Purification of Nucleic Acids in Microfluidic Devices

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Citation Report

#	Article	IF	CITATIONS
1	Extracting evidence from forensic DNA analyses: future molecular biology directions. BioTechniques, 2009, 46, 339-350.	0.8	68
2	Continuous-flow PCR using segmented flow and integrating sample preparation. , 2009, , .		1
3	Scaling of nucleic acid assays on microelectrophoresis array devices: Highâ€dynamic range multiâ€gene readout from less than ten transcripts. Electrophoresis, 2009, 30, 2090-2099.	1.3	0
4	Extraction of genomic DNA using a new amino silica monolithic column. Journal of Separation Science, 2009, 32, 2752-2758.	1.3	12
5	An integrated microdevice for highâ€performance short tandem repeat genotyping. Biotechnology Journal, 2009, 4, 1530-1541.	1,8	13
6	Rapid detection of bacterial cell from whole blood: Integration of DNA sample preparation into single micro-PCR chip. , 2009, , .		0
7	Nucleic acid extraction techniques and application to the microchip. Lab on A Chip, 2009, 9, 2484.	3.1	167
8	Purification of Nucleic Acids from Whole Blood Using Isotachophoresis. Analytical Chemistry, 2009, 81, 9507-9511.	3.2	95
9	Simple practical approach for sample loading prior to DNA extraction using a silica monolith in a microfluidic device. Lab on A Chip, 2009, 9, 3430.	3.1	16
10	Microfluidic sample preparation: cell lysis and nucleic acid purification. Integrative Biology (United) Tj ETQq1	1 0.784314 rg	gBT/Overlock 244
10	Microfluidic sample preparation: cell lysis and nucleic acid purification. Integrative Biology (United) Tj ETQq1 2 Microfluidic Platforms for Single-Cell Analysis. Annual Review of Biomedical Engineering, 2010, 12, 187-201.	1 0.784314 rg	gBT /Overlo <mark>ck</mark> 287
	Microfluidic Platforms for Single-Cell Analysis. Annual Review of Biomedical Engineering, 2010, 12,		
11	Microfluidic Platforms for Single-Cell Analysis. Annual Review of Biomedical Engineering, 2010, 12, 187-201. Review on recent and advanced applications of monoliths and related porous polymer gels in	5.7	287
11	Microfluidic Platforms for Single-Cell Analysis. Annual Review of Biomedical Engineering, 2010, 12, 187-201. Review on recent and advanced applications of monoliths and related porous polymer gels in micro-fluidic devices. Analytica Chimica Acta, 2010, 668, 100-113. An all-in-one microfluidic device for parallel DNA extraction and gene analysis. Biomedical	5.7 2.6	287
11 12 13	Microfluidic Platforms for Single-Cell Analysis. Annual Review of Biomedical Engineering, 2010, 12, 187-201. Review on recent and advanced applications of monoliths and related porous polymer gels in micro-fluidic devices. Analytica Chimica Acta, 2010, 668, 100-113. An all-in-one microfluidic device for parallel DNA extraction and gene analysis. Biomedical Microdevices, 2010, 12, 1043-1049. Sample to answer: a fully integrated nucleic acid identification system for bacteria monitoring., 2010,	5.7 2.6	287
11 12 13	Microfluidic Platforms for Single-Cell Analysis. Annual Review of Biomedical Engineering, 2010, 12, 187-201. Review on recent and advanced applications of monoliths and related porous polymer gels in micro-fluidic devices. Analytica Chimica Acta, 2010, 668, 100-113. An all-in-one microfluidic device for parallel DNA extraction and gene analysis. Biomedical Microdevices, 2010, 12, 1043-1049. Sample to answer: a fully integrated nucleic acid identification system for bacteria monitoring., 2010, Single-Molecule DNA Amplification and Analysis Using Microfluidics. Chemical Reviews, 2010, 110,	5.7 2.6 1.4	287 83 58
