

BVT Carbon(Graphite) SPE - W4 and W5 Differences

AC1.W4. with screen printed Carbon(Graphite) WE and AUX/CE

- The printed layer has a working and auxiliary electrode made of Carbon(Graphite), the dielectric layer is made of polymer.
- The printed Carbon(Graphite) working electrode has better properties in terms of surface reproducibility but has greater resistance between the electrode and the measuring device. The polymeric binder of the active layer has limited resistance to organic solvents and sonification.

AC1.W5. with manually microdispensed Carbon(Graphite) WE (Au+Pt alloy AUX/CE)

- The coated layer is made by microdispensing. Only the working electrode is made of Carbon(Graphite), the auxiliary/counter electrode is made of another material (Au+Pt alloy), the dielectric layer is usually ceramic.
- The manually applied Carbon(Graphite) working electrode has better properties in terms of conductivity between the active surface and the input of the device, but it is not possible to ensure reproducibility of the surface in same level as in screen printing.

What is Microdispensing

- Microdispensing is when a precise amount of Carbon(Graphite) is applied (manually) as a drop by a specialised syringe, on to printed layer (Generally an Au+Pt alloy).
As can be seen in the image.

