

Benzene

C₆H₆

NO.121L



Performance

Measuring Range	0.1 to 10 ppm	10 to 65 ppm
Number of Pump Strokes	5	1
Correction Factor	1	6.5
Sampling Time	1.5 minutes per pump stroke	
Detecting Limit	0.05 ppm (n=10)	
Colour Change	White → Dark green	
Reaction Principle	Benzene reduces iodine pentoxide to liberate iodine, which produces a brownish grey in colour $C_6H_6 + I_2O_5 + H_2S_2O_7 \rightarrow I_2$	
Coefficient of Variation	10% (for 0.1 to 3 ppm), 5% (for 3 to 10 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
Alcohols	-	No error	No discolouration
Ethyl benzene	≥1	Plus error	Produces dark brown stain
Xylene	≥10 ppm	Plus error	Produces dark brown stain around zero point
Toluene	≥1	Plus error	Produces dark brown stain
Hexane	≥3 ppm	Plus error (Unclear demarcation)	No discolouration

Other substance measurable with this detector tube

Substance	Correction Factor	Pump Strokes	Measuring Range
Methylene Iodide	2.2	5	0.22 to 22 ppm
Methyl Iodide	3.2	5	0.32 to 32 ppm

Calibration gas generation Diffusion tube method

TLV-TWA	TLV-STEL	Explosive range
0.5ppm	2.5ppm	1.3 to 7.1%