11 12 13 14	Microfluidic Platforms for Single-Cell Analysis. Annual Review of Biomedical Engineering, 2010, 12, 187-201. Review on recent and advanced applications of monoliths and related porous polymer gels in micro-fluidic devices. Analytica Chimica Acta, 2010, 668, 100-113. An all-in-one microfluidic device for parallel DNA extraction and gene analysis. Biomedical Microdevices, 2010, 12, 1043-1049. Sample to answer: a fully integrated nucleic acid identification system for bacteria monitoring., 2010, Single-Molecule DNA Amplification and Analysis Using Microfluidics. Chemical Reviews, 2010, 110, 4910-4947. Characterization of dynamic solid phase DNA extraction from blood with magnetically controlled	5.7 2.6 1.4 23.0	287 83 58 2

#	Article	IF	Citations
19	Dual-Domain Microchip-Based Process for Volume Reduction Solid Phase Extraction of Nucleic Acids from Dilute, Large Volume Biological Samples. Analytical Chemistry, 2010, 82, 5669-5678.	3.2	33
20	Integrated Multiprocess Microfluidic Systems for Automating Analysis. Journal of the Association for Laboratory Automation, 2010, 15, 198-209.	2.8	22
21	An automated all-in-one microfludic device for parallel solid phase DNA extraction and droplet-inoil PCR analysis. , 2010, , .		1
22	PDMS bonding to organically-modified solid surface using photocatalyst for fabricating low-cost plastic microchip. , 2010, , .		0
23	Purification of HIV RNA from Serum Using a Polymer Capture Matrix in a Microfluidic Device. Analytical Chemistry, 2011, 83, 982-988.	3.2	27
24	Dynamic Solid Phase DNA Extraction and PCR Amplification in Polyester-Toner Based Microchip. Analytical Chemistry, 2011, 83, 5182-5189.	3.2	74
25	Extraction of DNA from Malaria-Infected Erythrocytes Using Isotachophoresis. Analytical Chemistry, 2011, 83, 9715-9718.	3.2	42
27	On-chip sample pretreatment using a porous polymer monolithic column for solid-phase microextraction and chemiluminescence determination of catechins in green tea. Analyst, The, 2011, 136, 4260.	1.7	27
28	SETG: An instrument for detection of life on Mars ancestrally related to life on Earth. , 2011, , .		5
29	Multiplexed detection of nucleic acids in a combinatorial screening chip. Lab on A Chip, 2011, 11, 1916.	3.1	27
30	Development of a real-world direct interface for integrated DNA extraction and amplification in a microfluidic device. Lab on A Chip, 2011, 11, 443-448.	3.1	31
31	Miniaturized isothermal nucleic acid amplification, a review. Lab on A Chip, 2011, 11, 1420.	3.1	359
32	Cellular Biomicrofluidics., 2011,, 880-941.		0
33	Method for automated extraction and purification of nucleic acids and its implementation in microfluidic system. Applied Biochemistry and Microbiology, 2011, 47, 211-220.	0.3	6
34	A self-contained disposable cartridge microsystem for dengue viral ribonucleic acid extraction. Sensors and Actuators B: Chemical, 2011, 160, 1557-1564.	4.0	10
35	Advances in microfluidic PCR for point-of-care infectious disease diagnostics. Biotechnology Advances, 2011, 29, 830-839.	6.0	256
36	Electrical detection of dsDNA and polymerase chain reaction amplification. Biomedical Microdevices, 2011, 13, 973-982.	1.4	25
37	Rapid detection of bacterial cell from whole blood: Integration of DNA sample preparation into single micro-PCR chip. Sensors and Actuators B: Chemical, 2011, 154, 46-51.	4.0	28

#	Article	IF	CITATIONS
38	Low-cost polymer microfluidic device for on-chip extraction of bacterial DNA. Sensors and Actuators B: Chemical, 2011, 155, 422-429.	4.0	15
39	Droplet-based Extraction of Hepatitis B Virus DNA in a Capillary. Chinese Journal of Analytical Chemistry, 2011, 39, 670-674.	0.9	4
40	Extraction of MS2 Phage RNA from Upper Respiratory Tract Specimens by Use of Flat Glass Devices. Journal of Clinical Microbiology, 2011, 49, 1010-1016.	1.8	2
