

Risk Groups - Bacteria

BL indicates the Biosafety Level; RG indicates the Risk Group

ID	Genus	Species	Comments	BL	RG	RG	RG	RG	RG
				BMBL-93 CDC/NIH	NIH rDNA-97	LCDC-96 (Canada)	EU-96	Belgium 97 Annex VIII	Australia-95
1	Acinetobacter		was Herellea vaginicola, A. calcoaceticus ssp. anitratus		2				2 implied
2	Acinetobacter	lwoffii	formerly Mima polymorpha						2 implied
3	Actinobacillus	actinomycetemcomitans	genus Hemophilus		2 implied	implied	2		2 implied
4	Actinobacillus	spp	EC-Haemophilus actinomycetem comitans		2	2	see 1 spp listed		2
5	Actinomadura	madurae					2	2	
6	Actinomadura	pelletieri					2	2	
7	Actinomyces	bovis						2	2 implied
8	Actinomyces	gerencseriae					2	2	2 implied
9	Actinomyces	israelii					2	2	2 implied
10	Actinomyces	naeslundii							2 implied
11	Actinomyces	pyogenes	was Corynebacterium		2	2 (as Corynebacterium)	2	2	2 implied
12	Actinomyces	spp					2	2	2
13	Aeromonas	hydrophilia			2			2	2 implied
14	Aeromonas	punctata							2 implied
15	Aeromonas	spp.							2
16	Afpia spp								2
17	Amycolata	autotrophica			2				
18	Arachnia	propionica	was Propionibacterium propionicum						
19	Arcanobacterium	haemolyticum	was Corynebacterium		2	2 (as Corynebacterium)	2	2	2
20	Arcnanobacterium	equi	was Corynebacterium				2 implied		
21	Arizona	hinshawii	all serotypes		2	2 (see Salmonella enterica)			
22	Bacillus	anthracis		2/3	2	3	3	3	3
23	Bacillus	cereus				2		2	2
24	Bacillus	thuringiensis						2	
25	Bacteroides	fragilis					2	2	2 implied

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26	Bacteroides	spp					see 1 spp listed	2	2
27	Bartonella	bacilliformis				2	2	3	2 implied
28	Bartonella	elizabethae				2			
29	Bartonella	spp.			see species listed	see spp listed	see 1 spp listed		2
30	Bartonella	henselae	was genus Rochalimaea		2	2		2	2 implied
31	Bartonella	quintana	was genus Rochalimaea	2	2	2	2 as Rochlimea	2	2 implied
32	Bartonella	vinsonii	was genus Rochalimaea	2	2				2 implied
33	Bordetella	all spp		See 1 sp	2	3 sp listed	3 species listed		2
34	Bordetella	bronchiseptica			2 implied	2	2	2 human 3 animal	2 implied
35	Bordetella	parapertussis			2 implied	2	2	2	2 implied
36	Bordetella	pertussis		2	2	2	2, V	2	2 implied
37	Borrelia	burgdorferi			2	2	2	2	2 implied
38	Borrelia	duttoni					2	2	2 implied
39	Borrelia	recurrentis			2	2	2	2	2 implied
40	Borrelia	spp			see species listed	see 2 sp listed	2	2	2
41	Borrelia	vincenti				2			2 implied
42	Brucella	abortus		3	3	3 implied	3	3	3 implied
43	Brucella	canis		3	3	3 implied	3	3	3 implied
44	Brucella	melitensis		3 (USDA restricted)	3	3 implied	3	3	3 implied
45	Brucella	ovis			3 implied	3 implied	3 implied	3	2
46	Brucella	spp	except B. ovis	3	3	3	see spp		3
47	Brucella	suis		3	3	3 implied	3	3	3
48	Burkholderia	spp	Australia, EU still as Pseudomonas spp.	see sp	2, unless listed at 3	see 2 spp listed	see spp	see sp	2 implied
49	Burkholderia	mallei	was Pseudomonas		3	3	3 as Pseudo-	3	3 implied

