Supplementary Table 1. Dataset DS1 was derived from 108 fully sequenced and annotated genomes from the three domains of life (Tekaia and Yeramian (2006)). Coding regions were translated into protein sequences and the frequency of occurrence of each amino acid was calculated, assuming that all proteins are equally abundant. The table shows values of amino acid relative abundances, predicted abundances from the genetic code model, genomic GC content and correlation R-values.

Amino acid	% abundance, observed	ln (% abundance, observed)	Cost (ATP)	Cost (ATP/time)	ln (% abundance, predicted)	Organism	Genomic GC content	R % abundance vs Cost (ATP)	R ln(% abundance) vs Cost (ATP)	R % abundance vs Cost (ATP/time)	R ln(% abundance) vs Cost (ATP/time)	R ln(% abundance), observed vs predicted
A	5.51	1.706564623	11.7	11.7	1.292	S. cerevisiae	0.38	-0.52	-0.6	-0.76	-0.91	0.77
C	1.28	0.246860078	24.7	741	1.082							
D	5.84	1.764730797	12.7	114.3	1.082							
E	6.57	1.882513832	15.3	76.5	1.082							
F	4.48	1.499623046	52	208	1.565							
G	5.01	1.611435915	11.7	11.7	1.292							
H	2.13	0.75612198	38.3	536.2	1.082							
I	6.55	1.87946505	32.3	64.6	2.046							
K	7.35	1.994700313	30.3	242.4	1.565							
L	9.56	2.257587727	27.3	54.6	2.368							
M	2.07	0.727548607	34.3	445.9	0.601							
N	6.1	1.808288771	14.7	147	1.565							
P	4.31	1.460937904	20.3	60.9	1.292							
Q	3.92	1.366091654	16.3	130.4	1.082							
R	4.44	1.490654376	27.3	109.2	1.885							
S	8.96	2.192770227	11.7	70.2	2.18							
T	5.82	1.761300262	18.7	112.2	1.775							
V	5.6	1.722766598	23.3	46.6	1.775							
W	1.04	3.9220713e-2	74.3	891.6	0.118							
Y	3.34	1.205970807	50	350	1.565							
A	6.33	1.8453	11.7	11.7	1.178	S. pombe	0.36	-0.52	-0.61	-0.77	-0.92	0.78

C	1.53	0.42527	24.7	741	1.058
D	5.32	1.67147	12.7	114.3	1.058
E	6.49	1.87026	15.3	76.5	1.058
F	4.59	1.52388	52	208	1.632
G	4.99	1.60744	11.7	11.7	1.178
H	2.25	0.81093	38.3	536.2	1.058
I	6.13	1.81319	32.3	64.6	2.126
K	6.39	1.85473	30.3	242.4	1.632
L	9.83	2.28544	27.3	54.6	2.387
M	2.05	0.71784	34.3	445.9	0.611
N	5.18	1.64481	14.7	147	1.632
P	4.69	1.54543	20.3	60.9	1.178
Q	3.79	1.33237	16.3	130.4	1.058
R	4.84	1.57691	27.3	109.2	1.813
S	9.39	2.23965	11.7	70.2	2.157
T	5.6	1.72277	18.7	112.2	1.752
V	6.01	1.79342	23.3	46.6	1.752
W	1.11	0.10436	74.3	891.6	3.8e-2
Y	3.4	1.22378	50	350	1.632

A	8.7	2.163323026	11.7	11.7	1.827	N. crassa	0.5
	-0.66	-0.67	-0.83	-0.93	0.77		
C	1.13	0.122217633	24.7	741	1.139		
D	5.63	1.728109442	12.7	114.3	1.139		
E	6.46	1.865629318	15.3	76.5	1.139		
F	3.37	1.214912744	52	208	1.145		
G	7.2	1.974081026	11.7	11.7	1.827		
H	2.45	0.896088025	38.3	536.2	1.139		
I	4.42	1.486139696	32.3	64.6	1.551		
K	5.08	1.625311262	30.3	242.4	1.145		
L	8.35	2.122261539	27.3	54.6	2.24		

M	2.15	0.765467842	34.3	445.9	0.449	
N	3.7	1.30833282	14.7	147	1.145	
P	6.52	1.874874376	20.3	60.9	1.827	
Q	4.26	1.44926916	16.3	130.4	1.139	
R	6.17	1.819698838	27.3	109.2	2.235	
S	8.29	2.115049969	11.7	70.2	2.238	
T	6.11	1.809926773	18.7	112.2	1.833	
V	5.98	1.788420568	23.3	46.6	1.833	
W	1.35	0.300104592	74.3	891.6	0.444	
Y	2.56	0.940007258	50	350	1.145	

A	4.93	1.595338988	11.7	11.7	1.032	C. albicans
0.34	-0.51	-0.59	-0.75	-0.9	0.75	
C	1.17	0.157003749	24.7	741	1.024	
D	5.71	1.742219024	12.7	114.3	1.024	
E	6.23	1.829376333	15.3	76.5	1.024	
F	4.52	1.508511994	52	208	1.709	
G	4.97	1.60341984	11.7	11.7	1.032	
H	2.14	0.760805829	38.3	536.2	1.024	
I	7.13	1.964311234	32.3	64.6	2.219	
K	7.2	1.974081026	30.3	242.4	1.709	
L	9.3	2.2300144	27.3	54.6	2.407	
M	1.87	0.625938431	34.3	445.9	0.616	
N	6.69	1.900613874	14.7	147	1.709	
P	4.49	1.501852702	20.3	60.9	1.032	
Q	4.42	1.486139696	16.3	130.4	1.024	
R	3.72	1.313723668	27.3	109.2	1.721	
S	9.29	2.228938553	11.7	70.2	2.123	
T	6.16	1.818076778	18.7	112.2	1.717	
V	5.51	1.706564623	23.3	46.6	1.717	

W	0.98	-2.0202707e-2	74.3	891.6	-6.9e-2	
Y	3.47	1.244154594	50	350	1.709	
A	9.38	2.238579763	11.7	11.7	1.88	M. grisea
0.51	-0.64	-0.66	-0.81	-0.92	0.8	
C	1.28	0.246860078	24.7	741	1.139	
D	5.7	1.740466175	12.7	114.3	1.139	
E	5.9	1.774952351	15.3	76.5	1.139	
F	3.47	1.244154594	52	208	1.09	
G	7.38	1.998773639	11.7	11.7	1.88	
H	2.33	0.845868268	38.3	536.2	1.139	
I	4.37	1.474763009	32.3	64.6	1.488	
K	4.78	1.564440547	30.3	242.4	1.09	
L	8.52	2.142416341	27.3	54.6	2.222	
M	2.2	0.78845736	34.3	445.9	0.421	
N	3.54	1.264126727	14.7	147	1.09	
P	6.34	1.846878768	20.3	60.9	1.88	
Q	4.1	1.410986974	16.3	130.4	1.139	
R	6.55	1.87946505	27.3	109.2	2.27	
S	8	2.079441542	11.7	70.2	2.237	
T	5.86	1.768149604	18.7	112.2	1.832	
V	6.2	1.824549292	23.3	46.6	1.832	
W	1.47	0.385262401	74.3	891.6	0.47	
Y	2.52	0.924258902	50	350	1.09	
A	8.23	2.107786015	11.7	11.7	1.903	F. graminearum
0.52	-0.63	-0.64	-0.84	-0.94	0.76	
C	1.28	0.246860078	24.7	741	1.138	
D	5.94	1.781709133	12.7	114.3	1.138	
E	6.21	1.826160896	15.3	76.5	1.138	
F	3.76	1.324418957	52	208	1.066	
G	6.7	1.902107526	11.7	11.7	1.903	

H	2.38	0.867100488	38.3	536.2	1.138		
I	5.11	1.631199404	32.3	64.6	1.459		
K	5.13	1.635105659	30.3	242.4	1.066		
L	8.68	2.161021529	27.3	54.6	2.213		
M	2.27	0.819779831	34.3	445.9	0.408		
N	3.87	1.353254507	14.7	147	1.066		
P	5.87	1.769854634	20.3	60.9	1.903		
Q	4.03	1.393766376	16.3	130.4	1.138		
R	5.75	1.749199855	27.3	109.2	2.285		
S	8.14	2.09679018	11.7	70.2	2.237		
T	6.1	1.808288771	18.7	112.2	1.831		
V	6.12	1.811562097	23.3	46.6	1.831		
W	1.51	0.412109651	74.3	891.6	0.48		
Y	2.8	1.029619417	50	350	1.066		
A	8.56	2.14710019	11.7	11.7	1.848	A. nidulans	0.5
	-0.61	-0.63 -0.82	-0.93	0.8			
C	1.24	0.21511138	24.7	741	1.139		
D	5.57	1.717395054	12.7	114.3	1.139		
E	6.19	1.822935087	15.3	76.5	1.139		
F	3.7	1.30833282	52	208	1.124		
G	6.77	1.912501087	11.7	11.7	1.848		
H	2.37	0.862889955	38.3	536.2	1.139		
I	5	1.609437912	32.3	64.6	1.527		
K	4.55	1.515127233	30.3	242.4	1.124		
L	9.16	2.214846179	27.3	54.6	2.233		
M	2.04	0.712949808	34.3	445.9	0.439		
N	3.67	1.300191662	14.7	147	1.124		
P	6	1.791759469	20.3	60.9	1.848		
Q	4.02	1.391281903	16.3	130.4	1.139		

R	6.24	1.830980182	27.3	109.2	2.248	
S	8.38	2.125847914	11.7	70.2	2.238	
T	5.97	1.786746927	18.7	112.2	1.833	
V	6.11	1.809926773	23.3	46.6	1.833	
W	1.46	0.378436436	74.3	891.6	0.454	
Y	2.89	1.061256502	50	350	1.124	

