

# Predicting the microbiome and metabolome dynamics of natural apple fermentation towards the development of enhanced functional vinegar

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Supplementary Material

**Table S1.** Relative abundance (%) of bacteria and fungi identified during the fermentation of Brazilian apple cider vinegar.

Genus	Weeks								
	1	2	3	4	5	6	7	8	9
<b><i>Bacteria</i></b>									
<i>Acetobacter</i>	0	0	0.0141338	0.0534451	0.3290043	0.3087687	5.0171312	82.726578	78.992575
<i>Komagataeibacter</i>	0	0	0	0	0.0065681	5.3626566	5.7885351	0.5134929	15.238644
<i>Leuconostoc</i>	0.2806685	62.58983	62.0837	61.097197	47.595163	43.816893	71.089669	12.74109	2.5054361
<i>Oenococcus</i>	0	0	0.0146049	0.1582395	0.8962532	2.4429524	2.5515009	1.8650713	1.8947717
<i>Gluconobacter</i>	0.1152503	19.192052	22.355446	22.799581	27.444693	25.086525	10.174231	0.9905804	0.5096479
<i>Tatumella</i>	0.0203383	4.7874515	4.5666338	5.3555148	9.1237498	9.1489396	1.6824907	0.3093177	0.0947386
<i>Novosphingobium</i>	1.978916	0	0.0131916	0	0.0214957	0.0191981	0.0246162	0.0285132	0.0331014
<i>Lelliottia</i>	0.0616928	0.8889878	1.1636836	1.296306	2.3693089	2.8215807	0.9480111	0.1265275	0.0211164
<i>Rahnella</i>	0.1891461	3.5018943	2.7075668	2.4422321	3.5426183	3.1799444	0.6065325	0.0954684	0.0176921
<i>Klebsiella</i>	0	1.395034	2.0484601	1.7463977	3.1807732	3.5463073	0.8226401	0.1069246	0.0114143
<i>Pseudomonas</i>	3.0520999	0.0299812	0.0230852	0.0130993	0.0023884	0	0.0065834	0	0.003995
<i>Luteibacter</i>	24.572048	0.0835839	0.0362768	0.0413938	0.0603075	0.0410625	0.0022899	0	0.0011414
<i>Methylophilus</i>	0	0	0	0	0	0	0.0203227	0.0465886	0
<i>Methylotenera</i>	0	0	0	0	0	0	0.0154567	0.0341141	0
<i>Erwinia</i>	14.726958	5.5219908	3.4792728	3.1972753	3.8668458	2.9591668	0.2364303	0.0241853	0
<i>Cronobacter</i>	29.233585	0.5519265	0.4070537	0.667016	0.0740409	0	0	0	0
<i>Sphingomonas</i>	2.3416155	0.0127193	0.0028268	0.0110034	0	0	0.0246162	0.023167	0
<i>Curtobacterium</i>	0.5654046	0	0	0	0	0	0	0.0066191	0
<i>Methylobacterium</i>	2.7788889	0.0027256	0	0.0010479	0	0	0.0005725	0	0
<i>Xanthomonas</i>	0.6508254	0.0027256	0.0042401	0	0.0023884	0.0346632	0	0	0
<i>Agrobacterium</i>	7.9319345	0.0963032	0.0612465	0.0770238	0.0071652	0	0	0	0
