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Yield: 100.0000%
Int Std: NONE
Int Std Amt: 0.0000
Sample Wt: 1.0000 Sample Den: 1.0000

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

	Paraffins	I-Paraffins	Olefins	Napthenes	Aromatics	Unknowns	Total
C1	0.00869	0.00000	0.00000	0.00000	0.00000	0.00000	0.00869
C2	0.00561	0.00000	0.00000	0.00000	0.00000	0.00000	0.00561
C3	0.00552	0.00000	0.00000	0.00000	0.00000	0.00000	0.00552
C4	10.36043	0.84934	0.18047	0.00000	0.00000	0.05338	11.44361
C5	14.80995	14.86169	0.01783	0.79745	0.00000	0.01260	30.49952
C6	9.00728	11.61230	0.50597	5.82972	2.16448	0.00801	29.12776
C7	3.04755	9.57891	0.14455	4.01015	2.44893	0.00482	19.23491
C8	1.18623	2.92972	0.00305	1.08867	1.16152	0.00470	6.37389
C9	0.44065	1.20254	0.02195	0.37692	0.36938	0.08067	2.49212
C10	0.12187	0.35095	0.00000	0.04269	0.07907	0.06723	0.66181
C11	0.02868	0.06440	0.00000	0.00000	0.01539	0.00730	0.11576
C12	0.00614	0.00202	0.00000	0.00000	0.00775	0.00825	0.02415
C13	0.00199	0.00000	0.00000	0.00000	0.00000	0.00000	0.00199
C14	0.00168	0.00000	0.00000	0.00000	0.00000	0.00000	0.00168
Total:	39.03227	41.45186	0.87382	12.14560	6.24651	0.24696	99.75006

Oxygenates 0.00000 Total C15+: 0.00299
Total Unknowns: 0.24696 Grand Total: 100.00000

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Comments:

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Analyzed: 3/19/2019 6:42:06 PM

Yield: 100.0000%
Int Std: NONE
Int Std Amt: 0.0000
Sample Wt: 1.0000 Sample Den: 1.0000

Hold

Components Listed in Chromatographic Order **Page: 4**

Minutes	Index	Group	Component	Mass %	Volume %	Mol %
6.532	100.000	P1	methane	0.0017	0.0037	0.0087
6.720	200.000	P2	ethane	0.0020	0.0038	0.0056
7.229	300.000	P3	propane	0.0029	0.0039	0.0055
7.293	306.150	--	unknown	0.0254	0.0338	0.0483
8.345	367.440	I4	i-butane	0.5884	0.7061	0.8493
9.028	390.240	O4	butene-1	0.0074	0.0084	0.0111
9.044	390.700	--	unknown	0.0034	0.0038	0.0050
9.339	398.660	P4	n-butane	7.1772	8.2974	10.3604
9.736	410.960	--	unknown	0.0087	0.0101	0.0126
9.832	413.800	O4	t-butene-2	0.1133	0.1254	0.1694
10.306	426.780	I5	2,2-dimethylpropane	0.0066	0.0075	0.0077
12.835	476.460	I5	i-pentane	12.7735	13.8009	14.8540
14.260	496.230	O5	2-methylbutene-1	0.0019	0.0020	0.0023
14.513	499.370	P5	n-pentane	12.7356	13.6378	14.8099
15.097	509.580	O5	t-pentene-2	0.0032	0.0033	0.0038
15.620	518.470	O5	c-pentene-2	0.0015	0.0016	0.0018
15.808	521.530	--	unknown	0.0026	0.0026	0.0031
15.932	523.520	O5	2-methylbutene-2	0.0061	0.0062	0.0073
16.914	538.410	I6	2,2-dimethylbutane	0.7852	0.8170	0.7644
18.169	555.510	O5	cyclopentene	0.0022	0.0019	0.0027
18.603	560.990	O6	4-methylpentene-1	0.0030	0.0030	0.0030
18.612	561.100	O6	3-methylpentene-1	0.0020	0.0020	0.0020
18.961	565.370	N5	cyclopentane	0.6666	0.6040	0.7975
19.144	567.560	I6	2,3-dimethylbutane	1.0773	1.0997	1.0489
19.312	569.550	--	unknown	0.0051	0.0052	0.0049
19.532	572.100	I6	2-methylpentane	5.8265	6.0253	5.6727
19.712	574.160	O6	4-methyl-t-pentene-2	0.0089	0.0090	0.0089
20.666	584.640	I6	3-methylpentane	4.2381	4.3088	4.1263
21.163	589.820	O6	2-methylpentene-1	0.0214	0.0211	0.0213
21.256	590.770	O6	hexene-1	0.0085	0.0085	0.0085
22.190	600.000	P6	n-hexane	9.2515	9.4757	9.0073
22.448	602.940	O6	t-hexene-3	0.0188	0.0187	0.0188
22.478	603.280	O6	c-hexene-3	0.0083	0.0082	0.0083
22.669	605.420	O6	t-hexene-2	0.0452	0.0447	0.0450
22.874	607.710	O6	2-methylpentene-2	0.0720	0.0703	0.0717
22.965	608.710	O6	4-methylcyclopentene	0.0137	0.0121	0.0140
23.127	610.480	O6	O12	0.0494	0.0482	0.0492
23.259	611.910	O6	3-methylcyclopentene	0.0083	0.0073	0.0085

