

# Application Data Sheet

## No. 183

## System Gas Chromatograph

### C10 or Lower Boiling Aromatics Analysis Nexis GC-2030ARO1 GC-2014ARO1

This method is for determining the composition of C10 or lower boiling point Aromatics as described in below compound table. It requires the use of a dedicated gas chromatographic system which is configured with an automatic liquid injector.

#### Analyzer Information

##### System Configuration:

One SPL injector / one capillary column / one FID detector

##### Methods met:

UOP-744

##### Sample Information:

Determining individual C6 through C10 aromatic compounds in petroleum distillates or aromatic concentrates having a final boiling point of 210° C or lower.

##### Concentration Range:

No.	Name of Compound	Concentration Range	
		Low Conc.	High Conc.
1	Non-aromatics	0.01 %	-
2	Benzene	0.01 %	-
3	Toluene	0.01 %	-
4	Ethylbenzene	0.01 %	-
5	p-Xylene	0.01 %	-
6	o-Xylene	0.01 %	-
7	m-Xylene	0.01 %	-
8	n-Propylbenzene	0.01 %	-
9	1-Methyl-2-ethylbenzene	0.01 %	-
10	1,3,5-Trimethylbenzene	0.01 %	-
11	Styrene	0.01 %	-
12	1,2,4-Trimethylbenzene	0.01 %	-
13	n-Butylbenzene	0.01 %	-
14	1,2-Dimethyl-4-ethylbenzene	0.01 %	-
15	1,2,4,5-Tetramethylbenzene	0.01 %	-
16	Naphthalene	0.01 %	-
17	Isopropylbenzene	0.01 %	-
18	1-Methyl-4-ethylbenzene	0.01 %	-
19	1-Methyl-3-ethylbenzene	0.01 %	-
20	tert-Butylbenzene	0.01 %	-
21	Isobutylbenzene	0.01 %	-
22	sec-Butylbenzene	0.01 %	-
23	1-Methyl-3-isopropylbenzene	0.01 %	-

No.	Name of Compound	Concentration Range	
		Low Conc.	High Conc.
24	1-Methyl-4-isopropylbenzene	0.01 %	-
25	1,3-Diethylbenzene + 1-Methyl-2-isopropylbenzene	0.01 %	-
26	1-Methyl-3-n-propylbenzene	0.01 %	-
27	1-Methyl-4-n-propylbenzene	0.01 %	-
28	1,4-Diethylbenzene	0.01 %	-
29	1,3-Dimethyl-5-ethylbenzene	0.01 %	-
30	1,2-Diethylbenzene	0.01 %	-
31	1-Methyl-2-n-propylbenzene	0.01 %	-
32	1,2,3-Trimethylbenzene	0.01 %	-
33	1,4-Dimethyl-2-ethylbenzene	0.01 %	-
34	1,3-Dimethyl-4-ethylbenzene	0.01 %	-
35	Indane	0.01 %	-
36	1,3-Dimethyl-2-ethylbenzene + 2-Methylindane	0.01 %	-
37	1-Methylindane	0.01 %	-
38	1,2-Dimethyl-3-ethylbenzene	0.01 %	-

No.	Name of Compound	Concentration Range	
		Low Conc.	High Conc.
39	1,2,3,5-Tetramethylbenzene	0.01 %	-
40	5-Methylindane	0.01 %	-
41	1,2,3,4-Tetramethylbenzene	0.01 %	-
42	4-Methylindane	0.01 %	-
43	Tetraline	0.01 %	-
44	2-Methylnaphthalene	0.01 %	-
45	1-Methylnaphthalene	0.01 %	-
46	C11+ Aromatics	0.01 %	-

Detection limits may vary depending on the sample. Please contact us for more consultation.

