

## 1. PERFORMANCE

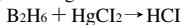
- |                             |  |              |              |
|-----------------------------|--|--------------|--------------|
| 1) Measuring range          | : 0.1-5 ppm  | 0.05-2.5 ppm | 0.02-1.0 ppm |
| Number of pump strokes      | 1 (100mℓ)  | 2 (200mℓ)    | 5 (500mℓ)    |
| 2) Sampling time            | : 1 minute / 1 pump stroke   |              |              |
| 3) Detectable limit         | : 0.01 ppm (500mℓ)   |              |              |
| 4) Shelf life               | : 2 years  |              |              |
| 5) Operating temperature    | : 0 ~ 40 °C  |              |              |
| 6) Operating Humidity       | : No corrections are necessary in case of 1 or 2 pump strokes.<br>In case of 5 pump strokes, the available humidity range is up to 25mg H <sub>2</sub> O/ℓ [~ 30 °C (86 °F), 80 % R.H.]. |              |              |
| 7) Temperature compensation | : Necessary (See "TEMPERATURE CORRECTION TABLE")   |              |              |
| 8) Reading                  | : Direct reading from the scale calibrated by 1 pump stroke  |              |              |
| 9) 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 cholride, 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		〃 (    〃    )
Monogermane		Not affected.

(NOTE)

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

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

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

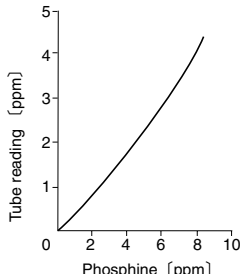


FIG.1 Influence of Phosphine

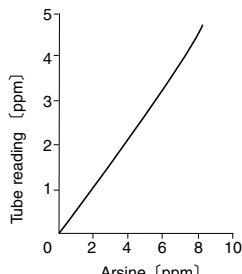


FIG.2 Influence of Arsine

TEMPERATURE CORRECTION TABLE

Scale 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