

# GASTEC Instructions for No.7L Phosphine 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.
3. The use of non-Gastec parts or components in Gastec's detector tube and pump system or use of a non-Gastec detector tube with a Gastec pump or use of a Gastec detector tube with a non-Gastec pump may result in property damage, serious bodily injury, and death; voids all warranties; and voids all performance and data accuracy guaranties

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

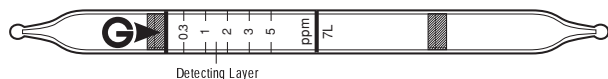
1. When breaking the tube ends, keep away from eyes.
2. Do not touch the broken glass tubes, pieces and reagent with bare hand(s).

### △ 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 10 - 90%.
4. This tube may be interfered with 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 Phosphine in air and environmental atmospheric condition.

**SPECIFICATION :** (As a result of Gastec's commitment to continued improvement,



Measuring Range	0.15 - 0.3ppm	0.3 - 5ppm
Number of Pump Strokes	10	5
Correction Factor	1/2	1
Sampling Time	1 minute per pump stroke	
Detecting Limit	0.04 ppm ( n = 10 )	
Colour Change	Pale yellow → Purple	
Reaction Principle	PH <sub>3</sub> + Au compound → Colloidal	

specifications are subject to change without notice.)

**Coefficient of Variance : 10% (for 0.3 to 1ppm),5% (for 1 to 5 ppm)**

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

**\*\* Store the tubes in dark and cool place.**

## CORRECTION FOR TEMPERATURE, HUMIDITY AND PRESSURE :

**Temperature :** No correction is required.

**Humidity :** No correction is 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 leak checking of the pump insert a fresh sealed detector tube into pump. Follow instructions provided with the pump operation 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 **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 1 pump stroke (100ml). Wait 1 minute and confirm the completion of the sampling.  
Repeat the above sampling procedure 4 more times.
6. For lower than 0.3ppm measurement, repeat the above sampling procedure 5 more times. until the stain attains to the first calibration mark.
7. Read concentration at the interface of the stained-to-unstained reagent.
8. If correction is needed, multiply the correction factors of pump strokes and pressure.

## INTERFERENCES :

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

Substance	Interference	Changes colour by itself to
Arsine	+	Purple
Germane	+	Purple
Hydrogen selenide	+	Purple
Hydrogen sulphide	+	Purple

## DANGEROUS AND HAZARDOUS PROPERTIES :

Threshold Limit Value-Time Weighted Average by ACGIH (2005) : 0.3 ppm

Threshold Limit Value-Short Term Exposure Limit by ACGIH (2005) : 1 ppm

## DISPOSAL INSTRUCTION :

Reagent of the tube does not use toxic substances. When dispose of 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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IM007LE1

Printed in Japan

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