

Microbiome Analysis Report

LONG PILE

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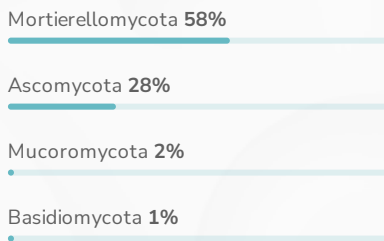
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14-Mar-2023

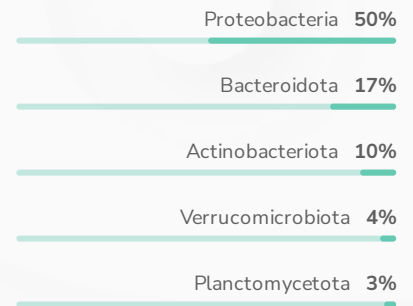
Microbial Population

All the information shown in this microbial report is based on the detected presence of **873** different species.

FUNGAL PHYLUM DISTRIBUTION



BACTERIAL PHYLUM DISTRIBUTION

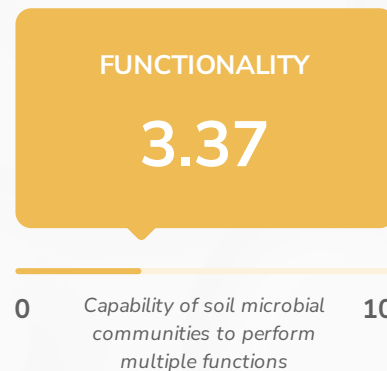
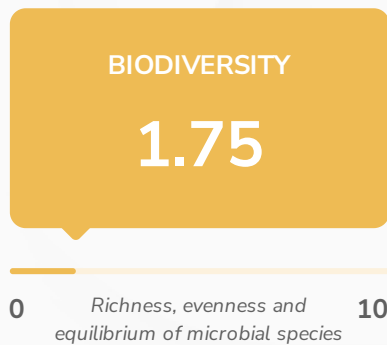


Conclusions

STRENGTHS

- Carbon fixation 2%
- Inorganic nitrogen release 2%

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

< 1%

Insecticide agents

< 1%

Bactericide agents

NOT DETECTED

Nematicide agents

< 1%

HORMONE PRODUCTION



Microbial species grouped according to the type of phytohormone they generate

Auxin production (IAA)

CELL DIVISION STEM ELONGATION

14%

Cytokinin production (CK)

CELL PROLIFERATION CELL DIFFERENTIATION

5%

Gibberellin production (GA)

STEM ELONGATION GERMINATION FLOWERING

2%

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.

5%

ACC deaminase (ACC-d)

PATHOGEN PROTECT. SALINITY PROTECT. DROUGHT PROTECT.

6%

Heavy metal solubilization

BIOREMEDIATION DETOXIFICATION ALLEVIATE HEAVY METAL STRESS

3%

Salicylic acid (SA)

DROUGHT PROTECT. SALINITY PROTECT. ALLEVIATE HEAVY METAL STRESS

< 1%

Salt tolerance

SALINITY PROTECT. ROOT GROWTH PROMOTION

4%

Abscisic acid (ABA)

GROWTH REGULATION PLANT RESISTANCE INCREASE YIELDS

< 1%

Siderophore production

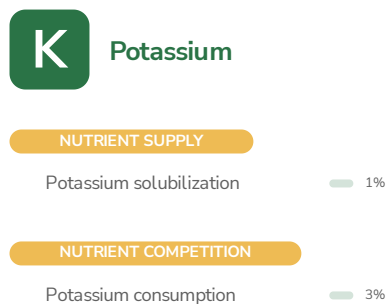
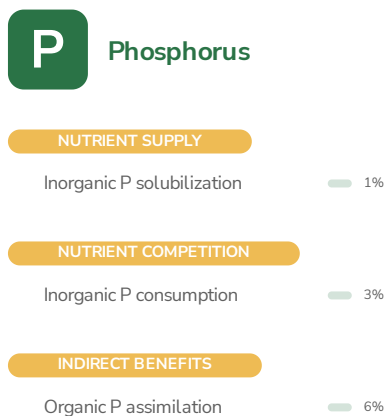
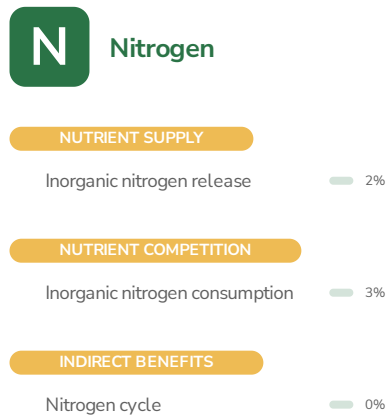
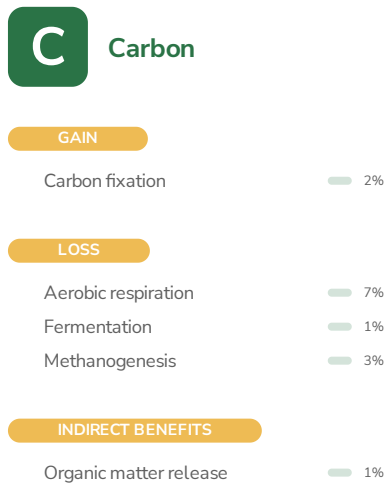
IRON AVAILABILITY BIOFERTILIZER

3%

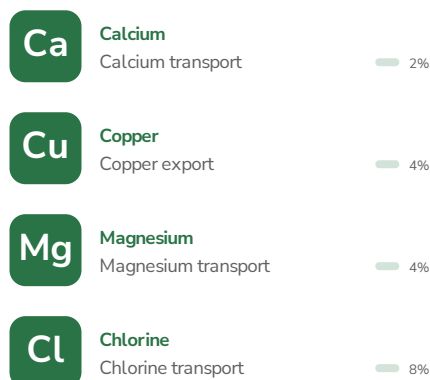
Nutrition

Nutritional status based on the microbial mobilization of certain compounds

MAJOR COMPOUNDS



MINOR COMPOUNDS



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>Rhodanobacter sp.</i>	1.25e+8	16	<i>Dongia sp.</i>	3.18e+7
2	<i>Nitrosocosmicus oleophilus</i>	1.13e+8	17	<i>Bryobacter sp.</i>	3.18e+7
3	<i>Pseudolabrys sp.</i>	8.81e+7	18	<i>Luteolibacter sp.</i>	3.04e+7
4	<i>Altererythrobacter sp.</i>	8.81e+7	19	<i>Povalibacter uvarum</i>	2.75e+7
5	<i>Acidibacter sp.</i>	6.65e+7	20	<i>Lysobacter sp.</i>	2.57e+7
6	<i>Hyphomicrobium sp.</i>	5.15e+7	21	<i>Gaiella sp.</i>	2.40e+7
7	<i>Devosia insulae</i>	4.94e+7	22	<i>Rhodoplanes sp.</i>	2.39e+7
8	<i>Pirellula sp.</i>	4.94e+7	23	<i>Parafilimonas sp.</i>	2.34e+7
9	<i>Pedomicrobium sp.</i>	4.03e+7	24	<i>Bauldia sp.</i>	2.33e+7
10	<i>Gemmatimonas sp.</i>	3.96e+7	25	<i>Mycobacterium brisbanense</i>	2.27e+7
11	<i>Lysobacter pocheonensis</i>	3.79e+7	26	<i>Asticcacaulis sp.</i>	2.21e+7
12	<i>Devosia sp.</i>	3.68e+7	27	<i>Pedobacter sp.</i>	2.21e+7
13	<i>Reyranelia sp.</i>	3.64e+7	28	<i>Bradyrhizobium sp.</i>	2.14e+7
14	<i>Mycobacterium sp.</i>	3.36e+7	29	<i>Phenyllobacterium sp.</i>	1.97e+7
15	<i>Stenotrophobacter sp.</i>	3.26e+7	30	<i>Taibaiella sp.</i>	1.87e+7

