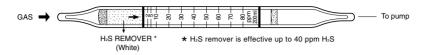
ETHYL MERCAPTAN



1. PERFORMANCE

1) Measuring range : 4-160 ppm 2-80 ppm 1-40 ppm Number of pump strokes : $1(100m\ell)$ 2 $(200m\ell)$ 4 $(400m\ell)$

2) Sampling time : 3 minutes/2 pump strokes

3) Detectable limit ∴ 0.2 ppm (200m ℓ) 4) Shelf life ∴ 2 years 5) Operating temperature ∴ 0 ~ 40 °C

6) Temperature compensation : Necessary (0 \sim 20 °C) (See "TEMPERATURE CORRECTION TABLE")

7) Reading : Direct reading from the scale calibrated by 2 pump strokes

8) Colour change : White → Yellow

2. RELATIVE STANDARD DEVIATION

RSD-low: 10% RSD-mid.: 10% RSD-high: 5%

3. CHEMICAL REACTION

Ethyl mercaptan reacts with Palladium sulphate. C₂H₅SH + PdSO₄ → (C₂H₅S)₂Pd + H₂SO₄

4. CALIBRATION OF THE TUBE

STANDARD GAS CYLINDER METHOD

5. INTERFERENCE AND CROSS SENSITIVITY

| Substance | ppm | Interference | ppm Coexistence | |
|-------------------|-----|-----------------------------------|-----------------|---------------------------|
| Carbon monoxide | 150 | Dark grey stain is produced. | | |
| Ethylene | 200 | | | |
| Hydrogen sulphide | 40 | Dark brown stain is produced. | | |
| Acetylene | | Pale brown stain is produced | | |
| Methyl mercaptan | | Reddish yellow stain is produced. | | |
| Methyl sulphide | | | 1 | Lower readings are given. |
| Nitrogen dioxide | | | 1 | " |
| Chlorine | | | 0.2 | " |

(NOTE)

- 1) Max. 40 ppm of Hydrogen sulphide is eliminated by pretreat reagent.
- 2) In case of 1 or 4 pump strokes, following formula is available for the actual concentration.

 $Actual\ concentration = Temperature\ corrected\ value \times \frac{2}{Number\ of\ strokes}$

TEMPERATURE CORRECTION TABLE

| Scale | True Concentration (ppm) | | | | |
|-------------------|--------------------------|----------------|------------------------|--|--|
| Readings (ppm) | 0°C (32°F) | 10°C (50°F) | 20-40 ℃ (68-104* F) | | |
| 80 | 91 | 85 | 80 | | |
| 70 | 80 | 75 | 70 | | |
| 60 | 69 | 64 | 60 | | |
| 50 | 57 | 53 | 50 | | |
| 40 | 45 | 42 | 40 | | |
| 30 | 33 | 31 | 30 | | |
| 20 | 21 | 20 | 20 | | |