Hydrogen Peroxide 0.1/a

Order No. 81 01 041

H

Application Range

Standard Measuring Range:	0.1 to 3 ppm
Number of Strokes n:	20
Time for Measurement:	approx. 3 min
Standard Deviation:	± 10 to 15 %
Color Change:	white → brown

Ambient Operating Conditions

Temperature:	10 to 25 °C
Absolute Humidity:	3 to 10 mg H_2O / L

Reaction Principle

$2\ H_2O_2 + 2\ KI \rightarrow I_2 + 2\ H_2O + O_2$

Cross Sensitivity

It is impossible to measure hydrogen peroxide in the presence of chlorine or nitrogen dioxide. Only hydrogen peroxide vapor is indicated, not the aerosols.

D-5445-2014

Hydrogen Sulfide 0.2/a

Order No. 81 01 461

Application Range

Standard Measuring Range:	0.2 to 5 ppm
Number of Strokes n:	10
Time for Measurement:	approx. 5 min
Standard Deviation:	± 5 to 10 %
Color Change:	white → pale brown

Ambient Operating Conditions

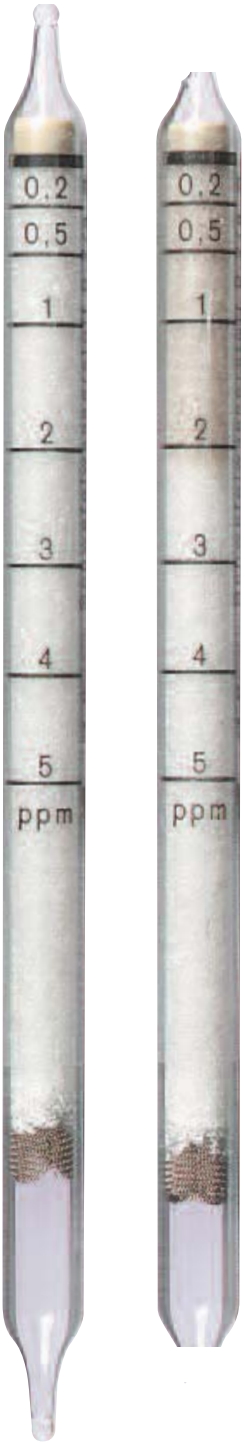
Temperature:	10 to 30 °C
Absolute Humidity:	3 to 15 mg H_2O / L

Reaction Principle

$H_2S + Pb^{2+} \rightarrow PbS + 2\ H^+$

Cross Sensitivity

Sulfur dioxide and hydrochloric acid in the TLV range do not interfere.



ST-132-2001

Hydrogen Sulfide 0.2/b

Order No. 81 01 991

H

Application Range

Standard Measuring Range:	0.2 to 6 ppm
Number of Strokes n:	1
Time for Measurement:	approx. 55 s
Standard Deviation:	± 15 to 20 %
Color Change:	yellow → pink

Ambient Operating Conditions

Temperature:	15 to 40 °C

In case of temperature between 0 °C and 10 °C, the reading has to be multiplied by 1.5; standard deviation: ± 30%.

