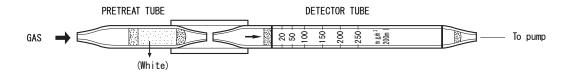
# ETHYLENE GLYCOL



## 1. PERFORMANCE

1) Measuring range :  $20-250 \text{mg/m}^3$ Number of pump strokes : 2(200 mL)

2) Sampling time : 1.5 minutes/1 pump stroke

3) Detectable limit :  $5mg/m^3$ 4) Shelf life : 1.5 years 5) Operating temperature :  $20 \sim 40$  °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

By decomposing with an Oxidizer, Formic acid is produced and PH indicator is discoloured. HOCH<sub>2</sub>CH<sub>2</sub>OH + HIO<sub>4</sub> $\rightarrow$ 2HCHO + HIO<sub>3</sub>+ H<sub>2</sub>O

 $HCHO + HIO_4 + H_2SO_4 \rightarrow HCOOH + HIO_3$  $HCOOH + NaOH \rightarrow Na(HCOO) + H_2O$ 

#### 4. CALIBRATION OF THE TUBE

GAS CHROMATOGRAPHY

## 5. INTERFERENCE AND CROSS SENSITIVITY

Substance	Interference	Coexistence	
Aldehydes	Similar stain is produced.	Higher readings are given.	
Sulphur dioxide	ıı .	<i>''</i>	
Ethylene oxide	"	"	
Hydrogen sulphide	Orange/Yellow stain is produced.	"	

#### TEMPERATURE CORRECTION TABLE

Scale	True Concentration (mg/m³)					
Readings (mg/m <sup>3</sup> )	20 ℃ (68°F)	22 °C (71. 6°F)	25 °C (77° F)	30 ℃ (86°F)	40 °C (104° F)	
250	-	370	250	200	155	
200	-	260	200	165	130	
150	270	170	150	125	105	
100	120	110	100	85	75	
50	60	55	50	45	40	
30	23	20	20	18	15	