A	5.04	1.617406082	11.7	11.7	1.722	E. cuniculi
0.47	-0.43	-0.56 -0.71	-0.83	0.71		
C	2.04	0.712949808	24.7	741	1.137	
D	5.46	1.69744879	12.7	114.3	1.137	
E	8.1	2.091864062	15.3	76.5	1.137	
F	4.78	1.564440547	52	208	1.244	
G	6.52	1.874874376	11.7	11.7	1.722	
H	1.92	0.652325186	38.3	536.2	1.137	
I	6.67	1.89761986	32.3	64.6	1.667	
K	7.08	1.957273908	30.3	242.4	1.244	
L	9.52	2.253394849	27.3	54.6	2.272	
M	3	1.098612289	34.3	445.9	0.496	
N	3.89	1.358409158	14.7	147	1.244	
P	3.38	1.217875709	20.3	60.9	1.722	
Q	2.27	0.819779831	16.3	130.4	1.137	
R	6.71	1.903598951	27.3	109.2	2.165	
S	7.99	2.07819076	11.7	70.2	2.235	
T	4.09	1.40854497	18.7	112.2	1.83	
V	7.04	1.95160817	23.3	46.6	1.83	
W	0.78	-0.248461359	74.3	891.6	0.388	
Y	3.62	1.286474026	50	350	1.244	

A	6.29	1.838961071	11.7	11.7	1.144	C. elegans
0.35	-0.58	-0.67 -0.84	-0.93	0.76		
C	2.03	0.708035793	24.7	741	1.051	

D	5.3	1.667706821	12.7	114.3	1.051	
E	6.5	1.871802177	15.3	76.5	1.051	
F	4.83	1.574846468	52	208	1.651	
G	5.34	1.675225653	11.7	11.7	1.144	
H	2.32	0.841567186	38.3	536.2	1.051	
I	6.14	1.814824742	32.3	64.6	2.149	
K	6.42	1.859418118	30.3	242.4	1.651	
L	8.65	2.157559321	27.3	54.6	2.392	
M	2.61	0.959350221	34.3	445.9	0.613	
N	4.91	1.591273942	14.7	147	1.651	
P	4.91	1.591273942	20.3	60.9	1.144	
Q	4.11	1.413423029	16.3	130.4	1.051	
R	5.21	1.650579856	27.3	109.2	1.792	
S	8.04	2.084429083	11.7	70.2	2.149	
T	5.84	1.764730797	18.7	112.2	1.744	
V	6.19	1.822935087	23.3	46.6	1.744	
W	1.1	9.531018e-2	74.3	891.6	1.3e-2	
Y	3.16	1.150572028	50	350	1.651	

A	6.18	1.821318271	11.7	11.7	1.249	C. briggsae
0.37	-0.59	-0.67	-0.84	-0.94	0.77	
C	1.95	0.667829373	24.7	741	1.073	
D	5.29	1.665818246	12.7	114.3	1.073	
E	6.81	1.91839212	15.3	76.5	1.073	
F	4.66	1.539015448	52	208	1.591	
G	5.37	1.680827909	11.7	11.7	1.249	
H	2.32	0.841567186	38.3	536.2	1.073	
I	5.89	1.773255998	32.3	64.6	2.077	
K	6.46	1.865629318	30.3	242.4	1.591	
L	8.46	2.135349174	27.3	54.6	2.375	

M	2.62	0.963174318	34.3	445.9	0.606	
N	4.78	1.564440547	14.7	147	1.591	
P	5.05	1.619388243	20.3	60.9	1.249	
Q	4.13	1.418277407	16.3	130.4	1.073	
R	5.49	1.702928256	27.3	109.2	1.858	
S	8.01	2.080690761	11.7	70.2	2.172	
T	5.73	1.745715531	18.7	112.2	1.766	
V	6.09	1.806648082	23.3	46.6	1.766	
W	1.15	0.139761942	74.3	891.6	8.8e-2	
Y	3.09	1.128171091	50	350	1.591	

A	7.46	2.009555414	11.7	11.7	1.495	D. melanogaster
0.42	-0.68	-0.76	-0.84	-0.94	0.78	
C	1.87	0.625938431	24.7	741	1.115	
D	5.19	1.646733697	12.7	114.3	1.115	
E	6.41	1.857859271	15.3	76.5	1.115	
F	3.55	1.266947603	52	208	1.428	
G	6.18	1.821318271	11.7	11.7	1.495	
H	2.68	0.985816795	38.3	536.2	1.115	
I	4.87	1.583093937	32.3	64.6	1.884	
K	5.55	1.713797928	30.3	242.4	1.428	
L	9.15	2.213753879	27.3	54.6	2.329	
M	2.36	0.858661619	34.3	445.9	0.566	
N	4.65	1.53686722	14.7	147	1.428	
P	5.46	1.69744879	20.3	60.9	1.495	
Q	5.19	1.646733697	16.3	130.4	1.115	
R	5.59	1.720979287	27.3	109.2	2.016	
S	8.26	2.111424588	11.7	70.2	2.214	
T	5.59	1.720979287	18.7	112.2	1.808	
V	5.93	1.780024213	23.3	46.6	1.808	
W	1	0	74.3	891.6	0.253	

Y	2.97	1.088561953	50	350	1.428	
A	7.43	2.005525859	11.7	11.7	1.602	A. gambiae
0.45	-0.63	-0.72	-0.84	-0.94	0.83	
C	2.01	0.698134722	24.7	741	1.127	
D	5.25	1.658228077	12.7	114.3	1.127	
E	6.24	1.830980182	15.3	76.5	1.127	
F	3.76	1.324418957	52	208	1.346	
G	6.36	1.850028377	11.7	11.7	1.602	
H	2.65	0.97455964	38.3	536.2	1.127	
I	5.23	1.654411278	32.3	64.6	1.788	
K	5.53	1.710187816	30.3	242.4	1.346	
L	9.32	2.232162629	27.3	54.6	2.304	
M	2.24	0.806475866	34.3	445.9	0.538	
N	4.38	1.477048724	14.7	147	1.346	
P	5.13	1.635105659	20.3	60.9	1.602	
Q	4.32	1.463255402	16.3	130.4	1.127	
R	6.02	1.795087259	27.3	109.2	2.086	
S	7.46	2.009555414	11.7	70.2	2.226	
T	5.83	1.763017	18.7	112.2	1.821	
V	6.41	1.857859271	23.3	46.6	1.821	
W	1.12	0.113328685	74.3	891.6	0.319	
Y	3.14	1.1442228	50	350	1.346	
A	6.16	1.818076778	11.7	11.7	1.177	A. thaliana
0.36	-0.56	-0.65	-0.78	-0.91	0.73	
C	1.92	0.652325186	24.7	741	1.058	
D	5.37	1.680827909	12.7	114.3	1.058	
E	6.68	1.899117988	15.3	76.5	1.058	
F	4.32	1.463255402	52	208	1.632	
G	6.31	1.842135677	11.7	11.7	1.177	

H	2.32	0.841567186	38.3	536.2	1.058		
I	5.35	1.677096561	32.3	64.6	2.127		
K	6.39	1.854734268	30.3	242.4	1.632		
L	9.54	2.255493485	27.3	54.6	2.387		
M	2.43	0.887891257	34.3	445.9	0.611		
N	4.39	1.479329227	14.7	147	1.632		
P	4.73	1.553925203	20.3	60.9	1.177		
Q	3.5	1.252762968	16.3	130.4	1.058		
R	5.5	1.704748092	27.3	109.2	1.813		
S	9.02	2.199444334	11.7	70.2	2.157		
T	5.13	1.635105659	18.7	112.2	1.751		
V	6.66	1.896119485	23.3	46.6	1.751		
W	1.29	0.254642218	74.3	891.6	3.7e-2		
Y	2.89	1.061256502	50	350	1.632		

A	6.97	1.941615225	11.7	11.7	1.402	H. sapiens	0.4
	-0.62	-0.73 -0.78	-0.89	0.74			
C	2.31	0.837247525	24.7	741	1.101		
D	4.68	1.54329811	12.7	114.3	1.101		
E	6.95	1.93874166	15.3	76.5	1.101		
F	3.64	1.291983682	52	208	1.494		
G	6.7	1.902107526	11.7	11.7	1.402		
H	2.64	0.970778917	38.3	536.2	1.101		
I	4.35	1.470175845	32.3	64.6	1.962		
K	5.72	1.743968805	30.3	242.4	1.494		
L	9.87	2.289499853	27.3	54.6	2.348		
M	2.2	0.78845736	34.3	445.9	0.585		
N	3.58	1.2753628	14.7	147	1.494		
P	6.37	1.85159947	20.3	60.9	1.402		
Q	4.71	1.549687908	16.3	130.4	1.101		
R	5.68	1.736951233	27.3	109.2	1.956		

S	8.25	2.1102132	11.7	70.2	2.2	
T	5.34	1.675225653	18.7	112.2	1.794	
V	6	1.791759469	23.3	46.6	1.794	
W	1.27	0.2390169	74.3	891.6	0.193	
Y	2.63	0.966983846	50	350	1.494	

A	6.7	1.902107526	11.7	11.7	1.448	M. musculus
0.41	-0.6	-0.72 -0.77	-0.89	0.79		
C	2.47	0.904218151	24.7	741	1.108	
D	4.75	1.558144618	12.7	114.3	1.108	
E	6.79	1.915450942	15.3	76.5	1.108	
F	3.91	1.363537374	52	208	1.462	
G	6.4	1.85629799	11.7	11.7	1.448	
H	2.76	1.01523068	38.3	536.2	1.108	
I	4.57	1.519513205	32.3	64.6	1.924	
K	5.8	1.757857918	30.3	242.4	1.462	
L	9.99	2.301584593	27.3	54.6	2.339	
M	2.18	0.779324877	34.3	445.9	0.576	
N	3.64	1.291983682	14.7	147	1.462	
P	5.86	1.768149604	20.3	60.9	1.448	
Q	4.67	1.541159072	16.3	130.4	1.108	
R	5.53	1.710187816	27.3	109.2	1.986	
S	8.18	2.101692151	11.7	70.2	2.207	
T	5.43	1.691939134	18.7	112.2	1.801	
V	6.18	1.821318271	23.3	46.6	1.801	
W	1.22	0.198850859	74.3	891.6	0.223	
Y	2.85	1.047318994	50	350	1.462	