Absolute Humidity:	max. 20 mg H_2O / L

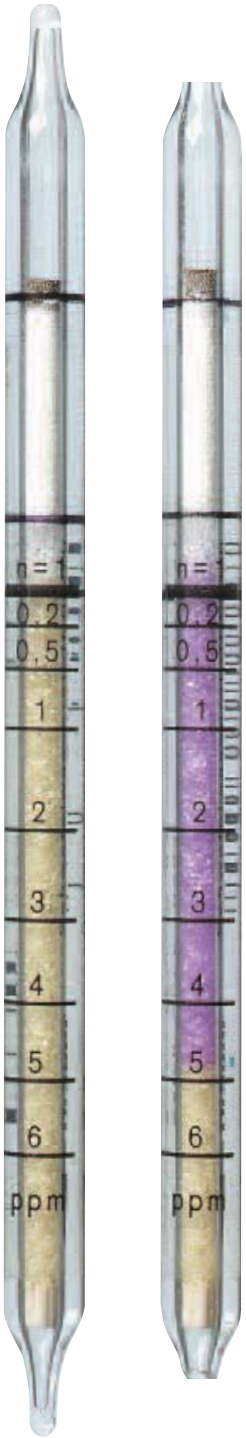
Reaction Principle

$H_2S + HgCl_2 \rightarrow HgS + 2\ HCl$

HCL + pH indicator → pink reaction product

Cross Sensitivity

Up to 1000 ppm, sulfur dioxide has no influence on the reading. Within the range of their TLV, mercaptanes, arsine, phosphine and nitrogen dioxide are also indicated, however, with differing sensitivity. Within its TLV, hydrogen cyanide changes the color of the entire indicating layer to a light orange. The reading of hydrogen sulfide is not affected.



ST-127-2001

Hydrogen Sulfide 0.5/a

Order No. 67 28 041

Application Range

Standard Measuring Range:	0.5 to 15 ppm
Number of Strokes n:	10
Time for Measurement:	approx. 6 min
Standard Deviation:	± 5 to 10 %
Color Change:	white → pale brown

Ambient Operating Conditions

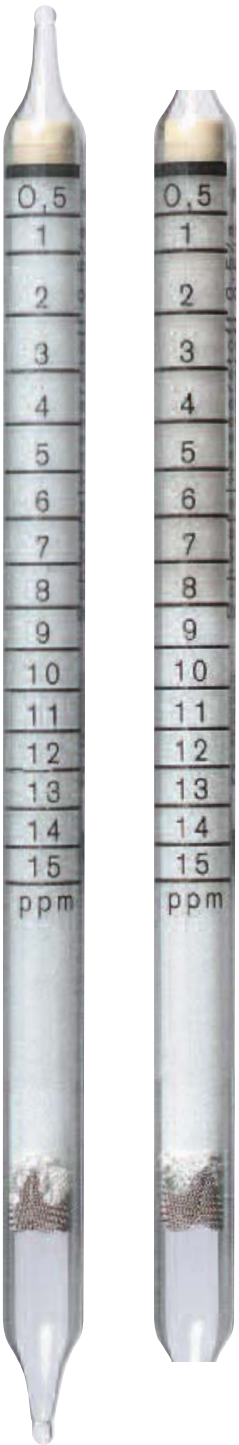
Temperature:	0 to 40 °C
Absolute Humidity:	3 to 30 mg H_2O / L

Reaction Principle

$H_2S + Hg^{2+} \rightarrow HgS + 2\ H^+$

Cross Sensitivity

No interference by:	100 ppm sulfur dioxide
	100 ppm hydrochloric acid
	100 ppm ethyl mercaptan



ST-126-2001

Hydrogen Sulfide 1/c

Order No. 67 19 001

H

Application Range

Standard Measuring Range:	10 to 200	/ 1 to 20 ppm
Number of Strokes n:	1	/ 10
Time for Measurement:	approx. 20 sec./ approx. 3 min	
Standard Deviation:	± 5 to 10 %	
Color Change:	white → pale brown	

Ambient Operating Conditions

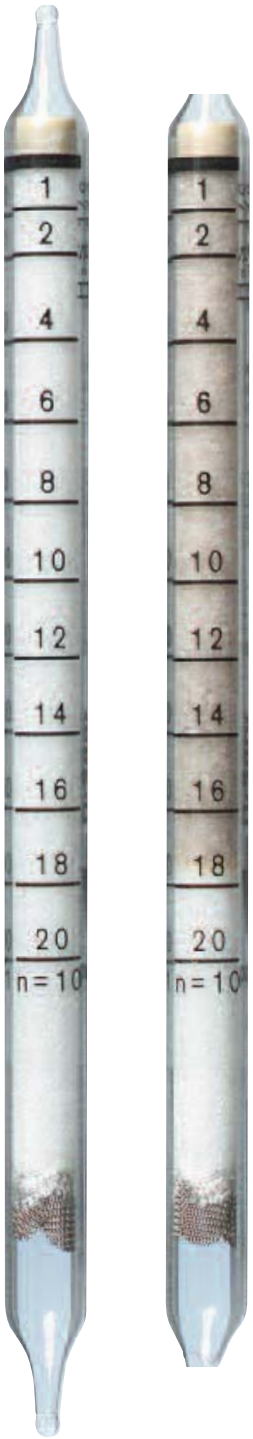
Temperature:	0 to 40 °C
Absolute Humidity:	max. 30 mg H_2O / L