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Comments:

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Yield: 100.0000%
Int Std: NONE
Int Std Amt: 0.0000
Sample Wt: 1.0000 Sample Den: 1.0000

Hold

Components Listed in Chromatographic Order **Page: 5**

Minutes	Index	Group	Component	Mass %	Volume %	Mol %
23.505	614.540	O6	c-hexene-2	0.0283	0.0276	0.0282
24.080	620.560	O6	3-methyl-t-pentene-2	0.0902	0.0867	0.0899
24.384	623.650	I7	2,2-dimethylpentane	0.8303	0.8322	0.6952
24.586	625.690	N6	methylcyclopentane	3.7428	3.3767	3.7313
25.020	629.970	I7	2,4-dimethylpentane	1.0381	1.0422	0.8692
25.493	634.530	I7	2,2,3-trimethylbutane	0.1890	0.1849	0.1582
25.897	638.330	O7	O18	0.0041	0.0039	0.0041
26.771	646.300	O7	2,4-dimethylpentene-1	0.0144	0.0139	0.0123
26.913	647.560	--	unknown	0.0056	0.0055	0.0048
27.022	648.520	O6	1-methylcyclopentene	0.1183	0.1025	0.1208
27.216	650.220	A6	benzene	2.0151	1.5485	2.1645
27.434	652.110	O7	3-ethylpentene-1	0.0054	0.0052	0.0046
27.654	654.010	I7	3,3-dimethylpentane	0.5445	0.5305	0.4559
28.096	657.740	N6	cyclohexane	2.1049	1.8261	2.0985
28.441	660.610	O7	2-methyl-t-hexene-3	0.0154	0.0150	0.0132
28.809	663.620	O7	4-methylhexene-1	0.0064	0.0062	0.0055
29.085	665.840	O7	4-methyl-t/c-hexene-2	0.0232	0.0222	0.0198
29.239	667.070	I7	2-methylhexane	3.7441	3.7264	3.1350
29.414	668.450	I7	2,3-dimethylpentane	1.1538	1.1210	0.9661
29.755	671.120	N7	1,1-dimethylcyclopentane	0.2752	0.2463	0.2351
30.119	673.930	O6	cyclohexene	0.0076	0.0063	0.0078
30.329	675.530	I7	3-methylhexane	3.6557	3.5934	3.0610
30.828	679.270	O7	3,4-dimethyl-c-pentene-2	0.0079	0.0074	0.0067
31.151	681.660	N7	1c,3-dimethylcyclopentane	0.3982	0.3611	0.3403
31.529	684.410	N7	1t,3-dimethylcyclopentane	0.3570	0.3220	0.3051
31.702	685.660	I7	3-ethylpentane	0.2847	0.2754	0.2384
31.904	687.100	N7	1t,2-dimethylcyclopentane	0.5786	0.5201	0.4944
32.069	688.270	I8	2,2,4-trimethylpentane	0.0151	0.0147	0.0111
32.270	689.680	O7	2-ethylpentene-1	0.0069	0.0067	0.0059
33.033	694.960	O7	3-methyl-c-hexene-3	0.0071	0.0067	0.0061
33.554	698.470	O7	t-heptene-3	0.0111	0.0107	0.0095
33.783	700.000	P7	n-heptane	3.6397	3.5954	3.0475
34.162	702.250	O7	3-methyl-t-hexene-3	0.0274	0.0267	0.0234
34.329	703.230	O7	t-heptene-2	0.0106	0.0102	0.0091
34.600	704.810	--	unknown	0.0055	0.0053	0.0047
34.870	706.370	O7	3-ethylpentene-2	0.0042	0.0039	0.0036
35.335	709.030	O7	c-heptene-2	0.0128	0.0122	0.0110
35.981	712.640	O7	3-ethylcyclopentene	0.0111	0.0096	0.0097

