

# Application Data Sheet

## No. 180

### System Gas Chromatograph

#### Octans and Lower Boiling Hydrocarbons in Olefin-Free Gasolines

Nexis GC-2030LBH3

This system is for determining the composition of C8 or lower boiling paraffins and naphthenes in olefin-free gasolines. Detailed identification is enabled by comparing chromatograms of two different analytical conditions.

#### Analyzer Information

##### System Configuration:

One SPL injector / one capillary column / one FID

##### Methods met:

UOP-690

#### System Features

- Single FID channel
- Good repeatability
- Detailed hydrocarbon analysis with simple configuration
- Dedicated software for supporting identification

#### Typical Chromatograms

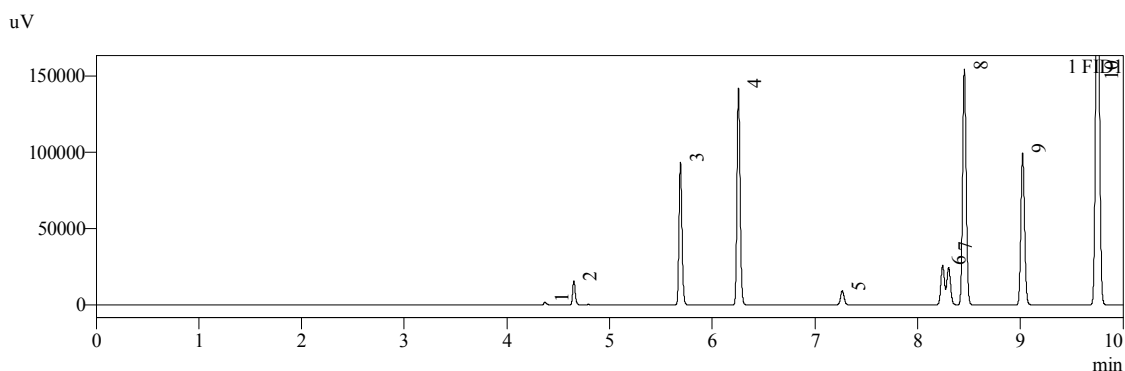


Fig. 1 Chromatogram of FID - 1 of 4

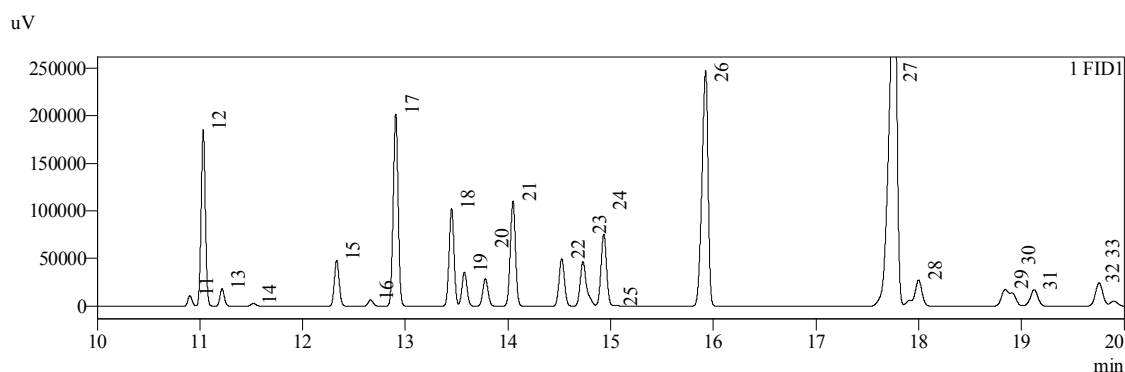


Fig. 2 Chromatogram of FID - 2 of 4

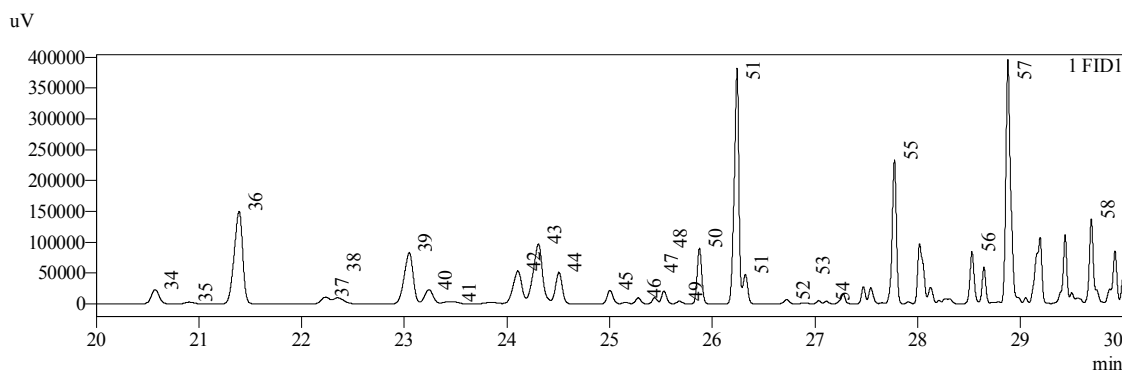


Fig. 3 Chromatogram of FID - 3 of 4

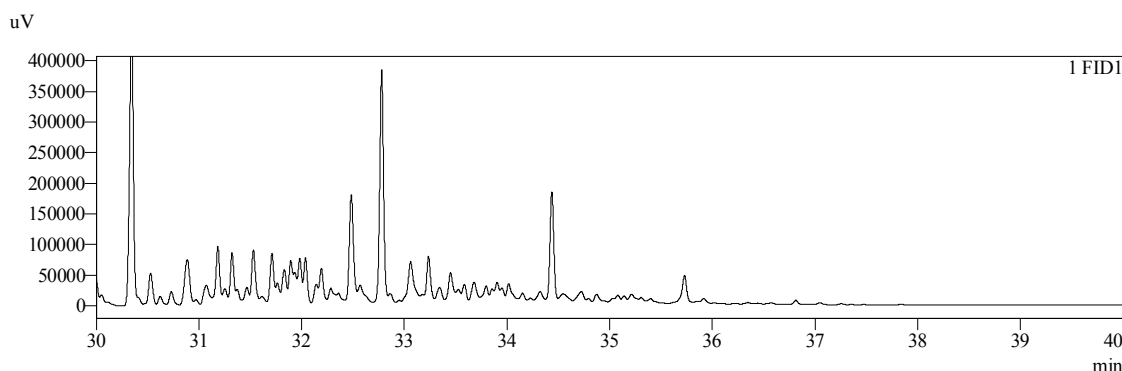


Fig. 4 Chromatogram of FID - 4 of 4

ID#	Name	ID#	Name
1	Isobutane	30	2,5-Dimethylhexane
2	n-Butane	31	2,2,3-Trimethylpentane + 2,4-Dimethylhexane
3	Isopentane	32	1-trans-2-cis-4-Trimethylcyclopentane
4	n-Pentane	33	3,3-Dimethylhexane
5	2,2-Dimethylbutane	34	1-trans-2-cis-3-Trimethylcyclopentane
6	Cyclopentane	35	2,3,4-Trimethylpentane