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50	Burkholderia	pseudomallei	was Pseudomonas	2/3	3	3	monas 3 as Pseudo- monas	3	3 implied
51	Calymmatobacterium	granulomatis							
52	Campylobacter	coli		2	2	2	2 implied	2	2 implied
53	Campylobacter	fetus	subsp fetus	2 ssp fetus	2	2	2	2	2 implied
54	Campylobacter	jejuni		2	2	2	2	2	2 implied
55	Campylobacter	spp		2 implied	see spp	2	2	2	2
56	Campylobacter	sputorum				2 (all spp)	2 implied		2 implied
57	Capnocytophaga	spp							2
58	Cardiobacterium	hominis					2	2	2
59	Chlamydia	pneumoniae			2	2	2	2	2 implied
60	Chlamydia	psittaci	avian strains, 3	2	2	2, non-avian 3, avian	2 (3 avian spp)	2, non-avian 3, avian	3, avian
61	Chlamydia	spp	C. pneumoniae*, EU=2, Belgium=2	see 2 spp	see 3 spp	see 2 spp	see 3 spp		2
62	Chlamydia	trachomatis	lymphogranuloma venereum agent	2	2	2	2	2	2 implied
63	Citrobacter	spp						OP	2
64	Clostridium	botulinum		2 V/3	2	2	2, T	2	2 G,S
65	Clostridium	chauvoei			2	2	2 implied	3	2 implied
66	Clostridium	difficile				2	2 implied		2 implied
67	Clostridium	equi					2 implied		2 implied
68	Clostridium	haemolyticum			2	2	2 implied	2	2 implied
69	Clostridium	histolyticum			2	2	2 implied		2 implied
70	Clostridium	novyi			2	2	2 implied	2	2 implied
71	Clostridium	perfringens				2	2	2	2 implied
72	Clostridium	septicum			2	2	2 implied	3	2 implied
73	Clostridium	sordelli				2	2 implied	2	2 implied
74	Clostridium	spp			2	see spp	2	2	2
75	Clostridium	tetani		2 V	2	2	2, T,V	2	2 ,V
76	Corynebacterium	bovis					2	2	

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77	Corynebacterium	diphtheriae		2 V	2	2	2, T,V	2	2,V
78	Corynebacterium	matruchotii							2
79	Corynebacterium	minutissimum					2	2	2
80	Corynebacterium	pseudotuberculosis			2	2	2	2	2
81	Corynebacterium	renale			2		2 implied	2	
82	Corynebacterium	spp			see 3 species listed	see 4 spp	2	2	
83	Corynebacterium	ulcerans					2 implied		2
84	Coxiella	burnetii		3	3	3	3	3	3,V
85	Dermatophilus	congolensis			2			2 human, 3 animal	2
86	Edwardsiella	tarda			2	2	2	2 human, 3 animal	2
87	Eikenella	corrodens					2	2	2
88	Enterobacter	aerogenes/cloacae					2	2	2 implied
89	Enterobacter	spp.					2	2	2
90	Enterococcus	spp	(Streptococcus faecalis)				2	2	2
91	Erichia	sennetsu	(Rickettsia)				2		
92	Erichia	spp					2		
93	Erysipelothrix	rhusiopathiae	was spp insidiosa		2	2 (insidiosa)	2	2	2 implied
94	Erysipelothrix	spp.							2
95	Escherichia	coli	(pathogenic strains)		2	2 (et, inv, hemor strains)	2	2	2
96	Escherichia	coli K12	genetically crippled		1		1		
97	Flavobacterium	meningosepticum					2		2 implied
98	Flavobacterium	spp							2
99	Fluoribacter	bozemanae	was Legionella				2	2	
100	Francisella	novocida				2			
101	Francisella	tularensis	Type A	3 V	3	3 (Type A, biovar tularensis)	3	3	3
102	Francisella	tularensis	Type B	2 V		2 (Type B, biovar palaearctica)	2	2	2

