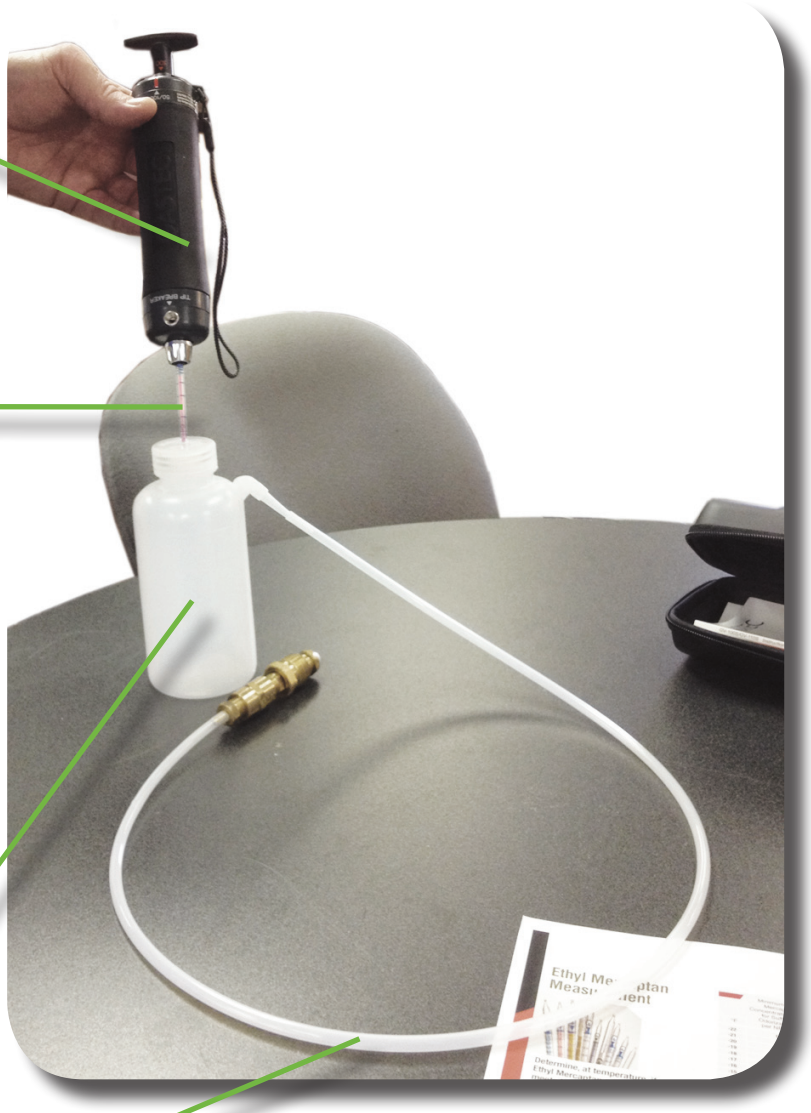
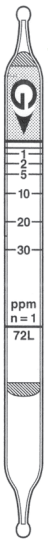
Ethyl Mercaptan Testing



GV100STR
Gastec sampling air pump for Ethyl Mercaptan testing.
(Includes carrying case & lifetime warranty).



72L (10 per box)
Direct read stain tubes for Ethyl Mercaptan testing. Single 100 ML stroke, wait 1 min. for PPM reading, color changes from yellow to red. Direct read concentration scale .05 ppm to 30 ppm.
NFPA 58 minimum recommended odorant concentration is 3.9 ppm at 68°F.
(See accompanying table for minimum recommended concentrations by temperature).

Note: 72L stain tube temperature range is 32°F to 104°F.
See back for stroke and temperature correction factors.

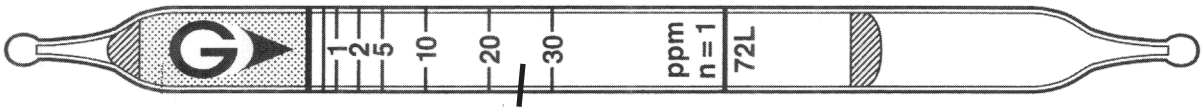
MERCAPTESTBOTTLE
500 ml plastic test bottle for Ethyl Mercaptan with hose barb. Fill with LP vapor for 30 seconds or until bottle is purged.

1/4NATTUBE
1/4" OD plastic tubing for Ethyl Mercaptan testing, sold by the foot, use with MERCAPTESTBOTTLE, and choice of hose barb fitting/connector.

3100 VeriAir Flex Sample Bag
1 liter flexible sample bag for Ethyl Mercaptan testing. Includes 1/4" brass hose barb with shut-off.
Manually inflated, 4 uses per bag, no pre-purging required.

Bergquist

OH 800-537-7518 | KY 800-448-9504 | IN 800-662-3252 | MO 800-821-3878 | MN 800-328-6291
Your questions answered by the people who know propane equipment.



Detecting Layer

Measuring Range	0.2 - 0.5 ppm	0.5 - 30 ppm	30 - 75 ppm
Number of Pump Strokes	2	1	1/2
Correction Factor	0.4	1	2.5
Sampling Time	1.5 minute per pump stroke		45 seconds
Detecting Limit	0.15 ppm (n = 2)		
Color Change	Yellow > Red		
Reaction Principle	Ethyl mercaptan reacts with acid reagent to produce red stain.		

Coefficient of Variation: 10% (for 0.5 to 5 ppm), 5% (for 5 to 30 ppm).

•• Shelf Life: Please refer to the Validity Date printed on the box of tubes.

•• Store the tubes in dark & cool place.

72L STAIN TUBE - TEMPERATURE CORRECTION FACTORS

Temperature: Correct for temperature using the table below:

Temperature °F	32	41	50	59	68	77	86	95	104
Correction Factor	1.7	1.55	1.4	1.2	1.0	0.93	0.85	0.78	0.70

MEASUREMENT PROCEDURE:

1. For leak tight check of 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 analyzer 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 handle all the way out until it locks on 1 pump stroke (100 ml). Wait 1.5 minutes and confirm the completion sampling.
6. For lower than 0.5 ppm measurement, repeat the above sampling procedure 1 more time until the stain attains to the first calibration mark. For higher than 30 ppm measurement, prepare fresh tube and take 1/2 pump stroke.
7. Read concentration at the interface of the stain-to-unstained reagent.
8. If correction is needed, multiply the correction factors of temperature and pump strokes.

2014 NFPA 58, LP-Gas Odorization

4.2

All LP-Gases shall be odorized prior to delivery to a bulk plant by the addition of a warning agent of such character that gases are detectable, by a distinct odor, to a concentration in air of not over 1/5 the lower limit of flammability.

The presence of odorant shall be determined by sniff testing or other means, and the results shall be documented as follows:

1) When LP-Gas is delivered to a bulk plant

2) When shipments of LP-Gas bypass the bulk plant

A.4.2.1

Experience has shown that ethyl mercaptan in the ratio of 1 lb. per 10,000 gallons of liquid LP-Gas has been recognized as an effective odorant.

A.4.2.3

Another method of determining the presence of odorant is the stain tube test. The method involves using a small handheld pump to draw a sample across a filled glass tube and reading the length of color change.

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