Reaction Principle

$H_2S + Pb^{2+} \rightarrow PbS + 2\ H^+$

Cross Sensitivity

Should sulfur dioxide occur simultaneously in concentrations well above their TLV, this may result in plus errors of up to 50%. Sulfur dioxide alone is not indicated.



ST-130-2001

Hydrogen Sulfide 1/d

Order No. 81 01 831

Application Range

Standard Measuring Range:	10 to 200	/ 1 to 20 ppm
Number of Strokes n:	1	/ 10
Time for Measurement:	approx. 1 min	/ approx. 10 min
Standard Deviation:	± 15 %	
Color Change:	white → brown	

Ambient Operating Conditions

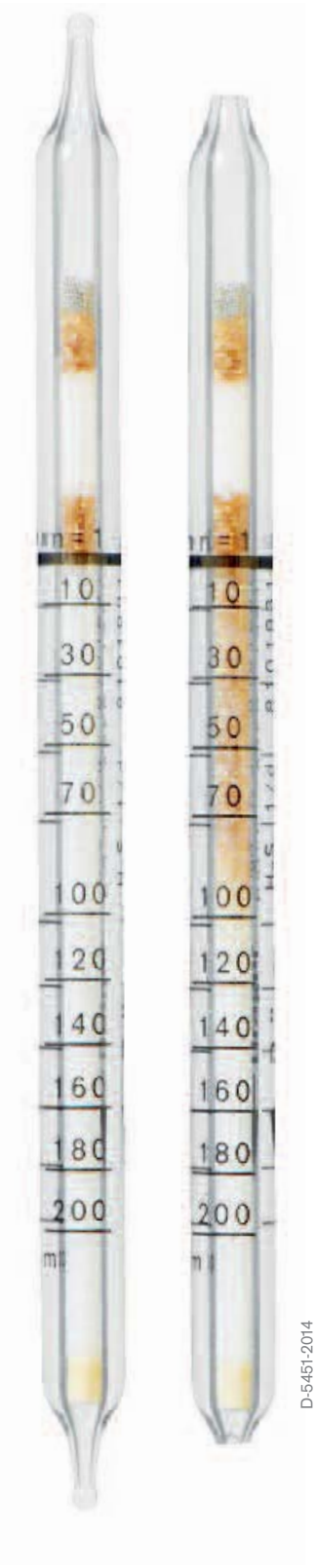
Temperature:	2 to 40 °C
Absolute Humidity:	max. 40 mg H_2O / L

Reaction Principle

$H_2S + Cu_2 \rightarrow CuS + 2H^+$

Cross Sensitivity

500 ppm hydrochloric acid, 500 ppm sulfur dioxide, 500 ppm ammonia or 100 ppm arsine do not interfere with the reading. Methyl mercaptan and ethyl mercaptan change the entire indicating layer to a pale yellow. When mixed with hydrogen sulfide, the reading is extended by approx. 30%.



D-5451-2014

Hydrogen Sulfide 2/a

Order No. 67 28 821

H

Application Range

Standard Measuring Range:	20 to 200	/ 2 to 20 ppm
Number of Strokes n:	1	/ 10
Time for Measurement:	approx. 20 s	/ approx. 3.5 min
Standard Deviation:	± 5 to 10 %	
Color Change:	white → pale brown	