A	6.89	1.930071085	11.7	11.7	1.481	R. norvegicus
0.42	-0.61	-0.72 -0.77	-0.89	0.78		
C	2.28	0.824175443	24.7	741	1.113	

D	4.76	1.560247668	12.7	114.3	1.113	
E	6.83	1.921324674	15.3	76.5	1.113	
F	3.7	1.30833282	52	208	1.439	
G	6.49	1.870262531	11.7	11.7	1.481	
H	2.62	0.963174318	38.3	536.2	1.113	
I	4.36	1.472472057	32.3	64.6	1.897	
K	5.65	1.731655545	30.3	242.4	1.439	
L	10	2.302585093	27.3	54.6	2.332	
M	2.23	0.802001585	34.3	445.9	0.57	
N	3.55	1.266947603	14.7	147	1.439	
P	6.04	1.798404012	20.3	60.9	1.481	
Q	4.7	1.547562509	16.3	130.4	1.113	
R	5.64	1.729884066	27.3	109.2	2.007	
S	8.37	2.124653885	11.7	70.2	2.212	
T	5.46	1.69744879	18.7	112.2	1.806	
V	6.27	1.835776355	23.3	46.6	1.806	
W	1.24	0.21511138	74.3	891.6	0.244	
Y	2.66	0.978326123	50	350	1.439	

A	6.56	1.880990603	11.7	11.7	1.642	F. rubripes
0.45	-0.62	-0.73	-0.79	-0.9	0.84	
C	2.38	0.867100488	24.7	741	1.131	
D	5.08	1.625311262	12.7	114.3	1.131	
E	6.49	1.870262531	15.3	76.5	1.131	
F	3.8	1.335001067	52	208	1.313	
G	6.44	1.86252854	11.7	11.7	1.642	
H	2.73	1.004301609	38.3	536.2	1.131	
I	4.52	1.508511994	32.3	64.6	1.749	
K	5.42	1.690095815	30.3	242.4	1.313	
L	9.8	2.282382386	27.3	54.6	2.294	
M	2.28	0.824175443	34.3	445.9	0.525	

N	3.81	1.337629189	14.7	147	1.313	
P	5.65	1.731655545	20.3	60.9	1.642	
Q	4.64	1.534714366	16.3	130.4	1.131	
R	5.78	1.754403683	27.3	109.2	2.112	
S	8.31	2.117459609	11.7	70.2	2.23	
T	5.54	1.711994501	18.7	112.2	1.824	
V	6.55	1.87946505	23.3	46.6	1.824	
W	1.25	0.223143551	74.3	891.6	0.343	
Y	2.85	1.047318994	50	350	1.313	

A	5.81	1.759580571	11.7	11.7	1.157	P. falciparum
0.19	-0.24	-0.43	-0.36	-0.59	0.82	
C	2.39	0.871293366	24.7	741	1.054	
D	5.41	1.688249093	12.7	114.3	1.054	
E	6.24	1.830980182	15.3	76.5	1.054	
F	4.11	1.413423029	52	208	1.643	
G	5.72	1.743968805	11.7	11.7	1.157	
H	2.53	0.928219303	38.3	536.2	1.054	
I	5.58	1.719188776	32.3	64.6	2.14	
K	6.44	1.86252854	30.3	242.4	1.643	
L	8.82	2.17702187	27.3	54.6	2.39	
M	2.48	0.90825856	34.3	445.9	0.613	
N	5.16	1.640936579	14.7	147	1.643	
P	4.68	1.54329811	20.3	60.9	1.157	
Q	4.1	1.410986974	16.3	130.4	1.054	
R	5.06	1.621366483	27.3	109.2	1.8	
S	8.04	2.084429083	11.7	70.2	2.152	
T	6.11	1.809926773	18.7	112.2	1.747	
V	6.7	1.902107526	23.3	46.6	1.747	
W	1.2	0.182321557	74.3	891.6	2.3e-2	

Y	3.25	1.178654996	50	350	1.643	
A	8.61	2.152924318	11.7	11.7	1.825	C. intestinalis
0.36	-0.61	-0.71	-0.81	-0.91	0.77	
C	1.27	0.2390169	24.7	741	1.139	
D	5.55	1.713797928	12.7	114.3	1.139	
E	6.14	1.814824742	15.3	76.5	1.139	
F	3.7	1.30833282	52	208	1.147	
G	6.7	1.902107526	11.7	11.7	1.825	
H	2.42	0.88376754	38.3	536.2	1.139	
I	4.91	1.591273942	32.3	64.6	1.554	
K	4.62	1.530394705	30.3	242.4	1.147	
L	9.12	2.210469804	27.3	54.6	2.241	
M	2.11	0.746687947	34.3	445.9	0.45	
N	3.58	1.2753628	14.7	147	1.147	
P	6.05	1.800058272	20.3	60.9	1.825	
Q	4.06	1.401182974	16.3	130.4	1.139	
R	6.34	1.846878768	27.3	109.2	2.233	
S	8.4	2.128231706	11.7	70.2	2.238	
T	5.88	1.771556762	18.7	112.2	1.833	
V	6.19	1.822935087	23.3	46.6	1.833	
W	1.45	0.371563556	74.3	891.6	0.442	
Y	2.78	1.022450928	50	350	1.147	
A	8.22	2.106570209	11.7	11.7	1.773	A. fumigatus 0.5
	-0.61	-0.63	-0.82	-0.93	0.81	
C	1.32	0.277631737	24.7	741	1.139	
D	5.55	1.713797928	12.7	114.3	1.139	
E	6.05	1.800058272	15.3	76.5	1.139	
F	3.86	1.350667183	52	208	1.197	
G	6.88	1.928618652	11.7	11.7	1.773	
H	2.42	0.88376754	38.3	536.2	1.139	

I	5.16	1.640936579	32.3	64.6	1.612	
K	4.64	1.534714366	30.3	242.4	1.197	
L	9.22	2.221375038	27.3	54.6	2.257	
M	2.21	0.792992516	34.3	445.9	0.474	
N	3.73	1.316408234	14.7	147	1.197	
P	5.81	1.759580571	20.3	60.9	1.773	
Q	3.97	1.378766095	16.3	130.4	1.139	
R	5.94	1.781709133	27.3	109.2	2.199	
S	8.2	2.104134154	11.7	70.2	2.237	
T	5.95	1.78339122	18.7	112.2	1.832	
V	6.31	1.842135677	23.3	46.6	1.832	
W	1.53	0.425267735	74.3	891.6	0.416	
Y	2.95	1.08180517	50	350	1.197	

A	11	2.397895273	11.7	11.7	2.023	C. neoformans
0.49	-0.6	-0.62	-0.83	-0.93	0.8	
C	1.78	0.576613364	24.7	741	1.129	
D	4.91	1.591273942	12.7	114.3	1.129	
E	6.29	1.838961071	15.3	76.5	1.129	
F	3.29	1.190887565	52	208	0.929	
G	6.39	1.854734268	11.7	11.7	2.023	
H	2.48	0.90825856	38.3	536.2	1.129	
I	3.63	1.289232648	32.3	64.6	1.3	
K	2.76	1.01523068	30.3	242.4	0.929	
L	10.3	2.332143895	27.3	54.6	2.165	
M	1.83	0.604315967	34.3	445.9	0.331	
N	2.56	0.940007258	14.7	147	0.929	
P	5.5	1.704748092	20.3	60.9	2.023	
Q	4.3	1.458615023	16.3	130.4	1.129	
R	8.74	2.16791019	27.3	109.2	2.366	

S	7.96	2.074429	11.7	70.2	2.228	
T	5.57	1.717395054	18.7	112.2	1.823	
V	6.74	1.908059925	23.3	46.6	1.823	
W	1.52	0.418710335	74.3	891.6	0.532	
Y	2.3	0.832909123	50	350	0.929	
A	6.7	1.902107526	11.7	11.7	1.577	C. merolae
0.55	-0.53	-0.63 -0.69	-0.82	0.88		
C	1.34	0.292669614	24.7	741	1.125	
D	5.67	1.735189118	12.7	114.3	1.125	
E	6.67	1.89761986	15.3	76.5	1.125	
F	4.32	1.463255402	52	208	1.366	
G	5.55	1.713797928	11.7	11.7	1.577	
H	2.21	0.792992516	38.3	536.2	1.125	
I	5.48	1.701105101	32.3	64.6	1.811	
K	6.45	1.864080131	30.3	242.4	1.366	
L	9.77	2.279316466	27.3	54.6	2.311	
M	2.05	0.717839793	34.3	445.9	0.545	
N	4.69	1.545432582	14.7	147	1.366	
P	4.56	1.517322624	20.3	60.9	1.577	
Q	4.22	1.439835128	16.3	130.4	1.125	
R	5	1.609437912	27.3	109.2	2.069	
S	9.1	2.208274414	11.7	70.2	2.224	
T	5.71	1.742219024	18.7	112.2	1.818	
V	6.18	1.821318271	23.3	46.6	1.818	
W	1.09	8.6177696e-2	74.3	891.6	0.304	
Y	3.15	1.147402453	50	350	1.366	
A	7.85	2.060513532	11.7	11.7	1.911	K. waltii
0.44	-0.56	-0.63 -0.8	-0.93	0.78		
C	1.37	0.31481074	24.7	741	1.138	
D	5.63	1.728109442	12.7	114.3	1.138	

