TWA-TOLUENE



1. PERFORMANCE

1) Measuring range : 20-200 ppm

(1 hr.) (8 hrs.)

40-200 ppm 20-120 ppm

2) Sampling time : 8 hrs. (10 m ℓ /min.)

3) Shelf life \therefore 3 years 4) Operation temperature \therefore 10 \sim 40 $^{\circ}$ C

5) Reading : Direct reading from the scale calibrated by 8 hrs. Sampling

6) Colour change : White→Brown

2. RELATIVE STANDARD DEVIATION

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

3. CHEMICAL REACTION

Iodine pent-oxide is reduced. $C_6H_5CH_3 + I_2O_5 + H_2SO_4 \rightarrow I_2$

4. CALIBRATION OF THE TUBE

GAS CHROMATOGRAPHY

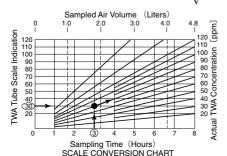
5. INTERFERENCE AND CROSS SENSITIVITY

Substance	Interference	ppm	Coexistence
Acetone	Similar stain is produced		Higher readings are given.
Xylene	"		"
Benzene	"		"
Methyl ethyl ketone	"		"
Hexane	Whole regent is discoloured to Brown.	50	Whole reagent is discoloured and readings are not be obtained.

(NOTE)

- 1) Model PM-2 personal sampler (option) ia available for this tube.
- 2) Flow Rate and Sampling Time
- (1) In case of 8 hours, sampling with 10mℓ/min., the TWA concentration can be read directly by the scale printed on the tube at the top of Brack stain.
- (2) If the sampling duration is less than 8 hours, the actual TWA concentration can be obtained graphically from the chart provided below.
- (3) If the flow rate is not $10\text{m}\ell/\text{min}$, divide the scale reading by the ratio of sampled air volume to $4800\text{m}\ell$.

Actual TWA concentration (ppm) = $I \times 4800$



 $I = Scale reading in m\ell$

V = Sampled air volume

[Flow rate $(m\ell/min.) \times Sampling duration (min.)$]

Example:

- (a) If sampling time is 5 hours and scale reading is 50, the actual TWAconcentration is 80 ppm.
- (b) If sampled air volume is 4.0ℓ, and scale reading is 50, the actual TWA concentration is 60 ppm.