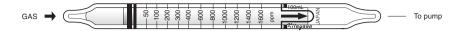
# **HYDROGEN SULPHIDE**



### 1. PERFORMANCE

1) Measuring range 50-1,600 ppmNumber of pump strokes  $1(100\text{m}\ell)$ 

2) Sampling time : 1 minute/1 pump stroke

3) Detectable limit  $\therefore$  20 ppm 4) Shelf life  $\therefore$  3 years 5) Operating temperature  $\therefore$  0  $\sim$  40  $^{\circ}$ C

6) Temperature compensation : Necessary (See "TEMPERATURE CORRECTION TABLE") 6) Reading : Direct reading from the scale calibrated by 1 pump stroke

7) Colour change : Pale yellow → Dark blue

#### 2. RELATIVE STANDARD DEVIATION

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

# 3. CHEMICAL REACTION

By reacting with Palladium sulphate and Ammonium molybdate, Palladium sulphate is produced. H<sub>2</sub>S + PdSO<sub>4</sub> + (NH<sub>4</sub>)<sub>2</sub>MoO<sub>4</sub> → PdS

#### 4. CALIBRATION OF THE TUBE

STANDARD GAS CYLINDER METHOD

## 5. INTERFERENCE AND CROSS SENSITIVITY

| Substance        | Interference | ppm          | Coexistence  |  |
|------------------|--------------|--------------|--|--|
| Carbon monoxide  |              | 10           | Whole reagent is changed to Blue and higher readings are given.                    |  |
| Ethylene         |              | 5            | Similar stains are produced and higher readings are given.                         |  |
| Propylene        |              | 5            | "  |  |
| Butylene         |              | 5            | "  |  |
| Acetylene        |              | 5            | "  |  |
| Methyl acetylene |              | 5            | "  |  |
| Hydrogen cyanide |              |              | White stain is produced and the discolouration by Hydrogen sulphide is interfered. |  |
| Ammonia          |              |              | "  |  |
| Sulphur dioxide  |              | less than 6% | The accuracy of readings is not affected.  |  |

#### TEMPERATURE CORRECTION TABLE

| Tube     | Corrected Concentration (%) |        |        |        |         |  |  |
|----------|-----------------------------|--------|--------|--------|---------|--|--|
| Readings | 0,0                         | 10 °C  | 20℃    | 30℃    | 40℃     |  |  |
| (%)      | (32°F)                      | (50°F) | (68°F) | (86°F) | (104°F) |  |  |
| 1600     | 1400                        | 1500   | 1600   | 1700   | 1700    |  |  |
| 1400     | 1300                        | 1300   | 1400   | 1500   | 1500    |  |  |
| 1200     | 1100                        | 1200   | 1200   | 1300   | 1300    |  |  |
| 1000     | 900                         | 1000   | 1000   | 1000   | 1100    |  |  |
| 800      | 700                         | 800    | 800    | 800    | 900     |  |  |
| 600      | 500                         | 600    | 600    | 600    | 700     |  |  |
| 400      | 400                         | 400    | 400    | 400    | 400     |  |  |
| 300      | 300                         | 300    | 300    | 300    | 300     |  |  |
| 200      | 200                         | 200    | 200    | 200    | 200     |  |  |