E	6.55	1.87946505	15.3	76.5	1.138	
F	3.93	1.368639426	52	208	1.058	
G	5.95	1.78339122	11.7	11.7	1.911	
H	2.39	0.871293366	38.3	536.2	1.138	
I	5.04	1.617406082	32.3	64.6	1.45	
K	5.65	1.731655545	30.3	242.4	1.058	
L	10	2.302585093	27.3	54.6	2.21	
M	2.18	0.779324877	34.3	445.9	0.404	
N	4.09	1.40854497	14.7	147	1.058	
P	4.86	1.581038438	20.3	60.9	1.911	
Q	4.26	1.44926916	16.3	130.4	1.138	
R	5.85	1.766441661	27.3	109.2	2.291	
S	7.96	2.074429	11.7	70.2	2.236	
T	5.44	1.693779061	18.7	112.2	1.831	
V	6.49	1.870262531	23.3	46.6	1.831	
W	1.12	0.113328685	74.3	891.6	0.484	
Y	3.26	1.181727195	50	350	1.058	

A	5.52	1.70837786	11.7	11.7	1.316	A. gossypii
0.52	-0.58	-0.65 -0.82	-0.94	0.74		
C	1.17	0.157003749	24.7	741	1.086	
D	6.15	1.816452082	12.7	114.3	1.086	
E	6.72	1.905088155	15.3	76.5	1.086	
F	4.18	1.430311247	52	208	1.55	
G	5.23	1.654411278	11.7	11.7	1.316	
H	2.12	0.751416089	38.3	536.2	1.086	
I	6.51	1.873339456	32.3	64.6	2.029	
K	7.28	1.985130862	30.3	242.4	1.55	
L	9.3	2.2300144	27.3	54.6	2.364	
M	2.2	0.78845736	34.3	445.9	0.598	

N	6.02	1.795087259	14.7	147	1.55	
P	4.25	1.446918983	20.3	60.9	1.316	
Q	3.93	1.368639426	16.3	130.4	1.086	
R	4.43	1.488399584	27.3	109.2	1.901	
S	8.69	2.162172939	11.7	70.2	2.185	
T	5.87	1.769854634	18.7	112.2	1.779	
V	5.85	1.766441661	23.3	46.6	1.779	
W	0.98	-2.0202707e-2	74.3	891.6	0.134	
Y	3.48	1.247032294	50	350	1.55	

A	5.58	1.719188776	11.7	11.7	1.323	C. glabrata
0.39	-0.54	-0.61	-0.78	-0.92	0.76	
C	1.25	0.223143551	24.7	741	1.088	
D	6.02	1.795087259	12.7	114.3	1.088	
E	6.65	1.894616855	15.3	76.5	1.088	
F	4.4	1.481604541	52	208	1.545	
G	5.09	1.627277831	11.7	11.7	1.323	
H	2.19	0.783901544	38.3	536.2	1.088	
I	6.33	1.845300236	32.3	64.6	2.023	
K	7.04	1.95160817	30.3	242.4	1.545	
L	9.72	2.274185618	27.3	54.6	2.363	
M	2.08	0.732367894	34.3	445.9	0.597	
N	5.54	1.711994501	14.7	147	1.545	
P	4.31	1.460937904	20.3	60.9	1.323	
Q	4.19	1.432700734	16.3	130.4	1.088	
R	4.36	1.472472057	27.3	109.2	1.906	
S	8.86	2.181546765	11.7	70.2	2.186	
T	5.84	1.764730797	18.7	112.2	1.781	
V	6	1.791759469	23.3	46.6	1.781	
W	1.09	8.6177696e-2	74.3	891.6	0.14	
Y	3.34	1.205970807	50	350	1.545	

A	7.81	2.055404964	11.7	11.7	1.794	K. lactis
0.39	-0.53	-0.6 -0.78	-0.91	0.77		
C	1.22	0.198850859	24.7	741	1.139	
D	5.97	1.786746927	12.7	114.3	1.139	
E	6.47	1.867176109	15.3	76.5	1.139	
F	3.88	1.355835154	52	208	1.177	
G	6.37	1.85159947	11.7	11.7	1.794	
H	2.42	0.88376754	38.3	536.2	1.139	
I	4.9	1.589235205	32.3	64.6	1.589	
K	5.85	1.766441661	30.3	242.4	1.177	
L	8.71	2.164471791	27.3	54.6	2.251	
M	2.24	0.806475866	34.3	445.9	0.465	
N	4.02	1.391281903	14.7	147	1.177	
P	5.46	1.69744879	20.3	60.9	1.794	
Q	4.19	1.432700734	16.3	130.4	1.139	
R	5.09	1.627277831	27.3	109.2	2.213	
S	8.25	2.1102132	11.7	70.2	2.238	
T	6.16	1.818076778	18.7	112.2	1.832	
V	6.71	1.903598951	23.3	46.6	1.832	
W	1.2	0.182321557	74.3	891.6	0.427	
Y	2.98	1.091923301	50	350	1.177	

A	5.14	1.637053079	11.7	11.7	1.191	Y. lipolytica
0.49	-0.64	-0.66 -0.85	-0.95	0.75		
C	1.17	0.157003749	24.7	741	1.061	
D	6.14	1.814824742	12.7	114.3	1.061	
E	6.56	1.880990603	15.3	76.5	1.061	
F	4.47	1.497388409	52	208	1.624	
G	5.21	1.650579856	11.7	11.7	1.191	
H	2.08	0.732367894	38.3	536.2	1.061	

I	7.05	1.953027617	32.3	64.6	2.117
K	7.35	1.994700313	30.3	242.4	1.624
L	9.61	2.262804223	27.3	54.6	2.385
M	1.99	0.688134639	34.3	445.9	0.61
N	6.63	1.891604804	14.7	147	1.624
P	4.23	1.442201993	20.3	60.9	1.191
Q	3.8	1.335001067	16.3	130.4	1.061
R	4.02	1.391281903	27.3	109.2	1.821
S	8.88	2.183801557	11.7	70.2	2.16
T	5.46	1.69744879	18.7	112.2	1.754
V	5.42	1.690095815	23.3	46.6	1.754
W	0.99	-1.0050336e-2	74.3	891.6	4.7e-2
Y	3.6	1.280933845	50	350	1.624

A	2.03	0.71	11.7	11.7	-6.2e-2	D. hansenii
0.36	-0.5	-0.58	-0.75	-0.9	0.76	
C	1.78	0.58	24.7	741	0.67	
D	6.46	1.87	12.7	114.3	0.67	
E	7.13	1.96	15.3	76.5	0.67	
F	4.25	1.45	52	208	2.095	
G	2.94	1.08	11.7	11.7	-6.2e-2	
H	2.43	0.89	38.3	536.2	0.67	
I	9.12	2.21	32.3	64.6	2.686	
K	11.7	2.46	30.3	242.4	2.095	
L	7.51	2.02	27.3	54.6	2.487	
M	2.21	0.79	34.3	445.9	0.454	
N	14.1	2.65	14.7	147	2.095	
P	2.09	0.74	20.3	60.9	-6.2e-2	
Q	2.78	1.02	16.3	130.4	0.67	
R	2.67	0.98	27.3	109.2	1.063	
S	6.42	1.86	11.7	70.2	1.768	

T	4.16	1.43	18.7	112.2	1.363	
V	3.94	1.37	23.3	46.6	1.363	
W	0.49	-0.71	74.3	891.6	-0.971	
Y	5.64	1.73	50	350	2.095	

A	5.47	1.699278616	11.7	11.7	0.895	M. jannaschii
0.31	-0.29	-0.44	-0.6	-0.78	0.68	
C	1.27	0.2390169	24.7	741	0.989	
D	5.54	1.711994501	12.7	114.3	0.989	
E	8.68	2.161021529	15.3	76.5	0.989	
F	4.22	1.439835128	52	208	1.775	
G	6.34	1.846878768	11.7	11.7	0.895	
H	1.43	0.357674444	38.3	536.2	0.989	
I	10.4	2.341805806	32.3	64.6	2.298	
K	10.4	2.341805806	30.3	242.4	1.775	
L	9.48	2.249184316	27.3	54.6	2.423	
M	2.2	0.78845736	34.3	445.9	0.613	
N	5.29	1.665818246	14.7	147	1.775	
P	3.36	1.211940974	20.3	60.9	0.895	
Q	1.45	0.371563556	16.3	130.4	0.989	
R	3.85	1.348073148	27.3	109.2	1.636	
S	4.48	1.499623046	11.7	70.2	2.087	
T	4.04	1.396244692	18.7	112.2	1.682	
V	6.86	1.925707442	23.3	46.6	1.682	
W	0.72	-0.328504067	74.3	891.6	-0.173	
Y	4.36	1.472472057	50	350	1.775	

A	7.33	1.991975516	11.7	11.7	1.814	M.
thermoautotrophicum	0.5	-0.49	-0.57	-0.78	-0.89	0.7
C	1.2	0.182321557	24.7	741	1.139	
D	5.91	1.776645831	12.7	114.3	1.139	

E	8.14	2.09679018	15.3	76.5	1.139	
F	3.64	1.291983682	52	208	1.158	
G	7.97	2.075684493	11.7	11.7	1.814	
H	1.87	0.625938431	38.3	536.2	1.139	
I	7.7	2.041220329	32.3	64.6	1.566	
K	4.56	1.517322624	30.3	242.4	1.158	
L	9.47	2.248128907	27.3	54.6	2.244	
M	2.93	1.075002423	34.3	445.9	0.455	
N	3.31	1.196948189	14.7	147	1.158	
P	4.3	1.458615023	20.3	60.9	1.814	
Q	1.9	0.641853886	16.3	130.4	1.139	
R	6.79	1.915450942	27.3	109.2	2.226	
S	6.14	1.814824742	11.7	70.2	2.238	
T	4.96	1.601405741	18.7	112.2	1.832	
V	7.74	2.046401688	23.3	46.6	1.832	
W	0.84	-0.174353387	74.3	891.6	0.437	
Y	3.22	1.16938136	50	350	1.158	

