

GASTEC No.1LM Instructions for Carbon Monoxide 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.

⚠ 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, pieces 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

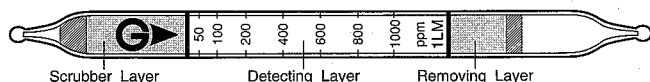
1. Use Gastec Gas Sampling Pump together with Gastec Detector Tubes only for the purposes specified in the instruction manual of the detector tube.
2. Use this tube within the temperature range of 0 - 40°C (32 - 104°F).
3. Use this tube within the relative humidity range of 0 - 90%.
4. This tube may 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 Carbon Monoxide in air or the industrial areas and environmental atmospheric condition. This tube can be used in Hydrogen coexisting atmosphere without any interference.

SPECIFICATION :

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



Measuring Range	20 - 50 ppm	50 - 1,000 ppm	1,000 - 2,000 ppm
Number of Pump Strokes	2	1	1/2
Correction Factor	1/2	1	2
Sampling Time	1.5 minutes per pump stroke		
Detecting Limit	5 ppm (n = 2)		
Color Change	White → Pale Brown		
Reaction Principle	Carbon monoxide reduces iodine pentoxide to liberate iodine to produce pale brown stain.		

- ** Shelf Life : Please refer to the Validity Date printed on the box of tube.
- ** Store the tubes in the dark and cool place.

CORRECTION FOR TEMPERATURE, HUMIDITY AND PRESSURE :

Temperature : Temperature correction is not required.

Humidity : Humidity Correction is not required.

Pressure : To correct for pressure, multiply by the tube reading by

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

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 (➔) 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 1.5 minutes and confirm the completion of the sampling.
6. For lower than 50 ppm measurement, repeat the above sampling procedure one more time.
7. Read concentration at the interface of the stained-to-unstained reagent.

INTERFERENCES :

Substance	Concentration	Interference	Change color by itself
Hydrogen		No	No
Acetylene, Olefins	≥ 1 / 20	+	} Pale brown
Propane, Butane, Hexane	≥ 1 / 20	+	

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 substance not listed in the table. For more precise information is needed, please contact us or our distributors in your territory.

DANGEROUS AND HAZARDOUS PROPERTIES :

Threshold Limit Value-Time Weighted Average by ACGIH (2002) : 25 ppm

DISPOSAL INSTRUCTION :

Reagent of the tubes use selenium and chromic acid as 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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