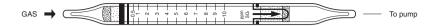
# **SULPHUR DIOXIDE**



#### 1. PERFORMANCE

1) Measuring range Number of pump strokes 1  $(100 \text{m} \ell)$  2  $(200 \text{m} \ell)$  2 Sampling time 1.5 minutes/1 pump stroke

3) Detectable limit :  $0.1 \text{ ppm} (200 \text{m} \ell)$ 

4) Shelf life : 1 year (Necessary to store in refrigerated conditions ;  $0 \sim 10 \, ^{\circ}\mathrm{C}$ )

5) Operating temperature :  $0 \sim 40 \,^{\circ}\text{C}$ 

6) Humidity compensation
7) Reading
: Necessary (See "R.H. CORRECTION COEFFICIENT TABLE")
: Direct reading from the scale calibrated by 1 pump stroke

8) Colour change : Pink → Yellow

### 2. RELATIVE STANDARD DEVIATION

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

## 3. CHEMICAL REACTION

By reacting with alkali, PH indicator is discoloured. SO<sub>2</sub> + 2NaOH → Na<sub>2</sub>SO<sub>3</sub> + H<sub>2</sub>O

## 4. CALIBRATION OF THE TUBE

PERMEATION TUBE METHOD

### 5. INTERFERENCE AND CROSS SENSITIVITY

| Substance         | Interference                 | ppm | Coexistence  |  |
|-------------------|------------------------------|-----|--|--|
| Nitrogen dioxide  | Pale pink stain is produced. | 3   | Higher readings with indiscernible maximum end point of stained layer are given. |  |
| Hydrogen chloride | "                            |     | Higher readings are given.   |  |

#### (NOTE)

- This detector tube is affected by abmbient relative humidity, therefore, it is necessary to compensate the reading
  of gas detector tube with the following formula and correction confficient table.
   Actual concentration = Reading Value (ppm) × Correction Coefficient
- 2) In case of 2 pump strokes, following formula is available for actual concentration. Actual concentration = 1/2 × Reading value corrected with above formula

# R.H. CORRECTION COEFFICIENT TABLE

|                           | 10  | 30   | 50  | 60  | 70  | 80  | 90  |
|---------------------------|-----|------|-----|-----|-----|-----|-----|
| coefficient of correction | 0.9 | 0.95 | 1.0 | 1.1 | 1.2 | 1.3 | 1.4 |