

Search history

Search 1: ft=radial and receptacle and channel and lab (Results 6)

Search 2: ft=(radial or circular) and chamber and channel* and lab (Results 196)

Search 3: ft=(radial or circular) and chamber and channel* and lab and IC=B01L (Results 31)

- session log created:13 February 2017 03:33:09

- Update information:

PatBase Coverage at Update 2017 Week 05 (Year 2017 Week 05)

PatBase Coverage includes 100+ million documents from over 100 patent-issuing authorities and includes patent applications, granted patents, utility models and designs – detailed in the below coverage listings.

Major countries

Publishing body	Document type	Bibliographic publication date		Full-Text publication date	
		Earliest	Latest	Earliest	Latest
CN China	Patent Applications	19850910	20170201	19850910	20170125
	Patents	19930106	20170201	19930106	20170125
	Utility Model Applications	19850409	19921230	19850409	19921230
	Utility Models	19930106	20170201	19930106	20170125
	Designs	19850910	20170201	19850910	20150819
DE Germany	Patent Applications	19211221	20170202	19650317	20170202
	Patents	18770101	20170202	19200113	20170202
	Utility Models	19280626	20170202	19610831	20170202
	EP/WO Patents	19871217	20140410		
EP European Patent Office	Patent Applications	19781220	20170201	19781220	20170201
	Patents	19800109	20170201	19800109	20170201
FR France	Patent Applications	19690307	20170203	19810102	20170113
	Patents	18550227	20170203	19600502	20170203
	Utility Model Applications	19720107	20170203	19800104	20170113
	Utility Models	19730112	20170203	19690802	20170127
GB United Kingdom	Unpublished Patent Applications	19830209	20161207		
	Patent Applications	19790104	20170201	19790104	20170118
	Patents	17820704	20170201	19020911	19811216
	Patent Applications	19710116	20170202	19930108	20170119

	Patents	19281026	20170118	19960529	20170111
	Utility Model Applications	19710723	20060209	19990817	20031107
	Utility Models	19640805	19960329		
	Registered Utility Models	19940726	20170112	19940726	20101216
KR Republic of Korea	Patent Applications	19781209	20170203	19940103	20170126
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	Utility Models	19780110	20170203	19970104	20170126
US United States of America	Patent Applications	20010315	20170202	20010315	20170202
	Patents	18360101	20170131	18560617	20170131
	Designs	18650912	20170131	19770719	20170131
WO World Intellectual Property Organization (WIPO)	Patent Applications	19781019	20170202	19781019	20170202

20170204 21:00

- Login to Patbase:13 February 2017 03:33:09
- **search:** SS1 ft=radial and receptacle and channel and lab (Results 6)
- List: SS1 1–10 (ft=radial and receptacle and channel and lab) (Results 6)

0) US3719182A – AUGMENTATION OF THE PRODUCTION OF ANTIBODIES IN...

1) Family number: 10840023 (US3719182A)

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Title: AUGMENTATION OF THE PRODUCTION OF ANTIBODIES IN ANIMALS AND HUMANS AND THE COLLECTION THEREOF

Priority: DE19782835307 19780811 US19710136476 19710422 US19770851744 19771115
 US19730328048 19730130 US19770824182 19770812 US19730349330 19730409
 US19810287032 19810727 US19790059497 19790723 US19820380960 19820521
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Family:

Publication number	Publication date	Application number	Application date
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<u>US5759147 A</u>	19980602	US19950472671	19950607

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Probable Assignee: BAXTER INT

Assignee(s):^(std): BIO RESPONSE INC ; BAXTER TRAVENOL LAB ; BAXTER INT

Assignee(s): BAXTER INT INC ; BAXTER INT INC A CORP OF DE ; BAXTER INT INC N D GES D STAATES DELAWA ; BAXTER INTERNATIONAL INC ; BAIO RESUPONSU INC ; FENWAL INC ; BIO RESPONSE INC US ; BAXTER TRAVENOL LABOR INC ; BIO RESPONSE INC SCARBOROUGH N Y V ST A ; BAXTER TRAVENOL LABORATORIES INC ; FENWAL HOLDINGS INC ; BAXTER TRAVENOL LABORATORIES INC DEERFIELD ILL US ; BIO RESPONSE INC SCARBOROUGH N Y US ; BAXTER INTERNATIONAL INC N D GES D STAATES DELAWARE DEERFIELD ILL US ; BIO RESPONSE ; MORGAN STANLEY AND CO INC ; ROSE SAM

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International class
(IPC 8-9): [A61K35/14](#) [A61K35/26](#) [A61K35/28](#) [A61K35/32](#) [A61K35/34](#) [A61K35/55](#) [A61K39/00](#) [A61M1/02](#) [A61M1/36](#) [B04B1/00](#) [B04B5/04](#) [C07K16/00](#) [C07K16/06](#) [C07K16/30](#) [C12M1/00](#) [C12N5/02](#) [C12N5/06](#) [C12P19/00](#) [F04B43/10](#) [F04B9/02](#) [G01N33/48](#) (Advanced/Invention); [A61K35/14](#) [A61K35/26](#) [A61K35/28](#) [A61K35/32](#) [A61K35/34](#) [A61K35/55](#) [A61K39/00](#) [A61M1/02](#) [A61M1/36](#) [C12N5/02](#) [G01N33/48](#) (Advanced/Non-invention); [A61K35/14](#) [A61K35/26](#) [A61K35/28](#) [A61K35/32](#) [A61K35/34](#) [A61K35/55](#) [A61K39/00](#) [A61M1/02](#) [A61M1/36](#) [B04B1/00](#) [B04B5/00](#) [C07K16/00](#) [C07K16/06](#) [C07K16/18](#) [C12N5/02](#) [C12N5/06](#) [F04B43/00](#) [F04B9/02](#) [G01N33/48](#) (Core/Invention); [A61M1/36](#) (Core/Non-invention); [A61K A61M](#) (Subclass/Invention)

International class
(IPC 1-7): [A01N1/02](#) [A61B19/00](#) [A61K17/00](#) [A61K23/00](#) [A61K35/12](#) [A61K35/14](#) [A61K35/20](#) [A61K35/26](#) [A61K35/28](#) [A61K35/32](#) [A61K35/34](#) [A61K35/55](#) [A61K39/00](#) [A61K39/395](#) [A61K39/40](#) [A61K39/42](#) [A61M1/00](#) [A61M1/02](#) [A61M1/03](#) [B04B1/00](#) [B04B11/00](#) [B04B5/00](#) [B04B5/04](#) [B04B7/08](#) [B04B7/12](#) [C07G7/00](#) [C12B1/00](#) [C12D9/00](#) [C12K9/00](#) [C12M1/10](#) [C12N1/00](#) [C12N5/00](#) [C12N5/02](#) [C12N5/06](#) [F04B23/10](#) [F04B43/00](#) [F04B43/02](#) [F04B43/12](#) [F04B9/02](#) [F16K7/07](#) [G01F11/00](#) [G01N1/14](#) [G01N33/16](#) [G01N33/54](#) [G05D7/00](#)

CPC: [B04B2005/045](#) [Y10S530/806](#) [Y10S530/838](#) [Y10S424/806](#) [Y10S530/837](#) [Y10S530/863](#) [A61M1/362](#) [A61M1/3679](#) [A61M1/3693](#) [C12M25/14](#) [C12M27/10](#) [C12M41/34](#) [B04B5/0442](#) [B04B1/00](#) [B04B5/0428](#) [B04B2005/0464](#) [C07K16/30](#) [F04B9/02](#) [F04B43/10](#) [C07K16/00](#) [C07K16/06](#)

European class: [A61M1/36Z](#) [B04B1/00](#) [B04B5/04B4](#) [B04B5/04C](#) [C07K16/00](#) [C07K16/06](#) [C07K16/30](#) [F04B43/10](#) [F04B9/02](#) [K61M1/36A30](#) [K61M1/36P](#) [L04B5/04C1](#) [L04B5/04C3](#)

US class: [128/0.1R](#) [128/1](#) [128/1R](#) [128/21.4R](#) [128/898](#) [195/1.8](#) [383/127](#) [424/140.1](#) [424/537](#) [424/806](#) [424/85](#) [435/1](#) [435/2](#) [435/240](#) [435/241](#) [435/391](#) [435/394](#) [435/397](#) [435/401](#) [494/18](#) [494/45](#) [530/364](#) [530/387.1](#) [530/389.1](#) [530/389.4](#) [530/389.5](#) [530/389.6](#) [530/389.7](#) [530/412](#) [530/413](#) [530/427](#) [530/806](#) [530/837](#) [530/838](#) [530/863](#) [604/28](#) [604/5.01](#) [604/8](#)

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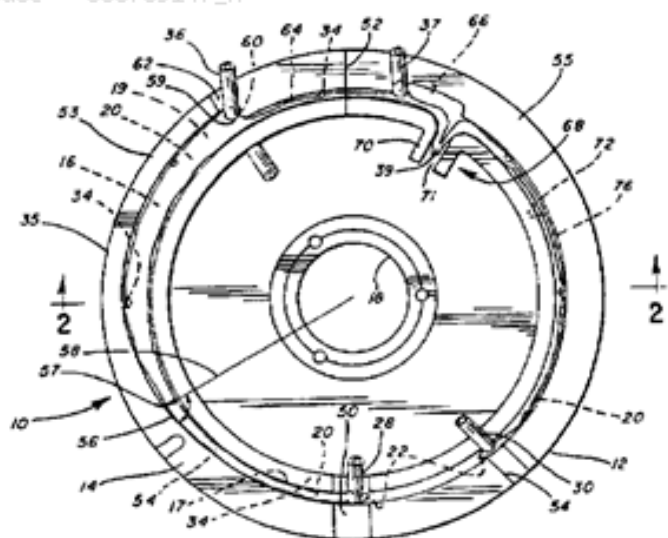
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 DE2416842, CN103191013, CN103191013,

Abstract:

Source: US3719182A ABSTRACT OF THE

DISCLOSURE It has been found that very large production of antibodies can be achieved by removing specific feedback regulatory antibodies by means of a lymphorectomy performed under special conditions in a patient or subject (e.g., an animal or human) with induced anatomical and physiological changes. The subject is first given antigen administration then, preferably, but not mandatorily, is splenectomized. A thoracic duct fistula is next performed. The central venous system pressure is then preferably raised so that it is above the atmospheric pressure of the thoracic duct. In this manner, substantially all the lymph fluid is allowed to flow out of the thoracic duct from the fistula (through an indwelling catheter) for a prolonged period of time. The lymph is separated into cells and lymph fluid. The cells are returned to the subject intravenously. The subject must be given replacement fluid, which can be of several kinds, but all lacking the specific antibody. By virtue of the above procedure, the plasma and extracellular fluid of the subject is continuously depleted of feedback antibody because the antibody is continuously removed prior to its reaching the blood stream. Because of this lack of antibody, in the presence of antigen administration, it is found that the antibody production in the lymphoid tissue and therefore its content in the lymph fluid is enormous and ever-increases. The tremendous increase in antibody production appears to be several orders of magnitude greater than other modes of antibody production and therefore appears to have very substantial utility in the fields of biology, chemistry and veterinary and clinical medicine.

PatBase - US5759147_A



0) US3978875A – DISH WASHING MACHINE

2) Family number: 18415703 (US3978875A)

© PatBase

Title: Dish washing machine

Priority: DE19732345705 19730911 NL19740011309 19740826

Family:	Publication number	Publication date	Application number	Application date
	BE819759 A1	19741231	BE19746044740	19740910
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	DE2525454 A1	19760311	DE19752525454	19750607
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	LU70880 A	19750102	LU19740070880	19740910
	NL7411309 A	19750313	NL19740011309	19740826
	US3978875 A	19760907	US19740503450	19740905

Probable Assignee: SLANY ERICH H 7300 ESSLINGEN DE

Assignee(s):^(std): ERICH HANS SLANY ; ERICH HANS SLANY TE ESSLINGEN BONDSREPUBLIC DUTS ; SLANY ERICH ; SLANY ERICH H ; SLANY ERICH HANS

Assignee(s): SLANY ERICH H 7300 ESSLINGEN DE ; SLANY ERICH DT ; ERICH HANS SLANY TE ESSLINGEN BONDSREPUBLIC DUTSLAND

Inventor(s):^(std): SLANY ERICH H ; SLANY ERICH HANS

Inventor(s): H SLANY ERICH

International class
(IPC 8-9): [A47L15/06](#) [A47L15/16](#) (Advanced/Invention);
[A47L15/00](#) [A47L15/14](#) (Core/Invention)

International class
(IPC 1-7): [A47L15/14](#) [A47L15/22](#) [B08B3/02](#)

CPC: [A47L15/06](#) [A47L15/16](#)

European class: [A47L15/06](#) [A47L15/16](#)

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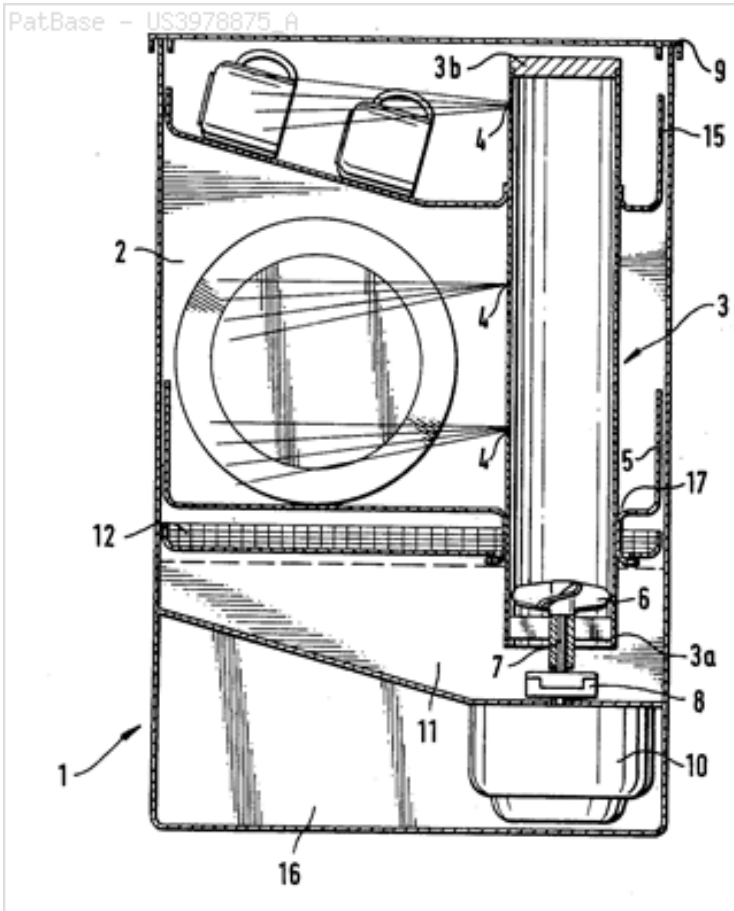
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Abstract:

Source: US3978875A The invention relates to a dish washing machine, comprising a receptacle which can be opened to one side – preferably upwards – which encloses the wash zone and forms a water reservoir at the bottom, comprising also at least one dish basket or similar device which can be inserted into the wash zone and secured, and an offset spray pipe which passes through the spray zone from bottom to top in a preferably vertical direction, the spray pipe having a number of superposed jets in its side and the bottom of which extends into the water reservoir and contains a water pumping device, in particular a screw-type impeller which is coupled to an electric motor.



0) US5143511A – REGENERATIVE CENTRIFUGAL COMPRESSOR

3) Family number: 3257973 (US5143511A)

© PatBase

Title: REGENERATIVE CENTRIFUGAL COMPRESSOR

Priority: US19900589795 19900928

Family:	Publication number	Publication date	Application number	Application date
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Probable Assignee: GARDNER DENVER INC

Assignee(s):^(std): LAMSON CORP ; RAMUSON CORP

Assignee(s): UBS STAMFORD BRANCH COLLATERAL AG AS ; LAMSON CORP
SYRACUSE NEW YORK US ; GARDNER DENVER INC

Inventor(s):^(std): ARAIN BERUNIYUU ; BARI DEITORAA ; DITTLER BARRY ; VERNEAU ALAIN

Inventor(s): VERNEAU ALAIN F 78990 ELANCOURT FR ; DITTLER BARRY FAYETTEVILLE NY
13066 FR

Designated states: DE ES FR GB IT

International class [F04D17/12 F04D23/0 F04D29/16](#)
(IPC 1-7):

CPC: [F04D23/008 F04D29/161](#)

European class: [F04D23/00R F04D29/16C](#)

US class: [415/172.1 415/55.4 415/554](#)

[Classification Explorer](#)

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Abstract:

Source: US5143511A A regenerative centrifugal compressor has an impeller disk with axial impeller blades on either side of the impeller disk rim, and a support housing for rotationally supporting a drive shaft for the impeller disk, and also defining annular compression chambers that respectively surround one or the other of the rows of impeller blades. The annular compression chambers extend in the rotation direction of the impeller from an inlet to an outlet, with a stripper section extending from the outlet to the inlet in the rotation direction. Stripper seal inserts formed of a low-friction material softer than the impeller blades are fastened into stripper receptacles on either side of the housing at the stripper section. A baffle at the inlet conducts inlet air around the impeller to a radially inward side thereof. Annular running seals are provided between the rim of the impeller disk and the housing. The blades of the impeller are shaped for optimal efficiency and compression.

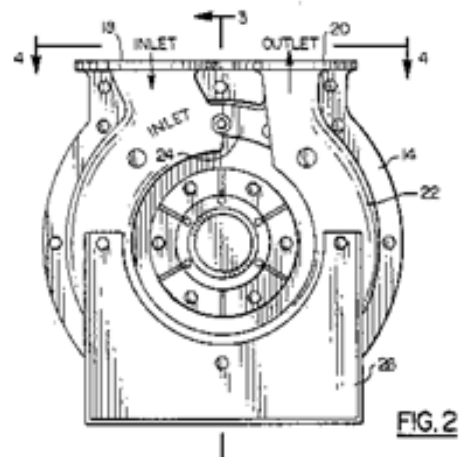
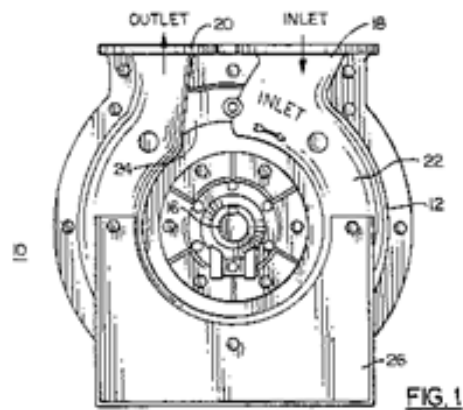
PatBase - US5143511_A

U.S. Patent

Sep. 1, 1992

Sheet 1 of 7

5,143,511



0) US2002049557A – FLUID SAMPLE TESTING SYSTEM

4) Family number: 30111368 (US2002049557A)

© PatBase

Title: FLUID SAMPLE TESTING SYSTEM

Priority: CA19992301153 19990623 CA19992632856 19990623 CA20082301153 20080707
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Family:

Publication number	Publication date	Application number	Application date
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<u>WO03022435 A3</u>	20031204	WO2002US28951	20020911
<u>WO9967646 A1</u>	19991229	WO1999US14105	19990623

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Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LI LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NE NL NO NZ OM PH PL PT RO RU SD SE SG SI SK SL SN SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VN YU ZA ZM ZW

International class
(IPC 8-9): [A61B5/145 A61B5/15 A61B5/155 B01J19/00 B01L11/00 B01L3/00 B01L3/14 B01L7/00 B01L99/00 C12M1/00 C12M1/24 C12M1/34 C12M1/36 C12M1/38 C12M1/40 C12N15/09 C12P19/34 C12Q1/68 C40B30/00 C40B60/12 G01N1/00 G01N1/10 G01N1/28 G01N21/03 G01N21/11 G01N21/64 G01N21/77 G01N27/447 G01N33/48 G01N33/49 G01N33/50 G01N35/00 G01N35/08 G01N35/10 G01N37/00](#) (Advanced/Invention); [B01L3/14 C12M1/42 G01N27/453 G01N35/10](#) (Advanced/Non-Invention);

B01L3/00 B01L7/00 C12M1/00 C12M1/24 C12M1/34 C12M1/36 C12N15/09 C12P19/00
C12Q1/68 G01N1/28 G01N21/03 G01N21/11 G01N21/77 G01N27/447 G01N33/49
G01N33/50 G01N35/00 G01N35/08 G01N37/00 (Core/Invention);
B01L3/14 C12M1/42 G01N27/453 G01N35/10 (Core/Non-invention)

International class
(IPC 1-7):

A61B5/14 B01L3/00 B01L3/14 B01L7/00 C12M1/00 C12M1/34 C12N15/09 C12P19/34
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CPC:

B01L2200/026 B01L2300/021 B01L2300/046 B01L2300/047 B01L2300/0887
Y10T436/2575 Y10T436/10 B01F11/0065 B01F13/0818 B01F15/0278 B01F15/028
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B01L2300/123 B01L2400/0694 A61B5/15003 A61B5/150221 A61B5/150251
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A61B5/150717 A61B5/150755 A61B5/150786 A61B5/150022 A61B5/150343 B01L3/505
B01L3/502 B01L3/50825 B01L7/525 B01L2300/044 B01L2300/0636 B01L2300/1805
B01L2400/0683 G01N35/00009 A61B5/1427 A61B5/1438 B01L7/52 B01L3/5027
B01L3/5082 B01L2200/027 B01L2200/10 B01L2300/0816 B01L2300/0832
B01L2300/0874 B01L2300/1822 B01L2300/1861 B01L2400/0421 B01L2400/0481
B01L2400/0655 G01N35/1002

European class:

A61B5/14B12 A61B5/14B8 B01F11/00J B01F13/08C B01F15/02C40D B01F15/02C40E
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US class:

204/450 204/453 204/455 204/600 204/604 422/102 422/103 422/103S 422/400 422/400S
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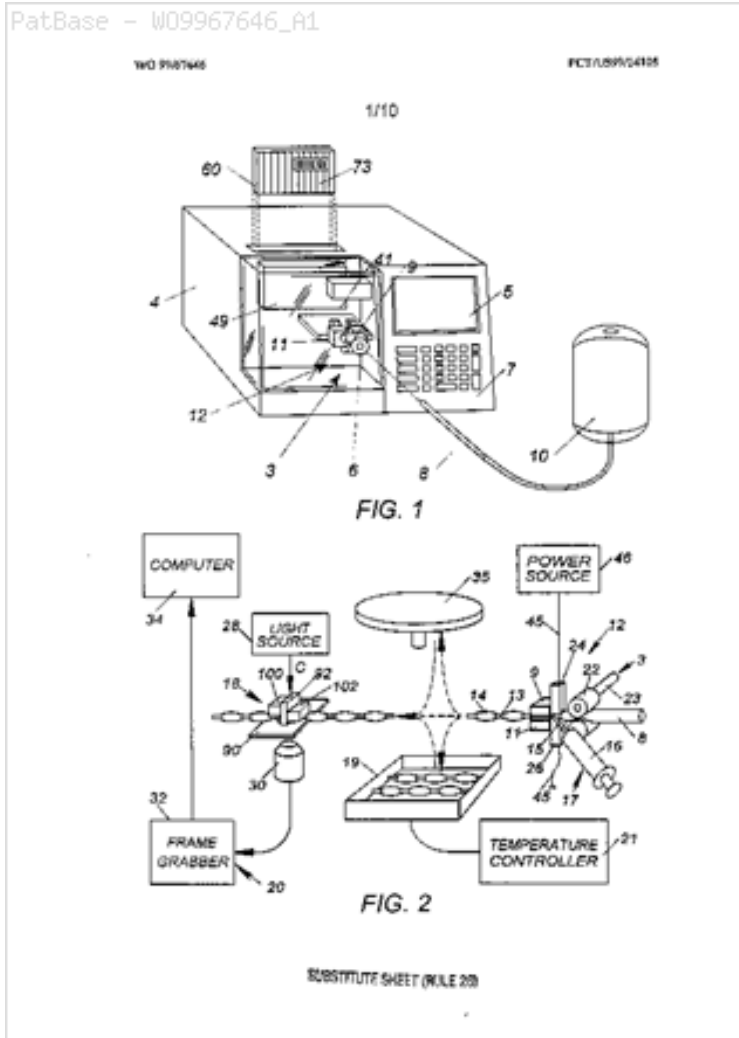
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Abstract:

Source: US2002049557A A sample testing system has a chamber sealing apparatus adapted to receive a chamber containing a fluid sample material and to seal portions of a chamber into segments. A reagent injector cartridge actuator is adapted to receive a reagent injector cartridge having at least one needle in fluid communication with a reagent reservoir, and to move a reagent injector cartridge to inject a quantity of reagent into a segment of a chamber. In certain preferred embodiments, a flow control device induces a flow of sample in a segment. A sensor generates a signal corresponding to a condition of the mixture.



0) US2002014951A – REMOTE CONTROL FOR A HOSPITAL BED

5) Family number: 42244894 (US2002014951A)

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Title: REMOTE CONTROL FOR A HOSPITAL BED

Priority:

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Agent(s): MACRAE AND CO; FINDLAY ALICE ROSEMARY; FINDLAY ALICE ROSEMARY ET AL; ISSHIKI AND CO; INTELLECTUAL PROPERTY GROUP, BOSE MCKINNEY AND EVANS LLP; INTELLECTUAL PROPERTY GROUP BOSE MCKINNEY AND EVANS LLP; BOSE MCKINNEY AND EVANS LLP, JAMES COLES; BOSE MCKINNEY AND EVANS LLP JAMES COLES; BARNES AND THORNBURG LLP; BOSE MCKINNEY AND EVANS LLP; CAESAR RIVISE BERNSTEIN COHEN AND POKOTILOW LTD

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LI LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NE NL NO NZ OM PH PL PT RO RU SD SE SG SI SK SL SN SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

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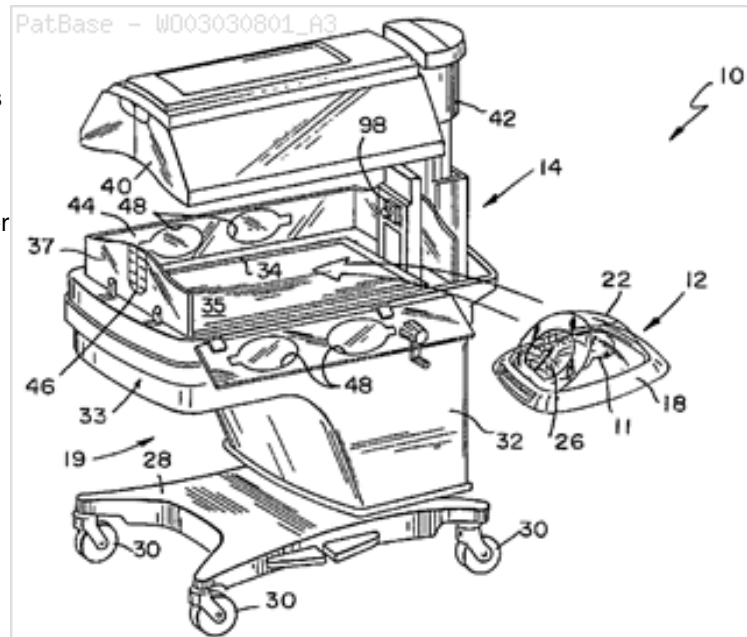
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CN103813770, CN103429212, CN102834049, CN102648481, CN102525775,
CN102483772, CN102396888, AU2011201894, AU2010300816, AU2007358994,
AU2005233945, AU2004224883,

Source: US2002014951A A remote control system includes beds, remote controls, and a master station in communication with the beds and the remote controls. Each bed is adapted to receive requests from a patient associated with the bed, and each remote control is adapted to present requests to a caregiver associated with the remote control. The master station is adapted to receive a nurse call request from a patient via a bed, to identify a remote control that is associated with a caregiver for the patient, and to transmit the nurse call request to the remote control identified as being associated with the caregiver for the patient.



6) Family number: 56548867 (US2014205969A)

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Title: UNIVERSAL ALIGNING ADAPTOR SYSTEM AND METHODS

Priority: US20120796837P 20121120 US20130085286 20131120 WO2013US71029 20131120
US20160162305 20160523

Family:	Publication number	Publication date	Application number	Application date
	<u>EP2922492 A1</u>	20150930	EP20130856462	20131120
	<u>EP2922492 A4</u>	20160727	EP20130856462	20131120
	<u>US2014205969 AA</u>	20140724	US20130085286	20131120
	<u>US2016262852 AA</u>	20160915	US20160162305	20160523
	<u>US9364299 BB</u>	20160614	US20130085286	20131120
	<u>WO14081843 A1</u>	20140530	WO2013US71029	20131120

Probable Assignee: ADVANCED IMPLANT INTELLECTUAL PROPERTIES LLC

Assignee(s):^(std): ADVANCED IMPLANT INTELLECTUAL PROPERTIES LLC ; MARLIN GERALD M

Inventor(s):^(std): MARLIN GERALD M ; MARLIN GERALD

Agent(s): FORD JAMES; STERNE KESSLER GOLDSTEIN AND FOX PLLC; MCCABE KEVIN W ET AL

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

International class A61B6/00 A61B6/03 A61B6/14 A61C13/00 A61C13/103 A61C8/00
(IPC 8-9): A61C9/00 (Advanced/Invention)

CPC: A61C8/006 A61C9/004 A61C8/0068 A61C8/008 A61C13/0004 A61B6/032 A61B6/4085 A61B6/145 A61C8/0001 A61C8/0053 A61C8/0089 A61C8/009 A61C9/0006 A61C8/0012 A61B6/14 A61C2008/0084

US class: 1/1 433/173 433/196 433/202.1

[Classification Explorer](#)

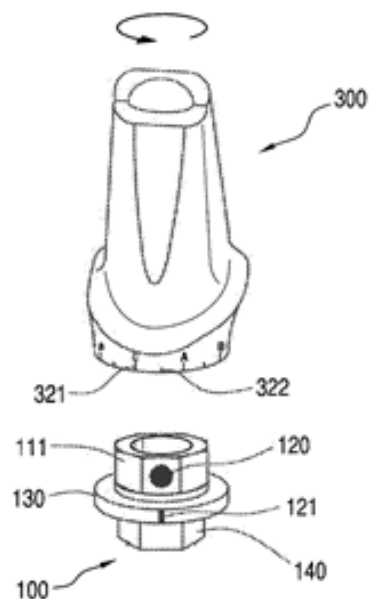
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Forward Citations: WO16185076, US2016074141, US2016051344, US2016022397, US2015359615, US2015320520, US2015265372, US2015182312, US2015173861, US2015017603, US2014297232, KR101473835, ES2590383,

Abstract:

Source: US2014205969A A system for dental implant restoration is provided. It includes universal aligning adaptors and prosthetic components having co-operable indices, which together form a translational, integrating system which aligns, synchronizes, and references the prosthetic components about an implant's central axis of rotation. Rotation of an adaptor about a prosthetic component, with its reference point becoming aligned to a predetermined reference point on the prosthetic component, followed by the rotation of the adaptor/prosthetic component assembly about the implant, situates the prosthetic component in a predetermined position such that all other prosthetic components become synchronized to the adaptor's reference point. The prosthetic component is mechanical for clinical or lab bench use, or is virtual for restoration design in a software program, prior to milling prosthetic abutments or devices. Abutments, healing caps and screw access holes are realigned to preferred positions and synchronized with minimal deviation from the ideal direction.