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Yield: 100.0000%
Int Std: NONE
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Hold

Components Listed in Chromatographic Order **Page: 6**

Minutes	Index	Group	Component	Mass %	Volume %	Mol %
36.983	718.100	N7	methylcyclohexane	2.9526	2.5918	2.5230
37.435	720.500	I8	2,2-dimethylhexane	0.3079	0.2991	0.2262
39.130	729.220	N7	ethylcyclopentane	0.1313	0.1157	0.1122
39.319	730.150	I8	2,5-dimethylhexane	0.3112	0.3031	0.2286
39.680	731.940	I8	2,4-dimethylhexane	0.3562	0.3435	0.2616
40.791	737.320	N8	1c,2t,4-trimethylcyclopentane	0.1145	0.1013	0.0856
41.056	738.570	I8	3,3-dimethylhexane	0.1134	0.1079	0.0833
42.320	744.440	N8	1t,2c,3-trimethylcyclopentane	0.1039	0.0911	0.0777
42.908	747.100	I8	2,3,4-trimethylpentane	0.0131	0.0123	0.0096
43.807	751.080	I8	2,3,3-trimethylpentane	0.0168	0.0156	0.0124
44.071	752.230	A7	toluene	2.6894	2.0950	2.4489
45.441	758.080	I8	2,3-dimethylhexane	0.2164	0.2052	0.1589
45.730	759.280	I8	2-methyl-3-ethylpentane	0.0274	0.0260	0.0201
46.952	764.290	I8	2-methylheptane	1.1465	1.1095	0.8421
47.322	765.780	I8	4-methylheptane	0.4032	0.3865	0.2962
47.583	766.820	I8	3-methyl-3-ethylpentane	0.0425	0.0403	0.0312
47.707	767.310	I8	3,4-dimethylhexane	0.0422	0.0396	0.0310
48.327	769.750	N8	1c,2c,4-trimethylcyclopentane	0.0128	0.0113	0.0095
48.879	771.890	I8	3-methylheptane	0.9768	0.9347	0.7175
49.186	773.070	N8	1c,2t,3-trimethylcyclopentane	0.5876	0.5151	0.4394
49.697	775.010	N8	1t,4-dimethylcyclohexane	0.1911	0.1692	0.1429
51.199	780.590	N8	1,1-dimethylcyclohexane	0.0828	0.0716	0.0619
51.882	783.060	I9	2,2,5-trimethylhexane	0.0399	0.0381	0.0261
52.275	784.470	N8	3c-ethylmethylcyclopentane	0.0258	0.0228	0.0193
52.889	786.650	N8	3t-ethylmethylcyclopentane	0.0229	0.0201	0.0171
53.268	787.970	N8	2t-ethylmethylcyclopentane	0.0462	0.0406	0.0345
53.876	790.090	N8	1,1-methylethylcyclopentane	0.0103	0.0089	0.0077
54.660	792.760	N8	1t,2-dimethylcyclohexane	0.1676	0.1459	0.1253
56.841	800.000	P8	n-octane	1.6150	1.5527	1.1862
59.384	809.430	I9	2,4,4-trimethylhexane	0.0124	0.0114	0.0081
61.464	816.820	O8	c-octene-2	0.0046	0.0043	0.0030
62.467	820.280	I9	2,3,4-trimethylhexane	0.0170	0.0155	0.0111
63.055	822.280	N8	N2	0.0032	0.0028	0.0024
63.851	824.960	N8	N3	0.0716	0.0620	0.0535
65.181	829.350	--	unknown	0.0285	0.0247	0.0213
65.492	830.360	I9	2,3,5-trimethylhexane	0.1086	0.1016	0.0710
66.098	832.320	I9	2,2-dimethylheptane	0.0130	0.0124	0.0085
67.268	836.040	N9	1,1,4-trimethylcyclohexane	0.2305	0.2016	0.1532

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Yield: 100.0000%
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Hold