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103	Fusobacterium	necrophorum				2	2	2	2 implied
104	Fusobacterium	spp							2
105	Gardnerella	vaginalis					2	2	
106	Haemophilus	ducreyi			2	2	2	2	2 implied
107	Haemophilus	influenzae			2	2	2	2	2 implied
108	Haemophilus	spp			see 2 spp	see spp	2	2	2
	Hafnia	spp.					2	2	2
109	Hartmanella	spp							
110	Helicobacter	pylori	was genus <i>Campylobacter</i>		2	2	2	2	
111	Herellea	vaginicola	see <i>Actinetobacter baumannii</i>						
112	Kingella	kingae						OP	2
113	Klebsiella	oxytoca			1		2	2	2 implied
114	Klebsiella	pneumoniae			2 implied		2	2	2 implied
115	Klebsiella	spp			2		2	2	2
116	Lactobacillus	spp			1				
117	Legionella	pneumophila		2	2	2 implied	2	2	2 implied
118	Legionella	spp		2	2	2	2	2	2
119	Legionella-like organisms			2		2 implied			
120	Leptospira	interrogans	all serotypes (<i>icterohemorrhagiae</i>)	2	2	2 (all serovars)	2, all serovars	2 human, 3 animal	2, E
121	Listeria	ivanovii			2 implied		2	2	
122	Listeria	monocytogenes			2 implied	2	2	2	2
123	Listeria	spp			2		2 species listed		
124	Mima	polymorpha	<i>Acinetobacter lwoffii</i>						
125	Moraxella	spp			2			2	2
126	Morganella	morganii					2	2	
127	Mycobacterium	africanum			2 implied	2 implied	3, V *	3	2,CGVT implied
128	Mycobacterium	asiaticum		2	2	2 implied		2	2,CGVT implied

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129	Mycobacterium	avium-intracellulare	(avium in Canada)	2	2	2 implied	2	2 human, 3 animal	2,CGVT implied
1300	Mycobacterium	bovis	BCG is 2	3	3	3 (2, BCG)	3 (2 BCG), V*	3	2,CGVT implied
131	Mycobacterium	chelonei	EU chelonae	2	2	2 implied	2	2	2,CGVT implied
132	Mycobacterium	fortuitum		2	2	2 implied	2	2	2,CGVT implied
133	Mycobacterium	kansasii		2	2	2 implied	2	2	2,CGVT implied
134	Mycobacterium	leprae		2	2	2 implied	3	3	2,CGVT implied
135	Mycobacterium	malmoense		2	2	2 implied	2	2	2,CGVT implied
136	Mycobacterium	marinum		2	2	2 implied	2	2	2,CGVT implied
137	Mycobacterium	microti			2 implied	2 implied	3 (*)	3 (*)	2,CGVT implied
138	Mycobacterium	paratuberculosis	Mycobacterium avium subsp. Paratuberculosis	2	2	2 implied	2	2 human, 3 animal	2,CGVT implied
139	Mycobacterium	scrofulaceum		2	2	2 implied	2	2	2,CGVT implied
140	Mycobacterium	simiae		2	2	2 implied	2	2	2,CGVT implied
141	Mycobacterium	spp	except. MDR M.tb complex	see spp	2 unless listed as 3	2 , except 3 listed	see sp listed	see species listed	2,CGVT
142	Mycobacterium	szulgai		2	2	2 implied	2	2	2,CGVT implied
143	Mycobacterium	tuberculosis	3, V,T for multiply resistant	3	3	3	3, V	3	2,CGVT implied
144	Mycobacterium	ulcerans		2	2	2 implied	3 (*)	3 (*)	2,CGVT implied
145	Mycobacterium	xenopi		2	2	2 implied	2	2	2,CGVT implied
146	Mycoplasma	hominis			2 implied	2		2	
147	Mycoplasma	mycoides			Restricted AP			3 subsp. capri , 4 subsp. Mycoides	

