

Microbiome Analysis Report

HUMANNE_FX3

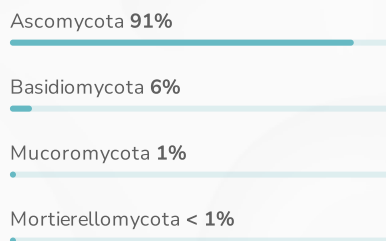
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2-Feb-2024

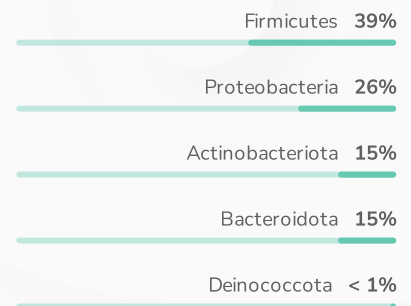
Microbial Population

All the information shown in this microbial report is based on the detected presence of **927** different species.

FUNGAL PHYLUM DISTRIBUTION



BACTERIAL PHYLUM DISTRIBUTION

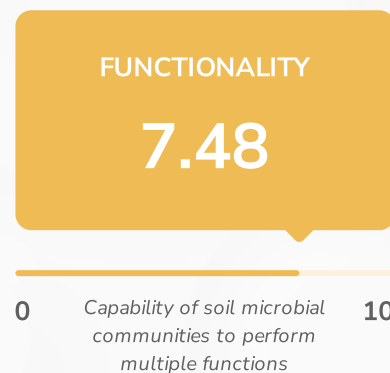
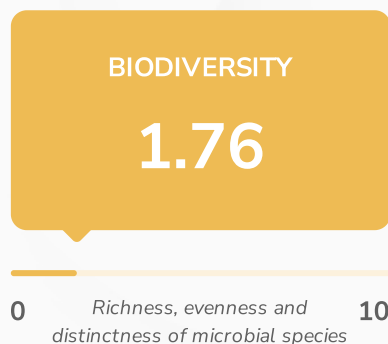


Conclusions

STRENGTHS



Biosustainability



Plant health improvement

Biocontrol agents, plant growth promoting organisms

BIOCONTROL



Microbial species grouped according to the type of pest they encounter, capable of preventing pathogenic species from taking hold or proliferation

Fungicide agents

5%

Insecticide agents

16%

Bactericide agents

NOT DETECTED

Nematicide agents

24%

HORMONE PRODUCTION



Microbial species grouped according to the type of phytohormone they generate

Auxin production (IAA)

CELL DIVISION STEM ELONGATION

38%

Cytokinin production (CK)

CELL PROLIFERATION CELL DIFFERENTIATION

34%

Gibberellin production (GA)

STEM ELONGATION GERMINATION FLOWERING

14%

STRESS ADAPTATION



Microbial species grouped according to their relationship with the metabolisms linked to the capability to withstand stress conditions

Exopolysaccharide production

NUTRIENT TRAP SALINITY PROTECT. DROUGHT PROTECT.

79%

ACC deaminase (ACC-d)

PATHOGEN PROTECT. SALINITY PROTECT. DROUGHT PROTECT.

40%

Heavy metal resistance

BIOREMEDIATION DETOXIFICATION ALLEVIATE HEAVY METAL STRESS

71%

Salicylic acid (SA)

DROUGHT PROTECT. SALINITY PROTECT. ALLEVIATE HEAVY METAL STRESS

NOT DETECTED

Salt tolerance

SALINITY PROTECT. ROOT GROWTH PROMOTION

44%

Absciscic acid (ABA)

GROWTH REGULATION PLANT RESISTANCE INCREASE YIELDS

8%

Siderophore production

IRON AVAILABILITY BIOFERTILIZER

58%

Nutrition

Nutritional status based on the microbial mobilization of certain compounds

MAJOR COMPOUNDS

C Carbon

GAIN

Carbon fixation 20%

LOSS

Aerobic respiration 19%

Fermentation 84%

Methanogenesis 18%

INDIRECT BENEFITS

Organic matter release 45%

N Nitrogen

NUTRIENT SUPPLY

Inorganic nitrogen release 82%

NUTRIENT COMPETITION

Inorganic nitrogen consumption 30%

INDIRECT BENEFITS

Nitrogen cycle 33%

P Phosphorus

NUTRIENT SUPPLY

Inorganic P solubilization 19%

NUTRIENT COMPETITION

Inorganic P consumption 19%

INDIRECT BENEFITS

Organic P assimilation 82%

K Potassium

NUTRIENT SUPPLY

Potassium solubilization 19%

NUTRIENT COMPETITION

Potassium consumption 57%

MINOR COMPOUNDS

Fe Iron
Iron assimilation 17%

Zn Zinc
Zinc transport equilibrium 16%

Mn Manganese
Manganese transport equilibrium 31%

S Sulfur
Sulfur cycle equilibrium 19%

Ca Calcium
Calcium transport 87%

Cu Copper
Copper export 77%

Mg Magnesium
Magnesium transport 81%

Cl Chlorine
Chlorine transport 20%

APPENDIX

Bacterial Quantification 2.0

Methodology

The Next-Gen sequencing in combination with the addition of a known quantity spike-in enables the knowledge of the total microbial load in a sample.

The present analysis relies on the application of a spike-in of our synthetic proprietary DNA sequence in known quantities into crude samples. After the sequencing and data processing, the relative abundance of the exogenous spike-in allows us to extrapolate the original absolute quantity of the 16S copies of the sample species, while knowledge of the number of gene copies per genome in the species allows us to calculate the number of Cells.

Results are expressed in 'cells per gram' or 'cells per milliliter', depending on the sample being a solid or liquid.

1	 <i>Psychrobacter maritimus</i>	2.43e+6
2	 <i>Aerococcus viridans</i>	1.84e+6
3	 <i>Clostridium</i> sp.	1.80e+6
4	 <i>Proteiniphilum</i> sp.	1.78e+6
5	 <i>Mycobacterium kumamotonense</i>	1.71e+6
6	 <i>Lysobacter</i> sp.	1.33e+6
7	 <i>Corynebacterium stationis</i>	1.26e+6
8	 <i>Galbibacter marinus</i>	1.25e+6
9	 <i>Brumimicrobium glaciale</i>	9.99e+5
10	 <i>Pseudomonas</i> sp.	9.62e+5
11	 <i>Dasania</i> sp.	9.55e+5
12	 <i>Halomonas</i> sp.	8.67e+5
13	 <i>Antarcticibacterium</i> sp.	8.57e+5
14	 <i>Luteibacter</i> sp.	8.52e+5
15	 <i>Aestuariicella</i> sp.	7.88e+5
16	 <i>Novosphingobium ginsenosidimutans</i>	7.77e+5
17	 <i>Alcanivorax</i> sp.	7.68e+5
18	 <i>Longilinea</i> sp.	7.08e+5
19	 <i>Staphylococcus equorum</i>	7.05e+5
20	 <i>Salinimicrobium</i> sp.	7.04e+5
21	 <i>Fermentimonas</i> sp.	6.49e+5
22	 <i>Aliifodinibius</i> sp.	6.16e+5
23	 <i>Pedobacter</i> sp.	6.11e+5
24	 <i>Terrisporobacter mayombeii</i>	6.11e+5
25	 <i>Pseudomonas caeni</i>	5.88e+5
26	 <i>Truepera</i> sp.	5.42e+5
27	 <i>Brachybacterium ginsengisoli</i>	5.38e+5
28	 <i>Georgenia satyanarayanai</i>	5.18e+5
29	 <i>Rhodopirellula rubra</i>	5.04e+5
30	 <i>Rhodohalobacter</i> sp.	4.89e+5

