

Supplemental Table 4. Indicator species analysis (set to "genus" level) for full dataset. Analysis was conducted using the "indval" function within the "labdiv" package in R using default parameters. Data generated includes "indval" (indicator value; this value is a product of incidence and frequency) and "p-value" (significance of the aforementioned indicator value, and "freq" (relative frequency of the taxon across all replicates for a model). Only indicator genera with p-value less than 0.05 were retained.

Module Name	indval	p-value	freq	Domain	Phylum	Class	Order	Family	Genus
10nC_yilan	7	0.2859242	0.009	Bacteria	Proteobacteria	Beta	Bacteroidia	Burkholderiales	Alphaproteobacteria
10nC_yilosu	4	0.0484845	0.002	Bacteria	Proteobacteria	Alphaproteobacteria	Rhizobiales	Rhizobiales	Aurimonomadaceae
10nC_yilosu	13	0.1371139	0.001	Bacteria	Proteobacteria	Alphaproteobacteria	Rhizobiales	Rhizobiales	Enfiter
10nC_yilosu	3	0.0438206	0.002	Bacteria	Proteobacteria	Alphaproteobacteria	Rhizobiales	Rhizobiales	?
10nC_yilosu	13	0.1450804	0.001	Bacteria	Proteobacteria	Alphaproteobacteria	Rhizobiales	Rhizobiales	?
10nC_yilosu	3	0.2989011	0.001	Bacteria	Proteobacteria	Alphaproteobacteria	Rhizobiales	Rhizobiales	Phyllobacteriaceae
2_4_0_yilan	6	0.1293484	0.038	Bacteria	Proteobacteria	Alphaproteobacteria	Rhizobiales	Rhizobiales	Glucosacetobacter
cellulose	11	0.1454455	0.001	Bacteria	Proteobacteria	Alphaproteobacteria	Rhizobiales	Rhizobiales	Phyllobacteriaceae
cellulose	13	0.1505	0.005	Bacteria	Proteobacteria	Alphaproteobacteria	Rhizobiales	Rhizobiales	Kaista
cellulose	11	0.1702128	0.001	Bacteria	Proteobacteria	Alphaproteobacteria	Rhizobiales	Rhizobiales	Rhizobiales
cellulose	13	0.1426804	0.001	Bacteria	Proteobacteria	Alphaproteobacteria	Rhizobiales	Rhizobiales	Agromyces
cellulose	13	0.1964233	0.012	Bacteria	Firmicutes	Clostridia	Clostridiales	Ruminococcales	Ruminococcaceae
cellulose	13	0.1515161	0.001	Bacteria	Proteobacteria	Alphaproteobacteria	Rhizobiales	Rhizobiales	Depressa
cellulose	13	0.2666667	0.031	Bacteria	Chloroflexi	Ktedonobacteria	Rhodospirillales	Rhodospirillales	H8_DFS_F07
cellulose	13	0.1413793	0.009	Bacteria	Proteobacteria	Alphaproteobacteria	Rhizobiales	Rhizobiales	Incerta
cellulose	13	0.2774688	0.014	Bacteria	Proteobacteria	Alphaproteobacteria	Rhizobiales	Rhizobiales	Springomonas
cellulose	13	0.1259894	0.031	Bacteria	Proteobacteria	Alphaproteobacteria	Rhizobiales	Rhizobiales	Incertae
cellulose	14	0.1774959	0.039	Bacteria	Proteobacteria	Alphaproteobacteria	Rhizobiales	Rhizobiales	Bradyrhizobium
chitin	14	0.2816	0.024	Bacteria	Proteobacteria	Alphaproteobacteria	Rhizobiales	Rhizobiales	Stemella
chitin	14	0.1867429	0.041	Bacteria	Bacteroidetes	Chloroflexi	Chloroflexiales	Chloroflexiales	Chloroflexus
chitin	14	0.2816	0.024	Bacteria	Firmicutes	Clostridia	Clostridiales	Clostridiales	Clostridium_sensu_stricto_1
gentamycin	22	0.1748549	0.001	Bacteria	Firmicutes	Clostridia	Clostridiales	Clostridiales	Clostridium_sensu_stricto_8
gentamycin	22	0.1814147	0.001	Bacteria	Proteobacteria	Gamma	Proteobacteria	Xanthomonadales	Stenotrophomonas
gentamycin	22	0.1666233	0.001	Bacteria	Proteobacteria	Beta	Bacteroidia	Bacteroidiales	Comamonadaceae
glycerol	26	0.2083133	0.028	Bacteria	Proteobacteria	Beta	Bacteroidia	Rhodocyclales	Rhodocyclales
heat_n_acetylglucosamine	28	0.2084516	0.001	Bacteria	Firmicutes	Negativicutes	Selenomonadales	Selenomonadales	Propionispora
heat_n_acetylglucosamine	28	0.1471886	0.002	Bacteria	Firmicutes	Bacilli	Bacillales	Bacillales	Nocardaceae
heat_n_acetylglucosamine	28	0.1305176	0.002	Bacteria	Firmicutes	Bacilli	Bacillales	Bacillales	Paenibacillaceae
heat_n_acetylglucosamine	28	0.2083133	0.001	Bacteria	Firmicutes	Bacilli	Bacillales	Bacillales	Anemobacillus
heat_n_acetylglucosamine	28	0.4333079	0.001	Bacteria	Firmicutes	Bacilli	Bacillales	Bacillales	?
