

#132L

GASTEC
TRICHLOROETHYLENE
LOW RANGE DETECTOR TUBE

The Gastec Detector Tube No. 132L provides a rapid, fully quantitative analysis of the concentration of TRICHLOROETHYLENE in air with an accuracy tolerance of $\pm 25\%$ utilizing the Gastec Multi-Stroke Gas Sampling Pump.

PERFORMANCE :

Calibration Scale	2 - 25 ppm (based on 1 pump strokes)		
Measuring Range	1 - 2 ppm	2 - 25 ppm	25 - 70 ppm
Number of Pump Strokes	2	1	1/2
Correction Factor	1/2	1	2.8
Detecting Limit*	0.4 ppm		
Sampling Time	1 minute per pump stroke		
Color Change	Yellow — Purple		

* Minimum detectable concentration

Shelf Life :

Please refer to the term of validity on a Tube Box Label.

MEASUREMENT PROCEDURE :

- Break tips off a fresh detector tube by bending each tube end in the tube tip breaker of the pump.
- Insert the tube securely into the rubber inlet of the pump with the arrow on the tube pointing toward the pump.
- Make certain the pump handle is all the way in. Align the guide marks on handle and pump body.
- Pull the handle all the way out until it locks on 1 pump stroke (100 ml). Wait until staining stops.
- Read concentration at the interface of the stained-to-unstained reagent.
- If the discoloration is before the first calibration mark (1 ppm), take one more pump stroke without removing the tube. Obtain true concentration by dividing the tube reading by 2.
For repeated pump strokes, the handle must be turned 1/4 turn in either direction to unlock the pump so the handle can be returned to the starting position.
- If the stain exceeds the highest calibration mark, use 1/2 pump stroke. Obtain true concentration by multiplying the tube reading by 2.8.

CORRECTION FOR TEMPERATURE, HUMIDITY AND PRESSURE :

Calibration of the Gastec detector tube No. 132L 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.

- For tube temperature other than 20°C (86°F), tube reading must be corrected according to the Temperature Correction Factor below :

Temperature Correction Factor No. 132L

Temperature	°C	0	10	20	30	40
	(°F)	(32)	(50)	(68)	(86)	(104)
Correction Factor		1.4	1.2	1.0	0.9	0.8

- No correction is required for relative humidity range of 10 - 90%.

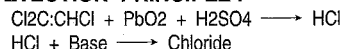
- To correct for pressure, multiply by

760

Atmospheric Pressure (mmHg)

CALIBRATION AND ACCURACY :

The Gastec detector tube No. 132L is carefully calibrated as an integral part of the manufacturing process. Calibration and accuracy test are performed using combinations of vapor pressure method or standard reference gas of known concentration, dynamic gas flow system, and wet chemical colorimetric or gas chromatographic technique.

DETECTION PRINCIPLE :**INTERFERENCES :**

Substance	Concentration	Interference	Changes color by itself to
Bromine, Chlorine		+	} Purple
Hydrogen chloride		+	
Unsaturated halogenated hydrocarbons		+	
Acetone	≤ 200 ppm	No	} No
Aromatic hydrocarbons	≤ 100 ppm	—	
Nitrogen oxides		No	

DANGEROUS AND HAZARDOUS PROPERTIES :

Threshold Limit Value-Time Weighted Average by ACGIH (1997) : 50 ppm (7-8 hours)

Threshold Limit Value-Short Term Exposure Limit by ACGIH (1997) : 100 ppm (15 minutes)

APPLICATION FOR OTHER GASES :

Substance	Correction	No. of pump strokes	Measuring range
Benzyl chloride	Factor: 0.8	2	1.6 to 20 ppm

Correction Factor :

Detector tubes are primarily designed to measure specific gases. But it is also possible to measure other substances of similar chemical properties with the aid of a correction factor or chart. A correction factor is a figure which is multiplied by the concentration interpreted from the color starting on the detector tube. The correction may also be presented as a chart on tube if the correction relationship is nonlinear. Therefore, please make use of the correction factor/chart measuring ranges as a reference. Moreover, this factor may vary slightly between production batches. For a more precise factor please contact your Gastec distributor.

TUBE MUST BE STORED BELOW 10°C (50°F). OTHERWISE SHELF LIFE WILL BE SHORTENED.

SEE OPERATING INSTRUCTIONS INCLUDED WITH THE GASTEC MULTI-STROKE GAS SAMPLING PUMP.

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