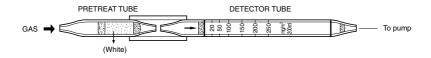
ETHYLENE GLYCOL



1. PERFORMANCE

1) Measuring range \therefore 20-250mg/m³ Number of pump strokes \therefore 2 (200m ℓ)

2) Sampling time : 1.5 minutes/1 pump stroke

3) Detectable limit 5 smg/m^3 4) Shelf life 2 years 5) Operating temperature $20 \sim 40 \, \text{°C}$

6) Temperature compensation : Necessary (See "TEMPERATURE CORRECTION TABLE")
7) Reading : Direct reading from the scale calibrated by 2 pump strokes

8) Colour change : Pink→Yellow

2. RELATIVE STANDARD DEVIATION

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

3. CHEMICAL REACTION

By decomposing with an Oxidizer, Formic acid is produced and PH indicator is discoloured.

HOCH₂CH₂OH + HIO₄ \rightarrow 2HCHO + HIO₃ + H₂O HCHO + HIO₄ + H₂SO₄ \rightarrow HCOOH + HIO₃ HCOOH + N₈OH \rightarrow N₈ (HCOO) + H₂O

4. CALIBRATION OF THE TUBE

GAS CHROMATOGRAPHY

5. INTERFERENCE AND CROSS SENSITIVITY

| Substance | Interference | Coexistence | |
|-------------------|--------------------------------|---------------------------------------|--|
| Aldehydes | Similar stain is produced. | Higher readings are given. | |
| Sulphur dioxide | " | " | |
| Ethylene oxide | " | " | |
| Hydrogen sulphide | Orange/Pink stain is produced. | Accurate measurement can not be done. | |

TEMPERATURE CORRECTION TABLE

| Scale | True Concentration (mg/m³) | | | | | |
|----------------------------------|----------------------------|------------------|---------------|----------------|-----------------|--|
| Readings (mg/m ³) | 20°C (68°F) | 22°C (71.6°F) | 25℃ (77°F) | 30°C (86°F) | 40°C (104°F) | |
| 250 | - | 370 | 250 | 200 | 155 | |
| 200 | - | 260 | 200 | 165 | 130 | |
| 150 | 270 | 170 | 150 | 125 | 105 | |
| 100 | 120 | 110 | 100 | 85 | 75 | |
| 50 | 60 | 55 | 50 | 45 | 40 | |
| 30 | 23 | 20 | 20 | 18 | 15 | |