

# Faecal indicator bacteria enumeration in beach sand: a comparison of methods in medium to coarse sands

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Citation Report

#	ARTICLE	IF	CITATIONS
5	Substratum-Associated Microbiota. <i>Water Environment Research</i> , 2010, 82, 1903-1944.	1.3	0
6	Release of <i>Escherichia coli</i> from the bottom sediment in a first-order creek: Experiment and reach-specific modeling. <i>Journal of Hydrology</i> , 2010, 391, 322-332.	2.3	99
7	Extraintestinal <i>Escherichia coli</i> Carrying Virulence Genes in Coastal Marine Sediments. <i>Applied and Environmental Microbiology</i> , 2010, 76, 5659-5668.	1.4	58
8	Rapidly measured indicators of recreational water quality and swimming-associated illness at marine beaches: a prospective cohort study. <i>Environmental Health</i> , 2010, 9, 66.	1.7	198
9	Bacteria in Beach Sands: An Emerging Challenge in Protecting Coastal Water Quality and Bather Health. <i>Environmental Science &amp; Technology</i> , 2011, 45, 370-379.	4.6	139
10	Microbial Source Tracking: Methods, Applications, and Case Studies. , 2011, , .		64
11	Relationships between sand and water quality at recreational beaches. <i>Water Research</i> , 2011, 45, 6763-6769.	5.3	68
12	Quantifying environmental reservoirs of fecal indicator bacteria associated with sediment and submerged aquatic vegetation. <i>Environmental Microbiology</i> , 2011, 13, 932-942.	1.8	73
13	Indicator microbes correlate with pathogenic bacteria, yeasts and helminthes in sand at a subtropical recreational beach site. <i>Journal of Applied Microbiology</i> , 2011, 110, 1571-1583.	1.4	82
14	Method repeatability for measuring <i>Enterococcus</i> in southern California beach sands. <i>Letters in Applied Microbiology</i> , 2011, 53, 656-659.	1.0	2
15	Pore water transport of enterococci out of beach sediments. <i>Marine Pollution Bulletin</i> , 2011, 62, 2293-2298.	2.3	39
16	Test of Direct and Indirect Effects of Agrochemicals on the Survival of Fecal Indicator Bacteria. <i>Applied and Environmental Microbiology</i> , 2011, 77, 8765-8774.	1.4	30
17	Environmental Factors Influencing the Abundance of Enterococci in Gulf Coast Beach Waters. <i>Journal of Environmental Engineering, ASCE</i> , 2012, 138, 1130-1137.	0.7	6
18	Occurrence and Persistence of Bacterial Pathogens and Indicator Organisms in Beach Sand along the California Coast. <i>Applied and Environmental Microbiology</i> , 2012, 78, 1733-1745.	1.4	92
19	New Sequence Types and Multidrug Resistance among Pathogenic <i>Escherichia coli</i> Isolates from Coastal Marine Sediments. <i>Applied and Environmental Microbiology</i> , 2012, 78, 3916-3922.	1.4	55
20	Relationship between Enterococcal Levels and Sediment Biofilms at Recreational Beaches in South Florida. <i>Applied and Environmental Microbiology</i> , 2012, 78, 5973-5982.	1.4	59
21	Enterococci in the Environment. <i>Microbiology and Molecular Biology Reviews</i> , 2012, 76, 685-706.	2.9	502
22	Fecal Contamination and Diarrheal Pathogens on Surfaces and in Soils among Tanzanian Households with and without Improved Sanitation. <i>Environmental Science &amp; Technology</i> , 2012, 46, 5736-5743.	4.6	149

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23	Mobilization and Transport of Naturally Occurring Enterococci in Beach Sands Subject to Transient Infiltration of Seawater. <i>Environmental Science &amp; Technology</i> , 2012, 46, 5988-5996.	4.6	47
24	Spatial and temporal variation in indicator microbe sampling is influential in beach management decisions. <i>Water Research</i> , 2012, 46, 2237-2246.	5.3	65
25	Correlation of Intracellular Trehalose Concentration with Desiccation Resistance of Soil <i>Escherichia coli</i> Populations. <i>Applied and Environmental Microbiology</i> , 2012, 78, 7407-7413.	1.4	52