<i>Lactococcus</i>	0.6711637	0.0077224	0.003769	0.0115274	0	0	0	0	0
<i>Pseudoxanthomonas</i>	0.8650554	0.0086309	0	0.0052397	0	0	0	0	0
<i>Rhizobium</i>	0.6609945	0	0.0028268	0.0031438	0	0	0	0	0
<i>Neorhizobium</i>	1.5667266	0.0054511	0	0	0	0	0	0	0
<i>Endobacter</i>	0.857598	0	0	0	0	0	0	0	0

<i>Lichenicola</i>	0.6657401	0	0	0	0	0	0	0	0
<i>Ralstonia</i>	0	0	0	0	0	0	0.019464	0.0229124	0.3761008
<i>Burkholderia</i>	0	0	0.0032979	0	0.005971	0.013332	0.0489462	0.0216395	0.1306936
<i>Achromobacter</i>	0.3410054	0.001817	0.0023556	0	0	0	0.0415041	0.0330957	0.0553593
<i>Serratia</i>	0	0	0	0	0	0	0.1079107	0.0931772	0.0496521
<i>Oryzomicrobium</i>	0	0	0	0	0	0	0.0045798	0.00611	0.0182629
<i>Phyllobacterium</i>	0	0	0	0	0	0	0.0042935	0.0038187	0.00799
<i>Faecalibacterium</i>	0.035253	0.0199875	0.0009423	0.0298664	0.0340349	0	0.0214676	0.0229124	0.0068486
<i>Streptomyces</i>	0	0	0	0	0	0.0138653	0.0014312	0.0007637	0.0062779
<i>Comamonas</i>	0	0	0	0	0	0	0.0025761	0.0048371	0.0062779
<i>Genero</i>	0.0006779	0.0009085	0.0014134	0.0020959	0.0029855	0.0031997	0.0020036	0.0020367	0.0057071
<i>Bacteroides</i>	0	0	0	0.0031438	0	0	0.0042935	0.0071283	0.0057071
<i>Herbaspirillum</i>	0.1084709	0	0	0	0	0	0	0	0.003995
<i>Enterenecus</i>	0	0	0	0	0	0	0.0028624	0	0.0017121
<i>Schleiferia</i>	0	0	0	0	0	0	0	0	0.0011414
<i>Acinetobacter</i>	0.0027118	0	0	0	0	0	0	0	0
<i>Enterobacter</i>	0	0.0068139	0	0	0	0	0	0	0
<i>Polynucleobacter</i>	0	0	0	0	0	0	0	0	0
<i>Methylopumilus</i>	0	0	0	0	0	0	0	0	0
<i>Corynebacterium</i>	0.0250839	0	0	0	0	0	0.0011449	0	0
<i>Enterococcus</i>	0	0	0	0	0	0	0.0034348	0	0
<i>Lactobacillus</i>	0.0454222	0.0404292	0.051824	0.0089075	0.1200179	0.1935804	0.0057247	0.0078921	0
<i>Staphylococcus</i>	0.0677943	0	0.0028268	0	0.0214957	0	0.0088733	0	0
<i>Agathobaculum</i>	0	0	0	0	0	0	0	0	0
<i>Limnobacter</i>	0	0	0	0	0	0	0	0	0
<i>Nitrospira</i>	0	0	0	0	0	0.0021331	0	0	0
<i>Bradyrhizobium</i>	0.0149147	0	0	0	0.0591133	0	0	0	0
<i>Agathobacter</i>	0.0054235	0.0036341	0	0.0062877	0	0	0.0045798	0	0
<i>Methylocystis</i>	0	0	0	0	0	0	0	0	0
<i>Liquorilactobacillus</i>	0	0.0158991	0.0551219	0.0827875	0.0370205	0.0399959	0.0240438	0.0081466	0
<i>Pedobacter</i>	0.0738958	0.0009085	0.0009423	0	0	0	0	0	0

<i>Solibacillus</i>	0	0	0	0	0	0	0	0	0
