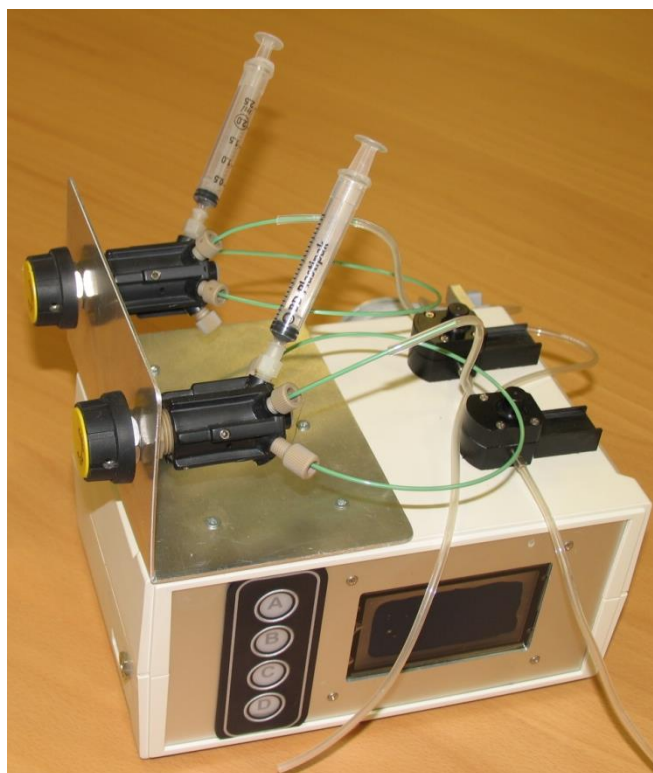


## ELECTROCHEM-BIOSENS LINE ELECTROCHEMICAL BIOSENSORS



These devices use screen printed electrodes (SPE) technology and the cells were designed to work any commercially available SPE with a maximum width of 10 mm. The biologic material is immobilized on screen printed electrodes (SPEs) in a 3 electrodes measurement configuration: working, Ag/AgCl reference and counter-electrode.

The ASPE new model features 2 automatic flow cells in a parallel or series fluidic connection respectively, thus offering the contemporary test of 2 different samples with different biomediators at different bias potentials.

The cells are fully independent and moreover, it features, when requested. All models are equipped with current measurement system, and an electronic control board for data read-out, processing and PC transfer. Keyboard and display can be used to set-up the parameters.

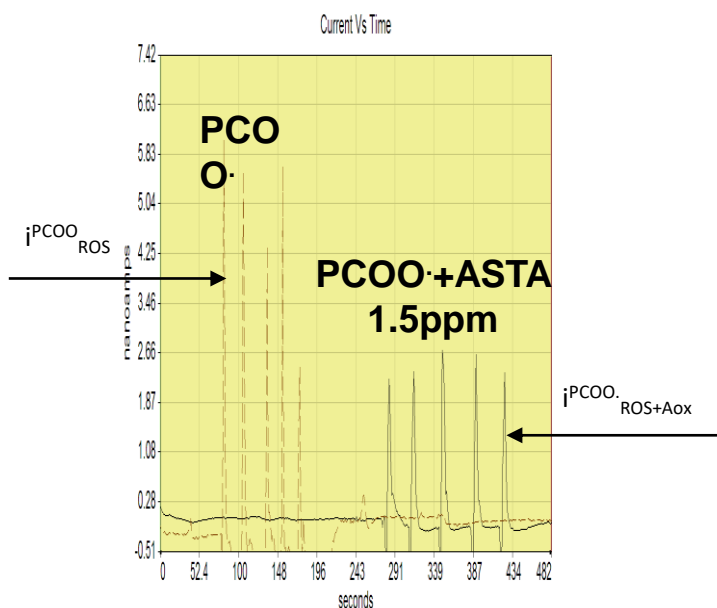
The ASPE systems can be used for several applications, not only in the food analysis field for antioxidant activity, but also in environmental monitoring (e.g. water pollutants, drinking water quality control, waste water analysis) and biomedical analysis. This kind of instrument is able to detect the antioxidant levels in different matrix too, thanks its capacity to monitor very fast electrochemical reaction

Two fluxes combine into each measurement micro-cell: a peristaltic pump mounted behind the instrument provides the sample while another fluid is injected at low steady pressure thanks to a special valve. The reaction between the fluxes results in a signal registered by the SPEs as amperometric variation. An outlet channel allows the fluxes to come out of the system.

**An Example of the SPEAox sensors response on standard ASTAXANTHIN** with an injection time of 12 seconds; washing time: 10 minutes; 2 washing steps (1<sup>st</sup> step -water, 2<sup>nd</sup> step-buffer).

Phosphatidyl-choline (PC), was the substrate for free radicals (FR) attack. Peroxyl radicals produced reacts with lipo-protein and subsequent the electrochemically active PC-hydroperoxides are generated. The peak intensity is proportional with concentration of formed PC-hydroperoxides (may be called lipoperoxides).

Immobilization and tragment with magnetic beads and release is possible.



It is possible to customize the instrument meet the customer requirement (e.g. Leds wavelength, Leds intensity, no Leds, voltage range, scale of current output, etc)

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