26	Microbial source tracking to identify human and ruminant sources of faecal pollution in an ephemeral Florida river. <i>Journal of Applied Microbiology</i> , 2012, 113, 1396-1406.	1.4	40
27	Clonally Related Methicillin-Resistant <i>Staphylococcus aureus</i> Isolated from Short-Finned Pilot Whales ( <i>Globicephala macrorhynchus</i> ), Human Volunteers, and a Bayfront Cetacean Rehabilitation Facility. <i>Microbial Ecology</i> , 2013, 65, 1024-1038.	1.4	26
28	The influence of predation and competition on the survival of commensal and pathogenic fecal bacteria in aquatic habitats. <i>Environmental Microbiology</i> , 2013, 15, 517-526.	1.8	84
30	Fecal pathogen pollution: sources and patterns in water and sediment samples from the upper Cook Inlet, Alaska ecosystem. <i>Environmental Sciences: Processes and Impacts</i> , 2013, 15, 1041.	1.7	9
31	Microbial water quality in freshwater lakes with different land use. <i>Journal of Applied Microbiology</i> , 2013, 115, 1240-1250.	1.4	30
32	Spatial and Temporal Variation in Enterococcal Abundance and Its Relationship to the Microbial Community in Hawaii Beach Sand and Water. <i>Applied and Environmental Microbiology</i> , 2013, 79, 3601-3609.	1.4	40
33	Indigenous Microbiota and Habitat Influence <i>Escherichia coli</i> Survival More than Sunlight in Simulated Aquatic Environments. <i>Applied and Environmental Microbiology</i> , 2013, 79, 5329-5337.	1.4	64
34	Survival of Fecal Indicator Bacteria on Pervious Environmental Surfaces. , 2013, , .		0
35	Development and use of <i>Bacteroides</i> 16S rRNA Polymerase Chain Reaction Assay for Source Tracking Dog Faecal Pollution in Bathing Waters. <i>Hydrology Current Research</i> , 2014, 5, .	0.4	6
36	Evaluation of detachment methods for the enumeration of <i>Bacteroides fragilis</i> in sediments via propidium monoazide quantitative PCR, in comparison with <i>Enterococcus faecalis</i> and <i>Escherichia coli</i> . <i>Journal of Applied Microbiology</i> , 2014, 117, 1513-1522.	1.4	13
37	Evidence for the Accumulation and Steady-State Persistence of <i>E. coli</i> in Subtropical Drainage Basin Sediments. <i>Water, Air, and Soil Pollution</i> , 2014, 225, 1.	1.1	3
38	Impacts of Beach Wrack Removal via Grooming on Surf Zone Water Quality. <i>Environmental Science &amp; Technology</i> , 2014, 48, 2203-2211.	4.6	21
39	Protozoan Predation Is Differentially Affected by Motility of Enteric Pathogens in Water vs. Sediments. <i>Microbial Ecology</i> , 2014, 68, 751-760.	1.4	13
40	Effects of full-scale beach renovation on fecal indicator levels in shoreline sand and water. <i>Water Research</i> , 2014, 48, 579-591.	5.3	28
41	Routine screening of harmful microorganisms in beach sands: Implications to public health. <i>Science of the Total Environment</i> , 2014, 472, 1062-1069.	3.9	66

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42	Microbial release from seeded beach sediments during wave conditions. <i>Marine Pollution Bulletin</i> , 2014, 79, 114-122.	2.3	26
43	Microbial investigations of water, sediment, and algal mats in the mixed use watershed of Saginaw Bay, Michigan. <i>Journal of Great Lakes Research</i> , 2014, 40, 75-82.	0.8	8
44	A Coupled Modeling and Molecular Biology Approach to Microbial Source Tracking at a Marine Beach: A Case Study Investigating the Role of Fecal Indicator Bacteria from Wrack and Sand. <i>Proceedings of the Water Environment Federation</i> , 2014, 2014, 4860-4888.	0.0	0
45	Human-Associated Fecal Quantitative Polymerase Chain Reaction Measurements and Simulated Risk of Gastrointestinal Illness in Recreational Waters Contaminated with Raw Sewage. <i>Environmental Science and Technology Letters</i> , 2015, 2, 270-275.	3.9	99
46	Detection of multi-drug resistant <i>Escherichia coli</i> in the urban waterways of Milwaukee, WI. <i>Frontiers in Microbiology</i> , 2015, 6, 336.	1.5	35
