MITC (METHYL ISOTHIOCYANATE)



1. PERFORMANCE

1) Measuring range : 0.3-10 ppm 0.66-22 ppm Number of pump strokes 1 (100mL) 1/2 (50mL) 2) Sampling time : 2 minutes/1 pump stroke

3) Detectable limit : 0.1 ppm

4) Shelf life : 1 year (Necessary to store in a refrigerated place; 0-10°C)

5) Operating temperature : $0 \sim 40$ °C

6) Temperature compensation : Necessary (See "TEMPERATURE CORRECTION TABLE") 7) Reading : Direct reading from the scale calibrated by 1 pump stroke

8) Colour change : Pink → Yellowish orange

2. RELATIVE STANDARD DEVIATION

RSD-low: 10% RSD-mid.: 5% RSD-high: 5%

3. CHEMICAL REACTION

By decomposing with an oxidizer, Sulphur dioxide is produced and PH indicator is discoloured.

CH₃NCS + V₂O₅ + H₂SO₄ \rightarrow SO₂ SO₂ + pH indicator (Pink) \rightarrow Yellowish orange

4. CALIBRATION OF THE TUBE

DIFFUSION TUBE METHOD

5. INTERFERENCE AND CROSS SENSITIVITY

Substance	Interference	%	Coexistence
Carbon dioxide		35	Higher readings are given.

(NOTE)

The scale is calibrated based on the temperature of 20°C. Reading obrained in other temperature circumstances should be corrected with the following temperature correction coefficient table.

TEMPERATURE CORRECTION COEFFICIENT TABLE (AT 20°C)

Pump stroke	Temperature (°C)	0	5	10	15	20	25	30	35	40
1		1.30	1.23	1.15	1.08	1.00	0.95	0.90	0.85	0.80
1/2		1.70	1.48	1.30	1.11	1.00	0.97	0.95	0.92	0.90

Actual concentration = Reading value x Coefficient for temperature correction