PatBase - W014081843_A1

FIG. 11A

- **search:** SS2 ft=(radial or circular) and chamber and channel* and lab (Results 196)
- **List:** SS2 1-10 (ft=(radial or circular) and chamber and channel* and lab) (Results 196)

1) Family number: 29615799 (DE566995A)

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Title: ELEKTRISCHER OFEN, INSBESONDERE FUER ZAHNAERZTLICHE ZWECKE
ELECTRIC FURNACE, IN PARTICULAR FOR PURPOSES Dental Lab (Machine translation)

Priority: DE1929SC89606D 19290313 DE1929SC89606 19290313

Family:	Publication number	Publication date	Application number	Application date
	<u>DE566995 A</u>	19330926	DE1929SC89606D	19290313

Probable Assignee: RUDOLF SCHMITZ DR

Assignee(s):^(std): RUDOLF SCHMITZ DR

Assignee(s): DR RUDOLF SCHMITZ

International class A61C13/20 (Advanced/Invention);
(IPC 8-9); A61C13/20 (Core/Invention)

CPC: A61C13/20

European class: 31C34 A61C13/20

[Classification Explorer](#)

Forward Citations: DE2752332,

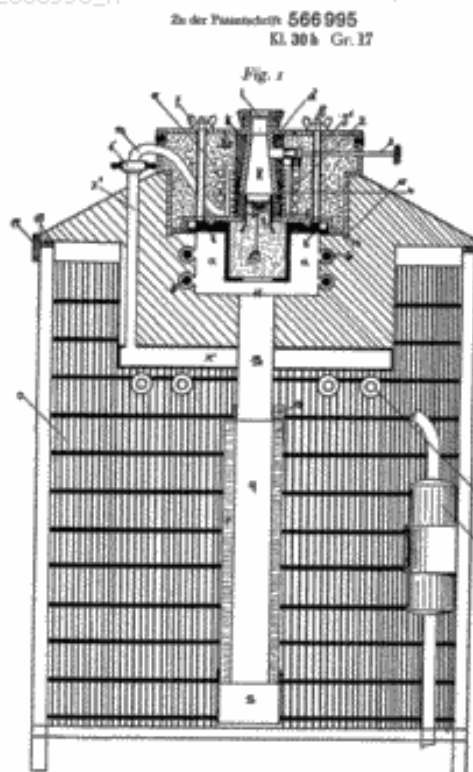
Abstract:

Source: DE566995A (Claim 1)
PATENTANSPRUECHE; i. Elektrischer Ofen, insbesondere fuer zahnaerztliche Zwecke nach Patent 559 057, dadurch gekennzeichnet, dass um ein innerhalb des elektrisch beheizbaren Ein satzes(e) befindliches Schutzrohr(d) eine Pressluftleitung (-2) in Schlangenwindung gefuehrt ist, die kurz vor ihrer illuendung in das Schaulrohr (k) ein Absperrventil (3) hat.

Machine translation: (Claim 1) CLAIMS: i.

Electric furnace, in particular for dental purposes by Patent 559 057, wherein an electrically heated entry within the rate (s) are protective tube (d) a compressed air line (-2) performed in Schlangenwindung is that, shortly before their illuendung in the viewing tube (k) a check valve (3).

PatBase - DE566995_A



2) Family number: 20805050 (DE636675A)

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Title: ZAPFVENTIL MIT EINER DURCH EIN EINLASS- UND EIN AUSLASSVENTIL BEIDERSEITS ABGESCHLOSSENEN SCHUTZGASVORKAMMER NOZZLE WITH A BY AN INTAKE AND ON EITHER SIDE VALVE CLOSED SCHUTZGASVORKAMMER (Machine translation)

Priority: DE1931U011396 19310809

Family:	Publication number	Publication date	Application number	Application date
	<u>DE636675 A</u>	19361015	DE1931U011396D	19310809

Probable Assignee: US FIRE PROT CORP

Assignee(s):^(std): US FIRE PROT CORP

Assignee(s): UNITED STATES FIRE PROTECTION CORP

International class F16K23/00 (Advanced/Invention);
(IPC 8-9): F16K23/00 (Core/Invention)

International class B67D3/00
(IPC 1-7):

CPC: F16K23/00

European class: F16K23/00

[Classification Explorer](#)

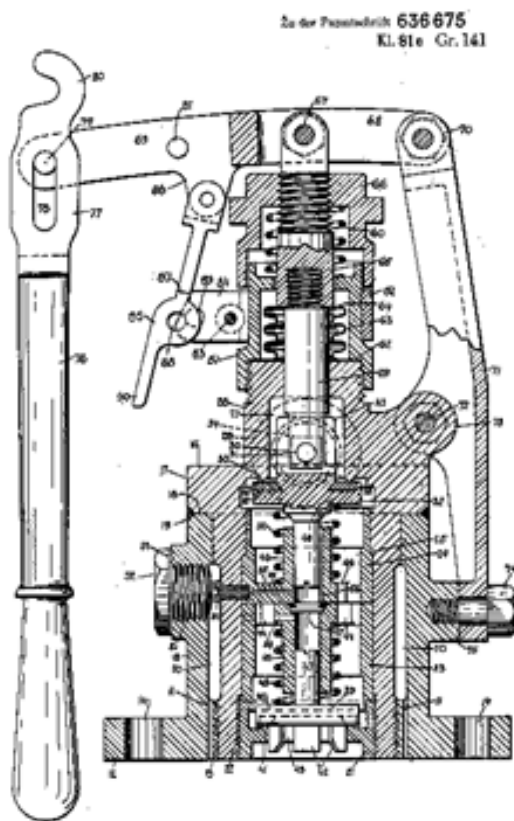
Abstract:

Source: DE636675A (Claim 1) 1.

PATENTANSPRUECHE: i. Zapfventil mit einer durch ein Ein lab- und ein Auslassventil beiderseits ab geschlossenen Schutzgasvorkammer, deren Auslassventil mit einer Einrichtung ver bunden ist, welche beim oeffnen dieses Ventils gleichzeitig die Zufuhr des Schutz gases zur Vorkammer absperrt, dadurch gekennzeichnet, dass die die Gaskammer abschliessenden Ventile(39,322) gegenlaeu- fig'von innen nach aussen schliessend ange ordnet sind, so dass beide Ventile durch den in' der Kammer herrschenden Gas druck auf ihren Ventilsitz gedrueckt wer den.

Machine translation: (claim 1) 1 Claims: i tap valve having a through an on-lab and an exhaust valve on both sides from the closed Schutzgasvorkammer whose exhaust valve with a device connected VER is that when opening this valve same time the supply of shielding gas to the antechamber shuts off, characterized in that the gas chamber final valves (39.322) gegenlaeu-fig'von inside to the outside to close be classified, so that both valves by the pressured in 'the chamber gas pressure prevailing on its valve seat who the.

PatBase - DE636675_A



0) GB683828A – IMPROVEMENTS IN OR RELATING TO STEAM SUPERHEATE...

3) Family number: 19937972 (GB683828A)

© PatBase

Title: Improvements in or relating to steam superheaters for locomotives

Priority: GB19500007719 19500328

Family:	Publication number	Publication date	Application number	Application date
	<u>GB683828 A</u>	19521203	GB19500007719	19500328

Probable Assignee: SUPERHEATER CO LTD

Assignee(s):^(std): FREDERICK ARTHUR BOYES ; SUPERHEATER CO LTD

Assignee(s): THE SUPERHEATER COMPANY LIMITED

International class
(IPC 8-9): F22G7/06 (Advanced/Invention);
F22G7/00 (Core/Invention)

International class
(IPC 1-7): F22G3/00

CPC: F22G7/065

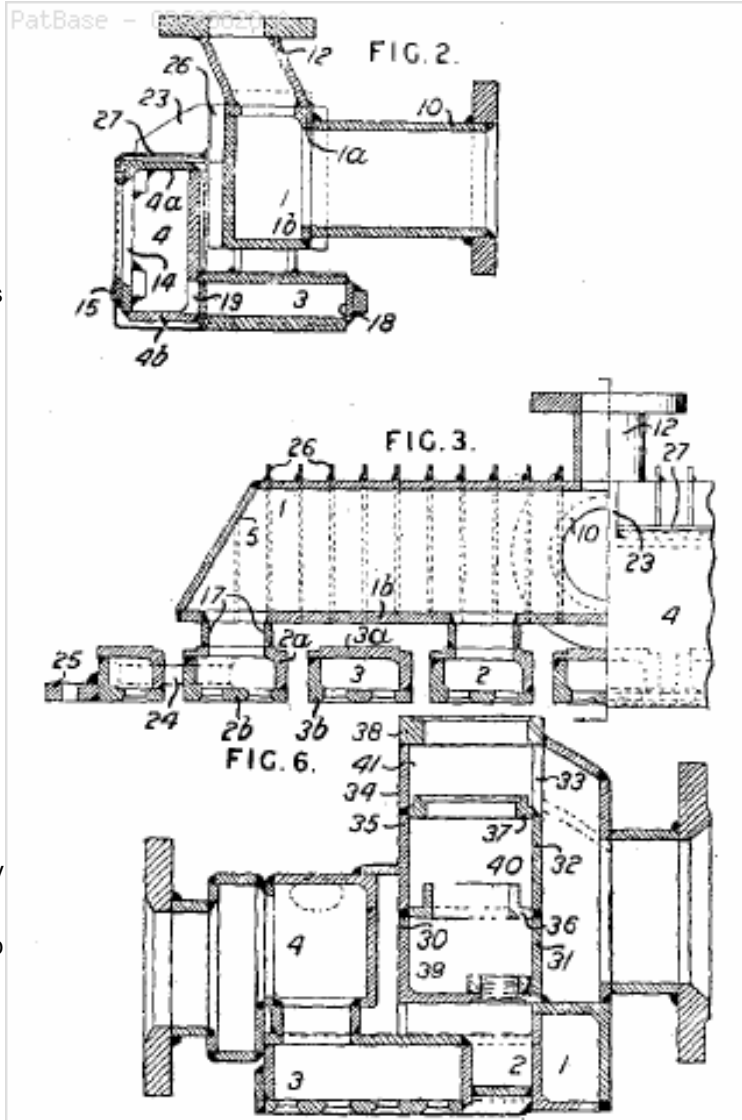
European class: F22G7/06L

[Classification Explorer](#)

Forward Citations: DE1012307,

Abstract:

Source: GB683828A 683,828. Steam superheaters. SUPERHEATER CO., Ltd., and BOYES, F. A. June 28, 1951 [March 28, 1950; and June 3, 1950], Nos. 7719/50 and 13922/50. Class 123 (iii) A header, Figs. 2 and 3, for a locomotive steam superheater has one or both of its steam distributing and collecting channels 1, 4 and the pockets 2, 3 thereof formed wholly of lengths of standard rolled steel sections and steel plate welded together. For example the channels 1, 4 each comprises two lengths 1a, 1b or 4a, 4b of unequal sided angle section steel with end plates such as 5, and the pockets 2, 3 of angles 2a, 2b and 3a, 3b, the pockets 2 being closed by end plates, not shown, and each communicating with an aperture in the channel 1 through a neck 17 formed by a pair of angles, and each pocket 3 being closed at one end by a plate 18 and welded direct at the other end around an aperture 19 in the channel 4. Neckings 10, 12 on the channel 1, for connection to a steam inlet pipe and for mounting a snifting valve respectively, are formed of standard steel tubing, and apertures 14 in the channel 4 may be provided with similar neckings or, alternatively, welded-on steel plates 15 for connection to pipes leading to the locomotive engine valve chests. The channels are secured together by a gusset plate 23, through welded joints, and by straps 24 welded to pockets 2, 3 at the two ends of the header, and the header is completed by end supporting lugs 25. The channel 1 is preferably provided with heatabsorbing fins 26 and the channel 4 may be enclosed in a heat-insulated casing 27. The invention is also applicable to a combined header and housing of a multiple valve regulator, Fig. 6, the channels 1, 4 and pockets 2, 3 being constructed as already described and the housing from a length 30 of rolled steel angle and plates 31... 38 welded together to provide steam supply, delivery and balancing chambers 41, 40, 39. Specifications 296,513, 330,693, [both in Class 123 (iii)], 351,088, 354,925 and 382,642, [Group XXIX], are referred to.



0) US2776821A – FUEL MIXING CONTROL DEVICE

4) Family number: 22588988 (US2776821A)

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Title: FUEL MIXING CONTROL DEVICE

Priority: US19520320375 19521114

Family:	Publication number	Publication date	Application number	Application date
	<u>US2776821 A</u>	19570108	US19520320375	19521114

Probable Assignee: REX DAVIS J

Assignee(s):^(std): REX DAVIS J

Inventor(s):^(std): REX DAVIS J

Inventor(s): DAVIS J REX

International class
(IPC 8-9): F02M19/00 F02M7/12 (Advanced/Invention);
F02M19/00 F02M7/00 (Core/Invention)

International class
(IPC 1-7): F02M7/22

CPC: F02M7/12 F02M19/00

European class: F02M19/00 F02M7/12

US class: 251/305 261/44.2 261/62

[Classification Explorer](#)

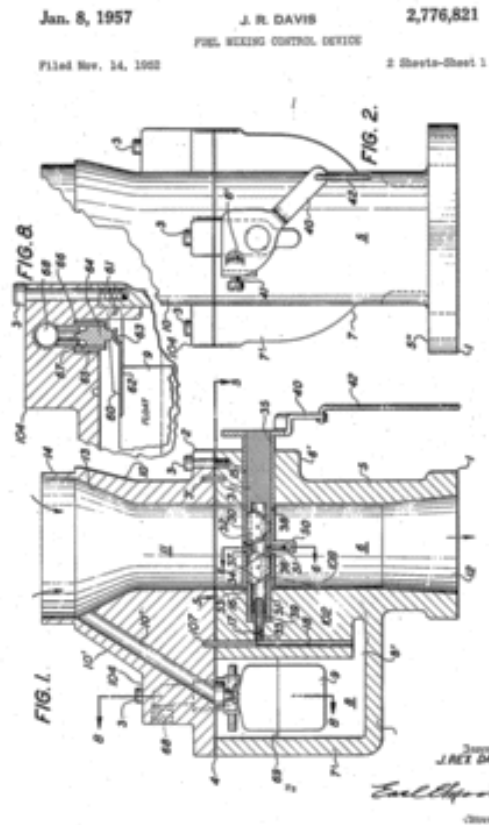
Cited documents: US2190314 A, US2035191 A, US1477280 A, US1383044 A, US1325688 A, US1321471 A, US1319789 A, US1305744 A, US1132314 A, FR510346 A,

Forward Citations: US6082711, US5942159, US5439619, US3279771, US3141048, US3043574, DE1078371,

Abstract:

Source: US2776821A (Claim 1) 1. I claim: 1. in a carburetor having a housing defining a vertically extending down-draft passage, a valve unit including a central body rotatably mounted in said passage on a horizontal axis, and a pair of wings disposed in parallel planes offset from said axis on respective sides thereof, said body being rotatable through an angle of substantially 90 degrees from closed to open positions and having a fuel receiving and dispensing chamber and a plurality of radial ports communicating with said chamber, said ports being disposed, in the closed position of the valve, with one of the ports extending downwardly substantially parallel with the axis of said passage and another extending laterally on that side of the body which moves downwardly in the opening movement of the valve, whereby in the movement of said valve to open position, said one port will swing upwardly to extend horizontally, transverse to the axis of said passage, and said other port will swing downwardly to extend downwardly, parallel to the axis of said passage.

PatBase - US2776821_A



0) DE1032765A –

5) Family number: 21499045 (DE1032765A)

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Priority: DE1955P013404 19550118

Family:

Publication number	Publication date	Application number	Application date
<u>DE1032765 A</u>	00000000		00000000
<u>DE1032765 B</u>	19580626	DE1955P013404	19550118

Probable Assignee: PHILLIPS PETROLEUM CO

Assignee(s):^(std): PHILLIPS PETROLEUM CO

Assignee(s): PHILLIPS PETROLEUM COMPANY

Inventor(s):^(std): FORKEL CURT EMIL ; HALL DICK S ; SEYER CHESTER LEE

International class B01J8/32 F26B17/14 F28D19/02

(IPC 1-7):

CPC: B01J8/12 B01J8/44

European class: B01J8/12 B01J8/44

[Classification Explorer](#)

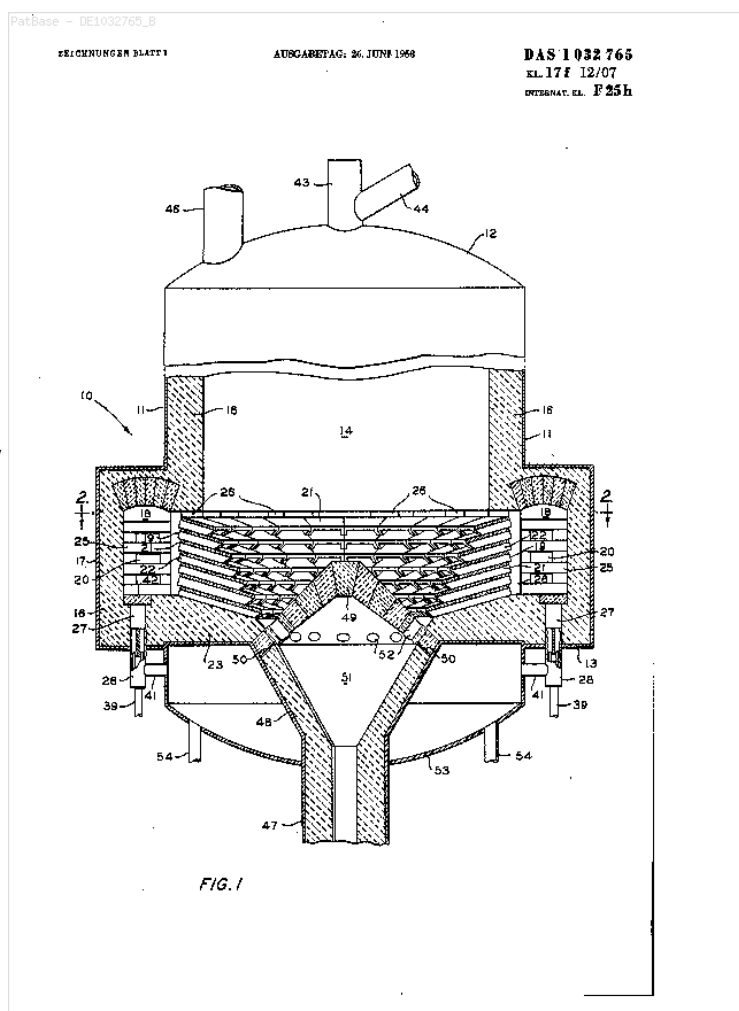
Cited documents: US2565809,

Abstract:

Source: DE1032765A (Claim1)
ssssWARNUNGssss Anfang CLMS Feld konnte Ende DESC uberlappen ssss koerper aus einer mit Isoliermaterial verkleideten Leitung, deren oberes Ende 48 in an sich bekannter Weise erweitert ist Ein ebenfalls bekanntes im wesentlichen konisch geformtes Prallglied oder eine Kuppel 49 ist im unteren Teil der Fuehlkoerpererhitzungskammer unmittelbar ueber dem erweiterten Ende 48 des Fuehlkoerpererauslasses 47 angeordnet.

Machine translation: (Claim1)

ssssWARNUNGssss at the beginning of CLMS field could overlap end of DESC ssss bodies from one with insulating material disguised line, their upper end of 48 in actually well-known way extended is a likewise well-known essentially conical formed percussion member or a dome 49 is directly over the extended end of 48 of the Fuehlkoerpererauslasses 47 arranged in the lower part of the filling material heating chamber.



0) GB947812A – A ROTARY INTERNAL COMBUSTION ENGINE

6) Family number: 20410175 (GB947812A)

© PatBase

Title: A rotary internal combustion engine

Priority: IT19600004462 19600316 IT19600022119 19601228 FR19610851512 19610202

Family:

Publication number	Publication date	Application number	Application date
FR1279013 A	19611215	FR19610851512	19610202
GB947812 A	19640129	GB19610004474	19610207

Probable Assignee: ADELMO BERGERETTO

Assignee(s):^(std): ADELMO BERGERETTO

Inventor(s):^(std): BERGERETTO ADELMO

International class
(IPC 8-9): [F01C1/063](#) (Advanced/Invention);
[F02B53/00](#) (Advanced/Non-invention);
[F01C1/00](#) (Core/Invention);
[F02B53/00](#) (Core/Non-invention)

International class
(IPC 1-7): [F01C1/42](#)

CPC: [F01C1/063](#) [F02B53/00](#)

European class: [F01C1/063](#) [R02B53/00](#)

[Classification Explorer](#)

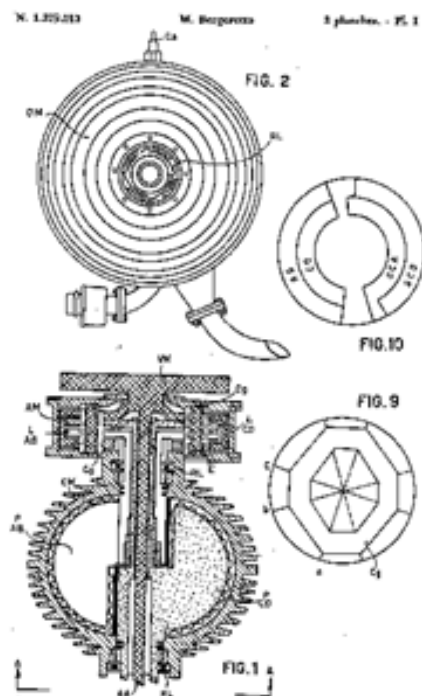
Forward Citations: US4153396, US3776201,

Abstract:

Source: GB947812A 947,812. Rotary piston internal combustion engines. A

BERGERETTO. Feb. 7, 1961 [March 16, 1960; Dec. 28, 1960], No. 4474/61. Heading F1F. A rotary piston I.C. engine comprises an engine body CM, Fig. 1, having a substantially spherical chamber in which rotate blades A, B, C, D mounted in diametrically opposite pairs AB, CD, Fig. 3, on coaxial shafts and coupled together by slotted levers L-AB, L-CD, Fig. 6, one fixed to each shaft, and rollers E co-operating with the lever slots and with a guide channel Cg in each side plate Ps between which the levers are disposed. In Fig. 3, the blades are shown at the commencement of a cycle with the compressed gases between the blades D and B being ignited by a spark plug Ca. On ignition the blade B is rotated clockwise and through the lever L-AB, the blade A. Anti-clockwise rotation of the blade D is prevented by wheel RL and a ratchet. Simultaneously with expansion between the blades D and B, spent gases are expelled ahead of the blade B through an exhaust port Fs, the blade A sucks in gas mixture through a port Fa, and gases from a previous cycle are compressed between the blades AD. During this time the lever L-AB moves from its Fig. 6 position to the position shown in Fig. 7, the rollers E being carried along the slots SI in the lever L-CD. The lever L-CD and hence the blades C, D remaining stationary whilst the engine output shaft AA, by means of a lever AM and due to the inclination of the slots SI moves through an angle of 55 degrees and the blades A and B move to positions slightly spaced from blades D and C respectively. A flywheel VM secured to the engine shaft then further moves the lever L-AB and through the rollers E, also the lever L-CD, so that the engine shaft moves through a passive phase of 35 degrees with all the blades moving together. The blades A, D occupying the positions previously occupied by the blades D, B. Ignition of the gases between the blades A and D then takes place and another active phase of the engine rotates the engine shaft through a further 55 degrees. Thus on one complete revolution of the engine shaft each blade is acted on in turn to rotate the engine shaft through 55 degrees and between each active phase the flywheel rotates the engine shaft through 35 degrees. In a modified construction, the engine body CM is cylindrical and differential bevel and planet gearing is included to rotate the engine shaft AA.

PatBase - FR1279013_A



0) US3339399A – DIRECT READING DENSITOMETER

7) Family number: 29881406 (US3339399A)

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Title: DIRECT READING DENSITOMETER

Priority: US19640342494 19640204

Family:	Publication number	Publication date	Application number	Application date
	<u>DE1271427 B</u>	19680627	DE19651271427	19650203
	<u>DE1281181 B</u>	19681024	DE1965R039808	19650203
	<u>DE1598951 A1</u>	19700305	DE1965R039807	19650203
	DE1598951 B2	19740411	DE1965R039807	19650203
	<u>DE1598951 C3</u>	19741107	DE1965R039807	19650203
	<u>GB1024585 A</u>	19660330	GB19640042773	19641020
	<u>GB1024586 A</u>	19660330	GB19640042774	19641020
	<u>GB1024587 A</u>	19660330	GB19640042781	19641020
	<u>US3339399 A</u>	19670905	US19640342494	19640204

Probable Assignee: ROTRON MFG CO

Assignee(s):^(std): PROCESS ANALYZERS INC N D GES ; ROTRON MFG CO ; ROTRON MFG COMPANY INC

Assignee(s): ROTRON MFG CO INC ; PROCESS ANALYZERS INC N D GES D STAATES TEXAS HOUSTON TEX V ST A ; ROTRON MANUFACTURING COMPANY INC

Inventor(s):^(std): BYRON HUBBARD ALBERT ; DENT MCMAHAN KENTON ; HUBBARD ALBERT B ; HUBBARD ALBERT BYRON ; MCMAHAN KENTON D ; MCMAHAN KENTON DENT

Inventor(s): MCMAHAN KENTON DENT ROGERS ARK V ST A ; HUBBARD ALBERT BYRON WOODSTOCK N Y

International class
(IPC 8-9): C07D301/06 C07D301/32 G01N9/26 G01N9/30 (Advanced/Invention);
C07D301/00 G01N9/00 (Core/Invention)

International class
(IPC 1-7): G01N9/30

CPC: C07D301/06 C07D301/32 G01N9/26 G01N9/30

European class: C07D301/06 C07D301/32 G01N9/26 G01N9/30

US class: 73/30.01 73/30.02

[Classification Explorer](#)

Cited documents: US3172364 A, US3080495 A, US3063287 A, US2962895 A, US2306742 A,

Forward Citations: US5417102, US4677841, GB2116727,

Source: US3339399A 1,024,587.
Densitometers. ROTRON MANUFACTURING
CO., Inc. Oct. 20, 1964 [Feb. 4, 1964],
No.42781/64. Heading G1S. The subject
matter is the same as that of Specification
1,024,585 but the claims differ.

10 Sheets-Sheet 1



INVENTORS
ALBERT M. HUBBARD
RENTON D. McPHERAY
BY
Kane, Sullivan & Kane
ATTORNEYS

8) Family number: 517359 (DE1542286A1)

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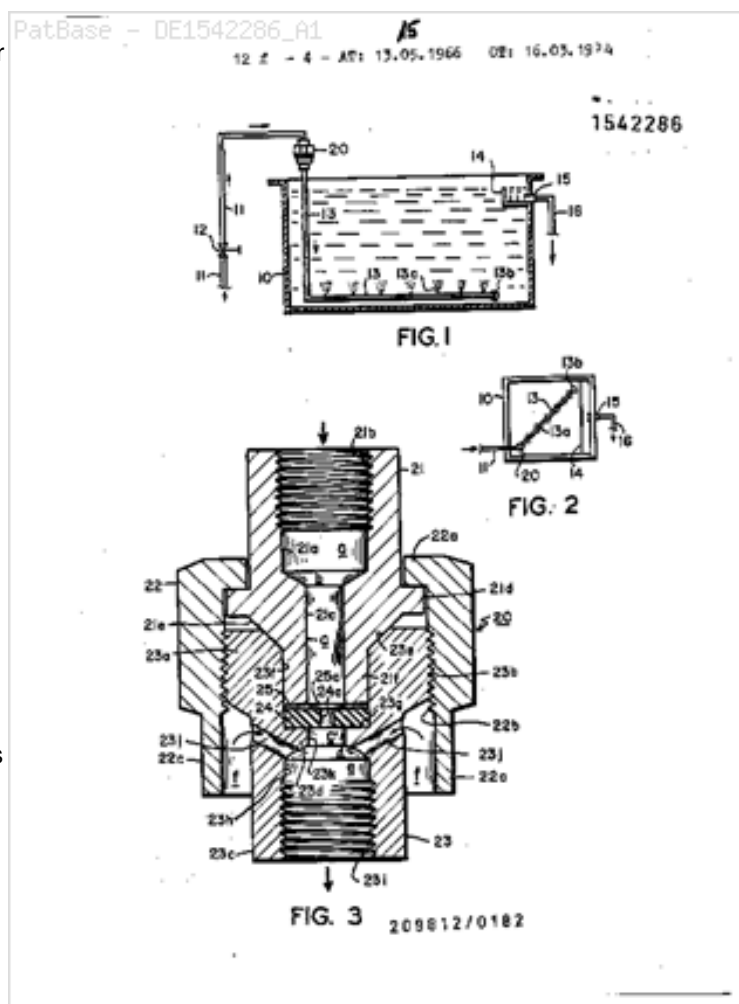
Title: GERAET ZUR DURCHLASSREGELUNG,DURCHLUEFTUNG UND VERHINDERUNG VON LEITUNGSRUECKDRUCK**Priority:** DE1966L053573 19660513**Family:**

Publication number	Publication date	Application number	Application date
<u>DE1542286 A1</u>	19720316	DE19661542286	19660513
<u>DE1542286 C3</u>	19730719	DE1966L053573	19660513

Probable Assignee: LANCY LAB INC CORP**Assignee(s):^(std):** LANCY LAB ; LANCY LAB INC CORP**Assignee(s):** LANCY LABORATORIES INC ; LANCY LABORATORIES INC CORP**International class** C02F3/12 E04H4/12 (Advanced/Invention);
(IPC 8-9): C02F3/12 E04H4/00 (Core/Invention)**International class** B01J4/00 B01J4/02 C02C1/12
(IPC 1-7):**CPC:** C02F3/1294 C02F2103/42 E04H4/12 Y02W10/15**European class:** C02F3/12V6 E04H4/12 M02F103/42[Classification Explorer](#)**Abstract:**

Source: DE1542286A1 (Claim 1) 1. Geraet zur Belueftung und Zufuehrung einer Behandlungsfluessigkeit mit im wesentlichen konstanter Durchflu ssmenge in ein aufzuberei- tendes Fluessigkeitsbad, dadurch gekennzeichnet, dass zwei mit zur gegenseitigen Ausrichtung zusammenwirkenden Bereichen (21e, 23e) versehene, mittels eines Kupplungsteiles (22) loesbar miteinander verbundene Einlass- und Auslasskoerper (21 bzw. 23) gemeinsam einen sich in Auslassrichtung erstreckenden Venturi-Kanal (c, cl) bilden, der ueber eine Anschlusskammer (a) im Einlasskoerper (21) von der Flues- sigkeitsquelle (11) gespeist wird und stromab innerhalb des Auslass- koerpers (23) n eine Unt- erdruckkammer (d) sowie eine nachgeschalte- te Ausgangsanschlusskammer (e) uebergeht; dass die Unterdruckkammer (d) ueber im Auslasskoerper nach aussen und rueckwaerts verlaufende Luftkanaele (23j) mit dem oberen Ende einer zwischen Auelasskoerper und Kupplungs teil (22) gebildeten Luftkammer (f) in Verbindung steht, weiche ei nen Fluessigkeitsaustritt aus der Unterdruckkammer verhindert und an- dererseits der Unterdruckkammer zur Durchlueftung dar zum Ausgang des Geraetes (20) stroemenden Fluessigkeit Luft zufuehrt, und dass inner halb des Venturi-Kanals und zwischen dem Einlass- und Auslasskoerper eine burchflussregleinrichtung (2#, 25) angeordnet ist.

Machine translation: (Claim 1) 1. Equipment for the ventilation and supply of a treatment liquid marked by essentially constant Durchflu ssmenge into aufzuberei a tendes liquid bath, by the fact that provided, by means of a clutch



part (22) solvable connected inlet and discharge opening body (21 and/or 23) together form a venturi flume extending in discharge opening direction (C, cl) for two also ranges cooperating for mutual adjustment (21e, 23e), which is fed over a connection box (A) in the inlet body (21) of the Flues sigkeitsquelle (11) and downstream within the discharge opening of body (23) n an altitude chamber (D) as well as one after-peeled width unit output terminal chamber (E) turns into; that the altitude chamber (D) is located, yields to formed Luftkammer (f) over in the discharge opening body outward and air ducts (23j) with the upper end of one, running backwards, between Auelasskoerper and clutch part (22) in connection egg nen liquid withdrawal from the altitude chamber prevented and on supplies dererseits for aeration for the exit of the equipment (20) flowing liquid air to the altitude chamber, and that internal half the venturi flume and between the inlet and discharge opening bodies one is arranged burchflussregeleinrichtung (2#, 25).