47	Comparative decay of <i>Catelicoccus marimalium</i> and enterococci in beach sand and seawater. <i>Water Research</i> , 2015, 83, 377-384.	5.3	22
48	Differential occurrence of <i>Escherichia coli</i> and human <i>Bacteroidales</i> at two Great Lakes beaches. <i>Journal of Great Lakes Research</i> , 2015, 41, 530-535.	0.8	19
49	Differential Decay of Wastewater Bacteria and Change of Microbial Communities in Beach Sand and Seawater Microcosms. <i>Environmental Science &amp; Technology</i> , 2015, 49, 8531-8540.	4.6	59
50	Influence of Land Use, Nutrients, and Geography on Microbial Communities and Fecal Indicator Abundance at Lake Michigan Beaches. <i>Applied and Environmental Microbiology</i> , 2015, 81, 4904-4913.	1.4	40
51	Sediment and Vegetation as Reservoirs of <i>Vibrio vulnificus</i> in the Tampa Bay Estuary and Gulf of Mexico. <i>Applied and Environmental Microbiology</i> , 2015, 81, 2489-2494.	1.4	22
52	LA35 Poultry Fecal Marker Persistence Is Correlated with That of Indicators and Pathogens in Environmental Waters. <i>Applied and Environmental Microbiology</i> , 2015, 81, 4616-4625.	1.4	20
53	Impact of indigenous microbiota of subtidal sand on fecal indicator bacteria decay in beach systems: a microcosm study. <i>Environmental Science: Water Research and Technology</i> , 2015, 1, 306-315.	1.2	7
54	Fecal Indicator Bacteria Entrainment from Streambed to Water Column: Transport by Unsteady Flow over a Sand Bed. <i>Journal of Environmental Quality</i> , 2016, 45, 1046-1053.	1.0	3
55	Potential Impacts of PCBs on Sediment Microbiomes in a Tropical Marine Environment. <i>Journal of Marine Science and Engineering</i> , 2016, 4, 13.	1.2	1
56	<i>Escherichia coli</i> Reduction by Bivalves in an Impaired River Impacted by Agricultural Land Use. <i>Environmental Science &amp; Technology</i> , 2016, 50, 11025-11033.	4.6	17
57	Beach sand and the potential for infectious disease transmission: observations and recommendations. <i>Journal of the Marine Biological Association of the United Kingdom</i> , 2016, 96, 101-120.	0.4	80
58	Geographic information systems and multivariate analysis to evaluate fecal bacterial pollution in coastal waters of Andaman, India. <i>Environmental Pollution</i> , 2016, 214, 45-53.	3.7	17
59	Release of <i>Escherichia coli</i> from Foreshore Sand and Pore Water during Intensified Wave Conditions at a Recreational Beach. <i>Environmental Science &amp; Technology</i> , 2016, 50, 5676-5684.	4.6	33

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60	Vancomycin-Resistant Enterococci and Bacterial Community Structure following a Sewage Spill into an Aquatic Environment. <i>Applied and Environmental Microbiology</i> , 2016, 82, 5653-5660.	1.4	32
61	Phylogenetic diversity of ceftriaxone resistance and the presence of extended-spectrum $\beta$ -lactamase genes in the culturable soil resistome. <i>Journal of Global Antimicrobial Resistance</i> , 2016, 6, 128-135.	0.9	5
62	Freshwater wrack along Great Lakes coasts harbors <i>Escherichia coli</i> : Potential for bacterial transfer between watershed environments. <i>Journal of Great Lakes Research</i> , 2016, 42, 760-767.	0.8	7
63	Epidemiologic evaluation of multiple alternate microbial water quality monitoring indicators at three California beaches. <i>Water Research</i> , 2016, 94, 371-381.	5.3	48
64	Comparison of the occurrence and survival of fecal indicator bacteria in recreational sand between urban beach, playground and sandbox settings in Toronto, Ontario. <i>Science of the Total Environment</i> , 2016, 541, 520-527.	3.9	14
65	Soil Ingestion Is Associated with Child Diarrhea in an Urban Slum of Nairobi, Kenya. <i>American Journal of Tropical Medicine and Hygiene</i> , 2017, 96, 16-0543.	0.6	20
