

Title (en)

MICROFLUIDIC ELEMENT FOR MULTIFUNCTIONAL ANALYSIS CHAMBER

Title (de)

MIKROFLUIDISCHES ELEMENT MIT MULTIFUNKTIONALER MESSKAMMER

Title (fr)

ELEMENT MICROFLUIDIQUE POUR COMPARTIMENT D'ANALYSE MULTIFONCTIONNEL

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Application

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Abstract (en)

[origin: WO2011120819A1] The invention relates to a test element (3) for optical analysis of a liquid sample and to an analysis system (1) comprising a test element (3) and an analysis unit (2) with a holder (4) for holding the test element (3), a measurement and evaluation unit (10), an optical receiver (9) for receiving and an optical transmitter (8) for transmitting light. The test element (3) has a substrate (12) and a microfluidic channel structure (11) surrounded by the substrate (12) and a cover layer. The channel structure (11) has a measurement chamber (13) with an inlet orifice (17). The test element (3) has a first level (24) which faces the cover layer and in which the optical analysis is effected. A second level (25) of the test element (3) adjoins the first level (24) in such a way that the first level (24) is arranged between the cover layer and the second level (25). A portion of the measurement chamber (13) which extends through the first level (24) forms a measurement space (14) which is adjoined by a part of the measurement chamber (13) which extends partly into the second level (25) and is a mixing space (15). The optical analysis of the liquid sample is effected by means of light, which is passed through the first level (24) parallel to the cover layer such that the light passes through the measurement space (14) of the measurement chamber (13) along an optical axis (30). The mixing space (15) of the measurement chamber (13) arranged in the second level (25) has a rounded base (39).

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