0) US3719182A – AUGMENTATION OF THE PRODUCTION OF ANTIBODIES IN...

9) Family number: 10840023 (US3719182A)

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Title: AUGMENTATION OF THE PRODUCTION OF ANTIBODIES IN ANIMALS AND HUMANS AND THE COLLECTION THEREOF

Priority: DE19782835307 19780811 US19710136476 19710422 US19770851744 19771115
 US19730328048 19730130 US19770824182 19770812 US19730349330 19730409
 US19810287032 19810727 US19790059497 19790723 US19820380960 19820521
 US19920900897 19920618 US19900463694 19900111 US19910744947 19910814
 US19910660710 19910225 US19910771729 19911004 US19950472671 19950607
 US19940277706 19940720

Family:

Publication number	Publication date	Application number	Application date
<u>AU197467692 A1</u>	19751009	AU19740067692	19740409
<u>CA1041445 A1</u>	19781031	CA19740196550	19740401
<u>CH624712 A</u>	19810814	CH19740004873	19740408
<u>DE2416842 A1</u>	19741010	DE19742416842	19740406
<u>DE2416842 C2</u>	19871008	DE19742416842	19740406
<u>DE2835307 A1</u>	19790222	DE19782835307	19780811
<u>DE2835307 C2</u>	19880303	DE19782835307	19780811
<u>DE2858828 C2</u>	19931202	DE19782858828	19780811
<u>FR2224134 A1</u>	19741031	FR19740012340	19740408
<u>FR2224134 B1</u>	19790615	FR19740012340	19740408
<u>FR2309282 A1</u>	19761126	FR19750038213	19751212
<u>FR2309282 B1</u>	19790119	FR19750038213	19751212
<u>FR2309635 A1</u>	19761126	FR19750038215	19751212
<u>FR2309635 B1</u>	19780728	FR19750038215	19751212
<u>FR2309838 A1</u>	19761126	FR19750038214	19751212
<u>FR2309838 B1</u>	19790406	FR19750038214	19751212
<u>GB1471204 A</u>	19770421	GB19740014576	19740402
<u>GB2002266 A1</u>	19790221	GB19780032777	19780809
<u>GB2002266 B2</u>	19820224	GB19780032777	19780809
<u>IT1030569 A</u>	19790410	IT19740021102	19740409
<u>JP1242361 C3</u>	19841126	JP19780097157	19780808
<u>JP2033354 B4</u>	19900726	JP19820084691	19820519
<u>JP50012226 A2</u>	19750207	JP19740040409	19740409
<u>JP54042073 A2</u>	19790403	JP19780097157	19780808
<u>JP58088324 A2</u>	19830526	JP19820084691	19820519
<u>JP59013898 B4</u>	19840402	JP19780097157	19780808
<u>US3719182 A</u>	19730306	US19710136476	19710422
<u>US3857393 A</u>	19741231	US19730328048	19730130
<u>US3964467 A</u>	19760622	US19730349330	19730409
<u>US4064006 A</u>	19771220	US19750549085	19750211
<u>US4189470 A</u>	19800219	US19770851744	19771115
<u>US4508819 A</u>	19850402	US19820380960	19820521
<u>US4934995 A</u>	19900619	US19770824182	19770812
<u>US5006103 A</u>	19910409	US19900463694	19900111
<u>US5217426 A</u>	19930608	US19910744947	19910814
<u>US5217427 A</u>	19930608	US19910771729	19911004
<u>US5571068 A</u>	19961105	US19940277706	19940720
<u>US5759147 A</u>	19980602	US19950472671	19950607

ZA7402091 A	19751126	ZA19740002091	19740402	
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Probable Assignee: BAXTER INT

Assignee(s):^(std): BIO RESPONSE INC ; BAXTER TRAVENOL LAB ; BAXTER INT

Assignee(s): BAXTER INT INC ; BAXTER INT INC A CORP OF DE ; BAXTER INT INC N D GES D STAATES DELAWA ; BAXTER INTERNATIONAL INC ; BAIO RESUPONSU INC ; FENWAL INC ; BIO RESPONSE INC US ; BAXTER TRAVENOL LABOR INC ; BIO RESPONSE INC SCARBOROUGH N Y V ST A ; BAXTER TRAVENOL LABORATORIES INC ; FENWAL HOLDINGS INC ; BAXTER TRAVENOL LABORATORIES INC DEERFIELD ILL US ; BIO RESPONSE INC SCARBOROUGH N Y US ; BAXTER INTERNATIONAL INC N D GES D STAATES DELAWARE DEERFIELD ILL US ; BIO RESPONSE ; MORGAN STANLEY AND CO INC ; ROSE SAM

Inventor(s):^(std): AAMONDO AARU FUANBEEREN ; BACEHOWSKI DAVID V ; CULLIS HERBERT M ; DEEBITSUDO BUI BASEHOSUKII ; HAABAATO EMU KARISU ; ROSE SAM ; ROSE S ; SAMU ROOZU ; VAN BAELEN ARMAND R ; VANBAELEN ARMAND R

Inventor(s): V BACEHOWSKI DAVID ; ROSE S US ; ROSE SAM EGGERTSVILLE N Y ; ROSE SAM EGGERTSVILLE N Y V ST A ; ROSE SAM EGGERTSVILLE NY ; ROSE SAM EGGERTSVILLE NY VSTA ; SAM ROSE ; M CULLIS HERBERT ; R VANBAELEN ARMAND ; DEEBITSUDO BUI BASEHOSUKII

International class
(IPC 8-9): [A61K35/14](#) [A61K35/26](#) [A61K35/28](#) [A61K35/32](#) [A61K35/34](#) [A61K35/55](#) [A61K39/00](#) [A61M1/02](#) [A61M1/36](#) [B04B1/00](#) [B04B5/04](#) [C07K16/00](#) [C07K16/06](#) [C07K16/30](#) [C12M1/00](#) [C12N5/02](#) [C12N5/06](#) [C12P19/00](#) [F04B43/10](#) [F04B9/02](#) [G01N33/48](#) (Advanced/Invention); [A61K35/14](#) [A61K35/26](#) [A61K35/28](#) [A61K35/32](#) [A61K35/34](#) [A61K35/55](#) [A61K39/00](#) [A61M1/02](#) [A61M1/36](#) [C12N5/02](#) [G01N33/48](#) (Advanced/Non-invention); [A61K35/14](#) [A61K35/26](#) [A61K35/28](#) [A61K35/32](#) [A61K35/34](#) [A61K35/55](#) [A61K39/00](#) [A61M1/02](#) [A61M1/36](#) [B04B1/00](#) [B04B5/00](#) [C07K16/00](#) [C07K16/06](#) [C07K16/18](#) [C12N5/02](#) [C12N5/06](#) [F04B43/00](#) [F04B9/02](#) [G01N33/48](#) (Core/Invention); [A61M1/36](#) (Core/Non-invention); [A61K A61M](#) (Subclass/Invention)

International class
(IPC 1-7): [A01N1/02](#) [A61B19/00](#) [A61K17/00](#) [A61K23/00](#) [A61K35/12](#) [A61K35/14](#) [A61K35/20](#) [A61K35/26](#) [A61K35/28](#) [A61K35/32](#) [A61K35/34](#) [A61K35/55](#) [A61K39/00](#) [A61K39/395](#) [A61K39/40](#) [A61K39/42](#) [A61M1/00](#) [A61M1/02](#) [A61M1/03](#) [B04B1/00](#) [B04B11/00](#) [B04B5/00](#) [B04B5/04](#) [B04B7/08](#) [B04B7/12](#) [C07G7/00](#) [C12B1/00](#) [C12D9/00](#) [C12K9/00](#) [C12M1/10](#) [C12N1/00](#) [C12N5/00](#) [C12N5/02](#) [C12N5/06](#) [F04B23/10](#) [F04B43/00](#) [F04B43/02](#) [F04B43/12](#) [F04B9/02](#) [F16K7/07](#) [G01F11/00](#) [G01N1/14](#) [G01N33/16](#) [G01N33/54](#) [G05D7/00](#)

CPC: [B04B2005/045](#) [Y10S530/806](#) [Y10S530/838](#) [Y10S424/806](#) [Y10S530/837](#) [Y10S530/863](#) [A61M1/362](#) [A61M1/3679](#) [A61M1/3693](#) [C12M25/14](#) [C12M27/10](#) [C12M41/34](#) [B04B5/0442](#) [B04B1/00](#) [B04B5/0428](#) [B04B2005/0464](#) [C07K16/30](#) [F04B9/02](#) [F04B43/10](#) [C07K16/00](#) [C07K16/06](#)

European class: [A61M1/36Z](#) [B04B1/00](#) [B04B5/04B4](#) [B04B5/04C](#) [C07K16/00](#) [C07K16/06](#) [C07K16/30](#) [F04B43/10](#) [F04B9/02](#) [K61M1/36A30](#) [K61M1/36P](#) [L04B5/04C1](#) [L04B5/04C3](#)

US class: [128/0.1R](#) [128/1](#) [128/1R](#) [128/21.4R](#) [128/898](#) [195/1.8](#) [383/127](#) [424/140.1](#) [424/537](#) [424/806](#) [424/85](#) [435/1](#) [435/2](#) [435/240](#) [435/241](#) [435/391](#) [435/394](#) [435/397](#) [435/401](#) [494/18](#) [494/45](#) [530/364](#) [530/387.1](#) [530/389.1](#) [530/389.4](#) [530/389.5](#) [530/389.6](#) [530/389.7](#) [530/412](#) [530/413](#) [530/427](#) [530/806](#) [530/837](#) [530/838](#) [530/863](#) [604/28](#) [604/5.01](#) [604/8](#)

[Classification Explorer](#)

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Forward Citations: WO9830247, WO08001992, WO0220165, USB302271, US9556243, US9533090, US9443633, US9364600, US9327296, US9302042, US9248446, US9248227, US9239276, US9238097, US9138664, US9114334, US9095665, US9079194,

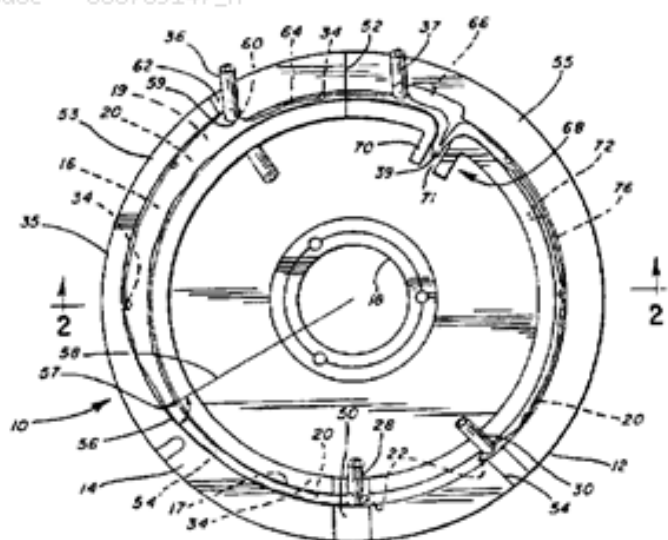
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DE2416842, CN103191013, CN103191013,

Abstract:

Source: US3719182A ABSTRACT OF THE

DISCLOSURE It has been found that very large production of antibodies can be achieved by removing specific feedback regulatory antibodies by means of a lymphorectomy performed under special conditions in a patient or subject (e.g., an animal or human) with induced anatomical and physiological changes. The subject is first given antigen administration then, preferably, but not mandatorily, is splenectomized. A thoracic duct fistula is next performed. The central venous system pressure is then preferably raised so that it is above the atmospheric pressure of the thoracic duct. In this manner, substantially all the lymph fluid is allowed to flow out of the thoracic duct from the fistula (through an indwelling catheter) for a prolonged period of time. The lymph is separated into cells and lymph fluid. The cells are returned to the subject intravenously. The subject must be given replacement fluid, which can be of several kinds, but all lacking the specific antibody. By virtue of the above procedure, the plasma and extracellular fluid of the subject is continuously depleted of feedback antibody because the antibody is continuously removed prior to its reaching the blood stream. Because of this lack of antibody, in the presence of antigen administration, it is found that the antibody production in the lymphoid tissue and therefore its content in the lymph fluid is enormous and ever-increases. The tremendous increase in antibody production appears to be several orders of magnitude greater than other modes of antibody production and therefore appears to have very substantial utility in the fields of biology, chemistry and veterinary and clinical medicine.

PatBase - US5759147_A



10) Family number: 10126876 (US3858649A)

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Title: APPARATUS FOR TESTING OIL WELLS USING ANNULUS PRESSURE**Priority:** AU19740065977 19740225 US19730335980 19730226 US19740471119 19740517
US19740443599 19740219 US19740443598 19740219**Family:**

Publication number	Publication date	Application number	Application date
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Probable Assignee: HALLIBURTON CO**Assignee(s):**^(std): HALLIBURTON CO ; HALLIBURTON SERVICES ; HOLDEN JOHN C ; WRAY GARY Q**Assignee(s):** HALLIBURTON COMPANY ; HALLIBURTON COMPANY TE DUNCAN OKLAHOMA VER
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DUNCAN OKLA ; GARY Q WRAY**Agent(s):** JAMES M LAWRIE AND CO MELBOURNE**International class**
^(IPC 8-9): E21B33/12 E21B34/10 E21B49/00 E21B49/08 (Advanced/Invention);
E21B33/12 E21B34/00 E21B49/00 (Core/Invention)**International class**
^(IPC 1-7): E21B43/00 E21B43/12 E21B47/00 E21B49/00 E21B49/08 E21D G01N33/24**CPC:** E21B33/12 E21B34/108 E21B49/001 E21B49/081**European class:** E21B33/12 E21B34/10T E21B49/00A E21B49/08B

US class: 166/152 166/162 166/264 166/321 166/336 73/151 73/152.01

[Classification Explorer](#)

Cited documents: US3860066 A, US3824850 A, US3823773 A, US3796261 A, US3779263 A, US3741305 A, US3664415 A, US3646995 A, US3643505 A, US3456726 A, US3358755 A, US3096823 A,

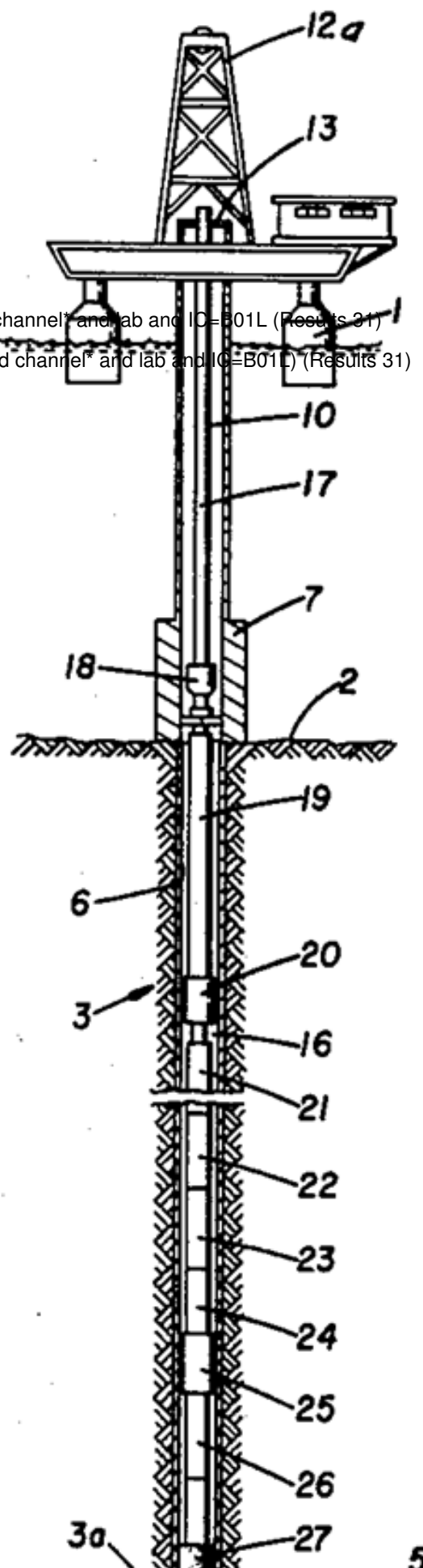
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Abstract:

Source: US3858649A An annulus pressure operated oil well testing and sampling apparatus utilizes hydrostatic pressure to supplement spring means which biases against valve means to hold the valve means closed until application of sufficient hydraulic pressure to the annular fluid opens the tool to the formation and allows testing operations to be performed. A subsequent intentional or inadvertent release or sudden extreme increase of applied pressure on the annular fluid actuates means to close the valve means against further formation fluid flow.

- **search:** SS3 ft=(radial or circular) and chamber and channel* and lab and IC=B01L (Results 31)
- **List:** SS3 1-10 (ft=(radial or circular) and chamber and channel* and lab and IC=B01L) (Results 31)

PatBase - US3964305_A



1) Family number: 42816197 (US2001007759A)

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Title: METHOD FOR RAPID THERMAL CYCLING OF BIOLOGICAL SAMPLES

Priority:

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Assignee(s):(std): BIOFIRE DIAGNOSTICS INC ; HILLYARD DAVID R ; IDAHO TECHNOLOGY INC ; UNIV UTAH RES FOUND ; UNIV UTAH ; WITTWER CARL T ; RIRIE KIRK M ; UNIV OF UTAH RES FOUNDATION ; RASMUSSEN RANDY P

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Inventor(s):(std):

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Inventor(s): RANDY P RASMUSSEN ; KIRK M RIRIE ; CARL T WITTWER ; DAVID R HILLYARD ; HILLYARD DAVID

Agent(s): SHELSTON IP; SHELSTON IP PTY LTD; SMART AND BIGGAR; BANNERMAN DAVID GARDNER ET AL; ELSY DAVID; ELSY DAVID ET AL; DURAN LUIS ALFONSO; ISSHIKI AND CO; DORSEY AND WHITNEY LLP INTELLECTUAL PROPERTY DEPARTMENT; BARNES AND THORNBURG; ICE MILLER; ICE MILLER LLP; BARNES AND THORNBURG LLP; RICHARD F; MORGAN LEWIS AND BOCKIUS LLP; HOMER W; MAGINOT MOORE AND BECK LLP

Designated states: AL AM AT AU AZ BA BB BE BF BG BR BY CA CH CN CU CZ DE DK EE ES FI FR GB GE GH GR HU IE IL IS IT JP KE KG KP KR KZ LC LI LK LR LS LT LU LV MC MD MG MK MN MW MX NL NO NZ PL PT RO RU SD SE SG SI SK SZ TJ TM TR TT UA UG US UZ VN YU

International class
(IPC 8-9): B01L3/14 B01L7/00 B01L9/00 B10J19/18 C07H21/00 C07H21/04 C12M1/00 C12M1/26 C12M1/34 C12M1/38 C12M1/40 C12N15/09 C12N15/10 C12P19/34 C12Q1/68 G01N1/00 G01N15/00 G01N21/01 G01N21/03 G01N21/07 G01N21/25 G01N21/64 G01N21/76 G01N21/78 G01N30/46 G01N33/00 G01N33/50 G01N33/58 G01N35/00 G01N35/02 G01N35/10 (Advanced/Invention); C12N15/09 C12P19/34 C12Q1/68 G01N21/03 G01N21/07 G01N21/76 G01N30/02 G01N30/06 G01N30/30 G01N30/46 G01N33/50 G01N33/58 G01N35/00 G01N35/02 (Advanced/Non-invention); B01L3/14 B01L7/00 C12M1/34 C12M1/36 C12Q1/68 G01N1/00 G01N15/00 G01N21/25 G01N21/64 G01N30/00 (Core/Invention); G01N21/03 G01N30/00 G01N35/00 G01N35/02 (Core/Non-invention)

International class
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CPC: B01L9/065 B01L2200/147 B01L2300/1827 B01L2300/1872 B01L2300/1883 G01N2030/3084 B01L3/5025 B01L2300/0803 B01L2400/0406 B01L2400/0409 Y10S435/808 Y10S435/809 Y10S436/807 G01N30/463 B01L2400/0644 G01N2030/027 G01N30/02 G01N30/06 G01N30/466 Y10T436/11 Y10T436/118339 Y10T436/25 Y10T436/25375 Y10T436/255 C12Q1/686 B01L3/5082 B01L7/52 B01L2300/0654 B01L2300/0838 B01L2300/1844 C12Q1/6818 C12Q1/6823 G01N21/0303 G01N21/07 G01N21/253 G01N21/6428 G01N21/6452 G01N35/025 G01N2021/6417 G01N2021/6482 G01N2035/00237 Y10T436/143333

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US class: 204/601 204/604 210/142 210/198.2 210/656 422/100 422/102 422/104 422/134 422/417 422/50 422/64 422/68.1 422/70 422/81 422/82.08 422/99 435/283.1 435/286.1 435/286.100P 435/286.6 435/287.2 435/287.200P 435/287.200S 435/287.3 435/288.1 435/288.100S 435/288.2 435/288.7 435/288.700S 435/303.1 435/303.100S 435/303.3 435/4 435/6 435/6.1 435/6.100S 435/6.11 435/6.12 435/6.120P 435/6.120S 435/6.18 435/6.180P 435/6P 435/6S 435/808 435/809 435/91.1 435/91.100P 435/91.2 435/91.200S 436/161 436/172 436/174 436/177 436/178 436/43 436/53 436/807 436/94 536/24.3 536/24.300S 73/61.55 73/61.56 935/85 935/88

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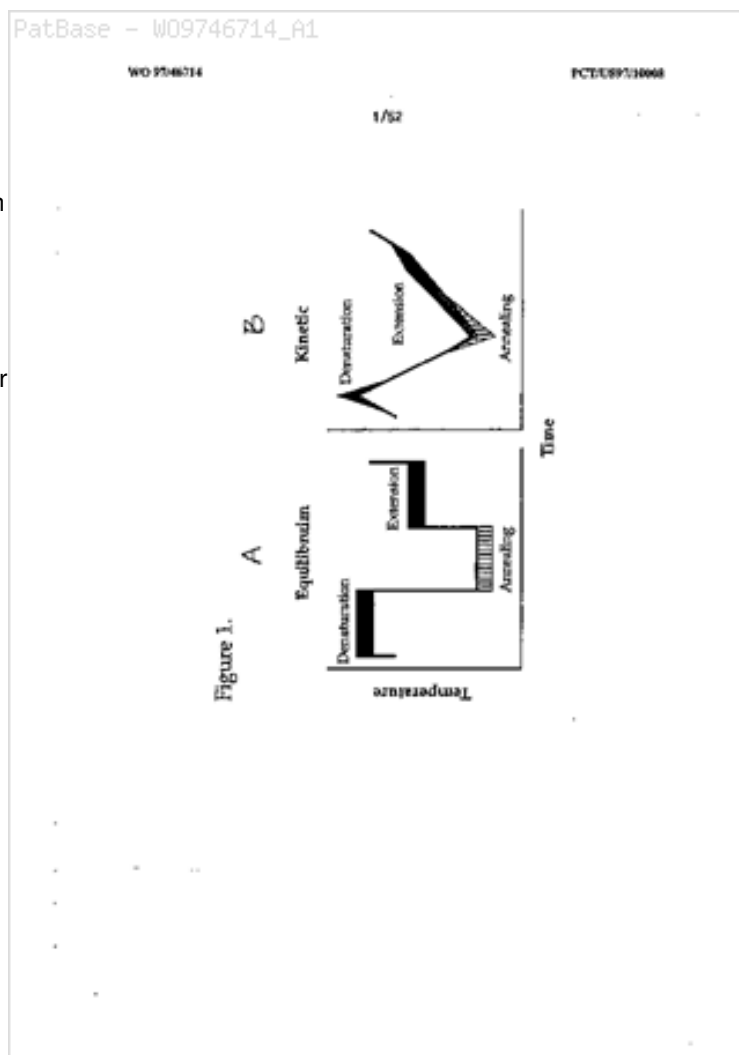
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Abstract:

Source: US2001007759A A thermal cycling method and device is disclosed. The device comprises a sample chamber whose temperature can be rapidly and accurately modulated over a range of temperatures needed to carry out a number of biological procedures, such as the DNA polymerase chain reaction. Biological samples are placed in glass micro capillary tubes and then located inside the sample chamber. A programmable controller regulates the temperature of the sample inside the sample chamber. Once a heating cycle is completed, the controller opens a door to the chamber for venting hot air out and cool ambient air is moved in. Temperature versus time profiles corresponding to optimum denaturation, annealing and elongation temperatures for amplification of DNA are achieved by the present invention.



0) US2002049557A – FLUID SAMPLE TESTING SYSTEM

2) Family number: 30111368 (US2002049557A)

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Title: FLUID SAMPLE TESTING SYSTEM

Priority: CA19992301153 19990623 CA19992632856 19990623 CA20082301153 20080707
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Family:

Publication number	Publication date	Application number	Application date
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Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LI LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NE NL NO NZ OM PH PL PT RO RU SD SE SG SI SK SL SN SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VN YU ZA ZM ZW

International class
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US class:

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422/68.1 422/68.100P 422/68.100S 422/81 422/82 422/82.05 422/82.06 422/99 422/99S
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435/303.100 435/303.100S 435/304.2 435/304.200 435/304.200S 435/6 435/6.1
435/6.100P 435/6.11 435/6.12 435/6.16 435/809 435/809S 435/91.2 435/91.200
435/91.200P 435/912 436/18 436/180 436/180S 436/53 436/63 436/8 506/39 506/39P
506/7 53/416 53/434 53/469 702/116 702/116P 702/19 73/863.11 73/864.21 935/85
935/88 96/105

[Classification Explorer](#)

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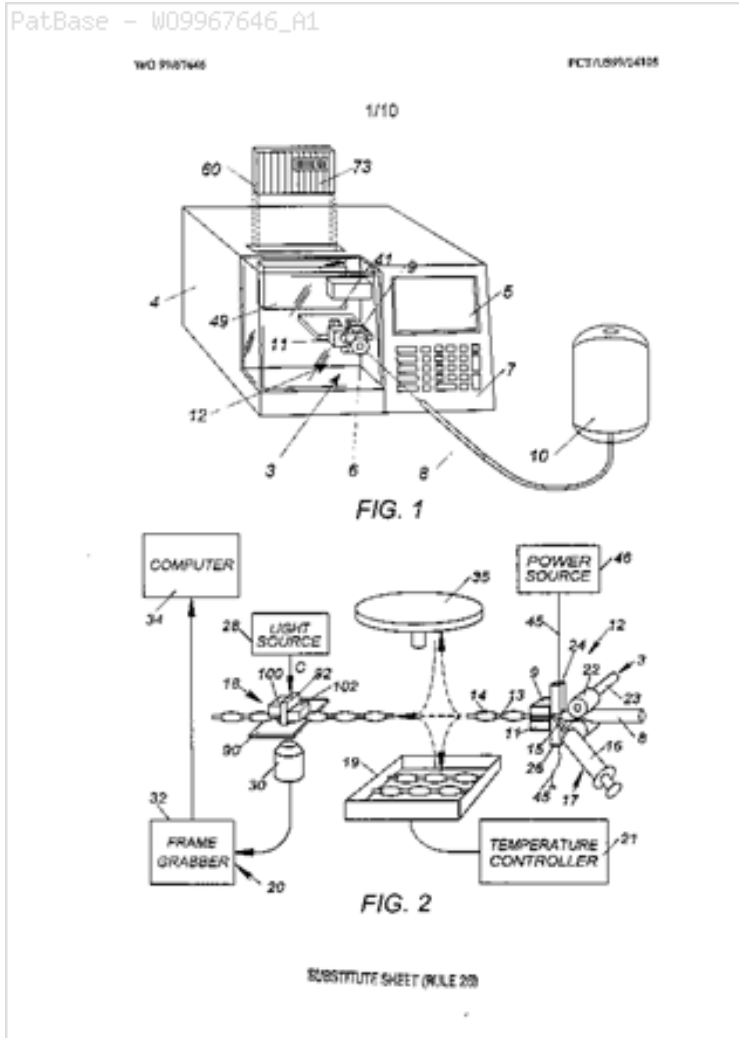
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Abstract:

Source: US2002049557A A sample testing system has a chamber sealing apparatus adapted to receive a chamber containing a fluid sample material and to seal portions of a chamber into segments. A reagent injector cartridge actuator is adapted to receive a reagent injector cartridge having at least one needle in fluid communication with a reagent reservoir, and to move a reagent injector cartridge to inject a quantity of reagent into a segment of a chamber. In certain preferred embodiments, a flow control device induces a flow of sample in a segment. A sensor generates a signal corresponding to a condition of the mixture.



3) Family number: 29116375 (WO03080868A1)

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Title: BIO-DISC, BIO-DRIVER APPARATUS, AND ASSAY METHOD USING THE SAME
Priority: KR20020017558 20020327 WO2003KR00613 20030327 WO2003KR00613 20040922
Family:

Publication number	Publication date	Application number	Application date
AU2003218806 AA	20031008	AU20030218806	20030327
KR100830926 B1	20080522	KR20047015027	20030327
KR20050014797 A	20050207	KR20047015027	20040922
WO03080868 A1	20031002	WO2003KR00613	20030327

Probable Assignee: YOO JAE CHERN

Assignee(s):^(std): YOO JAE CHERN

Inventor(s):^(std): YOO JAE CHERN

Inventor(s): JAE CHERN YOO

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NE NI NL NO NZ OM PH PL PT RO RU SC SD SE SG SI SK SL SN SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

International class
 (IPC 8-9): [B01L3/00 G01N35/00 G11B19/02 G11B23/00 G11B7/24 G11B7/26](#) (Advanced/Invention);
[G11B19/02 G11B7/24 G11B7/26](#) (Advanced/Non-invention);
[B01L3/00 G01N35/00 G11B19/02 G11B23/00 G11B7/24 G11B7/26](#) (Core/Invention)

International class
 (IPC 1-7): [C12Q1/68 G11B17/00 G11B19/02 G11B7/24 G11B7/26](#)

CPC: [B01L3/502715 B01L3/502738 B01L2300/023 B01L2300/024 B01L2300/0645 B01L2300/0681 B01L2300/0806 B01L2300/0867 B01L2300/087 B01L2300/1827 B01L2400/0409 G01N35/00069 G01N35/00871 G01N2035/00366 G01N2035/00782 G11B23/0021](#)

European class: [B01L3/00C6M10 B01L3/5027B B01L3/5027E G01N35/00C2 G01N35/00G3L G11B23/00D1 L01L300/02B L01L300/02C L01L300/06B4 L01L300/06D L01L300/08A2 L01L300/08E4 L01L300/08E6 L01L300/18A8 L01L400/04F4 S01N35/00E1A S01N35/00G3C1V S01N35/00G3L](#)

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Forward Citations: WO10076337, WO09102159, WO09102159, WO09075513, WO09075513, WO08130178, WO08051167, WO08016271, WO07079530, WO07073107, WO07001160, WO06121266, WO06118420, WO06042369, US9463431, US9279818, US9170204, US8993487, US8951779, US8865479, US8835188, US8835187, US8772049, US8658113, US8630867, US8609434, US8480980, US8263386, US8097450, US7776553, US7524464, US2010312574, KR101555476, KR101528433, KR101345412, KR101335920, KR101307859, KR101306341, KR101255984, KR101250537, KR100941416, KR100818274, KR100806941, KR100707171, JP4940446, JP4896127, JP4819119, JP2009520985, JP2008544296, JP2008541043, GB2455956, EP2046992, EP1977223, EP1971861, EP1971861, EP1917525, EP1885883, EP1883815, DE102005059536, CN103495440, CN103495440,

Abstract:

A non-optical bio-disc, a bio-disc device including the non-optical bio-disc and/or an optical disc, a bio-driver apparatus in which a controller disc including a controller for the bio-disc is installed, and an assay method using the same, which are suitable for labs-on-a-chips for various diagnostic assays, nucleic acid hybridization assays, and immunoassays, are provided. The bio-driver apparatus is compatible with general optical disc drivers, including audio CDs, CD-Rs, game CDs, DVDs, etc., and the assay method is compatible with general optical disc drivers, including CD-ROMs, DVD players, etc. Thus, the bio-driver apparatus and the assay method offer an economical and convenient alternative to existing products. In addition, the bio-driver apparatus can be readily and easily applied in connection with a computer for remote diagnosis via the Internet.