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31		<i>Fastidiosipila</i> sp.		4.82e+5
32		<i>Paeniglutamicibacter gangotriensis</i>		4.81e+5
33		<i>Virgibacillus</i> sp.		4.67e+5
34		<i>Sphingorhabdus litoris</i>		4.58e+5
35		<i>Oceanobacillus</i> sp.		4.55e+5
36		<i>Desemzia incerta</i>		4.52e+5
37		<i>Pusillimonas</i> sp.		4.49e+5
38		<i>Halomonas pacifica</i>		4.24e+5
39		<i>Clostridium disporicum</i>		4.20e+5
40		<i>Geofilum rhodophaeum</i>		4.17e+5
41		<i>Ruania</i> sp.		4.12e+5
42		<i>Glutamicibacter bergerei</i>		4.12e+5
43		<i>Methanoculleus palmolei</i>		4.12e+5
44		<i>Brachybacterium paraconglomeratum</i>		4.11e+5
45		<i>Roseovarius</i> sp.		4.03e+5
46		<i>Pseudomonas litoralis</i>		4.01e+5
47		<i>Alcanivorax dieselolei</i>		3.93e+5
48		<i>Parvibaculum</i> sp.		3.65e+5
49		<i>Pseudohongiella</i> sp.		3.55e+5
50		<i>Weissella thailandensis</i>		3.41e+5
51		<i>Alkalibacterium</i> sp.		3.36e+5
52		<i>Flavobacterium</i> sp.		3.16e+5
53		<i>Methanogenium</i> sp.		3.15e+5
54		<i>Vicingus</i> sp.		3.09e+5
55		<i>Haloactinopolyspora</i> sp.		2.82e+5
56		<i>Microbacterium</i> sp.		2.81e+5
57		<i>Fermentimonas caenicola</i>		2.72e+5
58		<i>Altererythrobacter</i> sp.		2.62e+5
59		<i>Brevibacterium</i> sp.		2.62e+5
60		<i>Clostridium ultunense</i>		2.60e+5
61		<i>Novosphingobium</i> sp.		2.58e+5
62		<i>Janibacter cremeus</i>		2.50e+5
63		<i>Hydrogenispora</i> sp.		2.49e+5
64		<i>Leucobacter</i> sp.		2.49e+5
65		<i>Actinomadura</i> sp.		2.43e+5
66		<i>Luteimonas lutimaris</i>		2.40e+5
67		<i>Mycobacterium koreense</i>		2.33e+5
68		<i>Planococcus donghaensis</i>		2.32e+5
69		<i>Idiomarina</i> sp.		2.29e+5
70		<i>Tissierella</i> sp.		2.29e+5
71		<i>Novibacillus thermophilus</i>		2.27e+5
72		<i>Devosia psychrophila</i>		2.22e+5
73		<i>Salinibacterium xinjiangense</i>		2.20e+5
74		<i>Castellaniella</i> sp.		2.19e+5

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75	 Dietzia maris		2.14e+5	97	 Parapedobacter sp.		1.49e+5
76	 Gelidibacter sp.		2.14e+5	98	 Carnobacterium maltaromaticum		1.43e+5
77	 Aequorivita sp.		2.12e+5	99	 Lysobacter defluvii		1.42e+5
78	 Nocardia aciditolerans		2.08e+5	100	 Novosphingobium aquiterrae		1.42e+5
79	 Aliidiomarina sp.		2.07e+5	101	 Gracilimonas sp.		1.41e+5
80	 Brevefilum fermentans		2.07e+5	102	 Dietzia aerolata		1.36e+5
81	 Turicibacter sanguinis		2.05e+5	103	 Brevibacterium avium		1.36e+5
82	 Pusillimonas noertemannii		2.00e+5	104	 Sphaerochaeta sp.		1.33e+5
83	 Microbacterium faecale		1.97e+5	105	 Dyella ginsengisoli		1.32e+5
84	 Salegentibacter sp.		1.95e+5	106	 Romboutsia ilealis		1.27e+5
85	 Fluvicola sp.		1.87e+5	107	 Methanoculleus chikugoensis		1.27e+5
86	 Psychrobacter faecalis		1.76e+5	108	 Cellvibrio sp.		1.23e+5
87	 Sphingopyxis sp.		1.70e+5	109	 Novibacillus sp.		1.21e+5
88	 Methanosaeta sp.		1.67e+5	110	 Rhodopirellula sp.		1.21e+5
89	 Membranicola sp.		1.64e+5	111	 Oceanobacillus halophilus		1.19e+5
90	 Pedobacter silvitoris		1.62e+5	112	 Saccharomonospora viridis		1.17e+5
91	 Marinobacter hydrocarbonoclasticus		1.59e+5	113	 Aequorivita viscosa		1.17e+5
92	 Methanospirillum sp.		1.59e+5	114	 Brumimicrobium sp.		1.17e+5
93	 Arthrobacter sp.		1.57e+5	115	 Paracoccus yeei		1.15e+5
94	 Halocella sp.		1.57e+5	116	 Filomicrobium sp.		1.12e+5
95	 Isoptericola sp.		1.54e+5	117	 Treponema sp.		1.12e+5
96	 Virgibacillus dakarensis		1.53e+5	118	 Luteimonas pelagia		1.08e+5

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119	 <i>Sphingobacterium sp.</i>		1.06e+5
120	 <i>Novosphingobium resinovorum</i>		1.06e+5
121	 <i>Pseudoalteromonas marina</i>		1.05e+5
122	 <i>Pedobacter bauzanensis</i>		1.05e+5
123	 <i>Gillisia limnaea</i>		1.05e+5
124	 <i>Corynebacterium efficiens</i>		1.04e+5
125	 <i>Pricia sp.</i>		1.03e+5
126	 <i>Salinicoccus roseus</i>		1.01e+5
127	 <i>Luteibacter rhizovicius</i>		1.01e+5
128	 <i>Nocardioides sp.</i>		9.78e+4
129	 <i>Corynebacterium variabile</i>		9.54e+4
130	 <i>Steroidobacter sp.</i>		9.50e+4
131	 <i>Sulfurimonas sp.</i>		9.42e+4
132	 <i>Nitrosococcus oceani</i>		9.35e+4
133	 <i>Balneola sp.</i>		9.21e+4
134	 <i>Clostridium butyricum</i>		9.11e+4
135	 <i>Brevundimonas subvibrioides</i>		9.06e+4
136	 <i>Pelagibacterium sp.</i>		9.06e+4
137	 <i>Candidimonas sp.</i>		9.02e+4
138	 <i>Syntrophomonas sp.</i>		9.02e+4
139	 <i>Mycobacterium holsaticum</i>		8.92e+4
140	 <i>Carnobacterium alterfunditum</i>		8.82e+4
141	 <i>Mariniflexile soesokkakense</i>		8.82e+4
142	 <i>Methanosarcina mazei</i>		8.82e+4
143	 <i>Sphaerobacter thermophilus</i>		8.78e+4
144	 <i>Blastopirellula sp.</i>		8.63e+4
145	 <i>Bacillus sp.</i>		8.52e+4
146	 <i>Atopostipes suicloacalis</i>		8.29e+4
147	 <i>Aminobacter sp.</i>		8.25e+4
148	 <i>Luteimonas mephitis</i>		8.20e+4
149	 <i>Actinotalea sp.</i>		8.20e+4
150	 <i>Geofilum rubicundum</i>		8.20e+4
151	 <i>Bacteroides sp.</i>		8.11e+4
152	 <i>Fusobacterium sp.</i>		7.83e+4
153	 <i>Herminiimonas glaciei</i>		7.77e+4
154	 <i>Mycobacterium sp.</i>		7.77e+4
155	 <i>Nakamurella sp.</i>		7.63e+4
156	 <i>Tepidimicrobium sp.</i>		7.58e+4
157	 <i>Leuconostoc mesenteroides</i>		7.55e+4
158	 <i>Proteiniclasticum sp.</i>		7.42e+4
159	 <i>Microbacterium esteraromaticum</i>		7.34e+4
160	 <i>Terrisporobacter sp.</i>		7.02e+4
161	 <i>Jeotgalicoccus psychrophilus</i>		6.96e+4
162	 <i>Rubellimicrobium sp.</i>		6.91e+4

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163		<i>Gracilibacillus dipsosauri</i>		6.91e+4
164		<i>Corynebacterium marinum</i>		6.76e+4
165		<i>Castellaniella fermenti</i>		6.76e+4
166		<i>Marinobacter sp.</i>		6.71e+4
167		<i>Ulvibacter sp.</i>		6.62e+4
168		<i>Aequorivita capsosiphonis</i>		6.47e+4
169		<i>Demequina sp.</i>		6.33e+4
170		<i>Methanoculleus sp.</i>		6.33e+4
171		<i>Constrictibacter sp.</i>		6.33e+4
172		<i>Brevundimonas basaltis</i>		6.33e+4
173		<i>Georgenia sp.</i>		5.95e+4
174		<i>Acholeplasma sp.</i>		5.90e+4
175		<i>Limnochorda sp.</i>		5.90e+4
176		<i>Bacillus gottheilii</i>		5.87e+4
177		<i>Microbacterium oxydans</i>		5.76e+4
178		<i>Luteimonas sp.</i>		5.76e+4
179		<i>Devosia sp.</i>		5.76e+4
180		<i>Paracoccus sp.</i>		5.76e+4
181		<i>Taibaiella sp.</i>		5.76e+4
182		<i>Lentimonas sp.</i>		5.61e+4
183		<i>Methanosphaera sp.</i>		5.61e+4
184		<i>Lactobacillus coryniformis</i>		5.47e+4
185		<i>Sneathiella sp.</i>		5.47e+4
186		<i>Sphingorhabdus sp.</i>		5.47e+4
187		<i>Methanomassiliococcus sp.</i>		5.47e+4
188		<i>Aureimonas populi</i>		5.37e+4
189		<i>Amylolactobacillus sp.</i>		5.35e+4
190		<i>Lentimicrobium sp.</i>		5.32e+4
191		<i>Castellaniella defragrans</i>		5.32e+4
192		<i>Oerskovia sp.</i>		5.32e+4
193		<i>Lysobacter spongiicola</i>		5.32e+4
194		<i>Ornithinibacillus heyuanensis</i>		5.30e+4
195		<i>Ruminococcus sp.</i>		5.25e+4
196		<i>Pseudaminobacter salicylatoxidans</i>		5.18e+4
197		<i>Leucobacter denitrificans</i>		5.18e+4
198		<i>Guyarkeria hydrothermalis</i>		5.18e+4
199		<i>Pedobacter duraquae</i>		5.11e+4
200		<i>Methanoplasma sp.</i>		4.89e+4
201		<i>Mariniphaga sp.</i>		4.89e+4
202		<i>Ornithinimicrobium kibberense</i>		4.89e+4
203		<i>Facklamia sp.</i>		4.82e+4
204		<i>Planifilum sp.</i>		4.75e+4
205		<i>Porphyrobacter sp.</i>		4.75e+4
206		<i>Iamia sp.</i>		4.75e+4