41	Electroporation and lysis of marine microalga <i>Karenia brevis</i> for RNA extraction and amplification. Journal of the Royal Society Interface, 2011, 8, 601-608.	1.5	32
42	Microfluidics: from Engineering to Life Sciences. Current Nanoscience, 2012, 8, 458-473.	0.7	5
43	Infectious Disease Management through Point-of-Care Personalized Medicine Molecular Diagnostic Technologies. Journal of Personalized Medicine, 2012, 2, 50-70.	1.1	50
44	Development of chip-compatible sample preparation for diagnosis of infectious diseases. Expert Review of Molecular Diagnostics, 2012, 12, 189-206.	1.5	50
45	Genotyping from saliva with a one-step microdevice. Lab on A Chip, 2012, 12, 2514.	3.1	24
46	The manufacture of micropillars with high depth-to-width ratio, and the comparison between two typical materials. , 2012 , , .		0
47	Direct processing of clinically relevant large volume samples for the detection of sexually transmitted infectious agents from urine on a microfluidic device. Analytical Methods, 2012, 4, 2141.	1.3	3
48	Facile and rapid DNA extraction and purification from food matrices using IFAST (immiscible filtration) Tj ETQq0	0 O ₁ .gBT /0	Overlock 10 T
49	Integrated Printed Circuit Board Device for Cell Lysis and Nucleic Acid Extraction. Analytical Chemistry, 2012, 84, 9640-9645.	3.2	64
50	Improved DNA extraction efficiency from low level cell numbers using a silica monolith based micro fluidic device. Analytica Chimica Acta, 2012, 750, 127-131.	2.6	19
51	Integrated DNA extraction and amplification using electrokinetic pumping in a microfluidic device. Analytical Methods, 2012, 4, 96-100.	1.3	7
52	Rapid identification of Yersinia pestis and Brucella melitensis by chip-based continuous flow PCR. Proceedings of SPIE, 2012, , .	0.8	1
53	Solid Phase DNA Extraction with a Flexible Bead-Packed Microfluidic Device to Detect Methicillin-Resistant <i>Staphylococcus aureus</i> in Nasal Swabs. Analytical Chemistry, 2012, 84, 7912-7918.	3.2	22
54	Bacterial RNA Extraction and Purification from Whole Human Blood Using Isotachophoresis. Analytical Chemistry, 2012, 84, 5858-5863.	3.2	42
55	Integration of functional materials and surface modification for polymeric microfluidic systems. Journal of Micromechanics and Microengineering, 2013, 23, 033001.	1.5	62

#	Article	IF	CITATIONS
56	Point-of-care nucleic acid detection using nanotechnology. Nanoscale, 2013, 5, 10141.	2.8	79
57	Siloxane photopolymer to replace polydimethylsiloxane in microfluidic devices for polymerase chain reaction. Polymers for Advanced Technologies, 2013, 24, 1068-1074.	1.6	7
58	Sex identification of ancient DNA samples using a microfluidic device. Journal of Archaeological Science, 2013, 40, 705-711.	1.2	10
59	Detection of <i>Mycobacterium tuberculosis</i> Using a Capillary-Array Microsystem with Integrated DNA Extraction, Loop-Mediated Isothermal Amplification, and Fluorescence Detection. Analytical Chemistry, 2013, 85, 4698-4704.	3.2	54
60	Advances in Microfluidic Materials, Functions, Integration, and Applications. Chemical Reviews, 2013, 113, 2550-2583.	23.0	731
61	A microfluidic chip integrating DNA extraction and real-time PCR for the detection of bacteria in saliva. Lab on A Chip, 2013, 13, 1325.	3.1	129
62	Magneto-capillary valve for integrated purification and enrichment of nucleic acids and proteins. Lab on A Chip, 2013 , 13 , $106-118$.	3.1	53
63	A pillar-based microfilter for isolation of white blood cells on elastomeric substrate. Biomicrofluidics, 2013, 7, 14102.	1.2	49
64	Integrated Microfluidic Sample Preparation for Chip-based Molecular Diagnostics., 2013, , 135-160.		0
65	- Training of Forensic DNA Scientists—A Commentary. , 2013, , 398-431.		0