PatBase - W003080868_A1

W003080868

PCT/KR2003/00613

1/31

FIG. 1A

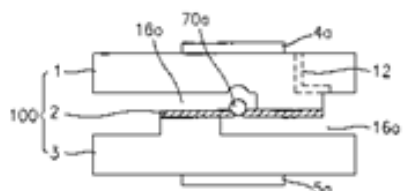
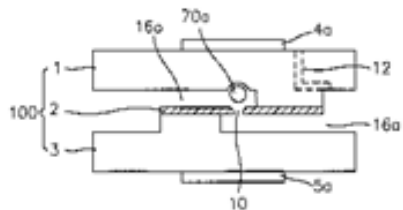


FIG. 1B



4) Family number: 30362130 (US2006163063A)

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Title: DEVICE FOR MEASURING THE ELECTRICAL ACTIVITY OF BIOLOGICAL ELEMENTS AND ITS APPLICATIONS

Priority: FR20020010663 20020828 WO2003EP15044 20030828

Family:	Publication number	Publication date	Application number	Application date
	CN100354626 C	20071212	CN20038020379	20030828
	CN1678909 A	20051005	CN20038020379	20030828
	EP1532441 A2	20050525	EP20030809339	20030828
	EP1532441 B1	20130417	EP20030809339	20030828
	FR2844052 A1	20040305	FR20020010663	20020828
	FR2844052 B1	20050701	FR20020010663	20020828
	JP2005539242 T2	20051222	JP20040546035T	20030828
	JP4373333 B2	20091125	JP20040546035T	20030828
	US2006163063 AA	20060727	US20030522599	20030828
	US7494622 BB	20090224	US20030522599	20030828
	WO04038409 A2	20040506	WO2003EP15044	20030828
	WO04038409 A3	20041104	WO2003EP15044	20030828

Probable Assignee: COMMISSARIAT A L ENERGIE ATOMIQUE

Assignee(s):^(std): CAILLAT PATRICE ; CHATELAIN FRANCOIS ; COMMISSARIAT ENERGIE ATOMIQUE ; PICOLLET DAHAN NATHALIE ; REVOL CAVALIER FREDERIC ; SAUTER FABIEN

Assignee(s): COMMISSARIAT A L ENERGIE ATOMIQUE ; COMMISSARIAT A L ENERGIE ATOMIQUE ET AUX ENERGIESALTERNATIVES ; COMMISSARIAT A L'ENERGIE ATOMIQUE

Inventor(s):^(std): CAILLAT PATRICE ; CHATELAIN FRANCOIS ; FABIEN SAUTER ; FRANCOIS CHATELAIN ; FREDERIC REVOL CAVALIER ; NATHALIE PICOLLET DAHAN ; PATRICE CAILLAT ; PICOLLET DAHAN NATHALIE ; REVOL CAVALIER FREDERIC ; SAUTER FABIEN

Agent(s): AHNER PHILIPPE; BREVALEX; OBLON SPIVAK MCCLELLAND MAIER AND NEUSTADT PC

Designated states: AT BE BG CH CN CY CZ DE DK EE ES FI FR GB GR HU IE IT JP LI LU MC NL PT RO SE SI SK TR US

International class
(IPC 8-9): [C12M1/00](#) [C12Q1/00](#) [G01N27/00](#) [G01N27/22](#) [G01N27/30](#) [G01N27/416](#) [G01N33/487](#)
[G01N37/00](#) (Advanced/Invention);
[B01L3/00](#) (Advanced/Non-invention);
[C12M1/00](#) [C12Q1/00](#) [G01N27/22](#) [G01N27/30](#) [G01N27/416](#) [G01N33/487](#)
[G01N37/00](#) (Core/Invention);
[B01L3/00](#) (Core/Non-invention)

International class
(IPC 1-7): [C12M1/00](#) [C12M1/34](#) [G01N27/22](#) [G01N27/30](#) [G01N27/416](#) [G01N33/487](#) [G01N33/50](#)
[G01N33/68](#) [G01N37/00](#)

CPC: [G01N33/48728](#) [B01L3/5085](#)

European class: [G01N33/487B6](#) [L01L3/5085](#)

US class: [204/403.01](#) [204/403.010S](#) [204/403.06](#) [204/403.060P](#) [324/691](#) [324/692](#) [422/102](#) [422/504](#)
[422/82.01](#) [422/82.02](#)

[Classification Explorer](#)

Cited documents: WO9966329 A1, WO9931503 A1, WO9716726 A1, WO9613721 A1, WO0171349 A1, WO0159447 A1, WO0125769 A2, WO0025121 A1, US7169609 BB, US6989089 BB, US6984297 BB, US6932893 BB, US6776896 BA, US6315940 BA, US5643742 A, US5506141 A, US4894343 A, US2002064841 AA,

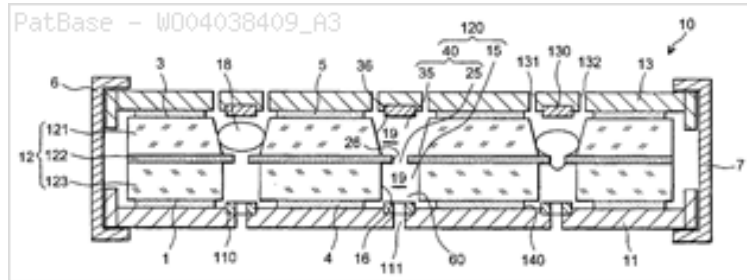
Forward Citations: WO07001091, WO06131679, WO06131679, WO06123267, WO05098423, USD768870, US9410924, US8852881, US8816450, US8445263, US8349158, US8318477,

US8314466, US8277762, US8247218, US8202439, US8075754, US7501279, US7169609, US2015209786, US2012322144, US2010236926, US2010219488, US2010147682, US2010019782, US2010019756, US2009281410, US2009239033, US2009167288, US2009047731, US2008257726, US2008237039, US2008210558, US2007183936, US2006240543, JP2012504427, JP2011506994, JP2008518594, JP2007298351, JP2007218716, JP2007132837, JP2007010429, FR2887030, EP2306189, EP1783202, EP1767929, CN104024839, CN104024839, CN103396946, CN103194388, CN103194388, CN102753270, CN102753270,

Abstract:

Source: US2006163063A A device for measuring electrical activity of biological elements, including a substrate that has lower and upper faces and at least one through opening, the opening being delimited by a set of walls. Two plates are placed on either side of the lower and upper faces of the substrate and delimit, with the set of walls, a chamber. Each of the plates is provided, on its face lying opposite the substrate, with at least one electrode facing the opening in the substrate.

Each of the plates further has at least one channel that starts inside the chamber and connects the chamber to the outside of the device, and the chamber communicates with the outside of the device only through the channels.



5) Family number: 30716004 (US2004132218A)

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Title: SELF-CONTAINED MICROFLUIDIC BIOCHIP AND APPARATUS

Priority: US20030338451 20030108 US20040013609 20041216 US20050117908 20050429
WO2004US00768 20040108

Family:	Publication number	Publication date	Application number	Application date
	<u>JP2006518449 T2</u>	20060810	JP20060500928T	20040108
	<u>US2004132218 AA</u>	20040708	US20030338451	20030108
	<u>US2005196779 AA</u>	20050908	US20040013609	20041216
	<u>US2005221281 AA</u>	20051006	US20050117908	20050429
	<u>US7122153 BB</u>	20061017	US20030338451	20030108
	<u>WO04062804 A1</u>	20040729	WO2004US00768	20040108
	<u>WO04062804 C1</u>	20060406	WO2004US00768	20040108

Probable Assignee: HO WINSTON Z

Assignee(s):^(std): HO WINSTON Z

Assignee(s): TAJBAKHSJ JIAN

Inventor(s):^(std): HO WINSTON Z ; TAJBAKHSJ JIAN

Inventor(s): HO WINSTON

Agent(s): WINSTON Z HO; LIU AND LIU

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NA NE NI NL NO NZ OM PG PH PL PT RO RU SC SD SE SG SI SK SL SN SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

International class
(IPC 8-9): B01L3/00 C12M1/00 C12M1/34 C12Q1/00 G01N21/00 G01N21/64 G01N33/53
G01N35/08 (Advanced/Invention);
C12N15/09 G01N37/00 (Advanced/Non-invention);
B01L3/00 C12M1/34 C12Q1/00 G01N21/64 (Core/Invention)

International class
(IPC 1-7): B01L3/00 C12M1/34 C12Q1/00 C12Q1/68 G01N33/545

CPC: B01L3/5025 B01L2200/16 B01L2300/0672 B01L2300/0803 B01L2300/0864
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B01L2300/0877 B01L2300/1822 B01L2400/0478 G01N21/6452 B01L3/502738

European class: B01L3/00C6M10 B01L3/5025 B01L3/5027 B01L3/5027E G01N21/64P2 L01L200/06J8
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US class: 422/417 422/417S 422/55 422/57 422/58 422/58S 435/287.1 435/287.100 435/287.100S
435/4 435/4P 435/6 435/6.11 435/6.110P 435/6.110S 435/6P 435/6S 436/5 436/524
436/524P 436/531 436/531S 436/6

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US9535059, US9500645, US9482662, US9460263, US9440424, US9428781, US9410977, US9399216, US9395359, US9322054, US9314795, US9310360, US9303286, US9255866, US9234888, US9229001, US9216412, US9182388, US9180418, US9176126, US9156004, US9132398, US9116148, US9116124, US9110044, US9103360, US9079182, US9075051, US9075047, US9075046, US9067207, US8967853, US8961764, US8945480, US8932523, US8915259, US8894946, US8889085, US8883518, US8862448, US8841076, US8828654, US8802445, US8802029, US8778665, US8772017, US8765367, US8765062, US8741230, US8735055, US8703070, US8695355, US8679407, US8669047, US8646482, US8637250, US8609038, US8591829, US8580569, US8567425, US8535541, US8480975, US8475737, US8409527, US8389272, US8283155, US8226826, US8222049, US8222023, US8221700, US8202492, US8187541, US8168135, US8158430, US8137626, US8123192, US8039249, US8034296, US8030057, US8007999, US8003060, US7959876, US7888125, US7832429, US7814928, US7794665, US7790118, US7635594, US7625760, US2015316483, US2014220579, US2014047823, US2014045191, US2014038209, US2013294973, US2013193065, US2013004385, US2012053068, US2012034687, US2011250690, US2011201101, US2011143378, US2011120562, US2010285479, US2010233798, US2010227379, US2010151560, US2010144541, US2010075863, US2010034704, US2010002535, US2009266421, US2009215050, US2009148933, US2009142771, US2009137029, US2009136963, US2009130658, US2009042211, US2008286858, US2008273918, US2008145286, US2008142157, US2008083465, US2008069733, US2008056063, US2008047608, US2008038839, US2008035499, US2008021364, US2008013092, US2007184463, US2007099022, US2007031289, US2007012891, US2006264783, US2006264782, US2006264781, US2006264779, US2006076068, US2005196779, US2005169799, US2005148091, TWI431276, TWI381163, TWI373617, TWI369494, KR101680185, KR101392106, JP2010527443, JP2007024549, GB2512141, EP2230017, EP2223037, EP2160604, EP2124039, EP1894617, EP1816187, CN105203775, CN104946505, CN103547925, CN103376312, CN103376312, CN101688861, AU2007225038,

Abstract:

Source: US2004132218A A biochip and apparatus is disclosed for performing biological assays in a self-contained microfluidic platform. The disposable biochip for multi-step reactions comprises a body structure with a plurality of reagent cavities and reaction wells connected via microfluidic channels; the reagent cavities with reagent sealing means for storing a plurality of reagents; the reagent sealing means being breakable and allowing a sequence of reagents to be released into microfluidic channel and reaction well; and the reaction well allowing multi-step reactions to occur by sequentially removing away the residual reagents. The analysis apparatus can rapidly, automatically, sensitively, and simultaneously detect and identify multiple analytes or multiple samples in a very small quantity.

FIG. 1

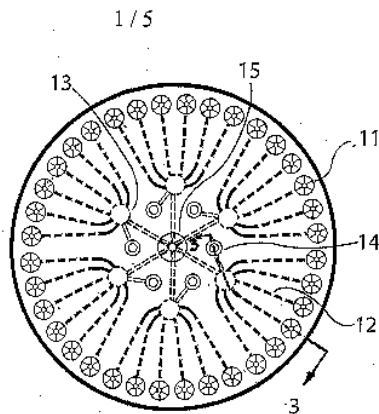
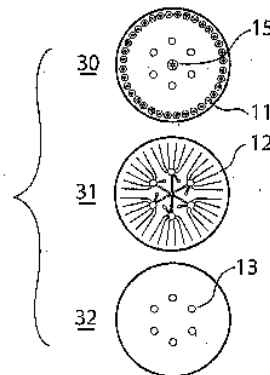


FIG. 2



6) Family number: 31418091 (US2004259076A)

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Title: NANO AND MICRO-TECHNOLOGY VIRUS DETECTION METHOD AND DEVICE**Priority:** US20030601378 20030623 US20100915911 20101029

Family:	Publication number	Publication date	Application number	Application date
	US2004259076 AA	20041223	US20030601378	20030623
	US2011097788 AA	20110428	US20100915911	20101029
	WO04113919 A2	20041229	WO2004CA00877	20040616
	WO04113919 A3	20050818	WO2004CA00877	20040616

Probable Assignee: ACCELLA SCIENTIFIC INC**Assignee(s):^(std):** ACCELLA SCIENT INC ; FARROW DAVID**Assignee(s):** ACCELLA SCIENTIFIC INC**Inventor(s):^(std):** FARROW DAVID

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NA NE NI NL NO NZ OM PG PH PL PT RO RU SC SD SE SG SI SK SL SN SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

International class
(IPC 8-9): [B01D61/18](#) [B01F13/00](#) [B01F15/02](#) [B01F3/20](#) [B01F5/06](#) [B01L3/00](#) [C12M1/34](#) [C12Q1/70](#) [G01N15/10](#) [G01N33/569](#) (Advanced/Invention); [G01N1/34](#) (Advanced/Non-invention); [B01D61/18](#) [B01F13/00](#) [B01F15/02](#) [B01F3/00](#) [B01F5/06](#) [B01L3/00](#) [C12Q1/70](#) [G01N15/10](#) [G01N33/569](#) (Core/Invention); [G01N1/34](#) (Core/Non-invention)

International class
(IPC 1-7): [B01D61/02](#) [B01D61/02](#) [B01L3/00](#) [B01L3/00](#) [C12Q1/70](#) [G01N33/569](#)

CPC: [B01D61/18](#) [B01F3/20](#) [B01F3/2057](#) [B01F5/0646](#) [B01F5/0647](#) [B01F13/0059](#) [B01F15/0201](#) [B01F15/0237](#) [B01F2215/0431](#) [B01F2215/045](#) [B01L2200/10](#) [B01L2300/0681](#) [B01L2300/0816](#) [B01L2300/087](#) [B01L2300/0883](#) [B01L2300/0896](#) [B01L2400/0478](#) [B01L2400/0481](#) [B82Y30/00](#) [C12Q1/703](#) [G01N1/405](#) [G01N15/1031](#) [G01N33/56988](#) [B01L3/502753](#)

European class: [B01D61/18](#) [B01F13/00M](#) [B01F15/02B](#) [B01F15/02B40H](#) [B01F3/20](#) [B01F3/20H](#) [B01F5/06B3F](#) [B01F5/06B3F2](#) [B01L3/5027G](#) [B82Y30/00](#) [C12Q1/70B2B](#) [G01N15/10D](#) [G01N33/569K2](#) [L01F215/04F2F](#) [L01F215/04F4F](#) [L01L200/10](#) [L01L300/06D](#) [L01L300/08B4](#) [L01L300/08E14](#) [L01L300/08E6](#) [L01L300/08J](#) [L01L400/04M2](#) [L01L400/04M4](#) [S01N1/40P](#)

US class: [435/287.1](#) [435/287.100P](#) [435/5](#) [435/5P](#)

[Classification Explorer](#)

Cited documents: US6528057 BA, US6440725 BA, US6391657 BA, US6391541 BA, US6365404 BA, US6242239 BA, US6221677 BA, US6184029 BA, US6159375 A, US6096563 A, US5696236 A, US5667684 A, US5547576 A, US5501949 A, US5498520 A, US5185086 A, US5155021 A, US4965187 A, US4933092 A, US4870005 A, US3872225 A, US2004072278 AA, US2003134416 AA, US2002187561 AA, US2002160525 AA, US2002055167 AA, US2002042125 AA, US2001008760 AA,

Forward Citations: WO14144825, WO14144825, WO09069023, WO09069023, WO05102528, USD768872, US9182353, US9180449, US9012136, US9005887, US8927299, US8895293, US8337692, US2013071304, JP2011505555,

Abstract:

Source: US2004259076A The invention relates to methods and devices for detecting the presence of a particle of interest (hereinafter an analyte particle) in a fluid. A detection device exemplary of the present invention filters a sample of the fluid to remove particles larger than the analyte particles. A reagent solution, containing reagent particles smaller than the analyte particles, is then added to the sample. The reagent particles will react with the analyte particles, if any are present, to form reagent-analyte complexes which are larger than the analyte particles. The sample is then filtered a second time to remove particles the same size as or smaller than the analyte particles. The sample is then tested for the presence of reagent-analyte complexes to detect the presence of the analyte particle in the fluid.

PatBase - W004113919_A2

W0 2004/113919

PC/ECA2004/000677

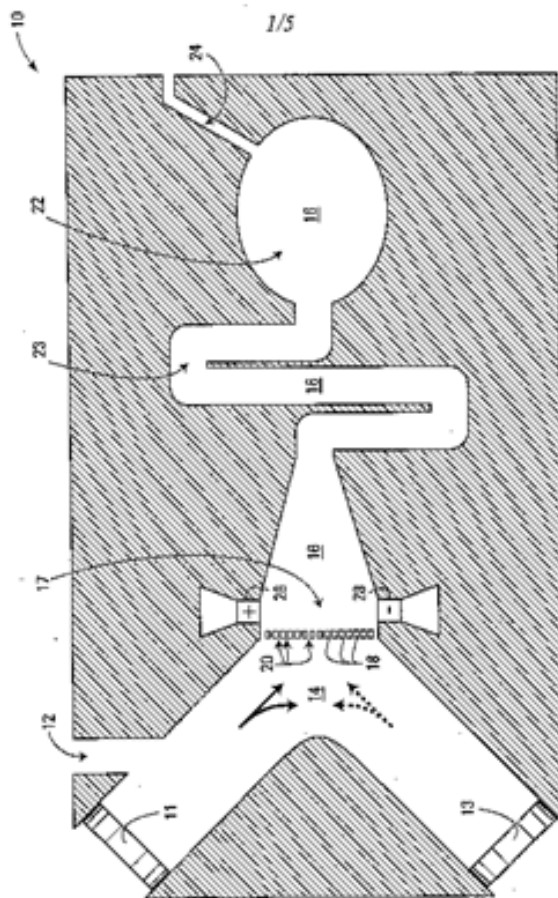


FIG. 1

7) Family number: 31779028 (US2005067286A)

© PatBase

Title: MICROFABRICATED STRUCTURES AND PROCESSES FOR MANUFACTURING SAME

Priority: CA20042482335 20040924 CA20042482335 20040924 US20030506226P 20030926
 US20040946685 20040922 US20040946818 20040922 US20030506424P 20030926
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 US20040947577 20040922 US20040947557 20040922 US20080327204 20081203
 US20040947576 20040922

Family:	Publication number	Publication date	Application number	Application date
	<u>CA2482335 AA</u>	20050326	CA20042482335	20040924
	<u>CA2482335 C</u>	20071204	CA20042482335	20040924
	<u>US2005067286 AA</u>	20050331	US20040947557	20040922
	<u>US2005069459 AA</u>	20050331	US20040946685	20040922
	<u>US2005130226 AA</u>	20050616	US20040947576	20040922
	<u>US2005130292 AA</u>	20050616	US20040947577	20040922
	<u>US2005232817 AA</u>	20051020	US20040946818	20040922
	<u>US2009152215 AA</u>	20090618	US20080327204	20081203
	<u>US7476326 BB</u>	20090113	US20040946685	20040922
	<u>US7524464 BB</u>	20090428	US20040947577	20040922
	<u>US7601269 BB</u>	20091013	US20080327204	20081203

Probable Assignee: DUHN OIL TOOL INC

Assignee(s):^(std): PUNTAMBEKAR ANIRUDDHA ; JAIN ALOK ; HAN JUNGYOUP ; NEVIN JOSEPH ; AHN CHONG H ; BEAUCAGE GREGORY ; CHOI JIN WOO ; UNIV CINCINNATI ; DUHN OIL TOOL INC

Assignee(s): THE UNIVERSITY OF CINCINNATI ; AFRL IFOJ ; CINCINNATI UNIV ; CINCINNATI UNIV OF ; OF CINCINNATI UNIV ; UNIV ; MEEK ROBERT K ; DUHN REX E

Inventor(s):^(std): APPASAMY SREERAM C ; BEAUCAGE GREGORY ; CHOI JIN WOO ; DUHN REX E ; HAN JUNGYOUP ; HONG CHEIN CHONG ; JAIN ALOK ; KAI JUNHAI ; KIM SANGHYO ; MEEK ROBERT K ; MURUGESAN SURESH ; NEVIN JOSEPH ; PUNTAMBEKAR ANIRUDDHA ; SOHN YOUNG SOO ; TRICHUR KRISHNAN ; AHN CHONG H

Inventor(s): APPASAMY SREERAM ; AHN CHONG

Agent(s): FETHERSTONHAUGH AND CO; HAHN LOESER AND PARKS LLP; DAVID J MUZILLA; JAMES L WILCOX ESQ JOSEPH ACETO ESQ; ACETO ESQ JOSEPH F; WILCOX ESQ JAMES L; JOSEPH F; JAMES L

International class
 (IPC 8-9): A61M31/00 B01D37/00 B01D45/00 B01L11/00 B01L3/00 B01L99/00 C12M1/34 C12M1/68 C12Q1/68 C25D1/10 E21B33/03 E21B33/068 E21B43/25 G01N33/53 G01N33/537 G01N33/543 H01L21/00 (Advanced/Invention);
A61M31/00 B01L3/00 C12M1/34 C12Q1/68 C25D1/00 E21B33/03 E21B43/25 G01N33/53 G01N33/536 G01N33/543 H01L21/00 (Core/Invention)

International class
 (IPC 1-7): A61M31/00 B01L11/00 B01L3/00 C12M1/34 C12Q1/68 C25D1/10 E21B33/068 E21B43/25 G01N33/53 G01N33/537 G01N33/543 H01L21/00

CPC: A61B5/14532 A61B5/1486 A61B5/1495 B01L3/50273 B01L2400/0442 B01L2400/046 B81B2203/033 B81B2203/0361 B81B2203/0376 B81C99/009 C25D1/10 G01N33/54353 G01N33/54393 B81B2201/051 B01D21/283 G01N33/491 B01L2200/0668 B01L2200/146 B01L2300/0816 B01L2300/0861 B01L2400/0487 B01L2400/084 B01L2400/086 B81C1/00206 B01L3/502746 B01L3/502753 B01L3/502761 B01L3/502784

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US class:

205/7 205/70 210/348 210/767 210/808 422/100 422/100P 422/101 422/101S 422/103
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422/99P 427/2.11 435/283.1 435/287.1 435/287.100 435/287.2 435/287.8 435/288.4
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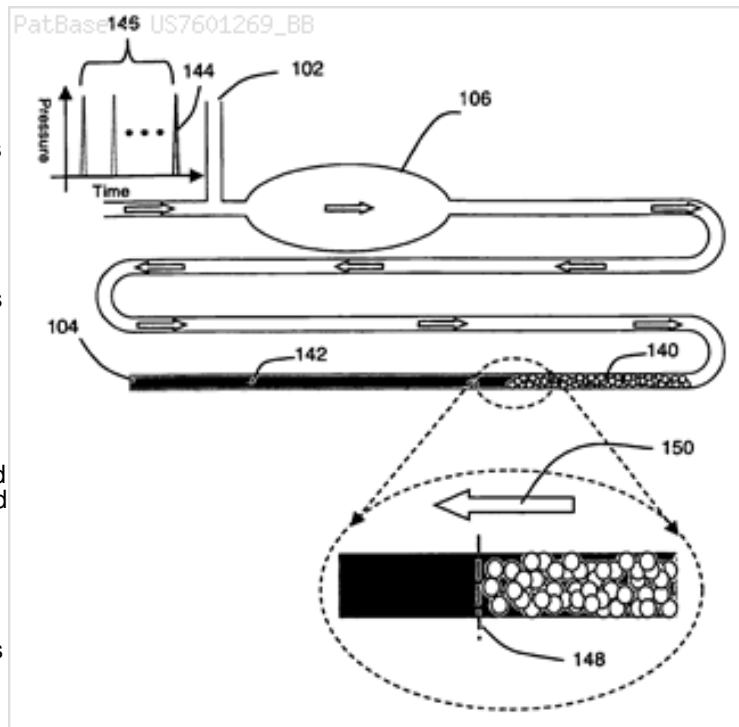
Forward Citations:

WO16112090, WO16049365, WO14172236, WO14155343, WO14113598, WO14113598, WO14111928, WO14082377, WO13087573, WO12129170, WO12012135, WO12003223, WO11133663, WO11116388, WO11081437, WO11081437, WO09024869, WO09024869, WO08155585, WO08101047, WO08088587, WO08036045, WO08030541, WO07092785, WO07052225, WO07052225, WO07021358, WO06062805, WO06062805, US9561000, US9560993, US9549700, US9517026, US9498160, US9481112, US9460263, US9427532, US9416776, US9415390, US9408568, US9404882, US9386944, US9380973, US9380972, US9375169, US9370109, US9351680, US9314194, US9303286, US9289786, US9261476, US9255348, US9248267, US9238309, US9226699, US9199232, US9186468, US9182388, US9176126, US9162259, US9144401, US9132426, US9103786, US9089678, US9089294, US9075046, US9072842, US9034639, US9023269, US9005951, US8975193, US8965476, US8961901, US8945910, US8926906, US8905945, US8895293, US8883518, US8865074, US8862448, US8845550, US8841076, US8835184, US8828203, US8808588, US8778665, US8778270, US8771612, US8741230, US8721671, US8705245, US8702624, US8690796, US8679407, US8679033, US8669047, US8668656, US8652831, US8652763, US8641643, US8628493, US8622930, US8579831, US8546067, US8439872, US8435190, US8430828, US8420978, US8414503, US8403864, US8388551, US8384042, US8383341, US8382683, US8382682, US8372657, US8367397, US8360991, US8343075, US8337420, US8337419, US8333710, US8332797, US8323573, US8307988, US8303522, US8296918, US8293337, US8288738, US8288171, US8283155, US8282577, US8282576, US8280476, US8267870, US8251921, US8241479, US8221334, US8216154, US8211037, US8206650, US8206319, US8206317, US8202231, US8197423, US8197421, US8188431, US8187795, US8187541, US8162853, US8158430, US8137626, US8134118, US8127794, US8123700, US8101404, US8095201, US8079960, US8062231, US8057724, US8051697, US8016774, US8007999, US8007446, US8003300, US7990336, US7988645, US7988644, US7986113, US7981056, US7981055, US7976476, US7959876, US7959582, US7949382, US7938787, US7914465, US7911345, US7909778, US7909777, US7909775, US7909774, US7901362, US7898736, US7892183, US7888125, US7876793, US7874994, US7862520, US7857141, US7850622, US7850621, US7841992, US7833171, US7822454, US7816124, US7807450, US7794665, US7791291, US7791290, US7791053, US7763211, US7758739, US7746532, US7741934, US7740804, US7732786, US7731729, US7728702, US7728397, US7727477, US7723698, US7718977, US7717863, US7714513, US7713214, US7710040, US7699791, US7688274, US7682981, US7682318, US7679067, US7674232, US7666149, US7659513, US7656094, US7655934, US7648468, US7646991, US7635594, US7626179, US7619373, US7605835, US7604592, US7586167, US7586097, US7583370, US7582099, US7582063, US7579609, US7573045, US7569836, US7563232, US7560716, US7558490, US7557647, US7557365, US7554083, US7547287, US7537571, US7524293, US7492868, US7491178, US7481776, US7476907, US7470920, US7450794, US7443577, US7443358, US7442940, US7436177, US7410468, US7404932, US7391572, US7390377, US7374544, US7361916, US7359589, US7351380, US7344990, US7344894, US7344507, US7342441, US7316700, US7297151, US7282776, US7271022, US7253426, US7208712, US2015314288, US2015208963, US2014342381, US2014309553, US2014242407, US2013341834, US2013029313, US2013005027, US2012144361, US2012077260, US2011310281, US2011262307, US2011171754, US2011170272, US2011167795, US2011165025, US2011139189, US2011129931, US2011129856, US2011117577, US2011105871, US2011104826, US2011104817, US2011088786, US2011079547, US2011020182, US2011014096, US2010292551,

US2010248277, US2010245803, US2010196897, US2010175821, US2010167472, US2010159614, US2010144558, US2010143848, US2010108865, US2010096561, US2010084032, US2010081144, US2010074799, US2010049021, US2010034993, US2009317558, US2009297574, US2009290604, US2009278685, US2009274579, US2009239042, US2009227005, US2009205398, US2009152187, US2009140178, US2009131778, US2009105738, US2009099427, US2009072698, US2009069660, US2009069651, US2009050569, US2009023098, US2008312518, US2008310799, US2008296517, US2008260586, US2008251877, US2008241935, US2008241910, US2008241909, US2008241000, US2008234562, US2008226504, US2008199862, US2008181821, US2008181820, US2008181816, US2008180658, US2008180259, US2008179255, US2008176755, US2008154107, US2008149828, US2008135502, US2008135462, US2008128341, US2008083881, US2008073590, US2008069733, US2008069509, US2008067941, US2008067940, US2008060700, US2008058726, US2008056947, US2008047608, US2008035499, US2008021364, US2008013092, US2008009766, US2008001098, US2007284298, US2007274365, US2007272931, US2007272876, US2007264030, US2007264023, US2007259641, US2007259488, US2007259465, US2007258720, US2007258690, US2007258689, US2007258675, US2007258492, US2007258146, US2007257749, US2007257739, US2007257738, US2007257622, US2007257621, US2007257620, US2007257619, US2007257328, US2007257273, US2007257206, US2007257199, US2007256472, US2007253535, US2007252089, US2007235651, US2007232995, US2007224084, US2007206288, US2007200910, US2007200784, US2007200770, US2007200071, US2007200063, US2007190794, US2007170370, US2007161119, US2007154846, US2007152938, US2007152781, US2007152176, US2007141553, US2007126144, US2007125654, US2007125653, US2007125651, US2007125248, US2007099022, US2007085039, US2007075907, US2007075326, US2007075265, US2007075263, US2007034518, US2007034298, US2006264783, US2006264782, US2006264780, US2006264779, US2006254962, US2006228259, US2006216940, US2006166508, US2006163070, US2006134820, US2006110845, US2006035173, US2006018797, US2005249641, US2005151371, US2005151285, US2005142039, US2005127032, KR101562865, KR101554905, JP2008224662, GR1006042, GR1006042, GB2434151, EP3088892, EP2791672, EP2468403, EP2254985, EP2184599, EP2176659, EP2160610, EP2160610, EP1970565, DE102011056271, DE102009043226, DE102009043226, DE102009007616, DE102008004646, DE102008004646, DE102008002509, DE102007044708, DE102007042986, DE102006010959, DE102005061811, DE102005059536, CN103055981, CN102486814, CN102486814, CN102277598, AU2012231737,

Abstract:

Source: US2005067286A Various techniques for the fabrication of highly accurate master molds with precisely defined microstructures for use in plastic replication using injection molding, hot embossing, or casting techniques are disclosed herein. Three different fabrication processes used for master mold fabrication are disclosed wherein one of the processes is a combination of the other two processes. In an embodiment of the first process, a two-step electroplating approach is used wherein one of the metals forms the microstructures and the second metal is used as a sacrificial support layer. Following electroplating, the exact height of the microstructures is defined using a chemical mechanical polishing process. In an embodiment of the second process, a modified electroforming process is used for master mold fabrication. The specific modifications include the use of Nickel-Iron (80:20) as a structural component of the master mold, and the use of a higher saccharin concentration in the electroplating bath to reduce tensile stress during plating and electroforming on the top as well as sides of the dummy substrate to prevent peel off of the electroform. The electroforming process is also well suited towards the fabrication of microstructures with non-rectangular cross sectional profiles. Also disclosed is an embodiment of a simple fabrication process using direct deposition of a curable liquid molding material combined with the electroforming process. Finally, an embodiment of a third fabrication process combines the meritorious features of the first two approaches and is used to fabricate a master mold using a combination of the two-step electroplating plus chemical mechanical polishing approach and the electroforming approach to fabricate highly accurate master molds with precisely defined microstructures. The microstructures are an integral part of the



master mold and hence the master mold is more robust and well suited for high volume production of plastic MEMS devices through replication techniques such as injection molding.

