

Step Six: For additional pump strokes, rotate the handle ¼ turn, push the plunger in without removing the tube and, then repeat **Step Four**.

Step Seven: Empty the broken glass s from the tube-tip reservoir as often as required.

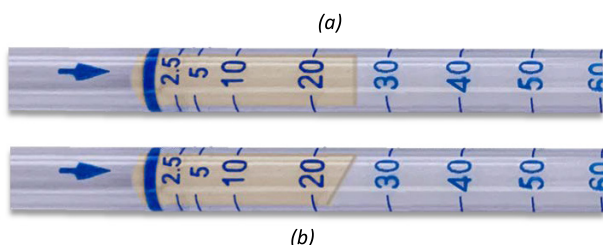
Remove cap shown here to open the reservoir to empty.



Reading Tubes

The reading (or measurement) is the furthest point along the color change **(a)**.

If the reading edge is diagonal or diffuse, use the average of the minimum and maximum values **(b)**.



Read the tube immediately after the gas sampling, as colors may change, fade, or disperse with time.

If a non-standard number of pump strokes was used for sampling, multiply the reading by the correction factor given on the Tube Data Sheet.

If humidity and temperature corrections are necessary as indicated on the Data Sheets, multiply the observed readings by the given correction factor(s) (CF) to obtain the true concentration.

Gas concentrations can be measured by the scale printed on the tube.

Extended Sampling Volumes and Ranges varying the number of strokes (volume) allows for measurement of lower and higher concentrations than printed.

Varying the stroke means that the printed scale reading must be multiplied by a correction factor (CF).



Cross-Sensitivity Cautions



- **Some compounds interfere with certain measurements.**
- **Each Tube Data Sheet lists possible interfering compounds, but others may also exist.**
- **Interfering compounds can increase or decrease the reading.**
- **Be aware of potential interferences!**

Quick Start Guide

WatchGas Colorimetric

Gas Detection Tubes & Pump v1.0|EN|28-10-24

SAFETY FIRST



Wear safety glasses and gloves when opening or handling tubes with sharp edges.



Failure to wear protective equipment may lead to cuts and other severe injuries to the eyes, hands, and face.



In the case of accidental breakage, avoid contact with tube contents.



Exposure to tube contents can result in significant health hazards.



Dispose of spent tubes according to local regulations.



Always test the pump for leaks immediately before each use.



Failure to test the pump for leakage may lead to inaccurate readings.

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The Watchgas Air Sampling Pump

WG-HP Piston Type Hand-Pump

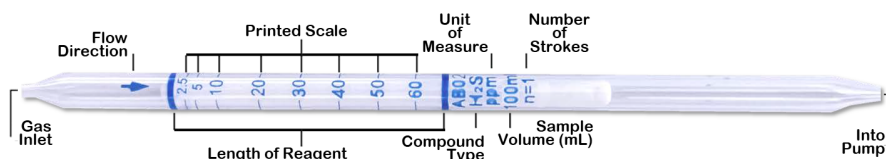


- The pump draws a fixed volume of gas - either 25, 50, or 100 mL.
- A vacuum seal is formed by a greased plunger gasket.
- Its tapered inlet accommodates for a wide range of tubes.
- An inlet filter protects the shaft from particulates.
- The handle houses an end-of-flow indicator.
- A built-in automatic counter keeps track of the number of strokes.

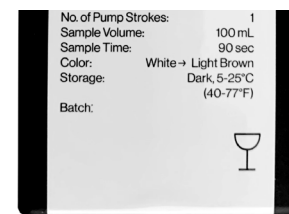
Testing the Hand-Pump for Leaks

- Insert the unopened tube into the pump inlet.
- Pull one full stroke on the plunger.
- Wait for 2 minutes.
- While holding the pump and plunger, rotate the plunger to release.
- Allow the plunger to be drawn gently back into the pump shaft.
- The plunger should return to within 3mm of its original position.

The WG-Colorimetric Tube



- Each box contains 10 tubes. Either:
 - (a) 10 Measurement tubes, or
 - (b) 5 Measurement tubes and 5 "Pre" tubes.
- Make sure to insert the tubes correctly by following the instructions on the back of the box.
- The arrow on the picture above indicates the direction of insertion and airflow.
- The concentration scale and gas type are printed on the tube.
- The number of strokes, total sample volume, and units of measure are also printed on the tube box shown below.



Measurement Procedure

Step One: Break both ends of a new detection tube using the tip breaker on the side of the pump.



Step Two: Insert the tube with the arrow pointing towards the pump.

Step Three: Select the sample volume desired and align the red dot on the plunger with the red dot on the pump shaft.



Step Four: Pull the handle sharply until it locks (25, 50, or 100 mL). Wait for the sampling time pump. tow- indicated on the specific tube data sheet to allow for the air to be drawn through the tube.



Step Five: The flow is complete when the end-of-flow indicator returns to its full brightness.