Ambient Operating Conditions

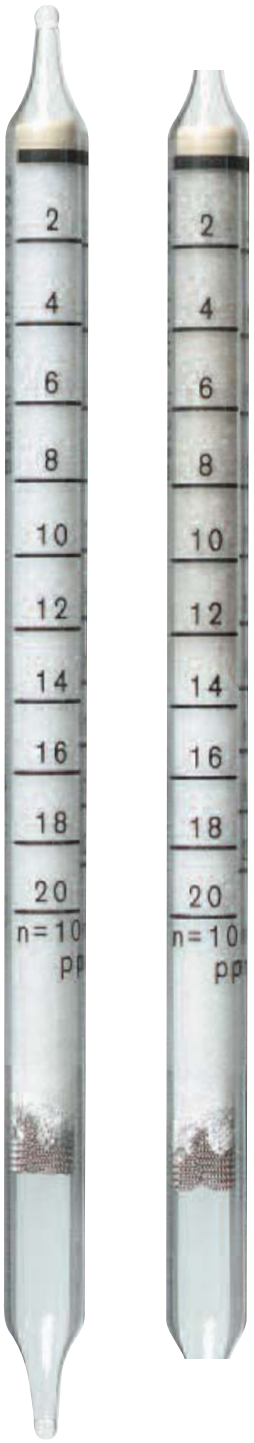
Temperature:	0 to 40 °C
Absolute Humidity:	3 to 30 mg H_2O / L

Reaction Principle

$H_2S + Hg^{2+} \rightarrow HgS + 2H^+$

Cross Sensitivity

No interference by:	200 ppm sulfur dioxide
	100 ppm hydrochloric acid
	100 ppm ethyl mercaptan



ST-133-2001

Hydrogen Sulfide 2/b

Order No. 81 01 961

Application Range

Standard Measuring Range:	2 to 60 ppm
Number of Strokes n:	1
Time for Measurement:	approx. 30 s
Standard Deviation:	± 5 to 10 %
Color Change:	white → pale brown

Ambient Operating Conditions

Temperature:	0 to 40 °C
Absolute Humidity:	max. 20 mg H_2O / L

Reaction Principle

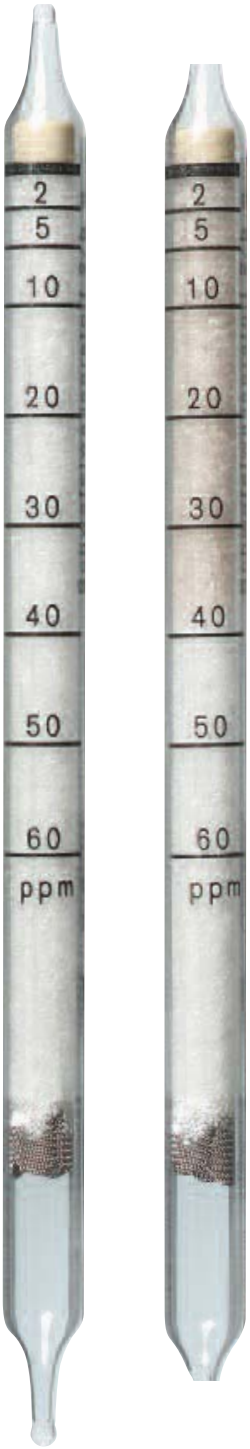
$H_2S + Pb^{2+} \rightarrow PbS + 2\ H^+$

Cross Sensitivity

Hydrochloric acid, mercaptan and sulfur dioxide in the TLV range does not interfere.

Extension of the Measuring Range

Using n = 2, divide the reading by 2; the measuring range will be 1 to 30 ppm.



ST-128-2001

Hydrogen Sulfide 5/b

Order No. CH 29 801

H

Application Range

Standard Measuring Range:	5 to 60 ppm
Number of Strokes n:	10
Time for Measurement:	approx. 4 min
Standard Deviation:	± 5 to 10 %
Color Change:	white → brown

