

Bacteria, Fungi and Viruses, Sizes and Significance (Sizes in Micrometers - MM)

Note: Most are above 0.1M in size. None are below 0.01 in size.

Organism	Microbial Group	Rod Length μm	Rod or Coccus Diameter μm	Source	Significance
Absidia corymbifera	Fungi		3.8	Environmental	Zygomycosis
Acetobacter Melanogenus	Bacteria	1.0-2.0	0.4-0.8		Strong beer/vinegar bacterium.
Acinetobacter	Bacteria		1.3	Environmental	Opportunistic infections
Acremonium spp.	Fungi		2.5	Environmental	Extrinsic Allergic Aveons
Actinomyces israelii	Bacteria		1.0	Humans	Antinomycosis
Adenovirus	Virus		0.08	Humans	Colds
Alcaligenes Viscolactis	Bacteria	0.8-2.6	0.6-1.0		Causes ropiness in milk.
Alkaligenes	Bacteria		0.75	Humans	Opportunistic infections
Alternaria alternata	Fungi		14.4	Environmental	Mycotoxycosis
Arenavirus	Virus		0.18	Rodents	Hemorrhagic fever
Aspergillus spp.	Fungi		3.5	Environmental	Aspergillosis, Volatile Organic Compound
Aureobasidium pullulans	Fungi		5	Environmental	Chromomycosis
Bacillus anthracis	Bacteria	3.0-10.0	1.0-1.3 (1.1 average)	Environmental	Causes anthrax in mammals
Bacillus Stearothermophilus	Bacteria	2.0-5.0	0.6-1.0		Biological indicator for steam sterilization
Bacillus subtilis	Bacteria	2.0-3.0	0.7-0.8		Biological indicator for ethylene oxide sterilization
Blastomyces dermatiitidis	Fungi		14	Environmental	Blastomycosis
Bordetella pertussis	Bacteria		0.25	Humans	Whooping cough
Botrytis cinera	Fungi		7	Environmental	Extrinsic Allergic Aveons
Cardiobacterium	Bacteria		0.63	Humans	Opportunistic infections
Chaetomium globosum	Fungi		5.5	Environmental	Chromomycosis, Volatile Organic Compound
Chiamydia psittaci	Bacteria		0.3	Birds	Psittacosis
Chlamydia pneumoiae	Virus		0.3	Humans	Pneumonia
Cladosporium spp.	Fungi		9	Environmental	Chromblastomycosis
Clostridium botulinum (B)	Bacteria	3.0-8.0	0.5-0.8		Produces exotin causes botulism
Clostridium Perinngens	Bacteria	4.0-8.0	1.0-1.5		Produces toxin causing food poisoning
Clostridium tetani	Bacteria	4.0-8.0	0.4-0.6		Produces exotoxin causing tetanus
Coccidioides immitis	Fungi		4	Environmental	Coccidiomycosis
Coronavirus	Virus		0.11	Humans	Colds

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Corynebacteria diphtheria	Bacteria		1.0	Humans	Diphtheria
Coxiella burnetii	Bacteria		0.5	Cattle, sheep	Q fever
Coxsackievirus	Virus		0.027	Humans	Colds
Cryptococcus neoformans	Fungi		5.5	Environmental	Cryptococcosis
Diplococcus Pneumoniae	Bacteria		0.5-1.25		Causes lobar pneumonia
Echovirus	Virus		0.028	Humans	Colds
Emericella nidulans	Fungi		3.3	Environmental	Mycotoxigenic, Volatile Organic Compound
Epicoccum nigrum	Fungi		20	Environmental	Extrinsic Allergic Avelons
Erwinia aroideae	Bacteria	2.0-3.0	0.5		Causes soft rot in vegetables.
Escherichia Coli (E Coli)	Bacteria	1.0-3.0	0.5		Indicator of fecal contamination in water.
Eurotium spp.	Fungi		5.8	Environmental	Extrinsic Allergic Avelons
Exophiala jeanselmei	Fungi		2	Environmental	Chromomycosis
Francisella tularensis	Bacteria		0.2	Wild animals	Tularemia
Geomyces pannorum	Fungi		3	Environmental	Extrinsic Allergic Avelons
Haemophilus influenzae	Bacteria	0.5-2.0	0.2-0.3		Causes influenza and acute respiratory infections
Haemophilus influenzae	Bacteria		0.43	Humans	Meningitis, pneumonia
Haemophilus parainfluenzae	Bacteria		1	Humans	Opportunistic infections
Hantavirus	Virus		0.07	Rodents	Hantavirus
Helminthosporium	Fungi		12.5	Environmental	Extrinsic Allergic Avelons
Histoplasma capsulatum	Fungi		3	Environmental	Histoplasmosis
Influenza	Virus		0.1	Humans, birds	Flu
Klebsiella pneumoniae	Bacteria	5	0.4-0.5	Environmental	Opportunistic infections, causes pneumonia and other respiratory inflammation
Lactobacillus Delbrueckii	Bacteria	2.0-9.0	0.5-0.8		Causes souring of grain-mashes
Legionella pneumophila	Bacteria		0.6	Environmental	Pontiac fever
Micromonospora faeni	Actinomycetes		1	Agricultural	Farmers' lung, Hypersensitivity Pneumonitis
Micropolyspora faeni	Actinomycetes		0.69	Agricultural	Farmers' lung, Hypersensitivity Pneumonitis
Moraxella catarrhalis	Bacteria		1.3	Humans	Opportunistic infections
Moraxella lacunata	Bacteria		1	Humans	Opportunistic infections
Morbillivirus	Virus		0.12	Humans	Measles (rubeola)
Mucor plumbeus	Fungi		7.5	Environmental	Mucormycosis
Mycobacterium avium	Bacteria		1.2	Environmental	Cavitary pulmonary disorder
Mycobacterium intracellulare	Bacteria		1.2	Environmental	Cavitary pulmonary disorder
Mycobacterium kansasii	Bacteria		0.86	Unknown	Cavitary pulmonary disorder

