

Title (en)  
INTEGRATED PORTABLE BIOLOGICAL DETECTION SYSTEM

Title (de)  
INTEGRIERTES TRAGBARES SYSTEM ZUR BIOLOGISCHEN DETEKTION

Title (fr)  
SYSTEME DE DETECTION BIOLOGIQUE INTEGRE PORTATIF

Publication  
**EP 1144092 A4 20021029 (EN)**

Application  
**EP 99968558 A 19991222**

Priority  
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• US 11373098 P 19981223

Abstract (en)  
[origin: WO0037163A1] We have performed separation of bacterial and cancer cells from peripheral human blood in microfabricated electronic chips by dielectrophoresis. The isolated cells were examined by staining the nuclei with fluorescent dye followed by laser induced fluorescence imaging. We have also released DNA and RNA from the isolated cells electronically and detected specific marker sequences by DNA amplification followed by electronic hybridization to immobilized capture probes. Efforts towards the construction of a "laboratory-on-a-chip" system are presented which involves the selection of DNA probes, dyes, reagents and prototyping of the fully integrated portable instrument.

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**B01D 57/02**; **G01N 15/06**; **C12M 1/36**; **C12M 1/34**

IPC 8 full level  
**G01N 21/64** (2006.01); **B01D 57/02** (2006.01); **B03C 5/00** (2006.01); **C12M 1/00** (2006.01); **C12M 1/33** (2006.01); **C12M 3/08** (2006.01); **C12N 15/09** (2006.01); **C12Q 1/68** (2006.01); **C40B 40/02** (2006.01); **C40B 50/06** (2006.01); **G01N 21/78** (2006.01); **G01N 27/447** (2006.01); **G01N 33/48** (2006.01); **G01N 33/53** (2006.01); **G01N 33/566** (2006.01); **G01N 37/00** (2006.01); **C12R 1/19** (2006.01)

CPC (source: EP KR)  
**G01N 15/1433** (2024.01 - EP KR); **G01N 15/1484** (2013.01 - KR); **G01N 33/5438** (2013.01 - EP KR); **G01N 15/1484** (2013.01 - EP)

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• See also references of WO 0037163A1

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**US 9931098 W 19991222**; AU 2595000 A 19991222; BR 9916840 A 19991222; CA 2353461 A 19991222; EP 99968558 A 19991222; JP 2000589268 A 19991222; KR 20017007947 A 20010622; NZ 51208799 A 19991222