

Title (en)  
PRACTICAL DEVICE FOR CONTROLLING ULTRASMALL VOLUME FLOW

Title (de)  
PRAKTISCHE VORRICHTUNG ZUR DURCHFLUSS-KONTROLLE VON ULTRAKLEINEN FLÜSSIGKEITSVOLUMEN

Title (fr)  
DISPOSITIF PRATIQUE PERMETTANT D'AGIR SUR UN FLUX DE VOLUME ULTRA-REDUIT

Publication  
**EP 1129345 A1 20010905 (EN)**

Application  
**EP 99958906 A 19991110**

Priority  
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• US 10808698 P 19981112

Abstract (en)  
[origin: WO0028315A1] A device for control of ultrasmall volume fluid flow used in the fields of electrophoretic separation, chemical analysis, and microchemical reactions has a substrate defining a capillary channel and integrated external electrodes to control electroosmotic flow. The channel geometry and integrated external electrode proximity reduce the voltage required for control of flow. Longitudinal electrodes provide electrophoretic separation of components. High dielectric material between the integrated external electrode and capillary reduces the voltage required for the control of flow. Real-time flow monitoring and capillary channel surface coating enhance the control of flow.

IPC 1-7  
**G01N 27/447**

IPC 8 full level  
**G01N 1/10** (2006.01); **B03C 5/00** (2006.01); **G01N 27/447** (2006.01); **G01N 37/00** (2006.01); **G05D 7/06** (2006.01)

CPC (source: EP)  
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See references of WO 0028315A1

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**US 9926724 W 19991110**; CA 2348864 A 19991110; EP 99958906 A 19991110; JP 2000581444 A 19991110