

HANGING PLATINUM DROP ELECTRODE

Type: HPDE

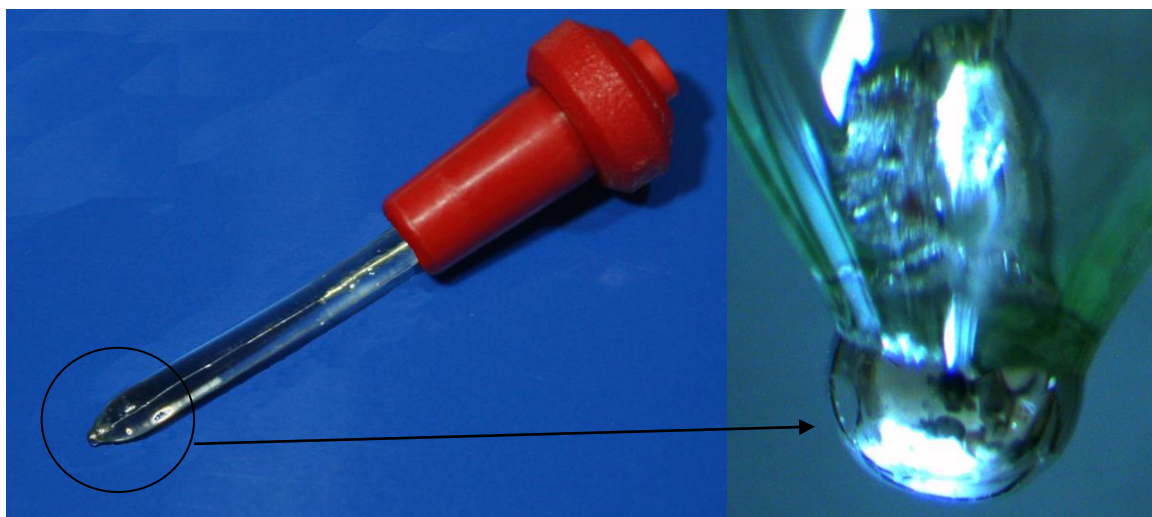
Description

Well known hanging mercury drop electrode (HMDE) is powerful tool in electrochemistry. The mercury drop has nearly ideal spherical surface. It eliminates the influence of surface inhomogenities on the electrochemical response. And more, the surface of HMDE has nearly ideal spherically symmetric surface which enables mathematical treatment of its response. The only substantial problem of HMDE is mercury toxicity.

Hanging platinum drop electrode (HPDE) is solid phase analogy of HMDE. The drop of liquid Pt at 2000 °C forms a drop of Pt. The surface of HPDE has nearly ideal surface which is impossible to obtain using polishing. HPDE has also spherical symmetry which enables mathematical treatment of its response. The material is not toxic and it is chemically stable. The only disadvantage is HPDE cleaning, which can be, however, in some cases solved by careful insertion of the electrode tip to the flame of alcohol burner.

Thus HPDE can be used as reference electrode for complicated electrochemical studies, where is necessary distinguish analytical signal from the signal generated by surface inhomogenities.

Hanging platinum drop electrode (HPDE) is designed for measurements with thermostated cell TC4, TC5, TC6, TC9.



electrode detail

Physical Parameters

Dimensions:

