

**Performance**

Measuring Range	5 to10 ppm	10 to 300 ppm	300 to 690 ppm
Number of Pump Strokes	2	1	1/2
Correction Factor	1/2	1	2.3
Sampling Time	1.5 minutes per pump stroke		
Detecting Limit	1 ppm (n=2)		
Colour Change	White → Brown		
Reaction Principle	Toluene reacts with iodine pentoxide to liberate iodine to produce brown colour. $\text{C}_6\text{H}_5\text{CH}_3 + \text{I}_2\text{O}_5 + \text{H}_2\text{SO}_4 \longrightarrow \text{I}_2$		
Coefficient of Variation	10% (for 10 to 100 ppm), 5% (for 100 to 300 ppm)		
Shelf Life	3 Years		
Corrections for temperature & humidity	Unnecessary		
Store the tubes at cool and dark place.			

**Possible coexisting substances and their interferences**

Substance	Concentration	Interference	Change colour by itself
Carbon Monoxide	≥1000ppm	2 layers	Discolours pale brown
Acetylene	≥2000 ppm	2 layers	Discolours pale brown
Xylene	≥1/5 time	Plus error	Discolours brown
Hexane	≥2000 ppm	2 layers	Discolours pale brown
Benzene	≥1/5 time	Plus error	Discolours pale yellow

**Other substance measurable with this detector tube**

Substance	Correction Factor	Pump Strokes	Measuring Range
Ethyl benzene	1.1	1	11 to 330 ppm

**Calibration gas generation** Diffusion tube method

TLV-TWA	TLV-STEL	Explosive range
20ppm	-	1.4 to 6.7%