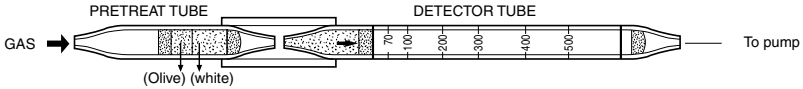
Tube No.
**152S**

# CHLOROFORM




## 1. PERFORMANCE

| | | | |
|---|---|---|---|
| 1) Measuring range | : 70-500 ppm | 35-250 ppm | 23-167 ppm |
| Number of pump strokes | 2 (200mℓ) | 3 (300mℓ) | 4 (400mℓ) |
| 2) Sampling time | : 3 minutes/2 pump strokes | | |
| 3) Detectable limit | : 20 ppm (400mℓ) | | |
| 4) Shelf life | : 2 years (Necessary to store in a refrigerated place ; 0 ~ 10℃) | | |
| 5) Operating temperature | : 10 ~ 40℃ | | |
| 6) Temperature compensation | : Necessary (See "TEMPERATURE CORRECTION TABLE") | | |
| 7) Reading | : Direct reading from the scale calibrated by 2 pump strokes | | |
| 8) Colour change | : White → Yellowish orange | | |

## 2. RELATIVE STANDARD DEVIATION

RSD-low : 20 % RSD-mid. : 15 % RSD-high : 15 %

## 3. CHEMICAL REACTION

Chlorine is produced by an Oxidizer.

$CrO_3 + H_2SO_4 \rightarrow (O)$

$CHCl_3 + (O) \rightarrow Cl_2 + H_2O + CO$

$Cl_2 + C_{14}H_{16}N_2 \rightarrow C_{14}H_{14}N_2 + 2HCl$

## 4. CALIBRATION OF THE TUBE

GAS CHROMATOGRAPHY

## 5. INTERFERENCE AND CROSS SENSITIVITY

| Substance | Interference | ppm | Coexistence |
|---|---|---|---|
| Halogens | Similar stain is produced. | | Higher readings are given. |
| Halogenated hydrocarbons | 〃 | | 〃 |
| n-Hexane FIG.2 | | 200 | Lower readings are given. |

(NOTE)

In case of 3 pump strokes, following formula is available for the actual concentration.
Actual concentration = 1/2 × Temperature corrected value.
In case of 4 pump strokes, following formula is available for the actual concentration.
Actual concentration = 1/3 × Temperature corrected value.

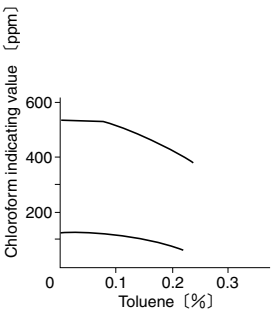


FIG.1 Influence of Toluene

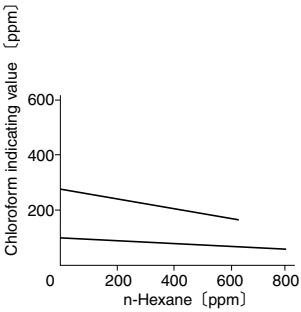


FIG.2 Influence of n-Hexane

TEMPERATURE CORRECTION TABLE

| Scale Readings (ppm) | True Concentration (ppm) | | | | |
|---|---|---|---|---|---|
| | 10℃ (50°F) | 15℃ (59°F) | 20℃ (68°F) | 30℃ (95°F) | 40℃ (95°F) |
| 500 | — | — | 500 | 335 | 260 |
| 400 | — | 520 | 400 | 280 | 215 |
| 300 | 590 | 390 | 300 | 215 | 165 |
| 200 | 380 | 260 | 200 | 145 | 115 |
| 100 | 180 | 130 | 100 | 80 | 65 |
| 70 | 120 | 85 | 70 | 60 | 50 |