Ambient Operating Conditions

Temperature:	0 to 60 °C
Absolute Humidity:	< 40 mg H_2O / L

Reaction Principle

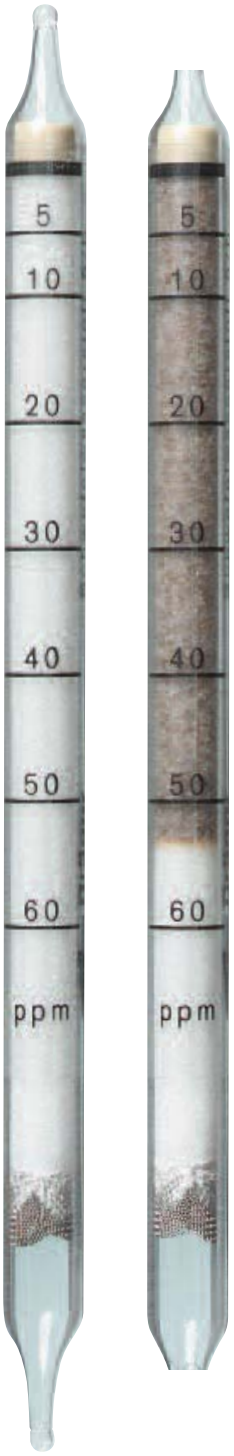
$H_2S + Pb^{2+} \rightarrow PbS + 2\ H^+$

Cross Sensitivity

Sulfur dioxide can cause plus errors of up to 50%. Sulfur dioxide alone does not discolor the indicating layer.

Extension of the Measuring Range

Using n = 1, multiply the reading by 10; the measuring range will be 50 to 600 ppm.



ST-125-2001

Hydrogen Sulfide 100/a

Order No. CH 29 101

Application Range

Standard Measuring Range:	100 to 2,000 ppm
Number of Strokes n:	1
Time for Measurement:	approx. 30 s
Standard Deviation:	± 5 to 10 %
Color Change:	white → brown

Ambient Operating Conditions

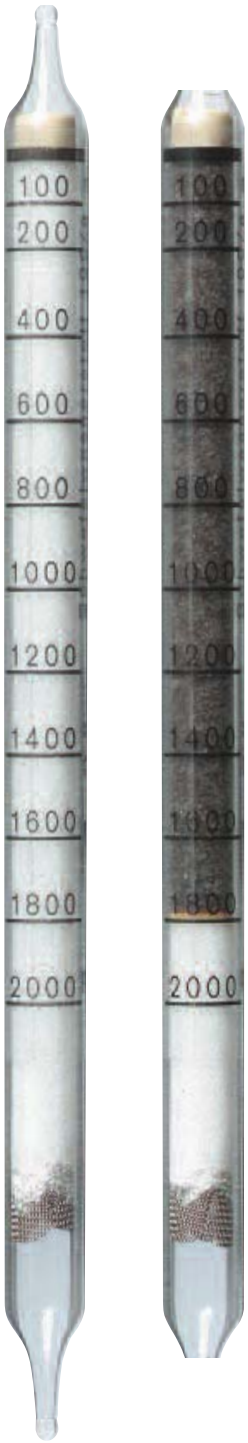
Temperature:	0 to 40 °C
Absolute Humidity:	3 to 40 mg H_2O / L

Reaction Principle

$H_2S + Pb^{2+} \rightarrow PbS + 2\ H^+$

Cross Sensitivity

No interference by:	2,000 ppm sulfur dioxide
	100 ppm nitrogen dioxide



ST-129-2001

Hydrogen Sulfide 0.2%/A

Order No. CH 28 101

H

Application Range

Standard Measuring Range:	0.2 to 7 vol. %
Number of Strokes n:	1 + 2 desorption strokes in clean air
Time for Measurement:	approx. 2 min
Standard Deviation:	± 5 to 10 %
Color Change:	pale blue → black

Ambient Operating Conditions

Temperature:	0 to 60 °C
Absolute Humidity:	max. 40 mg H_2O / L

Reaction Principle

$H_2S + Cu^{2+} \rightarrow CuS + 2\ H^+$

Cross Sensitivity

In the presence of sulfur dioxide, the indicating layer can change to a yellowish color, but the hydrogen sulfide measurement is not affected. Comparable concentrations of mercaptan will interfere with the reading.

D-13348-2010