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31	<i>Micropepsis sp.</i>	1.87e+7	53	<i>Cellvibrio sp.</i>	1.09e+7
32	<i>Mucilaginibacter sp.</i>	1.87e+7	54	<i>Arachidococcus ginsenosidivorans</i>	1.02e+7
33	<i>Hirschia sp.</i>	1.70e+7	55	<i>Solibacter sp.</i>	9.81e+6
34	<i>Mycobacterium tusciae</i>	1.57e+7	56	<i>Planctomicrobium sp.</i>	9.62e+6
35	<i>Parvibaculum sp.</i>	1.47e+7	57	<i>Solirubrobacter sp.</i>	9.48e+6
36	<i>Luteitalea pratensis</i>	1.39e+7	58	<i>Abditibacterium sp.</i>	9.34e+6
37	<i>Dokdonella sp.</i>	1.36e+7	59	<i>Steroidobacter sp.</i>	9.20e+6
38	<i>Flavobacterium sp.</i>	1.35e+7	60	<i>Bradyrhizobium cytisi</i>	9.20e+6
39	<i>Opitutus sp.</i>	1.35e+7	61	<i>Terrimonas sp.</i>	8.98e+6
40	<i>Solimonas terrae</i>	1.34e+7	62	<i>Sphingopyxis sp.</i>	8.53e+6
41	<i>Ramlibacter sp.</i>	1.31e+7	63	<i>Hassallia sp.</i>	8.52e+6
42	<i>Terrimicrobium sp.</i>	1.29e+7	64	<i>Wandonia sp.</i>	8.34e+6
43	<i>Aquicella sp.</i>	1.26e+7	65	<i>Ohtaekwangia sp.</i>	8.22e+6
44	<i>Luteimonas lutimaris</i>	1.25e+7	66	<i>Edaphobaculum sp.</i>	8.04e+6
45	<i>Puia sp.</i>	1.25e+7	67	<i>Ilumatobacter sp.</i>	7.76e+6
46	<i>Nocardioides sp.</i>	1.22e+7	68	<i>Rhizobium sp.</i>	7.72e+6
47	<i>Ferruginibacter sp.</i>	1.21e+7	69	<i>Phenylobacterium mobile</i>	7.70e+6
48	<i>Lacunisphaera sp.</i>	1.21e+7	70	<i>Pseudorhodoplanes sp.</i>	7.59e+6
49	<i>Microbacterium paraoxydans</i>	1.19e+7	71	<i>Pseudoxanthomonas suwonensis</i>	7.54e+6
50	<i>Brevundimonas basaltis</i>	1.16e+7	72	<i>Bythopirellula sp.</i>	7.48e+6
51	<i>Pseudoxanthomonas humi</i>	1.14e+7	73	<i>Sphingomonas sp.</i>	7.43e+6
52	<i>Mesorhizobium sp.</i>	1.14e+7	74	<i>Pseudomonas putida</i>	7.29e+6

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75	<i>Luteitalea sp.</i>	7.15e+6	97	<i>Micromonospora sp.</i>	5.15e+6
76	<i>Bdellovibrio sp.</i>	6.87e+6	98	<i>Hephaestia sp.</i>	5.15e+6
77	<i>Blastopirellula sp.</i>	6.76e+6	99	<i>Moheibacter sp.</i>	5.11e+6
78	<i>Coxiella sp.</i>	6.65e+6	100	<i>Iamia sp.</i>	4.96e+6
79	<i>Aminobacter sp.</i>	6.56e+6	101	<i>Novosphingobium sp.</i>	4.95e+6
80	<i>Solirubrobacter soli</i>	6.32e+6	102	<i>Nordella sp.</i>	4.93e+6
81	<i>Nitrospira japonica</i>	6.26e+6	103	<i>Neochlamydia sp.</i>	4.78e+6
82	<i>Aquisphaera sp.</i>	6.06e+6	104	<i>Achromobacter xylooxidans</i>	4.69e+6
83	<i>Sphingomonas hengshuiensis</i>	6.04e+6	105	<i>Nitrosocosmicus sp.</i>	4.63e+6
84	<i>Nitrosotenuis sp.</i>	5.99e+6	106	<i>Mucilaginibacter polysacchareus</i>	4.60e+6
85	<i>Conexibacter sp.</i>	5.93e+6	107	<i>Pseudohongiella sp.</i>	4.57e+6
86	<i>Prostheco bacter sp.</i>	5.82e+6	108	<i>Shinella sp.</i>	4.53e+6
87	<i>Pseudaminobacter sp.</i>	5.78e+6	109	<i>Pedobacter boryungensis</i>	4.41e+6
88	<i>Chthoniobacter sp.</i>	5.71e+6	110	<i>Aeromicrobium marinum</i>	4.38e+6
89	<i>Arenimonas sp.</i>	5.65e+6	111	<i>Legionella sp.</i>	4.38e+6
90	<i>Sphingomonas daechungensis</i>	5.65e+6	112	<i>Galbitalea sp.</i>	4.35e+6
91	<i>Luteimonas mephitis</i>	5.65e+6	113	<i>Cellvibrio mixtus</i>	4.34e+6
92	<i>Nakamurella sp.</i>	5.63e+6	114	<i>Xenophilus aerolatus</i>	4.29e+6
93	<i>Novosphingobium ginsenosidimutans</i>	5.54e+6	115	<i>Haliangium sp.</i>	4.21e+6
94	<i>Luedemannella sp.</i>	5.45e+6	116	<i>Planctopirus sp.</i>	4.18e+6
95	<i>Luminiphilus sp.</i>	5.29e+6	117	<i>Pedobacter bauzanensis</i>	4.17e+6
96	<i>Nitrosospira lacus</i>	5.21e+6	118	<i>Brevundimonas sp.</i>	4.13e+6

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119	<i>Demequina sp.</i>	4.12e+6	141	<i>Sphingopyxis macrogoltabida</i>	3.21e+6
120	<i>Taibaiella yonginensis</i>	4.05e+6	142	<i>Paludisphaera borealis</i>	3.18e+6
121	<i>Nitrospira sp.</i>	4.05e+6	143	<i>Dyella ginsengisoli</i>	3.13e+6
122	<i>Arenimonas daechungensis</i>	3.96e+6	144	<i>Saccharimonas sp.</i>	3.10e+6
123	<i>Cellulomonas sp.</i>	3.93e+6	145	<i>Phenylbacterium koreense</i>	3.10e+6
124	<i>Methylobacillus sp.</i>	3.91e+6	146	<i>Fluviicola riflensis</i>	3.08e+6
125	<i>Caulobacter sp.</i>	3.91e+6	147	<i>Vampirovibrio sp.</i>	3.08e+6
126	<i>Solimonas sp.</i>	3.82e+6	148	<i>Hyphomicrobium facile</i>	3.05e+6
127	<i>Pseudoxanthomonas wuyuanensis</i>	3.80e+6	149	<i>Altererythrobacter mangrovi</i>	2.99e+6
128	<i>Adhaeribacter terreus</i>	3.74e+6	150	<i>Massilia sp.</i>	2.98e+6
129	<i>Diaphorobacter sp.</i>	3.70e+6	151	<i>Sphingopyxis taejonensis</i>	2.94e+6
130	<i>Nitrobacter vulgaris</i>	3.60e+6	152	<i>Nitrosovibrio tenuis</i>	2.88e+6
131	<i>Herminiimonas glaciei</i>	3.55e+6	153	<i>Chryseolinea sp.</i>	2.83e+6
132	<i>Dyella sp.</i>	3.55e+6	154	<i>Granulicella sp.</i>	2.83e+6
133	<i>Klebsiella pneumoniae</i>	3.49e+6	155	<i>Streptomyces sp.</i>	2.80e+6
134	<i>Singulisphaera sp.</i>	3.42e+6	156	<i>Sumerlaea sp.</i>	2.77e+6
135	<i>Cephalotococcus sp.</i>	3.38e+6	157	<i>Lysobacter soli</i>	2.74e+6
136	<i>Microbacterium kitamiense</i>	3.38e+6	158	<i>Labrys sp.</i>	2.72e+6
137	<i>Methanobacterium sp.</i>	3.38e+6	159	<i>Nitrososphaera sp.</i>	2.72e+6
138	<i>Porphyrobacter tepidarius</i>	3.35e+6	160	<i>Reyranella aquatilis</i>	2.60e+6
139	<i>Cytophaga sp.</i>	3.27e+6	161	<i>Luteolibacter gellanilyticus</i>	2.60e+6
140	<i>Flavitalea sp.</i>	3.25e+6	162	<i>Mucilagibacter yixingensis</i>	2.60e+6