heat_n_acetylglucosamine	28	0.1813935	0.015	Bacteria	Firmicutes	Negativicutes	Selenomonadales	Selenomonadales	Venombacillus
heat_n_acetylglucosamine	28	0.2496503	0.048	Bacteria	Firmicutes	Negativicutes	Selenomonadales	Selenomonadales	Brummbacillus
heat_yilan	29	0.1750784	0.001	Bacteria	Proteobacteria	Beta	Bacteroidia	Burkholderiales	Cupriavidus
heat_yilan	29	0.2794242	0.009	Bacteria	Firmicutes	Bacilli	Bacillales	Bacillales	Paenibacillaceae
heat_yilan	29	0.1401254	0.04	Bacteria	Firmicutes	Clostridia	Clostridiales	Clostridiales	Clostridium_sensu_stricto_3
heat_yilosu	30	0.0892366	0.004	Bacteria	Firmicutes	Bacilli	Bacillales	Bacillales	Paenibacillaceae
late_yilan	33	0.192	0.006	Bacteria	Bacteroidetes	Sphingobacterii	Sphingobacteriales	Sphingobacteriales	Paudobacter
late_yilan	33	0.192	0.006	Bacteria	Proteobacteria	Alphaproteobacteria	Rhizobiales	Rhizobiales	Methylbacterium
lign_yilosu	37	0.1489942	0.001	Bacteria	Actinobacteria	Actinobacteria	Actinobacteriales	Nocardiales	Rhododoccus
pH6_n_acetylglucosamine	48	0.1629791	0.005	Bacteria	Proteobacteria	Alphaproteobacteria	Rhizobiales	Rhizobiales	Leucobacter
pH6_n_acetylglucosamine	48	0.1333133	0.011	Bacteria	Proteobacteria	Gamma	Proteobacteria	Xanthomonadales	Leucobacter
pH6_yilan	51	0.1779270	0.003	Bacteria	Proteobacteria	Alphaproteobacteria	Rhizobiales	Rhizobiales	Rhizobium
pH6_yilosu	52	0.25	0.002	Bacteria	Proteobacteria	Alphaproteobacteria	Rhizobiales	Rhizobiales	Rhizobium
potassiumnitrate	53	0.1601919	0.001	Bacteria	Firmicutes	Clostridia	Clostridiales	Clostridiales	Clostridium_sensu_stricto_1
potassiumnitrate	53	0.1788929	0.001	Bacteria	Firmicutes	Clostridia	Clostridiales	Clostridiales	Clostridium_sensu_stricto_1
potassiumnitrate	53	0.2907108	0.015	Bacteria	Firmicutes	Clostridia	Clostridiales	Clostridiales	Clostridium_sensu_stricto_6
salt_glucose	57	0.1650549	0.001	Bacteria	Firmicutes	Bacilli	Bacillales	Bacillales	Terribacillus
salt_glucose	57	0.2222825	0.001	Bacteria	Firmicutes	Bacilli	Bacillales	Bacillales	Bacillus
salt_glucose	57	0.2666667	0.037	Bacteria	Verrucomicrobia	Spartobacteria	Chthoniobacteriales	Chthoniobacteriales	?
salt_n_acetylglucosamine	58	0.1577707	0.001	Bacteria	Firmicutes	Bacilli	Bacillales	Bacillales	?
salt_n_acetylglucosamine	58	0.1478469	0.001	Bacteria	Actinobacteria	Actinobacteria	Actinobacteriales	Actinobacteriales	Paeniglutamicibacter
salt_yilan	59	0.1777727	0.001	Bacteria	Actinobacteria	Actinobacteria	Actinobacteriales	Promicromonosporae	?