Components Listed in Chromatographic Order **Page: 7**

Minutes	Index	Group	Component	Mass %	Volume %	Mol %
67.713	837.440	N8	ethylcyclohexane	0.0159	0.0137	0.0119
68.194	838.940	I9	2,2,3-trimethylhexane	0.1603	0.1514	0.1049
69.445	842.780	I9	4,4-dimethylheptane	0.0840	0.0793	0.0550
70.432	845.760	--	unknown	0.0175	0.0165	0.0114
70.984	847.410	I9	2,5-dimethylheptane	0.2374	0.2237	0.1553
71.517	848.980	I9	3,5-dimethylheptane	0.0734	0.0686	0.0480
72.277	851.210	N9	1,1,3-trimethylcyclohexane	0.0141	0.0121	0.0094
72.936	853.120	N9	1c,2t,4t-trimethylcyclohexane	0.0082	0.0071	0.0054
75.087	859.220	A8	ethylbenzene	0.1939	0.1511	0.1533
75.498	860.360	N9	1c,2t,3c-trimethylcyclohexane	0.0651	0.0580	0.0432
78.156	867.600	A8	1,3-dimethylbenzene	0.7296	0.5702	0.5766
78.518	868.570	A8	1,4-dimethylbenzene	0.3386	0.2656	0.2676
79.363	870.800	I9	3,4-dimethylheptane	0.0327	0.0302	0.0214
79.576	871.360	N9	N14	0.0224	0.0194	0.0149
80.408	873.530	I9	4-ethylheptane	0.0424	0.0397	0.0277
81.426	876.150	I9	4-methyloctane	0.2581	0.2420	0.1688
81.767	877.020	I9	2-methyloctane	0.3340	0.3162	0.2185
82.887	879.850	I9	3-ethylheptane	0.0125	0.0116	0.0081
83.328	880.950	--	unknown	0.0581	0.0540	0.0380
83.739	881.970	I9	3-methyloctane	0.3347	0.3137	0.2189
84.289	883.330	I9	3,3-diethylpentane	0.0049	0.0043	0.0032
84.725	884.400	N9	1c,2t,4c-trimethylcyclohexane	0.0130	0.0114	0.0087
85.043	885.180	A8	1,2-dimethylbenzene	0.2076	0.1593	0.1641
86.009	887.520	I9	I9	0.0121	0.0112	0.0079
86.796	889.400	N9	N19	0.0996	0.0862	0.0662
87.212	890.390	I9	I9-1	0.0084	0.0078	0.0055
87.397	890.830	I9	I9-2	0.0396	0.0366	0.0259
87.788	891.750	--	unknown	0.0152	0.0140	0.0099
89.823	896.490	N9	N23	0.0146	0.0126	0.0097
90.915	898.980	I9	I10	0.0130	0.0121	0.0085
91.363	900.000	P9	n-nonane	0.6736	0.6340	0.4407
91.638	901.530	N9	1,1-methylethylcyclohexane	0.0411	0.0344	0.0273
92.157	904.400	O9	t-nonene-3	0.0107	0.0099	0.0071
92.389	905.670	N9	N24	0.0068	0.0058	0.0045
93.766	913.190	A9	i-propylbenzene	0.0217	0.0170	0.0151
94.073	914.850	N9	N27	0.0262	0.0224	0.0174
94.629	917.840	O9	c-nonene-2H16(124)	0.0223	0.0221	0.0149
95.266	921.250	N9	i-propylcyclohexane	0.0180	0.0152	0.0120

Detailed Hydrocarbon Analysis Detail Report - Report Date: 3/19/2019 6:42:06 PM

RawFile: C:\HPCHEM\4\DATA\03-19-19\04138-60.D\04138-60.CDF
Sample: 04138-6
Processed 245 Peaks
Reference File: C:\HPCHEM\4\Refs\PONA-VII_09282018.DHA
Comments:

Acquired: 81/91/92 32:00:57
Analyzed: 3/19/2019 6:42:06 PM

Yield: 100.0000%
Int Std: NONE
Int Std Amt: 0.0000
Sample Wt: 1.0000 Sample Den: 1.0000