<i>Succinivibrio</i>	0	0	0	0	0	0	0	0	0
<i>Pseudonocardia</i>	0	0	0	0	0	0	0	0	0
<i>Bacillus</i>	0.0061015	0	0	0	0	0.0079992	0.0091595	0.0448065	0
<i>Cyanobium</i>	0	0	0	0	0	0	0.0151705	0.0129837	0
<i>Pantoea</i>	0.250161	0.2303101	0.1922198	0.1461881	0.189282	0.2527744	0.0440802	0.0114562	0
<i>Clostridium</i>	0	0	0	0	0	0	0.0240438	0.0104379	0
<i>Flavobacterium</i>	0.4101556	0.0027256	0	0	0	0	0.0020036	0.0094196	0
<i>Mediterraneibacter</i>	0	0	0	0	0	0.026664	0	0.0073829	0
<i>Gemmiger</i>	0.0928782	0.0213502	0	0.0419177	0.0161218	0.022931	0.0125944	0.0056008	0
<i>Phocaeicola</i>	0.2888038	0.022713	0.0080092	0.0303904	0.1080758	0.0026664	0.0037211	0.0050916	0
<i>Escherichia</i>	0.0135589	0	0	0	0	0	0	0.0028004	0
<i>Zoogloea</i>	0	0	0	0	0	0	0	0.0025458	0
<i>Stenotrophomonas</i>	0.0338972	0	0	0	0	0	0	0.0022912	0
<i>Faecousia</i>	0	0	0	0	0	0	0.0020036	0.0017821	0
<i>Terrisporobacter</i>	0	0	0	0	0	0	0.0034348	0.0015275	0
<i>Limosilactobacillus</i>	0.0223721	0.0758615	0.0386324	0.0110034	0.0776235	0.0543945	0	0.0015275	0
<i>Fimimorpha</i>	0	0	0	0	0	0	0	0.0015275	0
<i>Eubacterium</i>	0.0088133	0	0	0	0	0	0.0020036	0.0012729	0
<i>Anaerofilum</i>	0.0013559	0	0	0	0	0	0	0.0012729	0
<i>Caproicibacterium</i>	0	0	0	0	0	0	0	0.0012729	0
<i>Lawsonibacter</i>	0	0	0	0	0	0	0	0.0012729	0
<i>Anaerotruncus</i>	0	0	0	0	0	0	0	0.0010183	0
<i>Sharpea</i>	0	0	0	0	0	0	0.2221185	0	0
<i>Sodaliophilus</i>	0.0040677	0	0	0	0	0	0.0463701	0	0
<i>Phytobacter</i>	0.09559	0.4842417	0.4475706	0.3714959	0.3982684	0.1647833	0.0403592	0	0
<i>Bulleidia</i>	0	0	0	0	0	0	0.0386418	0	0
<i>Ruminococcus</i>	0.0101691	0.0072682	0	0	0	0	0.0314859	0	0
<i>Holdemanella</i>	0.0894885	0.0022713	0	0.0062877	0.005971	0.0890576	0.0260474	0	0
<i>Citrobacter</i>	0	0.2153195	0.1531163	0.1561436	0.1731602	0.1386526	0.0254749	0	0
<i>Intestinibacter</i>	0	0	0	0	0	0	0.0137393	0	0

<i>Intestinimonas</i>	0	0	0	0	0	0	0.0123081	0	0
<i>Prevotella</i>	0.012203	0.0249843	0	0.0267226	0	0	0.0117356	0	0
<i>Parafannyhessea</i>	0	0	0	0	0	0	0.0117356	0	0
<i>Absicoccus</i>	0	0	0	0	0	0	0.009732	0	0
<i>Alloprevotella</i>	0.0027118	0	0	0	0	0	0.0094458	0	0
<i>Blautia</i>	0.0142368	0	0	0.0036678	0.0065681	0.0079992	0.0083008	0	0
<i>Copromorpha</i>	0	0	0	0	0	0	0.0060109	0	0
