SHIMADZU
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Application Data Sheet

No.38

## System Gas Chromatograph

# Carbon Number Distribution of P-,N- and A- Nexis GC-2030CAD1 GC-2014CAD1

This is an automated method for determining the distribution of paraffins, naphthenes and aromatics by carbon number in hydrocarbon fractions having an endpoint of 200 ℃ or less (C3-C11). The sample is injected into a GC equipped with three packed columns and appropriate valving. The first column is polar, typically packed with OV-275 on Chromosorb; the second column is non-polar, typically packed with OV-101 on Chromosorb; and the third column is selective, typically packed with specially treated molecular sieves. Initially, the polar and selective columns are connected in series. After the elution of C11 saturates from the polar column, the polar column flow is stopped, holding the aromatics until the paraffins and naphthenes have eluted from the selective column. The aromatics are then eluted from the polar column in three fractions, each fraction being separated on the non-polar column. Internal normalization of peak areas after correction for difference in response is used to obtain a mass- or LV-% distribution of the components. The system includes LabSolutions GC workstation software.

## Analyzer Information

**System Configuration:**
Two valves/Two packed column with one FID detector

**Sample Information:**
Single carbon number hydrocarbon type

**Methods met:**
UOP-870

**Concentration Range:**

| No.z | Name of Compound | Concentration Range | |
|---|---|---|---|
| | | Low Conc. | High Conc. |
| 1 | Single carbon number hydrocarbon type | 0.05% (mass or liquid volume) | 3%(mass or liquid volume) |

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

## System Features

- 100 minutes analysis can be carried out for the gasoline analysis.
- Single channel with dual packed column by using FID detector

## Typical Chromatograms

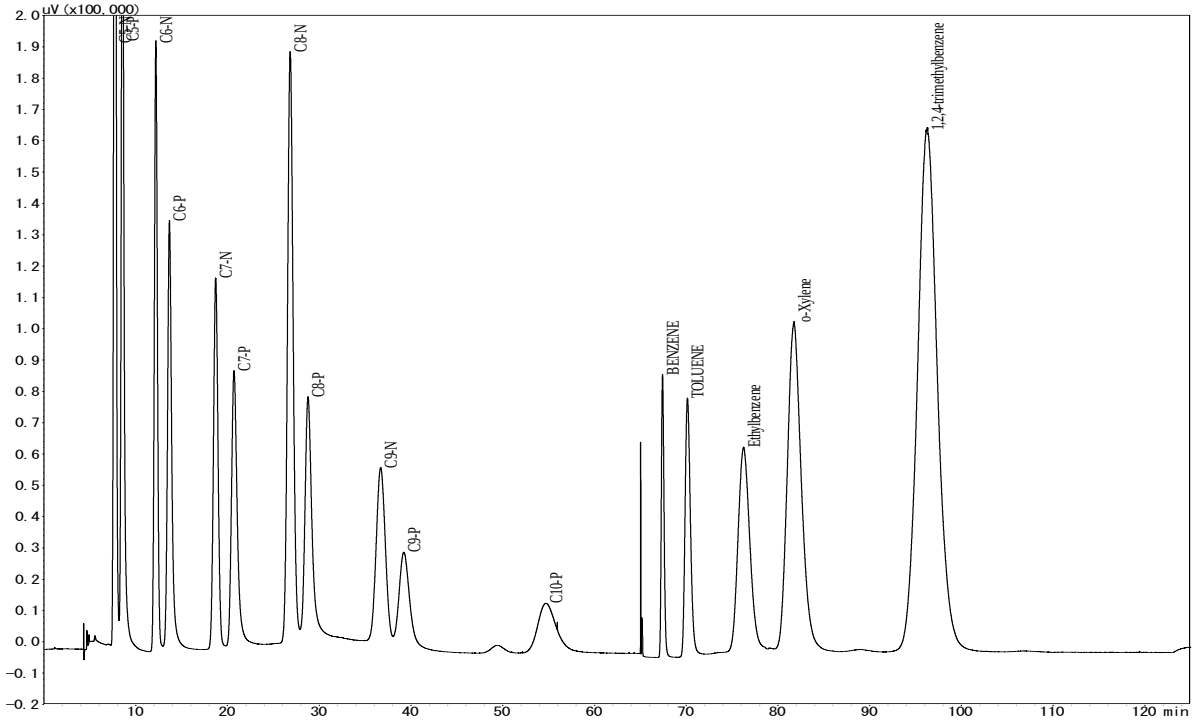


Fig. 1 Chromatogram of FID

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