A	7.84	2.059238834	11.7	11.7	1.775	A. fulgidus
0.49	-0.4	-0.46	-0.73	-0.84	0.64	
C	1.17	0.157003749	24.7	741	1.139	
D	4.89	1.587192303	12.7	114.3	1.139	
E	8.9	2.186051277	15.3	76.5	1.139	
F	4.59	1.523880024	52	208	1.195	
G	7.24	1.979621206	11.7	11.7	1.775	
H	1.51	0.412109651	38.3	536.2	1.139	
I	7.22	1.976854953	32.3	64.6	1.61	
K	6.86	1.925707442	30.3	242.4	1.195	
L	9.5	2.251291799	27.3	54.6	2.257	
M	2.62	0.963174318	34.3	445.9	0.473	
N	3.21	1.166270937	14.7	147	1.195	

P	3.86	1.350667183	20.3	60.9	1.775	
Q	1.78	0.576613364	16.3	130.4	1.139	
R	5.77	1.752672081	27.3	109.2	2.2	
S	5.51	1.706564623	11.7	70.2	2.237	
T	4.16	1.425515074	18.7	112.2	1.832	
V	8.61	2.152924318	23.3	46.6	1.832	
W	1.03	2.9558802e-2	74.3	891.6	0.417	
Y	3.64	1.291983682	50	350	1.195	

A	6.37	1.85159947	11.7	11.7	1.478	P. horikoshii
0.42	-0.32	-0.36	-0.71	-0.83	0.67	
C	0.63	-0.46203546	24.7	741	1.113	
D	4.26	1.44926916	12.7	114.3	1.113	
E	8.29	2.115049969	15.3	76.5	1.113	
F	4.6	1.526056303	52	208	1.44	
G	6.97	1.941615225	11.7	11.7	1.478	
H	1.49	0.39877612	38.3	536.2	1.113	
I	8.78	2.172476408	32.3	64.6	1.899	
K	7.74	2.046401688	30.3	242.4	1.44	
L	10.3	2.332143895	27.3	54.6	2.333	
M	2.4	0.875468737	34.3	445.9	0.57	
N	3.53	1.261297871	14.7	147	1.44	
P	4.5	1.504077397	20.3	60.9	1.478	
Q	1.63	0.488580015	16.3	130.4	1.113	
R	5.45	1.695615609	27.3	109.2	2.005	
S	5.85	1.766441661	11.7	70.2	2.211	
T	4.51	1.506297154	18.7	112.2	1.806	
V	7.55	2.021547563	23.3	46.6	1.806	
W	1.17	0.157003749	74.3	891.6	0.242	
Y	3.84	1.345472367	50	350	1.44	

A	6.67	1.89761986	11.7	11.7	1.609	P. abyssi
0.45	-0.33	-0.35 -0.71	-0.83	0.63		
C	0.55	-0.597837001	24.7	741	1.128	
D	4.6	1.526056303	12.7	114.3	1.128	
E	8.84	2.179286877	15.3	76.5	1.128	
F	4.35	1.470175845	52	208	1.341	
G	7.26	1.982379829	11.7	11.7	1.609	
H	1.5	0.405465108	38.3	536.2	1.128	
I	8.49	2.138889	32.3	64.6	1.781	
K	7.8	2.054123734	30.3	242.4	1.341	
L	10.2	2.32238772	27.3	54.6	2.303	
M	2.39	0.871293366	34.3	445.9	0.536	
N	3.33	1.202972304	14.7	147	1.341	
P	4.25	1.446918983	20.3	60.9	1.609	
Q	1.66	0.506817602	16.3	130.4	1.128	
R	5.72	1.743968805	27.3	109.2	2.09	
S	4.97	1.60341984	11.7	70.2	2.227	
T	4.2	1.435084525	18.7	112.2	1.821	
V	8.07	2.088153482	23.3	46.6	1.821	
W	1.17	0.157003749	74.3	891.6	0.323	
Y	3.82	1.340250423	50	350	1.341	

A	9.69	2.271094426	11.7	11.7	2.07	A. pernix
0.56	-0.44	-0.44 -0.71	-0.82	0.73		
C	0.78	-0.248461359	24.7	741	1.123	
D	4.22	1.439835128	12.7	114.3	1.123	
E	7.27	1.983756292	15.3	76.5	1.123	
F	2.87	1.05431203	52	208	0.87	
G	8.84	2.179286877	11.7	11.7	2.07	
H	1.61	0.476234179	38.3	536.2	1.123	
I	5.53	1.710187816	32.3	64.6	1.232	

K	3.94	1.371180723	30.3	242.4	0.87	
L	11	2.397895273	27.3	54.6	2.144	
M	2.21	0.792992516	34.3	445.9	0.295	
N	1.97	0.678033543	14.7	147	0.87	
P	5.52	1.70837786	20.3	60.9	2.07	
Q	1.76	0.565313809	16.3	130.4	1.123	
R	7.8	2.054123734	27.3	109.2	2.398	
S	6.66	1.896119485	11.7	70.2	2.222	
T	4.34	1.467874348	18.7	112.2	1.817	
V	9.03	2.200552367	23.3	46.6	1.817	
W	1.34	0.292669614	74.3	891.6	0.549	
Y	3.46	1.241268589	50	350	0.87	

A	6.95	1.93874166	11.7	11.7	1.665	T. acidophilum
0.46	-0.42	-0.45	-0.8	-0.89	0.66	
C	0.6	-0.510825624	24.7	741	1.133	
D	5.74	1.74745921	12.7	114.3	1.133	
E	5.97	1.786746927	15.3	76.5	1.133	
F	4.7	1.547562509	52	208	1.294	
G	7.25	1.981001469	11.7	11.7	1.665	
H	1.64	0.494696242	38.3	536.2	1.133	
I	9.01	2.198335072	32.3	64.6	1.726	
K	5.63	1.728109442	30.3	242.4	1.294	
L	8.38	2.125847914	27.3	54.6	2.288	
M	3.2	1.16315081	34.3	445.9	0.517	
N	4.25	1.446918983	14.7	147	1.294	
P	3.96	1.376244025	20.3	60.9	1.665	
Q	2.15	0.765467842	16.3	130.4	1.133	
R	5.49	1.702928256	27.3	109.2	2.127	
S	7.57	2.024193067	11.7	70.2	2.232	

T	4.77	1.562346305	18.7	112.2	1.826	
V	7.15	1.967112357	23.3	46.6	1.826	
W	0.85	-0.162518929	74.3	891.6	0.356	
Y	4.63	1.532556868	50	350	1.294	
A	6.35	1.848454813	11.7	11.7	1.382	T. volcanium 0.4
	-0.39	-0.44 -0.77	-0.88	0.71		
C	0.62	-0.478035801	24.7	741	1.098	
D	5.48	1.701105101	12.7	114.3	1.098	
E	6.35	1.848454813	15.3	76.5	1.098	
F	4.73	1.553925203	52	208	1.507	
G	6.95	1.93874166	11.7	11.7	1.382	
H	1.52	0.418710335	38.3	536.2	1.098	
I	9.22	2.221375038	32.3	64.6	1.977	
K	6.89	1.930071085	30.3	242.4	1.507	
L	8.76	2.170195905	27.3	54.6	2.352	
M	2.71	0.996948635	34.3	445.9	0.588	
N	4.75	1.558144618	14.7	147	1.507	
P	3.76	1.324418957	20.3	60.9	1.382	
Q	2.09	0.737164066	16.3	130.4	1.098	
R	4.67	1.541159072	27.3	109.2	1.943	
S	7.52	2.017566138	11.7	70.2	2.197	
T	4.8	1.568615918	18.7	112.2	1.791	
V	7.15	1.967112357	23.3	46.6	1.791	
W	0.83	-0.186329578	74.3	891.6	0.18	
Y	4.75	1.558144618	50	350	1.507	
A	13.1	2.57261223	11.7	11.7	2.386	Halobacterium sp.
NRC-1	0.66	-0.55 -0.56	-0.68	-0.83	0.69	
C	0.73	-0.314710745	24.7	741	1.032	
D	9.02	2.199444334	12.7	114.3	1.032	
E	6.69	1.900613874	15.3	76.5	1.032	

F	3.11	1.134622726	52	208	0.372	
G	8.52	2.142416341	11.7	11.7	2.386	
H	2.24	0.806475866	38.3	536.2	1.032	
I	3.58	1.2753628	32.3	64.6	0.665	
K	1.64	0.494696242	30.3	242.4	0.372	
L	8.34	2.121063216	27.3	54.6	1.955	
M	1.74	0.553885113	34.3	445.9	-4.4e-2	
N	2.12	0.751416089	14.7	147	0.372	
P	4.69	1.545432582	20.3	60.9	2.386	
Q	2.6	0.955511445	16.3	130.4	1.032	
R	6.49	1.870262531	27.3	109.2	2.616	
S	5.24	1.656321498	11.7	70.2	2.131	
T	6.83	1.921324674	18.7	112.2	1.726	
V	9.61	2.262804223	23.3	46.6	1.726	
W	1.06	5.8268908e-2	74.3	891.6	0.616	
Y	2.52	0.924258902	50	350	0.372	