<i>Ruthenibacterium</i>	0	0	0	0	0	0	0.0054385	0	0
<i>Cupriavidus</i>	0	0	0.0009423	0	0	0.0010666	0.0051522	0	0
<i>Sphingomicrobium</i>	0.0983018	0	0	0.0047157	0	0	0.0040073	0	0
<i>Lachnospira</i>	0	0.001817	0	0	0	0	0.0037211	0	0
<i>Paratractidigestivibacter</i>	0	0	0	0	0	0	0.0034348	0	0
<i>Parabacteroides</i>	0	0.0009085	0	0	0	0	0.0028624	0	0
<i>Senegalimassilia</i>	0	0	0	0	0	0	0.0025761	0	0
<i>Caproicibacter</i>	0	0	0	0	0	0	0.0022899	0	0
<i>Emergencia</i>	0	0	0	0	0	0	0.0022899	0	0
<i>Collinsella</i>	0.0033897	0.0027256	0	0.0078596	0.0041797	0	0.0020036	0	0
<i>Hyphomicrobium</i>	0	0	0	0	0	0	0.0020036	0	0
<i>Dorea</i>	0	0	0	0	0	0	0.0017174	0	0
<i>Microvirga</i>	0	0.0009085	0	0	0.057322	0	0.0014312	0	0
<i>Fimenecus</i>	0	0	0	0	0	0	0.0014312	0	0
<i>Planktophila</i>	0	0	0	0	0	0	0.0011449	0	0
<i>Reyranella</i>	0	0	0	0	0	0	0.0011449	0	0
<i>Cryptobacteroides</i>	0	0	0	0	0.0017913	0	0.0008587	0	0
<i>Phascolarctobacterium</i>	0	0	0	0.0036678	0	0	0.0008587	0	0
<i>Butyricicoccus</i>	0.0027118	0	0	0	0	0	0.0008587	0	0
<i>Merdicola</i>	0	0	0	0	0	0	0.0008587	0	0
<i>Tumebacillus</i>	0	0	0	0	0	0	0.0008587	0	0
<i>Onthovivens</i>	0	0	0	0	0	0	0.0005725	0	0
<i>Asaia</i>	0.0230501	0.0145363	0.0164894	0	0	0.0511948	0	0	0
<i>Oryzihumus</i>	0	0	0	0	0	0.0346632	0	0	0

<i>Salinicoccus</i>	0	0	0	0	0	0.0287971	0	0	0
<i>Ligilactobacillus</i>	0.0061015	0.0467888	0.0292099	0.0172911	0.0203015	0.0202646	0	0	0
<i>Streptococcus</i>	0.0196604	0	0	0.0052397	0	0.0117321	0	0	0
<i>Massilia</i>	0.0101691	0	0	0.0052397	0	0.0090657	0	0	0
<i>Cutibacterium</i>	0	0	0	0	0	0.0063994	0	0	0
<i>Lachnoclostridium</i>	0	0	0	0	0	0.0063994	0	0	0
<i>Mycobacterium</i>	0.0203383	0	0	0	0	0.003733	0	0	0
<i>Spirillospora</i>	0	0	0	0	0	0.0031997	0	0	0
<i>Bifidobacterium</i>	0.0210162	0.0022713	0	0.0094315	0	0.0026664	0	0	0
<i>Moraxella</i>	0	0.0031798	0	0	0	0.0026664	0	0	0
<i>Ktedonobacter</i>	0	0	0	0	0	0.0026664	0	0	0
<i>Sulfurimonas</i>	0	0	0.0018845	0	0.0083595	0.0021331	0	0	0
<i>Kitasatospora</i>	0	0	0	0	0	0.0021331	0	0	0
<i>Noviherbaspirillum</i>	0	0	0	0	0	0.0021331	0	0	0
<i>Paludibaculum</i>	0	0	0	0	0	0.0021331	0	0	0
<i>Solirubrobacter</i>	0	0	0	0.0015719	0	0.0015998	0	0	0
<i>Dormibacter</i>	0	0	0	0	0	0.0015998	0	0	0
<i>Rubrimentiphilum</i>	0	0	0	0	0	0.0010666	0	0	0
<i>Yaniella</i>	0	0	0	0	0.0579191	0	0	0	0