66	Microbial pollution characterization of water and sediment at two beaches in Saginaw Bay, Michigan. <i>Journal of Great Lakes Research</i> , 2017, 43, 64-72.	0.8	7
67	Effect of Low Energy Waves on the Accumulation and Transport of Fecal Indicator Bacteria in Sand and Pore Water at Freshwater Beaches. <i>Environmental Science &amp; Technology</i> , 2017, 51, 2786-2794.	4.6	18
68	Cattle exclusion using fencing reduces <i>Escherichia coli</i> ( <i>E. coli</i> ) level in stream sediment reservoirs in northeast Ireland. <i>Agriculture, Ecosystems and Environment</i> , 2017, 239, 349-358.	2.5	25
69	Effect of freshwater sediment characteristics on the persistence of fecal indicator bacteria and genetic markers within a Southern California watershed. <i>Water Research</i> , 2017, 119, 1-11.	5.3	31
70	Evaluation of methods to sample fecal indicator bacteria in foreshore sand and pore water at freshwater beaches. <i>Water Research</i> , 2017, 121, 204-212.	5.3	9
71	Sources and Persistence of Fecal Indicator Bacteria and Bacteroidales in Sand as Measured by Culture-Based and Culture-Independent Methods: a Case Study at Santa Monica Pier, California. <i>Water, Air, and Soil Pollution</i> , 2017, 228, 1.	1.1	4
72	Distribution and Differential Survival of Traditional and Alternative Indicators of Fecal Pollution at Freshwater Beaches. <i>Applied and Environmental Microbiology</i> , 2017, 83, .	1.4	23
73	Child soil ingestion in rural Ghana – frequency, caregiver perceptions, relationship with household floor material and associations with child diarrhoea. <i>Tropical Medicine and International Health</i> , 2018, 23, 558-569.	1.0	27
74	<i>Escherichia coli</i> ( <i>E. coli</i> ) distribution in the Lake Malawi nearshore zone. <i>Journal of Great Lakes Research</i> , 2018, 44, 1281-1288.	0.8	8
75	Evidence for Environmental Dissemination of Antibiotic Resistance Mediated by Wild Birds. <i>Frontiers in Microbiology</i> , 2018, 9, 745.	1.5	45
76	Poikilothermic Animals as a Previously Unrecognized Source of Fecal Indicator Bacteria in a Backwater Ecosystem of a Large River. <i>Applied and Environmental Microbiology</i> , 2018, 84, .	1.4	17
77	A localized sanitation status index as a proxy for fecal contamination in urban Maputo, Mozambique. <i>PLoS ONE</i> , 2019, 14, e0224333.	1.1	21

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78	Presence of bacteroidales as a predicator of human enteric viruses in Haihe River of Tianjin City, China. <i>Environmental Science and Pollution Research</i> , 2019, 26, 8169-8181.	2.7	2
79	Interaction of bacterial communities and indicators of water quality in shoreline sand, sediment, and water of Lake Michigan. <i>Water Research</i> , 2020, 178, 115671.	5.3	33
80	Two-decade variations of fresh submarine groundwater discharge to Tolo Harbour and their ecological significance by coupled remote sensing and radon-222 model. <i>Water Research</i> , 2020, 178, 115866.	5.3	19
81	Application of molecular source tracking and mass balance approach to identify potential sources of fecal indicator bacteria in a tropical river. <i>PLoS ONE</i> , 2020, 15, e0232054.	1.1	3
82	Selective Survival of <i>Escherichia coli</i> Phylotypes in Freshwater Beach Sand. <i>Applied and Environmental Microbiology</i> , 2021, 87, .	1.4	9
84	Limited Bacterial Removal in Full-Scale Stormwater Biofilters as Evidenced by Community Sequencing Analysis. <i>Environmental Science &amp; Technology</i> , 2021, 55, 9199-9208.	4.6	10
85	Pathogen and Surrogate Survival in Relation to Fecal Indicator Bacteria in Freshwater Mesocosms. <i>Applied and Environmental Microbiology</i> , 2021, 87, e0055821.	1.4	9
86	Identificaç�o e caracterizaç�o de bact�rias potencialmente patog�nicas isoladas de duas praias do litoral norte de Pernambuco. <i>Research, Society and Development</i> , 2021, 10, e184101119402.	0.0	0