A	5.6	1.722766598	11.7	11.7	1.164	S. solfataricus
0.36	-0.32	-0.38	-0.72	-0.85	0.71	
C	0.61	-0.494296322	24.7	741	1.055	
D	4.68	1.54329811	12.7	114.3	1.055	
E	6.81	1.91839212	15.3	76.5	1.055	
F	4.44	1.490654376	52	208	1.64	
G	6.43	1.860974538	11.7	11.7	1.164	
H	1.29	0.254642218	38.3	536.2	1.055	
I	9.43	2.243896097	32.3	64.6	2.136	
K	7.74	2.046401688	30.3	242.4	1.64	
L	10.3	2.332143895	27.3	54.6	2.389	
M	2.2	0.78845736	34.3	445.9	0.612	
N	4.95	1.599387577	14.7	147	1.64	

P	3.8	1.335001067	20.3	60.9	1.164	
Q	2.09	0.737164066	16.3	130.4	1.055	
R	4.71	1.549687908	27.3	109.2	1.804	
S	6.7	1.902107526	11.7	70.2	2.154	
T	4.72	1.5518088	18.7	112.2	1.748	
V	7.47	2.010894999	23.3	46.6	1.748	
W	1.05	4.8790164e-2	74.3	891.6	2.8e-2	
Y	4.82	1.572773928	50	350	1.64	

A	6.55	1.87946505	11.7	11.7	1.424	P. furiosus
0.41	-0.31	-0.35	-0.7	-0.83	0.64	
C	0.59	-0.527632742	24.7	741	1.105	
D	4.36	1.472472057	12.7	114.3	1.105	
E	8.9	2.186051277	15.3	76.5	1.105	
F	4.43	1.488399584	52	208	1.478	
G	7.12	1.962907725	11.7	11.7	1.424	
H	1.51	0.412109651	38.3	536.2	1.105	
I	8.7	2.163323026	32.3	64.6	1.943	
K	8.1	2.091864062	30.3	242.4	1.478	
L	10.1	2.312535424	27.3	54.6	2.344	
M	2.2	0.78845736	34.3	445.9	0.581	
N	3.48	1.247032294	14.7	147	1.478	
P	4.28	1.45395301	20.3	60.9	1.424	
Q	1.75	0.559615788	16.3	130.4	1.105	
R	5.33	1.673351238	27.3	109.2	1.97	
S	4.94	1.597365331	11.7	70.2	2.203	
T	4.41	1.483874689	18.7	112.2	1.798	
V	7.9	2.066862759	23.3	46.6	1.798	
W	1.23	0.207014169	74.3	891.6	0.208	
Y	3.99	1.383791231	50	350	1.478	

A	5.56	1.715598108	11.7	11.7	0.989	S. tokodaii
0.33	-0.3	-0.39 -0.7	-0.85	0.7		
C	0.65	-0.430782916	24.7	741	1.013	
D	4.63	1.532556868	12.7	114.3	1.013	
E	7.02	1.948763218	15.3	76.5	1.013	
F	4.54	1.512927012	52	208	1.731	
G	6.28	1.83736998	11.7	11.7	0.989	
H	1.3	0.262364264	38.3	536.2	1.013	
I	9.92	2.294552921	32.3	64.6	2.245	
K	8	2.079441542	30.3	242.4	1.731	
L	10.3	2.332143895	27.3	54.6	2.412	
M	2.14	0.760805829	34.3	445.9	0.616	
N	4.87	1.583093937	14.7	147	1.731	
P	3.92	1.366091654	20.3	60.9	0.989	
Q	2.08	0.732367894	16.3	130.4	1.013	
R	4.15	1.423108334	27.3	109.2	1.694	
S	6.68	1.899117988	11.7	70.2	2.112	
T	4.76	1.560247668	18.7	112.2	1.706	
V	7.21	1.975468951	23.3	46.6	1.706	
W	1.01	9.950331e-3	74.3	891.6	-0.102	
Y	4.89	1.587192303	50	350	1.731	

A	9.89	2.291524146	11.7	11.7	1.886	P. aerophilum
0.51	-0.38	-0.39 -0.71	-0.83	0.69		
C	0.87	-0.139262067	24.7	741	1.139	
D	4.29	1.456286733	12.7	114.3	1.139	
E	6.99	1.944480556	15.3	76.5	1.139	
F	3.63	1.289232648	52	208	1.084	
G	7.67	2.037316615	11.7	11.7	1.886	
H	1.51	0.412109651	38.3	536.2	1.139	
I	6.29	1.838961071	32.3	64.6	1.481	

K	5.68	1.736951233	30.3	242.4	1.084	
L	10.5	2.351375257	27.3	54.6	2.219	
M	1.92	0.652325186	34.3	445.9	0.418	
N	2.6	0.955511445	14.7	147	1.084	
P	4.98	1.605429891	20.3	60.9	1.886	
Q	2.08	0.732367894	16.3	130.4	1.139	
R	6.54	1.877937165	27.3	109.2	2.274	
S	4.93	1.595338988	11.7	70.2	2.237	
T	4.4	1.481604541	18.7	112.2	1.832	
V	9.31	2.231089091	23.3	46.6	1.832	
W	1.47	0.385262401	74.3	891.6	0.472	
Y	4.3	1.458615023	50	350	1.084	

A	6.88	1.928618652	11.7	11.7	1.516	M. acetivorans
0.43	-0.49	-0.55	-0.79	-0.9	0.72	
C	1.25	0.223143551	24.7	741	1.118	
D	5.34	1.675225653	12.7	114.3	1.118	
E	7.96	2.074429	15.3	76.5	1.118	
F	4.44	1.490654376	52	208	1.413	
G	7.23	1.978239036	11.7	11.7	1.516	
H	1.66	0.506817602	38.3	536.2	1.118	
I	7.35	1.994700313	32.3	64.6	1.866	
K	6.54	1.877937165	30.3	242.4	1.413	
L	9.39	2.239645293	27.3	54.6	2.325	
M	2.45	0.896088025	34.3	445.9	0.561	
N	4.48	1.499623046	14.7	147	1.413	
P	3.99	1.383791231	20.3	60.9	1.516	
Q	2.54	0.932164081	16.3	130.4	1.118	
R	4.48	1.499623046	27.3	109.2	2.03	
S	6.9	1.931521412	11.7	70.2	2.216	
T	5.43	1.691939134	18.7	112.2	1.811	

V	6.82	1.919859472	23.3	46.6	1.811	
W	1.05	4.8790164e-2	74.3	891.6	0.266	
Y	3.72	1.313723668	50	350	1.413	
A	8.34	2.121063216	11.7	11.7	2.236	M. kandleri
0.61	-0.44	-0.48	-0.67	-0.77	0.68	
C	1.31	0.270027137	24.7	741	1.088	
D	5.79	1.756132292	12.7	114.3	1.088	
E	9.99	2.301584593	15.3	76.5	1.088	
F	2.87	1.05431203	52	208	0.634	
G	8.05	2.085672091	11.7	11.7	2.236	
H	1.93	0.657520003	38.3	536.2	1.088	
I	4.82	1.572773928	32.3	64.6	0.962	
K	4.02	1.391281903	30.3	242.4	0.634	
L	10	2.302585093	27.3	54.6	2.057	
M	1.9	0.641853886	34.3	445.9	0.143	
N	1.91	0.647103242	14.7	147	0.634	
P	5.46	1.69744879	20.3	60.9	2.236	
Q	1.4	0.336472237	16.3	130.4	1.088	
R	8.34	2.121063216	27.3	109.2	2.511	
S	4.62	1.530394705	11.7	70.2	2.187	
T	4.59	1.523880024	18.7	112.2	1.781	
V	10.4	2.341805806	23.3	46.6	1.781	
W	1.23	0.207014169	74.3	891.6	0.597	
Y	2.82	1.036736885	50	350	0.634	
A	7.07	1.95586048	11.7	11.7	1.459	M. mazei
0.41	-0.49	-0.57	-0.79	-0.9	0.73	
C	1.24	0.21511138	24.7	741	1.11	
D	5.25	1.658228077	12.7	114.3	1.11	
E	8.16	2.099244169	15.3	76.5	1.11	

F	4.29	1.456286733	52	208	1.454	
G	7.22	1.976854953	11.7	11.7	1.459	
H	1.67	0.512823626	38.3	536.2	1.11	
I	7.65	2.034705648	32.3	64.6	1.915	
K	6.81	1.91839212	30.3	242.4	1.454	
L	9.37	2.237513096	27.3	54.6	2.337	
M	2.49	0.91228271	34.3	445.9	0.574	
N	4.35	1.470175845	14.7	147	1.454	
P	4	1.386294361	20.3	60.9	1.459	
Q	2.48	0.90825856	16.3	130.4	1.11	
R	4.67	1.541159072	27.3	109.2	1.993	
S	6.75	1.909542505	11.7	70.2	2.209	
T	5.11	1.631199404	18.7	112.2	1.803	
V	6.86	1.925707442	23.3	46.6	1.803	
W	0.93	-7.2570693e-2	74.3	891.6	0.23	
Y	3.53	1.261297871	50	350	1.454	

A	6.69	1.900613874	11.7	11.7	1.424	M. burtonii
0.41	-0.5	-0.58 -0.78	-0.9	0.71		
C	1.22	0.198850859	24.7	741	1.105	
D	6.29	1.838961071	12.7	114.3	1.105	
E	7.3	1.987874348	15.3	76.5	1.105	
F	4.06	1.401182974	52	208	1.479	
G	6.96	1.940179474	11.7	11.7	1.424	
H	1.95	0.667829373	38.3	536.2	1.105	
I	8.46	2.135349174	32.3	64.6	1.944	
K	6.45	1.864080131	30.3	242.4	1.479	
L	8.98	2.194999882	27.3	54.6	2.344	
M	2.96	1.085189268	34.3	445.9	0.581	
N	4.6	1.526056303	14.7	147	1.479	
P	3.61	1.283707772	20.3	60.9	1.424	