Length: 53 mm

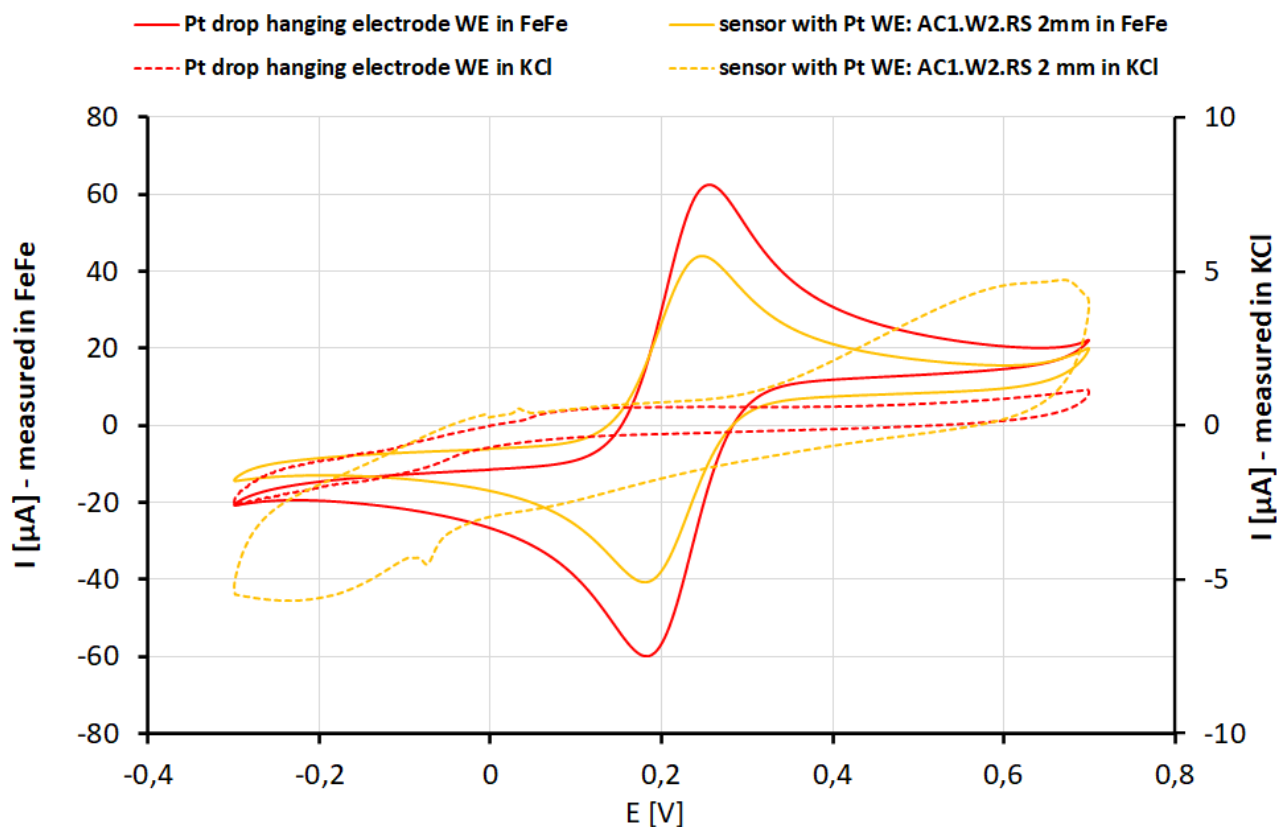
Diameter: 11 mm

Weight: 6 gms

Electrode material

HPDE Hanging platinum drop electrode - Pt

Typical Sensor Response



Measurement specification:

- Cyclic voltammetry, scan rate: 50 mV/s, potential range: -0,3 to +0,7V
- Temperature: 20 °C
- Working electrode: Pt drop hanging electrode (HPDE)
 sensor with Pt WE: AC1.W2.RS 2 mm

All measurements performed with ERS (external reference system - stable)

- Reference electrode: RCEc.RS.R5
 (external Ag/AgCl electrode (filled with 1M KCl))
- Auxiliary electrode: ACEc
 (external Pt electrode)

Chemicals:

- FeFe: 0.005M $K_3[Fe(CN)_6]$ + 0.005M $K_4[Fe(CN)_6]$ in 0.2M KOH

Ordering Information

- The order is specified by whole product code
- Minimum order quantity - 1 electrode
- Delivery time for standard HPDE electrode is 4 weeks from receipt of order
- Delivery time for non-standard HPDE electrode depends on final technical specification of order

Example of Order: - 1piece - HPDE

Connecting cable

Look at the cables catalog, and choose the one you need.