

122L

GASTEC

TOLUENE LOW RANGE DETECTOR TUBE

The Gastec Detector Tube No. 122L provides a rapid, fully quantitative analysis of the concentration of TOLUENE in air utilizing the Gastec Multi-Stroke Gas Sampling Pump.

PERFORMANCE :

Calibration Scale	2—50 ppm (based on 2 pump strokes)		
Measuring Range	1—2 ppm	2—50 ppm	50—100 ppm
Number of Pump Strokes	4	2	1
Detecting Limit*	0.5 ppm	—	—
Correction Factor	1/2	1	2
Sampling Time	1.5 minute per pump stroke		
Color Change	White—Brown		

Minimum detectable concentration

SHELF LIFE :

Please refer to the term of validity of a label of a Detector Tube Box.

MEASUREMENT PROCEDURE :

1. Break tips off a fresh detector tube by bending each tube end in the tube tip breaker of the pump.
2. Insert the tube securely into the rubber inlet of the pump with the arrow on the tube pointing toward the pump.
3. Make certain the pump handle is all the way in. Align the guide marks on handle and pump body.
4. Pull the handle all the way out until it locks on 1 pump stroke (100 ml). Wait until staining stops.
5. Read concentration at the interface of the stained-to-unstained reagent after the completion of 2 pump stroke (200 ml) sampling.
6. When the measuring concentration is over the 50 ppm, if the stain length extends over the highest calibration mark by 2 pump stroke sampling, use 1 stroke sampling (100 ml) in which case the true concentration is obtained by doubling the tube reading.
7. When the discoloration is before the first calibration mark (2 ppm) with 2 pump stroke (200 ml), repeat the above sampling procedure two (2) more times, without removing the tube, to take additional 200 ml sample. Obtain true concentration by dividing the tube reading by 2.
8. To unlock the pump, turn the handle 1/4 turn in either direction.

CORRECTION FOR TEMPERATURE, HUMIDITY AND PRESSURE :

Calibration of the detector tube No. 122L is based on a tube temperature of 20°C (68°F) and not the temperature of the gas being sampled, approximately 50% relative humidity and normal atmospheric pressure. No correction is required for tube temperatures of 0—40°C (32—104°F) and for relative humidity range of 10—90%. To correct for pressure, multiply by

760

Atmospheric Pressure (mmHg)

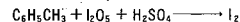
CALIBRATION AND ACCURACY :

The Gastec detector tube No. 122L is carefully calibrated as an integral part of the manufacturing process.

Calibration and accuracy test are performed using combinations of dynamic diffusion tube method, and gravimetric analysis after absorbing charcoal sampling tube and gas chromatographic technique.

DETECTION PRINCIPLE :

Toluene reduces iodine pentoxide to liberate iodine, which produces a brown color



DANGEROUS AND HAZARDOUS PROPERTIES :

Threshold Limit Value-Time Weighted Average (TLV-TWA) by A.C.I.G.H. (1998) : 50 ppm (7—8 hours)

INTERFERENCES :

Substance	Concentration	Interference	Changes color by itself to
Aromatic hydrocarbons		+	Brown
Acetylene, Ethylene, Hexane		No	
Alcohols, Esters, Ketones		No	

Water vapor is trapped in the pretreatment (pale brown) layer.

SEE OPERATING INSTRUCTION INCLUDED IN THE GASTEC MULTI-STROKES GAS SAMPLING PUMP.

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