### System Features

- Single FID channel
- Good repeatability

### Typical Chromatograms

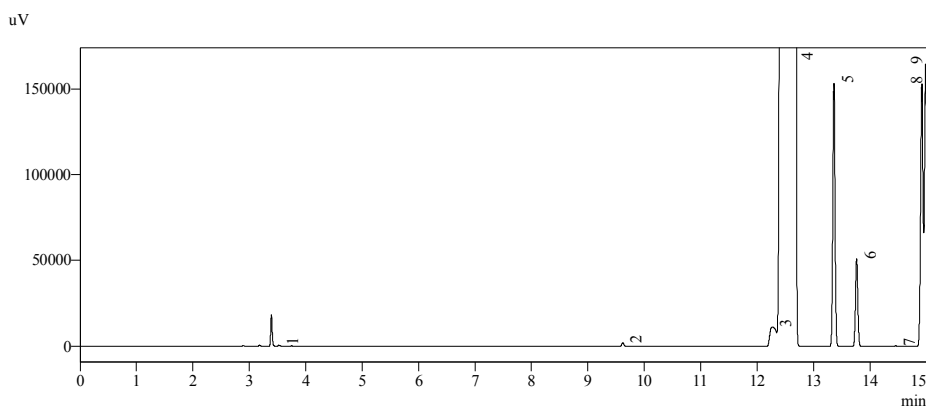


Fig. 1 Chromatogram of FID – 1 of 3

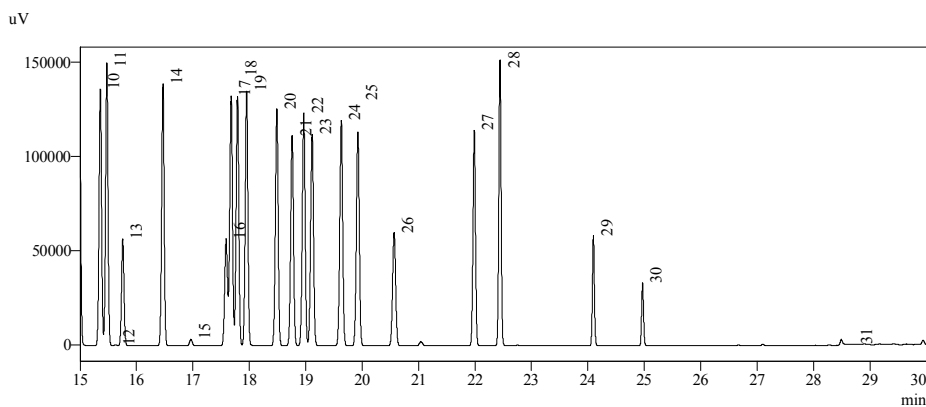


Fig. 2 Chromatogram of FID – 2 of 3

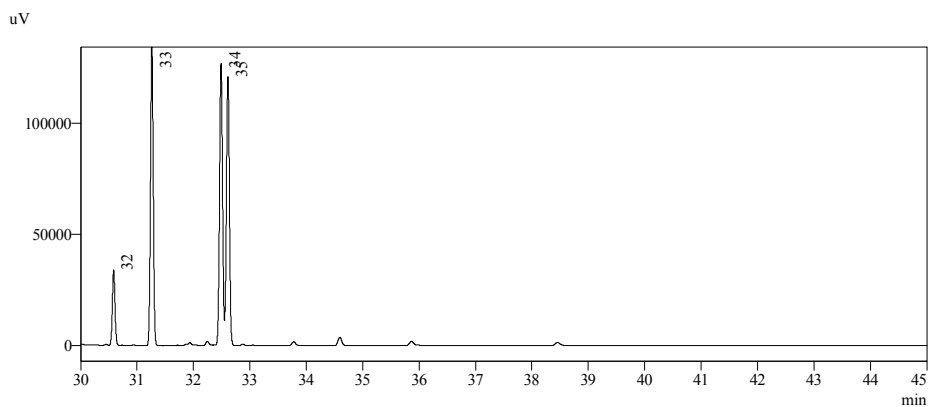


Fig. 3 Chromatogram of FID – 3 of 3

ID#	Name	ID#	Name
1	n-Heptane	19	1,4-Diethylbenzene
2	Toluene	20	1,3-Dimethyl-5-ethylbenzene
3	p-Xylene	21	1,2-Diethylbenzene
4	m-Xylene	22	1-Methyl-2-n-propylbenzene
5	Isopropylbenzene	23	1,2,3-Trimethylbenzene
6	o-Xylene	24	1,4-Dimethyl-2-ethylbenzene
7	n-Propylbenzene	25	1,3-Dimethyl-4-ethylbenzene
8	1-Methyl-4-ethylbenzene	26	Indane
9	1-Methyl-3-ethylbenzene	27	1,2-Dimethyl-3-ethylbenzene
10	tert-Butylbenzene	28	1,2,3,5-Tetramethylbenzene
11	Isobutylbenzene	29	1,2,3,4-Tetramethylbenzene
12	1,3,5-Trimethylbenzene		
13	sec-Butylbenzene		
14	1-Methyl-4-isopropylbenzene		
15	1,2,4-Trimethylbenzene		
16	1,3-Diethylbenzene + 1-Methyl-2-isopropylbenzene		
17	1-Methyl-3-n-propylbenzene		
18	1-Methyl-4-n-propylbenzene		

Fig. 4 Compound List of The Chromatogram