

# EXPERTS IN ANALYSIS



Conform  
to Standard  
DIN 38405-27:  
2017-10

**H<sub>2</sub>S**  
ANALYZER

Hydrogen sulphide  
in gases and liquids

[www.ECH.de](http://www.ECH.de)

## Description

The H<sub>2</sub>S ANALYZER fulfils the requirements of the standard DIN 38405-27:2017-10: Determination of sulphide by gas extraction method (D 27).

The H<sub>2</sub>S ANALYZER creates the opportunity for analysis of hydrogen sulphide in gases and liquids in only one device.

The determination of total volatile sulphides in aqueous solutions and high viscous liquids works through high efficient gas extraction linked with a selective detection method. Thereby, interferences from the sample matrix will be minimized.

The analysis is performed fast and with high efficiency. Sample preparation is not required, therefore the reproducibility and the accuracy enhance additionally.

The dosing of the sample can either happen manually using syringe or optionally using an automated autosampler.

For extension of application the H<sub>2</sub>S ANALYZER can be upgraded with an additional module available on request: The Head Space Module is suitable for solid and pasty samples.



H<sub>2</sub>S ANALYZER

## Applications

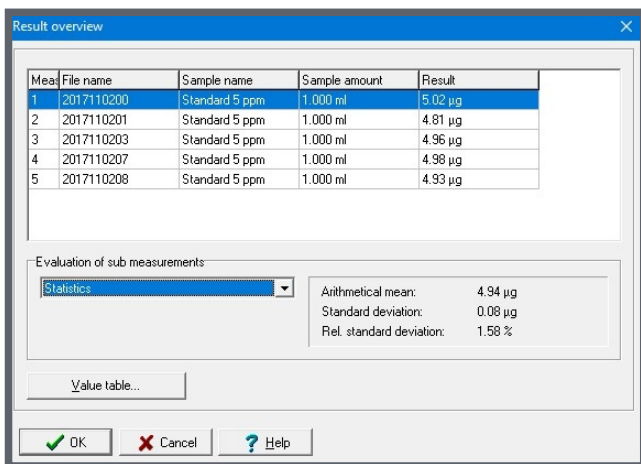
- Water, drinking water, surface water
- Municipal wastewater
- Industrial wastewater
- Monitoring of landfill-leachate
- H<sub>2</sub>S in hydrocarbon mixtures
- Gas analysis (e. g. LNG, LPG)
- Environmental applications
- Investigation of technical and pharmaceutical products (e. g. storage stability)
- Quality management



H<sub>2</sub>S ANALYZER with autosampler for liquids

## Principle

- Dosing of the sample via syringe or autosampler in the gas extracting vessel
- Fast release of the gas out of the sample after automatic addition of the acid
- Automatic transfer of the gas onto the electrochemical sensor
- Automatic integration of the measurement graph
- Results in parts per million (ppm), milligrams (mg) or, if requested, in customer specific units by using a formula generator



Meas	File name	Sample name	Sample amount	Result
1	2017110200	Standard 5 ppm	1.000 ml	5.02 µg
2	2017110201	Standard 5 ppm	1.000 ml	4.81 µg
3	2017110203	Standard 5 ppm	1.000 ml	4.96 µg
4	2017110207	Standard 5 ppm	1.000 ml	4.98 µg
5	2017110208	Standard 5 ppm	1.000 ml	4.93 µg

Evaluation of sub measurements

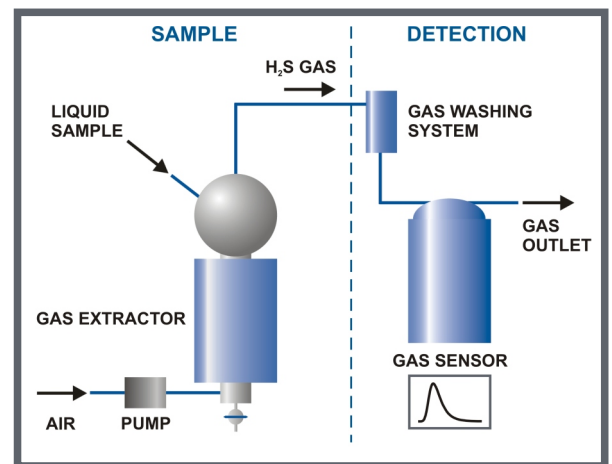
Statistics

Arithmetical mean: 4.94 µg  
Standard deviation: 0.08 µg  
Rel. standard deviation: 1.58 %

Value table...