Q	2.45	0.896088025	16.3	130.4	1.105	
R	4.19	1.432700734	27.3	109.2	1.97	
S	6.8	1.916922612	11.7	70.2	2.203	
T	5.41	1.688249093	18.7	112.2	1.798	
V	7.26	1.982379829	23.3	46.6	1.798	
W	0.86	-0.15082289	74.3	891.6	0.207	
Y	3.39	1.220829921	50	350	1.479	

A	5.2	1.648658626	11.7	11.7	0.912	N. equitans
0.32	-0.21	-0.36 -0.59	-0.81	0.7		
C	0.82	-0.198450939	24.7	741	0.993	
D	4.95	1.599387577	12.7	114.3	0.993	
E	7.85	2.060513532	15.3	76.5	0.993	
F	4.42	1.486139696	52	208	1.767	
G	5.29	1.665818246	11.7	11.7	0.912	
H	1.34	0.292669614	38.3	536.2	0.993	
I	10.4	2.341805806	32.3	64.6	2.289	
K	10.8	2.379546134	30.3	242.4	1.767	
L	10.4	2.341805806	27.3	54.6	2.421	
M	1.69	0.524728529	34.3	445.9	0.614	
N	5.24	1.656321498	14.7	147	1.767	
P	4.02	1.391281903	20.3	60.9	0.912	
Q	2.21	0.792992516	16.3	130.4	0.993	
R	3.91	1.363537374	27.3	109.2	1.647	
S	4.62	1.530394705	11.7	70.2	2.092	
T	4.1	1.410986974	18.7	112.2	1.686	
V	5.92	1.778336449	23.3	46.6	1.686	
W	0.96	-4.0821995e-2	74.3	891.6	-0.16	
Y	5.64	1.729884066	50	350	1.767	

A	5.61	1.72455072	11.7	11.7	1.174	P. torridus
0.36	-0.31	-0.4 -0.69	-0.82	0.71		
C	0.61	-0.494296322	24.7	741	1.057	
D	5.86	1.768149604	12.7	114.3	1.057	
E	5.66	1.733423892	15.3	76.5	1.057	
F	4.85	1.578978705	52	208	1.634	
G	6.51	1.873339456	11.7	11.7	1.174	
H	1.48	0.392042088	38.3	536.2	1.057	
I	11	2.397895273	32.3	64.6	2.129	
K	6.9	1.931521412	30.3	242.4	1.634	
L	8.62	2.154085085	27.3	54.6	2.387	
M	3.06	1.118414916	34.3	445.9	0.612	
N	6.61	1.888583654	14.7	147	1.634	
P	3.48	1.247032294	20.3	60.9	1.174	
Q	1.46	0.378436436	16.3	130.4	1.057	
R	4.42	1.486139696	27.3	109.2	1.811	
S	7.43	2.005525859	11.7	70.2	2.156	
T	4.37	1.474763009	18.7	112.2	1.751	
V	5.73	1.745715531	23.3	46.6	1.751	
W	0.73	-0.314710745	74.3	891.6	3.5e-2	
Y	5.44	1.693779061	50	350	1.634	

A	10.6	2.360854001	11.7	11.7	2.234	H. marismortui
0.61	-0.58	-0.58 -0.74	-0.87	0.67		
C	0.73	-0.314710745	24.7	741	1.089	
D	8.46	2.135349174	12.7	114.3	1.089	
E	8.15	2.098017927	15.3	76.5	1.089	
F	3.22	1.16938136	52	208	0.636	
G	8.39	2.12704052	11.7	11.7	2.234	
H	1.97	0.678033543	38.3	536.2	1.089	
I	4.27	1.451613827	32.3	64.6	0.965	
K	1.92	0.652325186	30.3	242.4	0.636	

L	8.79	2.173614712	27.3	54.6	2.058	
M	1.89	0.636576829	34.3	445.9	0.144	
N	2.51	0.920282753	14.7	147	0.636	
P	4.57	1.519513205	20.3	60.9	2.234	
Q	3.03	1.10856262	16.3	130.4	1.089	
R	6.09	1.806648082	27.3	109.2	2.51	
S	5.8	1.757857918	11.7	70.2	2.187	
T	6.82	1.919859472	18.7	112.2	1.782	
V	8.83	2.178155015	23.3	46.6	1.782	
W	1.12	0.113328685	74.3	891.6	0.596	
Y	2.66	0.978326123	50	350	0.636	

A	7.42	2.004179057	11.7	11.7	1.911	T. kodakaraensis
	0.52	-0.37 -0.36	-0.73	-0.84	0.57	
C	0.53	-0.634878272	24.7	741	1.138	
D	4.73	1.553925203	12.7	114.3	1.138	
E	8.82	2.17702187	15.3	76.5	1.138	
F	4.32	1.463255402	52	208	1.058	
G	7.58	2.0255132	11.7	11.7	1.911	
H	1.59	0.463734016	38.3	536.2	1.138	
I	6.96	1.940179474	32.3	64.6	1.45	
K	6.86	1.925707442	30.3	242.4	1.058	
L	10.4	2.341805806	27.3	54.6	2.21	
M	2.33	0.845868268	34.3	445.9	0.404	
N	3.21	1.166270937	14.7	147	1.058	
P	4.38	1.477048724	20.3	60.9	1.911	
Q	1.82	0.598836501	16.3	130.4	1.138	
R	5.83	1.763017	27.3	109.2	2.291	
S	5.04	1.617406082	11.7	70.2	2.236	
T	4.61	1.528227857	18.7	112.2	1.831	

V	8.28	2.113842968	23.3	46.6	1.831	
W	1.29	0.254642218	74.3	891.6	0.484	
Y	3.83	1.342864803	50	350	1.058	
A	8.2	2.104134154	11.7	11.7	1.292	H. influenzae
0.38	-0.49	-0.57	-0.8	-0.93	0.69	
C	1.03	2.9558802e-2	24.7	741	1.082	
D	4.98	1.605429891	12.7	114.3	1.082	
E	6.49	1.870262531	15.3	76.5	1.082	
F	4.46	1.495148766	52	208	1.565	
G	6.64	1.893111963	11.7	11.7	1.292	
H	2.05	0.717839793	38.3	536.2	1.082	
I	7.08	1.957273908	32.3	64.6	2.046	
K	6.33	1.845300236	30.3	242.4	1.565	
L	10.5	2.351375257	27.3	54.6	2.368	
M	2.4	0.875468737	34.3	445.9	0.601	
N	4.89	1.587192303	14.7	147	1.565	
P	3.72	1.313723668	20.3	60.9	1.292	
Q	4.63	1.532556868	16.3	130.4	1.082	
R	4.5	1.504077397	27.3	109.2	1.885	
S	5.84	1.764730797	11.7	70.2	2.18	
T	5.2	1.648658626	18.7	112.2	1.775	
V	6.7	1.902107526	23.3	46.6	1.775	
W	1.12	0.113328685	74.3	891.6	0.118	
Y	3.14	1.1442228	50	350	1.565	
A	5.57	1.717395054	11.7	11.7	0.921	M. genitalium
0.32	-0.33	-0.45	-0.66	-0.84	0.73	
C	0.82	-0.198450939	24.7	741	0.995	
D	4.92	1.593308531	12.7	114.3	0.995	
E	5.68	1.736951233	15.3	76.5	0.995	
F	6.09	1.806648082	52	208	1.764	

G	4.62	1.530394705	11.7	11.7	0.921		
H	1.58	0.457424847	38.3	536.2	0.995		
I	8.24	2.109000344	32.3	64.6	2.284		
K	9.5	2.251291799	30.3	242.4	1.764		
L	10.6	2.360854001	27.3	54.6	2.42		
M	1.52	0.418710335	34.3	445.9	0.614		
N	7.5	2.014903021	14.7	147	1.764		
P	2.99	1.095273387	20.3	60.9	0.921		
Q	4.73	1.553925203	16.3	130.4	0.995		
R	3.1	1.131402111	27.3	109.2	1.652		
S	6.64	1.893111963	11.7	70.2	2.094		
T	5.4	1.686398954	18.7	112.2	1.689		
V	6.14	1.814824742	23.3	46.6	1.689		
W	0.96	-4.0821995e-2	74.3	891.6	-0.154		
Y	3.23	1.172482137	50	350	1.764		
A	6.67	1.89761986	11.7	11.7	1.387	M. pneumoniae	0.4
	-0.42	-0.47 -0.74	-0.88	0.69			
C	0.75	-0.287682072	24.7	741	1.099		
D	4.96	1.601405741	12.7	114.3	1.099		
E	5.67	1.735189118	15.3	76.5	1.099		
F	5.59	1.720979287	52	208	1.504		
G	5.52	1.70837786	11.7	11.7	1.387		
H	1.8	0.587786665	38.3	536.2	1.099		
I	6.6	1.887069649	32.3	64.6	1.974		
K	8.56	2.14710019	30.3	242.4	1.504		
L	10.3	2.332143895	27.3	54.6	2.351		
M	1.57	0.451075619	34.3	445.9	0.588		
N	6.22	1.827769907	14.7	147	1.504		
P	3.5	1.252762968	20.3	60.9	1.387		

