



## 1. PERFORMANCE

- 1) Measuring range : 50-1,400 ppm (as n-Hexane)  
Number of pump strokes : 1 (100mℓ)  
2 pump strokes (200mℓ) are required for Kerosine and Mineral turpentine determination.
- 2) Sampling time : 1.5 minutes/1 pump stroke
- 3) Detectable limit : 5 ppm
- 4) Shelf life : 2 years
- 5) Operating temperature : 0 ~ 40 °C
- 6) Temperature compensation : Necessary (refer to "Table 2. Temperature Correction Table")
- 7) Reading : Direct reading from the scale calibrated by 1 pump stroke
- 8) Colour change : Orange → Yellowish green

## 2. RELATIVE STANDARD DEVIATION

RSD-low : 10 %    RSD-mid. : 5 %    RSD-high : 5 % (Controlled on n-Hexane)

## 3. CHEMICAL REACTION

Chromium oxide is reduced.



## 4. CALIBRATION OF THE TUBE

GAS CHROMATOGRAPHY

## 5. INTERFERENCE AND CROSS SENSITIVITY

| Substance             | Interference | % | Coexistence  |
|-----------------------|--------------|---|--|
| Aromatic hydrocarbons |              |   | The bottom of the discoloured layer is changed to Black and higher readings are given. |
| Alcohols              |              | 6 | Higher readings are given.   |
| Esters                |              | 6 | 〃  |
| Ketones               |              | 6 | 〃  |

It has no influence on readings even if Alcohols, Esters or Ketones each co-exists up to 6 %.

(NOTE)

- 1) Determine the concentration of objective gas by multiplication with the figure shown in Table 1 after temperature correction.

Table.1  
Coefficient Chart

| Name of Gas | Figure | Name of Gas | Figure |
|-------------|--------|-------------|--------|
| Isobutane   | 0.8    | Heptane     | 1.5    |
| Pentane     | 0.8    | Octane      | 2.0    |
| n-Hexane    | 1.0    | Cyclohexane | 1.0    |

Table.2  
TEMPERATURE CORRECTION TABLE (20 °C standard)

| Tube Readings | Corrected Concentration (ppm) |       |       |       |       |
|---------------|-------------------------------|-------|-------|-------|-------|
|               | 0 °C                          | 10 °C | 20 °C | 30 °C | 40 °C |
| 1400          | 1630                          | 1530  | 1400  | 1270  | 1180  |
| 1200          | 1400                          | 1320  | 1200  | 1090  | 1010  |
| 1000          | 1170                          | 1100  | 1000  | 910   | 840   |
| 800           | 930                           | 870   | 800   | 720   | 670   |
| 600           | 700                           | 660   | 600   | 550   | 500   |
| 400           | 460                           | 430   | 400   | 360   | 330   |
| 200           | 220                           | 210   | 200   | 180   | 170   |
| 100           | 100                           | 100   | 100   | 100   | 100   |

Unit : ppm

Example) For measuring Heptane at 10 °C of temperature

- Reading concentration : 600 ppm  
 Concentration on temperature correction : 660 ppm  
 Concentration of Heptane : 990 ppm

2) Measurement of mixed solvents :

- (1) Take 2 pump strokes and use the following conversion graph to measure Kerosene or Mineral turpentine (Mineral spirits).
- (2) After temperature correction for the reading of the gas detector tube with the Table 2, determine the concentration from FIG.1 conversion graph.

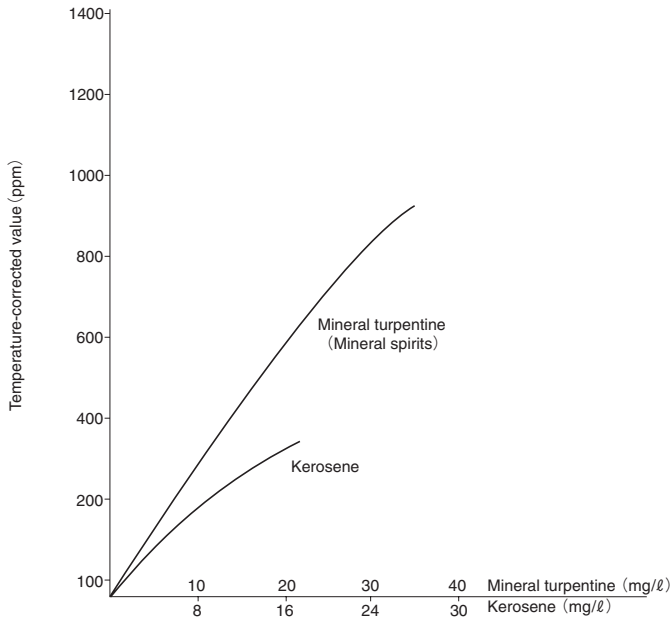
Instance)

For measuring mineral turpentine at 40 °C

Reading Concentration 600 ppm

Concentration on temperature correction 500 ppm

Concentration of mineral turpentine 16mg/ℓ



Mineral turpentine (mg/ℓ)  
FIG.1 Conversion graph