

# GASTEC Instructions for No.121P Benzene Detector Tube

## FOR SAFE OPERATION :

Read this manual and the instruction manual of your Air 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 to the test result**

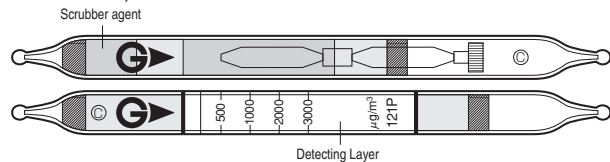
1. Recommend to use Gastec Gas Sampling device Model GSP-300FT-2 (if not available use the air sampler of equivalent to sample for 50ml/min ) together with Gastec Detector Tubes only for the purposes specified in the instruction manual of the detector tube.
2. Use this tube under the temperature range of 0 - 35°C (32 - 95°F).
3. Use this tube under the relative humidity range of 0 - 85%.
4. This tube may be interfered by the coexisting gases. Please refer to the "INTERFERENCES".
5. Shelf life and storage condition of the tube is marked on the label of the box of tube.

## APPLICATION OF THE TUBE :

Use this tube for the detection of Benzene in air of environmental atmospheric condition.

## SPECIFICATION :

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



Measuring Range	250 - 3000 µg/m <sup>3</sup>
Sampling Rate	50 ml/min
Correction Factor	1
Sampling Time	60 minutes
Detecting Limit	100 µg/m <sup>3</sup> (3000ml)
Color Change	White → Brown
Reaction Principle	Benzene reacts with formaldehyde to form a condensation polymer to discolor the reagent to brown in color.

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

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

## CORRECTION FOR TEMPERATURE, HUMIDITY AND PRESSURE :

**Temperature :** No correction is required for 0 - 35°C (32 - 95°F).

**Humidity :** No correction is not required for 0 - 85% R.H.

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

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

## MEASUREMENT PROCEDURE :

**If automatic air sample Model GSP-300FT-2 is used**

1. Prior to operation please confirm if black color inlet rubber tube holder is equipped with the sampler.
2. Break both end of the tips of the primary tube and analyzer tube by the tube tip holder supplied. Connect both tubes with rubber tubing supplied in the box of tubes.
3. Insert the analyzer tube securely into pump inlet with arrow (➔) on the tube pointing toward pump.
4. Set the flow meter 50 ml/min and timer to "60 minutes" of the sampler. Press the power switch of the sampler to start the sampling.
5. After the sampling, remove the detector tube from the sampler.
6. Read concentration from the length of discoloration of the tube.
7. If correction is needed after sampling, multiply the correction factor of the temperature, sampling volume and Pressure respectively.

## INTERFERENCES :

Substance	Concentration	Interference	Change color by itself
Hexane	500 µg/m <sup>3</sup>	No effect	No discoloration
Toluene	500 µg/m <sup>3</sup>	No effect	No discoloration
Xylene	500 µg/m <sup>3</sup>	No effect	No discoloration

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 distributors in your territory .

## DANGEROUS AND HAZARDOUS PROPERTIES :

Threshold Limit Value-Time Weighted Average by ACGIH (2003) : 0.5 ppm

Threshold Limit Value-Short Term Exposure Limit by ACGIH (2003) : 2.5 ppm

## DISPOSAL INSTRUCTION :

Reagent of the tube does not use toxic substances. On 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.

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