



INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification 5 : G01N 21/76, 35/02	A3	(11) International Publication Number: WO 93/22657 (43) International Publication Date: 11 November 1993 (11.11.93)
(21) International Application Number: PCT/US93/04115 (22) International Filing Date: 3 May 1993 (03.05.93) (30) Priority data: 878,829 5 May 1992 (05.05.92) US (71) Applicant: CHIRON CORPORATION [US/US]; 4560 Horton Street, Emeryville, CA 94608 (US). (72) Inventors: SMETHERS, Rick, T. ; 1233 Valdez Street, Fremont, CA 94539 (US). WARNER, Brian, D. ; 1034 Alhambra Avenue, Martinez, CA 94553 (US). BUROLLA, Victor, P. ; 1322 Shawnee Road, Livermore, CA 94550 (US). (74) Agent: GOLDMAN, Kenneth, M.; Chiron Corporation, 4560 Horton Street, Emeryville, CA 94608 (US).		(81) Designated States: CA, JP, European patent (AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE). Published <i>With international search report.</i> <i>Before the expiration of the time limit for amending the claims and to be republished in the event of the receipt of amendments.</i> (88) Date of publication of the international search report: 20 January 1994 (20.01.94)
(54) Title: LUMINOMETER WITH REDUCED SAMPLE CROSSTALK <div data-bbox="555 1173 1082 1823" data-label="Image"> </div> (57) Abstract <p>A luminometer is described comprising a tray for receiving an array of sample wells, a photodetector assembly, and means for relatively moving the tray and photodetector assembly in one direction to align the sample wells received by the tray in a predetermined sequence with the photodetector assembly. The photodetector assembly of the luminometer includes a stage, a photodetection head (73) having a detection aperture permitting passage of light therethrough, a means for mounting the photodetection head to the stage that permits movement of the head in a direction substantially normal to the direction of relative tray and photodetector assembly movement, and a means for biasing the photodetection head toward a selected sample well (72) so that the detection aperture is substantially isolated from light emitted from adjacent wells. Internal and external photodetector calibration systems and a sample heater are also contemplated.</p>		

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INTERNATIONAL SEARCH REPORT

International Application No

PCT/US 93/04115

I. CLASSIFICATION OF SUBJECT MATTER (if several classification symbols apply, indicate all) ⁶		
According to International Patent Classification (IPC) or to both National Classification and IPC Int.Cl.5 G 01 N 21/76 G 01 N 35/02		
II. FIELDS SEARCHED		
Minimum Documentation Searched ⁷		
Classification System	Classification Symbols	
Int.Cl.5	G 01 N	
Documentation Searched other than Minimum Documentation to the Extent that such Documents are Included in the Fields Searched ⁸		
III. DOCUMENTS CONSIDERED TO BE RELEVANT⁹		
Category ^o	Citation of Document, ¹¹ with indication, where appropriate, of the relevant passages ¹²	Relevant to Claim No. ¹³
X	EP,A,0181060 (LABSYSTEMS OY) 14 May 1986 see the whole document ---	1,2,8, 10
X	US,A,3997404 (J.R.WATERS) 14 December 1976 see claims 1-5,10,13,14; figures ---	1,2,8, 10
A	see claims 1-5,10,13,14; figures ---	4,11
A	US,A,4775633 (D.P.ROUNBEHLER) 4 October 1988 see figure 7 ---	4
P,X	EP,A,0523521 (LABORATORIUM PROF. DR. RUDOLF) 20 January 1993 -/-	1,2,8, 10
<div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <p>^o Special categories of cited documents :¹⁰</p> <p>"A" document defining the general state of the art which is not considered to be of particular relevance</p> <p>"E" earlier document but published on or after the international filing date</p> <p>"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)</p> <p>"O" document referring to an oral disclosure, use, exhibition or other means</p> <p>"P" document published prior to the international filing date but later than the priority date claimed</p> </div> <div style="width: 45%;"> <p>"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention</p> <p>"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step</p> <p>"Y" 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.</p> <p>"&" document member of the same patent family</p> </div> </div>		
IV. CERTIFICATION		
Date of the Actual Completion of the International Search	Date of Mailing of this International Search Report	
17-08-1993	10. 12. 93	
International Searching Authority	Signature of Authorized Officer	
EUROPEAN PATENT OFFICE	SCHEU M.	

III. DOCUMENTS CONSIDERED TO BE RELEVANT (CONTINUED FROM THE SECOND SHEET)		
Category °	Citation of Document, with indication, where appropriate, of the relevant passages	Relevant to Claim No.
P,A	see the whole document -----	9,11

INTERNATIONAL SEARCH REPORT

1 national application No.

PCT/US93/04115

Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:
2. ☐ Claims Nos.:
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:
3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

1. Claims 1-6,8-11
2. Claim 7
3. Claim 12

For further information please see form PCT/ISA/206 mailed 03.09.93.

1. ☐ As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☒ No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

1-6,8-11

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

**ANNEX TO THE INTERNATIONAL SEARCH REPORT
ON INTERNATIONAL PATENT APPLICATION NO.**

US 9304115
SA 74090

This annex lists the patent family members relating to the patent documents cited in the above-mentioned international search report. The members are as contained in the European Patent Office EDP file on 15/11/93
The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
EP-A- 0181060	14-05-86	JP-A- 61116647	04-06-86
US-A- 3997404	14-12-76	US-A- 3944471	16-03-76
US-A- 4775633	04-10-88	None	
EP-A- 0523521	20-01-93	DE-A- 4123817	21-01-93
		JP-A- 5209830	20-08-93