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163	<i>Pedobacter metabolipauper</i>	2.59e+6	185	<i>Microbacterium pumilum</i>	1.83e+6
164	<i>Roseimicrobium sp.</i>	2.51e+6	186	<i>Pseudomonas alcaligenes</i>	1.83e+6
165	<i>Luteibacter sp.</i>	2.44e+6	187	<i>Mitsuaria chitosanitabida</i>	1.79e+6
166	<i>Methyloceanibacter sp.</i>	2.38e+6	188	<i>Jatrophihabitans sp.</i>	1.77e+6
167	<i>Afipia felis</i>	2.36e+6	189	<i>Paludisphaera sp.</i>	1.75e+6
168	<i>Pseudomonas sp.</i>	2.34e+6	190	<i>Fontimonas sp.</i>	1.75e+6
169	<i>Rhodoferax sp.</i>	2.33e+6	191	<i>Leptothrix sp.</i>	1.66e+6
170	<i>Peredibacter sp.</i>	2.30e+6	192	<i>Methylophilus sp.</i>	1.66e+6
171	<i>Pedobacter composti</i>	2.26e+6	193	<i>Frankia sp.</i>	1.63e+6
172	<i>Massilia timonae</i>	2.16e+6	194	<i>Rhizobium giardinii</i>	1.63e+6
173	<i>Rhodopirellula sp.</i>	2.16e+6	195	<i>Legionella tucsonensis</i>	1.63e+6
174	<i>Hyphomicrobium denitrificans</i>	2.16e+6	196	<i>Nitrolancea sp.</i>	1.61e+6
175	<i>Niastella sp.</i>	2.11e+6	197	<i>Gemmata sp.</i>	1.57e+6
176	<i>Paenibacillus sp.</i>	2.07e+6	198	<i>Pseudonocardia sp.</i>	1.57e+6
177	<i>Pseudarthrobacter oxydans</i>	2.05e+6	199	<i>Rhizobium leguminosarum</i>	1.55e+6
178	<i>Amaricoccus sp.</i>	2.02e+6	200	<i>Amphiplicatus sp.</i>	1.50e+6
179	<i>Sphingosinicella vermicomposti</i>	2.00e+6	201	<i>Arachidicoccus sp.</i>	1.50e+6
180	<i>Lysinimonas soli</i>	1.91e+6	202	<i>Nocardioides islandensis</i>	1.50e+6
181	<i>Pseudoxanthomonas sp.</i>	1.91e+6	203	<i>Berkiella sp.</i>	1.50e+6
182	<i>Afipia sp.</i>	1.88e+6	204	<i>Hydrogenispora sp.</i>	1.50e+6
183	<i>Streptomyces thermoviolaceus</i>	1.88e+6	205	<i>Phaselicystis sp.</i>	1.46e+6
184	<i>Candidimonas bauzanensis</i>	1.85e+6	206	<i>Pelobium sp.</i>	1.45e+6

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207	<i>Rhodovastum sp.</i>	1.45e+6	229	<i>Bosea thiooxidans</i>	1.16e+6
208	<i>Sphingobium sp.</i>	1.44e+6	230	<i>Rhizobium arenae</i>	1.13e+6
209	<i>Geminisphaera sp.</i>	1.44e+6	231	<i>Peredibacter starrii</i>	1.11e+6
210	<i>Alysiosphaera sp.</i>	1.43e+6	232	<i>Sphingopyxis alaskensis</i>	1.11e+6
211	<i>Microterricola viridarii</i>	1.42e+6	233	<i>Microvirga lotononidis</i>	1.09e+6
212	<i>Bacillus megaterium</i>	1.42e+6	234	<i>Vicinamibacter sp.</i>	1.05e+6
213	<i>Sphingomonas changbaiensis</i>	1.41e+6	235	<i>Kaistia sp.</i>	1.05e+6
214	<i>Mucilaginibacter kameinonensis</i>	1.40e+6	236	<i>Phenylobacterium haematophilum</i>	1.05e+6
215	<i>Pajaroellobacter sp.</i>	1.40e+6	237	<i>Oxalicibacterium sp.</i>	1.03e+6
216	<i>Microbispora rosea</i>	1.37e+6	238	<i>Sphingomonas oligoaromativorans</i>	1.03e+6
217	<i>Sphingomonas wittichii</i>	1.33e+6	239	<i>Devosia riboflavina</i>	9.98e+5
218	<i>Patulibacter minatonensis</i>	1.33e+6	240	<i>Paenarthrobacter sp.</i>	9.79e+5
219	<i>Mycobacterium conspicuum</i>	1.33e+6	241	<i>Pusillimonas sp.</i>	9.79e+5
220	<i>Bordetella bronchialis</i>	1.29e+6	242	<i>Lysinibacillus massiliensis</i>	9.65e+5
221	<i>Parafilimonas rhizosphaerae</i>	1.27e+6	243	<i>Agromyces aureus</i>	9.61e+5
222	<i>Luteibacter yejuensis</i>	1.25e+6	244	<i>Flavitalea gansuensis</i>	9.61e+5
223	<i>Dongia soli</i>	1.22e+6	245	<i>Arachidicoccus rhizosphaerae</i>	9.61e+5
224	<i>Mucilaginibacter carri</i>	1.22e+6	246	<i>Rhodomicrobium sp.</i>	9.42e+5
225	<i>Paracoccus sp.</i>	1.22e+6	247	<i>Aridibacter sp.</i>	9.42e+5
226	<i>Edaphobacter sp.</i>	1.22e+6	248	<i>Flavobacterium saccharophilum</i>	9.18e+5
227	<i>Flavisolibacter sp.</i>	1.19e+6	249	<i>Streptomyces avermitilis</i>	9.05e+5
228	<i>Lysobacter dokdonensis</i>	1.19e+6	250	<i>Terrimonas lutea</i>	9.05e+5

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251	<i>Agromyces ulmi</i>	9.05e+5	273	<i>Dokdonella ginsengisoli</i>	7.48e+5
252	<i>Flavobacterium hauense</i>	8.87e+5	274	<i>Pseudoxanthomonas helianthi</i>	7.48e+5
253	<i>Nitrosomonas oligotropha</i>	8.87e+5	275	<i>Spirilliplanes yamanashiensis</i>	7.39e+5
254	<i>Algoriphagus sp.</i>	8.68e+5	276	<i>Dactylosporangium sp.</i>	7.39e+5
255	<i>Lysinimonas sp.</i>	8.59e+5	277	<i>Steroidobacter flavus</i>	7.20e+5
256	<i>Pedosphaera sp.</i>	8.59e+5	278	<i>Udaeobacter copiosus</i>	7.20e+5
257	<i>Sphaerisporangium sp.</i>	8.41e+5	279	<i>Novosphingobium barchaimii</i>	7.20e+5
258	<i>Bacillus cereus</i>	8.35e+5	280	<i>Rhizobium etli</i>	7.20e+5
259	<i>Aeromicrobium panaciterrae</i>	8.31e+5	281	<i>Solimonas soli</i>	7.20e+5
260	<i>Xiphinematobacter sp.</i>	8.31e+5	282	<i>Alkalihalobacillus clausii</i>	7.05e+5
261	<i>Sphingopyxis ginsengisoli</i>	8.31e+5	283	<i>Pantoea cyripedii</i>	7.05e+5
262	<i>Brevundimonas diminuta</i>	8.31e+5	284	<i>Comamonas sp.</i>	6.98e+5
263	<i>Streptomyces albidoflavus</i>	8.31e+5	285	<i>Nocardioides daedukensis</i>	6.93e+5
264	<i>Acidicaldus sp.</i>	8.17e+5	286	<i>Leifsonia sp.</i>	6.65e+5
265	<i>Ferrovibrio sp.</i>	8.04e+5	287	<i>Conexibacter woesei</i>	6.65e+5
266	<i>Shinella kummerowiae</i>	7.94e+5	288	<i>Leifsonia lichenia</i>	6.65e+5
267	<i>Rhodoblastus acidophilus</i>	7.94e+5	289	<i>Microtunatus sp.</i>	6.65e+5
268	<i>Rhodopseudomonas palustris</i>	7.76e+5	290	<i>Raoultella planticola</i>	6.44e+5
269	<i>Chitinophaga sp.</i>	7.76e+5	291	<i>Luteimonas aestuarii</i>	6.37e+5
270	<i>Rhizobacter sp.</i>	7.76e+5	292	<i>Dongia rigui</i>	6.37e+5
271	<i>Alterococcus sp.</i>	7.76e+5	293	<i>Thermomonas haemolytica</i>	6.37e+5
272	<i>Noviherbaspirillum sp.</i>	7.57e+5	294	<i>Brevundimonas subvibrioides</i>	6.37e+5

