Tube No.
122SM

ETHYLENE OXIDE

1. PERFORMANCE

1) Measuring range : 5-100 ppm
   Number of pump strokes 3 (300mℓ)
2) Sampling time : 4.5 minutes/3 pump strokes
3) Detectable limit : 3 ppm
4) Shelf life : 3 years
5) Operating temperature : 10 ~ 40 ℃
6) Temperature compensation : Necessary (See "TEMPERATURE CORRECTION TABLE")
7) Reading : Direct reading from the scale calibrated by 3 pump strokes
8) Colour change : Yellow → Pale blue

2. RELATIVE STANDARD DEVIATION

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

3. CHEMICAL REACTION

Chromium oxide is reduced.

$$\underbrace{CH_2CH_2O} + Cr^{6+} + H_2SO_4 \rightarrow Cr^{3+}$$

4. CALIBRATION OF THE TUBE

PERMEATION TUBE METHOD

5. INTERFERENCE AND CROSS SENSITIVITY

Substance	Interference	Coexistence
Alcohols	Similar stain is produced.	Higher readings are given.
Ethers	〃	〃
Esters	〃	〃
Ketones	〃	〃
Aliphatic hydrocarbons (more than C_3)	〃	〃
Aromatic hydrocarbons	〃	〃
Halogen hydrocarbons	〃	〃

TEMPERATURE CORRECTION TABLE

Tube Readings (ppm)	Corrected Concentration (ppm)						
	10 ℃ (50 ˚F)	15 ℃ (59 ˚F)	20 ℃ (68 ˚F)	25 ℃ (77 ˚F)	30 ℃ (86 ˚F)	35 ℃ (95 ˚F)	40 ℃ (104 ˚F)
100	70	79	100	122	—	—	—
80	57	64	80	97	120	—	—
60	44	48	60	73	92	115	140
40	31	33	40	46	60	78	92
30	25	26	30	33	40	50	60
20	17	18	20	22	26	28	30
10	9	10	10	10	10	11	11
5	5	5	5	5	5	5	5