87	<i>Escherichia coli</i> and Enterococci Bacteria in Lake Michigan Beach Sand. <i>Environmental Engineering Science</i> , 2022, 39, 3-14.	0.8	5
88	Quantitative Microbial Risk Assessment of Pediatric Infections Attributable to Ingestion of Fecally Contaminated Domestic Soils in Low-Income Urban Maputo, Mozambique. <i>Environmental Science &amp; Technology</i> , 2021, 55, 1941-1952.	4.6	15
89	Environmental Persistence and Naturalization of Fecal Indicator Organisms. , 2011, , 379-397.		17
90	Classical and Molecular Methods to Measure Fecal Bacteria. , 0, , 241-273.		2
91	Physical and Biological Factors Influencing Environmental Sources of Fecal Indicator Bacteria in Surface Water. , 0, , 111-134.		5
92	Present status of effect of microorganisms from sand beach on public health. <i>Journal of Coastal Life Medicine</i> , 2014, , .	0.2	3
93	A baseline study of fecal indicator bacteria on Caribbean beach sand from Riohacha, La Guajira, Colombia. <i>Contemporary Engineering Sciences</i> , 2018, 11, 5093-5107.	0.2	0
94	Comprehensive water testing analyses for improved water management: coliforms, coliphage and cholesterol. <i>Water Science and Technology: Water Supply</i> , 2021, 21, 815-823.	1.0	1
95	An assessment of three methods for extracting bacterial DNA from beach sand. <i>Journal of Applied Microbiology</i> , 2022, 132, 2990-3000.	1.4	0
98	Highly variable removal of pathogens, antibiotic resistance genes, conventional fecal indicators and human-associated fecal source markers in a pilot-scale stormwater biofilter operated under realistic stormflow conditions. <i>Water Research</i> , 2022, 219, 118525.	5.3	10

#	ARTICLE	IF	CITATIONS
99	Microbial contamination in the coastal waters of the southeast coast of India: A comparison of pre and post COVID-19 lockdown scenario. , 2022, , .		0
100	Application of magnetic carbon nanocomposite from agro-waste for the removal of pollutants from water and wastewater. Chemosphere, 2022, 305, 135384.	4.2	38
101	Fecal Indicator Bacteria Levels at a Marine Beach Before, During, and after the COVID-19 Shutdown Period and Associations with Decomposing Seaweed and Human Presence. SSRN Electronic Journal, 0, , .	0.4	0
102	Multimodal analysis of south-eastern Black Sea sediment bacterial population diversity. Marine Pollution Bulletin, 2022, 183, 114063.	2.3	2
103	Fecal indicator bacteria levels at a marine beach before, during, and after the COVID-19 shutdown period and associations with decomposing seaweed and human presence. Science of the Total Environment, 2022, 851, 158349.	3.9	10
104	Influence of Nutrients and the Native Community on E. coli Survival in the Beach Environment. Applied and Environmental Microbiology, 2022, 88, .	1.4	3
105	Fecal pollution source characterization in the surface waters of recharge and contributing zones of a karst aquifer using general and host-associated fecal genetic markers. Environmental Sciences: Processes and Impacts, 2022, 24, 2450-2464.	1.7	2
106	Cattle access to small streams increases concentrations of Escherichia coli in bed sediments. Hydrobiologia, 2023, 850, 3273-3291.	1.0	4
107	Evaluation of two methods for detection of viable Bacillus anthracis simulant spores in maritime environmental samples. Environmental Monitoring and Assessment, 2023, 195, .	1.3	0
108	Faecal indicator bacteria on indoor floors linked to exterior sidewalk contamination in New York City. Indoor and Built Environment, 2023, 32, 1187-1197.	1.5	1
110	Prediction of <i>Escherichia coli</i> concentration from wetting of beach sand using machine learning. Surface Innovations, 2024, 12, 96-105.	1.4	0
111	Microbial communities in the water surface microlayer and associations with microbes in aerosols, beach sand, and bulk water. FEMS Microbiology Ecology, 2023, 99, .	1.3	0