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207	 <i>Propionibacterium freudenreichii</i>		4.75e+4	229	 <i>Prauserella</i> sp.		3.84e+4
208	 <i>Arenibacter</i> sp.		4.70e+4	230	 <i>Timonella</i> sp.		3.74e+4
209	 <i>Thermovirga</i> sp.		4.70e+4	231	 <i>Haloactinobacterium album</i>		3.74e+4
210	 <i>Nitratireductor</i> sp.		4.70e+4	232	 <i>Devosia honganensis</i>		3.74e+4
211	 <i>Anaerosporebacter</i> sp.		4.66e+4	233	 <i>Thermoactinomyces khenchelensis</i>		3.66e+4
212	 <i>Prauserella rugosa</i>		4.60e+4	234	 <i>Paracoccus alcaliphilus</i>		3.64e+4
213	 <i>Glycomyces arizonensis</i>		4.51e+4	235	 <i>Desulphuromonas</i> sp.		3.60e+4
214	 <i>Salinisphaera</i> sp.		4.46e+4	236	 <i>Mycolicibacterium thermoresistibile</i>		3.60e+4
215	 <i>Saccharimonas</i> sp.		4.32e+4	237	 <i>Salinicoccus halodurans</i>		3.53e+4
216	 <i>Gilvimarinus polysaccharolyticus</i>		4.32e+4	238	 <i>Opitutus</i> sp.		3.45e+4
217	 <i>Microbacterium flavescens</i>		4.32e+4	239	 <i>Compostibacillus humi</i>		3.45e+4
218	 <i>Leucobacter salsicius</i>		4.32e+4	240	 <i>Methanothrix soehngenii</i>		3.45e+4
219	 <i>Algoriphagus</i> sp.		4.32e+4	241	 <i>Pseudonocardia carboxydvorans</i>		3.36e+4
220	 <i>Georgenia deserti</i>		4.22e+4	242	 <i>Planifilum composti</i>		3.36e+4
221	 <i>Methanobacterium</i> sp.		4.17e+4	243	 <i>Sedimentibacter</i> sp.		3.33e+4
222	 <i>Mycetocola miduiensis</i>		4.17e+4	244	 <i>Arenimonas</i> sp.		3.31e+4
223	 <i>Pseudomonas xanthomarina</i>		4.10e+4	245	 <i>Rhodanobacter</i> sp.		3.31e+4
224	 <i>Nitrococcus</i> sp.		4.03e+4	246	 <i>Paludibacter</i> sp.		3.26e+4
225	 <i>Nitrobacter winogradskyi</i>		4.03e+4	247	 <i>Psychrobacter</i> sp.		3.24e+4
226	 <i>Verticiella</i> sp.		3.93e+4	248	 <i>Intrasporangium</i> sp.		3.17e+4
227	 <i>Muricauda</i> sp.		3.88e+4	249	 <i>Paenochrobactrum</i> sp.		3.17e+4
228	 <i>Caldicoprobacter</i> sp.		3.86e+4	250	 <i>Pirellula</i> sp.		3.17e+4

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251		<i>Georgenia subflava</i>		3.07e+4
252		<i>Cellvibrio fulvus</i>		3.07e+4
253		<i>Agrococcus baldri</i>		3.02e+4
254		<i>Aeromicrobium marinum</i>		3.02e+4
255		<i>Leucobacter aridicollis</i>		3.02e+4
256		<i>Sanguibacter suarezii</i>		3.02e+4
257		<i>Kroppenstedtia eburnea</i>		2.88e+4
258		<i>Bogoriella</i> sp.		2.88e+4
259		<i>Luteimonas soli</i>		2.88e+4
260		<i>Marivirga</i> sp.		2.88e+4
261		<i>Desulforudis</i> sp.		2.88e+4
262		<i>Woeseia</i> sp.		2.88e+4
263		<i>Nitrososphaera</i> sp.		2.88e+4
264		<i>Aliifodinibius roseus</i>		2.88e+4
265		<i>Nitrobacter</i> sp.		2.88e+4
266		<i>Limnobacter</i> sp.		2.78e+4
267		<i>Fibrobacter</i> sp.		2.78e+4
268		<i>Psychroflexus</i> sp.		2.78e+4
269		<i>Glycomyces</i> sp.		2.78e+4
270		<i>Ornithinimicrobium</i> sp.		2.73e+4
271		<i>Methanobrevibacter</i> sp.		2.73e+4
272		<i>Salagentibacter holothuriorum</i>		2.69e+4
273		<i>Rheinheimera</i> sp.		2.65e+4
274		<i>Desulfatitalea</i> sp.		2.59e+4
275		<i>Devosia terrae</i>		2.59e+4
276		<i>Mesorhizobium</i> sp.		2.59e+4
277		<i>Antricoccus suffuscus</i>		2.59e+4
278		<i>Pontibaca methylaminivorans</i>		2.59e+4
279		<i>Thermocrisum municipale</i>		2.59e+4
280		<i>Paracaligenes</i> sp.		2.59e+4
281		<i>Oceanobacter</i> sp.		2.52e+4
282		<i>Formosa</i> sp.		2.49e+4
283		<i>Parapusillimonas</i> sp.		2.49e+4
284		<i>Pseudaminobacter</i> sp.		2.49e+4
285		<i>Tepidanaerobacter</i> sp.		2.45e+4
286		<i>Brevundimonas</i> sp.		2.45e+4
287		<i>Tomitella cavernea</i>		2.45e+4
288		<i>Olleya marilimosa</i>		2.45e+4
289		<i>Lactobacillus nenjiangensis</i>		2.42e+4
290		<i>Rhizobium</i> sp.		2.40e+4
291		<i>Trichococcus pasteurii</i>		2.30e+4
292		<i>Roseovarius antarcticus</i>		2.30e+4
293		<i>Nitrosococcus</i> sp.		2.30e+4
294		<i>Nitrosomonas</i> sp.		2.30e+4

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295	 <i>Longispora sp.</i>	 2.30e+4
296	 <i>Mariniflexile aquimaris</i>	 2.30e+4
297	 <i>Marinobacter litoralis</i>	 2.30e+4
298	 <i>Paracoccus alkenifer</i>	 2.30e+4
299	 <i>Arachidicoccus ginsenosidivorans</i>	 2.30e+4
300	 <i>Enteractinococcus sp.</i>	 2.23e+4
301	 <i>Gallicola sp.</i>	 2.21e+4
302	 <i>Chryseolinea sp.</i>	 2.21e+4
303	 <i>Mariniradius sp.</i>	 2.21e+4
304	 <i>Actinomyces sp.</i>	 2.21e+4
305	 <i>Thermasporomyces composti</i>	 2.16e+4
306	 <i>Chujaibacter sp.</i>	 2.16e+4
307	 <i>Acholeplasma pleciae</i>	 2.16e+4
308	 <i>Brevundimonas bullata</i>	 2.16e+4
309	 <i>Arsenicitalea sp.</i>	 2.16e+4
310	 <i>Idiomarina zobellii</i>	 2.16e+4
311	 <i>Bavariicoccus seileri</i>	 2.16e+4
312	 <i>Paucislibacillus globulus</i>	 2.11e+4
313	 <i>Gillisia sp.</i>	 2.11e+4
314	 <i>Facklamia tabacinasalis</i>	 2.09e+4
315	 <i>Pedobacter oryzae</i>	 2.09e+4
316	 <i>Haloplasma sp.</i>	 2.06e+4
317	 <i>Bacillus piscicola</i>	 2.05e+4
318	 <i>Methanofastidiosum sp.</i>	 2.01e+4
319	 <i>Hyphomicrobium sp.</i>	 2.01e+4
320	 <i>Methanobrevibacter ruminantium</i>	 2.01e+4
321	 <i>Lutibacter sp.</i>	 2.01e+4
322	 <i>Cryomorpha sp.</i>	 2.01e+4
323	 <i>Pusillimonas caeni</i>	 2.01e+4
324	 <i>Sphingomonas kaistensis</i>	 2.01e+4
325	 <i>Aequorivita sublithincola</i>	 2.01e+4
326	 <i>Rhodococcus sp.</i>	 2.01e+4
327	 <i>Natribacillus sp.</i>	 1.94e+4
328	 <i>Melghirimyces thermohalophilus</i>	 1.94e+4
329	 <i>Methylophaga thiooxydans</i>	 1.92e+4
330	 <i>Cytophaga sp.</i>	 1.92e+4
331	 <i>Alkaliphilus sp.</i>	 1.92e+4
332	 <i>Marinimicrobium sp.</i>	 1.92e+4
333	 <i>Desulfofarcimen sp.</i>	 1.90e+4
334	 <i>Ruminofilibacter xylanolyticum</i>	 1.87e+4
335	 <i>Pseudoclavibacter sp.</i>	 1.87e+4
336	 <i>Tessaracoccus rhinocerotis</i>	 1.87e+4
337	 <i>Methanobrevibacter smithii</i>	 1.87e+4
338	 <i>Egicoccus halophilus</i>	 1.87e+4