66	Development of a Univariate Membrane-Based Mid-Infrared Method for Protein Quantitation and Total Lipid Content Analysis of Biological Samples. Journal of Analytical Methods in Chemistry, 2014, 2014, 1-12.	0.7	28
67	Developments of Laser Fabrication Methods for Lab-on-a-Chip Microfluidic Multisensing Devices. , 2014, , 447-458.		6
68	Innovative microRNA purification based on surface properties modulation. Colloids and Surfaces B: Biointerfaces, 2014, 116, 160-168.	2.5	14
69	Centrifugal LabTube platform for fully automated DNA purification and LAMP amplification based on an integrated, low-cost heating system. Biomedical Microdevices, 2014, 16, 375-85.	1.4	13
70	Purification of nucleic acids using isotachophoresis. Journal of Chromatography A, 2014, 1335, 105-120.	1.8	79
71	Immunology on chip: Promises and opportunities. Biotechnology Advances, 2014, 32, 333-346.	6.0	40
72	Solid phase nucleic acid extraction technique in a microfluidic chip using a novel non-chaotropic agent: dimethyl adipimidate. Lab on A Chip, 2014, 14, 359-368.	3.1	37
73	On-Chip Separation and Analysis of RNA and DNA from Single Cells. Analytical Chemistry, 2014, 86, 1953-1957.	3.2	54

#	Article	IF	Citations
74	Ribonucleic acid purification. Journal of Chromatography A, 2014, 1355, 1-14.	1.8	54
75	Synthesis and characterization of siloxane photopolymers used for microfluidic devices. New Journal of Chemistry, 2015, 39, 2532-2540.	1.4	9
76	Solvent-selective routing for centrifugally automated solid-phase purification of RNA. Microfluidics and Nanofluidics, 2015 , 18 , 859 - 871 .	1.0	11
77	Microfluidic Devices for Nucleic Acid (NA) Isolation, Isothermal NA Amplification, and Real-Time Detection. Methods in Molecular Biology, 2015, 1256, 15-40.	0.4	37
78	Rotary-based platform with disposable fluidic modules for automated isolation of nucleic acids. Biomedical Microdevices, 2015, 17, 18.	1.4	3
79	The mechanism for the motion of nanoscale water droplet induced by wetting gradient: A molecular dynamic study. Computational Materials Science, 2015, 105, 39-46.	1.4	30
80	Extraction and fractionation of RNA and DNA from single cells using selective lysing and isotachophoresis. , $2015, , .$		0
81	A microfluidic device for rapid quantification of cell-free DNA in patients with severe sepsis. Lab on A Chip, 2015, 15, 3925-3933.	3.1	39
82	Microfluidic Sample Preparation for Medical Diagnostics. Annual Review of Biomedical Engineering, 2015, 17, 267-286.	5.7	106
83	Microfluidic platform towards point-of-care diagnostics in infectious diseases. Journal of Chromatography A, 2015, 1377, 13-26.	1.8	176
84	Polyethyleneimine–iron phosphate nanocomposite as a promising adsorbent for the isolation of DNA. Talanta, 2015, 132, 857-863.	2.9	35
85	Point-of-care testing (POCT) diagnostic systems using microfluidic lab-on-a-chip technologies. Microelectronic Engineering, 2015, 132, 46-57.	1.1	403
86	An integrated, cellulose membrane-based PCR chamber. Microsystem Technologies, 2015, 21, 841-850.	1.2	12
87	Combining Electro-Osmotic Flow and FTA® Paper for DNA Analysis on Microfluidic Devices. Micromachines, 2016, 7, 119.	1.4	7
88	Advances in monoliths and related porous materials for microfluidics. Biomicrofluidics, 2016, 10, 032901.	1.2	34
89	A capillary-based multiplexed isothermal nucleic acid-based test for sexually transmitted diseases in patients. Chemical Communications, 2016, 52, 12187-12190.	2.2	18
90	Plasma micro-nanotextured polymeric micromixer for DNA purification with high efficiency and dynamic range. Analytica Chimica Acta, 2016, 942, 58-67.	2.6	24
91	Flow-through Capture and <i>in Situ</i> Amplification Can Enable Rapid Detection of a Few Single Molecules of Nucleic Acids from Several Milliliters of Solution. Analytical Chemistry, 2016, 88, 7647-7653.	3.2	27

