BENZENE



1. PERFORMANCE

2) Sampling time : 4 minutes/2 pump strokes 3) Detectable limit : 0.2 ppm (400mℓ)

3) Detectable limit 0.2 ppm (4) Shelf life 2 years 5) Operating temperature 0.2 ppm $0.2 \text{ ppm$

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. $C_6H_6 + I_2O_5 + H_2SO_4 \cdot nSO_3 \rightarrow I_2$

4. CALIBRATION OF THE TUBE

GAS CHROMATOGRAPHY

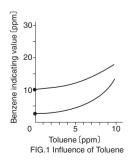
5. INTERFERENCE AND CROSS SENSITIVITY

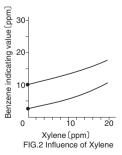
Substance		Interference	ppm	Coexistence	
Toluene	FIG.1	Yellowish brown stain is produced.		Higher readings are given.	
Xylene	FIG.2	"		"	
Carbon monoxide			50	Whole reagent is discoloured to Pale brown, the top of discoloured layer becomes unclear and higher readings are given.	
Hexane			100	"	

(NOTE)

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

 $Actual\ concentration = Temprature\ corrected\ value \times \frac{\textit{\angle}}{\text{Number of pump strokes}}$





TEMPERATURE CORRECTION TABLE

Tube	Corrected Concentration (ppm)					
Readings (ppm)	0 °C (32 °F)	10 ℃ (50 °F)	20 ℃ (68 °F)	30 °C (86 °F)	40°C (104°F)	
50	38	44	50	_	- 1	
40	30	35	40	45	50	
30	23	26	30	34	38	
20	15	18	20	23	25	
10	8	9	10	11	13	
5	4	5	5	6	6	