

Surface Enhanced Raman Spectroscopy Screen-Printed Electrodes (Silver, Gold BT and Copper electrodes)

Ref. SERSMIX

Surface-enhanced Raman Spectroscopy (SERS) is a surface-sensitive technique that enhances Raman scattering by molecules adsorbed on rough metal surfaces. The enhancement factor is so powerful that the technique may detect single molecules. **Electrochemical SERS** using Screen-Printed Electrodes in order to generate SERS in solution, have shown outstanding properties for SERS. Screen-Printed Electrodes (SPEs) of various materials such as Silver, Gold, Copper... make the technique more sensitive and cost effective in comparison with other SERS substrates.

Ceramic substrate: L33 x W10 x H0.5 mm

Electric contacts: Silver

The electrochemical cell consists of:



Ref. 010

Working electrode: **Silver**
Counter electrode: Carbon
Reference electrode: Silver



Ref. 220BT

Working electrode: **Gold BT**
Counter electrode: Gold BT
Reference electrode: Silver

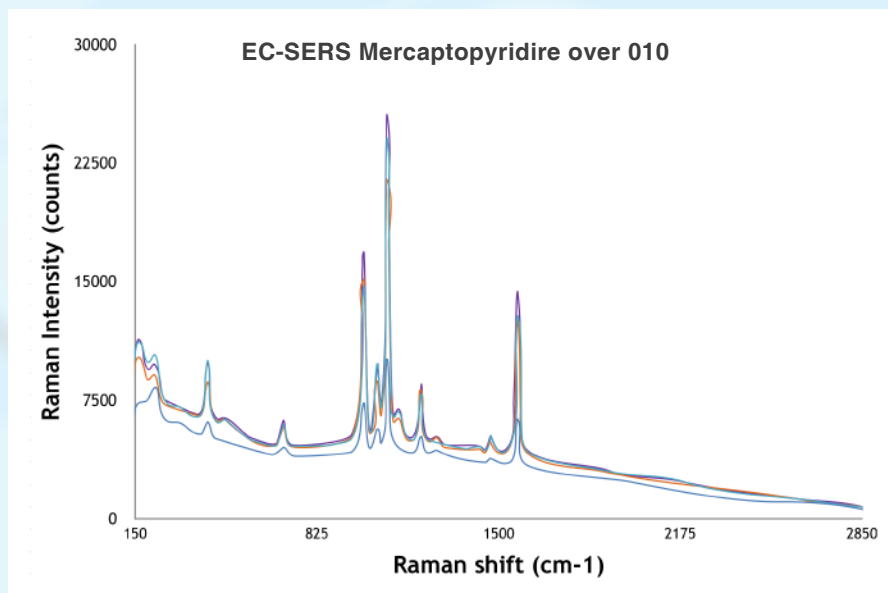


Ref. CU10

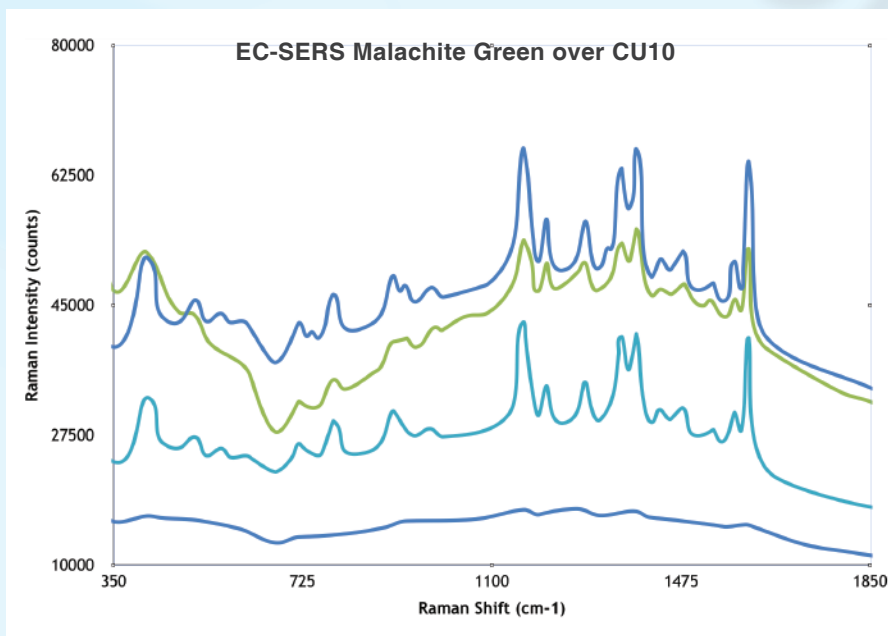
Working electrode: **Copper**
Counter electrode: Carbon
Reference electrode: Silver

Ref. **SERSMIX** is commercialised in 50 units packs mixing 20 units of refs. 010 and 220BT, and 10 units of CU10. They should be stored at room temperature, protected from light in a dry place.

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



250 ppb 4-mercaptopyridine in 0.1M KCl over screen-printed silver electrode (ref. 010). Experimental conditions:
Cyclic Voltammogram $E_0=0.3V$, $E_{vtx1}=-0.4V$, $E_{vtx2}=0.3V$, Step potential= 2 mV, Scan rate= 50 mV/s;
Raman's experiment parameters: Integration time 2 s, Laser power= 0.6 V.



50 ppb Malachite Green over thick-film copper electrode (ref. CU10). Experimental conditions:
Cyclic Voltammogram $E_0=0.3V$, $E_{vtx1}=-0.9V$, $E_{vtx2}=0.3V$, Step potential= 2 mV, Scan rate= 25 mV/s;
Raman's experiment parameters: Integration time 8 s, Laser power= 0.35 V.

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Full Catalogue



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