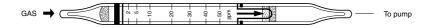
# **BENZENE**



### 1. PERFORMANCE

2) Sampling time : 4 minutes/2 pump strokes

3) Detectable limit  $0.2 \text{ ppm} (400 \text{m} \ell)$ 4) Shelf life 2 years

5) Operating temperature :  $0 \sim 40 \, \text{C}$ 

6) Temperature compensation : Necessary (See "TEMPERATURE CORRECTION TABLE") 7) Reading : Direct reading from the scale calibrated by 2 pump strokes

8) Colour change : White→Greenish brown

## 2. RELATIVE STANDARD DEVIATION

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

#### 3. CHEMICAL REACTION

Iodine pentoxide is reduced.  $C_6H_6 + I_2O_5 + H_2SO_4 \rightarrow I_2$ 

#### 4. CALIBRATION OF THE TUBE

GAS CHROMATOGRAPHY

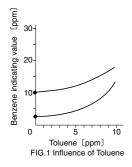
#### 5. INTERFERENCE AND CROSS SENSITIVITY

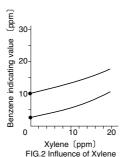
Substance		Interference	ppm	Coexistence	
Toluene	FIG.1	Yellowish brown stain is produced.		Higher readings are given.	
Xylene	FIG.2	"		"	
Carbon monoxide			50	Whole reagent is discoloured to Pale brown, the top of discoloured layer becomes unclear and higher readings are given.	
Hexane			100	"	

(NOTE)

In case of 1 or 4 strokes, following formula is available for the actual concentration.

Actual concentration = Temprature corrected value 
$$\times \frac{2}{\text{Number of stroke}}$$





TEMPERATURE CORRECTION TABLE

Scale Readings | True Concentration (ppm) | (ppm) | (20° E) | (10° E) | (20° E) | (10° E) | (10°

0°C (32°F)	10 ℃ (50* F)	20°C (68°F)	30°C (86°F)	40 ℃ (104 ° F)
38	44	50		
30	35	40	45	50
23	26	30	34	38
15	18	20	23	25
8	9	10	11	13
4	5	5	6	6
	38 30 23 15	(32° F) (50° F) 38 44 30 35 23 26 15 18 8 9	(32* F)         (50* F)         (68* F)           38         44         50           30         35         40           23         26         30           15         18         20           8         9         10	(32° F)         (50° F)         (68° F)         (86° F)           38         44         50           30         35         40         45           23         26         30         34           15         18         20         23           8         9         10         11