salt_yilan	59	0.2030486	0.001	Bacteria	Actinobacteria	Actinobacteria	Actinobacteriales	Actinobacteriales	Demingia
salt_yilan	59	0.4	0.017	Bacteria	Proteobacteria	Alphaproteobacteria	Rhizobiales	Rhizobiales	Acetobacter
salt_yilan	59	0.4	0.014	Bacteria	Proteobacteria	Gamma	Proteobacteria	Aeromonadales	Aeromonas
salt_yilan	59	0.1822824	0.012	Bacteria	Flammonetes	Flammonetata	Flammonetatales	Flammonetatales	Actinella
salt_yilan	59	0.1971164	0.01	Bacteria	Actinobacteria	Actinobacteria	Actinobacteriales	Microbacteriales	Leucobacter
salt_yilan	59	0.1428714	0.042	Bacteria	Proteobacteria	Gamma	Proteobacteria	Norwalkiaceae	Actinobacter
salt_yilan	59	0.1333133	0.011	Bacteria	Actinobacteria	Actinobacteria	Actinobacteriales	Actinobacteriales	?
salt_yilan	59	0.2871429	0.02	Bacteria	Proteobacteria	Gamma	Proteobacteria	Nocardiales	Thermus
salt_yilan	59	0.2378294	0.02	Bacteria	Deinococcus	Deinococcus	Thermales	Thermales	Thermus
salt_yilan	59	0.25	0.014	Bacteria	Proteobacteria	Alphaproteobacteria	Sphingomonadales	Sphingomonadales	Novosphingobium
salt_yilan	59	0.2469043	0.001	Bacteria	Actinobacteria	Actinobacteria	Actinobacteriales	Micrococcales	?
salt_yilan	59	0.24	0.017	Bacteria	Chloroflexi	Chloroflexi	Saltedinales	SAW175	?
salt_yilan	59	0.2287143	0.042	Bacteria	Bacteroidetes	Sphingobacterii	Sphingobacteriales	AYH767	?
salt_yilan	59	0.2129624	0.025	Bacteria	Actinobacteria	Actinobacteria	Actinobacteriales	Actinobacteriales	Arthrobracter
salt_yilan	59	0.2159797	0.04	Bacteria	Actinobacteria	Actinobacteria	Actinobacteriales	Actinobacteriales	?
salt_yilan	59	0.1338462	0.016	Bacteria	Firmicutes	Bacilli	Lactobacillales	Streptococcales	Lactococcus
salt_yilan	59	0.2152178	0.014	Bacteria	Firmicutes	Bacilli	Bacillales	Bacillales	Geobacillus
salt_yilan	59	0.2	0.046	Bacteria	Proteobacteria	Delta	Proteobacteria	Mycobacteriales	Bifidus
salt_yilan	59	0.2	0.022	Bacteria	Ca	Hydrophi	?	?	?
salt_yilan	59	0.2	0.03	Bacteria	Actinobacteria	Actinobacteria	Actinobacteriales	Actinobacteriales	Sporothrix
salt_yilan	59	0.1846138	0.042	Bacteria	Flammonetes	Phycisphaerae	Phycisphaerales	Phycisphaerales	SMLA02
salt_yilan	59	0.18	0.047	Bacteria	Actinobacteria	Actinobacteria	Actinobacteriales	Actinobacteriales	Hydrosporangium
salt_yilan	59	0.1995184	0.04	Bacteria	Chloroflexi	Chloroflexi	Subdivisio	?	?
salt_yilan	59	0.1738421	0.049	Bacteria	Actinobacteria	Actinobacteria	Actinobacteriales	Actinobacteriales	Aeromicrobium
salt_yilosu	60	0.1892077	0.044	Bacteria	Actinobacteria	Actinobacteria	Actinobacteriales	Actinobacteriales	Paudobacter
salt_yilosu	60	0.1754262	0.003	Bacteria	Actinobacteria	Actinobacteria	Actinobacteriales	Actinobacteriales	?
salt_yilosu	60	0.1972843	0.004	Bacteria	Firmicutes	Bacilli	Lactobacillales	Comabacteriaceae	Deinema
salt_yilosu	60	0.1137152	0.002	Bacteria	Actinobacteria	Actinobacteria	Actinobacteriales	Actinobacteriales	Geogema
salt_yilosu	60	0.4	0.019	Bacteria	Actinobacteria	Actinobacteria	Actinobacteriales	Actinobacteriales	?
salt_yilosu	60	0.1864	0.002	Bacteria	?	?	?	?	?
salt_yilosu	60	0.32	0.024	Bacteria	Verrucomicrobia	Spartobacteria	Chthoniobacteriales	Sphingnetmataceae	?
salt_yilosu	60	0.2871429	0.026	Archaea	Euryarchaeota	Thaumogammatina	Marine_Group_1	?	?
salt_yilosu	60	0.2328294	0.009	Bacteria	Chloroflexi	S055	?	?	?
