

# GASTEC No.4D

## Instructions for Hydrogen Sulfide Passive Dosi - Tube

### FOR SAFE OPERATION :

Read this manual carefully before use.

**⚠ CAUTION : If not observed, injuries to the operator or damage to the product may result.**

1. When breaking the Passive Dosi-Tube, 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

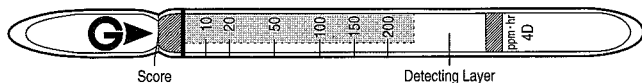
1. Use this tube within the temperature range of 0 - 40°C (32 - 104°F).
2. Use this tube within the relative humidity range of 0 - 90%
3. This tube may be interfered by the coexisting gases. Please refer to the "INTER-FERENCES".
4. Shelf life and storage conditions of the Passive dosi-tube are marked 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	0.2 - 200 ppm
Sampling Hours	1 - 48 hours
Detecting Limit	0.2 ppm (48 hours)
Color Change	White → Brown
Reaction Principle	Hydrogen sulfide reacts with lead acetate to produce lead sulfide which color is brown. $\text{H}_2\text{S} + \text{Pb}(\text{CH}_3\text{COO})_2 \rightarrow \text{PbS} + 2\text{CH}_3\text{COOH}$

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

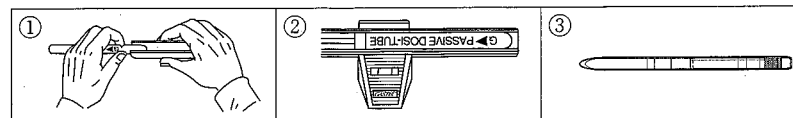
### CORRECTION FOR TEMPERATURE, HUMIDITY AND PRESSURE :

**Temperature :** Temperature correction is not required.

**Humidity :** Humidity correction is not required.

**Pressure :** Pressure correction is not required.

### MEASUREMENT PROCEDURE :



1. Break the tube at the score of the tube with Gastec Passive Dosi-Tube Holder No.710.
2. Set the Dosi-tube in the Tube Holder firmly inside the holder so the broken part is not appeared from the edge of the holder. Record the measurement starting time on the peel off numbered label in each box of the tube and put the label on the tube.
3. For personal sampling, put the dosi-tube holder to the shirt collar of the person or workplace where the measurement is required. When the sampling is finished, record the time on the label of the tube.
4. Average gas concentration can be obtained from an hour sampling. 4 - 10 hours sampling term is recommended. Calculate actual sampling time and obtain the average gas concentration can be obtained by the following formula :

$$\text{Average Concentration} = \frac{\text{Dosi - Tube Reading (ppm} \cdot \text{hour)}}{\text{Actual Sampling Time (hour)}}$$

5. To protect the tube holder of shirt collar from dropping during operation, support the tube holder with string through a small hole of the tube holder.

### INTERFERENCES :

Substance	Concentration	Interference	Change color by itself
Nitrogen dioxide	5 ppm or higher	Plus error	No discoloration by itself

### DANGEROUS AND HAZARDOUS PROPERTIES.

Threshold limit Value-Time Weighted Average by ACGIH (1998) : 10 ppm (7 - 8 hours)

Threshold limit Value-Short Term Exposure Limit by ACGIH (1998) : 15 ppm (15 minutes)

### DISPOSAL INFORMATION :

Reagent of the tube does not use toxic substance. On disposing the tube regardless of whether used or unused, follow the rules and regulations of the local government.