<i>Blastococcus</i>	0	0	0	0	0.0435886	0	0	0	0
<i>Alistipes</i>	0.0027118	0	0	0	0.0089566	0	0	0	0
<i>Niallia</i>	0	0	0	0	0.005971	0	0	0	0
<i>Erysipelatoclostridium</i>	0	0	0	0	0.0029855	0	0	0	0
<i>Rubneribacter</i>	0	0	0	0	0.0029855	0	0	0	0
<i>Acidithrix</i>	0	0	0	0	0.0023884	0	0	0	0
<i>Sulfotelmato bacter</i>	0	0	0	0	0.0017913	0	0	0	0
<i>Trebonia</i>	0	0	0	0	0.0017913	0	0	0	0
<i>Udaeobacter</i>	0	0	0	0	0.0011942	0	0	0	0
<i>Fusobacterium</i>	0	0.0136278	0	0.0083835	0	0	0	0	0
<i>Porphyromonas</i>	0.0203383	0.0054511	0	0.0057637	0	0	0	0	0
<i>Bergeyella</i>	0.0067794	0.0036341	0	0.0052397	0	0	0	0	0

<i>Barnesiella</i>	0	0	0	0.0047157	0	0	0	0	0
<i>Jatrophihabitans</i>	0.2928714	0	0	0.0036678	0	0	0	0	0
<i>Adlercreutzia</i>	0.0067794	0.0081767	0	0.0031438	0	0	0	0	0
<i>Aureimonas</i>	0.0027118	0	0	0.0026199	0	0	0	0	0
<i>Nocardioides</i>	0.0508457	0	0	0.0020959	0	0	0	0	0
<i>Slackia</i>	0	0	0	0.0020959	0	0	0	0	0
<i>Gordonibacter</i>	0	0	0	0.0015719	0	0	0	0	0
<i>Amycolatopsis</i>	0	0	0	0.0010479	0	0	0	0	0
<i>Christensenella</i>	0	0	0	0.0010479	0	0	0	0	0
<i>Metallibacterium</i>	0	0	0.0018845	0	0	0	0	0	0
<i>Humisphaera</i>	0.0074574	0	0.0014134	0	0	0	0	0	0
<i>Acidulodesulfobacterium</i>	0	0	0.0009423	0	0	0	0	0	0
<i>Patulibacter</i>	0	0	0.0009423	0	0	0	0	0	0
<i>Paracoccus</i>	0	0.0072682	0	0	0	0	0	0	0
<i>Trichococcus</i>	0	0.0068139	0	0	0	0	0	0	0
<i>Romboutsia</i>	0	0.0059054	0	0	0	0	0	0	0
<i>Frederiksenia</i>	0	0.0022713	0	0	0	0	0	0	0
<i>PMG-095</i>	0	0.0022713	0	0	0	0	0	0	0
<i>Scatomonas</i>	0	0.0022713	0	0	0	0	0	0	0
<i>Desulfovibrio</i>	0.0020338	0.001817	0	0	0	0	0	0	0
<i>Oceanivirga</i>	0.0020338	0.001817	0	0	0	0	0	0	0
<i>Methyloceanibacter</i>	0.0013559	0.0013628	0	0	0	0	0	0	0
<i>Desulfofustis</i>	0	0.0013628	0	0	0	0	0	0	0
<i>Oribacterium</i>	0	0.0013628	0	0	0	0	0	0	0
<i>Phycococcus</i>	0	0.0013628	0	0	0	0	0	0	0
<i>Terriglobus</i>	0.0366089	0.0009085	0	0	0	0	0	0	0
<i>Bruticola</i>	0.0020338	0.0009085	0	0	0	0	0	0	0
<i>Humimicrobium</i>	0	0.0009085	0	0	0	0	0	0	0
<i>Veillonella</i>	0	0.0009085	0	0	0	0	0	0	0
<i>Fron Dihabitans</i>	0.2949053	0	0	0	0	0	0	0	0
<i>Pigmentiphaga</i>	0.2928714	0	0	0	0	0	0	0	0

<i>Duganella</i>	0.2454154	0	0	0	0	0	0	0	0
<i>Paraburkholderia</i>	0.2271109	0	0	0	0	0	0	0	0