8) Family number: 32539658 (US2006006774A)

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Title: MICROPLATE STORAGE APPARATUS AND METHOD**Priority:** US20040588340P 20040716 US20040588342P 20040716 US20040887355 20040709
US20050182068 20050715 WO2005US24357 20050708 US20050182056 20050715

Family:	Publication number	Publication date	Application number	Application date
	<u>CA2573134 AA</u>	20070105	CA20052573134	20050708
	<u>CN101151099 A</u>	20080326	CN200580027189	20050708
	<u>EP1817110 A2</u>	20070815	EP20050769339	20050708
	<u>EP1817110 A4</u>	20100217	EP20050769339	20050708
	<u>IN00226DN2007 A</u>	20070803	IN2007DN00226	20070109
	<u>JP2008506607 T2</u>	20080306	JP20070520556T	20050708
	<u>KR20070112757 A</u>	20071127	KR20077003163	20070209
	<u>US2006006774 AA</u>	20060112	US20040887355	20040709
	<u>US2006018802 AA</u>	20060126	US20050182056	20050715
	<u>US2006018996 AA</u>	20060126	US20050182068	20050715
	<u>WO06010045 A2</u>	20060126	WO2005US24357	20050708
	<u>WO06010045 A3</u>	20070322	WO2005US24357	20050708

Probable Assignee: KENDRO LABORATORY PRODUCTS LP**Assignee(s):^(std):** GREENWAY BRYAN R JR ; GREENWAY ROGER B JR ; JACKSON JON ; JACKSON JON A ; KENDRO LAB PRODUCTS L P ; KENDRO LAB PROD LP ; VINSON JOHN R ; POLLOCK PAUL W ; RILING DAVE ; KENDRO LAB PRODUCTS LP ; THERMO FISHER SCIENT ASHEVILLE**Assignee(s):** GREENWAY BRYAN R ; KENDRO LABORATORY PRODUCTS L P ; THERMO FISHER SCIENTIFIC ASHEVILLE LLC ; KENDRO LABORATORY PRODUCTS LP DE CORP ; KENDRO LABORATORY PRODUCTS LP A DE CORP ; KENDRO LABORATORY PRODUCTS LP DE CORP ; KENDRO LABORATORY PRODUCTS LP ; KENDRO LABORATORY PRODUCTS LP ; KENDRO LABORATORY PRODUCTS LP (DE CORP) ; KENDRO LABORATORY PRODUCTS LP (A DE CORP) ; KENDRO LABORATORY PRODUCTS LP (DE CORP) ; KENDRO LABORATORY PRODUCTS LP**Inventor(s):^(std):** DAVE RILING ; GREENWAY BRYAN R ; GREENWAY BRYAN R JR ; GREENWAY R B JR ; GREENWAY ROGER B JR ; JACKSON JON ; JACKSON JON A ; JON JACKSON ; POLLOCK PAUL W ; RILING DAVE ; VINSON JOHN R**Inventor(s):** VINSON JOHN RANDALL ; VINSON JOHN ; BRYAN R GREENWAY JR ; POLLOCK PAUL WAYNE ; PAUL W POLLOCK ; POLLOCK PAUL ; JACKSON JON ARTHUR ; GREENWAY ROGER BJR ; GREENWAY ROGER BRYAN ; GREENWAY R BJR ; GREENWAY R BRYAN ; GREENWAY ROGER ; GREENWAY R**Agent(s):** ROBIC; BAKER AND HOSTETLER LLP, SUITE 1100; BAKER AND HOSTETLER LLP SUITE 1100; BAKER AND HOSTETLER LLP**Designated states:** AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KM KP KR KZ LC LI LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RU SC SD SE SG SI SK SL SM SN SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW**International class**
(IPC 8-9): A21D2/00 A21D8/02 A47B97/00 A47F1/14 B01L9/00 B01L9/02 B01L99/00 B23K26/14 B65G1/00 C30B35/00 G01N35/00 (Advanced/Invention);
A21D2/00 A21D8/02 B01L9/00 B65G1/00 G01N35/00 (Core/Invention)**International class**
(IPC 1-7): A47B97/00**CPC:** B01L3/06 B01L9/523 B01L2300/021 B01L2300/0829 B01L9/00 B01L9/06 B01L9/52 G01N35/028 G01N2035/0425 G01N2035/00782 G01V15/00**European class:**

B01L9/00 B01L9/523 G01N35/02P G01V15/00 L01L3/06 L01L300/02A L01L300/08B12
L01L9/06 L01L9/52 S01N35/00G3C1V S01N35/04A4C

US class: 312/350 312/350P 422/104 422/104P 422/400 422/400P 426/19 426/19P

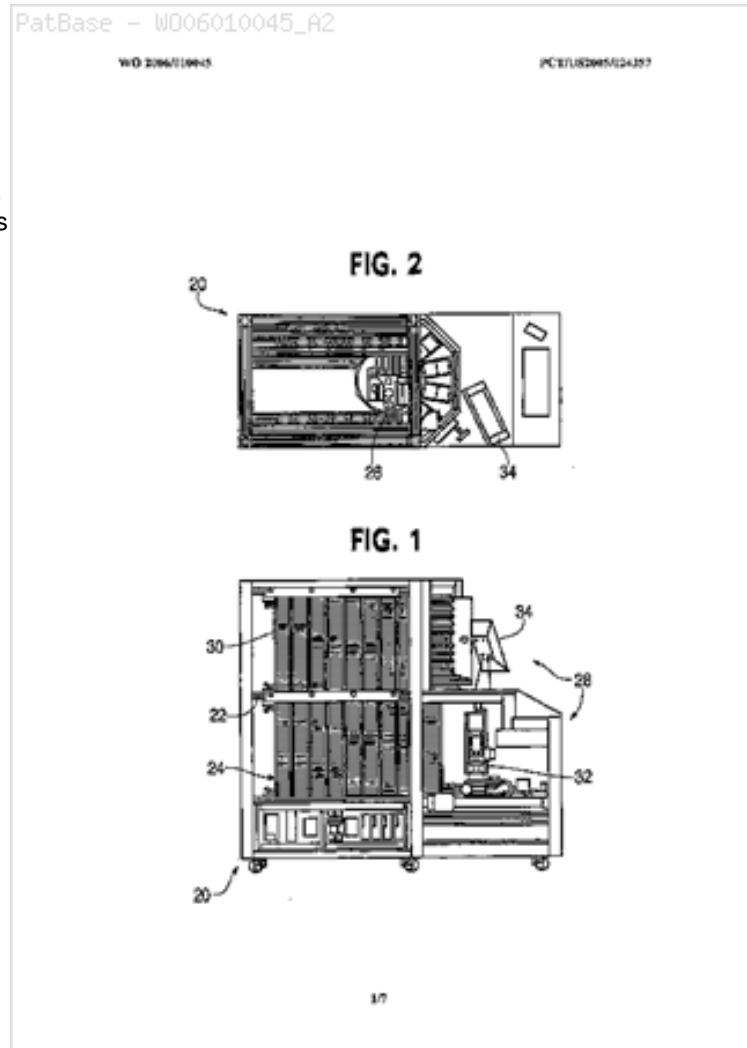
[Classification Explorer](#)

Cited documents: US7527764 BB, US7446976 BB, US7329394 BB, US7314341 BB, US7111781 BB, US7004392 BB, US6974294 BB, US6911910 BB, US6890742 BB, US6878896 BB, US6848876 BB, US6688255 BB, US6672341 BB, US6588625 BB, US6568770 BB, US6517782 BA, US6447726 BA, US6402837 BA, US6159425 A, US6117683 A, US6117392 A, US6099230 A, US6096272 A, US6059509 A, US6042786 A, US5993746 A, US5894941 A, US5845785 A, US5842582 A, US5749477 A, US5707124 A, US5622470 A, US5498116 A, US5482861 A, US5303034 A, US5266272 A, US4907889 A, US4738825 A, US4664265 A, US4614474 A, US4600231 A, US4385781 A, US4220236 A, EP0490671 A1,

Forward Citations: WO08014117, WO08014117, US9561905, US9550225, US9499338, US9423796, US9321591, US9187244, US9156394, US9151770, US9027730, US8965619, US8919801, US8857208, US8759084, US8750900, US8534447, US8504068, US8238938, US8115599, US8035485, US7734299, US7688207, US7411508, US2014154043, US2012272500, US2010210210, US2010183408, US2010123551, US2010070069, US2009015430, US2008233971, US2008231152, US2008024301, US2007252496, US2007013541, CN102985978,

Abstract:

Source: US2006006774A An embodiment of the invention has a side panel with integrated shelving members and integrated locating members, both folded from the side panel. One method of fabricating the shelving members involves cutting a template of the shelving members and locating members onto the side panel and then folding the cut portions of the side panel to form shelving members and locating members.



9) Family number: 33546059 (US2008041722A)

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Title: METHOD AND DEVICE FOR CONTROLLING ELECTROSMOTIC FLOW BY USING LIGHT

Priority: HU20050000406 20050422 WO2006HU00033 20060424

Family:

Publication number	Publication date	Application number	Application date
<u>EP1877189 A1</u>	20080116	EP20060727225	20060424
<u>US2008041722 AA</u>	20080221	US20070875164	20071019
<u>WO06111780 A1</u>	20061026	WO2006HU00033	20060424

Probable Assignee: BIOLOGICAL RESEARCH CENTER OF HUNGARIAN ACADEMY OF SCIENCES

Assignee(s):^(std): BIOLOG RES CT OF HUNGARIAN ; BIOLOG RES CT OF THE HUNGARIAN ; OROSZI LASZLO ; DER ANDRAS ; ORMOS PAL

Assignee(s): BIOLOGICAL RESEARCH CENTER OF THE HUNGARIAN ACADEMY OF SCIENCES ; BIOLOGICAL RESEARCH CENTER OF HUNGARIAN ACADEMY OF ; BIOLOGICAL RESEARCH CENTER OF HUNGARIAN ACADEMY OF SCIENCES ; ORMOS PSSL ; DER ANDRSSS ; OROSZI LSSSZLO ; BIOLOGICAL RESEARCH CENTER OF THE HUNGARIAN ACADEM

Inventor(s):^(std): DER ANDRAS ; ORMOS PAL ; OROSZI LASZLO

Inventor(s): OROSZI LSSSZLO ; ORMOS PSSL ; DER ANDRSSS

Agent(s): SVINGOR ADAM; HAHN AND VOIGHT PLLC

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LC LI LK LR LS LT LU LV LY MA MC MD MG MK ML MN MR MW MX MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RU SC SD SE SG SI SK SL SM SN SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

International class
(IPC 8-9): B01F13/00 B01J19/00 B01L3/00 C07K1/26 F04B19/00 F04B43/04 G01N27/447 (Advanced/Invention);
B01F13/00 B01J19/00 F04B19/00 F04B43/04 G01N27/44 G01N27/447 (Advanced/Non-invention);
B01F13/00 B01L3/00 C07K1/00 F04B19/00 (Core/Invention);
B01F13/00 B01J19/00 F04B19/00 F04B43/02 G01N27/44 G01N27/447 (Core/Non-invention)

CPC: B01F13/0076 B01J19/0093 B01J2219/00889 B01J2219/00925 B01L3/502715 B01L3/502746 B01L2300/0816 B01L2300/089 B01L2400/0418 B01L2400/0427 B01L2400/082 F04B19/006

European class: B01F13/00M6A B01J19/00R B01L3/5027B B01L3/5027F F04B19/00M L01J219/00R14 L01J219/00R20 L01L300/08B4 L01L300/08G L01L400/04F6A L01L400/04F6W L01L400/08A

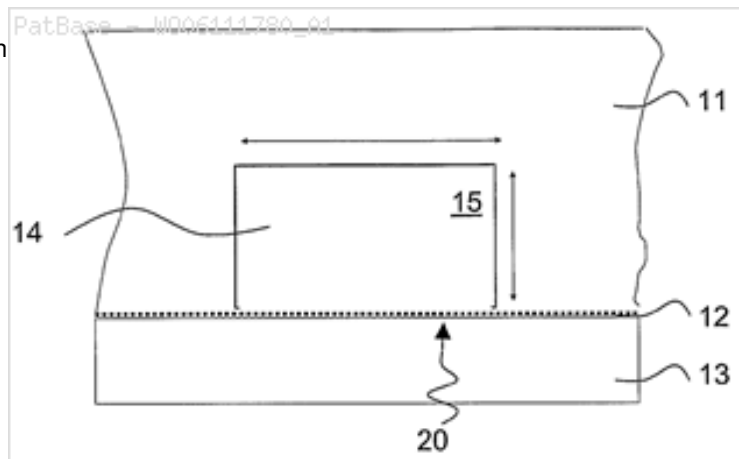
US class: 204/451
[Classification Explorer](#)

Cited documents: US6778724 BB, US6482306 BA, US6406605 BA, US5985568 A, US2004120880 AA, US2004037744 AA, US2003224528 AA, US2003157698 AA, US2003127329 AA, US2002166592 AA, US2002023840 AA, JP2005062029,

Forward Citations: WO10007210, US9238224, US2012052240, US2010078090,

Abstract:

Source: US2008041722A Electroosmosis is an effective way to move fluids in microfluidic devices. The process is driven by the interaction of a double-layer formed at the surface of the fluid in a microspace of the device and the electric field parallel with the surface. Surface conductivity of light sensitive surfaces can be modified by light and thereby the flow pattern of the fluid can be manipulated. The invention relates to a microfluidic device and method to move fluids by electroosmosis and to manipulate flow of the fluid, wherein at least a part the surface adjacent to the fluid driven by electroosmosis is made of a light sensitive material, the surface conductivity of which is modified by changing illumination thereof, thereby flow of the fluid can be influenced. The invention can be used for example in microfluidic channels to manipulate flow velocity, for the preparation of microfluidic switches and mixers or "lab-on-a-chip" devices.



10) Family number: 34438359 (US2007099288A)

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Title: MICROFLUIDIC METHODS, DEVICES, AND SYSTEMS FOR FLUID HANDLING

Priority: US20050732538P 20051102 US20060553944 20061027 US20060813547P 20060613
 US20060814014P 20060614 US20060814316P 20060615 US20060814474P 20060616
 US20070117610 20070611 US20070761062 20070611 US20070760948 20070611
 US20070760938 20070611 US20060815506P 20060620 US20060816099P 20060622
 US20070761007 20070611 US20060817316P 20060628 US20080134857 20080606
 US20070942792P 20070608 US20110292962 20111109 US20110177106 20110706
 US20130787413 20130306 US20120524265 20120615

Family:	Publication number	Publication date	Application number	Application date
	<u>CN1974751 A</u>	20070606	CN200610143385	20061102
	<u>CN201041563 Y</u>	20080326	CN200620157130U	20061102
	<u>US2007099288 AA</u>	20070503	US20060553944	20061027
	<u>US2007267335 AA</u>	20071122	US20070761007	20070611
	<u>US2007267782 AA</u>	20071122	US20070761062	20070611
	<u>US2008038713 AA</u>	20080214	US20070760938	20070611
	<u>US2008038714 AA</u>	20080214	US20070760948	20070611
	<u>US2008311585 AA</u>	20081218	US20080134857	20080606
	<u>US2011268832 AA</u>	20111103	US20110177106	20110706
	<u>US2012055338 AA</u>	20120308	US20110292962	20111109
	<u>US2012329681 AA</u>	20121227	US20120524265	20120615
	<u>US2013190213 AA</u>	20130725	US20130787413	20130306
	<u>US8007267 BB</u>	20110830	US20070761062	20070611
	<u>US8075852 BB</u>	20111213	US20070761007	20070611

Probable Assignee: AFFYMETRIX**Assignee(s):^(std):** AFFYMETRIX INC ; GAO CHUAN ; NGUYEN DEVIN ; OWNPHY CO LTD ; YU TIANYUE ; YAMAMOTO MELVIN**Assignee(s):** OWNPHY CO ; GENERAL ELECTRIC CAPITAL AGENT AS CORP ; BANK OF AMERICA NA ADMINISTRATIVE AGENT AS ; AFFYMETRIX**Inventor(s):^(std):** GOLDBERG MARTIN J ; TIANYUE GAO CHUAN YU ; YU TIANYUE ; YAMAMOTO MELVIN ; TIANYUE YU ; NGUYEN DEVIN ; CHUAN GAO ; GAO CHUAN**Inventor(s):** GAO CHUAN YU TIANYUE ; GOLDBERG MARTIN**Agent(s):** AFFYMETRIX INC ATTN CHIEF IP COUNSEL LEGAL DEPT; STEVEN M

International class
 (IPC 8-9): A01J21/00 A21C11/10 B01D19/00 B01D35/01 B01L3/02 B28B13/02 B28B7/18
B29C35/12 B29C59/02 C12M1/00 C12M1/34 C12M1/36 C12Q1/00 C12Q1/68 C12Q3/00
C40B60/00 C40B99/00 G01N33/48 G01N33/50 G01N35/00 (Advanced/Invention);
B01D35/00 B28B13/00 B29C35/12 B29C59/02 C12M1/00 C12M1/34 C12M1/36
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CPC: B01F13/1013 B01F11/0071 B01F13/0059 B01F13/1022 B01L2300/123 B01L2400/0481
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G01N2035/00237 Y10T436/11 Y10T436/2575 B01D19/00 B01L3/565 B01L7/52
B01L7/525 B01L2200/027 B01L2200/028 B01L2200/04 B01L2200/0668 B01L2200/10
B01L2300/021 B01L2300/0636 B01L2300/0816 B01L2300/0864 B01L2300/0867
B01L2300/0887 B01L2300/1827 B01L2300/1844 B01L2300/1861 B01L2400/043
B01L2400/0487 B01L2400/0655 B01L2400/0694 B41J2/175 B41J2/19 G01N33/54366
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European class: B01D19/00 B01F11/00L B01F13/00M B01F13/10B B01F13/10B6 B01L3/00C6M10
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S01N35/00C7D S01N35/00D5 S01N35/08

US class:

210/120 210/218 210/218S 210/808 210/808S 264/320 264/320P 422/502 422/503
422/504 422/505 422/552 425/164 425/164S 425/233 425/233P 425/290 425/390
435/287.1 435/287.100P 435/287.100S 435/287.2 435/287.200S 435/4 435/4P 435/6
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[Classification Explorer](#)

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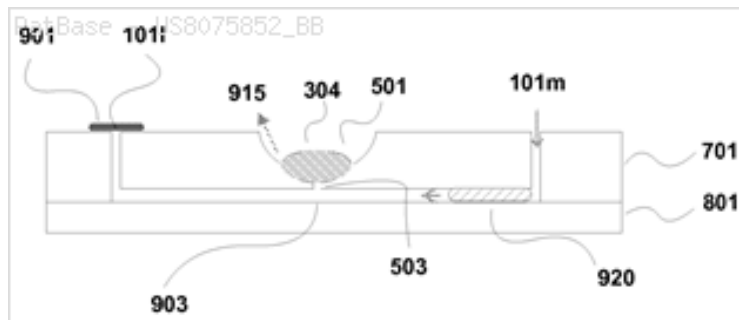
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US2003198576 AA, US2003148362 AA, US2002120409 AA, US2002055167 AA,
US2002022261 AA, US2001036672 AA, US1750245 A, EP0378968,

Forward Citations:

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US2007099288, JP2014509745, ITTO20100319, GB2472236, FR2959312, EP2893980,
DE102012109317, CN105283760, CN103429997, CN103402640, CN102250751,

Abstract:

Source: US2007099288A In one aspect of the invention, systems methods, and devices are provided for handling liquid. In some embodiments, such systems, methods, and devices are used to process reagent biochemical reactions.



11) Family number: 34622207 (US2009253130A)

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Title: BIO MEMORY DISC AND BIO MEMORY DISC DRIVE APPARATUS, AND ASSAY METHOD USING THE SAME**Priority:** KR20050128469 20051221 WO2006KR05636 20061221**Family:**

Publication number	Publication date	Application number	Application date
<u>CN101389956 A</u>	20090318	CN200680053231	20061221
<u>CN101389956 B</u>	20130102	CN200680053231	20061221
<u>EP1971861 A1</u>	20080924	EP20060835340	20061221
<u>EP1971861 A4</u>	20141022	EP20060835340	20061221
<u>JP2009520985 T2</u>	20090528	JP20080547113T	20061221
<u>JP5030110 B2</u>	20120919	JP20080547113T	20061221
<u>KR101292536 B1</u>	20130807	KR20087017126	20061221
<u>KR20080110575 A</u>	20081218	KR20087017126	20061221
<u>US2009253130 AA</u>	20091008	US20060158848	20061221
<u>US8951779 BB</u>	20150210	US20060158848	20061221
<u>WO07073107 A1</u>	20070628	WO2006KR05636	20061221

Probable Assignee: SAMSUNG ELECTRONICS CO**Assignee(s):^(std):** SAMSUNG ELECTRONICS CO LTD ; YOO JAE CHERN**Assignee(s):** SAMSUNG ELECTRONICS CO**Inventor(s):^(std):** YOO JAE CHERN**Inventor(s):** SAMSUNG ELECTRONICS CO**Agent(s):** GRUENECKER KINKELDEY STOCKMAIR AND SCHWANHAEUSSER ANWALTSSOZIETAET; STAAS AND HALSEY LLP**Designated states:** AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LK LR LS LT LU LV LY MA MC MD MG MK ML MN MR MW MX MY MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN SV SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

International class
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G01N37/00 (Advanced/Invention);
C12M1/34 C12Q1/68 G01N33/48 G01N33/483 G01N33/53 G01N33/543 G01N35/08
G01N37/00 (Core/Invention)

CPC: G01N35/00069 B01F13/0059 B01F13/0809 B01L3/545 B01L2200/0684 B01L2300/023
B01L2300/024 B01L2300/0654 B01L2300/0806 B01L2400/0409 B01L2400/0633
G01N33/483 G01N33/48 G01N33/53 B01L3/502715 B01L3/502723 B01L3/502738
B01L3/502753

European class: B01F13/00M B01F13/08B B01L3/00C6M10 B01L3/00C6M4 B01L3/00C6M6 B01L3/00E2
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L01L3/5027G L01L300/02B L01L300/02C L01L300/06B6 L01L300/08A2 L01L400/04F4
L01L400/06M

US class: 422/82.05 435/287.2 435/287.200S 435/4 435/6 435/6.1 435/6.11 435/6.110P 435/6P[Classification Explorer](#)

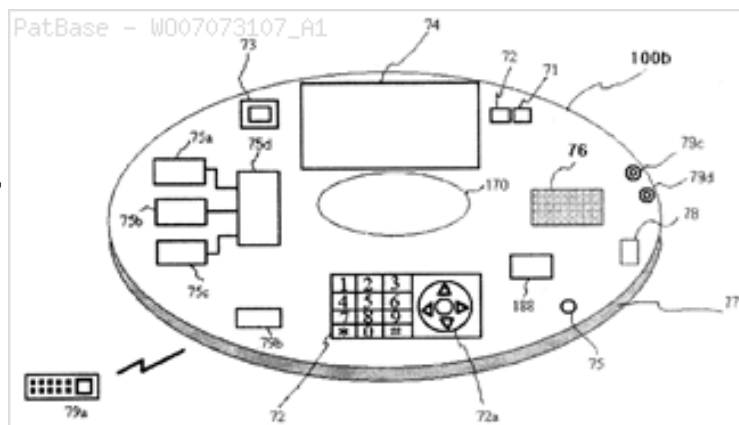
Cited documents: WO06121266 A1, WO05003723 A2, WO03080868 A1, WO02097422 A1, WO02059364 A1, US8480980 BB, US8263386 BB, US8097450 BB, US7635585 BB, US6361944 BA, US5497464 A, US2010055771 AA, US2009163367 AA, US2008190219 AA, US2006040273 AA, US2004155213 AA, US2003224377 AA, US2003177380 AA, US2003054376 AA, KR20050118651 A, JP8121636 A2, JP53074729 U1, JP53074729 U, JP2005514043 T2, JP2005242941 A2, JP2004309233 A2, JP2004212240 A2, JP2004073995 A2, JP2003084001 A2, JP2001518614 T2, JP2000515632 T2,

Forward Citations:

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Abstract:

Source: US2009253130A The present invention provides a bio memory disc where a lab-on-a-chip process system including an assay-diagnosis unit, a nucleic acid hybridization assay unit, or an immuno-assay unit and a semiconductor memory is disposed, a bio memory disc drive apparatus including a controller for controlling and driving an optical disc including CD or DVD and the bio memory disc and an assay method using the same.



12) Family number: 34939448 (WO07085395A1)

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Title: MICROFLUIDIC ARRANGEMENT AND MODULAR LAB-ON-A-CHIP SYSTEM
Priority: DE200610003532 20060124 EP20070711368 20070122 WO2007EP00505 20070122
Family:

Publication number	Publication date	Application number	Application date
<u>DE102006003532 A1</u>	20070726	DE200610003532	20060124
<u>DE102006003532 B4</u>	20081120	DE200610003532	20060124
<u>DE502007011695 D1</u>	20130627	DE200750011695T	20070122
<u>EP1979096 A1</u>	20081015	EP20070711368	20070122
<u>EP1979096 B1</u>	20130501	EP20070711368	20070122
<u>WO07085395 A1</u>	20070802	WO2007EP00505	20070122
<u>WO07085395 C1</u>	20080626	WO2007EP00505	20070122

Probable Assignee: INST MIKROTECHNIK MAINZ GMBH

Assignee(s):^(std): DADIC DALIBOR ; DOFFING FRANK ; DRESE KLAUS STEFAN ; INST MIKROTECHNIK MAINZ GMBH ; KREMPEL CHRISTIANE ; MEHIETANG JEAN MICHEL ; VON GERMAR FRITHJOF ; GRANSEE RAINER

Assignee(s): F MIKROTECHNIK MAINZ GMBH INST ; FRAUNHOFER GES ZUR FOERDERUNG DER ANGEWANDTEN FORSCHUNG EV ; INSTITUT FUER MIKROTECHNIK MAINZ GMBH

Inventor(s):^(std): DADIC DALIBOR ; DOFFING FRANK ; DRESE KLAUS STEFAN ; GERMAR FRITHJOF VON ; GRANSEE RAINER ; KREMPEL CHRISTIANE ; MEHIETANG JEAN MICHEL ; VON GERMAR FRITHJOF

Agent(s): KILBURN AND STRODE LLP; KAMPFENKEL KLAUS

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD MG MK ML MN MR MW MX MY MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN SV SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

International class
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[B01D21/26 B01J19/00 B01L3/00 C12M1/26 G01N1/28 G01N15/02 G01N15/04 G01N21/03 G01N33/48 G01N35/00](#) (Core/Invention)

CPC: [B01L3/502753 B01L2200/027 B01L2200/0642 B01L2200/10 B01L2300/0816 B01L2300/0819 B01L2400/0409 G01N35/00029](#)

European class: [B01L3/5027G G01N35/00C L01L200/02D2 L01L200/06H L01L200/10 L01L300/08B4 L01L300/08B6 L01L400/04F4](#)

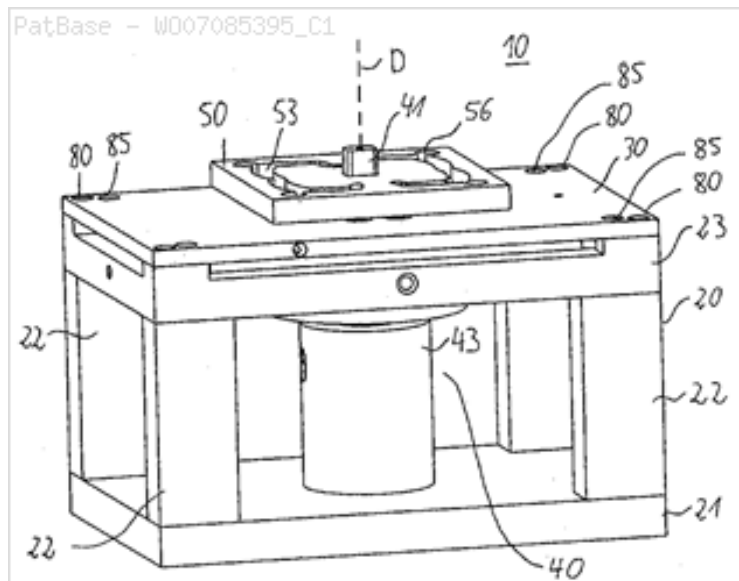
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Forward Citations: WO14082911, US9399214, US9381511, US9272278, US8449830, ITTO20131057, EP2754494, EP2535108, EP2532427, EP2532426, EP2532426, DE102012221734, DE102011077124, DE102011077115, DE102011077101, DE102008042581, CN102814242, CN102814241, CN102814241,

Abstract:

In order to be able to separate different substance mixtures optimally in the microlitre or millilitre range, a microfluidic arrangement for separating substance mixtures by centrifugal forces is provided. The microfluidic arrangement has a rotor chip (50) which is displaceable in a rotating motion and comprises at least one microfluidic channel (53), at least one microfluidic separating chamber (56) and at least one first orifice (54) connected to the microfluidic channel (53) for filling and/or emptying the rotor chip (50). In addition, the microfluidic arrangement has a stator chip (30) which has at least one microfluidic channel and at least one first orifice, the rotor chip being connectable to the stator chip for fluid flow via the orifices for filling and/or emptying.



