

GASTEC Instructions for No.92 Acetaldehyde 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, piece and reagent with bare hand(s).
3. The sampling time represents the time necessary to draw the air sample through the tube. The tube must be positioned in the desired sampling area for the entire sampling time or until the flow finish indicator indicates the end of the sample.

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

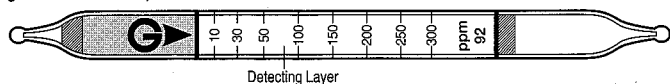
1. Use Gastec Gas Sampling Pump together with Gastec Detector Tubes only for the purposes specified in the instruction manual of the detector tube.
2. Use this tube under the temperature range of 0 - 40°C (32 - 104°F).
3. Use this tube under the relative humidity range of 0 - 90%.
4. This tube may be interfered by the coexisting gases. Please refer to the "INTERFERENCES".
5. Shelf life and storage condition of the tube is marked on the label of the box of tube.

APPLICATION OF THE TUBE :

Use this tube for the detection of acetaldehyde in industrial areas and environmental atmospheric monitoring.

SPECIFICATION :

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



Measuring Range	5 - 10 ppm	10 - 300 ppm	300 - 750 ppm
Number of Pump Stroke	4	2	1
Correction Factor	0.5	1	2.5
Sampling Time	2 minutes per pump stroke		
Detecting Limit	2 ppm (n = 4)		
Color Change	Yellow → Red		
Reaction Principle	Acetaldehyde reacts with mercuric chloride to liberate hydrogen chloride which discolors the indicator to red.		

Coefficient of Variation : 10%(for 10 to 100 ppm), 5 %(for 100 to 300 ppm)

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

**** Store the tubes in the refrigerator to keep at 10°C (50°F) or below.**

CORRECTION FOR TEMPERATURE, HUMIDITY AND PRESSURE:

1. Temperature : Temperature correction is not required.
2. Humidity : Humidity Correction is not required.
3. Pressure : To correct for pressure, multiply by the tube reading by

$$\frac{\text{Tube Reading (ppm)} \times 1013 \text{ (hPa)}}{\text{Atmospheric Pressure (hPa)}}$$

MEASUREMENT PROCEDURE :

1. For leak checking the pump insert a fresh sealed detector tube into pump. Follow instructions provided with the pump operating manual.
2. Break tips off a fresh detector tube in the tube tip breaker of the pump.
3. Insert the tube securely into 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 2 minutes. Repeat the above sampling procedure one more time and confirm the completion of the sampling.
6. For lower than 10 ppm measurement, repeat the above sampling procedure two more times.
7. For higher than 300 ppm measurement, prepare a fresh tube. Take one pump stroke.
8. If atmospheric correction is needed, refer to the "Correction for Pressure"

INTERFERENCES :

Substance	Concentration	interference	Change color by itself
Ammonia		Minus error	No discoloration
Acrolein	Higher than 3/5 times	Plus error	Produce red stain
Acetone	Higher than 2 times	Plus error	Produce red stain
Methyl ethyl ketone	Higher than 6 times	Plus error	Produce red stain
MIBK	Higher than 10 times	Plus error	Produce red stain

APPLICATION FOR OTHER SUBSTANCES:

Gastec Detector Tube No.92 can also be used for the detection of other substance below:

Tube 92 Reading(n=3)	10	30	50	100	150	200	250	(280)
Diacetyl Conc.(ppm)	25	70	130	400	700	1000	1300	1500

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.

DANGEROUS AND HAZARDOUS PROPERTIES :

Threshold Limit Value-Ceiling (TWA-C) by ACGIH (2000) : 25 ppm

DISPOSAL INSTRUCTION :

Reagent of the tube does not use toxic substances. 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.