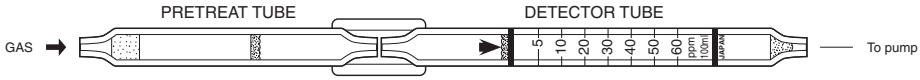
Tube No.
**147S**

# CARBON TETRACHLORIDE




## 1. PERFORMANCE

1) Measuring range : 5-60 ppm
   Number of pump strokes 1(100mℓ)
2) Sampling time : 1.5 minutes/1 pump stroke
3) Detectable limit : 0.5 ppm(100mℓ)
4) Shelf life : 1 year(Necessary to store in refrigerated conditions ; 0 ~ 10℃)
5) Operating temperature : 0 ~ 40℃
6) Temperature compensation : Necessary(See "TEMPERATURE CORRECTION TABLE")
7) Reading : Direct reading from the scale calibrated by 1 pump stroke
8) Colour change : White→Red

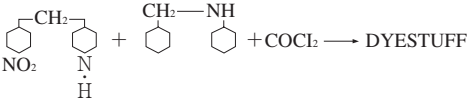
## 2. RELATIVE STANDARD DEVIATION

RSD-low : 15% RSD-mid. : 10% RSD-high : 10%

## 3. CHEMICAL REACTION

Carbon tetrachloride is decomposed and Phosgene is produced. By reacting with this Phosgene, 4-(p-Nitrobenzyl)-phridine and Benzylaniline, dyestuff is produced.

$$CCl_4 + I_2O_5 + F\cdot H_2SO_4 \longrightarrow COCl_2$$




## 4. CALIBRATION OF THE TUBE

DIFFUSION TUBE METHOD

## 5. INTERFERENCE AND CROSS SENSITIVITY

| Substance | Interference | ppm | Coexistence |
|---|---|---|---|
| Phosgene | Similar stain is produced. | 2 | Higher reading are given. |
| Chlorine | | 12 | 〃 |
| Trichloroethylene | | 2 | 〃 |

TEMPERATURE CORRECTION TABLE

| Tube Readings (ppm) | Corrected Concentration (ppm) | | | | |
|---|---|---|---|---|---|
| | 0℃ (32°F) | 10℃ (50°F) | 20℃ (68°F) | 30℃ (86°F) | 40℃ (104°F) |
| 60 | 108 | 75 | 60 | 50 | 44 |
| 50 | 90 | 62.5 | 50 | 41 | 36.5 |
| 40 | 72 | 50 | 40 | 33 | 29 |
| 30 | 54 | 37.5 | 30 | 25 | 22 |
| 20 | 36 | 25 | 20 | 16.5 | 14.5 |
| 10 | 18 | 12.5 | 10 | 8 | 7 |
| 5 | 9 | 6 | 5 | 4 | 3.5 |