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339		<i>Alkalispirochaeta</i> sp.		1.87e+4
340		<i>Rathayibacter oskolensis</i>		1.87e+4
341		<i>Treponema zuelzeri</i>		1.87e+4
342		<i>Anaerocella</i> sp.		1.87e+4
343		<i>Hoeflea phototrophica</i>		1.82e+4
344		<i>Gelidibacter mesophilus</i>		1.82e+4
345		<i>Paenaltcaligenes hominis</i>		1.82e+4
346		<i>Blastococcus aggregatus</i>		1.82e+4
347		<i>Sulfurovum</i> sp.		1.82e+4
348		<i>Thermomonospora curvata</i>		1.80e+4
349		<i>Anaerophaga</i> sp.		1.80e+4
350		<i>Vulgatibacter</i> sp.		1.73e+4
351		<i>Saccharomonospora azurea</i>		1.73e+4
352		<i>Mycolicibacter icosiumassiliensis</i>		1.73e+4
353		<i>Isoptericola salitolerans</i>		1.73e+4
354		<i>Anseongella</i> sp.		1.73e+4
355		<i>Phenylobacterium</i> sp.		1.73e+4
356		<i>Nitrosospora briensis</i>		1.73e+4
357		<i>Guyarkeria</i> sp.		1.73e+4
358		<i>Vicingus serpentipes</i>		1.73e+4
359		<i>Streptomyces thermogriseus</i>		1.73e+4
360		<i>Microbacterium luticocti</i>		1.73e+4
361		<i>Rhodanobacter koreensis</i>		1.73e+4
362		<i>Citricoccus nitrophenolicus</i>		1.73e+4
363		<i>Chryseobacterium</i> sp.		1.68e+4
364		<i>Azoarcus</i> sp.		1.65e+4
365		<i>Glycomyces sediminimaris</i>		1.63e+4
366		<i>Isosphaera</i> sp.		1.63e+4
367		<i>Herbaspirillum rhizosphaerae</i>		1.63e+4
368		<i>Tetragenococcus halophilus</i>		1.61e+4
369		<i>Pseudogracilibacillus endophyticus</i>		1.60e+4
370		<i>Arcticibacter pallidicorallinus</i>		1.58e+4
371		<i>Leuconostoc carnosum</i>		1.58e+4
372		<i>Ponticoccus litoralis</i>		1.58e+4
373		<i>Abditibacterium</i> sp.		1.58e+4
374		<i>Microbacterium humi</i>		1.58e+4
375		<i>Jatrophihabitans</i> sp.		1.58e+4
376		<i>Jeotgalibaca dankookensis</i>		1.53e+4
377		<i>Pseudochrobactrum</i> sp.		1.53e+4
378		<i>Pseudomonas stutzeri</i>		1.51e+4
379		<i>Bacillus oceanisediminis</i>		1.50e+4
380		<i>Bacillus marisflavi</i>		1.49e+4
381		<i>Simplicispira</i> sp.		1.44e+4
382		<i>Aquamicrobium aerolatum</i>		1.44e+4

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383	 <i>Massilia sp.</i>	 1.44e+4	405	 <i>Methanosarcina sp.</i>	 1.34e+4
384	 <i>Agarilytica rhodophyticola</i>	 1.44e+4	406	 <i>Mariniflexile jejuense</i>	 1.34e+4
385	 <i>Chelativorans sp.</i>	 1.44e+4	407	 <i>Candidimonas bauzanensis</i>	 1.34e+4
386	 <i>Falsochrobactrum ovis</i>	 1.44e+4	408	 <i>Gottschalkia sp.</i>	 1.34e+4
387	 <i>Bradymonas sediminis</i>	 1.44e+4	409	 <i>Raoultibacter sp.</i>	 1.34e+4
388	 <i>Pseudarcobacter sp.</i>	 1.44e+4	410	 <i>Sinomicrobium sp.</i>	 1.34e+4
389	 <i>Vibrio rumoiensis</i>	 1.44e+4	411	 <i>Kocuria rosea</i>	 1.34e+4
390	 <i>Chryseobacterium haifense</i>	 1.44e+4	412	 <i>Mesobacillus foraminis</i>	 1.33e+4
391	 <i>Psychrobacter cibarius</i>	 1.44e+4	413	 <i>Rhodanobacter fulvus</i>	 1.30e+4
392	 <i>Microbacterium aurum</i>	 1.44e+4	414	 <i>Ercella sp.</i>	 1.30e+4
393	 <i>Stenotrophobacter sp.</i>	 1.44e+4	415	 <i>Sphingomonas sp.</i>	 1.30e+4
394	 <i>Rubrobacter sp.</i>	 1.44e+4	416	 <i>Staphylococcus arlettae</i>	 1.27e+4
395	 <i>Bradyrhizobium sp.</i>	 1.44e+4	417	 <i>Jeotgalibaca arthritidis</i>	 1.25e+4
396	 <i>Hyphomonas sp.</i>	 1.44e+4	418	 <i>Pseudaminobacter manganicus</i>	 1.25e+4
397	 <i>Thiohalomonas denitrificans</i>	 1.44e+4	419	 <i>Bacillus cytotoxicus</i>	 1.24e+4
398	 <i>Desulfobulbus sp.</i>	 1.44e+4	420	 <i>Flavobacterium ardleyense</i>	 1.23e+4
399	 <i>Tetracoccus cechii</i>	 1.44e+4	421	 <i>Bacillus timonensis</i>	 1.18e+4
400	 <i>Shewanella morhuae</i>	 1.41e+4	422	 <i>Phenylobacterium immobile</i>	 1.15e+4
401	 <i>Saccharopolyspora sp.</i>	 1.38e+4	423	 <i>Parvibaculum lavamentivorans</i>	 1.15e+4
402	 <i>Irregularibacter sp.</i>	 1.38e+4	424	 <i>Luteitalea sp.</i>	 1.15e+4
403	 <i>Virgibacillus halodenitrificans</i>	 1.37e+4	425	 <i>Gemmatimonas sp.</i>	 1.15e+4
404	 <i>Paenibacillus sp.</i>	 1.35e+4	426	 <i>Desulfocapsa sp.</i>	 1.15e+4

