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*For two-letter codes and other abbreviations, refer to the "Guid-
ance Notes on Codes and Abbreviations" appearing at the begin-
ning of each regular issue of the PCT Gazette.*

(54) Title: PARTICLE BASED HOMOGENEOUS ASSAYS USING CAPILLARY ELECTROPHORESIS WITH LASER-INDUCED FLUORESCENCE DETECTION

(57) Abstract: The invention provides highly sensitive and rapid homogeneous assays which employ particle-enhanced assay formats in concert with capillary electrophoresis and laser-induced fluorescence (LIF) detection to determine the concentration of an analyte of interest in a sample. Such a determination is made by measuring fluorescent signal(s) (i.e., an electropherogram) produced upon LIF of species present in the reaction mixture that are capable of producing such signals. The method of this invention produces simplified electropherograms by reducing the number of signals that must be separated and subsequently measured, and therefore increases the accuracy of the detection and/or quantification of target analyte concentration in a sample.



WO 2003/023353 A3

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US02/27332

A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : G01N 33/536, 33/543, 33/546, 33/553, 33/554, 33/569

US CL : 435/7.1, 7.2, 7.32, 7.35, 7.5, 7.8, 7.92, 7.93, 7.94; 436/518, 519, 524, 526, 533, 541, 806, 824

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 435/7.1, 7.2, 7.32, 7.35, 7.5, 7.8, 7.92, 7.93, 7.94; 436/518, 519, 524, 526, 533, 541, 806, 824

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
Please See Continuation Sheet

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y, P	US 6,348,318 B1 (VALKIRS) 19 February 2002, especially abstract and figure 1.	1-49
Y	US 6,136,545 A (HOSEL et al.) 24 October 2000, especially abstract and figure 1.	1-49
Y	CHOI, J. Comparison of capillary electrophoresis-based immunoassay with fluorescence polarization immunoassay for the immunodetermination of methamphetamine using various methamphetamine antibodies. Electrophoresis. 1998, Vol. 19, pages 2950-2955. See entire document.	1-49
Y	CHEN, F.A. Characterization of proteins by capillary electrophoresis in fused-silica columns: Review on serum protein analysis and application to immunoassays. Electrophoresis. 1994, Vol. 15, pages 13-21. See entire document.	1-49
Y	US 5,981,180 A (CHANDLER et al.) 09 November 1999, see entire document.	1-49
Y	US 6,268,222 B1 (CHANDLER et al.) 31 July 2001, see entire document.	1-49
Y	US 5,585,241 A (LINDMO) 17 December 1996, see entire document.	1-49

☐ Further documents are listed in the continuation of Box C.

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* Special categories of cited documents:

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document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

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INTERNATIONAL SEARCH REPORT

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Continuation of B. FIELDS SEARCHED Item 3:

STN-biosis, caplus, embase, medline, cancerlit, japio
EAST and WEST patent database