

GASTEC No.3D

Instructions for Ammonia Passive Dosi-Tube

FOR SAFE OPERATION :

Carefully read this manual 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 results.

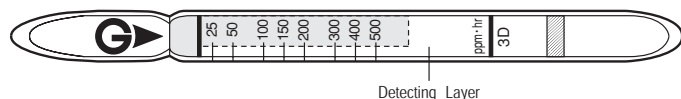
1. Use this tube within the temperature range of 0 - 40°C (32 - 104°F).
2. Use this tube within the relative humidity range of 25 - 90%.
3. This tube may be interfered with by the coexisting gases. Please refer to the "INTERFERENCES".
4. Shelf life and storage conditions of the Passive dosi-tube are marked on the label of the box of tube.

APPLICATION OF THE TUBE :

Use of this tube for the detection of Ammonia 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	2.5 - 1000 ppm
Sampling Hours	0.5 - 10 hours
Detecting Limit	0.5 ppm (10 hours)
Colour Change	Purple → Yellow
Reaction Principle	Ammonia neutralises analysing agent to discolour the indicator to yellow.

Coefficient of Variance : 10% (for 25 to 500 ppm · hr)

**** 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 : Correct for temperature by the table below :

Temperature °C(°F)	0 (32)	5 (41)	10 (50)	15 (59)	20 (68)	25 (77)	30 (86)	35 (95)	40 (104)
Correction Factor	1.34	1.25	1.15	1.08	1.0	0.95	0.9	0.85	0.8

Humidity : No correction is required.

Pressure : No correction is required.

MEASUREMENT PROCEDURE :

1. Break tip off a fresh 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 personnel 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 by the following formula:

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

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	Interference	Interference gas only
Amines, Hydrazine	+	Yellow
Aromatic amines	No	No discolouration

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, please contact Gastec or Gastec distributors in your territory.

DANGEROUS AND HAZARDOUS PROPERTIES :

Threshold Limit Value-Time Weighted Average by ACGIH (2014) : 25 ppm

Threshold Limit Value-Short Term Exposure Limit by ACGIH (2014) : 35 ppm

Explosive Range: 16 - 25 %

APPLICATION FOR OTHER SUBSTANCES :

The Gastec Passive Dosi-Tube No.3D can also be used for the following substances with each correction factor :

Substance	Correction Factor	Sampling Time	Measuring Range
Dimethyl amine	0.75	0.5 to 10 hours	1.9 - 750 ppm
N,N-Dimethylethyl amine	1.6		4 - 1600 ppm
Hydrazine	0.65		1.6 - 650 ppm
Triethyl amine	2.1		5.3 - 2100 ppm

CORRECTION FACTOR :

Detector tubes are primarily designed to measure specific gases. But it is also possible to measure other substances of similar chemical properties with the aid of a correction factor or chart. Therefore, please make use of the correction factor/chart measuring ranges as a reference. For more precise factor please contact your Gastec distributor.

DISPOSAL INFORMATION :

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 Gstec representatives.

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