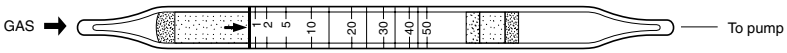
Tube No.
240S

SILANE



1. PERFORMANCE

1) Measuring range : 1-50 ppm 0.5-25 ppm
Number of pump strokes 1(100mℓ) 2(200mℓ)
2) Sampling time : 5 minutes/1 pump stroke
3) Detectable limit : 0.3 ppm(200mℓ)
4) Shelf life : 1 year(Necessary to store in a refrigerated place ; 0 ~ 10℃)
5) Operating temperature : 0 ~ 40℃
6) Temperature compensation : Necessary under 20℃(See "TEMPERATURE CORRECTION TABLE")
7) Reading : Direct reading from the scale calibrated by 1 pump stroke
8) Colour change : Yellow→Red

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.

$SiH_4 + HgCl_2 \rightarrow HCl$

4. CALIBRATION OF THE TUBE

STANDARD GAS CYLINDER METHOD

5. INTERFERENCE AND CROSS SENSITIVITY

Substance	Interference	ppm	Coexistence
Phosphine	2 layers of greyish white and red stain are produced.	20	Higher readings are given.
Arsine	2 layers of dark brown and red stain are produced.	50	〃
Disilane	A Similar stain is produced.	2	〃
Diborane	〃	20	〃
Ammonia		100	Lower readings are given.
Sulphur dioxide		Whole reagent is changed to orange. But the accuracy of readings are not affected by Sulphur dioxide if the top of the stained layer is clear.	
IPA		Not affected.	
Hydrogen		〃	
Hydrogen chloride		250	Not affected.
Dichlorosilane		200	〃

(NOTE)

In case of 2 pump strokes, following formula is available for the actual concentration.
Actual concentration = Temperature corrected value × 1/2

TEMPERATURE CORRECTION TABLE

Scale Readings (ppm)	True Concentration (ppm)		
	0℃ (32°F)	10℃ (50°F)	20-40℃ (68-104°F)
50	38	45	50
40	30	35	40
30	22	26	30
20	14	17	20
10	7	8	10
5	4	4	5
2	2	2	2
1	1	1	1