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295	<i>Aeromonas hydrophila</i>	6.32e+5	317	<i>Udaeobacter sp.</i>	4.99e+5
296	<i>Micromonospora echinospora</i>	6.28e+5	318	<i>Sporichthya polymorpha</i>	4.99e+5
297	<i>Cellvibrio fulvus</i>	6.28e+5	319	<i>Devosia limi</i>	4.99e+5
298	<i>Streptomyces thermocarboxydus</i>	6.28e+5	320	<i>Pantoea agglomerans</i>	4.99e+5
299	<i>Longispora sp.</i>	6.10e+5	321	<i>Phytohabitans sp.</i>	4.99e+5
300	<i>Brevundimonas bullata</i>	6.10e+5	322	<i>Ensifer adhaerens</i>	4.99e+5
301	<i>Paeniglutamicibacter kerguelensis</i>	5.96e+5	323	<i>Sediminibacterium salmoneum</i>	4.99e+5
302	<i>Variovorax sp.</i>	5.82e+5	324	<i>Paludibaculum sp.</i>	4.99e+5
303	<i>Ancylobacter sp.</i>	5.82e+5	325	<i>Terrimonas crocea</i>	4.80e+5
304	<i>Mesorhizobium amorphae</i>	5.82e+5	326	<i>Bacillus pumilus</i>	4.78e+5
305	<i>Paraburkholderia caribensis</i>	5.73e+5	327	<i>Acinetobacter johnsonii</i>	4.75e+5
306	<i>Shinella fusca</i>	5.54e+5	328	<i>Brevundimonas variabilis</i>	4.71e+5
307	<i>Stenotrophomonas rhizophila</i>	5.54e+5	329	<i>Lysobacter ginsengisoli</i>	4.71e+5
308	<i>Kaistia granuli</i>	5.54e+5	330	<i>Pseudoxanthobacter sp.</i>	4.71e+5
309	<i>Pseudoxanthomonas indica</i>	5.54e+5	331	<i>Rhodoplanes piscinae</i>	4.71e+5
310	<i>Oerskovia sp.</i>	5.54e+5	332	<i>Virgibacillus halodenitrificans</i>	4.64e+5
311	<i>Niabella sp.</i>	5.54e+5	333	<i>Pusillimonas noertemannii</i>	4.62e+5
312	<i>Neobacillus drentensis</i>	5.36e+5	334	<i>Parasegetibacter sp.</i>	4.62e+5
313	<i>Frateuria terrea</i>	5.26e+5	335	<i>Cellvibrio gandavensis</i>	4.62e+5
314	<i>Defluviicoccus sp.</i>	5.26e+5	336	<i>Adhaeribacter sp.</i>	4.43e+5
315	<i>Agromyces sp.</i>	5.17e+5	337	<i>Stenotrophobacter terrae</i>	4.43e+5
316	<i>Dyadobacter sp.</i>	5.13e+5	338	<i>Methanomassiliicoccus sp.</i>	4.43e+5

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339	<i>Sediminibacterium sp.</i>	4.43e+5	361	<i>Steroidobacter denitrificans</i>	3.88e+5
340	<i>Occallatibacter sp.</i>	4.43e+5	362	<i>Nitrospira nitrificans</i>	3.88e+5
341	<i>Chitinophaga taiwanensis</i>	4.43e+5	363	<i>Phenylobacterium conjunctum</i>	3.88e+5
342	<i>Cellulosimicrobium cellulans</i>	4.43e+5	364	<i>Glycomyces mongolensis</i>	3.88e+5
343	<i>Dokdonella fugitiva</i>	4.43e+5	365	<i>Streptomyces xishensis</i>	3.88e+5
344	<i>Methylocystis sp.</i>	4.43e+5	366	<i>Stella sp.</i>	3.88e+5
345	<i>Thermomonas sp.</i>	4.43e+5	367	<i>Advenella incenata</i>	3.88e+5
346	<i>Cerasicoccus sp.</i>	4.43e+5	368	<i>Cohnella sp.</i>	3.81e+5
347	<i>Reyranella massiliensis</i>	4.43e+5	369	<i>Bacillus acidiceler</i>	3.77e+5
348	<i>Salinibacterium amurskyense</i>	4.43e+5	370	<i>Luteolibacter flavescens</i>	3.69e+5
349	<i>Olivibacter sp.</i>	4.30e+5	371	<i>Nocardia aciditolerans</i>	3.69e+5
350	<i>Paracoccus koreensis</i>	4.25e+5	372	<i>Bordetella petrii</i>	3.69e+5
351	<i>Protochlamydia sp.</i>	4.25e+5	373	<i>Captivus acidiprotistae</i>	3.60e+5
352	<i>Salinispora sp.</i>	4.25e+5	374	<i>Fluviicola sp.</i>	3.60e+5
353	<i>Roseomonas sp.</i>	4.21e+5	375	<i>Fluviicola hefeinensis</i>	3.60e+5
354	<i>Rhodococcus erythropolis</i>	4.21e+5	376	<i>Leucobacter sp.</i>	3.60e+5
355	<i>Alkanibacter sp.</i>	4.16e+5	377	<i>Nitrosoarchaeum limnia</i>	3.60e+5
356	<i>Luteimonas sp.</i>	4.16e+5	378	<i>Herminiimonas fonticola</i>	3.60e+5
357	<i>Caballeronia glathei</i>	4.16e+5	379	<i>Dinghuibacter sp.</i>	3.51e+5
358	<i>Microbacterium oxydans</i>	4.16e+5	380	<i>Algoriphagus terrigena</i>	3.51e+5
359	<i>Nitrosotenuis aquarius</i>	3.88e+5	381	<i>Asanoa sp.</i>	3.51e+5
360	<i>Ovatusbacter sp.</i>	3.88e+5	382	<i>Nonomuraea kuesteri</i>	3.51e+5

