

PET 01
PETROLEUM

Analysis of Gasoline Range Hydrocarbons on BP1-PONA

KEYWORDS:

Gasoline

Petroleum Hydrocarbons

Components

TIME	COMPOUND
4.85	Cyclopentane
5.00	2,3-Dimethylbutane
5.25	2-Methylpentane
5.74	3-Methylpentane
1- 6.45	n-Hexane
7.46	2,2-Dimethylpentane
7.60	Methylcyclopentane
7.91	2,4-Dimethylpentane
8.18	2,2,3-Trimethylbutane
2- 8.99	Benzene
9.35	3,3-Dimethylpentane
9.55	Cyclohexane
10.23	2-Methylhexane
10.32	2,3-Dimethylpentane
10.47	1,1-Dimethylcyclohexane
10.83	3-Methylhexane
11.23	1-trans-3-Dimethylcyclopentane
11.43	1-cis-3-Dimethylcyclopentane
11.55	3-Ethylpentane
11.63	1-trans-2-Dimethylcyclopentane
11.78	2,2,4-Trimethylpentane
3- 12.73	n-Heptane
14.23	Methylcyclohexane
14.53	2,2-Dimethylhexane
15.27	Ethylcyclopentane
15.49	2,5-Dimethylhexane
15.65	2,4-Dimethylhexane
16.09	1-trans-2-cis-4-Trimethylcyclopentane
16.24	2,3,4-Trimethylpentane
16.78	1-trans-2-cis-3-Trimethylcyclopentane
17.05	2,3,3-Trimethylpentane
4- 17.39	Toluene
18.27	2,3-Dimethylhexane
18.43	2-Methyl-3-ethylpentane
18.84	2-Methylheptane
19.69	1-Methyl-2-ethylcyclopentane
18.98	4-Methylheptane
19.23	1-cis-2-cis-4-trans-Trimethylcyclopentane
19.50	3-Methylheptane
19.77	1-trans-4-Dimethylcyclohexane
20.73	1-Methyl-cis-2-ethylcyclopentane
20.86	1-Methyl-trans-3-ethylcyclopentane
21.08	1-Methyl-cis-3-ethylcyclohexane
21.27	1-Ethyl-1-methylcyclopentane
21.53	1-trans-2-Dimethylcyclohexane
5- 22.43	n-Octane
23.05	iso-Propylcyclopentane
24.14	2,2,5-Trimethylhexane
24.19	2,2,4-Trimethylhexane
24.53	2,4,4-Trimethylhexane
24.79	2,3,5-Trimethylhexane
25.16	2,4-Dimethylheptane
25.41	n-Propylcyclopentane
25.73	1-cis-2-Dimethylcyclohexane
26.00	1,1,3-Trimethylcyclohexane
26.25	2,5-Dimethylheptane
26.44	3,3-Dimethylheptane
26.58	3,5-Dimethylheptane
26.77	4,4-Dimethylheptane
26.94	2,3,3-Trimethylhexane
27.43	Ethylbenzene
27.57	1-cis-3-cis-5-Trimethylpentane

