

GASTEC No.4S

Instructions for Hydrogen Sulfide Detector Tube

FOR SAFE OPERATION :

Read this manual and the instruction manual of your 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).
3. The sampling time represents the time necessary to draw the air sample through the tube.

⚠ NOTES : For maintaining performance and reliability to the test result

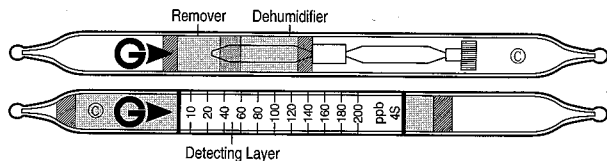
1. Use Gastec Gas Detector Tube together with Gas Sampling Device which can take sample at 150 ml/minute.
2. Use this tube within the temperature range of 0 - 40°C (32 - 104°F).
3. Use this tube within the relative humidity range of 0 - 90%.
4. This tube may be interfered by the coexisting gases. Please 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 Hydrogen sulfide 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	10- 200ppb
Sampling Method	Air Sampling Device- Motor Driven
Flow Rate	150 ml/minute
Sampling Time	5 minutes (Total 750 ml)
Color Change	Yellow → Purple
Reaction Principle	Hydrogen sulfide reacts with mercuric chloride to generate hydrogen chloride. The generated hydrogen chloride to discolor the indicator to purple. $H_2S + HgCl_2 \rightarrow HCl \quad HCl + Base \rightarrow Chlorides$

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

**** Store the tubes in refrigerator or less than 5°C.**

CORRECTION FOR TEMPERATURE, HUMIDITY AND PRESSURE :

Temperature : Temperature other than 20°C(68°F)refer to the Temperature Correction Table below :

Temperature °C (°F)	0(32)	10(50)	20(68)	30(86)	40(104)
Correction Factor	0.9	0.95	1.0	1.05	1.1

Humidity : Humidity correction is not required for range of 0 - 90% relative humidity.

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. Break tips off a fresh detector tube and analyzer tube by the tube tip breaker.
2. Connect the both tube by rubber tube marked with © supplied in each box of tube.
3. Connect the analyzer tube with arrow **G** on the tube pointing toward pump.
4. Set the air sampler pump at 150 ml/minute.
5. Push the air sampler pump to on and take sample for 5 minutes for 750 ml.
6. After 5 minutes, stop the air sampler pump.
7. Read concentration at the stained to unstained reagent of the tube.

INTERFERENCES :

Gastec Tube 4S is not given any effect by the coexisting gases of ammonia, methyl mercaptan, sulfur dioxide and nitrogen dioxide.

DANGEROUS AND HAZARDOUS PROPERTIES :

Threshold Limit Value-Time Weighted Average by ACGIH (2000) : 10 ppm

DISPOSAL INSTRUCTION :

Reagent of the tube uses toxic mercury. 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.