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Mycobacterium Tuberculosis	Bacteria	1.0-4.0	0.2-0.5 (0.86 average)	Humans	Hard swelling of body tissues. TB
Mycoplasma pneumoniae	Bacteria		0.25	Humans	Pneumonia
Mycoplasma pneumoniae (PPLO)	Bacteria		0.3-0.5		Smallest known free-living organism
Neisseria meningitidis	Bacteria		0.8	Humans	Meningitis
Nocardia Brasilensis	Actinomycetes		1.5	Environmental	Pulmonary mycetoma
Nocardiaasteroides	Actinomycetes		1.1	Environmental	Nocardiosis
Paecilomyces variotii	Fungi		3	Environmental	Mucormycosis
Paracoccidioides brasiliensis	Fungi		23	Environmental	Paracoccidioidomycosis
Parainfluenza	Virus		0.22	Humans	Flu
Paramyxovirus	Virus		0.23	Humans	Mumps
Parvovirus B19	Virus		0.022	Humans	Filth disease, anemia
Pediococcus acidilactici	Bacteria		0.6-1.0		Causes mash spoilage in brewing
Pediococcus Cerevisiae	Bacteria		1.0-1.3		Causes deterioration in beer
Penicillium spp.	Fungi		3.3	Environmental	Mycotoxigenic, Volatile Organic Compound
Phialophora spp.	Fungi		1.5	Environmental	Chromomycosis
Phoma spp	Fungi		3.3	Environmental	Mucormycosis
Pneumocystis carinii	Bacteria		2	Environmental	Pneumocystosis
Poxvirus - Vaccinia	Virus		0.23	Agricultural	Cowpox
Pseudomonas aeruginosa	Bacteria		0.57	Environmental	Opportunistic infections
Pseudomonas mallei	Bacteria		0.77	Environmental	Opportunistic infections
Pseudomonas pseudomallei	Bacteria		0.57	Environmental	Opportunistic infections
Pseudomonas diminuta	Bacteria		1.0 0.3		Test organism for retention 0.2 μm membranes
Rhinovirus	Virus		0.023	Humans	Colds
Rhizopus stolonifer	Fungi		8	Environmental	Zygomycosis
Rhodotulura spp.	Fungi		14	Environmental	Extrinsic Allergic Avelons
Salmonella enteritidis	Bacteria	2.0-3.0	0.6-0.7		Causes food poisoning
Salmonella enteritidis	Bacteria	2.0-3.0	0.6-0.7		Causes food poisoning
Salmonella hirschfeldii	Bacteria	1.0-2.5	0.3-0.5		Causes enteric fever
Salmonella typhimurium	Bacteria		1.0-1.5 0.5		Causes food poisoning in man
Salmonella typhosa	Bacteria	2.0-3.0	0.6-0.7		Causes typhoid fever
Sarcina maxima	Bacteria		4.0-4.5		Isolated from fermenting malt mash
Scopulariopsis spp.	Fungi		6	Environmental	Onychomycosis

Organism	Microbial Group	Rod Length μm	Rod or Coccus Diameter μm	Source	Significance
<i>Serratia marcescens</i>	Bacteria	0.5-1.0	0.5		Test organism for retention of 0.45 μm membranes
<i>Serratia marcescens</i>	Bacteria		1.3	Environmental	Opportunistic infections
<i>Shigella dysenteriae</i>	Bacteria	1.0-3.0	0.4-0.6		Causes dysentery in man
<i>Sporothrix schenckii</i>	Fungi		6.5	Environmental	Sporotrichosis
<i>Stachybotrys</i> spp.	Fungi		5.7	Environmental	Stachybotryotoxicosis
<i>Staphylococcus Aureus</i>	Bacteria		0.8-1.0	Humans	Causes pus forming infections, opportunistic infections
<i>Streptococcus lactis</i>	Bacteria		0.5-1.0		Contaminant in milk
<i>Streptococcus pneumoniae</i>	Bacteria		0.9	Humans	Pneumonia, otitis media
<i>Streptococcus pyogenes</i>	Bacteria		0.6-1.0 (0.9 average)	Humans	Causes pus forming infections, scarlet fever, pharyngitis
<i>Thermoactinomyces sacchari</i>	Actinomycetes		0.86	Agricultural	Bagassosis
<i>Thermoactinomyces vulgaris</i>	Actinomycetes		1	Agricultural	Farmers' lung, Hypersensitivity Pneumonitis
<i>Thermomonospora viridis</i>	Actinomycetes		0.6	Agricultural	Farmers' lung, Hypersensitivity Pneumonitis
Togavirus	Virus		0.063	Humans	Rubella (german measles)
<i>Trichoderma</i> spp.	Fungi		4.1	Environmental	Mycotoxicosis, Volatile Organic Compound
<i>Ulocladium</i> spp.	Fungi		15	Environmental	Extrinsic Allergic Avelons
<i>Varicella-zoster</i>	Virus		0.3	Humans	Chickenpox
<i>Wallemia sebi</i>	Fungi		3	Environmental	Extrinsic Allergic Avelons
<i>Yersinia pestis</i>	Virus		0.75	Humans	Pneumonic plague