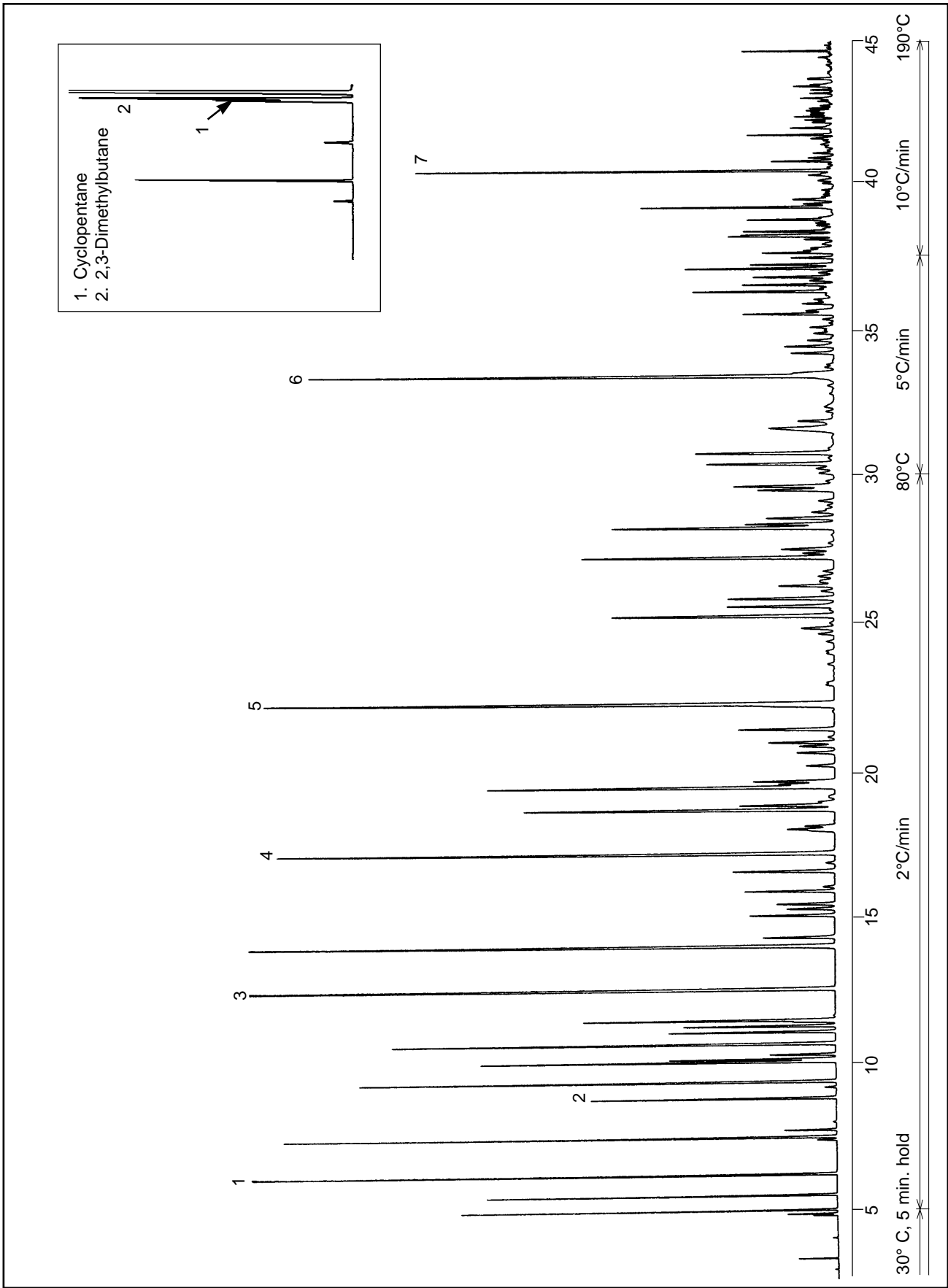
Notes: Very high column efficiency allows this analysis to be performed in under 50 minutes.

Good separation of m/p-xylene is observed, as is the separation of cyclopentane and 2,3-Dimethylbutane

GASOLINE RANGE HYDROCARBONS

Part No.: 054950
 Phase: BP1, PONA
 Column: 50m x 0.15mm ID
 Initial Temp: 30°C, 5 min hold
 Rate 1: 2°C/min
 Temp 2: 80°C
 Rate 2: 50°C/min
 Temp 3: 120°C
 Rate 3: 10°C/min
 Final Temp: 190°C
 Detector: FID
 Sensitivity: 32 x 10⁻¹² AFS
 Injection Mode: Split
 Carrier Gas: H₂, 40psi

27.69	1,1,4-Trimethylcyclohexane
27.88	2,3,4-Trimethylhexane
28.15	3,3,4-Trimethylhexane
28.42	m-Xylene
28.54	p-Xylene
28.74	2,3-Dimethylheptane
28.84	1-cis-2-trans-4-trans-Trimethylcyclohexane
28.95	1-cis-2-trans-4-cis-Trimethylcyclohexane
29.16	3,4-Dimethylheptane
29.31	3-Methylethylhexane
29.68	4-Methyloctane
29.81	2-Methyloctane
30.56	3-Methyloctane
30.93	o-Xylene
31.75	1-Methyl-2-propylcyclopentane and 1-Methyl-trans-4-ethylcyclohexane
31.98	1-Methyl-cis-4-ethylcyclohexane
32.46	3,3-Diethylpentane
32.89	2,2,6-Trimethylheptane
33.17	1,1,2-Trimethylcyclohexane
6- 33.52	n-Nonane
34.26	iso-Propylbenzene
34.48	tert-Butylcyclopentane
34.68	tert-Butylbenzene
35.57	sec-Butylcyclopentane
36.33	3-Methylnonane
36.56	n-Propylbenzene
36.83	n-Propylcyclohexane
37.12	m-Ethyltoluene
37.24	p-Ethyltoluene
37.64	1,3,5-Trimethylbenzene
38.20	2-Methylnonane
38.36	o-Ethyltoluene
38.75	3,6-Dimethyloctane
38.75	1,2,4-Trimethylbenzene
7- 40.32	n-Decane
40.63	1,2,3-Trimethylbenzene
41.57	4-Methyldecane
41.94	sec-Butylbenzene
42.45	n-Butylbenzene
44.54	n-Undecane



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