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427		<i>Thermobifida fusca</i>		1.15e+4
428		<i>Saccharomonospora saliphila</i>		1.15e+4
429		<i>Salinispora</i> sp.		1.15e+4
430		<i>Saccharofermentans</i> sp.		1.15e+4
431		<i>Thermus thermophilus</i>		1.15e+4
432		<i>Oceanobacillus oncorhynchi</i>		1.15e+4
433		<i>Pelagibacterium luteolum</i>		1.15e+4
434		<i>Leucobacter komagatae</i>		1.15e+4
435		<i>Roseimarinus</i> sp.		1.15e+4
436		<i>Pseudactinotalea terrae</i>		1.15e+4
437		<i>Guggenheimella</i> sp.		1.15e+4
438		<i>Cloacimonas</i> sp.		1.15e+4
439		<i>Pseudonocardia zijingensis</i>		1.06e+4
440		<i>Alcaligenes faecalis</i>		1.06e+4
441		<i>Erysipelothrix</i> sp.		1.04e+4
442		<i>Ottowia</i> sp.		1.01e+4
443		<i>Aeromicrobium</i> sp.		1.01e+4
444		<i>Agrococcus</i> sp.		1.01e+4
445		<i>Methanobrevibacter boviskoreani</i>		1.01e+4
446		<i>Herminiimonas</i> sp.		1.01e+4
447		<i>Planctomicrobium</i> sp.		1.01e+4
448		<i>Pseudactinotalea</i> sp.		1.01e+4
449		<i>Oceanobacillus luteolus</i>		9.87e+3
450		<i>Soehngenia</i> sp.		9.59e+3
451		<i>Anaerosalibacter bizertensis</i>		9.59e+3
452		<i>Marinobacter halophilus</i>		9.59e+3
453		<i>Camelimonas</i> sp.		9.59e+3
454		<i>Thermoactinomyces intermedius</i>		9.46e+3
455		<i>Idiomarina homiensis</i>		9.35e+3
456		<i>Anaerophaga thermohalophila</i>		9.35e+3
457		<i>Nocardiopsis alkaliphila</i>		9.21e+3
458		<i>Pseudomonas fluorescens</i>		9.11e+3
459		<i>Solimonas</i> sp.		8.63e+3
460		<i>Brevundimonas intermedia</i>		8.63e+3
461		<i>Ornithinococcus hortensis</i>		8.63e+3
462		<i>Luteimonas terricola</i>		8.63e+3
463		<i>Thiobacillus thiophilus</i>		8.63e+3
464		<i>Advenella</i> sp.		8.63e+3
465		<i>Bauldia</i> sp.		8.63e+3
466		<i>Advenella faeciporci</i>		8.63e+3
467		<i>Nocardiopsis</i> sp.		8.63e+3
468		<i>Paeniglutamibacter antarcticus</i>		8.63e+3
469		<i>Aquamicrobium</i> sp.		8.63e+3
470		<i>Nitrosocosmicus oleophilus</i>		8.63e+3

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471	Melioribacter sp.	8.63e+3	493	Winogradskyella echinorum	7.67e+3
472	Tepidicaulis sp.	8.63e+3	494	Methylophaga frappieri	7.67e+3
473	Methylorubrum extorquens	8.63e+3	495	Nocardia rhamnosiphila	7.67e+3
474	Flexilinea sp.	8.63e+3	496	Mucilaginibacter sp.	7.67e+3
475	Legionella sp.	8.63e+3	497	Salegentibacter mishustinae	7.67e+3
476	Desulfitibacter sp.	8.63e+3	498	Marinospirillum minutulum	7.48e+3
477	Halomonas meridiana	8.63e+3	499	Oceanobacillus timonensis	7.40e+3
478	Macellibacteroides sp.	8.63e+3	500	Oceanobacillus caeni	7.40e+3
479	Nitratireductor aquibiodomus	8.63e+3	501	Desulfosporosinus sp.	7.35e+3
480	Nitrosomonas eutropha	8.63e+3	502	Mesorhizobium thiogangneticum	7.19e+3
481	Sulfuricaulis limicola	8.63e+3	503	Changchengzhania sp.	7.19e+3
482	Marinomonas primoryensis	8.27e+3	504	Gimesia maris	7.19e+3
483	Acinetobacter sp.	8.15e+3	505	Rhizorhapis sp.	7.19e+3
484	Lactobacillus vaccinnostercus	8.06e+3	506	Microbacterium lacticum	7.19e+3
485	Aerococcus sp.	7.91e+3	507	Acholeplasma laidlawii	7.19e+3
486	Moheibacter sp.	7.91e+3	508	Brevundimonas variabilis	7.19e+3
487	Anaerovorax sp.	7.91e+3	509	Thioalkalimicrobium sp.	7.19e+3
488	Oceanobacillus indicireducens	7.81e+3	510	Lactobacillus oryzae	7.19e+3
489	Legionella nautarum	7.67e+3	511	Crocinitomix sp.	7.19e+3
490	Glycomyces albus	7.67e+3	512	Sandaracinus sp.	7.19e+3
491	Thermopolyspora flexuosa	7.67e+3	513	Pedobacter lignilitoris	7.19e+3
492	Methylophaga muralis	7.67e+3	514	Herbinix sp.	7.19e+3

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515		<i>Pseudomonas bauzanensis</i>		7.19e+3
516		<i>Methanocorpusculum</i> sp.		6.72e+3
517		<i>Dietzia cinnamea</i>		6.72e+3
518		<i>Tepidimicrobium ferriphilum</i>		6.72e+3
519		<i>Imperialibacter</i> sp.		6.72e+3
520		<i>Confluentibacter citreus</i>		6.72e+3
521		<i>Gordonia terrae</i>		6.72e+3
522		<i>Methylophaga</i> sp.		6.72e+3
523		<i>Sphingomonas agrestis</i>		6.72e+3
524		<i>Lacibacter</i> sp.		6.72e+3
525		<i>Pseudogracilibacillus marinus</i>		6.72e+3
526		<i>Lactobacillus acidipiscis</i>		6.71e+3
527		<i>Massilia varians</i>		6.58e+3
528		<i>Oceanobacillus picturae</i>		6.58e+3
529		<i>Psychrobacter cryohalolentis</i>		6.48e+3
530		<i>Clostridium bornimense</i>		6.48e+3
531		<i>Mobilitalea</i> sp.		6.33e+3
532		<i>Alkalibacterium iburiense</i>		6.33e+3
533		<i>Thiopseudomonas</i> sp.		6.33e+3
534		<i>Trichococcus</i> sp.		6.33e+3
535		<i>Nocardiopsis chromatogenes</i>		6.33e+3
536		<i>Lacticigenium naphthae</i>		6.33e+3
537		<i>Anaerocolumna</i> sp.		6.23e+3
538		<i>Enterococcus timonensis</i>		6.23e+3
539		<i>Flavobacterium qiangtangense</i>		6.17e+3
540		<i>Sumerlaea</i> sp.		5.76e+3
541		<i>Nitriliruptor</i> sp.		5.76e+3
542		<i>Nocardioides jensenii</i>		5.76e+3
543		<i>Nocardioides kribbensis</i>		5.76e+3
544		<i>Mogibacterium</i> sp.		5.76e+3
545		<i>Oligella</i> sp.		5.76e+3
546		<i>Methanosarcina thermophila</i>		5.76e+3
547		<i>Meiothermus ruber</i>		5.76e+3
548		<i>Marinobacter piscensis</i>		5.76e+3
549		<i>Marinilutecoccus</i> sp.		5.76e+3
550		<i>Lysobacter soli</i>		5.76e+3
551		<i>Luteimonas arsenica</i>		5.76e+3
552		<i>Peredibacter</i> sp.		5.76e+3
553		<i>Iodidimonas</i> sp.		5.76e+3
554		<i>Pusillimonas ginsengisoli</i>		5.76e+3
555		<i>Eoetvoesia caeni</i>		5.76e+3
556		<i>Rhodoplanes</i> sp.		5.76e+3
557		<i>Congobacterium massiliense</i>		5.76e+3
558		<i>Saliterribacillus persicus</i>		5.76e+3

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559	 <i>Caulobacter</i> sp.	 5.76e+3
560	 <i>Brevundimonas olei</i>	 5.76e+3
561	 <i>Stackebrandtia endophytica</i>	 5.76e+3
562	 <i>Bizionia hallyeonensis</i>	 5.76e+3
563	 <i>Streptomyces</i> sp.	 5.76e+3
564	 <i>Nitrolancea hollandica</i>	 5.76e+3
565	 <i>Sunxiuqinia dokdonensis</i>	 5.76e+3
566	 <i>Thermostaphylospora chromogena</i>	 5.76e+3
567	 <i>Aeromicrobium panaciterrae</i>	 5.76e+3
568	 <i>Aequorivita echinoideorum</i>	 5.76e+3
569	 <i>Cellulomonas</i> sp.	 5.76e+3
570	 <i>Nitrosocosmicus</i> sp.	 5.76e+3
571	 <i>Bacteroides graminisolvens</i>	 5.76e+3
572	 <i>Microvirga lotononidis</i>	 5.76e+3
573	 <i>Oceanisphaera</i> sp.	 5.76e+3
574	 <i>Desulforhopalus</i> sp.	 5.76e+3
575	 <i>Idiomarina indica</i>	 5.76e+3
576	 <i>Pedobacter daechungensis</i>	 5.76e+3
577	 <i>Halarcobacter</i> sp.	 5.76e+3
578	 <i>Dethiobacter</i> sp.	 5.76e+3
579	 <i>Cytobacillus firmus</i>	 5.47e+3
580	 <i>Intestinibacter</i> sp.	 5.47e+3
581	 <i>Bacillus subterraneus</i>	 5.18e+3
582	 <i>Pseudogracilibacillus</i> sp.	 5.12e+3
583	 <i>Enterococcus faecalis</i>	 5.04e+3
584	 <i>Caldanaerobacter subterraneus</i>	 5.04e+3
585	 <i>Cryptanaerobacter phenolicus</i>	 5.04e+3
586	 <i>Cellulosilyticum</i> sp.	 4.97e+3
587	 <i>Virgibacillus halotolerans</i>	 4.93e+3
588	 <i>Flavobacterium noncentrifugens</i>	 4.93e+3
589	 <i>Roseivirga ehrenbergii</i>	 4.80e+3
590	 <i>Gracilibacillus</i> sp.	 4.80e+3
591	 <i>Marinagarivorans</i> sp.	 4.80e+3
592	 <i>Lentibacillus salinarum</i>	 4.80e+3
593	 <i>Myroides</i> sp.	 4.80e+3
594	 <i>Blastococcus saxobsidens</i>	 4.80e+3
595	 <i>Sphingobium</i> sp.	 4.80e+3
596	 <i>Fulvivirga</i> sp.	 4.80e+3
597	 <i>Atopococcus</i> sp.	 4.60e+3
598	 <i>Oceanobacillus profundus</i>	 4.52e+3
599	 <i>Sarcina ventriculi</i>	 4.48e+3
600	 <i>Amphibacillus indicireducens</i>	 4.32e+3
601	 <i>Rufibacter immobilis</i>	 4.32e+3
602	 <i>Bacillus seohaeanensis</i>	 4.32e+3

