STYRENE



1. PERFORMANCE

1) Measuring range Number of pump strokes Sampling time S

4) Shelf life : 3 years 5) Operating temperature : 0 ~ 40 °C

6) Reading : Direct reading from the scale calibrated by 1 pump stroke

7) Colour change : White→Yellow

2. RELATIVE STANDARD DEVIATION

RSD-low: 15% RSD-mid.: 15% RSD-high: 10%

3. CHEMICAL REACTION

A polymer of Styrene is produced by sulphuric acid.

$$\begin{array}{ccc} CH: CH_2 & \longleftarrow CH - CH_2 - \\ H_2SO_4 + & \longleftarrow & \bigcirc \end{array}$$

4. CALIBRATION OF THE TUBE

GAS CHROMATOGRAPHY

5. INTERFERENCE AND CROSS SENSITIVITY

Substance		ppm	Interference	ppm	Coexistence
Acrylonitrile	FIG.1		The accuracy of readings is not affected.	400	Lower readings are given.
Butadiene	FIG.2	3	Similar stain is produced.	5	Uneven discolouration is produced and higher readings are given.
Formaldehyde	FIG.3		"	15	Yellowish orange stain is produced and higher readings are given.
Acetaldehyde			"	350	Similar stain is produced and higher readings are given.
Methyl alcohol			The accuracy of readings is not affected.	0.35%	Pale discolouration is produced and higher readings are given.
Ethyl alcohol			"	0.18%	"
Ethyl acetate			"	700	"
Butyl acetate			"	700	"

(NOTE)

In case of 2 pump strokes, following formula is available for actual concentration. Actual concentration = $1/2 \times \text{Reading value}$.