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383	<i>Cytophaga hutchinsonii</i>	3.51e+5	405	<i>Longispora albida</i>	3.14e+5
384	<i>Actinoallomurus oryzae</i>	3.33e+5	406	<i>Roseomonas lacus</i>	3.10e+5
385	<i>Cupriavidus necator</i>	3.33e+5	407	<i>Castellaniella</i> sp.	3.05e+5
386	<i>Nocardiosis dasonvillei</i>	3.33e+5	408	<i>Brevundimonas vesicularis</i>	3.05e+5
387	<i>Sphingomonas jaspsi</i>	3.33e+5	409	<i>Aquicella siphonis</i>	3.05e+5
388	<i>Leifsonia poae</i>	3.33e+5	410	<i>Nocardioides kribbensis</i>	3.05e+5
389	<i>Nitrobacter</i> sp.	3.33e+5	411	<i>Aquihabitans daechungensis</i>	3.05e+5
390	<i>Mucilaginibacter psychrotolerans</i>	3.33e+5	412	<i>Methylotenera</i> sp.	3.05e+5
391	<i>Starkeya novella</i>	3.33e+5	413	<i>Microbacterium thalassium</i>	3.05e+5
392	<i>Nitrosomonas</i> sp.	3.33e+5	414	<i>Shinella zoogloeoides</i>	2.96e+5
393	<i>Legionella pneumophila</i>	3.33e+5	415	<i>Taibaiella smilacinae</i>	2.96e+5
394	<i>Pedomicrobium manganicum</i>	3.33e+5	416	<i>Rhodococcus opacus</i>	2.91e+5
395	<i>Rhodococcus globerulus</i>	3.33e+5	417	<i>Koribacter</i> sp.	2.77e+5
396	<i>Rhizorhabdus argentea</i>	3.33e+5	418	<i>Phenylobacterium deserti</i>	2.77e+5
397	<i>Mesorhizobium camelthorni</i>	3.33e+5	419	<i>Mycobacterium frederiksbergense</i>	2.77e+5
398	<i>Jatrophihabitans endophyticus</i>	3.33e+5	420	<i>Bacillus circulans</i>	2.77e+5
399	<i>Schlesneria</i> sp.	3.33e+5	421	<i>Rugosimonospora</i> sp.	2.77e+5
400	<i>Pusillimonas ginsengisoli</i>	3.14e+5	422	<i>Frigidibacter albus</i>	2.77e+5
401	<i>Candidimonas</i> sp.	3.14e+5	423	<i>Mesorhizobium alhagi</i>	2.77e+5
402	<i>Streptosporangium roseum</i>	3.14e+5	424	<i>Bradyrhizobium japonicum</i>	2.77e+5
403	<i>Glutamicibacter nicotianae</i>	3.14e+5	425	<i>Microvirga</i> sp.	2.77e+5
404	<i>Nitrotoga fabula</i>	3.14e+5	426	<i>Actinotalea caeni</i>	2.77e+5

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427	<i>Sphingomonas echinoides</i>	2.77e+5	449	<i>Gellertiella hungarica</i>	2.22e+5
428	<i>Caballeronia zhejiangensis</i>	2.63e+5	450	<i>Jidaibacter sp.</i>	2.22e+5
429	<i>Aquisphaera giovannonii</i>	2.59e+5	451	<i>Flavimaricola sp.</i>	2.22e+5
430	<i>Sporocytophaga sp.</i>	2.59e+5	452	<i>Camelimonas lactis</i>	2.22e+5
431	<i>Brevibacillus borstelensis</i>	2.52e+5	453	<i>Microbacterium humi</i>	2.22e+5
432	<i>Marmoricola ginsengisoli</i>	2.49e+5	454	<i>Rubroacter sp.</i>	2.22e+5
433	<i>Variovorax paradoxus</i>	2.49e+5	455	<i>Solirubroacter phytolaccae</i>	2.22e+5
434	<i>Marmoricola sp.</i>	2.49e+5	456	<i>Terrimicrobium sacchariphilum</i>	2.22e+5
435	<i>Actinoplanes tereljensis</i>	2.49e+5	457	<i>Bosea sp.</i>	2.22e+5
436	<i>Microvirga ossetica</i>	2.49e+5	458	<i>Acidothermus sp.</i>	2.22e+5
437	<i>Bacillus horikoshii</i>	2.42e+5	459	<i>Janibacter melonis</i>	2.22e+5
438	<i>Isosphaera sp.</i>	2.40e+5	460	<i>Cellulomonas cellasea</i>	2.22e+5
439	<i>Tumebacillus sp.</i>	2.40e+5	461	<i>Vulgatibacter sp.</i>	2.22e+5
440	<i>Stenotrophomonas maltophilia</i>	2.36e+5	462	<i>Lysobacter erysipheiresistens</i>	2.22e+5
441	<i>Sphingobacterium faecium</i>	2.36e+5	463	<i>Paraburkholderia xenovorans</i>	2.12e+5
442	<i>Acrocarpospora sp.</i>	2.31e+5	464	<i>Paenibacillus glycanilyticus</i>	2.11e+5
443	<i>Terribacillus sp.</i>	2.29e+5	465	<i>Cupriavidus metallidurans</i>	2.08e+5
444	<i>Metabacillus niabensis</i>	2.22e+5	466	<i>Fimbriglobus sp.</i>	2.08e+5
445	<i>Pseudoxanthomonas yeongjuensis</i>	2.22e+5	467	<i>Ochrobactrum intermedium</i>	2.08e+5
446	<i>Inquilinus sp.</i>	2.22e+5	468	<i>Roseomonas wooponensis</i>	2.00e+5
447	<i>Parviterribacter sp.</i>	2.22e+5	469	<i>Kitasatospora aureofaciens</i>	1.97e+5
448	<i>Roseiarcus sp.</i>	2.22e+5	470	<i>Microbacterium sp.</i>	1.94e+5

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471	<i>Lysobacter concretionis</i>	1.94e+5	493	<i>Erythrobacter sp.</i>	1.66e+5
472	<i>Anaeromyxobacter sp.</i>	1.94e+5	494	<i>Micavibrio sp.</i>	1.66e+5
473	<i>Niabella terrae</i>	1.94e+5	495	<i>Megaira polyxenophila</i>	1.66e+5
474	<i>Oligoflexus sp.</i>	1.94e+5	496	<i>Williamsia sp.</i>	1.66e+5
475	<i>Arsenicitalea sp.</i>	1.94e+5	497	<i>Pseudonocardia dioxanivorans</i>	1.66e+5
476	<i>Bacteriovorax sp.</i>	1.94e+5	498	<i>Kinneretia sp.</i>	1.66e+5
477	<i>Kribbella sp.</i>	1.94e+5	499	<i>Emticicia soli</i>	1.66e+5
478	<i>Luteimonas composti</i>	1.94e+5	500	<i>Sphingomonas soli</i>	1.66e+5
479	<i>Tropicimonas sp.</i>	1.94e+5	501	<i>Brevundimonas olei</i>	1.66e+5
480	<i>Nocardioides hankookensis</i>	1.94e+5	502	<i>Paraburkholderia susongensis</i>	1.66e+5
481	<i>Dyella japonica</i>	1.94e+5	503	<i>Pseudoxanthomonas taiwanensis</i>	1.66e+5
482	<i>Franconibacter sp.</i>	1.94e+5	504	<i>Luteibacter jiangsuensis</i>	1.66e+5
483	<i>Amycolatopsis albispora</i>	1.94e+5	505	<i>Shimazuella sp.</i>	1.66e+5
484	<i>Myxococcus fulvus</i>	1.94e+5	506	<i>Microbacterium pseudoresistens</i>	1.66e+5
485	<i>Bacillus oleronius</i>	1.88e+5	507	<i>Rhodopila sp.</i>	1.66e+5
486	<i>Eoetvoesia caeni</i>	1.85e+5	508	<i>Sphingomonas psychrolutea</i>	1.66e+5
487	<i>Leadbetterella sp.</i>	1.85e+5	509	<i>Geobacter sp.</i>	1.66e+5
488	<i>Stenotrophomonas panacihumi</i>	1.80e+5	510	<i>Labeledella gwakjiensis</i>	1.66e+5
489	<i>Rhodococcus maanshanensis</i>	1.80e+5	511	<i>Microbacterium esteraromaticum</i>	1.66e+5
490	<i>Legionella fallonii</i>	1.80e+5	512	<i>Actinomadura sp.</i>	1.66e+5
491	<i>Sphingopyxis granuli</i>	1.66e+5	513	<i>Cupriavidus gilardii</i>	1.66e+5
492	<i>Rickettsia sp.</i>	1.66e+5	514	<i>Acinetobacter bohemicus</i>	1.57e+5

