

GASTEC

No.75

Instructions for tert-Butyl Mercaptan Detector Tube

FOR SAFE OPERATION :

Carefully read this manual and the instruction manual of your Gastec Gas Sampling Pump.

⚠ 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. Using non-Gastec parts or components in Gastec's detector tube and pump system or using a non-Gastec detector tube with a Gastec pump or using a Gastec detector tube with a non-Gastec pump may damage your detector tube and pump system, or may cause serious injuries, or death to the end-user. It will also void all warranties, and guarantees regarding performance and data accuracy.

⚠ 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 sampling.

△ NOTES : For maintaining performance and reliability to the test results.

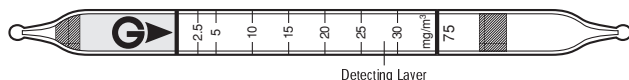
1. Use Gastec Gas Sampling Pump together with Gastec Detector Tubes only for the purposes specified in the instruction manual of the detector tube.
2. Use this tube within the temperature range of 0 - 40°C (32 - 104°F).
3. Use this tube within the relative humidity range of 0 - 90%.
4. This tube may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

APPLICATION OF THE TUBE :

Use this tube for the detection of tert-Butyl Mercaptan in air or 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	2.5 - 30 mg/m ³	30 - 60 mg/m ³	60 - 150 mg/m ³
Number of Pump Strokes	2	1	1/2
Correction Factor	1	2	5
Sampling Time	1.5 minute per pump stroke		45 seconds
Detecting Limit	0.5 mg/m ³ (n = 2)		
Colour Change	Yellow - Red		
Reaction Principle	$(CH_3)_3CSH + HgCl_2 \rightarrow (CH_3)_3CSHgCl + HCl$ $HCl + \text{Basic compounds} \rightarrow \text{Chlorides}$		

Coefficient of Variation : 10% (for 2.5 to 10 mg/m³), 5% (for 10 to 30 mg/m³)

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

**** Store the tubes in the REFRIGERATOR.**

CORRECTION FOR TEMPERATURE, HUMIDITY AND PRESSURE :

Temperature : Correct for temperature with the table below.

Temperature°C (°F)	0 (32)	5 (41)	10 (50)	15 (59)	20 (68)	25 (77)	30 (86)	35 (95)	40 (104)
Correction Factor	1.65	1.4	1.25	1.1	1.0	0.92	0.85	0.78	0.7

Humidity : No correction is not required.

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

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

MEASUREMENT PROCEDURE :

1. For checking the leakage of the pump, insert a freshly sealed detector tube into pump. Follow instructions provided with the pump operation manual.
2. Break tips off a fresh detector tube with the tube tip breaker in 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 one pump stroke (100mL). Wait 1.5 minutes and confirm the completion of the sampling. Repeat the above sampling procedure one more time.
6. For measurements higher than 30 mg/m³, prepare a fresh tube and perform one pump stroke. For measurements higher than 60 mg/m³, prepare a fresh tube and perform a half pump stroke.
7. Read concentration at the interface of the stained-to-unstained reagent.
8. If necessary, multiply the correction factors of temperature and atmospheric pressure respectively.

INTERFERENCES :

Substance	Interference	Interference gas only
Hydrogen Sulphide	+	Red
Propylene	+	Red
Other mercaptans	+	Red

Scrubber agent removes water vapour in sample. When the scrubber agent wholly discolored (consumed), the tube shows lower than actual concentration.

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. For more information is needed, please contact us or our distributors in your territory.

DISPOSAL INSTRUCTION :

Reagent of the tube uses a small amount of inorganic mercury. When disposing the tube regardless of 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.

Manufacturer : Gastec Corporation
 8-8-6 Fukayanaka, Ayase-City, 252-1195, Japan
<http://www.gastec.co.jp/>
 Telephone +81-467-79-3910 Facsimile +81-467-79-3979

IM0075E1
 Printed in Japan
 09L1Z