salt_yilosu	60	0.2666667	0.033	Bacteria	Gemmatimonadetes	Longimicrobiales	?	?	?
salt_yilosu	60	0.2666667	0.049	Bacteria	Proteobacteria	Alphaproteobacteria	Rhizobiales	NMG7	?
salt_yilosu	60	0.24	0.037	Bacteria	Nitrospirillum	Nitrospirillum	?	?	?
salt_yilosu	60	0.2311111	0.023	Bacteria	Proteobacteria	Alphaproteobacteria	Sphingomonadales	?	?
salt_yilosu	60	0.16	0.046	Bacteria	Proteobacteria	Gamma	Proteobacteria	Comamonadales	Agastella
salt_yilosu	60	0.1957118	0.001	Bacteria	Proteobacteria	Beta	Bacteroidia	Bacteroidiales	Polaromonas
sol_extract	61	0.1929205	0.001	Bacteria	Bacteroidetes	Chloroflexi	Bacteroidia	Bacteroidiales	?
sol_extract	61	0.1883479	0.001	Bacteria	Verrucomicrobia	Verrucomicrobia	Verrucomicrobiales	Verrucomicrobiales	Protheobacter
sol_extract	61	0.181785	0.001	Bacteria	Proteobacteria	Alphaproteobacteria	Caulobacteriales	Caulobacteriales	Caulobacter
sol_extract	61	0.1991195	0.001	Bacteria	Bacteroidetes	Chloroflexi	Chloroflexiales	Chloroflexiales	Parafirmomonas
sol_extract	61	0.1662762	0.001	Bacteria	Bacteroidetes	Chloroflexi	Chloroflexiales	Chloroflexiales	?
sol_extract	61	0.1402861	0.001	Bacteria	Proteobacteria	Alphaproteobacteria	Caulobacteriales	Caulobacteriales	Phenylololol
sol_extract	61	0.1906063	0.001	Bacteria	Proteobacteria	Alphaproteobacteria	Burkholderiales	Burkholderiales	Comamonadaceae
sol_extract	61	0.1722496	0.001	Bacteria	Bacteroidetes	Chloroflexi	Chloroflexiales	Chloroflexiales	Adhaeribacter
sol_extract	61	0.1851063	0.001	Bacteria	Bacteroidetes	Chloroflexi	Chloroflexiales	Chloroflexiales	Terminos
sol_extract	61	0.1853213	0.001	Bacteria	Verrucomicrobia	Gyphales	Gyphales	Gyphales	?
sol_extract	61	0.1794607	0.001	Bacteria	Proteobacteria	Beta	Bacteroidia	Burkholderiales	?
sol_extract	61	0.1793578	0.001	Bacteria	Proteobacteria	Alphaproteobacteria	Caulobacteriales	Caulobacteriales	Brundimonas
sol_extract	61	0.1786837	0.001	Bacteria	Bacteroidetes	Chloroflexi	Chloroflexiales	Chloroflexiales	Carolinella
sol_extract	61	0.1741935	0.001	Bacteria	Fibrobacteres	Fibrobacteres	Fibrobacteriales	Fibrobacteriales	?
sol_extract	61	0.1407407	0.001	Bacteria	Bacteroidetes	Sphingobacterii	Sphingobacteriales	NS11_11_mainline_group	?
sol_extract	61	0.2285136	0.001	Bacteria	Verrucomicrobia	Verrucomicrobia	Verrucomicrobiales	Verrucomicrobiales	Microbacterium
sol_extract	61	0.1883714	0.001	Bacteria	Bacteroidetes	Chloroflexi	Chloroflexiales	Chloroflexiales	?
sol_extract	61	0.1883407	0.001	Bacteria	Bacteroidetes	Chloroflexi	Chloroflexiales	Chloroflexiales	Flavobacter
sol_extract	61	0.1877435	0.001	Bacteria	Verrucomicrobia	Verrucomicrobia	Verrucomicrobiales	Verrucomicrobiales	Holofusa
sol_extract	61	0.1611429	0.001	Bacteria	Armatimonada	Fimbrimonada	Fimbrimonadales	?	?
sol_extract	61	0.1461335	0.001	Bacteria	Bacteroidetes	Sphingobacterii	Sphingobacteriales	?	?
sol_extract	61	0.15967419	0.001	Bacteria	Bacteroidetes	Sphingobacterii	Sphingobacteriales	env_01_17	?
sol_extract	61	0.1903743	0.001	Bacteria	Proteobacteria	Gamma	Proteobacteria	Oceanospirillales	Putidosphingella
sol_extract	61	0.1742827	0.001	Bacteria					