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515	<i>Actinocorallia libanotica</i>	1.55e+5	537	<i>Brevibacillus sp.</i>	1.45e+5
516	<i>Sphingobacterium multivorum</i>	1.52e+5	538	<i>Actinomadura keratinilytica</i>	1.44e+5
517	<i>Pedobacter lignilitoris</i>	1.52e+5	539	<i>Comamonas jiangduensis</i>	1.44e+5
518	<i>Microvirga flocculans</i>	1.52e+5	540	<i>Thermomonas brevis</i>	1.39e+5
519	<i>Thauera sp.</i>	1.52e+5	541	<i>Pseudoxanthomonas mexicana</i>	1.39e+5
520	<i>Rhodococcus sp.</i>	1.52e+5	542	<i>Sphingomonas polyaromaticivorans</i>	1.39e+5
521	<i>Sanguibacter suarezii</i>	1.52e+5	543	<i>Microbacterium aoyamense</i>	1.39e+5
522	<i>Stenotrophomonas sp.</i>	1.52e+5	544	<i>Omnitrophus sp.</i>	1.39e+5
523	<i>Paenibacillus pectinilyticus</i>	1.50e+5	545	<i>Sphingomonas mali</i>	1.39e+5
524	<i>Methanobacterium paludis</i>	1.48e+5	546	<i>Panacagrimonas sp.</i>	1.39e+5
525	<i>Rhodococcus triatomae</i>	1.48e+5	547	<i>Pseudoxanthomonas daejeonensis</i>	1.39e+5
526	<i>Legionella anisa</i>	1.48e+5	548	<i>Profundibacterium mesophilum</i>	1.39e+5
527	<i>Segetibacter sp.</i>	1.48e+5	549	<i>Taonella sp.</i>	1.39e+5
528	<i>Metachlamydia lacustris</i>	1.48e+5	550	<i>Bacillus sp.</i>	1.39e+5
529	<i>Streptomyces albus</i>	1.48e+5	551	<i>Paraburkholderia kururiensis</i>	1.39e+5
530	<i>Mucilaginibacter pineti</i>	1.48e+5	552	<i>Halyseosphaera europeae</i>	1.39e+5
531	<i>Aurantisolimonas sp.</i>	1.48e+5	553	<i>Pedobacter insulae</i>	1.39e+5
532	<i>Nitratireductor sp.</i>	1.48e+5	554	<i>Sphingobacterium sp.</i>	1.39e+5
533	<i>Agromyces cerinus</i>	1.48e+5	555	<i>Methylotenera versatilis</i>	1.29e+5
534	<i>Rhizobium puerariae</i>	1.48e+5	556	<i>Pelomonas saccharophila</i>	1.29e+5
535	<i>Novosphingobium lindaniclasticum</i>	1.48e+5	557	<i>Georgfuchsia toluolica</i>	1.29e+5
536	<i>Protochlamydia amoebophila</i>	1.48e+5	558	<i>Pseudonocardia zijingensis</i>	1.29e+5

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559	<i>Chelativorans</i> sp.	1.29e+5
560	<i>Actinoplanes</i> sp.	1.29e+5
561	<i>Streptomyces lannensis</i>	1.29e+5
562	<i>Sorangium</i> sp.	1.25e+5
563	<i>Sphingobacterium nematocida</i>	1.25e+5
564	<i>Tundrisphaera</i> sp.	1.25e+5
565	<i>Chryseobacterium</i> sp.	1.20e+5
566	<i>Cohnella plantaginis</i>	1.18e+5
567	<i>Blastomonas aquatica</i>	1.11e+5
568	<i>Oligoflexus tunisiensis</i>	1.11e+5
569	<i>Flavobacterium succinicans</i>	1.11e+5
570	<i>Nordella oligomobilis</i>	1.11e+5
571	<i>Aeromicrobium tamlense</i>	1.11e+5
572	<i>Caulobacter henricii</i>	1.11e+5
573	<i>Microvirga guangxiensis</i>	1.11e+5
574	<i>Chitinophaga cymbidii</i>	1.11e+5
575	<i>Aquamicrobium aestuarii</i>	1.11e+5
576	<i>Flavhumibacter</i> sp.	1.11e+5
577	<i>Clostridium algidixylanolyticum</i>	1.11e+5
578	<i>Cupriavidus</i> sp.	1.11e+5
579	<i>Paracaedibacter</i> sp.	1.11e+5
580	<i>Actinopolymorpha singaporensis</i>	1.11e+5
581	<i>Paenibacillus sacheonensis</i>	1.11e+5
582	<i>Nannocystis exedens</i>	1.11e+5
583	<i>Nocardioides hungaricus</i>	1.11e+5
584	<i>Acinetobacter junii</i>	1.11e+5
585	<i>Pedobacter oryzae</i>	1.11e+5
586	<i>Parapedobacter</i> sp.	1.11e+5
587	<i>Brevundimonas balnearis</i>	1.11e+5
588	<i>Micromonospora chokoriensis</i>	1.11e+5
589	<i>Acidovorax facilis</i>	1.11e+5
590	<i>Tepidisphaera mucosa</i>	1.11e+5
591	<i>Pseudoflavitalea</i> sp.	1.11e+5
592	<i>Saccharomonospora azurea</i>	1.11e+5
593	<i>Mucilaginibacter soli</i>	1.11e+5
594	<i>Marmoricola terrae</i>	1.11e+5
595	<i>Labrenzia suaedae</i>	1.11e+5
596	<i>Novosphingobium tardaugens</i>	1.11e+5
597	<i>Bacillus funiculus</i>	1.05e+5
598	<i>Thermoactinomyces daqus</i>	1.03e+5
599	<i>Actinoplanes cibodasensis</i>	1.02e+5
600	<i>Laceyella sacchari</i>	1.02e+5
601	<i>Parapedobacter defluvii</i>	9.70e+4
602	<i>Rhodococcus tukisamuensis</i>	9.70e+4

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603	<i>Flavobacterium granuli</i>	9.50e+4
604	<i>Paenibacillus barengoltzii</i>	9.42e+4
605	<i>Paenibacillus rhizoryzae</i>	9.42e+4
606	<i>Sphingomonas colocasiae</i>	9.24e+4
607	<i>Pseudoduganella sp.</i>	9.24e+4
608	<i>Sediminibacterium goheungense</i>	9.24e+4
609	<i>Duganella radidis</i>	9.24e+4
610	<i>Actinoplanes globisporus</i>	9.24e+4
611	<i>Flavobacterium arsenitoxidans</i>	8.71e+4
612	<i>Fictibacillus nanhaiensis</i>	8.71e+4
613	<i>Brevundimonas aveniformis</i>	8.31e+4
614	<i>Microbacterium sorbitolivorans</i>	8.31e+4
615	<i>Rathayibacter oskolensis</i>	8.31e+4
616	<i>Hydrogenophaga intermedia</i>	8.31e+4
617	<i>Methylobacillus rhizosphaerae</i>	8.31e+4
618	<i>Estrella lausannensis</i>	8.31e+4
619	<i>Nocardioides aromaticivorans</i>	8.31e+4
620	<i>Mycetocola sp.</i>	8.31e+4
621	<i>Nakamurella multipartita</i>	8.31e+4
622	<i>Oceanicella actignis</i>	8.31e+4
623	<i>Leucobacter denitrificans</i>	8.31e+4
624	<i>Mesorhizobium olivaresii</i>	8.31e+4
625	<i>Aeromicrobium sp.</i>	8.31e+4
626	<i>Advenella mimigardefordensis</i>	8.31e+4
627	<i>Parapedobacter lycopersici</i>	8.31e+4
628	<i>Adhaeribacter terrae</i>	8.31e+4
629	<i>Bacillus simplex</i>	8.31e+4
630	<i>Angustibacter luteus</i>	8.31e+4
631	<i>Microvirga aerilata</i>	8.31e+4
632	<i>Psychrobacillus psychrodurans</i>	7.76e+4
633	<i>Brachybacterium tyrofermentans</i>	7.39e+4
634	<i>Legionella dresdenensis</i>	7.39e+4
635	<i>Curtobacterium flaccumfaciens</i>	7.39e+4
636	<i>Chryseolinea serpens</i>	7.39e+4
637	<i>Anaerocolumna xylanovorans</i>	7.39e+4
638	<i>Sporocytophaga myxococcoides</i>	7.39e+4
639	<i>Gordonia malaquae</i>	7.39e+4
640	<i>Tumebacillus avium</i>	7.39e+4
641	<i>Isoptericola variabilis</i>	7.39e+4
642	<i>Methanosarcina mazei</i>	7.39e+4
643	<i>Chelativorans multitrophicus</i>	7.39e+4
644	<i>Agromyces atrinae</i>	7.39e+4
645	<i>Paenibacillus pueri</i>	7.20e+4
646	<i>Paenibacillus lactis</i>	7.20e+4