OK Cancel Help

Table of results of a multi measurement



Functional scheme

## Extension module

### Head Space Module for determination of H<sub>2</sub>S in solid samples

The determination of volatile hydrogen sulphide (H<sub>2</sub>S) in solid and high viscous samples is easily feasible by using a manual headspace module coupled with the selective H<sub>2</sub>S ANALYZER. This Head Space Module is an additional module for all H<sub>2</sub>S-Analyzers of ECH.

Solid samples are measured by isothermal heating in a closed headspace-vial. The temperature is adjustable depending on the type of sample. H<sub>2</sub>S concentrations down to 10 ppb are detectable depending on sample weight. Sample preparation is not necessary.

As a result of the rapid determination, new opportunities are opened regarding the analysis of H<sub>2</sub>S. Simple handling of the compact device allows the usage for laboratory, process and on-site solutions, too.

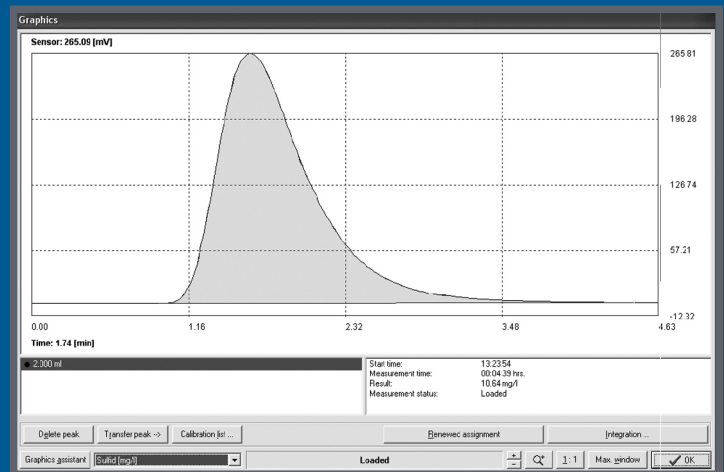


H<sub>2</sub>S ANALYZER (compact version) with Head Space Module



## Advantages

- Electrochemical sensor for precise, reproducible and sensitive micro-analysis
- Complete separation of H<sub>2</sub>S from the sample
- Fully automated analytical procedure
- Analysis of the original sample
- No sample preparation
- Definition of own methods for device control
- Simple calibration
- Dosing manually or optional fully automatic
- Minimized cross sensitivity through the indirect method
- Gas extracting technique for a fast release and separation of H<sub>2</sub>S from the sample
- Robust and fast analysis
- Software: simple, clear, intuitive



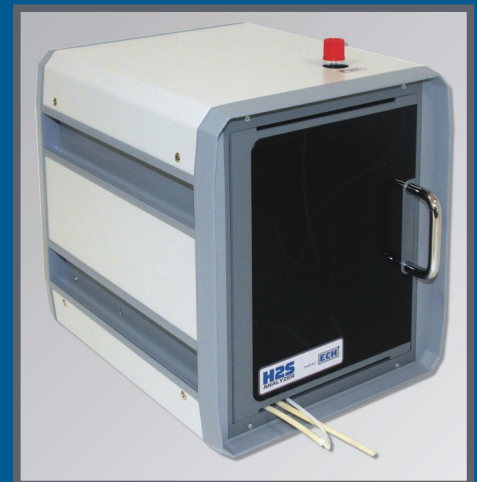
Typical measurement - automatic peak analysis / interpretation

## Specifications

Measuring range: 0.01 ... 10,000 ppm  
Resolution: 0.1 µg abs., output signal linear  
Typical duration: 1 ... 15 min (dependent on the sample)  
Sample volume: 0.01 ... 20 mL  
Gas flow: Up to 50 L/h  
Power supply: 230 V/50 Hz, 115 V/60 Hz  
Power input: 30 W

Laboratory version  
Dimensions: 480 x 390 x 290 mm (W x D x H)  
Weight: 11 kg

Compact version  
Dimensions: 260 x 310 x 300 mm (W x D x H)  
Weight: 8 kg



Compact version Cubi for on site application

## We are here for you



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