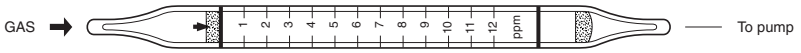
Tube No.
502

TWA-HYDROGEN SULPHIDE



1. PERFORMANCE

1) Measuring range : 1-20 ppm
(1 hr.) (8 hrs.)
2-20 ppm 1-12 ppm
2) Sampling time : 8 hrs.(6 mℓ/min.)
3) Shelf life : 1 year
4) Operating temperature : 10 ~ 30 ℃
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

By reacting with Lead acetate(II), Lead sulphide is produced.

$$H_2S + Pb(CH_3CO_2)_2 \rightarrow PbS + 2CH_3CO_2H$$

4. CALIBRATION OF THE TUBE

PERMEATION TUBE METHOD

5. INTERFERENCE AND CROSS SENSITIVITY

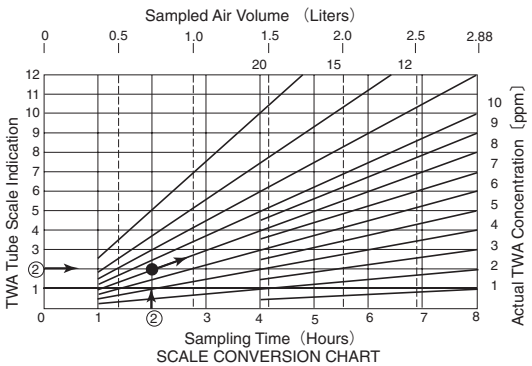
Substance	Interference	ppm	Coexistence
Sulphur dioxide		10	Higher readings are given.

(NOTE)

1) Air sampler is required for this tube.
2) Flow Rate and Sampling Time
(1) In case of 8 hours, sampling with 6mℓ/min., the TWA concentration can be read directly by the scale printed on the tube at the top of Brown 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 6mℓ/min, divide the scale reading by the ratio of sampled air volume to 2880mℓ.

$$\text{Actual TWA concentration (ppm)} = I \times \frac{2880}{V}$$

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



Example :
(a) If sampling time is 2 hours at 6mℓ/min and scale reading is 2, the actual TWA concentration is 8 ppm.
(b) If sampled air volume is 2.5ℓ and scale reading is 6, the actual TWA concentrationis 7 ppm.