



These disposable **Screen-Printed Carbon Electrodes** (SPCEs) modified with **Nickel (II) Oxide (NiO)** have been developed for working with microvolumes and for decentralised assays.

Among other applications, Nickel (II) Oxide SPCEs are designed as **electrocatalysts** for the electrochemical oxidation of small organic molecules such as **carbohydrates, aminoacids and alcohols**.

Ceramic substrate: L33 x W10 x H0.5 mm

Electric contacts: Silver

The electrochemical cell consists on:

Working electrode: Nickel (II) Oxide / Carbon (4 mm diameter)

Auxiliary electrode: Carbon

Reference electrode: Silver

Ni (II) Oxide SPCEs are commercialised in 50 units pack. They should be stored at room temperature in a dry place.

Recommended conditions of use

In order to obtain the best results in catalytic processes, as described above, it is recommended an electrode pre-treatment before you start working with it.

The pre-treatment conditions are described below:

Electrochemical Method: Cyclic Voltammetry

Supporting electrolyte: NaOH 0.1M (50 μ L)

Conditions:

$t_{eq} = 3''$; $nScan = 15$

$E_0 = + 0.1 \text{ V}$; $E_{vrtx,1} = + 0.7 \text{ V}$; $E_{vrtx,2} = + 0.1 \text{ V}$

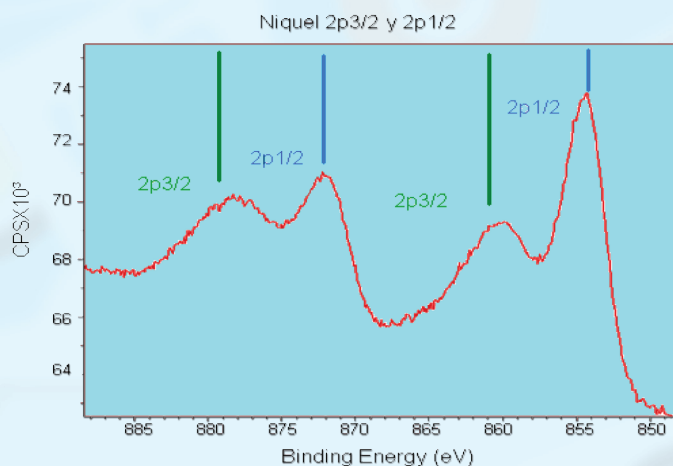
$E_{step} = 2 \text{ mV}$; $S_{rate} = 50 \text{ mV/s}$

Then wash the electrode with ultrapure water.

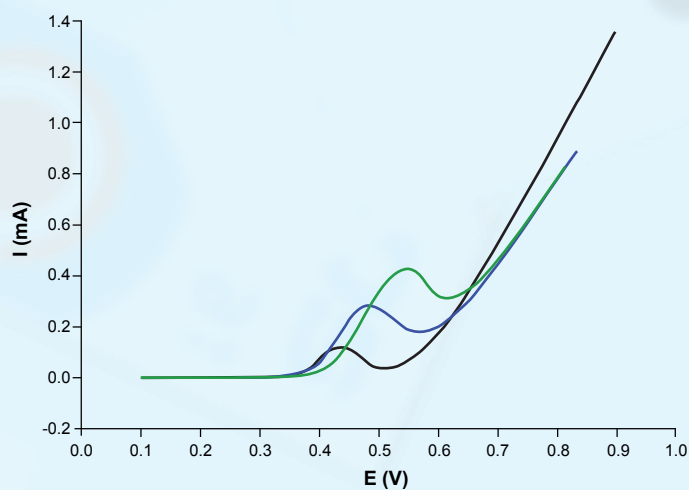
Nickel Oxide modified Screen-Printed Carbon Electrodes

Ref. 110NI

XPS spectra of nickel oxide screen-printed carbon electrode



Electrocatalytic behaviour of Nickel (II) Oxide SPCEs



Cyclic voltammograms of DRP-110NI obtained in 0.1 M NaOH, in absence (black curve) and presence of 3 mM (blue curve) and 5 mM (green curve) glucose.

Also, specific **connectors** that act as an interface between the screen-printed electrode and any potentiostat (ref. DSC, CAC) and other accessories are available at [DropSens](http://www.dropsens.com).

Related products



DSC



CAC



FLWCL



CELL



STAT400



STAT8000

Full Catalogue



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