

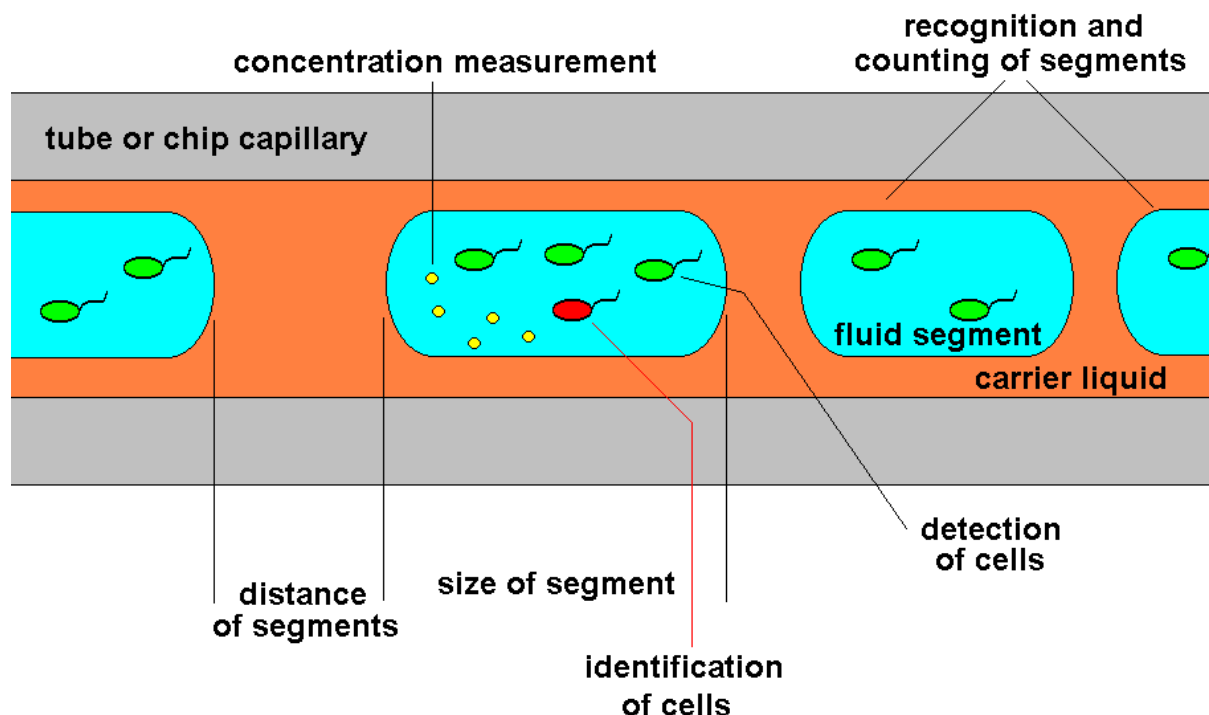
Topic: Micro Analytics

Micro fluid segments are excellent reaction spaces for analytical purposes. The chemical decoupling between wall and liquid, the easily possible application of reactants, fast mixing by segment-internal convection and a spectrum of available optical readout techniques make them a powerful tool for micro analytics.

The formation of bubbles and - in particular - of precipitations is much less critical than in conventional systems because the carrier liquid suppresses the sedimentation or the adsorption of particles on the wall.

Micro flow-through photometry and fluorometry can be used for a non-invasive optical readout of segments. Micro photometers used for segmented-flow monitoring at the Ilmenau University of Technology can be read-out with sampling rates up to 5 kHz. The signals can be used for the monitoring of the size and distance of the segments and for the analysis of the segment-incorporated products.

optical detection in segmented-flow



Scheme: principle of optical detection of cells inside micro segments

Source/Author/Date:

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