

GASTEC

Instructions for

No.77 tert-Buty Mercaptan and Dimethyl Sulfide simultaneous Detector Tube

FOR SAFE OPERATION :

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

⚠ 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).

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

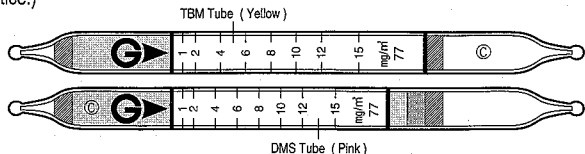
1. Use Gastec Gas Sampling pump together with Gastec Detector Tubes only for the purposes specified in the instruction manual of the detector tube.
2. Use this tube within the temperature range of 0 - 40°C (32 - 104°F).
3. Use this tube within the relative humidity range of 0 - 80%
4. This tube may be interfered by the coexisting gases. Please refer to the "INTERFERENCES".
5. If tubes are exposed to the direct sunlight, whole layer of the tube will turn to white and cannot be used for gas detection.
6. In case a sampling bag is used to collect the sample gas, conduct the gas sampling as quickly as possible not so to be intered by the other contaminants.
7. 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-Buty Mercaptan and Dimethyl Sulfide in Natural gas.

SPECIFICATION :

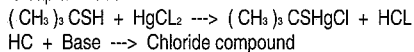
(As a result of Gastec's commitment to continued improvement, specifications are subject to change without notice.)



Detector Tube	TBM Tube	DMS Tube
Measuring Range	1 - 15 mg/m ³	1 - 15 mg/m ³
Number of Pump Strokes	1	1
Correction Factor	1	1
Sampling Time	3 minutes per pump stroke	
Detecting Limit	0.2 mg/m ³	0.2 mg/m ³
Color Change	Yellow ---> Pink	Pink ---> Pale Yellow

Reaction Principle :

ter-Buty Mercaptan Tube



Dimethyl Sulfide Tube



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

**** Store the tubes under dark and cool place.**

Correction for Temperature, Humidity and Pressure :

Temperature : Since the tube is affected by the temperature, multiply the correction factor to the tube reading.

Temperature °C	0	5	10	15	20	25	30	35	40
(°F)	32	41	50	55	68	77	86	95	104
Correction Factor	1.2	1.15	1.1	1.05	1.0	0.95	0.9	0.85	0.8

Humidity : Humidity correction is not required.

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

$$\frac{\text{Tube Reading (mg/m}^3\text{)} \times 1013 \text{ (hPa)}}{\text{Atmospheric Pressure (hPa)}}$$

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. In case a sampling bag is used to collect the sample gas, conduct the gas sampling as quickly as possible not so as to be interfered by the other contaminants.
3. Break tips off of the higher end plug of fresh detector tube in the tube tip breaker of the pump.
4. Connet (C) marked ends with rubber tubing after breaking each end.
5. Insert secondary tube securely into pump inlet with arrow on the tube pointing toward pump.
6. Make certain pump handle is all the way in. Align guide marks on pump body and handle.
7. Pull handle all the way out until it locks on 1 pump stroke (100ml). Wait 3 minute.
8. Read concentration at the interface of the stained-to-unstained reagent.
9. If atmospheric correction is needed, refer to the "Corrections for Temperature, and Pressure".

INTERFERENCES :

For tert-Buty Mercaptan Tube :

Substance	Concentration	Interference	Change color by itself
Mercaptans		Plus error	Discolor to Pink
Hydrogen Sulfide		Plus error	Discolor to Pink

For Dimethyl Sulfide Tube :

Substance	Concentration	Interference	Change color by itself
Olefins		Plus error	Discolor to Pale yellow
Tetrahydrothohen		Plus error	Discolor to Pale yellow

Hydrogen sulfide and Mercaptans do not give any effect on tube reading of DMS until the primary tube (TBM) becomes be wholly discolored.

Disposal Instruction :

Reagent of the tube contains a small amount of lead. 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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