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603	Jeotgalibaca sp.	4.32e+3	625	Nocardiopsis listeri	4.03e+3
604	Lachnoclostridium sp.	4.32e+3	626	Lactobacillus allii	4.03e+3
605	Brevibacterium hankyongi	4.32e+3	627	Ruminiclostridium sp.	3.96e+3
606	Brevibacterium senegalense	4.32e+3	628	Thiomicrothabodus chilensis	3.84e+3
607	Microbacterium koreense	4.32e+3	629	Anaerobaculum sp.	3.84e+3
608	Meniscus sp.	4.32e+3	630	Mucilaginibacter angelicae	3.84e+3
609	Petrimonas sp.	4.32e+3	631	Oxalicibacterium sp.	3.84e+3
610	Pseudorhodobacter aquimaris	4.32e+3	632	Promicromonospora sp.	3.84e+3
611	Deferrimonas sp.	4.32e+3	633	Nocardia paucivorans	3.84e+3
612	Pelagicoccus sp.	4.32e+3	634	Tianweitania sp.	3.84e+3
613	Propionimicrobium sp.	4.32e+3	635	Persicitalea sp.	3.84e+3
614	Dokdonella sp.	4.32e+3	636	Georgenia muralis	3.84e+3
615	Nordella sp.	4.32e+3	637	Cellulosimicrobium cellulans	3.84e+3
616	Wandonia haliotis	4.32e+3	638	Modestobacter sp.	3.84e+3
617	Leucobacter chromiirens	4.32e+3	639	Luteolibacter algae	3.84e+3
618	Pseudolabrys sp.	4.32e+3	640	Lentibacillus sp.	3.84e+3
619	Saccharophagus sp.	4.32e+3	641	Nonomuraea flavidia	3.84e+3
620	Microbacterium gubbeenense	4.32e+3	642	Streptomyces sparsus	3.84e+3
621	Oxalobacter sp.	4.32e+3	643	Corynebacterium testudinoris	3.60e+3
622	Flavobacterium ovatum	4.11e+3	644	Paracraurococcus ruber	3.60e+3
623	Garcilla nitrareducens	4.03e+3	645	Thermocrispum agreste	3.60e+3
624	Atopostipes sp.	4.03e+3	646	Ruminofilibacter sp.	3.60e+3

Results are expressed in 'cells per gram' or 'cells per milliliter', depending on the sample being a solid or liquid.

647		<i>Desemzia</i> sp.		3.45e+3	669		<i>Sporotomaculum syntrophicum</i>		2.88e+3
648		<i>Bacillus infernus</i>		3.45e+3	670		<i>Zhongshania</i> sp.		2.88e+3
649		<i>Glutamicibacter</i> sp.		3.36e+3	671		<i>Paenalcigenes suwonensis</i>		2.88e+3
650		<i>Flavobacterium micromati</i>		3.29e+3	672		<i>Sulfurovum aggregans</i>		2.88e+3
651		<i>Flavobacterium flevense</i>		3.29e+3	673		<i>Arachidicoccus</i> sp.		2.88e+3
652		<i>Planococcus ruber</i>		3.20e+3	674		<i>Methanosarcina flavescens</i>		2.88e+3
653		<i>Natronococcus xinjiangense</i>		2.88e+3	675		<i>Alkaliflexus</i> sp.		2.88e+3
654		<i>Planifilum fulgidum</i>		2.88e+3	676		<i>Tissierella creatinophila</i>		2.88e+3
655		<i>Glutamicibacter nicotianae</i>		2.88e+3	677		<i>Microterricola viridarii</i>		2.88e+3
656		<i>Lentibacillus amyloliquefaciens</i>		2.88e+3	678		<i>Virgibacillus dokdonensis</i>		2.88e+3
657		<i>Dietzia</i> sp.		2.88e+3	679		<i>Pontibacter roseus</i>		2.88e+3
658		<i>Ruania albidiflava</i>		2.88e+3	680		<i>Acetobacterium</i> sp.		2.88e+3
659		<i>Deinococcus ficus</i>		2.88e+3	681		<i>Clostridium perfringens</i>		2.88e+3
660		<i>Corynebacterium xerosis</i>		2.88e+3	682		<i>Limosilactobacillus</i> sp.		2.88e+3
661		<i>Corynebacterium</i> sp.		2.88e+3	683		<i>Desulfosporosinus youngiae</i>		2.56e+3
662		<i>Corynebacterium humireducens</i>		2.88e+3	684		<i>Thalassobacillus devorans</i>		2.56e+3
663		<i>Salinimicrobium gaetbulicola</i>		2.88e+3	685		<i>Planococcus</i> sp.		2.56e+3
664		<i>Chryseobacterium antarcticum</i>		2.88e+3	686		<i>Flavobacterium succinicans</i>		2.47e+3
665		<i>Caldalkalibacillus</i> sp.		2.88e+3	687		<i>Flavobacterium marinum</i>		2.47e+3
666		<i>Paeniglutamicibacter sulfureus</i>		2.88e+3	688		<i>Symbiobacterium thermophilum</i>		2.40e+3
667		<i>Bizionia myxarmorum</i>		2.88e+3	689		<i>Faecalibacterium</i> sp.		2.40e+3
668		<i>Sporosarcina ureae</i>		2.88e+3	690		<i>Enterococcus diestrammenae</i>		2.40e+3

Results are expressed in 'cells per gram' or 'cells per milliliter', depending on the sample being a solid or liquid.

691		<i>Planifilum fimeticola</i>		2.40e+3	713		<i>Myroides odoratimimus</i>		1.92e+3
692		<i>Nonomurea</i> sp.		2.40e+3	714		<i>Gracilibacillus halotolerans</i>		1.92e+3
693		<i>Streptococcus gallolyticus</i>		2.40e+3	715		<i>Malacobacter neptunis</i>		1.92e+3
694		<i>Halomonas cerina</i>		2.40e+3	716		<i>Gracilibacillus saliphilus</i>		1.92e+3
695		<i>Lutispora</i> sp.		2.30e+3	717		<i>Alteribacillus iranensis</i>		1.80e+3
696		<i>Lactobacillus concavus</i>		2.30e+3	718		<i>Ammoniibacillus agariperforans</i>		1.80e+3
697		<i>Acetobacterium bakii</i>		2.30e+3	719		<i>Epulopiscium</i> sp.		1.73e+3
698		<i>Agathobacter</i> sp.		2.30e+3	720		<i>Quasibacillus thermotolerans</i>		1.73e+3
699		<i>Marinilactibacillus piezotolerans</i>		2.30e+3	721		<i>Prevotella copri</i>		1.73e+3
700		<i>Rhabdanaerobium thermarum</i>		2.30e+3	722		<i>Thiopseudomonas denitrificans</i>		1.73e+3
701		<i>Rheinheimera salexigens</i>		2.30e+3	723		<i>Bacillus acidicola</i>		1.73e+3
702		<i>Massilibacterium senegalense</i>		2.30e+3	724		<i>Arcobacter cryaerophilus</i>		1.73e+3
703		<i>Anaerostipes</i> sp.		2.16e+3	725		<i>Tetragenococcus koreensis</i>		1.73e+3
704		<i>Parabacteroides chartae</i>		2.16e+3	726		<i>Coproccoccus</i> sp.		1.73e+3
705		<i>Angustibacter</i> sp.		2.16e+3	727		<i>Flavobacterium xinjiangense</i>		1.65e+3
706		<i>Rhodococcus gordoniae</i>		2.16e+3	728		<i>Providencia rettgeri</i>		1.65e+3
707		<i>Clostridium estertheticum</i>		2.16e+3	729		<i>Aeribacillus pallidus</i>		1.65e+3
708		<i>Pontibacter</i> sp.		2.16e+3	730		<i>Sinibacillus</i> sp.		1.60e+3
709		<i>Thermoactinomyces vulgaris</i>		2.06e+3	731		<i>Bacillus circulans</i>		1.57e+3
710		<i>Psychrobacter urativorans</i>		1.92e+3	732		<i>Bacillus fordii</i>		1.44e+3
711		<i>Symbiobacterium</i> sp.		1.92e+3	733		<i>Bacillus graminis</i>		1.44e+3
712		<i>Carnobacterium mobile</i>		1.92e+3	734		<i>Desulfitobacterium dichloroeliminans</i>		1.44e+3

Results are expressed in 'cells per gram' or 'cells per milliliter', depending on the sample being a solid or liquid.