Hold

Components Listed in Chromatographic Order **Page: 8**

Minutes	Index	Group	Component	Mass %	Volume %	Mol %
95.820	924.190	I10	2,4-dimethyloctane	0.0581	0.0540	0.0342
96.218	926.280	I10	2,2-dimethyloctane	0.0092	0.0086	0.0054
96.606	928.320	N9	N28	0.0076	0.0065	0.0050
97.111	930.960	I10	2,6-dimethyloctane	0.0644	0.0598	0.0380
97.395	932.440	I10	2,5-dimethyloctane	0.0610	0.0564	0.0360
98.142	936.310	N10	N30	0.0051	0.0043	0.0031
98.320	937.220	--	unknown	0.0326	0.0275	0.0195
98.461	937.950	--	unknown	0.0167	0.0141	0.0100
98.572	938.520	--	unknown	0.0054	0.0046	0.0033
99.136	941.410	I10	I14	0.0054	0.0050	0.0032
99.266	942.070	I10	3,3-dimethyloctane	0.1001	0.0914	0.0590
99.566	943.590	--	unknown	0.0084	0.0077	0.0050
99.731	944.430	--	unknown	0.0028	0.0026	0.0017
99.902	945.300	I10	I13	0.0106	0.0098	0.0063
100.255	947.080	A9	n-propylbenzene	0.0408	0.0319	0.0285
100.460	948.110	--	unknown	0.0177	0.0138	0.0123
100.679	949.210	I10	3,6-dimethyloctane	0.0205	0.0188	0.0121
101.130	951.470	I10	3-methyl-5-ethylheptane	0.0086	0.0080	0.0051
101.605	953.840	N10	N32	0.0097	0.0082	0.0058
101.832	954.960	A9	1,3-methylethylbenzene	0.0909	0.0710	0.0635
102.191	956.740	A9	1,4-methylethylbenzene	0.0322	0.0253	0.0225
102.533	958.420	N10	N33	0.0092	0.0078	0.0055
103.114	961.270	--	unknown	0.0073	0.0062	0.0044
103.342	962.390	A9	1,3,5-trimethylbenzene	0.1011	0.0789	0.0706
103.566	963.480	I10	2,3-dimethyloctane	0.0280	0.0257	0.0165
103.859	964.900	--	unknown	0.0049	0.0045	0.0029
104.041	965.780	I10	I15	0.0024	0.0022	0.0014
104.435	967.690	I10	5-methylnonane	0.0362	0.0334	0.0214
104.745	969.180	I10	4-methylnonane	0.0856	0.0781	0.0505
105.235	971.530	A9	I17 &1,2-methylethylbenzene	0.1052	0.0807	0.0735
105.800	974.230	I10	2-methylnonane	0.0170	0.0158	0.0100
106.348	976.830	N10	N35	0.0169	0.0143	0.0101
106.406	977.100	I10	3-methylnonane	0.0757	0.0697	0.0446
107.883	984.040	A9	1,2,4-trimethylbenzene	0.1178	0.0909	0.0822
108.144	985.250	--	unknown	0.0043	0.0034	0.0030
108.426	986.560	A10	t-Butylbenzene	0.0165	0.0128	0.0103
108.691	987.790	N10	i-butylcyclohexane	0.0038	0.0033	0.0023
110.005	993.820	N10	1t-methyl-2-n-propylcyclohexane	0.0052	0.0044	0.0031

Detailed Hydrocarbon Analysis Detail Report - Report Date: 3/19/2019 6:42:06 PM

RawFile: C:\HPCHEM\4\DATA\03-19-19\04138-60.D\04138-60.CDF
Sample: 04138-6
Processed 245 Peaks
Reference File: C:\HPCHEM\4\Refs\PONA-VII_09282018.DHA
Comments:

Acquired: 81/91/92 32:00:57
Analyzed: 3/19/2019 6:42:06 PM

Yield: 100.0000%
Int Std: NONE
Int Std Amt: 0.0000
Sample Wt: 1.0000 Sample Den: 1.0000

