

BenzeneC₆H₆ Humidity
Correction

NO. 121S

**Performance**

Measuring Range	2 to 5 ppm	5 to 120 ppm	120 to 312 ppm
Number of Pump Strokes	4	2	1
Correction Factor	0.4	1	2.6
Sampling Time	2 minutes per pump stroke		
Detecting Limit	0.5 ppm (n=4)		
Color Change	White → Brownish gray		
Reaction Principle	Benzene reduces iodine pentoxide to liberate iodine, which produces a brownish gray in color $\text{C}_6\text{H}_6 + \text{I}_2\text{O}_5 + \text{H}_2\text{S}_2\text{O}_7 \longrightarrow \text{I}_2$		
Coefficient of Variation	20% (for 5 to 40 ppm), 15% (for 40 to 120 ppm)		
Shelf Life	3 Years		
Corrections for temperature & humidity	Unnecessary		
Store the tubes at cool and dark place.			

Possible coexisting substances and their interferences (NOTE)

Substance	Concentration	Interference	Change color by itself
Hexane	100 ppm	No effect	No discoloration
Toluene	200 ppm	No effect	No discoloration
Xylene	300 ppm	No effect	No discoloration

Aromatic hydrocarbons other than benzene are trapped in the brown layer in the pretreatment tube. If the pretreatment reagent is entirely consumed (whole brown layer turns to dark brown), a higher reading will be given.

Calibration gas generation Diffusion tube method

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

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Policy Statement and Legal Notices

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