13) Family number: 41774998 (US2010047130A)

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Title: LAB-ON-CD SYSTEMS WITH MAGNETICALLY ACTUATED MICRO CHECK VALVES AND/OR MAGNETIC IMMOBILIZATION**Priority:** SG20060073985 20061025 WO2007SG00359 20071019

Family:	Publication number	Publication date	Application number	Application date
	<u>DE112007002483 T5</u>	20091224	DE200711002483T	20071019
	GB200907053 A0	20090603	GB20090007053	20071019
	<u>GB2455956 A1</u>	20090701	GB20090007053	20071019
	<u>JP2010507802 T2</u>	20100311	JP20090534551T	20071019
	<u>SG142188 A1</u>	20080528	SG20060073985	20061025
	<u>US2010047130 AA</u>	20100225	US20070446753	20071019
	<u>WO08051167 A1</u>	20080502	WO2007SG00359	20071019

Probable Assignee: NANYANG POLYTECHNIC**Assignee(s):^(std):** NANYANG POLYTECHNIC ; ONG ENG HOO TEDDY ; PRABHU VINAYAK ASHOK ; YAP TECK BOON**Inventor(s):^(std):** ONG ENG HOO TEDDY ; PRABHU VINAYAK ASHOK ; YAP TECK BOON ; ONG TEDDY ENG HOO ; ASHOK PRABHU VINAYAK**Inventor(s):** ENG HOO TEDDY ONG ; TECK BOON YAP ; VINAYAK ASHOK PRABHU**Agent(s):** LAWRENCE YD HO AND ASSOCIATES PTE LTD; LAWRENCE Y D HO AND ASSOCIATES PTE LTD**Designated states:** AE AG AL AM AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN SV SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

International class
 (IPC 8-9): B01L3/00 C12Q1/68 G01N21/00 G01N33/50 G01N33/543 G01N35/00 G01N35/08
G01N37/00 G11B7/00 (Advanced/Invention);
B01L3/00 C12Q1/68 G01N21/00 G01N33/50 G01N33/543 G01N35/00 G01N35/08
G01N37/00 G11B7/00 (Core/Invention)

CPC: G01N21/07 B01L3/502738 B01L3/502761 B01L2200/0668 B01L2300/0806
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G01N21/00 G01N33/50 G01N33/54326 G11B7/00

European class: B01L3/00C6M10 B01L3/00C6M16 B01L3/5027E B01L3/5027H C12Q1/68 F16K99/00M
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G01N35/00C2 G11B7/00 L01L200/06J8 L01L300/08A2 L01L300/08E2 L01L400/04F4
L01L400/06C L01L400/06C4 L01L400/06M R16K99/00M4 R16K99/00Y2

US class: 422/68.1 422/68.100P[Classification Explorer](#)**Cited documents:** WO06118420 A1, WO03080868 A1, US7223949 BB, US6184029 BA, US6030581 A, US2009221431 AA, US2009181463 AA, US2009131959 AA, US2009035746 AA, US2006040273 AA, US2004155213 AA,

Abstract:

Source: US2010047130A The present invention provides lab-on-CD (LoCD) systems for conducting chemical and biological reactions. One of the LoCD systems comprises a microfluidic CD with at least one magnetically actuated micro check valve, said microfluidic CD having at least one sample reservoir, at least one reaction chamber, and at least one microfluidic channel connecting the at least one sample reservoir and the at least one reaction chamber; wherein the at least one magnetically actuated micro check valve is positioned to control the microfluidic flow in the at least one microfluidic channel; and a supporting CD with at least one magnetic element for providing a magnetic force; thereby when the microfluidic CD and the supporting CD are assembled into the LoCD system, the at least one magnetic element can move the at least magnetically actuated micro check valve so as to control the microfluidic flow in the at least one microfluidic channel.

PatBase - W008051167_A1

WI 3008451167

PCT/SG2007/000369

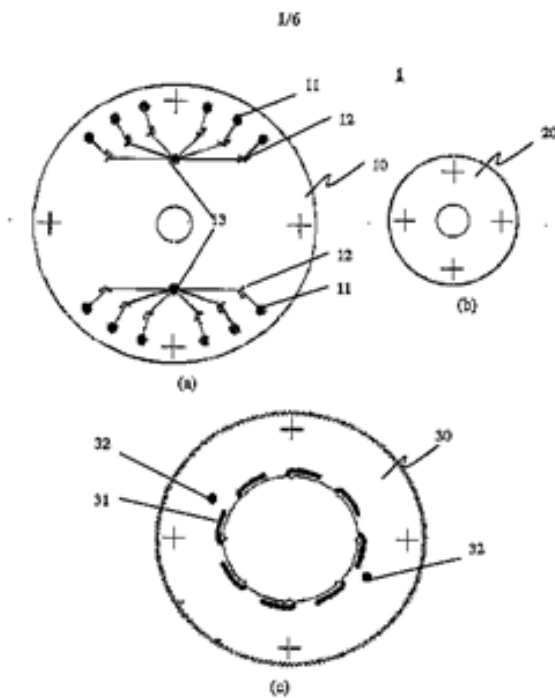


FIG 1

14) Family number: 34333329 (US2010216126A)

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Title: MICROFLUIDIC DEVICE**Priority:** GB20070000653 20070112 WO2008GB00094 20080111 WO2008GB00094 20080112**Family:**

Publication number	Publication date	Application number	Application date
AU2008204364 AA	20080717	AU20080204364	20080111
BRPI0806582 A2	20140506	BR2008PI06582	20080111
CA2675079 AA	20090709	CA20082675079	20080111
CN101631616 A	20100120	CN200880007915	20080111
EP2117714 A2	20091118	EP20080701775	20080111
GB2007000653 A0	20070221	GB20070000653	20070112
GB2446204 A1	20080806	GB20070000653	20070112
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JP2010515913 T2	20100513	JP20090545234T	20080111
KR20090104102 A	20091005	KR20097016827	20080111
MX2009007447 A1	20100301	MX20090007447	20080111
US2010216126 AA	20100826	US20080442993	20080112
WO08084245 A2	20080717	WO2008GB00094	20080111
WO08084245 A3	20090319	WO2008GB00094	20080111

Probable Assignee: BRUNEL UNIV**Assignee(s):^(std):** AHERN JEREMY ; AZIMI SAYAD MOHAMAD ; BAHMANYAR MOHAMAD REZA ; BALACHANDRAN WAMADEVA ; UNIV BRUNEL ; ZOLGHARNI MASSOUD ; SLIJEPCVIC PREDRAG**Assignee(s):** BRUNEL UNIV ; BRUNEL UNIVERSITY**Inventor(s):^(std):** AHERN JEREMY ; AZIMI SAYAD MOHAMAD ; BAHMANYAR MOHAMAD REZA ; BALACHANDRAN WAMADEVA ; JEREMY AHERN ; MASSOUD ZOLGHARNI ; MOHAMAD AZIMI SAYAD ; PREDRAG SLIJEPCVIC ; REZA BAHMANYAR MOHAMAD ; SLIJEPCVIC PREDRAG ; WAMADEVA BALACHANDRAN ; ZOLGHARNI MASSOUD ; SLIJEPCVIC PREDGRAG ; BAHMANYAR MOHAMMAD REZA ; BAHMANYAR MOHAMED REZA ; AZIMI SAYYED MOHAMAD ; AHERN JEREMY CLIVE**Inventor(s):** MOHAMAD REZA BAHMANYAR ; SAYAD MOHAMAD AZIMI ; PREDGRAG SLIJEPCVIC ; MOHAMED REZA BAHMANYAR ; JEREMY CLIVE AHERN**Agent(s):** GRIFFITH HACK; FETHERSTONHAUGH AND CO; SETNA ROHAN P; SENNIGER POWERS LLP; SETNA ROHAN PILOO ET AL**Designated states:** AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN SV SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW**International class**
(IPC 8-9): [B01F13/00](#) [B01F13/08](#) [B01F5/00](#) [B01J19/00](#) [B01J19/08](#) [B01L3/00](#) [B81B7/02](#) [C12M1/00](#) [C12Q1/68](#) [G01N1/28](#) [G01N1/34](#) [G01N27/447](#) [G01N33/50](#) [G01N35/08](#) [G01N37/00](#) (Advanced/Invention);
[B01F13/00](#) [B01F5/00](#) [B01J19/00](#) [B01J19/08](#) [B01L3/00](#) [B81B7/00](#) [C12M1/00](#) [C12Q1/68](#) [G01N1/28](#) [G01N1/34](#) [G01N27/447](#) [G01N33/50](#) [G01N35/08](#) [G01N37/00](#) (Core/Invention)**International class**
(IPC 1-7): [B01F13/00](#) [B01L3/00](#)**CPC:** [Y10T436/25](#) [B01L3/50273](#) [B01F13/0059](#) [B01F13/0818](#) [B01L3/502746](#) [B01L3/502761](#) [B01L2200/0647](#) [B01L2300/0645](#) [B01L2300/0809](#) [B01L2300/087](#) [B01L2400/043](#) [B01F13/0077](#) [G01N27/44791](#)**European class:** [B01F13/00M](#) [B01F13/00M6B](#) [B01F13/08C](#) [B01L3/5027D](#) [B01L3/5027F](#) [B01L3/5027H](#) [G01N27/447C7](#) [L01L200/06J](#) [L01L300/06B4](#) [L01L300/08B](#) [L01L300/08E6](#) [L01L400/04F8](#)

US class: 422/100 422/100S 422/501 422/501S 422/505 422/505S 422/82 422/82S 435/283.1 435/283.100S 435/289.1 435/289.100S 435/6 435/6.11 435/6.110P 435/6P 436/174 436/174S

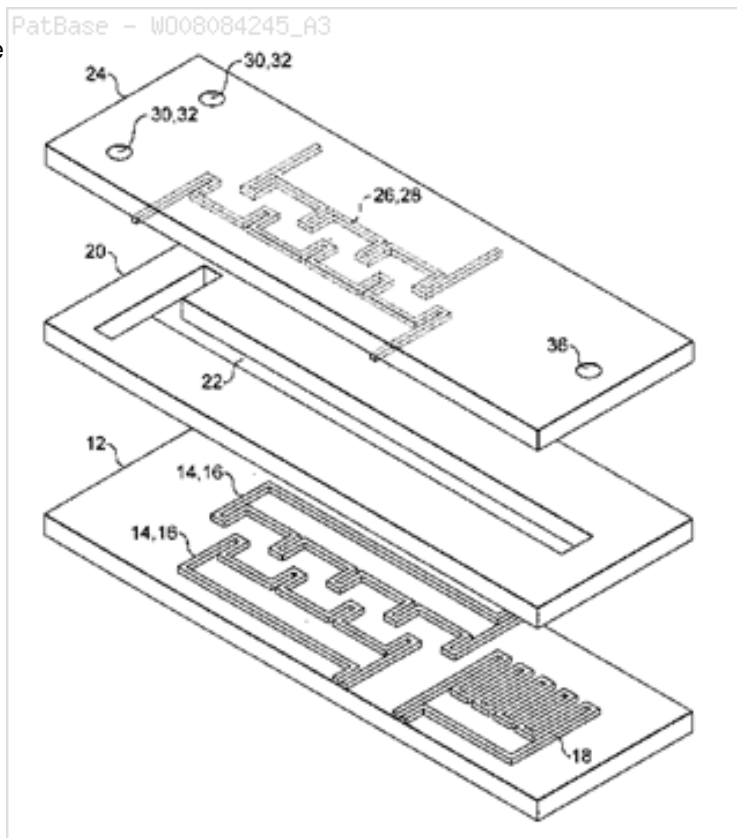
[Classification Explorer](#)

Cited documents: WO06004558 A1, WO03057368 A1, US7033473 BB, US2004229381 AA, US2002036141 AA, EP1658890 A2, EP1462174 A1,

Forward Citations: WO14018958, WO14018958, WO12044154, WO11030272, USD650911, USD650091, USD650090, US9506934, US9470616, US9101933, US9044729, US8932540, US8607450, US2013018256, US2011034873, TWI494563, JP2013504753, GB2483858, EP2799138, CN104748656, CN103842796, CN102692515, CN102692515, CN102192977, CN102192977,

Abstract:

Source: US2010216126A A microfluidic device comprising; i) an inlet; ii) a first layer comprising at least first and second current carrying structures, wherein the at least first and second current carrying structures each comprise a plurality of teeth, and wherein the teeth of the first and second current carrying structures are optionally offset such that the teeth of the first current carrying structure are positioned between the teeth of the second current carrying structure; iii) a second layer comprising a first microfluidic chamber in fluid communication with the inlet positioned above the at least first and second current carrying structures of the first layer; and iv) a third layer comprising at least third and fourth current carrying structures wherein the at least third and fourth current carrying structures each comprise a plurality of teeth, and wherein the teeth of the third and fourth current carrying structures are optionally offset such that the teeth of the third current carrying structure are positioned between the teeth of the fourth current carrying structure; and wherein the at least third and fourth current carrying structures are positioned in the third layer so as to be above the first microfluidic chamber and such that the teeth of the third current carrying structure are positioned substantially vertically above or offset from the teeth of the first current carrying structure and the teeth of the fourth current carrying structure are positioned substantially vertically above or offset from the teeth of the second current carrying structure; wherein the teeth have a stem having substantially elliptical tip.



15) Family number: 42079837 (US2008193336A)

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Title: CENTRIFUGAL FORCE BASED MICROFLUIDIC DEVICE FOR DILUTION AND MICROFLUIDIC SYSTEM INCLUDING THE SAME**Priority:** KR20070014554 20070212**Family:**

Publication number	Publication date	Application number	Application date
EP1955770 A2	20080813	EP20080151025	20080204
EP1955770 A3	20130724	EP20080151025	20080204
JP2008197097 A2	20080828	JP20080026810	20080206
JP5174481 B2	20130403	JP20080026810	20080206
KR101305976 B1	20130912	KR20070014554	20070212
KR20080075406 A	20080818	KR20070014554	20070212
US2008193336 AA	20080814	US20080029480	20080212
US7951332 BB	20110531	US20080029480	20080212

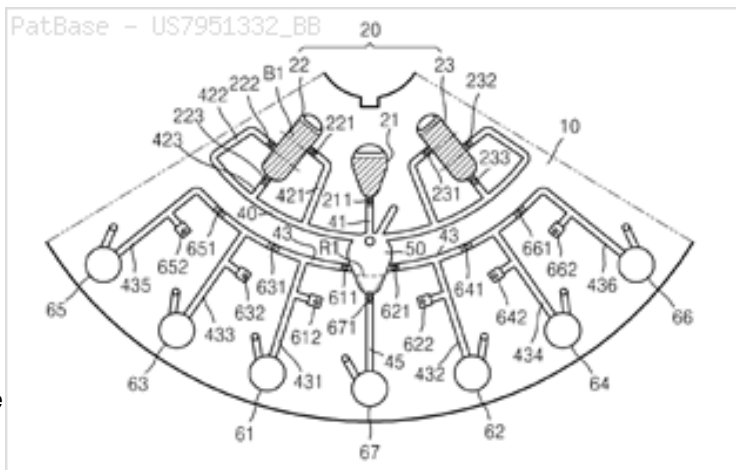
Probable Assignee: SAMSUNG ELECTRONICS CO LTD**Assignee(s):^(std):** SAMSUNG ELECTRONICS CO LTD**Assignee(s):** SAMSUNG ELECTRONICS CO**Inventor(s):^(std):** CHO YOON KYOUNG ; LEE BEOM SEOK ; LEE JEONG GUN ; LEE YOUNG SUN ; PARK JONG MYEON ; PARK SHOBEN**Inventor(s):** PARK JONG MYEON SAMSUNG ADV INST OF TECHNOLOGY ; LEE YOUNG SUN SAMSUNG ADV INST OF TECHNOLOGY ; LEE JEONG GUN SAMSUNG ADV INST OF TECHNOLOGY ; LEE BEOM SEOK SAMSUNG ADV INST OF TECHNOLOGY ; CHO YOON KYOUNG SAMSUNG ADV INST OF TECHNOLOGY**Agent(s):** GRUENECKER KINKELDEY STOCKMAIR AND SCHWANHAEUSSER ANWALTSSOZIETAET; GRUENECKER KINKELDEY STOCKMAIR AND SCHWANHAEUSSER; SUGHRUE MION PLLC**Designated states:** AL AT BA BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK TR**International class**
(IPC 8-9): [B01F11/00](#) [B01L11/00](#) [B01L3/00](#) [B01L99/00](#) [G01N33/53](#) [G01N35/00](#) [G01N35/08](#) [G01N37/00](#) (Advanced/Invention)**CPC:** [B01L3/50273](#) [B01L2200/0605](#) [B01L2200/0647](#) [B01L2200/16](#) [B01L2300/0806](#) [B01L2300/0864](#) [B01L2300/0867](#) [B01L2300/0887](#) [B01L2300/1861](#) [B01L2400/0409](#) [B01L2400/0677](#) [B01L3/502738](#) [B01L3/502792](#)**European class:** [B01L3/00C6M10](#) [B01L3/00C6M8](#) [B01L3/5027D](#) [B01L3/5027E](#) [L01L200/06A](#) [L01L200/06J](#) [L01L200/16](#) [L01L300/08A2](#) [L01L300/08E2](#) [L01L300/08E4](#) [L01L300/08F](#) [L01L300/18E](#) [L01L400/04F4](#) [L01L400/06P](#)**US class:** [422/100](#) [422/100P](#) [422/400](#) [422/400P](#) [422/502](#) [422/506](#) [422/68.1](#) [422/72](#)[Classification Explorer](#)**Cited documents:** WO06110093 A1, WO06108559 A2, WO05036182 A1, WO0187485 A2, US7476361 BB, US6705357 BB, US6582662 BA, US6063589 A, US5836004 A, US2008058192 AA, US2005249641 AA, US2004203136 AA, US2003156991 AA, US2003152491 AA, US2003044322 AA, US2001055812 AA, KR20060034390 A, KR20040003004 A, JPS1016542 Y1, JP2008534972 T2, JP2005345160 A2, JP2002505439 T2, JP10016542 Y1, EP1905515 A2, EP1897617 A1,

DE102005016509 A1

Forward Citations: WO14050946, WO13053077, WO11065666, WO11065666, US9557316, US9267940, US8703070, US8597572, US8491840, US8490655, US2015125865, US2015104814, US2012261026, US20111100476, US2010009457, US2009099782, KR101418668, KR101357808, KR100915900, JP5900269, JP2015503100, JP2014070967, EP2163308, DE202011108189, DE112011105723, DE102012213044, CN102641755,

Abstract:

Source: US2008193336A Provided are a centrifugal force based microfluidic device which can automatically perform a dilution operation and a microfluidic system including the same. The centrifugal force based microfluidic device for dilution includes a rotatable disk type platform, a mixing chamber disposed on the platform; a buffer solution storage disposed on a portion of the platform which is closer to a center of the platform than the mixing chamber, connected to the mixing chamber through a channel to supply a predetermined amount of buffer solution to the mixing chamber at least one time, and a plurality of diluted solution chambers which are disposed on a portion of the platform which is farther from the center of the platform than the mixing chamber, are each connected to the mixing chamber through flow paths extended from a middle exit corresponding to a predetermined water level, and sequentially receiving a solution which is serially diluted in the mixing chamber at least one time.



16) Family number: 42436008 (US2010128554A)

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Title: METHOD FOR MIXING AND/OR CONVEYING, MIXING AND/OR CONVEYANCE DEVICE, AND SAMPLE PROCESSING CHIP COMPRISING SUCH AS DEVICE

Priority: DE200710020243 20070424 EP20080736425 20080421 WO2008EP54809 20080421

Family:

Publication number	Publication date	Application number	Application date
<u>AT549078 E</u>	20120315	AT20080736425T	20080421
<u>DE102007020243 A1</u>	20081030	DE200710020243	20070424
<u>DE102007020243 B4</u>	20090226	DE200710020243	20070424
<u>DE502008006692 D1</u>	20120510	DE200850006692T	20080421
<u>EP2148738 A1</u>	20100203	EP20080736425	20080421
<u>EP2148738 B1</u>	20120314	EP20080736425	20080421
<u>US2010128554 AA</u>	20100527	US20080451024	20080421
<u>US8764275 BB</u>	20140701	US20080451024	20080421
<u>WO08129036 A1</u>	20081030	WO2008EP54809	20080421

Probable Assignee: INST MIKROTECHNIK MAINZ GMBH

Assignee(s):^(std): INST F MIKROTECHNIK MAINZ GMBH ; INST MIKROTECHNIK MAINZ GMBH ; WENIGER MALTE ; SCHOENFELD FRIEDHELM

Assignee(s): INSTITUT FUR MIKROTECHNIK MAINZ GMBH ; INSTITUT FUR MIKROTECHNIK MAINZ GMBH ; F MIKROTECHNIK MAINZ GMBH INST ; FRAUNHOFER GES ZUR FOERDERUNG DER ANGEWANDTEN FORSCHUNG EV ; FUR MIKROTECHNIK MAINZ GMBH INST

Inventor(s):^(std): SCHOENFELD FRIEDHELM ; WENIGER MALTE ; SCHOENFELD FRIEDHELM PROF DR

Agent(s): KILBURN AND STRODE LLP; HUDAK SHUNK AND FARINE CO LPA; FUCHS PATENTANWAELTE

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN SV SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

International class
(IPC 8-9): B01F11/02 B01F13/00 B01F3/00 B01F5/02 B01J19/00 B01L3/00 B01L99/00
F04F7/00 (Advanced/Invention);
B01L3/00 (Advanced/Non-invention)

CPC: B01F5/02 B01F11/0071 B01F11/0074 B01F11/0283 B01F13/0059 B01F2005/0017
B01L3/50273 B01L3/502784 B01L2400/0436 B01L2400/0439 F04F7/00

European class: B01F11/00L B01F11/00L2 B01F11/02K B01F13/00M B01F5/02 B01L3/00C6M18C
B01L3/00C6M8 B01L3/5027D B01L3/5027J4 F04F7/00 L01F5/00A6 L01L400/04F10A
L01L400/04F10U

US class: 366/114 366/114P 366/124 366/124S 366/127

[Classification Explorer](#)

Cited documents: ZA9809846 A, WO06105616 A1, WO06072384 A1, WO04030800 A2, USD655121 S1, USD638244 S1, USD567004 S1, USD532242 S1, USD440810 S1, US7731101 BB, US6910797 BB, US6811822 BB, US6745949 BB, US6676032 BB, US6460777 BB, US6431434 BA, US6244738 BA, US6230913 BA, US6210128 BA, US5201460 A, US5114074 A, US2010135104 AA, US2008186799 AA, US2007211562 AA, US2006027675 AA, US2004125689 AA, US2004076074 AA, US2004027915 AA, US2003230635 AA, US2003175947 AA, US2003133359 AA, US2003107946 AA, US2002185547 AA, GB2333047 A1, FR2770152 A1, EP1390131 B1, EP1390131 A2, EP1311341 B1, EP1311341 A2, DE19923378 C2, DE10013311 C2,

Abstract:

Source: US2010128554A A mixing and/or conveyance method and a mixing and/or conveyance device for a fluid substance, comprising a sample chamber, a cavity communicating with the sample chamber, said cavity being configured for accommodating a compressible medium, and a sound source that may be coupled to the compressible medium for the production of a fluctuation in pressure in the compressible medium. In the region of its mouth, the cavity is designed such that, in the case of an expansion in the volume of the compressible medium in the cavity, a directed fluid stream of the fluid substance escapes from the cavity through its mouth. A sample processing chip ('lab on a chip') comprising such a mixing and/or conveyance device.

PatBase - W008129036_A1

WD 32061214036

54

PCT/EP2008/054809

Fig. 1

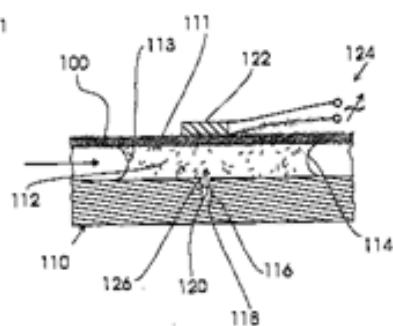
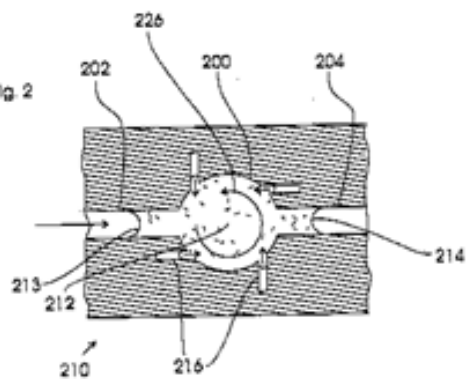


Fig. 2



17) Family number: 43296729 (US2010243078A)

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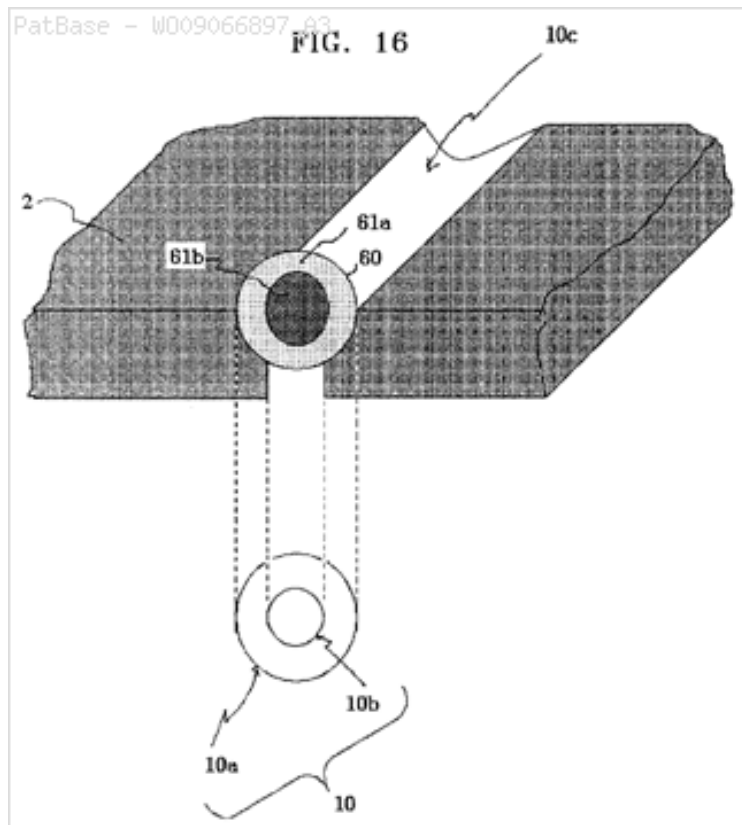
Title: THIN FILM VALVE DEVICE AND ITS CONTROLLING APPARATUS**Priority:** KR20070120586 20071122 WO2008KR06631 20081111**Family:**

Publication number	Publication date	Application number	Application date
CN101873885 A	20101027	CN200880117518	20081111
CN101873885 B	20130731	CN200880117518	20081111
EP2214801 A2	20100811	EP20080851751	20081111
EP2214801 A4	20161221	EP20080851751	20081111
JP2011505548 T2	20110224	JP20100534879T	20081111
KR20110073381 A	20110629	KR20107008024	20081111
US2010243078 AA	20100930	US20080743933	20081111
US8658113 BB	20140225	US20080743933	20081111
WO09066897 A2	20090528	WO2008KR06631	20081111
WO09066897 A3	20090813	WO2008KR06631	20081111

Probable Assignee: SAMSUNG ELECTRONICS CO**Assignee(s):^(std):** SAMSUNG ELECTRONICS CO LTD ; YOO JAE CHERN**Assignee(s):** SAMSUNG ELECTRONICS CO**Inventor(s):^(std):** YOO JAE CHERN ; CHERN YOO JAE**Inventor(s):** SAMSUNG ELECTRONICS CO LTD**Agent(s):** GRUENECKER KINKELDEY STOCKMAIR AND SCHWANHAEUSSER
ANWALTSSOZIETAET; STAAS AND HALSEY LLP; Y P LEE MOCK AND PARTNERS**Designated states:** AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI
CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH
GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC
LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE
NG NI NL NO NZ OM PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN ST SV
SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW**International class**
(IPC 8-9): [B01D45/12](#) [B01L3/00](#) [B01L7/00](#) [B01L99/00](#) [B81B3/00](#) [B81B5/00](#) [F16K13/10](#) [F16K17/38](#)
[F16K31/00](#) [F16K31/04](#) [F16K31/08](#) [F16K49/00](#) [F16K99/00](#) [G01N35/00](#) [G01N35/02](#)
[G01N35/08](#) [G01N37/00](#) (Advanced/Invention).
[B01D45/12](#) [F16K17/36](#) [F16K31/08](#) (Core/Invention)**CPC:** [Y10T137/7737](#) [Y10T436/2575](#) [F16K99/0001](#) [F16K99/0015](#) [F16K99/0046](#) [F16K2099/0084](#)
[G01N35/08](#) [B81B3/00](#) [F16K31/00](#) [F16K49/00](#) [G01N35/1009](#) [B01L3/502738](#) [B01L7/00](#)
[B01L2300/087](#) [B01L2300/0874](#) [B01L2300/0887](#) [B01L2300/1827](#) [B01L2400/0409](#)
[B01L2400/0677](#) [B01L2400/0683](#)**European class:** [F16K99/00M](#) [F16K99/00M2E](#) [F16K99/00M4C4](#) [R16K99/00Y2](#)**US class:** [137/468](#) [251/65](#) [251/65S](#) [422/50](#) [422/500](#) [422/501](#) [422/502](#) [422/503](#) [422/504](#) [422/537](#)
[436/180](#)[Classification Explorer](#)**Cited documents:** WO07073107 A1, WO07001160 A1, WO03080868 A1, US7560073 BA, US7459129 BB,
US7300199 BB, US6869671 BA, US6302134 BA, US2009163367 AA, US2006291354
AA, US2006194273 AA, US2005026301 AA, US2004155213 AA, US2004063217 AA,
US2002155010 AA, US2002106786 AA, US2001055812 AA, KR20020068449 A,
JP2009500621 T2, JP2007527517 T2, JP2007170469 A2, JP2006508790 T2,
JP2005024544 A2, JP2004525339 T2, JP2003083965 A2,**Forward Citations:** WO15022176, WO14088312, WO11156856, US9389231, US9157055, US8969070,
US8398938, US2015024377, US2011189660, US2010297659, KR101530935,
KR101439483, EP3029363, DE102014117976, CN102146465,

Abstract:

Source: US2010243078A Provided are a thin film valve device and a thin film valve control apparatus in which a hole or a channel in the body of the thin film valve device is opened and closed using the heat generated from a heat generating apparatus and the centrifugal force. The thin film valve device and the thin film valve control apparatus are applicable to, for example, a diagnostic lab-on-a-chip that can detect a trace amount of a material in a fluid, a rotatable bio-disc in which a bio chip, such as a protein chip and a DNA chip, is integrated, and the like.