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

647	<i>Thermoactinomyces vulgaris</i>	7.13e+4
648	<i>Brevibacterium aurantiacum</i>	6.93e+4
649	<i>Microvirga vignae</i>	6.93e+4
650	<i>Flavobacterium anhuiense</i>	6.93e+4
651	<i>Dyadobacter fermentans</i>	6.93e+4
652	<i>Hungateiclostridium sp.</i>	6.93e+4
653	<i>Agrobacterium tumefaciens</i>	6.93e+4
654	<i>Amycolatopsis sp.</i>	6.93e+4
655	<i>Mobilitalea sp.</i>	6.65e+4
656	<i>Domibacillus sp.</i>	6.65e+4
657	<i>Flavobacterium nitrogenifigens</i>	6.47e+4
658	<i>Lysinibacillus sphaericus</i>	6.47e+4
659	<i>Flavobacterium aquicola</i>	6.33e+4
660	<i>Ureibacillus thermosphaericus</i>	6.16e+4
661	<i>Myroides sp.</i>	6.16e+4
662	<i>Paenibacillus cineris</i>	6.10e+4
663	<i>Micromonospora echinaurantiaca</i>	5.54e+4
664	<i>Methylosinus trichosporium</i>	5.54e+4
665	<i>Luteolibacter luojiansis</i>	5.54e+4
666	<i>Uliginosibacterium sp.</i>	5.54e+4
667	<i>Rhodobacter maris</i>	5.54e+4
668	<i>Bordetella sp.</i>	5.54e+4
669	<i>Plantactinospora sp.</i>	5.54e+4
670	<i>Nocardia sp.</i>	5.54e+4
671	<i>Verticella sp.</i>	5.54e+4
672	<i>Thermobifida alba</i>	5.54e+4
673	<i>Eoetvoesia sp.</i>	5.54e+4
674	<i>Lysinimicrobium sp.</i>	5.54e+4
675	<i>Aureimonas populi</i>	5.54e+4
676	<i>Pseudonocardia carboxydvorans</i>	5.54e+4
677	<i>Virgisporangium sp.</i>	5.54e+4
678	<i>Legionella bozemanee</i>	5.54e+4
679	<i>Bacillus borbori</i>	5.54e+4
680	<i>Pantoea ananatis</i>	5.54e+4
681	<i>Bacillus licheniformis</i>	5.54e+4
682	<i>Streptomyces atratus</i>	5.54e+4
683	<i>Actinomadura rubrobrunea</i>	5.54e+4
684	<i>Actinocorallia sp.</i>	5.54e+4
685	<i>Cohnella xylanilytica</i>	5.54e+4
686	<i>Paenibacillus odorifer</i>	5.54e+4
687	<i>Cupriavidus taiwanensis</i>	5.54e+4
688	<i>Pseudomonas koreensis</i>	5.54e+4
689	<i>Ochrobactrum pseudogrignonense</i>	5.54e+4
690	<i>Gordonia alkanivorans</i>	5.54e+4

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

691	<i>Arcticibacter sp.</i>	5.54e+4	713	<i>Paenibacillus mendelii</i>	3.88e+4
692	<i>Angustibacter sp.</i>	5.54e+4	714	<i>Herbidospora cretacea</i>	3.69e+4
693	<i>Amycolatopsis rhabdoformis</i>	5.54e+4	715	<i>Streptomyces sulfonofaciens</i>	3.69e+4
694	<i>Kineococcus sp.</i>	5.54e+4	716	<i>Paenibacillus lautus</i>	3.46e+4
695	<i>Sphingobacterium shayense</i>	5.54e+4	717	<i>Pedobacter ginsengisoli</i>	3.33e+4
696	<i>Singulisphaera acidiphila</i>	4.85e+4	718	<i>Pseudomonas marincola</i>	3.33e+4
697	<i>Thermoactinomyces khenchelensis</i>	4.75e+4	719	<i>Anaerosporobacter sp.</i>	3.33e+4
698	<i>Flavobacterium banpakuense</i>	4.75e+4	720	<i>Bacillus pichinoty</i>	3.33e+4
699	<i>Chryseobacterium indologenes</i>	4.62e+4	721	<i>Caenibacillus caldisaponilyticus</i>	3.17e+4
700	<i>Actinoplanes digitatis</i>	4.62e+4	722	<i>Clostridium sp.</i>	3.08e+4
701	<i>Lysinibacillus sp.</i>	4.62e+4	723	<i>Bacillus fordii</i>	2.77e+4
702	<i>Paenibacillus thailandensis</i>	4.43e+4	724	<i>Streptomyces turgidiscabies</i>	2.77e+4
703	<i>Roseomonas oryzicola</i>	4.43e+4	725	<i>Seinonella sp.</i>	2.77e+4
704	<i>Sporosarcina psychrophila</i>	4.43e+4	726	<i>Streptomyces bluensis</i>	2.77e+4
705	<i>Paenibacillus kobensis</i>	4.43e+4	727	<i>Acinetobacter albensis</i>	2.77e+4
706	<i>Streptacidiphilus sp.</i>	4.16e+4	728	<i>Ruminiclostridium sp.</i>	2.77e+4
707	<i>Paraburkholderia denitrificans</i>	4.16e+4	729	<i>Solibacillus silvestris</i>	2.77e+4
708	<i>Thermobispora bispora</i>	4.16e+4	730	<i>Shewanella morhuae</i>	2.46e+4
709	<i>Buttiauxella gaviniae</i>	4.16e+4	731	<i>Oceanobacillus profundus</i>	2.38e+4
710	<i>Parapedobacter pyrenivorans</i>	4.16e+4	732	<i>Tuberibacillus calidus</i>	2.38e+4
711	<i>Kineosporia rhamnosa</i>	4.16e+4	733	<i>Oceanobacillus luteolus</i>	2.38e+4
712	<i>Oceanobacillus sojae</i>	3.96e+4	734	<i>Flavobacterium suncheonense</i>	2.38e+4

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735	<i>Flavobacterium hercynium</i>	2.38e+4
736	<i>Bacillus andresenii</i>	2.22e+4
737	<i>Bacillus timonensis</i>	2.22e+4
738	<i>Bacillus gottheilii</i>	2.22e+4
739	<i>Geobacillus sp.</i>	2.22e+4
740	<i>Paenibacillus harenae</i>	2.22e+4
741	<i>Cohnella laeviribosi</i>	2.08e+4
742	<i>Cohnella yongneupensis</i>	2.08e+4
743	<i>Bacillus thermoamylovorans</i>	2.08e+4
744	<i>Paenibacillus stellifer</i>	2.02e+4
745	<i>Pelosinus sp.</i>	1.85e+4
746	<i>Desulfosporosinus sp.</i>	1.85e+4
747	<i>Paenibacillus sepulcri</i>	1.66e+4
748	<i>Paenibacillus alginolyticus</i>	1.66e+4
749	<i>Paenibacillus typhae</i>	1.66e+4
750	<i>Paenibacillus polymyxa</i>	1.28e+4
751	<i>Clostridium beijerinckii</i>	1.19e+4

