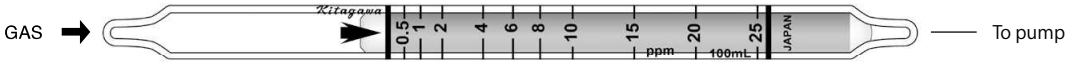
Tube No.
103SG

SULPHUR DIOXIDE IN CARBON DIOXIDE



1. PERFORMANCE

1) Measuring range : 0.5-25 ppm 0.1-3 ppm
Number of pump strokes 1(100mL) 4(400mL)
2) Sampling time : 2 minutes / 1 pump stroke
3) Detectable limit : 0.09 ppm(400mL)
4) Shelf life : 3 years
5) Operating temperature : 0～40℃
6) Temperature compensation : Necessary (See "TEMPERATURE CORRECTION TABLE")
7) Operating humidity : 0～90%R.H.
8) Reading : Direct reading from the scale calibrated by 1 pump stroke
9) Colour change : Blue purple→White

2. RELATIVE STANDARD DEVIATION

RSD-low：10% RSD-mid.：5% RSD-high：5%

3. CHEMICAL REACTION

Iodine is reduced.

$SO_2 + I_2 + 2H_2O \rightarrow 2HI + H_2SO_4$

4. CALIBRATION OF THE TUBE

PERMEATION TUBE METHOD

5. INTERFERENCE AND CROSS SENSITIVITY

Substance	ppm	Interference	ppm	Coexistence
Hydrogen sulphide	0.5	Whole reagent is changed to Pink.	0.5	Higher readings are given.
Nitrogen dioxide	0.5	Whole reagent is changed to Black.	0.5	Lower readings are given.
Ammonia	1.0	The accuracy of readings is not affected.	1.0	〃

(NOTE)

In case of 4 pump strokes, following formula is available for the actual concentration.

Actual concentration = Temperature corrected value × 0.2

TEMPERATURE CORRECTION TABLE

Tube Readings (ppm)	Corrected Concentration (ppm)				
	0℃ (32℉)	10℃ (50℉)	20℃ (68℉)	30℃ (86℉)	40℃ (104℉)
25	40.0	32.5	25.0	22.5	19.0
20	28.0	24.0	20.0	17.7	15.5
15	20.0	17.5	15.0	13.5	12.0
10	12.5	11.3	10.0	9.3	8.5
8	10.0	9.0	8.0	7.5	7.0
6	7.5	6.8	6.0	5.8	5.5
4	4.4	4.2	4.0	3.8	3.6
2	2.0	2.0	2.0	2.0	2.0
1	1.0	1.0	1.0	1.0	1.0
0.5	0.5	0.5	0.5	0.5	0.5