

GASTEC Instructions for No.6L Water Vapor 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 to the test result

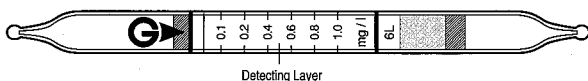
1. Use Gastec Gas Sampling Pump together with Gastec Detector Tubes only for the purposes specified in the instruction manual of the detector tube.
2. Use this tube within the temperature range of 0 - 40°C (32 - 104°F).
3. This tube may be interfered by the coexisting gases. Please refer to the "INTERFERENCES".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

APPLICATION OF THE TUBE :

Use of this tube for the detection of Water Vapor 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	(0.05) - 1 mg/l	1 - 2 mg/l
Number of Pump Strokes	1	1/2
Correction Factor	1	2
Sampling Time	30 seconds per pump stroke	
Detecting Limit	0.03 mg/l (n = 1)	
Color Change	Yellow → Purple	
Reaction Principle	Water vapor is absorbed by reagent to produce alkaline to discolor the indicator to purple. $\text{H}_2\text{O} + \text{Mg}(\text{ClO}_4)_2 \rightarrow \text{Mg}(\text{ClO}_4)_2 \cdot \text{H}_2\text{O}$	

- Coefficient of Variance : 10% (for 0.05 to 0.2 mg/l), 5% (for 0.2 to 1 mg/l)
- ** Shelf Life : Please refer to the Validity Date printed on the box of tube.
- ** Store the tubes in dark and cool place.

CORRECTION FOR TEMPERATURE, HUMIDITY AND PRESSURE :

Calibration of the Gastec detector Tube No.6L is based on a tube temperature of 20°C (66°F) and not the temperature of the gas being sampled, and normal atmospheric pressure.

- Temperature :** No temperature correction is required.
- Pressure :** To correct for pressure, multiply the tube reading by
- $$\frac{\text{Tube Reading (mg/l)} \times 1013 \text{ (hPa)}}{\text{Atmospheric Pressure (hPa)}}$$

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 detector tube in the tube tip breaker of the pump.
3. Insert the tube into the 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 the handle all the way out until it locks on 1 pump stroke (100ml). Wait 30 seconds and confirm the completion of the sampling.
6. For higher than 1 mg/l 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
Alcohols	100ppm or higher	Unclear demarcation	Greenish purple stain
Aldehydes		Unclear demarcation	Greenish purple stain
Ammonia	10ppm or higher	Unclear demarcation	Yellowish green stain
Esters		Unclear demarcation	Greenish purple stain
Ketones		Unclear demarcation	Greenish purple stain
Nitriles		Unclear demarcation	Greenish purple stain
Hydrocarbons		No effect	No discoloration
Nitrogen dioxide		No effect	No discoloration
Sulfur dioxide	100ppm or higher	No effect	No discoloration

The table of this interference gases primarily expresses the interference of each coexisting gas in the gas concentration range, equivalent to the gas concentration. Therefore, the test result may be given positive result by the other substances not listed in the table. Please contact us or our distributors in your territory for more precise information if necessary.

DISPOSAL INSTRUCTION :

Reagent of the tube does not use toxic substances. 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.

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IM006LE1
Printed in Japan
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