7	2,3-Dimethylbutane	36	2,3,3-Trimethylpentane + Toluene
8	2-Methylpentane	37	2,3-Dimethylhexane + 1,1,2-Trimethylcyclopentane
9	3-Methylpentane	38	2-Methyl-3-ethylpentane
10	n-Hexane	39	2-Methylheptane
11	2,2-Dimethylpentane	40	4-Methylheptane
12	Methylcyclopentane	41	3,4-Dimethylhexane + 3-Methyl-3-ethylpentane
13	2,4-Dimethylpentane	42	3-Methylheptane
14	2,2,3-Trimethylbutane	43	3-Ethylhexane + 1-cis-3-Dimethylcyclohexane + 1-cis-2-trans-3-Trimethylcyclopentane
15	Benzene	44	1-trans-4-Dimethylcyclohexane
16	3,3-Dimethylpentane	45	1,1-Dimethylcyclohexane
17	Cyclohexane	46	1-Methyl-trans-3-ethylcyclopentane
18	2-Methylhexane	47	1-Methyl-cis-3-ethylcyclopentane
19	2,3-Dimethylpentane	48	1-Methyl-trans-2-ethylcyclopentane
20	1,1-Dimethylcyclopentane	49	1-Methyl-1-ethylcyclopentane
21	3-Methylhexane	50	1-trans-2-Dimethylcyclohexane
22	1-trans-3-Dimethylcyclopentane	51	n-Octane + 1-cis-4-Dimethylcyclohexane + 1-trans-3-Dimethylcyclohexane
23	3-Ethylpentane	52	Isopropylcyclopentane
24	1-trans-2-Dimethylcyclopentane	53	1-Methyl-cis-2-ethylcyclopentane
25	2,2,4-Trimethylpentane	54	1-cis-2-Dimethylcyclohexane
26	n-Heptane	55	n-Propylcyclopentane + Ethylcyclohexane
27	Methylcyclohexane + 1-cis-2-Dimethylcyclopentane	56	Ethylbenzene
28	1,1,3-Trimethylcyclopentane + 2,2-Dimethylhexane	57	m-Xylene + p-Xylene
29	Ethylcyclopentane	58	o-Xylene

Fig. 5 Compound List of the Chromatogram