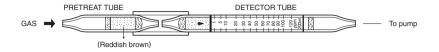
ACRYLONITRILE



1. PERFORMANCE

1) Measuring range : 1-120 ppm Number of pump strokes $2(200m\ell)$

2) Sampling time : 3 minutes/2 pump strokes

3) Detectable limit : 0.5 ppm

4) Shelf life 1 year (Necessary to store in refrigerated conditions; $0 \sim 10^{\circ}$ C)

5) Operating temperature : 0 ~ 40 °C

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

8) Colour change : Yellow → Pink

2. RELATIVE STANDARD DEVIATION

RSD-low: 10% RSD-mid.: 10% RSD-high: 5%

3. CHEMICAL REACTION

By decomposing with an Oxidizer, Hydrogen cyanide is produced. This Hydrogen cyanide reacts with Mercuric chloride, then Hydrogen chloride is liberated and PH indicator is discoloured.

 $CH_2 = CHCN + CrO_3 + H_2SO_4 \rightarrow HCN$ $HCN + HgCI_2 \rightarrow HCI$

4. CALIBRATION OF THE TUBE

GAS CHROMATOGRAPHY

5. INTERFERENCE AND CROSS SENSITIVITY

Substance	Interference	ppm	Coexistence
Hydrogen cyanide	Similar stain is produced.	2	Higher readings are given.
Methyl ethyl ketone		600	Lower readings are given.
Styrene		less than 350	The accuracy of readings is not affected.
Butadiene		200	Lower readings are given.

TEMPERATURE CORRECTION TABLE

Scale	True Concentration (ppm)						
Readings (ppm)	0 °C (32 °F)	10 °C (50 °F)	20 °C (68 °F)	30 °C (86 °F)	40°C (104°F)		
120	165	140	120	104	90		
100	142	117	100	87	77		
90	127	105	90	79	70		
80	112	93	80	70	62		
70	98	81	70	62	55		
60	84	70	60	53	48		
50	69	58	50	45	41		
40	55	46	40	37	34		
30	41	34	30	28	27		
20	26	22	20	20	20		
10	12	10	10	10	10		