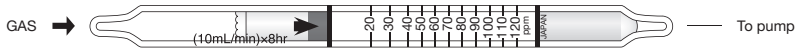
Tube No.
504

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 mℓ/min.)
3) Shelf life : 3 years
4) Operation temperature : 10～40℃
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

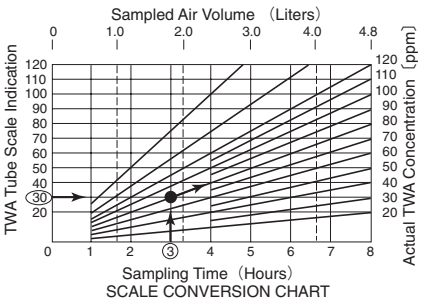
Substance	Interference	ppm	Coexistence
Acetone	Similar stain is produced	Toluene conc.×0.2	Higher readings are given.
Xylene	〃	Toluene conc.×0.7	〃
Benzene	〃	Toluene conc.×1.8	〃
Methyl ethyl ketone	〃	Toluene conc.×0.2	〃
Hexane	Whole regent is discoloured to Brown.	50	Whole reagent is discoloured and readings cannot be obtained.

(NOTE)

1) Air sampler is required 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 10mℓ/min, divide the scale reading by the ratio of sampled air volume to 4800mℓ.

Actual TWA concentration (ppm) $= I \times \frac{4800}{V}$

I = Scale reading in mℓ
V = Sampled air volume
[Flow rate (mℓ/min.) × Sampling duration (min.)]



SCALE CONVERSION CHART

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.