735		<i>Ammoniphilus sp.</i>		1.44e+3
736		<i>Enterococcus faecium</i>		1.44e+3
737		<i>Janthinobacterium lividum</i>		1.44e+3
738		<i>Bacillus andresenii</i>		1.44e+3
739		<i>Virgibacillus oceani</i>		1.23e+3
740		<i>Massilia oculi</i>		1.23e+3
741		<i>Oceanobacillus chironomi</i>		1.23e+3
742		<i>Bacillus persicus</i>		1.15e+3
743		<i>Bacillus endophyticus</i>		1.15e+3
744		<i>Oceanisphaera marina</i>		1.08e+3
745		<i>Oceanisphaera profunda</i>		1.08e+3
746		<i>Turicibacter sp.</i>		1.08e+3
747		<i>Shewanella putrefaciens</i>		1.08e+3
748		<i>Singulisphaera sp.</i>		1.08e+3
749		<i>Youngiibacter sp.</i>		9.59e+2
750		<i>Lysinibacillus sp.</i>		9.59e+2
751		<i>Metabacillus niabensis</i>		7.57e+2

Notes



Species belonging to a genus present in the CDFA Approved Microorganisms List



Species present in the CDFA Approved Microorganisms List

APPENDIX

Fungi Quantification 2.0

The Next-Gen sequencing in combination with the addition of a known quantity spike-in enables the knowledge of the total microbial load in a sample. The present analysis relies on the application of a spike-in of our synthetic proprietary DNA sequence in known quantities into crude samples. After the sequencing and data processing, the relative abundance of the exogenous spike-in allows us to extrapolate the original absolute quantity of the ITS copies of the sample species. NOTE: number of cells cannot be provided for Fungi due to many factors including very limited knowledge of ITS copies per genome, ploidy variations, pluricellularity, etc.

Results are expressed in 'ITS copies per gram' or 'ITS copies per milliliter', depending on the sample being a solid or liquid.

#	Genus & Species	Percentage	Copies	#	Genus & Species	Percentage	Copies
1	 <i>Debaryomyces hansenii</i>	48.82%	~ 2 Mill.	18	 <i>Chrysosporium synchronum</i>	0.6163%	36,507
2	 <i>Candida saitoana</i>	9.12%	540,133	19	 <i>Penicillium sp.</i>	0.6109%	36,187
3	 <i>Thelebolus globosus</i>	4.21%	249,533	20	 <i>Acremonium sclerotigenum</i>	0.5285%	31,307
4	 <i>Pseudogymnoascus roseus</i>	3.58%	211,980	21	 <i>Pythium sp.</i>	0.4770%	28,253
5	 <i>Scopulariopsis candida</i>	3.37%	199,800	22	 <i>Gymnascella littoralis</i>	0.4520%	26,767
6	 <i>Leucocoprinus birnbaumii</i>	3.04%	179,860	23	 <i>Pseudothielavia terricola</i>	0.4436%	26,273
7	 <i>Scopulariopsis brevicaulis</i>	2.54%	150,707	24	 <i>Gymnascella aurantiaca</i>	0.4171%	24,707
8	 <i>Penicillium chrysogenum</i>	2.28%	135,333	25	 <i>Circinella muscae</i>	0.3916%	23,193
9	 <i>Aspergillus ruber</i>	1.74%	102,980	26	 <i>Thermomyces stellatus</i>	0.3896%	23,080
10	 <i>Aspergillus chlamydosporus</i>	1.67%	98,620	27	 <i>Cleistothelobolus nipigonensis</i>	0.3675%	21,773
11	 <i>Chrysosporium merdarium</i>	1.45%	86,180	28	 <i>Aspergillus sp.</i>	0.3464%	20,520
12	 <i>Leucoagaricus meleagris</i>	1.05%	62,373	29	 <i>Arachniotus dankaliensis</i>	0.2993%	17,733
13	 <i>Mrakia frigida</i>	0.9594%	56,827	30	 <i>Penicillium pimateouiense</i>	0.2925%	17,327
14	 <i>Microascus verrucosus</i>	0.9172%	54,327	31	 <i>Solicocozyma terrea</i>	0.2478%	14,680
15	 <i>Penicillium commune</i>	0.7945%	47,060	32	 <i>Mortierella rishikesha</i>	0.2463%	14,593
16	 <i>Circinella chinensis</i>	0.7346%	43,513	33	 <i>Aspergillus rugulosus</i>	0.2243%	13,280
17	 <i>Aspergillus candidus</i>	0.6728%	39,847	34	 <i>Alternaria eichhorniae</i>	0.2198%	13,020

Relative Fungal Abundance

Results are expressed in 'ITS copies per gram' or 'ITS copies per milliliter', depending on the sample being a solid or liquid.

#	Genus & Species	Percentage	Copies	#	Genus & Species	Percentage	Copies
35	 <i>Mortierella sarnyensis</i>	 0.2081%	12,327	55	 <i>Humicola nigrescens</i>	 0.0898%	5,320
36	 <i>Heydenia alpina</i>	 0.2056%	12,180	56	 <i>Candida glabosa</i>	 0.0854%	5,060
37	 <i>Solicoccozyma aeria</i>	 0.1953%	11,567	57	 <i>Acrophialophora levis</i>	 0.0854%	5,060
38	 <i>Cladosporium herbarum</i>	 0.1737%	10,287	58	 <i>Fusarium oxysporum</i>	 0.0805%	4,767
39	 <i>Purpureocillium lilacinum</i>	 0.1649%	9,767	59	 <i>Aspergillus sydowii</i>	 0.0795%	4,707
40	 <i>Eustigmatos sp.</i>	 0.1536%	9,100	60	 <i>Xeromyces bisporus</i>	 0.0790%	4,680
41	 <i>Schizothecium curvisporum</i>	 0.1497%	8,867	61	 <i>Cystofilobasidium macerans</i>	 0.0770%	4,567
42	 <i>Aspergillus subversicolor</i>	 0.1487%	8,807	62	 <i>Aspergillus penicillioides</i>	 0.0741%	4,387
43	 <i>Talaromyces purpureogenus</i>	 0.1408%	8,340	63	 <i>Basipetospora sp.</i>	 0.0702%	4,153
44	 <i>Mortierella sp.</i>	 0.1389%	8,227	64	 <i>Stemphylium vesicarium</i>	 0.0692%	4,100
45	 <i>Chrysosporium pseudomerdarii...</i>	 0.1315%	7,787	65	 <i>Umbelopsis vinacea</i>	 0.0682%	4,040
46	 <i>Globisporangium splendens</i>	 0.1286%	7,613	66	 <i>Phallus rugulosus</i>	 0.0677%	4,013
47	 <i>Mortierella alpina</i>	 0.1134%	6,713	67	 <i>Penicillium simplicissimum</i>	 0.0658%	3,893
48	 <i>Pythium torulosum</i>	 0.1119%	6,627	68	 <i>Talaromyces tiftonensis</i>	 0.0643%	3,807
49	 <i>Magnaporthiopsis sp.</i>	 0.1060%	6,280	69	 <i>Pyrenochaetopsis leptospora</i>	 0.0623%	3,693
50	 <i>Lagenidium sp.</i>	 0.1040%	6,160	70	 <i>Chaetomium globosum</i>	 0.0623%	3,693
51	 <i>Globisporangium sp.</i>	 0.0981%	5,813	71	 <i>Mortierella elongata</i>	 0.0589%	3,487
52	 <i>Naganishia albida</i>	 0.0908%	5,380	72	 <i>Westerdykella cylindrica</i>	 0.0589%	3,487
53	 <i>Holtermanniella takashimae</i>	 0.0908%	5,380	73	 <i>Talaromyces sp.</i>	 0.0559%	3,313
54	 <i>Acremonium charticola</i>	 0.0898%	5,320	74	 <i>Aspergillus canadensis</i>	 0.0555%	3,287

Relative Fungal Abundance

Results are expressed in 'ITS copies per gram' or 'ITS copies per milliliter', depending on the sample being a solid or liquid.

