CARBON DISULPHIDE



1. PERFORMANCE

1) Measuring range 2-50 ppm 0.8-20 ppm Number of pump strokes $2(200\text{m}\ell)$ $4(400\text{m}\ell)$ 2) Sampling time 4 minutes/2 pump strokes

3) Detectable limit : $0.3 \text{ ppm} (400 \text{m} \ell)$

4) Shelf life : 3 years (Necessary to store in refrigerated conditions; $0 \sim 10^{\circ}$ C)

5) Operating temperature : $0 \sim 40 \,^{\circ}\text{C}$

6) Temperature compensation : Necessary (See "TEMPERATURE CORRECTION TABLE") 7) Reading : Direct reading from the scale calibrated by 2 pump strokes.

8) Colour change : Pink→Yellow

2. RELATIVE STANDARD DEVIATION

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

3. CHEMICAL REACTION

Sulphur dioxide is produced by an Oxidizer. By reacting between this Sulphur dioxide and alkali, PH indicator is discoloured.

 $\begin{aligned} &CS_2 + CrO_3 + H_2SO_4 {\rightarrow} SO_2 \\ &SO_2 + 2NaOH {\rightarrow} Na_2SO_3 + H_2O \end{aligned}$

4. CALIBRATION OF THE TUBE

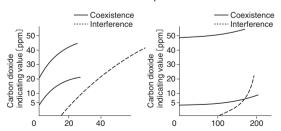
STANDARD GAS CYLINDER METHOD

5. INTERFERENCE AND CROSS SENSITIVITY

Substance	ppm	Interference	ppm	Coexistence
Sulphur dioxide FIG.1	15	Similar stain is produced.		Higher readings are given.
Hydrogen sulphide FIG.2	100	"	120	"
Chlorine		Pale pink stain is produced.		"

(NOTE)

In case of 4 pump strokes, following formula is available for the actual concentration. Actual concentration $= 2/5 \times$ Temperature corrected value



Sulphur dioxide (ppm) FIG.1 Influence of Sulphur dioxide

Hydrogen sulphide (ppm) FIG.2 Influence of Hydrogen sulphide

TEMPERATURE CORRECTION TABLE

Tube	Corrected Concentration (ppm)						
Readings (ppm)	0 °C (32 °F)	10 ℃ (50 °F)	20 ℃ (68 °F)	30 °C (86 °F)	40 °C (104 °F)		
50	72	59	50	43	38		
45	65	54	45	39	34		
40	58	48	40	34	30		
35	51	42	35	30	26		
30	44	36	30	26	22		
25	37	30	25	21	18		
20	31	25	20	17	14		
15	24	19	15	13	10		
10	16	12	10	8	7		
5	9	7	5	4	3		
2	3	3	2	2	1		