#	Article	IF	CITATIONS
92	Sample Preparation for Bioanalytical and Pharmaceutical Analysis. Analytical Chemistry, 2016, 88, 11262-11270.	3.2	73
93	A multi-layer microchip for high-throughput single-cell gene expression profiling. Analytical Biochemistry, 2016, 508, 1-8.	1.1	5
94	Surface Functionalization of Microfluidic Devices. , 2016, , 59-97.		2
95	Determination of DNA and RNA Methylation in Circulating Tumor Cells by Mass Spectrometry. Analytical Chemistry, 2016, 88, 1378-1384.	3.2	123
96	Highly selective capture of minicircle DNA biopharmaceuticals by a novel zinc-histidine peptide conjugate. Separation and Purification Technology, 2017, 174, 417-424.	3.9	4
97	Plasmid DNA purification by zirconia magnetic nanocomposite. Analytical Biochemistry, 2017, 539, 33-38.	1.1	17
98	Selective and Efficient RNA Analysis by Solid-Phase Microextraction. Analytical Chemistry, 2017, 89, 10661-10666.	3.2	30
99	Enabling miniaturised personalised diagnostics: from lab-on-a-chip to lab-in-a-drop. Lab on A Chip, 2017, 17, 3200-3220.	3.1	55
100	Lab-on-a-chip technologies for genodermatoses: Recent progress and future perspectives. Journal of Dermatological Science, 2017, 85, 71-76.	1.0	7
101	Novel approach for accurate minute DNA quantification on microvolumetric solutions. Microchemical Journal, 2018, 138, 540-549.	2.3	8
102	Preconcentration of DNA using magnetic ionic liquids that are compatible with real-time PCR for rapid nucleic acid quantification. Analytical and Bioanalytical Chemistry, 2018, 410, 4135-4144.	1.9	49
103	Highly efficient DNA extraction and purification from olive oil on a washable and reusable miniaturized device. Analytica Chimica Acta, 2018, 1020, 30-40.	2.6	18
104	A disposable lab-on-a-chip platform for highly efficient RNA isolation. Sensors and Actuators B: Chemical, 2018, 255, 1491-1499.	4.0	16
105	Solid-Phase Microextraction of DNA from Mycobacteria in Artificial Sputum Samples To Enable Visual Detection Using Isothermal Amplification. Analytical Chemistry, 2018, 90, 6922-6928.	3.2	32
106	Simple Approaches to Minimally-Instrumented, Microfluidic-Based Point-of-Care Nucleic Acid Amplification Tests. Biosensors, 2018, 8, 17.	2.3	63
107	NiO Nanoparticles for Exceptionally Stable DNA Adsorption and Its Extraction from Biological Fluids. Langmuir, 2018, 34, 9314-9321.	1.6	20
108	Sound wave activated nano-sieve (SWANS) for enrichment of nanoparticles. Lab on A Chip, 2019, 19, 3032-3044.	3.1	32
109	Transverse migration and microfluidic concentration of DNA using Newtonian buffers. Biomicrofluidics, 2019, 13, 044104.	1.2	9

#	Article	IF	CITATIONS
110	$3D\hat{1}/\!\!\!/4F$ - Interactive Design Environment for Continuous Flow Microfluidic Devices. Scientific Reports, 2019, 9, 9166.	1.6	19
111	Extraction of DNA from complex biological sample matrices using guanidinium ionic liquid modified magnetic nanocomposites. RSC Advances, 2019, 9, 23119-23128.	1.7	17
112	Microfluidic Technologies for cfDNA Isolation and Analysis. Micromachines, 2019, 10, 672.	1.4	15
113	Adsorption and desorption of DNA-functionalized beads in glass microfluidic channels. Biomicrofluidics, 2019, 13, 054104.	1.2	4
114	A point of care platform based on microfluidic chip for nucleic acid extraction in less than 1 minute. Biomicrofluidics, 2019, 13, 034102.	1.2	14
115	Glucose biosensor based on open-source wireless microfluidic potentiostat. Sensors and Actuators B: Chemical, 2019, 290, 616-624.	4.0	32
116	A modular integrated lab-on-a-chip platform for fast and highly efficient sample preparation for foodborne pathogen screening. Sensors and Actuators B: Chemical, 2019, 288, 171-179.	4.0	34
117	Exosome trapping and enrichment using a sound wave activated nano-sieve (SWANS). Lab on A Chip, 2020, 20, 3633-3643.	3.1	29