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148	Mycoplasma	pneumoniae			2 implied	2	2	2	2
149	Mycoplasma	agalactiae			Restricted AP			3	
150	<u>Mycoplasma</u>	spp			2, except M. mycoides, M agalactiae	see sp		2 see species listed	see sp
151	Neisseria	gonorrhoeae		2 (BSC)	2	2	2	2	
152	Neisseria	meningitidis		2 (BSC)	2	2	2, V	2	
153	Neisseria	spp		see species listed	see species listed	see spp	see spp	2	2
154	Nocardia	asteroides			2	2	2	2	2 implied
155	Nocardia	brasiliensis			2	2	2	2	2 implied
156	Nocardia	caviae							2 implied
157	Nocardia	farcinica					2	2	2 implied
158	Nocardia	nova					2	2	2 implied
159	<u>Nocardia</u>	spp			see species listed	see spp	see spp		2
160	Nocardia	transvalensis			2				
161	Nocarida	otitidis-caviarum	EU-otitidiscaviarum		2		2	2	
162	Pasteurella	haemolytica			2 implied	2 implied	2 implied	3	2 implied
163	Pasteurella	multocida			3	3, Type B; 2 implied other types.	2	2 human, 3 animal	2 implied
164	Pasteurella	pneumotropica				2 implied	2 implied		2 implied
165	Pasteurella	spp	type B, "buffalo", other virulent strains		2, except those listed as 3	2	2	2	2
166	Peptostreptococcus	anaerobius					2	2	
167	Plesiomonas	shigelloides					2	2	2
168	Porphyromonas	spp					2	2	
169	Prevotella	spp					2	2	

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				BMBL-93 CDC/NIH	NIH rDNA-97	LCDC-96 (Canada)	EU-96	Belgium 97 Annex VIII	Australia-95
170	Proteus	mirabilis					2	2	2 implied
171	Proteus	penneri					2	2	2 implied
172	Proteus	spp.					see sp listed	2	2
173	Proteus	vulgaris					2	2	2 implied
174	Providencia	alcalifaciens					2	2	2 implied
175	Providencia	rettgeri					2	2	2 implied
176	Providencia	spp					2	2	2
177	Pseudomonas	aeruginosa			2	2	2	2	2 implied
178	Pseudomonas	spp	except <i>P. mallei</i> , <i>Burholderia maieii</i>						2
179	Rhodococcus	equi			2		2	2	2
180	Rickettsia	(vole)			2	3 implied			
181	Rickettsia	akari		3	3	3 implied	3 (*)	3 (*)	3 implied
182	Rickettsia	australis		3	3	3 implied			3 implied
183	Rickettsia	canada		3	3	3 implied	3 (*)	3 (*)	3 implied
184	Rickettsia	conorii		3	3	3 implied	3	3	3 implied
185	Rickettsia	montana				3 implied	3 (*)	3 (*)	3 implied
186	Rickettsia	mooseri	see <i>R. typhi</i>			3 implied	3		3 implied
187	Rickettsia	parkeri				3 implied			3 implied
188	Rickettsia	prowazekii		3	3	3 implied	3	3	3 implied
189	Rickettsia	rhipicephali				3 implied			3 implied
190	Rickettsia	rickettsii		3	3	3 implied	3	3	3 implied
191	Rickettsia	sennetsu	see <i>Bartonella</i>			3 implied			3 implied
192	Rickettsia	sibirica		3	3	3 implied			3 implied
193	Rickettsia	spp			3 (except vole, 2)	3	2	2	3
194	Rickettsia	tsutsugamushi		3	3	3 implied	3	3	
195	Rickettsia	typhi (mooseri)			3	3 implied	3, (mooseri)	3	
196	Salmonella	arizonae			2	2, <i>S. enterica</i> serovar <i>arizonae</i>	2	2	2 implied

