



Sensors "Au-Sensor"



PRODUCT DESCRIPTION

The sensors of the "Au-Sensors" line are three electrode electrochemical cells with a gold working electrode. Similar to the "G-sensors" line these miniaturized sensor have a silver pseudoreference electrode and a graphite counter electrode.

The screen-printed gold surface presents electrochemical properties similar to those of bulk gold electrodes, allowing many applications of the Au-sensors, and overcoming the problem related to electrode surface cleaning and regeneration.

Each electrode is produced by screen-printing technology and constitutes of a circular gold working electrode (3 mm diameter), a silver pseudoreference electrode and a graphite counter electrode. The miniaturized electrode dimensions allow for the use of these devices with small sample volumes while their low cost permit disposable use.

The special planar shape permit the use of the sensors as "drop-on" devices, avoiding the waste of reagents and samples.

TECHNICAL SPECIFICATIONS

Dimensions: 0.8 x 4.5 cm

Working electrode dimensions: 7.06 mm²

Thickness: 450 μm

Connection system: Standard connector 2.54 mm pitch (upon request)

Coefficient of variation (CV) (n = 10): 7 %

APPLICATIONS

1. Applications requiring a gold working electrode
2. Heavy metal detection (Cd, Pb, Cu, Hg) with mercury-free systems
3. Determination of As using Anodic Stripping Voltammetry (ASV)
4. Development of DNA based biosensors through the formation of SAMs (Self Assembled Monolayers)
5. General biosensor applications (enzymatic biosensors, immunosensors)

APPLICATION ADVICES

The silver pseudoreference electrode shows higher stability in the presence of chloride ions. Hence, it is recommended that measurements are carried out in solutions with a chloride ion concentration of at least 10 mM. For some applications, in particular those regarding the formation of SAMs, it is preferable to carry out an electrochemical pretreatment using sulfuric acid.