# Sulfuryl Fluoride 1/a

**Order No. 81 03 471**

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## Application

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|---|---|
| Standard Measuring Range: | 1 to 5 ppm |
| Number of Strokes n: | 6 |
| Time for Measurement: | approx. 3 min |
| Standard Deviation: | ± 30 % |
| Color Change: | light blue → light pink |

## Ambient Operating Conditions

| | |
|---|---|
| Temperature: | 0 to 40 °C |
| Absolute Humidity: | 15 to 90 % r.h. |

At 0 to 10 °C, concentrations of sulfuryl fluoride are displayed with approximately half sensitivity.

At 30 to 40 °C and air humidity < 30 % r.h. the displays can only be recognised as of > 2 ppm.

At 30 to 40 °C and air humidity > 75 % r. h., concentrations of sulfuryl fluoride are displayed with approximately half sensitivity.

## Reaction Principle

a) pyrolysis sulfuryl fluoride → HF

b) HF + zircon / quinalizarin → pink reaction product (HF destroys the quinalizarin/zircon complex by complexation of the zircon)

## Cross Sensitivity

Fluorinated hydrocarbons are also displayed with different sensitivities. Ammonia and other basic gases could, depending on the concentrations, either shorten or prevent the color change. The following chemicals have no influence on the display of 3 ppm sulfuryl fluoride: 2 ppm formaldehyde, 5 ppm methyl bromide and 1 ppm phosphine.

When the oxygen concentration decreases, the sensitivity decreases. For example, the 3 ppm display at 18 % oxygen is very weak.


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