# **PHOSPHINE**



## 1. PERFORMANCE

1) Measuring range 0.05-1.0 ppm 0.05-1.0 ppm Number of pump strokes 0.1-2.0 ppm 0.05-1.0 ppm 0.05-1.

4) Shelf life  $\therefore$  2 years 5) Operating temperature  $\therefore$  0 ~ 40 °C

6) Reading : Direct reading from the scale calibrated by 1 pump stroke

7) Colour change : Pale yellow→Pink

## 2. RELATIVE STANDARD DEVIATION

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

#### 3. CHEMICAL REACTION

By reacting with Mercuric chloride (II), Hydrogen chloride is produced and PH indicator is discoloured.  $PH_3 + 3HgCI_2 \rightarrow P(HgCI)_3 + HCI$ 

#### 4. CALIBRATION OF THE TUBE

STANDARD GAS CYLINDER METHOD

#### 5. INTERFERENCE AND CROSS SENSITIVITY

Substance	Interference	Coexistence
Hydrogen sulphide	Similar stain is produced.	Higher readings are given.
Hydrogen selenide	"	"
Mercaptans	"	"
Arsine	"	"
Hydrogen cyanide	Whole reagent is changed to Red.	"
Sulphur dioxide	"	Whole reagent is changed to Pale red, but Purplish red stain indicates Phosphine concentration.

### (NOTE)

When the concentration is below 0.5 ppm, 2 pump strokes can be used to determine the lower concentration with the following formula.

Actual concentration =  $1/2 \times$  Reading value