<i>Frankia</i>	0.2196536	0	0	0	0	0	0	0	0
<i>Caballeronia</i>	0.1837226	0	0	0	0	0	0	0	0
<i>Tardiphaga</i>	0.1701637	0	0	0	0	0	0	0	0
<i>Pararhizobium</i>	0.1505034	0	0	0	0	0	0	0	0
<i>Rhizorhabdus</i>	0.1383004	0	0	0	0	0	0	0	0
<i>Kineococcus</i>	0.1050812	0	0	0	0	0	0	0	0
<i>Aquisphaera</i>	0.1016915	0	0	0	0	0	0	0	0
<i>Roseomonas</i>	0.09559	0	0	0	0	0	0	0	0
<i>Bosea</i>	0.0942341	0	0	0	0	0	0	0	0
<i>Variovorax</i>	0.0922003	0	0	0	0	0	0	0	0
<i>Fibrobacter</i>	0.0881326	0	0	0	0	0	0	0	0
<i>Janthinobacterium</i>	0.0847429	0	0	0	0	0	0	0	0
<i>Spirosoma</i>	0.0799973	0	0	0	0	0	0	0	0
<i>Subtercola</i>	0.0752517	0	0	0	0	0	0	0	0
<i>Beijerinckia</i>	0.0732179	0	0	0	0	0	0	0	0
<i>Mucilaginibacter</i>	0.0732179	0	0	0	0	0	0	0	0
<i>Brevundimonas</i>	0.0725399	0	0	0	0	0	0	0	0
<i>Yonghaparkia</i>	0.0684723	0	0	0	0	0	0	0	0
<i>Rubrivivax</i>	0.0664384	0	0	0	0	0	0	0	0
<i>Azospirillum</i>	0.0515237	0	0	0	0	0	0	0	0
<i>Fimbriimonas</i>	0.0393207	0	0	0	0	0	0	0	0
<i>Finegoldia</i>	0.0318633	0	0	0	0	0	0	0	0
<i>Rhizomicrobium</i>	0.0311854	0	0	0	0	0	0	0	0
<i>Faecalibacillus</i>	0.0203383	0	0	0	0	0	0	0	0
<i>Chryseobacterium</i>	0.0196604	0	0	0	0	0	0	0	0
<i>Clavibacter</i>	0.0189824	0	0	0	0	0	0	0	0
<i>Williamsia</i>	0.0149147	0	0	0	0	0	0	0	0
<i>Aurantimonas</i>	0.0142368	0	0	0	0	0	0	0	0
<i>Sphingobium</i>	0.0142368	0	0	0	0	0	0	0	0



<i>Granulicella</i>	0.012203	0	0	0	0	0	0	0	0
<i>Onthenecus</i>	0.012203	0	0	0	0	0	0	0	0
<i>Hymenobacter</i>	0.0108471	0	0	0	0	0	0	0	0
<i>Mesorhizobium</i>	0.0101691	0	0	0	0	0	0	0	0
<i>Acidisoma</i>	0.0088133	0	0	0	0	0	0	0	0
<i>Rhodococcus</i>	0.0088133	0	0	0	0	0	0	0	0
<i>Rhizobacter</i>	0.0081353	0	0	0	0	0	0	0	0
<i>Hansschlegelia</i>	0.0067794	0	0	0	0	0	0	0	0
<i>Granulicatella</i>	0.0061015	0	0	0	0	0	0	0	0
<i>Allobaculum</i>	0.0054235	0	0	0	0	0	0	0	0
<i>Alsobacter</i>	0.0054235	0	0	0	0	0	0	0	0
<i>Luteimonas</i>	0.0054235	0	0	0	0	0	0	0	0
<i>Paraclostridium</i>	0.0054235	0	0	0	0	0	0	0	0
<i>Aeromicrobium</i>	0.0047456	0	0	0	0	0	0	0	0
<i>Kineobactrum</i>	0.0047456	0	0	0	0	0	0	0	0
<i>Limivocinus</i>	0.0047456	0	0	0	0	0	0	0	0
<i>Megasphaera</i>	0.0047456	0	0	0	0	0	0	0	0
<i>Micrococcus</i>	0.0047456	0	0	0	0	0	0	0	0
<i>Salipiger</i>	0.0033897	0	0	0	0	0	0	0	0
<i>Sphingobacterium</i>	0.0033897	0	0	0	0	0	0	0	0
<i>Helcococcus</i>	0.0027118	0	0	0	0	0	0	0	0