Hold

Components Listed in Chromatographic Order **Page: 9**

Minutes	Index	Group	Component	Mass %	Volume %	Mol %
110.267	995.020	A10	i-butylbenzene	0.0052	0.0041	0.0033
110.615	996.600	I10	I25	0.0123	0.0113	0.0073
111.066	998.650	--	unknown	0.0089	0.0081	0.0052
111.365	1000.000	P10	n-decane	0.2067	0.1912	0.1219
111.620	1001.840	I11	I26	0.0033	0.0030	0.0018
112.555	1008.600	A9	1,2,3-trimethylbenzene	0.0194	0.0147	0.0136
112.910	1011.150	A10	1,3-methyl-i-propylbenzene	0.0075	0.0059	0.0047
113.390	1014.580	A10	1,4-methyl-i-propylbenzene	0.0046	0.0036	0.0029
113.828	1017.700	I11	I29	0.0040	0.0037	0.0022
113.950	1018.560	--	unknown	0.0050	0.0045	0.0027
114.272	1020.840	A10	2-3-dihydroindene	0.0066	0.0046	0.0047
114.490	1022.390	--	unknown	0.0024	0.0017	0.0017
114.787	1024.480	N10	sec-butylcyclohexane	0.0146	0.0121	0.0087
115.240	1027.670	I11	I30	0.0204	0.0186	0.0110
115.997	1032.950	I11	3-ethylnonane	0.0234	0.0213	0.0126
116.670	1037.630	I11	I31	0.0051	0.0047	0.0028
117.019	1040.040	I11	I32	0.0105	0.0089	0.0057
117.067	1040.370	--	unknown	0.0054	0.0045	0.0029
117.560	1043.770	A10	1,3-methyl-n-propylbenzene	0.0204	0.0160	0.0127
118.134	1047.700	A10	1,4-methyl-n-propylbenzene	0.0052	0.0041	0.0032
118.279	1048.690	A10	n-butylbenzene	0.0031	0.0025	0.0020
118.587	1050.790	A10	1,3-dimethyl-5-ethylbenzene	0.0094	0.0072	0.0059
119.140	1054.540	I11	I34	0.0064	0.0059	0.0034
119.523	1057.130	N10	t-decahydronaphthalene	0.0075	0.0064	0.0041
119.817	1059.110	A10	1,2-methyl-n-propylbenzene	0.0050	0.0039	0.0031
120.321	1062.500	I11	I36	0.0146	0.0133	0.0078
120.761	1065.430	I11	I37	0.0135	0.0123	0.0073
121.275	1068.860	A10	1,4,dimethyl-2-ethylbenzene	0.0181	0.0140	0.0113
121.597	1071.000	A10	1,3-dimethyl-4-ethylbenzene	0.0051	0.0040	0.0032
122.160	1074.720	I11	I40	0.0141	0.0128	0.0075
122.432	1076.510	A10	1,2-dimethyl-4-ethylbenzene	0.0042	0.0033	0.0026
122.951	1079.920	I11	I41	0.0044	0.0040	0.0024
124.960	1092.960	A11	1,4-methyl-t-butylbenzene	0.0028	0.0022	0.0016
125.239	1094.760	A10	1,2-dimethyl-3-ethylbenzene	0.0054	0.0041	0.0033
125.783	1098.240	A11	1,2-ethyl-i-propylbenzene	0.0095	0.0072	0.0054
126.058	1100.000	P11	n-undecane	0.0534	0.0485	0.0287
127.298	1110.630	A10	1,2,3,5-tetramethylbenzene	0.0033	0.0025	0.0021
127.984	1116.450	A11	1,2-methyl-n-butylbenzene	0.0057	0.0043	0.0032

Detailed Hydrocarbon Analysis Detail Report - Report Date: 3/19/2019 6:42:06 PM

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Processed 245 Peaks
Reference File: C:\HPCHEM\4\Refs\PONA-VII_09282018.DHA
Comments:

Hold

Acquired: 81/91/92 32:00:57
Analyzed: 3/19/2019 6:42:06 PM

Yield: 100.0000%
Int Std: NONE
Int Std Amt: 0.0000
Sample Wt: 1.0000 Sample Den: 1.0000

Components Listed in Chromatographic Order **Page: 10**

Minutes	Index	Group	Component	Mass %	Volume %	Mol %
128.409	1120.050	--	unknown	0.0027	0.0020	0.0015
128.558	1121.310	A11	1,2-methyl-t-butylbenzene	0.0030	0.0023	0.0017
129.272	1127.310	--	unknown	0.0026	0.0020	0.0015
129.507	1129.280	A10	5-methylindan	0.0023	0.0017	0.0014
129.755	1131.360	--	unknown	0.0038	0.0029	0.0024
130.468	1137.300	A11	1,2-ethyl-n-propylbenzene	0.0062	0.0047	0.0035
133.167	1159.480	A12	1,2-di-i-propylbenzene	0.0069	0.0052	0.0036
133.642	1163.330	--	unknown	0.0055	0.0042	0.0029
134.131	1167.280	A12	1,4-di-i-propylbenzene	0.0081	0.0062	0.0042
134.611	1171.150	A10	naphthalene	0.0034	0.0022	0.0022
134.918	1173.620	I12	I45	0.0041	0.0037	0.0020
138.250	1200.000	P12	n-dodecane	0.0125	0.0112	0.0061
148.996	1300.000	P13	n-tridecane	0.0044	0.0039	0.0020
158.830	1400.000	P14	n-tetradecane	0.0040	0.0035	0.0017
167.945	1500.000	+	C15+	0.0021	0.0019	0.0008
176.826	1500.000	+	C15+	0.0040	0.0035	0.0016
184.749	1500.000	+	C15+	0.0015	0.0013	0.0006