118	Poly-L-histidine coated microfluidic devices for bacterial DNA purification without chaotropic solutions. Biomedical Microdevices, 2020, 22, 44.	1.4	6
119	Oneâ€Step Nucleic Acid Purification and Noiseâ€Resistant Polymerase Chain Reaction by Electrokinetic Concentration for Ultralowâ€Abundance Nucleic Acid Detection. Angewandte Chemie, 2020, 132, 11074-11081.	1.6	2
120	Oneâ€Step Nucleic Acid Purification and Noiseâ€Resistant Polymerase Chain Reaction by Electrokinetic Concentration for Ultralowâ€Abundance Nucleic Acid Detection. Angewandte Chemie - International Edition, 2020, 59, 10981-10988.	7.2	21
121	Direct electrophoretic microRNA preparation from clinical samples using nanofilter membrane. Nano Convergence, 2020, 7, 1 .	6.3	62
122	Electrode-Free Concentration and Recovery of DNA at Physiologically Relevant Ionic Concentrations. Analytical Chemistry, 2020, 92, 6150-6157.	3.2	4
123	Navigating the Pandemic Response Life Cycle: Molecular Diagnostics and Immunoassays in the Context of COVID-19 Management. IEEE Reviews in Biomedical Engineering, 2021, 14, 30-47.	13.1	30
124	Analytical approaches to differential extraction for sexual assault evidence. Analytica Chimica Acta, 2021, 1141, 230-245.	2.6	13
125	Nanostructured Polymer-Containing Composites as an Efficient Tool for Molecular Diagnostic. Nanobiotechnology Reports, 2021, 16, 19-41.	0.2	1
126	Thread-based isotachophoresis for DNA extraction and purification from biological samples. Lab on A Chip, 2021, 21, 2565-2573.	3.1	13
127	Analytical Technologies for Liquid Biopsy of Subcellular Materials. Annual Review of Analytical Chemistry, 2021, 14, 207-229.	2.8	2

#	ARTICLE	IF	CITATIONS
128	Metal-containing and magnetic ionic liquids in analytical extractions and gas separations. TrAC - Trends in Analytical Chemistry, 2021, 140, 116275.	5.8	21
129	Overview and Challenges of Molecular Technologies in the Veterinary Microbiology Laboratory. Methods in Molecular Biology, 2015, 1247, 3-17.	0.4	3
130	Molecular Approaches to Recognize Relevant and Emerging Infectious Diseases in Animals. Methods in Molecular Biology, 2015, 1247, 109-124.	0.4	4
131	A Microfluidic Device for Preparing Next Generation DNA Sequencing Libraries and for Automating Other Laboratory Protocols That Require One or More Column Chromatography Steps. PLoS ONE, 2013, 8, e64084.	1.1	33
132	Microfluidics for single cell analysis. Progress in Molecular Biology and Translational Science, 2022, 186, 203-215.	0.9	1
133	Isolierung und Reinigung von Nucleinsären. , 2022, , 749-768.		0
134	Microfluidic system for near-patient extraction and detection of miR-122 microRNA biomarker for drug-induced liver injury diagnostics. Biomicrofluidics, 2022, 16, 024108.	1.2	6
136	An investigation into simplifying total RNA extraction with minimal equipment using a low volume, electrokinetically driven microfluidic protocol. Biomicrofluidics, 2022, 16, 044107.	1.2	0
137	A Compact Fully Automated Nucleic Acid Extractor. Lecture Notes in Bioengineering, 2022, , 109-126.	0.3	0
138	Solid phase microextraction based micro-device for extraction of PCR amplifiable DNA., 0,, 81-96.		1
139	Magnetophoresis in Centrifugal Microfluidics at Continuous Rotation for Nucleic Acid Extraction. Micromachines, 2022, 13, 2112.	1.4	2
140	Sensitive and Quantitative Point-of-Care HIV Viral Load Quantification from Blood Using a Power-Free Plasma Separation and Portable Magnetofluidic Polymerase Chain Reaction Instrument. Analytical Chemistry, 0, , .	3.2	3
141	Taking the microfluidic approach to nucleic acid analysis in forensics: Review and perspectives. Forensic Science International: Genetics, 2023, 63, 102824.	1.6	3
143	Extraction and Reactions. , 2020, , 154-166.		0