

# GASTEC Instructions for No.130L Vinylidene Chloride Low Range Detector Tube

## FOR SAFE OPERATION :

Read this manual and the instruction manual of your Gastec Gas Sampling Pump carefully.

### ⚠ WARNING:

1. Use only Gastec detector tubes in a Gastec pump.
2. Do not interchange or use non-Gastec parts or components in Gastec's detector tube and pump system.
3. The use of non-Gastec parts or components in Gastec's detector tube and pump system or use of a non-Gastec detector tube with a Gastec pump or use of a Gastec detector tube with a non-Gastec pump may result in property damage, serious bodily injury, and death; voids all warranties; and voids all performance and data accuracy guaranties.

### ⚠ CAUTION: If not observed, injuries to the operator or damage to the product may result.

1. When breaking the tube ends, keep away from eyes.
2. Do not touch the broken glass tubes, piece and reagent with bare hand(s).
3. The sampling time represents the time necessary to draw the air sample through the tube. The tube must be positioned in the desired sampling area for the entire sampling time or until the flow finish indicator indicates the end of the sample.

### △ NOTES : For maintaining performance and reliability of the test result

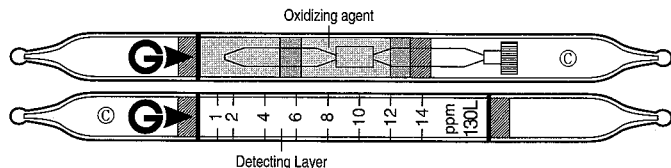
1. Use Gastec Gas Sampling Pump together with Gastec Detector Tubes only for the purposes specified in the instruction manual of the detector tube.
2. Use this tube under the temperature range of 0 - 40°C (32 - 104°F).
3. Use this tube within the relative humidity range of 0 - 90%.
4. This tube may be interfered by the coexisting gases. Please refer to the "INTERFERENCES".
5. Shelf life and storage condition of the tube are marked on the label of the box of tube.

### APPLICATION OF THE TUBE :

Use of this tube for the detection of Vinylidene chloride in air or the industrial areas and environmental atmospheric condition.

### SPECIFICATION :

(As a result of Gastec's commitment to continued improvement, specifications are subject to change without notice)



Measuring Range	0.4 - 1 ppm	1 - 14 ppm	14 - 40.6 ppm
Number of Pump Stroke	2	1	1/2
Correction Factor	0.4	1	2.9
Sampling Time	1 minute per pump stroke		
Detecting Limit	0.1 ppm (n=2)		
Color Change	Yellow → Reddish brown		
Reaction Principle	Vinylidene chloride is oxidized to form hydrogen chloride to produce reddish brown stain.		

**Coefficient of Variation :10% (for 1 to 4 ppm) , 5% (for 4 to 14ppm)**

**\*\* Shelf Life : Please refer to the Validity Date printed on the box of tube.**

**\*\* Store the tubes in the refrigerator to keep at 10°C (50°F) or below.**

### CORRECTION FOR TEMPERATURE, HUMIDITY AND PRESSURE:

1. Temperature : Temperature correction is not required.
2. Humidity : Humidity correction is not required for 0 -90%relative humidity.
3. Pressure : To correct for pressure, multiply by the tube reading by

$$\frac{\text{Tube Reading (ppm)} \times 1013 \text{ (hPa)}}{\text{Atmospheric Pressure (hPa)}}$$

### MEASUREMENT PROCEDURE :

1. For leak checking of the pump insert a fresh sealed detector tube into pump. Follow instructions provided with the pump operating manual.
2. Break tips off a fresh primary and detector tubes in the tube tip breaker of the pump.
3. Insert the tube into pump inlet with arrow (G) on the tube pointing toward pump.
4. Make certain pump handle is all the way in. Align guide marks on pump body and handle.
5. Pull handle all the way out until it locks on 1 pump stroke (100ml). Wait 1 minute and confirm the completion of the pump stroke.
6. For lower than 1 ppm measurement,repeat the above sampling produre one more time. For higher than 14ppm measurement, prepare fresh tube, then pull 1/2 pump stroke.
7. Read concentration at the interface of the stained-to-unstained reagent.
8. If atmospheric correction is needed, refer to the "Corrections for Pressure"

### INTERFERENCES :

Substance	Concentration	Interference	Change color by itself
Ethylene	≥ 300 ppm	Minus error	No discoloration
Vinyl chloride	≥ 1/7 time	Plus error	Produce Reddish brown
Tetrachloroethylene	≥ 4 times	Plus error	Produce Reddish brown
Trichloroethylene	≥ 1	Plus error	Produce Reddish brown
Toluene	≥ 500 ppm	Minus error	No discoloration
Benzene	≥ 400ppm	Minus error	No discoloration

### DANGEROUS AND HAZARDOUS PROPERTIES :

Threshold Limit Value-Time Weighted Average by ACGIH (2001) : 5 ppm

### DISPOSAL INSTRUCTION :

Reagent of the tube uses toxic chromic acid. On disposing the tube regardless of whether used or unused, follow the rules and regulations of the local government.

### WARRANTY :

If you have any questions regarding gas detection and quality of the tubes, please feel free to contact your Gastec representatives.