

GASTEC Instructions for No. 109AD Oil Mist (Mineral Oils) Airtec Tube

FOR SAFE OPERATION:

Carefully read this manual and the instruction manual.

⚠ CAUTION: If you do not observe the following precautions, you may suffer injuries or damage the product.

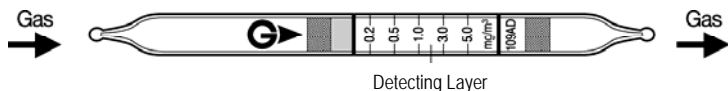
1. When breaking the tube ends, keep away from eyes.
2. Do not touch the broken glass tubes, broken pieces and reagent with bare hand(s).

⚠ NOTES: For maintaining performance and reliability of the test results, observe the following.

1. Use this tube within the temperature range of 0 - 40°C (32 - 104°F).
2. The shelf life and storage condition of the tube is marked on the label of the tube box.
3. If absolute humidity exceeds 3mg/L, the reagent will be stained yellow. However, the yellow colour does not affect the tube reading at all.

APPLICATION OF THE TUBE: To use this tube for detecting mainly mineral oils, simply connect the pressure reducer to your high pressure air source, compressor, cylinder, or air line and adjust the flow meter to the required setting.

SPECIFICATION: (Because of Gastec's commitment to continued improvement, specifications are subject to change without notice.)



Measuring Range	0.2 - 5.0 mg/m ³
Sampling Volume	20000 mL
Sampling Rate	1 litre per minute
Sampling Time	20 minutes
Colour Change	Pale red → Pale blue
Reaction Principle	Oil Mist + Cr ⁶⁺ → Cr ³⁺

Coefficient of Variation: 15% (for 0.2 to 1.0 mg/m³), 10% (for 1.0 to 5.0 mg/m³)

**** Shelf Life: Please refer to the validity date printed on the tube box.**

**** Store the tubes in a 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, use the formula below:

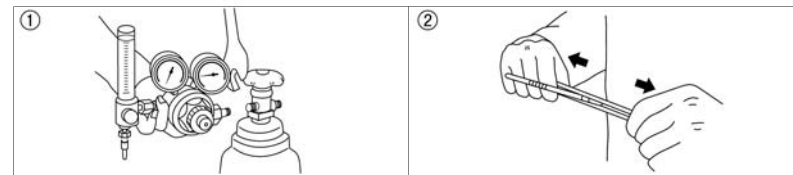
$$\frac{\text{Tube Reading (mg/m}^3\text{)} \times 1013 \text{ (hPa)}}{\text{Atmospheric Pressure (hPa)}}$$

If the sample volume exceeds the prescribed volume, compensate the tube reading with the following formula:

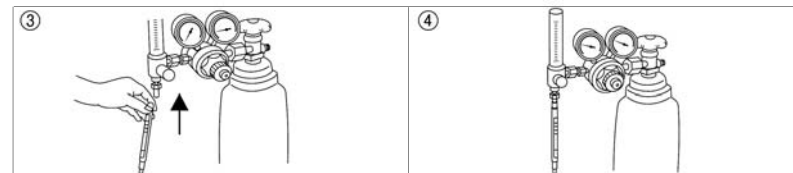
$$\text{True Concentration (mg/m}^3\text{)} = \text{Tube Reading (mg/m}^3\text{)} \times \left[\frac{20000 \text{ (mL)}}{\text{Sample Volume (mL)}} \right]$$

MEASUREMENT PROCEDURE

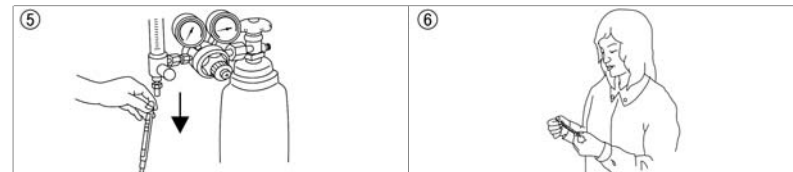
1. Attach a pressure reducer with gauge and flow metre to a cylinder, compressor or air line and adjust the flow metre to the required setting.
2. Break the tips off a fresh detector tube using the tube tip breaker and insert the tube into a tube holder.



3. Attach the rubber tube holder to the flow meter outlet. Make sure the tube arrow (➔) on the tube is pointing in the downward direction.
4. Turn on the cylinder or compressor and confirm the flow meter according to each Airtec tube specifications.
5. Time the flow rate with a stopwatch.



6. As soon as the sampling time has finished, turn off the cylinder or compressor, and remove the tube from the tube holder and then read the colour-changed layer immediately.



INSTRUCTIONS ON DISPOSAL: The reagent of the tube uses a small amount of hexavalent chromium. When disposing of the tube regardless of whether it has been used or not, follow the rules and regulations of your local government.

WARRANTY: If you have any questions regarding gas detection and the quality of the tubes, please feel free to contact your Gastec representatives.

Manufacturer: Gastec Corporation
8-8-6 Fukayanaka, Ayase-City, 252-1195, Japan
<http://www.gastec.co.jp/>
Telephone +81-467-79-3910 Fax +81-467-79-3979

IM01109ADE3
Printed in Japan
10E/D