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						(Arizona hinshawii)			
197	Salmonella	cholerasuis			2	2, S. enterica.		2, S. enterica	2 implied
198	Salmonella	enteritidis			2	2 S. enterica ?	2	2	2 implied
199	Salmonella	gallinarum-pullorum			2	2, S. enterica ser. gallinarum- pullorum		2 human, 3 animal	2 implied
200	Salmonella	meleagridis			2	2, S. enterica ser. meleagridis			2 implied
201	Salmonella	paratyphi,A,B,C	A, B, C		2	2, S. enterica ser paratyphi B, Schottmulleri	2, V	2	2 implied
202	Salmonella	spp	all spp and serotypes/ serovars	see 1 species listed	2	2, see spp	2 see spp	2	2
203	Salmonella	typhi		2 V, 3	2	2, S. enterica ser. typhi	3, V(*)*	3 (*)	2 G,V
204	Salmonella	typhimurium			2	2, S. enterica ser typhimurium	2	2	2 implied
205	Serpulina	spp					2	2	
206	Serratia	marcescens						OP	2
207	Serretia	liquefaciens							2
208	Shigella	boydii		2 implied	2	2	2	2	2 implied
209	Shigella	dysenteriae	Type 1	2 implied	2	2	3, T (*)	3 (*)	2 implied
210	Shigella	flexneri		2	2	2	2	2	2 implied
211	Shigella	sonnei		2 implied	2	2	2	2	2 implied
212	Shigella	spp.		2	2	See 4 spp	See sp listed		2
213	Sphaerophorus	necrophorus			2				
214	Staphylococcus	aureus			2	2	2	2	2

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215	Staphylococcus	epidermidis						2	
216	Streptobacillus	moniliformis			2	2	2	2	2
217	Streptobacillus	spp			see species listed	see 1 spp	see 1 spp listed	see species listed	
218	Streptococcus	agalactiae			2 implied	2, Grp B of Grps A-G	2 implied	2	2 implied
219	Streptococcus	pneumoniae			2	2 implied	2	2	2 implied
220	Streptococcus	pyogenes	Canada Lancefield Groups A-D, G		2	2 implied	2	2	2 implied
221	Streptococcus	spp.	see also Enterococcus spp		2	2, Grps A,B,C,D,G	2	2	2
222	Streptococcus	suis					2	2	
223	Treponema	carateum			2	2	2	2	
224	Treponema	pallidum		2	2	2	2	2	2, G,E
225	Treponema	pertenue				2	2	2	2, G,E
226	Treponema	spp			see 2 species listed	see spp	2	2	
227	Treponema	vincentii				2		2	
228	Ureaplasma	urealyticum				2		2	
229	Vibrio	cholerae	including El Tor(EU, Belgium)	2	2	2, incl El Tor	2	2	2 implied
230	Vibrio	parahaemolyticus		2	2	2	2	2	2 implied
231	Vibrio	spp		see 2 spp	see 3 species listed	see 2 spp	2	2	2
232	Vibrio	vulnificus			2	2	2 implied	2	2 implied
233	Yersinia	enterocolitica			2	2	2	2	2 implied

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234	Yersinia	pestis		2 V, 3 aerosols and antibiotic resistant strains	3	3	3, V	3	3
235	Yersinia	pseudotuberculosis				2	2	2	2 implied
236	Yersinia	spp	except Y. pestis	see 1 spp	see 2 species listed	see 3 spp	2	2	2
237									

(*) EU	May present a limited risk of infection for workers because they are not normally infectious by air-borne route. Member States shall assess the containment measures to be applied to such agents taking account of the nature of specific activities in question and of the quantity of the agent involved, with a view to determining whether, in particular circumstances, some of these measures may be dispensed with.
(*) Belgium	May present a limited risk of infection for workers because they are not normally infectious by air-borne route.
OP	Opportunistic Pathogen
V	Vaccine available
T	Toxin produced
AP	Animal Pathogen
HP	Human Pathogen