

EPSIS 240 Upgrade

EPSIS 240II (hardware)
EPSISoft Release 2.0 (software)

*We at ABTECH are delighted to announce the release of the new **EPSIS 240 II** (hardware) and new **EPSISoft Release 2.0** (software). The attached brochure fully describes the developments in these hardware and software products for Electroconductive Polymer Sensor Technology.*

EPSIS™ 240II CS

B i o s e n s o r A s s a y s

ELECTROCONDUCTIVE POLYMER SENSOR INTERROGATION SYSTEM

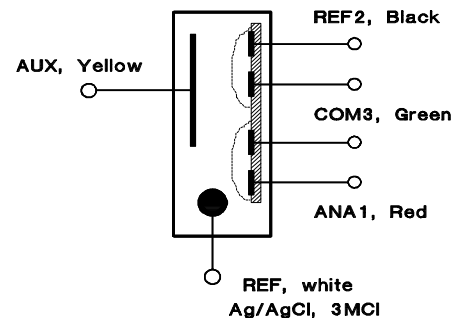
The new EPSIS 240II now boasts a new hardware configuration for software selectable two electrode and three electrode modes of sensor interrogation. This is a key and important development. With the two electrode mode, the user may now reliably and conveniently interrogate conductive polymer gas and vapor phase analytes -- useful in the development of electronic noses and VOC sensors -- without resorting to previous electrode patch-ins.



EPSIS continues, in three-electrode mode, to offer its innovative electroconductive polymer sensor interrogation configuration that allows for a three phase sequence of sensor interrogation:

- A *Potentiometric* read of the open circuit potential of the electroconductive polymer sensor device.
- A impressed potential that serves as an *Initialization* of the contiguous electroconductive polymer film, oxidizing or reducing it to a user prescribed level of electrical conductivity.
- Multiplexing between two distinct sensor elements (analyte and reference) to obtain analyte and blank or analyte and standard response signals during *Interrogation*.
- Simultaneous **Potentiometric Response** and **Conductimetric Response** in three electrode mode and Conductimetric Response in two electrode mode.

The traditional three electrode (3E) mode is customarily used in aqueous solutions with a suitable reference electrode (such as the miniature Ag/AgCl/3 M Cl⁻ sold by ABTECH) for the development of chemical and biological sensors for solution phase analytes. The two electrode (2E) mode is used in situations where a reference electrode is not feasible, such as in gas and vapor phase testing.

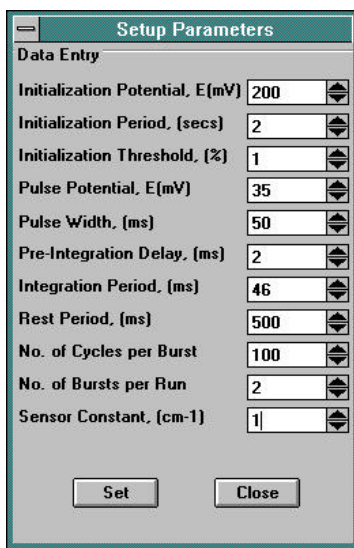


EPSISoft[®] v.2.0

Instrument Control and Data Acquisition

EPSISoft 2.0 is now fully Windows compatible with features that take advantage of all Microsoft Windows[®] capabilities.

New EPSISoft features include:



■ Setup Parameters

Window that allows the user to configure the sensor interrogation protocol to best suit the sensitivity and response rate needs of the chemical or biological assay.

■ **Real time display** of the conductimetric (change in electrical conductivity) and or potentiometric (change in electrode potential) response of the sensor.

■ **First derivative plots** of conductimetric rate and potentiometric rate response of the sensor.

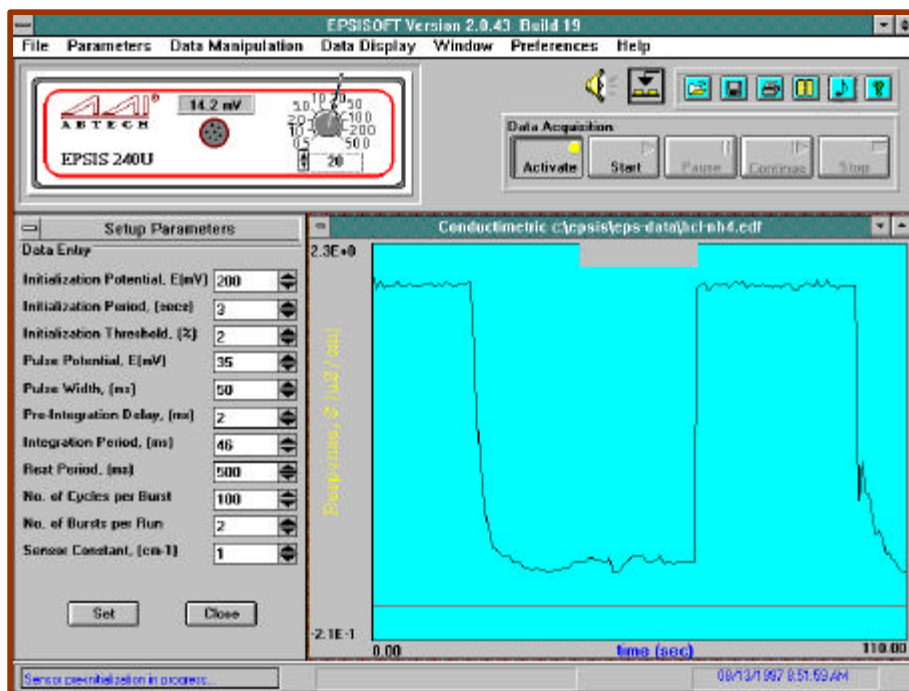
■ **Software selectable mode** selection that allows for user selectable two and three electrode mode.

