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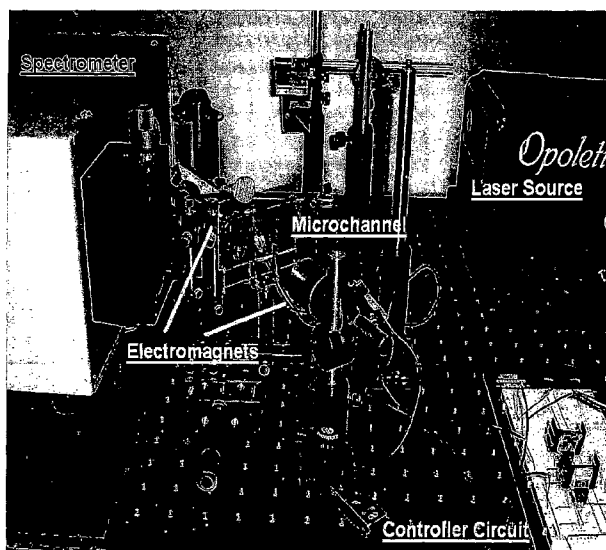
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(54) Title: MICROCHANNEL MAGNETO-IMMUNOASSAY



(57) Abstract: A single microchannel is combined with external electromagnets for performing a fast immunoassay within a very small volume. Magnetic/luminescent nanoparticles serve as carriers for the antibodies and as internal luminescent standard. The immunoreaction is accelerated by applying alternating magnetic field by means of the external electromagnets, thus inducing oscillation of the particles and achieving better diffusion during the incubation steps. Using the electromagnets the particles are held into the channel for washing and luminescence detection steps. The luminescence of the particles serves as an internal calibration for the assay and helps to avoid experimental error from particle loss.

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INTERNATIONAL SEARCH REPORT

International application No.  
PCT/US 07/02138

<p>A. CLASSIFICATION OF SUBJECT MATTER                  IPC(8) - G01N 33/53 (2007.01)                  USPC - 435/7.1                  According to International Patent Classification (IPC) or to both national classification and IPC</p>												
<p>B. FIELDS SEARCHED</p> <p>Minimum documentation searched (classification system followed by classification symbols)                  USPC - 435/7.1</p> <p>Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched                  USPC - 435/960; 977/838</p> <p>Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)                  PubWEST(USPT,PGPB,EPAB,JPAB); PubMed; Google Scholar                  Search Terms Used: Assay, analyte, magnetic particle, fluorescent, Europium, metal oxide</p>												
<p>C. DOCUMENTS CONSIDERED TO BE RELEVANT</p> <table border="1"> <thead> <tr> <th>Category*</th> <th>Citation of document, with indication, where appropriate, of the relevant passages</th> <th>Relevant to claim No.</th> </tr> </thead> <tbody> <tr> <td>X --- Y</td> <td>US 2005/0272049 A1 (BANERJEE et al.) 8 December 2005 (08.12.2005), entire document, especially para [0062], [0064]-[0065], [0076]-[0077], [0091], [0093],[0102], [0138], [0145], [0168]</td> <td>1-4 and 11-19 ----- 5-10 and 20-22</td> </tr> <tr> <td>Y</td> <td>US 2003/0047028 A1 (KUNITAKE et al.) 13 March 2003 (13.03.2003) entire document, especially para [0122]-[0123]</td> <td>5-10 and 20-22</td> </tr> </tbody> </table>			Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.	X --- Y	US 2005/0272049 A1 (BANERJEE et al.) 8 December 2005 (08.12.2005), entire document, especially para [0062], [0064]-[0065], [0076]-[0077], [0091], [0093],[0102], [0138], [0145], [0168]	1-4 and 11-19 ----- 5-10 and 20-22	Y	US 2003/0047028 A1 (KUNITAKE et al.) 13 March 2003 (13.03.2003) entire document, especially para [0122]-[0123]	5-10 and 20-22	
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<p>Name and mailing address of the ISA/US                  Mail Stop PCT, Attn: ISA/US, Commissioner for Patents                  P.O. Box 1450, Alexandria, Virginia 22313-1450                  Facsimile No. 571-273-3201</p>		<p>Authorized officer:                  Lee W. Young                  PCT Helpdesk: 571-272-4300                  PCT OSP: 571-272-7774</p>										