#	Genus & Species	Percentage	Copies	#	Genus & Species	Percentage	Copies
75	 <i>Gibellulopsis serrae</i>	 0.0550%	3,253	95	 <i>Aspergillus caninus</i>	 0.0339%	2,007
76	 <i>Mortierella exigua</i>	 0.0550%	3,253	96	 <i>Penicillium polonicum</i>	 0.0329%	1,947
77	 <i>Penicillium gossypii</i>	 0.0530%	3,140	97	 <i>Filobasidium magnum</i>	 0.0329%	1,947
78	 <i>Globisporangium ultimum</i>	 0.0510%	3,020	98	 <i>Candelaria pacifica</i>	 0.0324%	1,920
79	 <i>Mortierella hyalina</i>	 0.0510%	3,020	99	 <i>Epicoccum thailandicum</i>	 0.0324%	1,920
80	 <i>Gliomastix murorum</i>	 0.0486%	2,880	100	 <i>Mortierella minutissima</i>	 0.0319%	1,887
81	 <i>Gymnoascus udagawae</i>	 0.0486%	2,880	101	 <i>Setophoma terrestris</i>	 0.0304%	1,800
82	 <i>Chrysosporium vallenarense</i>	 0.0471%	2,793	102	 <i>Malbranchea cinnamomea</i>	 0.0304%	1,800
83	 <i>Thermomyces dupontii</i>	 0.0471%	2,793	103	 <i>Pseudeurotium hygrophilum</i>	 0.0299%	1,773
84	 <i>Debaryomyces sp.</i>	 0.0466%	2,760	104	 <i>Stephanonectria keithii</i>	 0.0285%	1,687
85	 <i>Byssoschlamys sp.</i>	 0.0451%	2,673	105	 <i>Cystofilobasidium infirmominia...</i>	 0.0280%	1,660
86	 <i>Botryotrichum murorum</i>	 0.0451%	2,673	106	 <i>Hapsidospora irregularis</i>	 0.0270%	1,600
87	 <i>Aspergillus terreus</i>	 0.0432%	2,560	107	 <i>Podospora bulbillosa</i>	 0.0265%	1,567
88	 <i>Wallemia sebi</i>	 0.0422%	2,500	108	 <i>Tomentella sp.</i>	 0.0265%	1,567
89	 <i>Humicola fuscoatra</i>	 0.0412%	2,440	109	 <i>Neurospora terricola</i>	 0.0260%	1,540
90	 <i>Pithoascus ater</i>	 0.0388%	2,293	110	 <i>Globisporangium heterothallic...</i>	 0.0260%	1,540
91	 <i>Chrysosporium lobatum</i>	 0.0368%	2,180	111	 <i>Acremonium sp.</i>	 0.0255%	1,513
92	 <i>Chaetomium madrasense</i>	 0.0358%	2,120	112	 <i>Lipomyces spencermartinsiae</i>	 0.0255%	1,513
93	 <i>Sclerotinia sclerotiorum</i>	 0.0348%	2,067	113	 <i>Arachnomyces pilosus</i>	 0.0250%	1,480
94	 <i>Phoma omnivirens</i>	 0.0344%	2,033	114	 <i>Lophotrichus fimeti</i>	 0.0250%	1,480

Relative Fungal Abundance

Results are expressed in 'ITS copies per gram' or 'ITS copies per milliliter', depending on the sample being a solid or liquid.

#	Genus & Species	Percentage	Copies	#	Genus & Species	Percentage	Copies
115	 <i>Mortierella wolfii</i>	 0.0245%	1,453	135	 <i>Knufia</i> sp.	 0.0162%	960
116	 <i>Emericellopsis minima</i>	 0.0245%	1,453	136	 <i>Trichoderma asperellum</i>	 0.0162%	960
117	 <i>Dendryphiella</i> sp.	 0.0236%	1,393	137	 <i>Scopulariopsis sphaerospora</i>	 0.0157%	933
118	 <i>Fusarium solani</i>	 0.0236%	1,393	138	 <i>Gymnoascus</i> sp.	 0.0157%	933
119	 <i>Cladosporium</i> sp.	 0.0226%	1,340	139	 <i>Chordomyces antarcticus</i>	 0.0152%	900
120	 <i>Penicillium brevicompactum</i>	 0.0221%	1,307	140	 <i>Microascus melanosporus</i>	 0.0147%	873
121	 <i>Chaetomium thermophilum</i>	 0.0216%	1,280	141	 <i>Cadophora luteo-olivacea</i>	 0.0137%	813
122	 <i>Helicoma</i> sp.	 0.0216%	1,280	142	 <i>Tausonia pullulans</i>	 0.0132%	787
123	 <i>Vishniacozyma victoriae</i>	 0.0206%	1,220	143	 <i>Fusarium equiseti</i>	 0.0128%	753
124	 <i>Mortierella indohii</i>	 0.0196%	1,160	144	 <i>Arachnomyces kanei</i>	 0.0128%	753
125	 <i>Athelia bombacina</i>	 0.0196%	1,160	145	 <i>Juncaceicola dactylidis</i>	 0.0123%	727
126	 <i>Fusarium brachygibbosum</i>	 0.0196%	1,160	146	 <i>Mucor circinelloides</i>	 0.0123%	727
127	 <i>Knufia tsunedae</i>	 0.0191%	1,133	147	 <i>Penicillium nepalense</i>	 0.0123%	727
128	 <i>Penicillium levitum</i>	 0.0191%	1,133	148	 <i>Penicillium freii</i>	 0.0123%	727
129	 <i>Aspergillus niger</i>	 0.0191%	1,133	149	 <i>Acaulium acremonium</i>	 0.0123%	727
130	 <i>Cystobasidium pallidum</i>	 0.0186%	1,107	150	 <i>Petriella</i> sp.	 0.0118%	700
131	 <i>Ascochyta medicaginicola</i>	 0.0182%	1,073	151	 <i>Thermomyces lanuginosus</i>	 0.0113%	667
132	 <i>Scutellinia</i> sp.	 0.0177%	1,047	152	 <i>Lipomyces lipofer</i>	 0.0113%	667
133	 <i>Torulaspora delbrueckii</i>	 0.0172%	1,020	153	 <i>Udeniomyces puniceus</i>	 0.0108%	640
134	 <i>Mucor fuscus</i>	 0.0172%	1,020	154	 <i>Wickerhamomyces anomalus</i>	 0.0103%	613

Relative Fungal Abundance

Results are expressed in 'ITS copies per gram' or 'ITS copies per milliliter', depending on the sample being a solid or liquid.

#	Genus & Species	Percentage	Copies	#	Genus & Species	Percentage	Copies
155	 <i>Scedosporium boydii</i>	 0.0103%	613	175	 <i>Sporendonema casei</i>	 0.0054%	320
156	 <i>Exophiala equina</i>	 0.0103%	613	176	 <i>Tetracladium sp.</i>	 0.0054%	320
157	 <i>Penicillium paneum</i>	 0.0098%	580	Notes  Species belonging to a genus present in the CDFA Approved Microorganisms List  Species present in the CDFA Approved Microorganisms List			
158	 <i>Acremonium chrysogenum</i>	 0.0098%	580				
159	 <i>Vishniacozyma carnescens</i>	 0.0088%	520				
160	 <i>Mortierella capitata</i>	 0.0088%	520				
161	 <i>Oidiodendron sp.</i>	 0.0083%	493				
162	 <i>Candida tropicalis</i>	 0.0079%	467				
163	 <i>Trichosporiella cerebriiformis</i>	 0.0079%	467				
164	 <i>Leptosphaeria sclerotioides</i>	 0.0079%	467				
165	 <i>Aspergillus fumigatiaffinis</i>	 0.0079%	467				
166	 <i>Acremonium restrictum</i>	 0.0074%	433				
167	 <i>Actinomucor elegans</i>	 0.0074%	433				
168	 <i>Alternaria metachromatica</i>	 0.0074%	433				
169	 <i>Subulicystidium perlongisporum</i>	 0.0064%	380				
170	 <i>Sebacina sp.</i>	 0.0064%	380				
171	 <i>Sphaerosporium equinum</i>	 0.0064%	380				
172	 <i>Melanocarpus albomyces</i>	 0.0059%	347				
173	 <i>Penicillium solitum</i>	 0.0054%	320				
174	 <i>Scopulariopsis koningii</i>	 0.0054%	320				

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