18) Family number: 43386374 (US2010288949A)

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Title: THIN FILM BIO VALVE DEVICE AND ITS CONTROLLING APPARATUS**Priority:** KR20070128592 20071210 WO2008KR07280 20081210

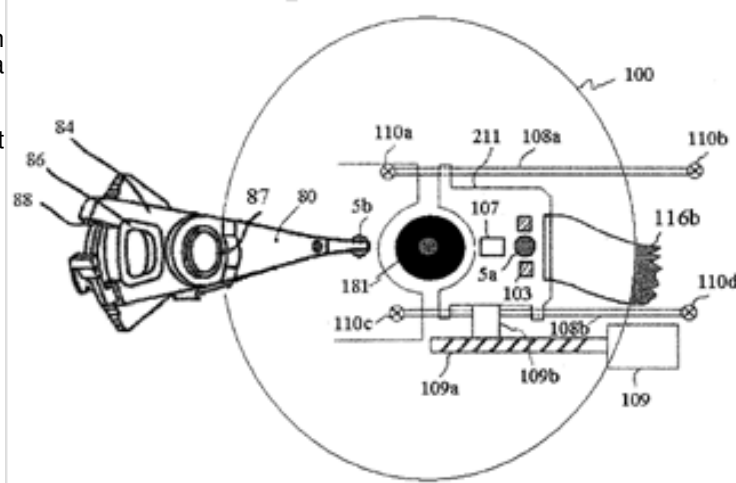
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	CN101918528 B	20130717	CN200880120196	20081210
	EP2240568 A2	20101020	EP20080860776	20081210
	EP2240568 A4	20160413	EP20080860776	20081210
	KR101555476 B1	20151006	KR20107011225	20081210
	KR20110074722 A	20110701	KR20107011225	20081210
	US2010288949 AA	20101118	US20080747117	20081210
	US8480980 BB	20130709	US20080747117	20081210
	WO09075513 A2	20090618	WO2008KR07280	20081210
	WO09075513 A3	20090911	WO2008KR07280	20081210

Probable Assignee: SAMSUNG ELECTRONICS CO LTD**Assignee(s):^(std):** SAMSUNG ELECTRONICS CO LTD ; YOO JAE CHERN**Assignee(s):** SAMSUNG ELECTRONICS CO**Inventor(s):^(std):** JAE CHERN YOO ; YOO JAE CHERN**Agent(s):** GRUENECKER KINKELDEY STOCKMAIR AND SCHWANHAEUSSER
ANWALTSSOZIETAET; SUGHRUE MION PLLC; Y P LEE MOCK AND PARTNERS**Designated states:** AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI
CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH
GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC
LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE
NG NI NL NO NZ OM PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN ST SV
SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW**International class**
(IPC 8-9): [B01L3/00](#) [B01L99/00](#) [C12M1/00](#) [F16K31/08](#) [F16K31/66](#) [G01N33/53](#) (Advanced/Invention);
[C12M1/00](#) (Core/Invention)**CPC:** [Y10T436/2575](#) [G01N35/1097](#) [B01L3/502715](#) [B01L3/502738](#) [B01L2300/0803](#)
[B01L2300/0806](#) [B01L2300/0867](#) [B01L2400/0409](#) [B01L2400/0633](#) [B01L2400/065](#)
[F16K99/0001](#) [F16K99/0011](#) [F16K99/0046](#) [F16K99/0063](#) [F16K2099/008](#) [F16K2099/0084](#)
[G01N2035/00247](#) [G01N2035/1034](#)**European class:** [B01L3/00C6M10](#) [B01L3/00C6M4](#) [B01L3/5027B](#) [B01L3/5027E](#) [F16K99/00M](#)
[F16K99/00M2C](#) [F16K99/00M4C4](#) [F16K99/00M4E](#) [G01N35/10V1](#) [L01L300/08A](#)
[L01L300/08A2](#) [L01L300/08E4](#) [L01L400/04F4](#) [L01L400/06M](#) [L01L400/06M6](#) [R16K99/00P8](#)
[R16K99/00Y2](#) [S01N35/00D5V](#) [S01N35/10F4](#)**US class:** [251/65](#) [251/65P](#) [422/50](#) [422/500](#) [422/501](#) [422/502](#) [422/537](#) [422/540](#) [436/180](#)[Classification Explorer](#)**Cited documents:** WO9015321 A2, WO07001160 A1, WO06121266 A1, WO06118420 A1, WO06118420
A1, US2004155213 AA, KR20050014797 A, KR20050014797, KR20040004014 A,
KR20040004014, KR100639816 B1,**Forward Citations:** WO14086912, US9506908, US9389231, US8969070, US8951779, US2015024377,
US2010297659, US2009253130, EP2684608, EP2647433, CN103537329,

Abstract:

Source: US2010288949A A thin film bio valve device and an apparatus for controlling the thin film bio valve device are effectively applied in a valve structure of a thin film device, such as a lab-on-a-chip, a protein chip, or a DNA chip, for diagnosing and/or detecting a small amount of material in a fluid.

PatBase - W009075513_A FIG. 27



19) Family number: 43552926 (US2010297659A)

© PatBase

Title: THIN-FILM LAYERED CENTRIFUGE DEVICE AND ANALYSIS METHOD USING THE SAME

Priority: CN200980102692 20090121 KR20080006890 20080121 WO2009KR00306 20090121
US20100863684 20100720 US20130090317 20131126

Family:	Publication number	Publication date	Application number	Application date
	CN101971035 A	20110209	CN200980102692	20090121
	CN101971035 B	20131016	CN200980102692	20090121
	CN103472241 A	20131225	CN201310412736	20090121
	CN103472241 B	20150617	CN201310412736	20090121
	EP2239583 A2	20101013	EP20090703773	20090121
	EP2239583 A4	20150902	EP20090703773	20090121
	KR101608749 B1	20160406	KR20107017651	20090121
	KR20110079570 A	20110707	KR20107017651	20090121
	US2010297659 AA	20101125	US20090863684	20090121
	US2014186935 AA	20140703	US20130090317	20131126
	US8969070 BB	20150303	US20090863684	20090121
	WO09093838 A2	20090730	WO2009KR00306	20090121
	WO09093838 A3	20091022	WO2009KR00306	20090121
	WO09093838 A9	20100910	WO2009KR00306	20090121

Probable Assignee: SAMSUNG ELECTRONICS CO

Assignee(s):^(std): SAMSUNG ELECTRONICS CO LTD ; YOO JAE CHERN

Assignee(s): SAMSUNG ELECTRONICS CO

Inventor(s):^(std): CHERN YOO JAE ; YOO JAE CHERN ; YOO JAE CHEM

Agent(s): GRUENECKER KINKELDEY STOCKMAIR AND SCHWANHAEUSSER
ANWALTSSOZIETAET; STAAS AND HALSEY LLP; Y P LEE MOCK AND PARTNERS

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI
CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH
GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC
LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE
NG NI NL NO NZ OM PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN ST SV
SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

International class
(IPC 8-9): [B01L3/00](#) [B04B1/02](#) [B04B7/08](#) [C12M1/10](#) [C12M1/34](#) [C12M3/00](#) [C12Q1/68](#) [G01N33/53](#)
[G01N35/00](#) (Advanced/Invention);
[G01N35/00](#) (Core/Invention)

CPC: [G01N33/5302](#) [G01N35/00069](#) [G01N35/00029](#) [G01N2035/00247](#) [G01N2035/00495](#)
[B04B1/02](#) [C12M1/10](#) [C12Q1/68](#) [C12Q2565/625](#) [B01L3/502753](#)

European class: [G01N35/00C](#) [S01N35/00C2](#) [S01N35/00D5V](#) [S01N35/00F2](#)

US class: [422/64](#) [422/68.1](#) [422/69](#) [435/287.2](#) [435/287.200S](#) [435/287.7](#) [435/288.5](#) [435/6](#) [435/6.16](#)
[435/6.160P](#) [494/81](#) [494/81S](#)

[Classification Explorer](#)

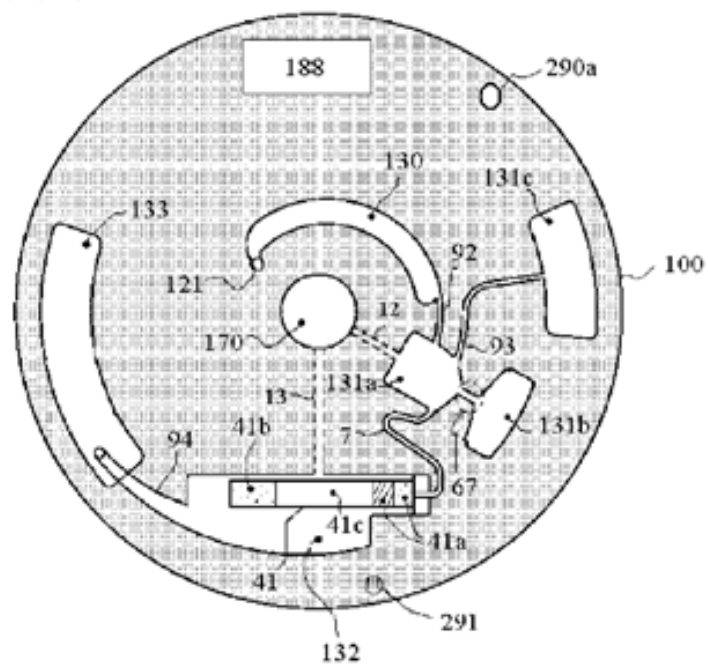
Cited documents: WO06118420 A1, US8097450 BB, US6632399 BA, US6302134 BA, US6302134,
US2010288949 AA, US2010243078 AA, US2010234237 AA, US2009253130 AA,
US2005041525 AA, US2003054376 AA, KR20080005224 A, KR20080005224,
KR20050118651 A, KR100639816, CN2874467, CN1592684 A,

Forward Citations: USD685919, USD685496, US9551769, US9506908, US9453255, US9213043,
US9081001, US9075042, US2014213468, US2013273528, EP2859953, CN105203746,
CN104483496, CN103988082, CN103988082, CN103429308, CN103429308,

Abstract:

Source: US2010297659A Disclosed herein is a thin-film layered centrifuge device and an analysis method using the same. One example of an embodiment of the present invention is a thin film layered centrifuge device where a device, such as a lab on a chip, a protein chip and a DNA chip, for diagnosing and detecting a small amount of material in a fluid is integrated into a rotatable thin-film layered body, and to an analysis method using the thin-film layered centrifuge device.

PatBase - W009093838_A9
[Fig. 2]



20) Family number: 44118725 (US2009311796A)

© PatBase

Title: MICROFLUIDIC ANALYTICAL DEVICE FOR ANALYSIS OF CHEMICAL OR BIOLOGICAL SAMPLES, METHOD AND SYSTEM THEREOF

Priority: EP20080104411 20080613 EP20090100331 20090610 US20090482707 20090611
US20140558152 20141202

Family:	Publication number	Publication date	Application number	Application date
	<u>DE602009027164 D1</u>	20141127	DE200960027164T	20090610
	<u>EP2133149 A1</u>	20091216	EP20080104411	20080613
	<u>EP2133150 A1</u>	20091216	EP20090100331	20090610
	<u>EP2133150 B1</u>	20141015	EP20090100331	20090610
	<u>US2009311796 AA</u>	20091217	US20090482707	20090611
	<u>US2015093771 AA</u>	20150402	US20140558152	20141202

Probable Assignee: ROCHE DIAGNOSTICS OPERATIONS INC

Assignee(s):^(std): HOFFMANN LA ROCHE ; ROCHE DIAGNOSTICS GMBH ; ROCHE DIAGNOSTICS OPERATIONS

Assignee(s): ROCHE DIAGNOSTICS OPERATIONS INC ; ROCHE DIAGNOSTICS AG ; F HOFFMANN LA ROCHE AG ; FHOFFMANN LA ROCHE AG

Inventor(s):^(std): GRISS PATRICK ; JAEGGI RAINER ; SAVATIC GORAN ; SILJEGOVIC VUK ; SILJEGOVIC VULK

Agent(s): POREDDA ANDREAS; CURCIO MARIO; DINSMORE AND SHOHL LLP ONE DAYTON CENTRE

Designated states: AL AT BA BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK TR

International class (IPC 8-9): B01L3/00 C12Q1/54 G01N21/75 G01N33/00 G01N33/49 G01N9/30 (Advanced/Invention);
B01L3/00 G01N21/75 G01N33/00 G01N9/00 (Core/Invention)

CPC: B01L2200/10 B01L2400/0688 C12Q1/54 B01L3/50273 B01L2300/0654 B01L2300/0803 B01L2300/0887 B01L2300/168 B01L2400/0409 G01N21/07 G01N33/491 Y10T436/15 Y10T436/144444 Y10T436/146666 Y10T436/166666 Y10T436/171538 Y10T436/175383 Y10T436/201666 Y10T436/204165

European class: B01L3/00C6M8 B01L3/5027D G01N21/07 L01L200/10 L01L300/06B6 L01L300/08A L01L300/08F L01L300/16B L01L400/04F4 L01L400/06S

US class: 422/68.1 422/68.100S 422/72 422/72S 435/15 435/17 435/19 435/21 435/22 435/26 436/100 436/105 436/108 436/113 436/129 436/132 436/166 436/166P 436/66 436/69 436/71 436/74 436/86 436/88 436/95 436/97

[Classification Explorer](#)

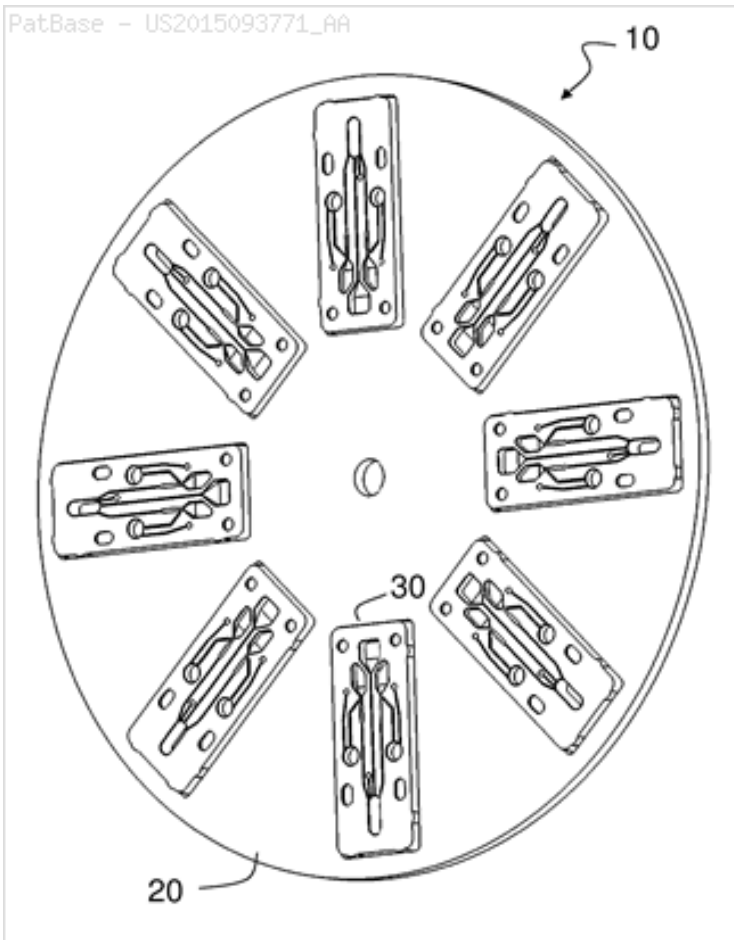
Cited documents: US7275858 BB, US5912134 A, US5627041 A, US2012028852 AA, US2009191643 AA, US2008058991 AA, US2008014576 AA, US2006281192 AA, US2005129583 AA, US2004089616 AA, US2003231989 AA, US2003053934 AA, US2002196435 AA,

Forward Citations: WO14058757, WO14049116, WO13135713, USD768872, US9307921, US9182353, US9180449, US2015105640, CN103328101, CN103328101,

Abstract:

Source: US2009311796A An analytical device for analysis of chemical or biological samples, a method of using such a device, based on rotation of the device, integrated sample dosing and optical detection, and a system comprising such a device are disclosed. The analytical device comprises a device body having a liquid processing unit. The liquid processing unit comprises a mixing chamber for mixing a sample with a reagent, a sample dosing chamber for delivering a defined volume of the sample to the mixing chamber, and a reagent channel for delivering the reagent to be mixed with the sample, wherein the mixing chamber also serves as a detection chamber.

PatBase - US2015093771_AA



21) Family number: 45170715 (US2010140110A)

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Title: MICROFLUIDIC-BASED LAB-ON-A-TEST CARD FOR A POINT-OF-CARE ANALYZER

Priority: US20080120253P 20081205 US20090632661 20091207 WO2009US67025 20091207 US20120444845 20120412

Family:	Publication number	Publication date	Application number	Application date
	CN102239409 A	20111109	CN200980148511	20091207
	EP2373996 A2	20111012	EP20090768299	20091207
	JP2012511156 T2	20120517	JP20110539779T	20091207
	KR20110113610 A	20111017	KR20117015356	20091207
	US2010140110 AA	20100610	US20090632661	20091207
	US2012258445 AA	20121011	US20120444845	20120412
	US8323466 BB	20121204	US20090632661	20091207
	WO10065967 A2	20100610	WO2009US67025	20091207
	WO10065967 A3	20100826	WO2009US67025	20091207

Probable Assignee: NANOIVD INC

Assignee(s):^(std): CHAN BECKY ; KELLY RORY ; KIM SUNNIE PARK ; NANOIVD INC ; SHIN YOUNG SHIK ; LIU CHANGGENG ; NANOLVD INC

Inventor(s):^(std): BECKY CHAN ; CHAN BECKY ; CHANGGENG LIU ; KELLY RORY ; KIM SUNNIE PARK ; LIU CHANGGENG ; PARK KIM SUNNIE ; RORY KELLY ; SHIK SHIN YOUNG ; SHIN YOUNG SHIK

Agent(s): HART DEBORAH MARY; JINN SU; SU JINNTUNG

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PE PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

International class
(IPC 8-9): [B01D29/01](#) [B01D29/64](#) [B01D29/86](#) [B01D29/90](#) [B01L3/00](#) [B81B7/00](#) [C07H21/00](#) [C07K1/22](#) [C07K16/00](#) [C12M1/00](#) [C12M1/12](#) [C12M1/34](#) [C12N5/00](#) [C12Q1/00](#) [G01N1/34](#) [G01N15/12](#) [G01N27/00](#) [G01N27/02](#) [G01N27/07](#) [G01N27/401](#) [G01N27/414](#) [G01N27/416](#) [G01N31/00](#) [G01N33/49](#) [G01N33/50](#) [G01N33/53](#) [G01N33/543](#) [G01N35/08](#) [G01N37/00](#) [H01L29/06](#) [H01L29/786](#) [H01L51/10](#) [H01L51/30](#) (Advanced/Invention); [B82Y15/00](#) [C12N15/09](#) (Advanced/Non-invention); [B01D29/00](#) [B01D29/01](#) [B01D29/62](#) [B01D29/88](#) [B01L3/00](#) [B81B7/00](#) [C07H21/00](#) [C07K1/00](#) [C07K16/00](#) [C12M1/00](#) [C12M1/12](#) [C12N5/00](#) [G01N1/34](#) [G01N27/00](#) [G01N27/02](#) [G01N27/06](#) [G01N27/28](#) [G01N33/49](#) [G01N33/50](#) [G01N33/543](#) [H01L29/02](#) [H01L29/66](#) (Core/Invention)

CPC: [B01L2200/0647](#) [B01L2200/143](#) [G01N33/48707](#) [G01N33/491](#) [G01N33/574](#) [H01L29/413](#) [B82Y15/00](#) [G01N33/5044](#) [B01L3/502761](#) [B01L9/527](#) [B01L2200/04](#) [B01L2200/0636](#) [B01L2200/0668](#) [B01L2300/0645](#) [B01L2300/0654](#) [B01L2300/0681](#) [B01L2300/0864](#) [B01L2300/0883](#) [B01L2300/0887](#) [B01L2400/0475](#) [B01L2400/0487](#) [G01N1/405](#) [G01N33/54313](#) [G01N33/5438](#) [G01N2001/4088](#) [G01N2035/00158](#) [H01L29/0665](#) [H01L29/0673](#) [B82Y10/00](#)

European class: [B01L3/5027H](#) [B82Y10/00](#) [B82Y15/00](#) [G01N33/49C](#) [G01N33/50D2F](#) [G01N33/543D](#) [G01N33/543K2B](#) [G01N33/574](#) [H01L29/06C6](#) [H01L29/06C6W2](#) [H01L29/41N](#) [L01L200/04](#) [L01L200/06G](#) [L01L200/06J8](#) [L01L300/06B4](#) [L01L300/06B6](#) [L01L300/06D](#) [L01L300/08E14](#) [L01L300/08E2](#) [L01L300/08F](#) [L01L400/04M](#) [L01L400/04M8](#) [L01L9/527](#) [S01N1/40P](#) [S01N1/40V3](#) [S01N35/00C7D](#)

US class: [204/403.01](#) [204/409](#) [204/409S](#) [205/775](#) [257/20](#) [257/40](#) [422/101](#) [422/101S](#) [422/400](#) [422/400S](#) [422/82.01](#) [422/82.010S](#) [435/308.1](#) [435/308.100S](#) [435/325](#) [435/325S](#) [435/4](#) [435/5](#) [435/6.1](#) [435/7.1](#) [436/2](#) [436/518](#) [530/387.1](#) [530/387.100S](#) [530/412](#) [530/412S](#) [536/25.4](#) [536/25.400S](#) [977/702](#) [977/720](#) [977/734](#) [977/762](#) [977/902](#) [977/938](#)

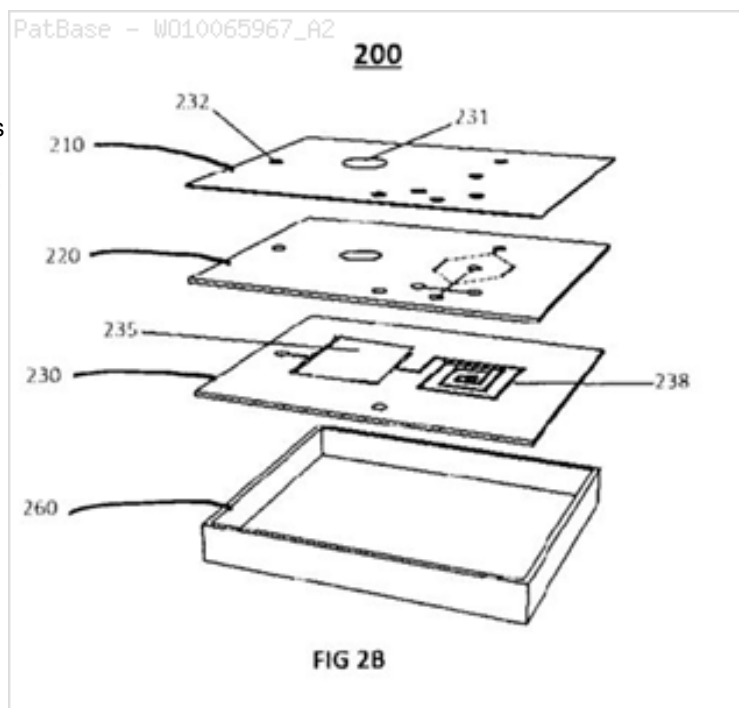
[Classification Explorer](#)

Cited documents: WO08147530 A1, WO06134942 A1, US7575681 BB, US7553453 BB, US7410904 BB, US7385267 BB, US7301199 BB, US5726026 A, US2010128260 AA, US2009152598 AA, US2009152597 AA, US2009104689 AA, US2008283875 AA, US2007172903 AA, US2006154361 AA, US2002117659 AA, US2002037530 AA, DE10213817 A1,

Forward Citations: WO14022422, WO13166347, WO13071301, US9460264, US9434937, US9334528, US9317662, US9272277, US9062342, US2014272968, US2014230579, US2013270124, JP2016000040, JP2014504854, JP2013142540, CN104133071, CN103575773, CN103403547,

Abstract:

Source: US2010140110A A
microfluidic-based lab-on-a-test card is described. The test card is used with a point-of-care (POC) analyzer. The test card is designed to receive a sample and then, with the use of the POC analyzer, quantify or count a particular substance in the sample. The test card may be comprised of multiple layers. In one embodiment, the test card includes a primary separation chamber with a filtration surface, a trapping channel, and a particle detector. The test card may also include a nanowire sensor.



22) Family number: 48303852 (US2011081275A)

© PatBase

Title: MICROFLUIDIC STRUCTURE**Priority:** DE200910048378 20091006 EP20100180301 20100927

Family:	Publication number	Publication date	Application number	Application date
	<u>DE102009048378 B3</u>	20110217	DE200910048378	20091006
	<u>DE502010002837 D1</u>	20130529	DE201050002837T	20100927
	<u>EP2308589 A1</u>	20110413	EP20100180301	20100927
	<u>EP2308589 B1</u>	20130403	EP20100180301	20100927
	<u>EP2308589 B9</u>	20130814	EP20100180301	20100927
	<u>US2011081275 AA</u>	20110407	US20100924788	20101005
	<u>US9186638 BB</u>	20151117	US20100924788	20101005

Probable Assignee: INST MIKROTECHNIK MAINZ GMBH**Assignee(s):^(std):** FRAUNHOFER GELLSCHAFT ZUR FOERDERUNG DER ANGEWANDTEN FORSCHUNG E V ; CLAUSSEN JAN ; INST MIKROTECHNIK MAINZ GMBH ; WENIGER MALTE**Assignee(s):** FUR MIKROTECHNIK MAINZ GMBH INST ; INSTITUT FUR MIKROTECHNIK MAINZ GMBH ; F MIKROTECHNIK MAINZ GMBH INST ; FRAUNHOFER GELLSCHAFT ZUR FOERDERUNG DER ANGEWANDTEN FORSCHUNG EV ; FRAUNHOFER GES ZUR FOERDERUNG DER ANGEWANDTEN FORSCHUNG EV ; INSTITUT FUER MIKROTECHNIK MAINZ GMBH**Inventor(s):^(std):** CLAUSSEN JAN ; WENIGER MALTE ; CLAUSEN DR JAN ; CLAUSEN JAN**Inventor(s):** CLAUSSEN DR JAN 65185 ; WENIGER MALTE 65719 ; CLAUSSEN DR JAN**Agent(s):** MEHLER ACHLER PATENTANWAELTE; FUCHS; MEHLER ACHLER; HUDAK SHUNK AND FARINE CO LPA**Designated states:** AL AT BA BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC ME MK MT NL NO PL PT RO RS SE SI SK SM TR

International class [B01F13/00 B01F5/04 B01F5/06 B01L3/00 C12M1/34 G01N1/00 G01N1/18](#)
 (IPC 8-9): [G01N35/00](#) (Advanced/Invention);
[G01N1/00](#) (Advanced/Non-invention)

CPC: [B01F13/0064 B01F5/0471 B01F5/0646 B01F5/0654 B01F13/0084 B01F13/0086](#)
[B01L2200/027 B01L2300/0867 B01L2400/0406 B01L2400/043 B01L2400/0487](#)
[B01L2400/086 B01L3/502715 B01L3/502746 B01L3/5027 B01L2200/026 B01L2300/0861](#)
[B01L2300/161](#)

European class: [B01F13/00M2B B01F13/00M6E1 B01F13/00M6E2 B01F5/04C14 B01F5/06B3F](#)
[B01F5/06B3F14 B01L3/00C6M4 B01L3/5027B L01L200/02D2 L01L3/5027F](#)
[L01L300/08E4 L01L400/04F2 L01L400/04F8 L01L400/04M8 L01L400/08P2](#)

US class: [1/1 422/507 422/507S 422/68.1 422/68.100P](#)[Classification Explorer](#)**Cited documents:** WO08036997 A1, WO04012864 A1, US7691328 BB, US7247274 BA, US6591852 BA, US2012031176 AA, US2011207619 AA, US2010311186 AA, US2010233824 AA, US2010044376 AA, US2009129198 AA, US2008161769 AA, US2008153152 AA, US2006216195 AA, EP2311565 A1, EP1932593 A1,

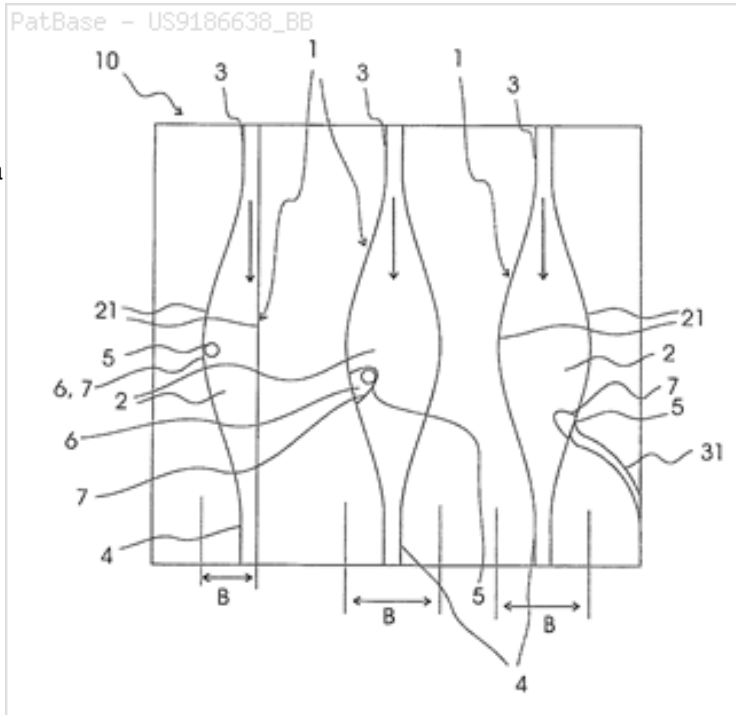
DE102008002674 B3

DE10013311 C2, DE10013311 A1,

Forward Citations: DE102015204235, DE102015204235, DE102013220445, DE102013220445,

Abstract:

Source: US2011081275A Pressure-operable microfluidic structure for the bubble-free combining of two liquid volumes with a fluid chamber that has a feed opening, as well as an inlet and outlet channel emerging into the fluid chamber, wherein the fluid chamber has a cross section that broadens out relative to the inlet channel in the direction of flow from the inlet to the outlet channel and is designed, thanks to the broadened cross section, to broaden a first liquid volume that is essentially pressure-driven and conducted through the inlet channel and through the fluid chamber to a cross section at least approximately corresponding to the full cross section of the fluid chamber, while the fluid chamber has a holding position and is configured so that a second liquid volume, placed in the fluid chamber through the feed opening, can be held in the region of the holding position and the second liquid volume when the first liquid volume is moved through by pressure can be taken up by the latter and delivered as a combined liquid volume through the fluid chamber and into the outlet channel.



