

Electrochemical detector *BioQuant PAM 2*

Improve the Possibilities of Your HPLC-System The New electrochemical Detector BioQuant PAM 2

The BioQuant PAM 2 (Fig. 1) is a pulsed amperometric Detector designed for routine analysis in HPLC. The BioQuant can be used in three different modes (DC-, Pulse- and Scan-Mode) covering the whole range of electrochemical detection. The Detector is characterised through its high selectivity and low detection limits. Within 30 minutes the user is able to work at highest sensitivity. Compared to other ECDs in the market it is a very robust detector.

The BioQuant PAM 2 consists of two units. The Control Unit (CU) which allows full parametric control of the detector and the programming of user defined Time Files. The Monitor Unit (MU), a highly stable Faraday-shielded oven compartment accommodates column and flow cell. To improve the stability of the BioQuant an injector and a high efficient pulse dampener can be installed in the oven compartment. The oven compartment can be thermostated up to 60 °C. Due to its perfect isolation and shielding properties this BioQuant offers constant detection conditions and therefore the highest stability and sensitivity. The electrochemical flow cell has been developed for ultra-trace analysis in standard, micro bore and capillary LC-EC (Fig. 2). Its walljet-design and low dead volume (< 1 µl) guarantees highest resolution and nearly no band broadening. The flow cell permits unusually short stabilisation times: trace analysis within half an hour after starting the the instrument can be expected. Two different flow cells are available. The first uses a glassy carbon working electrode and a ISAAC (In situ Ag/AgCl) reference electrode. The second uses a gold working electrode in combination with a maintenance free pH reference electrode. Due to the application and flow cell used, the BioQuant can operate in different detection modes. In DC-mode a constant voltage is applied on the working electrode. In Pulsed Amperometric Detection mode (PAD) the working electrode is regenerated at a frequency of 0.5 - 3 Hz by the applying a series of potential changes. This is particularly useful for certain applications where the working electrode is rapidly fouling due to adsorption of insoluble reaction products. In Scan mode cyclic voltamograms can be generated. For routine analysis the BioQuant offers the possibility to be remote control via PC through it's RS232C interface. Supporting software is McDAcq32 Control. In this way maximum flexibility is guaranteed.

BioQuant Carbohydrate and BioQuant Cat-Amine Analyzer The ideal solution for the determination of Carbohydrates and Catecholamines

For the advanced analysis of Carbohydrates and Catecholamines complete HPLC-Systems have been designed (Fig. 3). These include all of the equipment needed for the high end analysis of these Biomolecules. The systems have a modular design with the BioQuant PAM 2 being the central unit. All other parts are established products of the BISCHOFF-HPLC-Line optimized for these specific demands. For the BioQuant Carbohydrate- and for the BioQuant Cat-Amine-Analyzer a large selection of different columns is available.

P/N.-Nr. for - **BioQuant MU:** **8600 0100MU**
 - **BioQuant CU:** **8600 0100CU**



Fig. 1:
The electrochemical Detector BioQuant PAM2

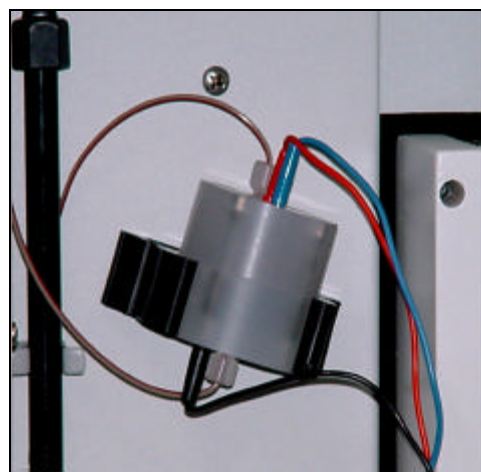


Fig 2:
Detailed view of the three-electrode electrochemical Flowcell in the oven compartment of the BioQuant PAM2.

BioQuant Carbohydrate	BioQuant Cat-Amine
BioQuant Controller	
Central control unit, consisting of: <ul style="list-style-type: none"> ➤ PC (state of the art) ➤ Interface LC-CaDI 22-14 for data handling, A/D-converter and control of the different modules ➤ McDAcq 32 integration and control software 	
BioQuant SDU (Solvent Delivery Unit)	
3 serial two piston pumps with inert PEEK- Pump heads > Flowrate 0,1 ... 4,99 mL/min Optional Mikro-PEEK Pump heads are also available > Flowrate 1 ... 999 µL/min	1 serial two piston pump with stainless steel pump head > Flowrate 0,01 ... 4,99 mL/min
BioQuant Autosampler (or biocompatible Injection valve on demand)	
Biocompatible Autosampler for variable Injection volumes with 72 position tray Trays are also available with 50 or 128 vial positions as well as with tray cooling	
BioQuant PAM 2	
Flow cell with gold working electrode and maintenance free pH reference electrode	Flow cell with glassy carbon working electrode and maintenance free ISAAC reference electrode
BioQuant Columns	
1 Column for the determination of carbohydrates	1 Column for the determination of Catecholamines



Fig. 3:
Complete BioQuant Carbohydrate Analyzer.



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