



## A Method To Determine The Throughput Speed Of A Pore

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### The Invention

A method (100) can be provided to determine the throughput speed  $v$  of at least one pore (1), comprising: • feeding (110), using a driving force  $F$ , a filiform calibration element (2) through the pore (1), said calibration element (2) having a plurality of markers (21) spaced apart by known distances (22) and configured to produce an interaction event (3) that transmits a signal away from the pore (1) upon interaction with the pore (1); • detecting (120) a plurality of interaction events (3); and determining (130) a time interval  $\Delta t$  between successive interaction events (3), and/or a frequency  $\omega$  of interaction events (3). Also provided is a filiform calibration element (2), configured to pass through a pore (1) of at most 5 diameter and comprising a plurality of light sources, configured to absorb excitation light of a first wavelength  $\lambda_1$  and to emit light of a second wavelength  $\lambda_2$  in response to said excitation light, as markers (21). Further provided is a liquid solution (20) as a tool for determining the throughput speed  $v$  of at least one pore (1), comprising a solvent (24) and a plurality of filiform calibration elements (2).

#### Tech Fields

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