<i>Kaistia</i>	0.0027118	0	0	0	0	0	0	0	0
<i>Oceanimonas</i>	0.0020338	0	0	0	0	0	0	0	0
<i>Perlucidibaca</i>	0.0020338	0	0	0	0	0	0	0	0
<i>Arcanobacterium</i>	0.0013559	0	0	0	0	0	0	0	0
<b>Fungi</b>									
<i>Saccharomyces</i>	18.773234	96.473735	97.765639	98.313346	89.848026	64.761852	24.398789	2.8237729	77.695151
<i>Pichia</i>	10.548327	0.0099809	0.0252747	0.0054059	0.2348114	17.52541	16.570321	67.312241	2.6030758
<i>Candida</i>	2.4163569	0.0036597	0	0.0011381	0	0	0	0.9942342	0
<i>Yarrowia</i>	14.684015	0.0326044	0.0203828	0.0071131	0.005135	0.0299076	0	0	0.016013
<i>Kluyveromyces</i>	9.5260223	0.0153041	0	0	0	0.0095055	0	0	0

<i>Hanseniaspora</i>	0	3.2138615	1.9909908	0.9281152	0.7102694	3.9338972	3.4277408	2.7572442	0.6289912
<i>Leotiomycetes</i>	15.520446	0.0123098	0	0.0008536	0	0.0187792	0	0	0
<i>Alternaria</i>	12.22119	0.0432507	0.0065225	0.0034143	0.0014005	0	0	0	0
<i>Brettanomyces</i>	0	0	0.0232364	0.6450144	9.1268332	13.509672	55.574561	22.165139	18.967737
<i>Cladosporium</i>	3.7639405	0.0039924	0.0040766	0.0025607	0	0	0	0.4435245	0
<i>Sistotrema</i>	2.4163569	0.0106463	0.0016306	0.0017071	0	0	0	0	0
<i>Helotiales</i>	2.2769517	0	0	0	0	0	0	0	0
<i>Boeremia</i>	1.7657993	0.0059886	0	0	0	0	0	0	0
<i>Sympodiomyces</i>	1.16171	0	0	0	0	0	0	0	0
<i>Aspergillus</i>	1.1152416	0.0059886	0	0	0	0	0.0222895	0	0
<i>Bullera</i>	1.0223048	0	0.0040766	0	0	0	0	0	0
<i>Vishniacozyma</i>	0.8828996	0	0	0	0	0	0	0	0
<i>Clavispora</i>	0.697026	0.0059886	0	0.0011381	0	0	0	0	0
<i>Papiliotrema</i>	0.6505576	0.0079847	0	0.0014226	0	0	0	0	0
<i>Ophiosphaerella</i>	0.5576208	0	0	0	0	0	0	0.5433176	0
<i>Agaricomycetes</i>	0	0	0	0	0	0	0	0.3585157	0
<i>Debaryomyces</i>	0	0	0	0	0	0	0	0.2476345	0
<i>Exobasidium</i>	0	0	0	0	0	0	0	1.6447368	0
<i>Kurtzmaniella</i>	0	0.1214347	0.1516479	0.0839344	0.0492497	0.2109763	0.0062992	0	0.016013
<i>Malassezia</i>	0	0	0.0020383	0	0	0	0	0	0
<i>Malassezia</i>	0	0	0	0	0.0242747	0	0	0.7096393	0
<i>Penicillium</i>	0	0	0	0.0014226	0	0	0	0	0.0185751
<i>Rhodotorula</i>	0	0.0029943	0	0	0	0	0	0	0
<i>Sporobolomyces</i>	0	0.0103136	0	0	0	0	0	0	0
<i>Starmerella</i>	0	0.0019962	0.0044842	0.0019917	0	0	0	0	0.0544443
<i>Tetracladium</i>	0	0.0036597	0	0.0014226	0	0	0	0	0
<i>Yamadazyma</i>	0	0.014306	0	0	0	0	0	0	0