

## 1. PERFORMANCE

- |                             |   |              |              |
|-----------------------------|---|--------------|--------------|
| 1) Measuring range          | : 0.1-5 ppm   | 0.05-2.5 ppm | 0.02-1.0 ppm |
| Number of pump strokes      | 1 (100mℓ)   | 2 (200mℓ)    | 5 (500mℓ)    |
| 2) Sampling time            | : 1 minute/1 pump stroke                                    |              |              |
| 3) Detectable limit         | : 0.01 ppm (500mℓ)  |              |              |
| 4) Shelf life               | : 2 years   |              |              |
| 5) Operating temperature    | : 0 ~ 40 °C   |              |              |
| 6) Temperature compensation | : Necessary (See "TEMPERATURE CORRECTION TABLE")            |              |              |
| 7) Reading                  | : Direct reading from the scale calibrated by 1 pump stroke |              |              |
| 8) Colour change            | : Pale yellow → Reddish purple                              |              |              |

## 2. RELATIVE STANDARD DEVIATION

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

## 3. CHEMICAL REACTION

By reacting with Mercuric chloride, Hydrogen chloride is liberated and PH indicator is discoloured.



## 4. CALIBRATION OF THE TUBE

STANDARD GAS CYLINDER METHOD

## 5. INTERFERENCE AND CROSS SENSITIVITY

Substance	Interference	Coexistence
Arsine      FIG.2		Higher readings are given.
Phosphine    FIG.1		∕
Hydrogen selenide		∕
Monosilane		∕ (Boundary is unclear.)
Disilane		∕ (    ∕    )
Monogermene		Not affected.

(NOTE)

In case of 2 and 5 pump strokes, the following formula is available for the actual concentration.

2 pump strokes : Actual concentration = Temperature corrected value ÷ 2

5 pump strokes : Actual concentration = Temperature corrected value ÷ 5

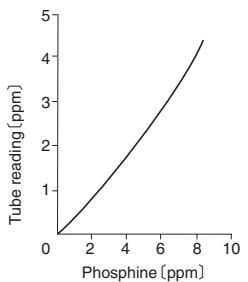


FIG.1 Influence of Phosphine

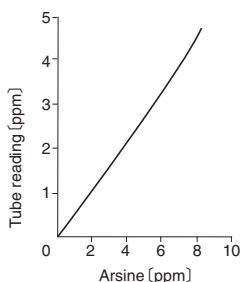


FIG.2 Influence of Arsine

TEMPERATURE CORRECTION TABLE

Tube Readings (ppm)	Corrected Concentration (ppm)				
	0 °C (32 °F)	10 °C (50 °F)	20 °C (68 °F)	30 °C (86 °F)	40 °C (104 °F)
5	—	9	5	3.5	2.5
4	—	7	4	3	2
3	—	5	3	2.5	1.5
2	8	3	2	1.5	1.3
1	1.5	1	1	1	0.8
0.5	0.5	0.5	0.5	0.5	0.5
0.1	0.1	0.1	0.1	0.1	0.1