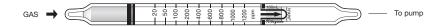
# **ETHYLENE**



## 1. PERFORMANCE

1) Measuring range 20-1,200 ppmNumber of pump strokes  $1(100\text{m}\ell)$ 

2) Sampling time : 3 minutes/1 pump stroke

3) Detectable limit  $\therefore$  10 ppm 4) Shelf life  $\therefore$  2 years 5) Operating temperature  $\therefore$  0  $\sim$  40  $^{\circ}$ C

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

8) Colour change : Yellow→Blue

## 2. RELATIVE STANDARD DEVIATION

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

#### 3. CHEMICAL REACTION

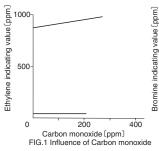
Molybdate is reduced and molybdeum blue is produced.  $H_2C = CH_2 + PdSO_4 + (NH_4) 2MoO_4 \rightarrow Mo_3O_8$ 

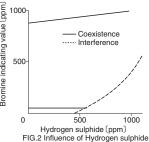
#### 4. CALIBRATION OF THE TUBE

GAS CHROMATOGRAPHY

#### 5. INTERFERENCE AND CROSS SENSITIVITY

Substance		ppm	Interference	Coexistence	
Carbon monoxide	FIG.1	10	Whole layer is discoloured to Green.	Higher readings are given.	
Hydrogen sulphide	FIG.2	500	Black stain is produced.	"	
Acetylene		20	Similar stain is produced.	"	
Propylene			"	"	





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Tube	Corrected Concentration (ppm)						
Readings (ppm)	0 °C (32 °F)	10 °C (50 °F)	20 °C (68 °F)	30 °C (86 °F)	40 °C (104 °F)		
1,200	950	1,100	1,200	1,300	1,350		
1,000	800	900	1,000	1,050	1,100		
800	650	720	800	820	840		
600	500	550	600	600	600		
400	400	400	400	400	400		
200	200	200	200	180	150		
100	100	100	100	50	_		
50	70	60	50	_	_		
20	40	30	20	_	_		