

Application Data Sheet

No. 187

System Gas Chromatograph

Trace Impurities in Xylenes Nexis GC-2030HC5 GC-2014HC5

This method is for determining the trace impurities in Xylenes 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

Methods met:

UOP-931

Sample Information:

Specific trace impurities determined include non-aromatic hydrocarbons, benzene, toluene and individual C9 and C10 aromatic compounds.

Concentration Range:

No.	Name of Compound	Concentration Range	
		Low Conc.	High Conc.
1	Non-aromatics	1 ppmwt	500 ppmwt
2	Benzene	1 ppmwt	500 ppmwt
3	Toluene	1 ppmwt	500 ppmwt
4	n-Undecane	1 ppmwt	500 ppmwt
5	Ethylbenzene	1 ppmwt	500 ppmwt
6	p-Xylene	1 ppmwt	500 ppmwt
7	m-Xylene	1 ppmwt	500 ppmwt
8	Isopropylbenzene	1 ppmwt	500 ppmwt
9	o-Xylene	1 ppmwt	500 ppmwt
10	n-Propylbenzene	1 ppmwt	500 ppmwt
11	1-Methyl-4-ethylbenzene	1 ppmwt	500 ppmwt
12	1-Methyl-3-ethylbenzene	1 ppmwt	500 ppmwt
13	1,3,5-Trimethylbenzene	1 ppmwt	500 ppmwt
14	sec-Butylbenzene	1 ppmwt	500 ppmwt
15	tert-Butylbenzene	1 ppmwt	500 ppmwt
16	1-Methyl-3-isopropylbenzene	1 ppmwt	500 ppmwt
17	1-Methyl-4-isopropylbenzene	1 ppmwt	500 ppmwt
18	Styrene	1 ppmwt	500 ppmwt
19	1-Methyl-2-ethylbenzene	1 ppmwt	500 ppmwt
20	1,2,4-Trimethylbenzene	1 ppmwt	500 ppmwt

No.	Name of Compound	Concentration Range	
		Low Conc.	High Conc.
21	1-Methyl-2-isopropylbenzene	1 ppmwt	500 ppmwt
22	1-Methyl-3-n-propylbenzene	1 ppmwt	500 ppmwt
23	1,4-Diethylbenzene	1 ppmwt	500 ppmwt
24	1,3-Dimethyl-5-ethylbenzene	1 ppmwt	500 ppmwt
25	1,2-Diethylbenzene	1 ppmwt	500 ppmwt
26	1,2,3-Trimethylbenzene	1 ppmwt	500 ppmwt
27	1,4-Dimethyl-2-ethylbenzene	1 ppmwt	500 ppmwt
28	1,3-Dimethyl-4-ethylbenzene	1 ppmwt	500 ppmwt
29	1,2-Dimethyl-4-ethylbenzene	1 ppmwt	500 ppmwt
30	Indane	1 ppmwt	500 ppmwt
31	1-Methyl 4 n-Propyl Benzene	1 ppmwt	500 ppmwt
32	Isobutyl Benzene	1 ppmwt	500 ppmwt
33	Heavy aromatics	1 ppmwt	500 ppmwt

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

System Features

- Single FID channel
- Good repeatability

Typical Chromatograms

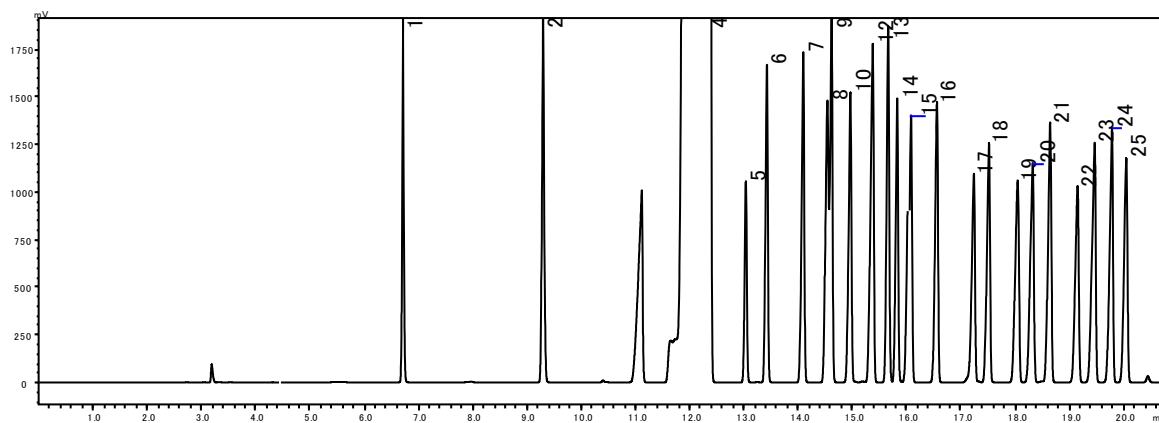


Fig. 1 Chromatogram of FID

- | | |
|--------------------------------------|--------------------------------|
| 1 Benzene | 14 1-Methyl-2-ethylbenzene |
| 2 Toluene | 15 1-Methyl-4-isopropylbenzene |
| 3 n-Undecane | 16 1,2,4-Trimethylbenzene |
| 4 p-Xylene + m-Xylene + Ethylbenzene | 17 1-Methyl-3-n-propylbenzene |
| 5 Isopropylbenzene | 18 1,4-Diethylbenzene |
| 6 o-Xylene | 19 1,3-Dimethyl-5-ethylbenzene |
| 7 n-Propylbenzene | 20 1,2-Diethylbenzene |
| 8 1-Methyl-4-ethylbenzene | 21 1,2,3-Trimethylbenzene |
| 9 1-Methyl-3-ethylbenzene | 22 1,4-Dimethyl-2-ethylbenzene |
| 10 tert-Butylbenzene | 23 1,3-Dimethyl-4-ethylbenzene |
| 11 1,3,5-Trimethylbenzene | 24 1,2-Dimethyl-4-ethylbenzene |
| 12 sec-Butylbenzene | 25 Indane |
| 13 Styrene | |