METHYL STYRENE



1. PERFORMANCE

1) Measuring range 10-500 ppmNumber of pump strokes $1(100\text{m}\ell)$

2) Sampling time : 1 minute/1 pump stroke

3) Detectable limit \therefore 1 ppm 4) Shelf life \therefore 3 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 : White→Yellow

2. RELATIVE STANDARD DEVIATION

RSD-low: 15% RSD-mid.: 15% RSD-high: 15%

3. CHEMICAL REACTION

A polymer of Styrene is produced by Sulphuric acid.

$$CH = CH_2$$

$$n \longleftrightarrow +H_2SO_4 \longrightarrow \left(-CH - CH_2 - \right)$$

$$CH_3$$

4. CALIBRATION OF THE TUBE

GAS CHROMATOGRAPHY

5. INTERFERENCE AND CROSS SENSITIVITY

Substance	Interference	Coexistence	
Alcohols	The accracy of readings is not affected.	The accracy of readings is not affected.	
Esters	"	"	
Aromatic hydrocarbons (except Styrene)	"	"	
Halogenated hydrocarbons	"		
Aliphatic hydrocarbons (more than C ₃)	"	"	
Styrene	Similar stain is produced.	Higher readings are given.	

TEMPERATURE CORRECTION TABLE

Tube	Corrected Concentration (ppm)					
Readings (ppm)	0 °C (32 °F)	10 °C (50 °F)	20 ℃ (68 °F)	30 °C (86 °F)	40 °C (104 °F)	
500	300	380	500	680	850	
400	270	320	400	560	730	
300	210	250	300	390	500	
200	140	160	200	250	300	
100	70	80	100	130	150	
50	30	40	50	70	80	
30	17	24	30	40	54	
10	4	6	10	12	18	