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	Mortierella hyalina	34.06%	~ 12 Mill.	18	Sebacina sp.	0.9178%	334,971
2	Pythium sp.	9.55%	~ 3 Mill.	19	Mortierella elongatula	0.7584%	276,806
3	Mortierella alpina	6.24%	~ 2 Mill.	20	Talaromyces marneffeii	0.7277%	265,594
4	Mortierella sp.	5.61%	~ 2 Mill.	21	Mortierella gamsii	0.6662%	243,171
5	Aspergillus fumigatus	4.16%	~ 1 Mill.	22	Talaromyces columbinus	0.6451%	235,459
6	Mortierella ambigua	3.95%	~ 1 Mill.	23	Talaromyces sp.	0.6298%	229,853
7	Mortierella elongata	3.08%	~ 1 Mill.	24	Talaromyces piceae	0.5587%	203,924
8	Ochroconis sp.	2.98%	~ 1 Mill.	25	Pseudogymnoascus sp.	0.5453%	199,024
9	Chrysosporium pseudomerdari...	2.89%	~ 1 Mill.	26	Talaromyces radicus	0.5165%	188,512
10	Mortierella amoeboidea	2.67%	974,082	27	Penicillium melinii	0.5126%	187,106
11	Humicola nigrescens	2.02%	735,818	28	Penicillium variratense	0.4301%	156,976
12	Penicillium citreonigrum	1.62%	591,459	29	Coniochaeta fasciculata	0.3802%	138,753
13	Penicillium solitum	1.54%	561,324	30	Penicillium amphipolaria	0.2765%	100,912
14	Mucor circinelloides	1.31%	476,529	31	Penicillium aeriis	0.2746%	100,212
15	Mortierella zychnae	1.16%	424,671	32	Volutella sp.	0.2669%	97,406
16	Cercophora samala	1.14%	417,665	33	Mucor racemosus	0.2515%	91,800
17	Aspergillus ustus	1.14%	415,559	34	Penicillium sp.	0.2458%	89,700

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>Aspergillus</i> sp.	0.2438%	89,000	55	<i>Humicola olivacea</i>	0.0979%	35,741
36	<i>Penicillium pinophilum</i>	0.2381%	86,894	56	<i>Globisporangium irregulare</i>	0.0864%	31,535
37	<i>Podospora</i> sp.	0.2362%	86,194	57	<i>Thermothielavioides terrestris</i>	0.0864%	31,535
38	<i>Lophiostoma</i> sp.	0.2170%	79,188	58	<i>Globisporangium heterothallic...</i>	0.0845%	30,835
39	<i>Globisporangium hypogynum</i>	0.2074%	75,682	59	<i>Talaromyces verruculosus</i>	0.0845%	30,835
40	<i>Trichoderma harzianum</i>	0.1958%	71,476	60	<i>Lophiostoma corticola</i>	0.0826%	30,135
41	<i>Pseudogymnoascus roseus</i>	0.1882%	68,676	61	<i>Mortierella wolfii</i>	0.0768%	28,029
42	<i>Globisporangium rostratifingens</i>	0.1728%	63,071	62	<i>Papiliotrema laurentii</i>	0.0749%	27,329
43	<i>Aspergillus inflatus</i>	0.1728%	63,071	63	<i>Chaetomium globosum</i>	0.0730%	26,629
44	<i>Oidiodendron truncatum</i>	0.1709%	62,371	64	<i>Chrysosporium merdarium</i>	0.0710%	25,929
45	<i>Mortierella indohii</i>	0.1536%	56,065	65	<i>Coniochaeta</i> sp.	0.0672%	24,529
46	<i>Thraustotheca</i> sp.	0.1459%	53,259	66	<i>Chaetomium acropullum</i>	0.0672%	24,529
47	<i>Penicillium griseofulvum</i>	0.1402%	51,159	67	<i>Tolyposcladium inegoense</i>	0.0672%	24,529
48	<i>Pseudogymnoascus pannorum</i>	0.1344%	49,053	68	<i>Phialophora americana</i>	0.0653%	23,824
49	<i>Oidiodendron griseum</i>	0.1325%	48,353	69	<i>Talaromyces subtropicalis</i>	0.0634%	23,124
50	<i>Aspergillus versicolor</i>	0.1286%	46,953	70	<i>Physisporinus pouzarii</i>	0.0634%	23,124
51	<i>Cladosporium herbarum</i>	0.1229%	44,847	71	<i>Tausonia pullulans</i>	0.0614%	22,424
52	<i>Penicillium brevicompactum</i>	0.1210%	44,147	72	<i>Penicillium dierckxii</i>	0.0614%	22,424
53	<i>Aspergillus niger</i>	0.1171%	42,747	73	<i>Venturia</i> sp.	0.0595%	21,724
54	<i>Trichoderma asperellum</i>	0.1037%	37,841	74	<i>Trichoderma atroviride</i>	0.0595%	21,724









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>Trichoderma virens</i>	0.0557%	20,324	95	<i>Tylospora asterophora</i>	0.0288%	10,512
76	<i>Mucor hiemalis</i>	0.0518%	18,924	96	<i>Rhizopus oryzae</i>	0.0288%	10,512
77	<i>Purpureocillium lilacinum</i>	0.0499%	18,218	97	<i>Penicillium sumatraense</i>	0.0288%	10,512
78	<i>Talaromyces rugulosus</i>	0.0461%	16,818	98	<i>Mariannaea sp.</i>	0.0288%	10,512
79	<i>Rasamsonia emersonii</i>	0.0461%	16,818	99	<i>Fusarium solani</i>	0.0288%	10,512
80	<i>Aspergillus nidulans</i>	0.0461%	16,818	100	<i>Zopfiella marina</i>	0.0269%	9,812
81	<i>Barnettozyma californica</i>	0.0442%	16,118	101	<i>Aspergillus subversicolor</i>	0.0269%	9,812
82	<i>Talaromyces neofusisporus</i>	0.0442%	16,118	102	<i>Thermomyces lanuginosus</i>	0.0250%	9,112
83	<i>Chaetomium sp.</i>	0.0422%	15,418	103	<i>Penicillium lagenae</i>	0.0250%	9,112
84	<i>Mortierella exigua</i>	0.0422%	15,418	104	<i>Gymnopus luxurians</i>	0.0250%	9,112
85	<i>Chrysosporium lobatum</i>	0.0403%	14,718	105	<i>Meliniomyces sp.</i>	0.0250%	9,112
86	<i>Oidiodendron setiferum</i>	0.0403%	14,718	106	<i>Fusicolla aquaeductum</i>	0.0230%	8,412
87	<i>Acremonium sp.</i>	0.0384%	14,018	107	<i>Cercophora coprophila</i>	0.0230%	8,412
88	<i>Oidiodendron sp.</i>	0.0384%	14,018	108	<i>Subulicystidium brachysporum</i>	0.0230%	8,412
89	<i>Penicillium polonicum</i>	0.0384%	14,018	109	<i>Pyrenochaetopsis leptospora</i>	0.0230%	8,412
90	<i>Wallemia canadensis</i>	0.0365%	13,318	110	<i>Chaetomium homopilatum</i>	0.0211%	7,706
91	<i>Hypomyces sp.</i>	0.0365%	13,318	111	<i>Metarhizium marquandii</i>	0.0211%	7,706
92	<i>Furcasterigmium furcatum</i>	0.0346%	12,612	112	<i>Neosetophoma sp.</i>	0.0211%	7,706
93	<i>Parascedosporium putredinis</i>	0.0326%	11,912	113	<i>Trichoderma citrinoviride</i>	0.0211%	7,706
94	<i>Penicillium citrinum</i>	0.0307%	11,212	114	<i>Gymnopus sp.</i>	0.0211%	7,706

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>Alternaria eichhorniae</i>	0.0211%	7,706				
116	 <i>Apiotrichum gracile</i>	0.0211%	7,706				
117	 <i>Cladophialophora immunda</i>	0.0211%	7,706				
118	 <i>Lasionectriopsis spinosa</i>	0.0211%	7,706				
119	 <i>Scedosporium boydii</i>	0.0192%	7,006				
120	 <i>Trichoderma hamatum</i>	0.0192%	7,006				
121	 <i>Saitozyma podzolica</i>	0.0192%	7,006				
122	 <i>Orbilium luteorubella</i>	0.0192%	7,006				

Notes

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

 Species present in the CDFA Approved Microorganisms List

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