

Title (en)

Flow analysis cell and layered sensor pertaining thereto

Title (de)

Durchfluss-Analysenzelle und Zugehöriger Schichtsensor

Title (fr)

Cellule d'analyse à écoulement et capteur à couche associée

Publication

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Application

EP 99930890 A 19990114

Priority

- DE 9900063 W 19990114
- DE 19801344 A 19980116

Abstract (en)

[origin: DE19801344A1] The flat sensor (20), is a thin or thick layer structure in a flow analysis cell, has at least one defined passage (24) for the fluid medium to be analyzed which is across the sensor (20) plane. The feed and outlet channels are on opposite sides of the sensor. The cell volume has a conical geometry, with the base of the cone at the sensitive surface of the sensor (20). A collection volume is at the side with the outlet, directly behind the sensor (20). The sensor can be fitted with a number of feed and outlet channels. The cell components (32) are within a holder. The connections for the feed and outlet channels and the acquisition of the sensor signals are contained within a detector unit. The holder has at least one system to take the sensor (20) signals, and a grip to secure the sensor (20) in a position in contact with the cell volume. The holder is in at least two parts, in a release bond with each other, with the sensor (20) between them. The holder can flap open. The holder is of metal or plastics or a ceramic material, with the cell volume integrated into its structure or through an exchangeable fluid handling component. The sensor (20) is an electrode, with a multiple-electrode geometry (22) printed on a carrier. At least one of the electrodes has at least one defined fluid passage (24) across the sensor layer. One electrode can be ion selective, another can be a pH electrode and a further electrode can measure electrochemical actions. The sensor (20) is a biosensor, preferably with a thin layer fixed on a carrier. A sensitive sensor layer is positioned at the sensor (20) in the direct vicinity of the fluid passage (24) to be next to it, within it, or through it. The passage (24) is within the layer or directly next to the layer such as in the carrier. The passage (24) has a round cross section, and can be conical across the sensor layer.

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