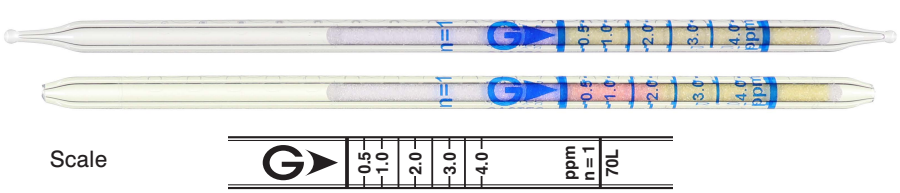
# Mercaptans R·SH

## No.70L




### Performance

This detector tube is calibrated with Methyl mercaptan.

| | | | | |
|---|---|---|---|---|
| Measuring range | 0.1 to 0.2 ppm | 0.2 to 0.5 ppm | 0.5 to 4.0 ppm | 4.0 to 8.0 ppm |
| Number of pump strokes | 4 (400 mL) | 2 (200 mL) | 1 (100 mL) | 1/2 (50 mL) |
| Correction factor | 0.2 | 0.4 | 1 | 2 |
| Sampling time | 6 min | 3 min | 1.5 min | 45 sec |

Detecting limit : 0.05 ppm (4 pump strokes)
Colour change : Yellow → Red
Operating conditions : Temperature 0 to 40 °C (32 to 104 °F) correction not used
Relative humidity 30 to 90 % correction not used
Relative standard deviation : 10 % (for 0.5 to 1 ppm), 5 % (for 1 to 4 ppm)
Tube quantity and number of tests per box : 10 tubes for 10 tests
Shelf life : 24 months

### Reaction principle

$R \cdot SH + HgCl_2 \rightarrow R \cdot SHgCl + HCl$
$HCl + Base \rightarrow Chloride$

### Possible coexisting substances and their interferences

| Substance | Concentration | Interference | Changes colour by itself to |
|---|---|---|---|
| Acid gases | | + | Red |
| Hydrogen sulphide | | No | No |

Up to 200 ppm of hydrogen sulphide is trapped in the pretreatment (white) layer.

### Substances measurable with this detector tube

| Substance | Correction factor | No. of pump strokes | Measuring range (ppm) |
|---|---|---|---|
| Butyl mercaptan | 3.2 | 1/2 | 6.4 to 12.8 |
| | 1.6 | 1 | 0.8 to 6.4 |
| | 0.64 | 2 | 0.32 to 0.8 |
| | 0.32 | 4 | 0.16 to 0.32 |
| tert-Butyl mercaptan | 2 | 1/2 | 4 to 8 |
| | 1.0 | 1 | 0.5 to 4 |
| | 0.4 | 2 | 0.2 to 0.5 |
| | 0.2 | 4 | 0.1 to 0.2 |
| Ethyl mercaptan | 2 | 1/2 | 4 to 8 |
| | 1.0 | 1 | 0.5 to 4 |
| | 0.4 | 2 | 0.2 to 0.5 |
| | 0.2 | 4 | 0.1 to 0.2 |
| Methyl mercaptan | 2 | 1/2 | 4 to 8 |
| | 1.0 | 1 | 0.5 to 4 |
| | 0.4 | 2 | 0.2 to 0.5 |
| | 0.2 | 4 | 0.1 to 0.2 |
| Propyl mercaptan | 2.4 | 1/2 | 4.8 to 9.6 |
| | 1.2 | 1 | 0.6 to 4.8 |
| | 0.48 | 2 | 0.24 to 0.6 |
| | 0.24 | 4 | 0.12 to 0.24 |

### Calibration gas generation

Permeation tube method

(Last updated: May 2026)