■ **Built-in Notepad access** for note taking during the course of an experiment.

■ **Data manipulation functions** such as: Zoom, Read Point, Overlay files, and Subtract files.

■ Continuous flow cell

operation with multiple initialization and interrogation sequences combined to yield a series of data collection bursts. This allows EPSIS to be used in a gas or liquid flow-cell environment with continuous data capture for up to several hours, even days.



ELECTRODES AND ACCESSORIES

ABTECH continues to supply you with your sensor and sensor substrate needs.

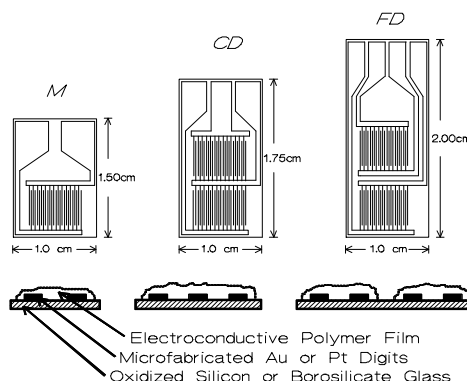
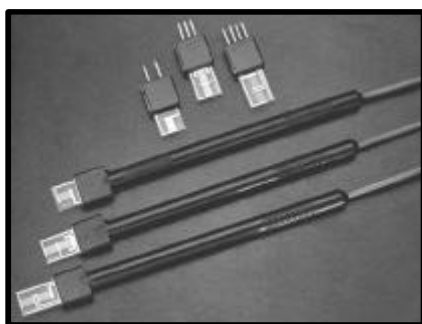
These include microfabricated interdigitated microsensor electrodes (IMEs), electroconductive polymer microsensor electrodes (EPMEs) [*polyaniline, polypyrrole and poly(3-hexylthiophene)*], and biotransducers of electroconductive polymers possessing surface functional groups for bioimmobilization:

■ Microfabricated Interdigitated Microsensor Electrodes (IMEs)

<i>Conductive Materials:</i>	Au, Pt, ITO
<i>Substrate Materials:</i>	Borosilicate Glass
<i>Line and Space Dimensions:</i>	5, 10, 15 μm
<i>Chip Dimensions:</i>	1.0 cm (wide) x 1.75 cm (long) x 0.05 cm (thick)
<i>Chip Designs:</i>	M, CD, and FD
<i>Delivery:</i>	packaged (as an electrode) or un-packaged (bare chip)

■ IME Accessories

Four-point pinch clip cable (1 ft or 3 ft) to pin (P) or banana (B) connectors **Part No. SA-1 or 3, P or B**
 Four-point pinch clip electrode to pin connectors **Part No. SA-E**



■ Flow Cell Products

IME Liquid Flow Cell Detector and IME Flow Cell Sensors

Liquid Flow Cell Sensor	GOLD	PLATINUM	ITO
Full Differential, packaged	IMELC Au-1010.3-FD	IMELC Pt-1010.3-FD	IMELC ITO-1010.3-FD

IME Gas/Vapor Flow Cell Detector

Gas/Vapor Flow Cell Sensor	GOLD	PLATINUM	ITO
Full Differential, packaged	IMEGV Au-1010.3-FD	IMEGV Pt-1010.3-FD	IMEGV ITO-1010.3-FD
Full Differential, packaged	IMEGV Au-1050.5-FD	IMEGV Pt-1050.5-FD	IMEGV ITO-1050.5-FD

■ Other Electrode/Sensor Products

- Miniature Ag/AgCl, 3 M Cl⁻ Reference Electrode Model RE 803
- Miniature pH Electrode Model CPE 905
- Planar Metal Electrodes (PME): Gold (PME-Au) and Platinum (PME-Pt)
- IQ 200 ISFET pH Sensor/Thermometer