Tube No.
187S

GENERAL HYDROCARBONS

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 tupentine 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℃
6) Temperature compensation : Necessary (refer to "Table 2. Temperature CorrectionTable")
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.

$$CH_3(CH_2)_4CH_3 + Cr^{6+} + H_2SO_4 \rightarrow Cr^{3+}$$

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.

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℃ standard)

Readings	0℃	10℃	20℃	30℃	40℃
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℃ 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℃
Reading Concentration 600 ppm
Concentration on temperature correction 500 ppm
Concentration of mineral tupentine 16mg/ℓ

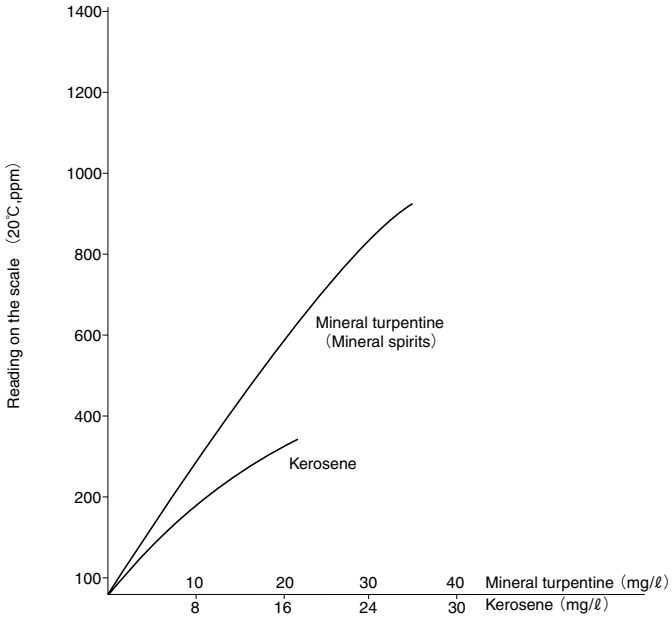

FIG.1 Conversion graph