PHOSPHINE



1. PERFORMANCE

3) Detectable limit : $0.02 \text{ ppm}(200\text{m}\ell)$

4) Shelf life : 2 years 5) Operating temperature : $0 \sim 40 \,^{\circ}\text{C}$

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. $PH_3 + HgCI_2 \rightarrow P(HgCI)_3 + HCI$

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. Following formula is available for the actual concentration.

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