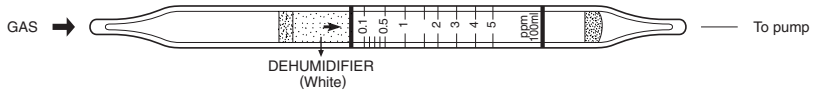
Tube No.
242S

DIBORANE



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℃		
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 cholride, Hydrogen chloride is liberated and PH indicator is discoloured.

$B_2H_6 + HgCl_2 \rightarrow HCl$

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		〃 (Boundery is unclear.)
Disilane		〃 (〃)
Monogermane		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

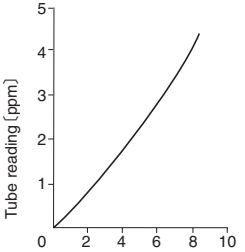


FIG.1 Influence of Phosphine

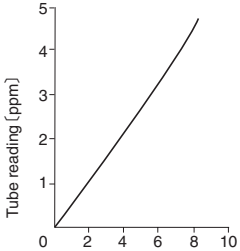


FIG.2 Influence of Arsine

TEMPERATURE CORRECTION TABLE

Tube Readings (ppm)	Corrected Concentration (ppm)				
	0℃ (32°F)	10℃ (50°F)	20℃ (68°F)	30℃ (86°F)	40℃ (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