23) Family number: 51300163 (WO11156835A1)

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Title: TEST MODULE INCORPORATING SPECTROMETER
Priority: US20100356018P 20100617 US20110437686P 20110130
Family:

Publication number	Publication date	Application number	Application date
<u>WO11156835 A1</u>	20111222	WO2011AU00658	20110601
<u>WO11156836 A1</u>	20111222	WO2011AU00659	20110601
<u>WO11156837 A1</u>	20111222	WO2011AU00660	20110601
<u>WO11156838 A1</u>	20111222	WO2011AU00661	20110601
<u>WO11156839 A1</u>	20111222	WO2011AU00662	20110601
<u>WO11156840 A1</u>	20111222	WO2011AU00663	20110601
<u>WO11156841 A1</u>	20111222	WO2011AU00664	20110601
<u>WO11156842 A1</u>	20111222	WO2011AU00665	20110601
<u>WO11156843 A1</u>	20111222	WO2011AU00666	20110601
<u>WO11156844 A1</u>	20111222	WO2011AU00667	20110601
<u>WO11156845 A1</u>	20111222	WO2011AU00668	20110601
<u>WO11156846 A1</u>	20111222	WO2011AU00669	20110601
<u>WO11156847 A1</u>	20111222	WO2011AU00670	20110601
<u>WO11156848 A1</u>	20111222	WO2011AU00671	20110601
<u>WO11156849 A1</u>	20111222	WO2011AU00672	20110601
<u>WO11156850 A1</u>	20111222	WO2011AU00673	20110601
<u>WO11156851 A1</u>	20111222	WO2011AU00674	20110601
<u>WO11156852 A1</u>	20111222	WO2011AU00675	20110601
<u>WO11156853 A1</u>	20111222	WO2011AU00676	20110601
<u>WO11156854 A1</u>	20111222	WO2011AU00677	20110601
<u>WO11156855 A1</u>	20111222	WO2011AU00678	20110601
<u>WO11156856 A1</u>	20111222	WO2011AU00679	20110601
<u>WO11156856 A9</u>	20120209	WO2011AU00679	20110601
<u>WO11156857 A1</u>	20111222	WO2011AU00680	20110601

Probable Assignee: GENEASYS PTY LTD**Assignee(s):^(std)** AZIMI MEHDI ; FACER GEOFFREY RICHARD ; GENEASYS PTY LTD ; MOINI ALIREZA ; SILVERBROOK KIA ; WORSMAN MATTHEW TAYLOR**Inventor(s):^(std)** AZIMI MEHDI ; FACER GEOFFREY RICHARD ; MOINI ALIREZA ; SILVERBROOK KIA ; WORSMAN MATTHEW TAYLOR**Agent(s):** GENEASYS PTY LTD**Designated states:** AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PE PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW**International class**
(IPC 8-9): A61B5/00 B01B1/00 B01L3/00 B81B3/00 B81B7/00 B81B7/02 C12M1/00 C12Q1/00 C12Q1/68 C12Q1/70 G01D3/08 G01N1/28 G01N1/31 G01N1/34 G01N1/40 G01N21/25 G01N21/62 G01N21/64 G01N27/00 G01N33/48 G01N33/50 (Advanced/Invention)**CPC:** C12Q1/68 B01L3/5027 B01L3/502707 B01L3/502738 B01L7/52 B01L2200/10 B01L2300/023 B01L2300/024 B01L2300/0636 B01L2300/0654 B01L2300/0883 B01L2300/10 B01L2300/1827 B01L2400/0406 B01L2400/0633 B01L2400/0677 B01L2400/0688 F16K99/003 F16K99/0036 Y10T436/107497 Y10T436/11 Y10T436/143333 Y10T436/145555 Y10T436/173845 Y10T436/203332 Y10T436/25 Y10T436/25375 Y10T137/0352 Y10T137/0391 Y10T137/1044 Y10T137/206

Y10T137/2076 Y10T137/2202

European class: B01L3/5027 B01L3/5027A B01L3/5027E F16K99/00M2M F16K99/00M4B G01N27/22C L01L200/10 L01L300/02B L01L300/02C L01L300/06B2 L01L300/06B6 L01L300/08E14 L01L300/10 L01L300/18A8 L01L400/04F2 L01L400/06M L01L400/06P L01L400/06S L01L7/52

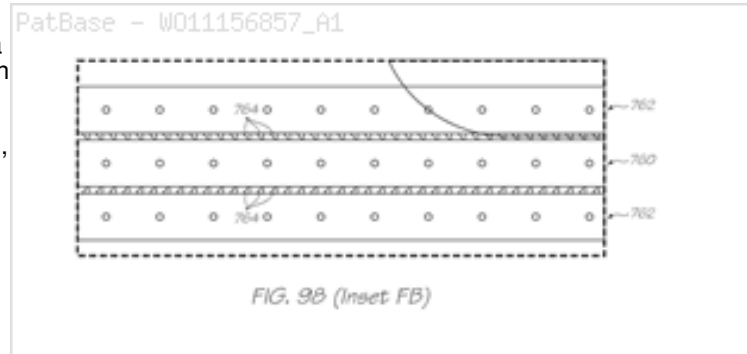
Classification Explorer

Cited documents: WO9841531 A2, WO9525116 A1, WO09156045 A2, WO09118690 A2, WO09066897 A2, WO09017627 A1, WO08113112 A1, WO08036614 A1, WO07033385 A2, WO04065010 A2, WO04055198 A2, WO02099410 A1, US6639313 BA, US6635226 BA, US4407290 A, US2010075340 AA, US2009325276 AA, US2009318312 AA, US2009253130 AA, US2008176757 AA, US2008057570 AA, US2007074972 AA, US2005284763 AA, US2004265182 AA, US2004115794 AA, US2004115709 AA, US2004018116 AA, US2003186222 AA, US2003143591 AA, US2003080442 AA, US2003032172 AA, US2002144895 AA, JP8122247 A2, JP2010076380,

Forward Citations: WO16062788, US9132426, US2016175835, CN105209917, CN104374903, CN102649931,

Abstract:

A test module having an outer casing having a receptacle for receiving a biological sample, an excitation source mounted in the outer casing for sequentially illuminating the biological sample with different wavelengths of light, and a photosensor positioned to detect the different wavelengths of light transmitted through the biological sample, wherein during use, the photosensor output signal is used to generate a spectrogram for analysis of a characteristic of the biological sample.



24) Family number: 51299929 (US2011312627A)

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Title: TEST MODULE WITH MICROFLUIDIC DEVICE HAVING LOC AND DIALYSIS DEVICE FOR SEPARATING PATHOGENS FROM OTHER CONSTITUENTS IN A BIOLOGICAL SAMPLE

Priority: US20100356018P 20100617 US20110149898 20110601 US20110437686P 20110130

Family:

Publication number	Publication date	Application number	Application date
<u>US2011312627 AA</u>	20111222	US20110149898	20110601
<u>US8349277 BB</u>	20130108	US20110149898	20110601

Probable Assignee: GENEASYS PTY LTD

Assignee(s):^(std): AZIMI MEHDI ; GENEASYS PTY LTD ; SILVERBROOK KIA

Inventor(s):^(std): SILVERBROOK KIA ; AZIMI MEHDI

International class B01L3/00 C40B60/12 (Advanced/Invention)
(IPC 8-9).

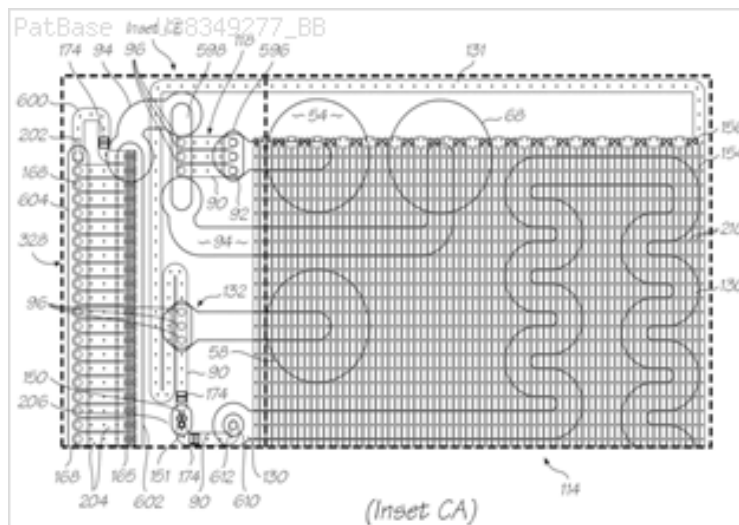
CPC: C12Q1/68 B01L3/5027 B01L3/502707 B01L3/502738 B01L7/52 B01L2200/10 B01L2300/023 B01L2300/024 B01L2300/0636 B01L2300/0654 B01L2300/0883 B01L2300/10 B01L2300/1827 B01L2400/0406 B01L2400/0633 B01L2400/0677 B01L2400/0688 F16K99/003 F16K99/0036 Y10T436/107497 Y10T436/11 Y10T436/143333 Y10T436/145555 Y10T436/173845 Y10T436/203332 Y10T436/25 Y10T436/25375 Y10T137/0352 Y10T137/0391 Y10T137/1044 Y10T137/206 Y10T137/2076 Y10T137/2202

European class: B01L3/5027 B01L3/5027A B01L3/5027E F16K99/00M2M F16K99/00M4B G01N27/22C L01L200/10 L01L300/02B L01L300/02C L01L300/06B2 L01L300/06B6 L01L300/08E14 L01L300/10 L01L300/18A8 L01L400/04F2 L01L400/06M L01L400/06P L01L400/06S L01L7/52

US class: 250/214.1 250/251 250/459.1 250/573 250/576 422/407 422/501 422/502 422/503 422/504 422/507 422/52 422/73 422/82.01 422/82.05 422/82.06 422/82.07 422/82.08 422/82.09 422/82.11 435/288.5 435/29 435/4 435/6.1 435/6.11 435/6.12 435/7.1 435/7.92 436/149 436/164 436/17 436/172 436/174 436/177 436/43 436/517 436/518 436/63 436/805 436/809 436/94 506/30 506/39 506/39P 530/408 714/752

[Classification Explorer](#)**Cited documents:** WO09017627 A1, US2005284763 AA, US2004115709 AA, US2004018116 AA,**Forward Citations:** US8820538,**Abstract:**

Source: US2011312627A A test module for concentrating pathogens in a biological sample, the test module having an outer casing with a receptacle for receiving the sample, a dialysis device in fluid communication with the receptacle and configured to separate the pathogens from other constituents in the sample, and, a lab-on-a-chip (LOC) device being in fluid communication with the dialysis device and configured to analyze the pathogens.



25) Family number: 57789152 (US2014332410A)

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Title: ANALYTICAL MICRO-DEVICES FOR MENTAL HEALTH TREATMENT MONITORING

Priority: US20130821344P 20130509 US20130905028P 20131115 US20140274643 20140509
WO2014US65913 20141117 US20140034719 20141117

Family:	Publication number	Publication date	Application number	Application date
	<u>US2014332410 AA</u>	20141113	US20140274643	20140509
	<u>US2016274020 AA</u>	20160922	US20140034719	20141117
	<u>WO15073952 A1</u>	20150521	WO2014US65913	20141117

Probable Assignee: OF MARYLAND COLLEGE PARK UNIV

Assignee(s):^(std): UNIV MARYLAND ; UNIV OF MARYLAND

Assignee(s): OF MARYLAND BALTIMORE UNIV ; OF MARYLAND COLLEGE PARK UNIV ; OF MARYLAND UNIV

Inventor(s):^(std): BEN YOAV HADAR SHUMEL ; WINKLER THOMAS E ; PAYNE GREGORY F ; KIM EUNKYOUNG ; KELLY DEANNA L ; GHODSSI REZA ; BEN YOAV HADAR

Agent(s): LIKOUREZOS GEORGE ET AL

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KR KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

International class B01L3/00 G01N15/10 G01N15/12 G01N27/327 (Advanced/Invention)
(IPC 8-9):

CPC: B01L3/502715 B01L2300/0636 B01L2300/0645 G01N15/1227 G01N2015/0069 G01N2015/008 G01N2015/1236 G01N2015/1254 G01N15/12 G01N15/1056 B01L3/502707 B01L3/502776 B01L3/502761 G01N15/1218 G01N2015/1062 G01N2015/1006 B01L2200/0636 B01L2200/0647 B01L2300/0861 B01L2300/0887 G01N27/3277 B01L2300/0816

US class: 204/403.01 205/782 324/663

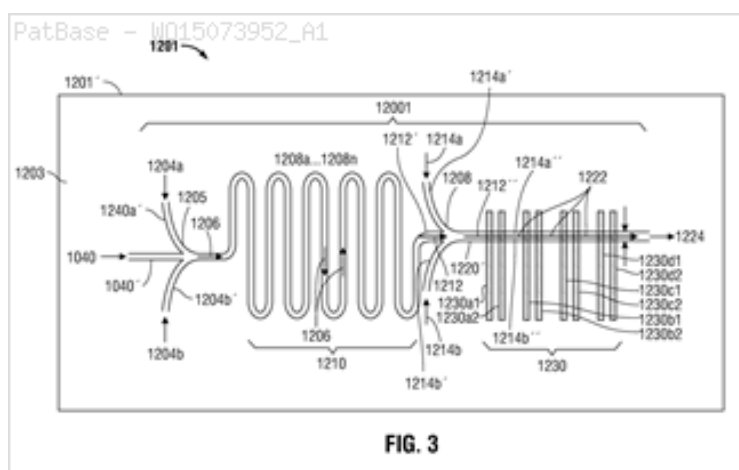
[Classification Explorer](#)

Cited documents: US5510267 A, US2011275111 AA, US2009142232 AA, US2008063566 AA, US2007166196 AA, US2003213693 AA, US2002098589 AA, EP2490005 A1,

Abstract:

Source: US2014332410A A lab on a chip device includes a whole blood inlet port and microchannels to transport a whole blood sample or plasma skimmed from the whole blood sample into a detection chamber that includes at least one 3-electrode set of a counter electrode, a working electrode and a reference electrode. The counter electrode, the working electrode and the reference electrode may present bare, unmodified surfaces that are disposed so that clozapine present in the whole blood sample is detected via a reduction-oxidation reaction.

Alternatively, the working electrode surface may include catechol grafted to chitosan. A method of detecting analytes and biomarkers includes collecting a whole blood sample, loading the sample into a point-of-care testing (POCT) device that includes at least one working electrode; testing the sample for the occurrence of a redox reaction; and calculating the total oxidative charge when the working electrode is bare or modified as before.



26) Family number: 54900695 (US2016168624A)

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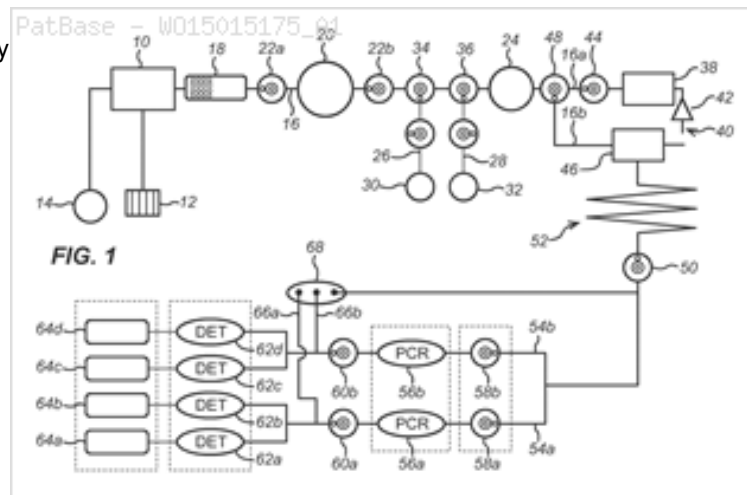
Title: FLUIDIC CARTRIDGE FOR NUCLEIC ACID AMPLIFICATION AND DETECTION**Priority:** GB20130013511 20130729 WO2014GB52301 20140728

Family:	Publication number	Publication date	Application number	Application date
	AU2014298179 AA	20150205	AU20140298179	20140728
	CA2918566 AA	20160118	CA20142918566	20140728
	CN105658333 A	20160608	CN201480052629	20140728
	EA201600148 A1	20160630	EA20160000148	20140728
	EP3027316 A1	20160608	EP20140744938	20140728
	GB201313511 A0	20130911	GB20130013511	20130729
	GB2516666 A1	20150204	GB20130013511	20130729
	GB2516666 B2	20150909	GB20130013511	20130729
	JP2016527510 T2	20160908	JP20160530598T	20140728
	US2016168624 AA	20160616	US20140906636	20140728
	WO15015175 A1	20150205	WO2014GB52301	20140728

Probable Assignee: ATLAS GENETICS LTD**Assignee(s):**^(std): ATLAS GENETICS LTD**Assignee(s):** EDWARDS THOMAS RICHARD KERBY ; MULLARKEY TOBY CHARLES EDWARD ; NEALE KEVIN DAVID ; TAYLOR JAY KENDALL ; ARLETT BEN**Inventor(s):**^(std): ARLETT BEN ; EDWARDS THOMAS RICHARD KERBY ; MULLARKEY TOBY CHARLES EDWARD ; MULLARKEY TOBY CHARLES EDWARDS ; NEALE KEVIN DAVID ; TAYLOR JAY KENDALL**Inventor(s):** THOMAS RICHARD KERBY EDWARDS ; TOBY CHARLES EDWARD MULLARKEY ; JAY KENDALL TAYLOR ; KEVIN DAVID NEALE ; BEN ARLETT**Agent(s):** FB RICE; OSLER HOSKIN AND HARCOURT LLP; CARPMAELS AND RANSFORD LLP; HIROSE TAKAYUKI; MARSHALL CAMERON JOHN ET AL**Designated states:** AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW**International class**
(IPC 8-9): [B01L3/00](#) [B01L7/00](#) [C12M1/00](#) [C12Q1/68](#) [G01N27/30](#) [G01N27/327](#) [G01N27/403](#)
[G01N35/08](#) [G01N37/00](#) (Advanced/Invention)**CPC:** [B01L7/52](#) [B01L2200/16](#) [B01L2300/0681](#) [B01L2300/0816](#) [B01L2300/0867](#) [B01L2300/0883](#)
[B01L2400/0481](#) [B01L2400/0638](#) [B01L2400/0683](#) [C12Q1/686](#) [C12Q2563/159](#)
[C12Q2565/629](#) [B01L3/5027](#) [C12Q1/6844](#) [B01L3/502715](#) [G01N27/403](#) [C12Q1/6825](#)
[B01L3/502](#) [B01L2400/06](#) [B01L2300/0877](#) [B01L3/502738](#) [B01L2200/10](#) [B01L2300/0645](#)
[B01L2400/0487](#)**US class:** [435/287.2](#) [506/16](#)[Classification Explorer](#)**Cited documents:** WO11106315 A1, WO07106579 A2, US2013217026 AA, US2012178179 AA, US2009148933 AA, FR2967362 A1, EP1769848 A2, EP1702684 A2, CN1950520 A, CN1110369 C,**Forward Citations:** WO16183289,

Abstract:

Source: US2016168624A A cartridge for assay of a target nucleic acid sequence in a liquid sample. The cartridge comprises: a fluidic portion through which the sample flows and in which nucleic acid amplification and detection takes place; a pneumatic portion which controls flow through the fluidic portion; and at least two electrodes which provide a potential difference for the detection of an amplified nucleic acid of interest.



27) Family number: 59063558 (US2015111778A)

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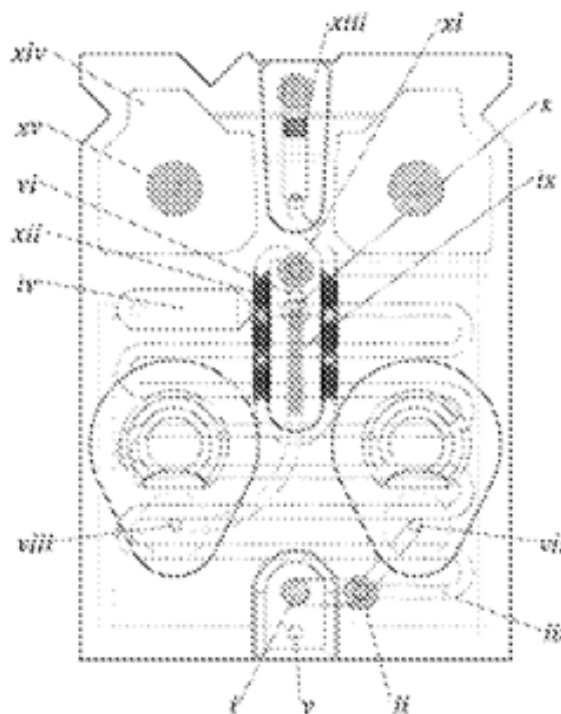
Title: BIO–NANO–CHIP FOR ANTICONVULSANT DRUG SALIVARY ASSAY**Priority:** US20130893588P 20131021 US20140503400 20141001

Publication number	Publication date	Application number	Application date
<u>US2015111778 AA</u>	20150423	US20140503400	20141001

Probable Assignee: WILLIAM MARSH RICE UNIV**Assignee(s):^(std):** UNIV RICE WILLIAM M ; UNIV TEXAS**Assignee(s):** BOARD OF UNIV OF TEXAS SYSTEM ; WILLIAM MARSH RICE UNIV**Inventor(s):^(std):** CHRISTODOULIDES NICOLAOS ; KALAMANGALAM GIRIDHAR P ; MCDEVITT JOHN T**International class** B01L3/00 G01N33/543 G01N33/545 G01N33/94 (Advanced/Invention)
(IPC 8–9).**CPC:** G01N33/9473 G01N33/54366 B01L2300/0636 B01L2300/0867 B01L2300/087 B01L2200/0668 B01L2300/0819 G01N2800/2857 B01L3/50276 B01L2300/0816 B01L2400/0481**US class:** 506/15 506/18 506/9[Classification Explorer](#)**Abstract:**

Source: US2015111778A This disclosure describes portable bio–nano–chip (BNC) assays of antiepileptic drugs (AED) using salivary samples. The BNC technology results in a more convenient, less expensive, and less time consuming sampling and analysis.

PatBase – US2015111778_AA



28) Family number: 61688077 (WO16023637A1)

© PatBase

Title: DEVICE FOR SEPARATING BUBBLES FROM A FLUID**Priority:** EP20140181200 20140815**Family:**

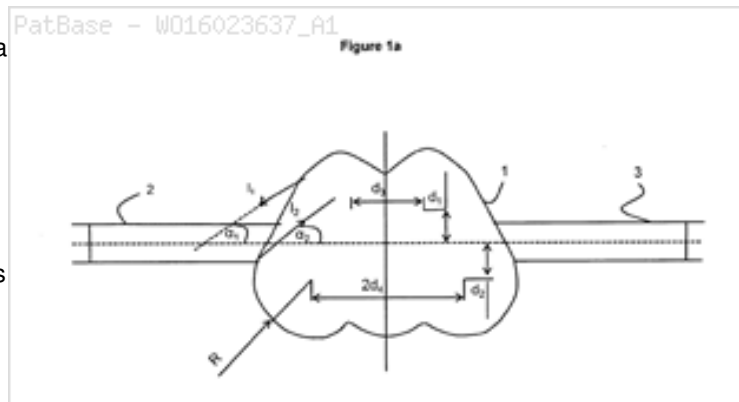
Publication number	Publication date	Application number	Application date
EP2985063 A1	20160217	EP20140181200	20140815
WO16023637 A1	20160218	WO2015EP01681	20150814

Probable Assignee: CARPEGEN GMBH**Assignee(s):**^(std) CARPEGEN GMBH ; SYSTEC ELEKTRONIK U SOFTWARE GMBH**Inventor(s):**^(std) HEITMANN HERR JENS ; HEITMANN JENS ; JOBST ANNETTE ; JOBST FRAU ANNETTE**Agent(s):** VON RENESSE DOROTHEA; KOENIG REIMAR ET AL

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

International class [B01D19/00](#) [B01L3/00](#) (Advanced/Invention)
(IPC 8-9):**CPC:** [B01D19/0042](#) [B01L3/502723](#) [B01L3/502746](#) [B01L2400/086](#)[Classification Explorer](#)**Cited documents:** US7279031 BA, US6537356 BA, US2010218679 AA, US2009126568 AA, US2005000364 AA, EP1855114 A1,**Abstract:**

The present invention relates to a device and a method for separating bubbles from a fluid comprising a chamber through which a fluid can pass. According to the invention the device is characterized in that the inner chamber wall has a geometry that generates within said chamber a continuous flow and at least one area with a discontinuous flow which has a low flow velocity so that bubbles remain at the inner chamber wall in said area and thus are separated from the fluid flowing out from the chamber.



29) Family number: 62923779 (WO16112090A1)

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Title: MICROFLUIDIC DEVICES AND METHODS OF MAKING THE SAME**Priority:** US20150100584P 20150107

Family:	Publication number	Publication date	Application number	Application date
	<u>WO16112090 A1</u>	20160714	WO2016US12311	20160106

Probable Assignee: CARBON3D INC**Assignee(s):^(std):** CARBON3D INC**Inventor(s):^(std):** DESIMONE JOSEPH M**Agent(s):** MYERS BIGEL SIBLEY AND SAJOVEC PA

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KR KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

International class B01F13/00 B01L3/00 B29C67/00 G03F7/00 (Advanced/Invention)
(IPC 8-9):

CPC: B01L3/502707 B01L3/502738 B01L2300/0867 B01L2300/0883 B29C67/007 G03F7/00 B33Y10/00 B33Y30/00 B01L3/502746 B01L2300/0816 B01L2300/0858 B01F5/061 B01F5/0644 B01F5/0647 B01F13/0059 B01F2005/0623 B01F2005/0636

[Classification Explorer](#)

Cited documents: WO14126834 A2, WO12129968 A1, USRE31406 E, US9216546 BB, US9211678 BB, US9205601 BB, US8715436 BB, US8685325 BB, US8642336 BB, US8446431 BB, US8427391 BB, US8357528 BB, US8294007 BB, US8268446 BB, US8263129 BB, US8232043 BB, US8158728 BB, US8119214 BB, US8102332 BB, US7935476 BB, US7919162 BB, US7902526 BB, US7862176 BB, US7824839 BB, US7767728 BB, US7690187 BB, US7651683 BB, US7651682 BB, US7649029 BB, US7556490 BB, US7550246 BB, US7534844 BB, US7524464 BB, US7507784 BB, US7435495 BB, US7344731 BB, US7292207 BA, US7097302 BB, US7001608 BB, US6939940 BB, US6932930 BB, US6814852 BB, US6713255 BA, US6692891 BB, US6602975 BB, US6312134 BA, US6248509 BA, US6238852 BA, US5836313 A, US5705821 A, US5691541 A, US5648805 A, US5374500 A, US5349394 A, US5310571 A, US5308685 A, US5162469 A, US5141665 A, US5070170 A, US5051115 A, US5017461 A, US4923906 A, US4845089 A, US4337130 A, US2015097316 AA, US2014290786 AA, US2013321475 AA, US2013278840 AA, US2013269882 AA, US2012329171 AA, US2010068740 AA, JP2012210408 A2,

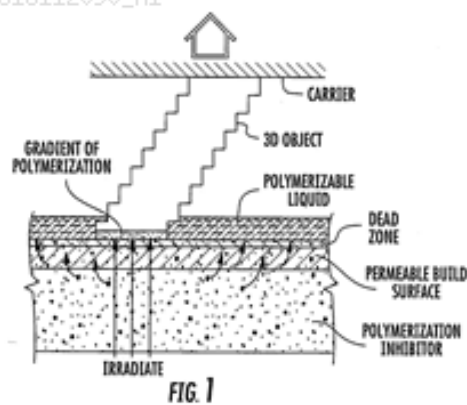
DE102005062723 A1

CN102715751 A,

Abstract:

Provided herein are microfluidic devices having seamless channels with curved cross-section segments extending in a non-linear direction and/or having a tapering cross-section. Methods, systems and apparatus for the production of the same by three dimensional additive manufacturing is also provided.

PatBase - W016112090_A1



0) WO16120252A1 – MICROFLUIDIC CHECK VALVE CLAPET DE NON RETOUR ...

30) Family number: 62988263 (WO16120252A1)

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Title: MICROFLUIDIC CHECK VALVE

Priority: EP20150152519 20150126

Family:	Publication number	Publication date	Application number	Application date
	<u>EP3048352 A1</u>	20160727	EP20150152519	20150126
	<u>WO16120252 A1</u>	20160804	WO2016EP51533	20160126

Probable Assignee: MEDIZINISCHE UNIV INNSBRUCK

Assignee(s):^(std) MEDIZINISCHE UNIV INNSBRUCK

Inventor(s):^(std) HAEMMERLE JACOB

Agent(s): SCHWARZ AND PARTNER; SCHWARZ AND PARTNER PATENTANWAELTE ET AL

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

International class B01L3/00 F04B19/00 F04B19/24 F16K99/00 (Advanced/Invention)
(IPC 8-9).

CPC: F16K99/0007 B01L3/502707 B01L3/502738 B01L2400/0638 F04B19/006 F04B19/24 F16K99/0057 F16K2099/0074 F16K2099/0084 F16K2099/0094

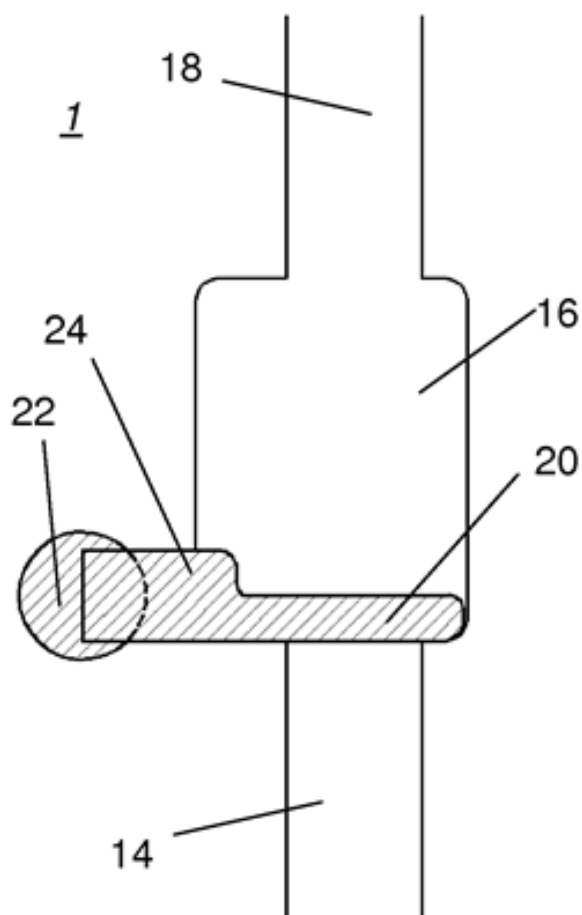
[Classification Explorer](#)

Cited documents: WO11073785 A1, US2005074340 AA, US2002013555 AA, EP2090271 A2, DE10333741 A1, DE10243997 A1, DE10243995 B3,

Abstract:

Microfluidic check valve (1), including a housing (10) with at least one closed channel (12), wherein the closed channel comprises a first sector (14) and a second sector (16), wherein the cross-sectional area (b) of the second sector (16) is larger than the cross-sectional area (a) of the first sector (14), wherein a sheet (20) is arranged in the second sector (16), wherein said sheet (20) is anchored in a channel inlet (22) ending in the second sector (16), said sheet (20) further consisting of a material that allows the sheet (20) to hinge between an open position and a closed position if pressure is applied by a fluid stream onto said sheet (20), and said sheet (20) tightly covering the cross-sectional area (a) of the first sector (14) if said sheet (20) is in the closed position.

PatBase - W016120252_A1

Fig. 2a

31) Family number: 63565067 (WO16145050A1)

© PatBase

Title: MICROFLUIDIC DEVICES HAVING FLEXIBLE FEATURES AND METHODS OF MAKING THE SAME**Priority:** US20150130791P 20150310

Family:	Publication number	Publication date	Application number	Application date
	<u>WO16145050 A1</u>	20160915	WO2016US21519	20160309

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Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KR KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

International class B01L3/00 B81C1/00 (Advanced/Invention)
(IPC 8-9):**CPC:** B29C67/0066 B01L3/502707 B81C1/00 B01L2300/0864 B01L2300/0867 B01L2300/0874 B01L2300/123 B01L2400/0481 B01L2400/0605 B01L2400/0655[Classification Explorer](#)

Cited documents: WO14126834 A2, WO12129968 A1, WO08127405 A2, USRE31406 E, US9216546 BB, US9211678 BB, US9205601 BB, US8446431 BB, US8427391 BB, US8268446 BB, US8263129 BB, US8232043 BB, US8168139 BB, US8158728 BB, US8119214 BB, US8102332 BB, US7935476 BB, US7919162 BB, US7902526 BB, US7862176 BB, US7862000 BB, US7824839 BB, US7767728 BB, US7651683 BB, US7651682 BB, US7649029 BB, US7556490 BB, US7550246 BB, US7534844 BB, US7507784 BB, US7435495 BB, US7378280 BB, US7344731 BB, US7292207 BA, US7097302 BB, US6939940 BB, US6932930 BB, US6767706 BB, US6692891 BB, US6602975 BB, US6312134 BA, US6248509 BA, US6238852 BA, US5836313 A, US5691541 A, US5374500 A, US5349394 A, US5310571 A, US5308685 A, US5248456 A, US5162469 A, US5141665 A, US5070170 A, US5051115 A, US5017461 A, US4923906 A, US4845089 A, US4785075 A, US4337130 A, US2014079571 AA, US2014072806 AA, US2014015506, US2014015497, US2014010858 AA, US2013321475 AA, US2013278840 AA, US2013269882 AA, US2013202392 AA, US2010068740 AA, US2007224617 AA, JP2012210408 A2, CN102715751 A,

Abstract:

Provided herein are microfluidic devices having seamless channels with curved cross-section segments extending in a non-linear direction and/or having a tapering cross-section, wherein at least a portion of said device is flexible. Methods, systems and apparatus for the production of the same by three dimensional additive manufacturing is also provided.

