

# H<sub>2</sub>S Sensor



## Applications

- Determination of H<sub>2</sub>S in water and watery sludges without any reagent need
- Determination of Total Inorganic Sulfide (TIS) in wastewater and sludge (after acidification)

## Advantages

- No maintenance (no electrolyte, liquid junction, adjustments )
- Full Perspex unbreakable shaft
- Detection limit <0.3 ppb
- Can be connected with any common pH/mV meter



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## Technical Data

- Max.membrane impedance (glass half cell)	~100 Mohm, Ag <sub>2</sub> S half cell < 10 kOhm
- Principle	combined (direct) potentiometry <i>without</i> liquid junction and residual mV reading (Ag <sup>0</sup> /Ag <sub>2</sub> S/glass/AgHal,Ag <sup>0</sup> )
- Meter	any pH/mV (ion) meter or transmitter (input impedance > 10 <sup>12</sup> Ohm, for measuring <0.3 ug/l H <sub>2</sub> S double high impedance recommendable but not essential)
- Range	0.3 ug/l ....about 3 g/l Sulfide as H <sub>2</sub> S (detection limit <<0.3 ug/l if double high impedance pH/mV (ion) meter with +/-0.1 mV scale is used)
- Precision	+/- 0.5 mV (common pH/mV meter) or +/-4 % error
- Response	<<1 minute at > = 0.03 mg/l H <sub>2</sub> S (depending on meter)
- Accuracy	<= 15 % error in absence of oxidizing or sulfide precipitating processes
- Interference	strong oxidants (HNO <sub>3</sub> ), Hg(II), thio-urea (at very low pH)
- Max. pressure	1 bar
- Temp. range	0 ..... 50 °C
- Optimal pH	2 ..... 12
- Calibration	usually 1x per month using sulfide free <i>H<sub>2</sub>S simulating buffers</i>
- Slope	Nernstian (bi-valent <b>cationic</b> ), highly conservative (no electrolyte flow, liquid junction)
- Potential drift	usually <2 mV/month
- Sterilisation	autoclavable (only glass shaft model* with potential drift <9 mV after 30 sterilisations)
- Dimensions	full perspex <b>unbreakable</b> shaft; length from lower edge to screw cap: 147 mm (adjustable to 120 mm on request); diameter:12 mm
- Working life	depending on application, usually > 2 year
- Meter connection	- plug-in head with 13.5 mm screw threads and O-ring <b>S8</b> fixed head connection in <i>Superlene<sup>R</sup></i> full plastic armature for field-analytical applications (wastewater, aquacultural ponds <i>in situ</i> )
- Warranty	6 months

### Standard set consists of

1x combined Hydrogen Sulfide Electrode **WT 573-H<sub>2</sub>S-SX**  
1x **USER'S MANUAL**

### Option

- Sensor cable with BNC or DIN socket (please specify clearly your order max. 6 m. length)
- Armature/housing protection for field use.

### **DISCLAIMER**

This publication is not intended to form the basis of a contract and WATER TEST Co., Ltd. reserves the right to amend the design and specifications of the instruments without notice.