Q	5.36	1.678963975	16.3	130.4	1.099	
R	3.48	1.247032294	27.3	109.2	1.946	
S	6.48	1.86872051	11.7	70.2	2.197	
T	5.96	1.785070481	18.7	112.2	1.792	
V	6.47	1.867176109	23.3	46.6	1.792	
W	1.19	0.173953307	74.3	891.6	0.183	
Y	3.22	1.16938136	50	350	1.504	
A	8.48	2.13771045	11.7	11.7	1.725	Synechocystis sp.
	0.47	-0.51 -0.55	-0.8	-0.93	0.72	
C	1	0 24.7	741	1.137		
D	5.02	1.613429934	12.7	114.3	1.137	
E	6.04	1.798404012	15.3	76.5	1.137	
F	4.01	1.388791241	52	208	1.242	
G	7.37	1.997417706	11.7	11.7	1.725	
H	1.86	0.620576488	38.3	536.2	1.137	
I	6.28	1.83736998	32.3	64.6	1.665	
K	4.18	1.430311247	30.3	242.4	1.242	
L	11.4	2.433613355	27.3	54.6	2.272	
M	2.01	0.698134722	34.3	445.9	0.495	
N	4.04	1.396244692	14.7	147	1.242	
P	5.14	1.637053079	20.3	60.9	1.725	
Q	5.55	1.713797928	16.3	130.4	1.137	
R	5.05	1.619388243	27.3	109.2	2.166	
S	5.81	1.759580571	11.7	70.2	2.235	
T	5.5	1.704748092	18.7	112.2	1.83	
V	6.69	1.900613874	23.3	46.6	1.83	
W	1.55	0.438254931	74.3	891.6	0.389	
Y	2.91	1.068153081	50	350	1.242	
A	9.48	2.249184316	11.7	11.7	1.853	E. coli

0.51 -0.52 -0.58 -0.78 -0.93 0.71

C	1.17	0.157003749	24.7	741	1.139
D	5.13	1.635105659	12.7	114.3	1.139
E	5.74	1.74745921	15.3	76.5	1.139
F	3.89	1.358409158	52	208	1.119
G	7.36	1.996059933	11.7	11.7	1.853
H	2.27	0.819779831	38.3	536.2	1.139
I	6	1.791759469	32.3	64.6	1.521
K	4.4	1.481604541	30.3	242.4	1.119
L	10.6	2.360854001	27.3	54.6	2.231
M	2.85	1.047318994	34.3	445.9	0.436
N	3.95	1.373715579	14.7	147	1.119
P	4.42	1.486139696	20.3	60.9	1.853
Q	4.43	1.488399584	16.3	130.4	1.139
R	5.53	1.710187816	27.3	109.2	2.252
S	5.82	1.761300262	11.7	70.2	2.238
T	5.4	1.686398954	18.7	112.2	1.832
V	7.05	1.953027617	23.3	46.6	1.832
W	1.52	0.418710335	74.3	891.6	0.457
Y	2.84	1.043804052	50	350	1.119

A	6.83	1.921324674	11.7	11.7	1.329	H. pylori

0.39 -0.38 -0.54 -0.69 -0.88 0.74

C	1.09	8.6177696e-2	24.7	741	1.089
D	4.77	1.562346305	12.7	114.3	1.089
E	6.86	1.925707442	15.3	76.5	1.089
F	5.41	1.688249093	52	208	1.541
G	5.76	1.750937475	11.7	11.7	1.329
H	2.12	0.751416089	38.3	536.2	1.089
I	7.19	1.972691172	32.3	64.6	2.018
K	8.94	2.190535589	30.3	242.4	1.541

L	11.2	2.415913778	27.3	54.6	2.362	
M	2.22	0.797507196	34.3	445.9	0.596	
N	5.85	1.766441661	14.7	147	1.541	
P	3.28	1.187843422	20.3	60.9	1.329	
Q	3.72	1.313723668	16.3	130.4	1.089	
R	3.45	1.238374231	27.3	109.2	1.909	
S	6.82	1.919859472	11.7	70.2	2.187	
T	4.39	1.479329227	18.7	112.2	1.782	
V	5.61	1.72455072	23.3	46.6	1.782	
W	0.7	-0.356674944	74.3	891.6	0.144	
Y	3.69	1.305626458	50	350	1.541	

A	7.67	2.037316615	11.7	11.7	1.555	B. subtilis
0.44	-0.47	-0.52	-0.79	-0.91	0.66	
C	0.8	-0.223143551	24.7	741	1.122	
D	5.17	1.642872689	12.7	114.3	1.122	
E	7.23	1.978239036	15.3	76.5	1.122	
F	4.49	1.501852702	52	208	1.384	
G	6.9	1.931521412	11.7	11.7	1.555	
H	2.27	0.819779831	38.3	536.2	1.122	
I	7.36	1.996059933	32.3	64.6	1.831	
K	7.05	1.953027617	30.3	242.4	1.384	
L	9.64	2.265921109	27.3	54.6	2.316	
M	2.78	1.022450928	34.3	445.9	0.551	
N	3.94	1.371180723	14.7	147	1.384	
P	3.68	1.302912752	20.3	60.9	1.555	
Q	3.83	1.342864803	16.3	130.4	1.122	
R	4.12	1.415853163	27.3	109.2	2.055	
S	6.29	1.838961071	11.7	70.2	2.221	
T	5.42	1.690095815	18.7	112.2	1.816	
V	6.74	1.908059925	23.3	46.6	1.816	

W	1.03	2.9558802e-2	74.3	891.6	0.29	
Y	3.48	1.247032294	50	350	1.384	
A	7.38	1.998773639	11.7	11.7	1.563	B. halodurans
0.44	-0.47	-0.5	-0.8	-0.91	0.65	
C	0.73	-0.314710745	24.7	741	1.123	
D	5.07	1.623340818	12.7	114.3	1.123	
E	7.84	2.059238834	15.3	76.5	1.123	
F	4.45	1.492904096	52	208	1.377	
G	7.01	1.947337701	11.7	11.7	1.563	
H	2.41	0.879626748	38.3	536.2	1.123	
I	6.93	1.935859813	32.3	64.6	1.824	
K	5.86	1.768149604	30.3	242.4	1.377	
L	9.98	2.30058309	27.3	54.6	2.314	
M	2.76	1.01523068	34.3	445.9	0.549	
N	3.62	1.286474026	14.7	147	1.377	
P	3.81	1.337629189	20.3	60.9	1.563	
Q	4.11	1.413423029	16.3	130.4	1.123	
R	4.84	1.576914721	27.3	109.2	2.06	
S	5.61	1.72455072	11.7	70.2	2.222	
T	5.55	1.713797928	18.7	112.2	1.817	
V	7.44	2.006870849	23.3	46.6	1.817	
W	1.13	0.122217633	74.3	891.6	0.295	
Y	3.38	1.217875709	50	350	1.377	
A	4.49	1.501852702	11.7	11.7	0.685	B. burgdoferi
0.28	-0.24	-0.43	-0.6	-0.83	0.76	
C	0.66	-0.415515444	24.7	741	0.928	
D	5.18	1.644805056	12.7	114.3	0.928	
E	6.77	1.912501087	15.3	76.5	0.928	
F	6.31	1.842135677	52	208	1.864	

G	5.2	1.648658626	11.7	11.7	0.685	
H	1.22	0.198850859	38.3	536.2	0.928	
I	10.7	2.370243741	32.3	64.6	2.405	
K	10.2	2.32238772	30.3	242.4	1.864	
L	10.3	2.332143895	27.3	54.6	2.443	
M	1.9	0.641853886	34.3	445.9	0.597	
N	7.27	1.983756292	14.7	147	1.864	
P	2.52	0.924258902	20.3	60.9	0.685	
Q	2.26	0.815364813	16.3	130.4	0.928	
R	3.22	1.16938136	27.3	109.2	1.507	
S	7.47	2.010894999	11.7	70.2	2.027	
T	3.94	1.371180723	18.7	112.2	1.621	
V	5.35	1.677096561	23.3	46.6	1.621	
W	0.5	-0.693147181	74.3	891.6	-0.339	
Y	4.23	1.442201993	50	350	1.864	

A	5.89	1.773255998	11.7	11.7	1.545	A. aeolicus
0.43	-0.29	-0.39	-0.66	-0.84	0.66	
C	0.79	-0.235722334	24.7	741	1.121	
D	4.31	1.460937904	12.7	114.3	1.121	
E	9.63	2.264883226	15.3	76.5	1.121	
F	5.14	1.637053079	52	208	1.391	
G	6.75	1.909542505	11.7	11.7	1.545	
H	1.54	0.431782416	38.3	536.2	1.121	
I	7.33	1.991975516	32.3	64.6	1.84	
K	9.4	2.240709689	30.3	242.4	1.391	
L	10.5	2.351375257	27.3	54.6	2.318	
M	1.93	0.657520003	34.3	445.9	0.554	
N	3.59	1.278152203	14.7	147	1.391	
P	4.07	1.403642999	20.3	60.9	1.545	
Q	2.04	0.712949808	16.3	130.4	1.121	

R	4.92	1.593308531	27.3	109.2	2.048	
S	4.79	1.566530411	11.7	70.2	2.22	
T	4.21	1.437462648	18.7	112.2	1.814	
V	7.93	2.070653036	23.3	46.6	1.814	
W	0.93	-7.2570693e-2	74.3	891.6	0.284	
Y	4.13	1.418277407	50	350	1.391	
A	13.2	2.58021683	11.7	11.7	2.376	M. tuberculosis
H37R	0.66	-0.51 -0.55	-0.68	-0.83	0.78	
C	0.88	-0.127833372	24.7	741	1.037	
D	5.8	1.757857918	12.7	114.3	1.037	
E	4.68	1.54329811	15.3	76.5	1.037	
F	2.95	1.08180517	52	208	0.391	
G	9.98	2.30058309	11.7	11.7	2.376	
H	2.23	0.802001585	38.3	536.2	1.037	
I	4.26	1.44926916	32.3	64.6	0.686	
K	2.03	0.708035793	30.3	242.4	0.391	
L	9.75	2.277267285	27.3	54.6	1.963	
M	1.84	0.609765572	34.3	445.9	-3.1e-2	
N	2.53	0.928219303	14.7	147	0.391	
P	5.8	1.757857918	20.3	60.9	2.376	
Q	3.09	1.128171091	16.3	130.4	1.037	
R	7.32	1.990610328	27.3	109.2	2.609	
S	5.48	1.701105101	11.7	70.2	2.135	
T	5.92	1.778336449	18.7	112.2	1.73	
V	8.56	2.14710019	23.3	46.6	1.73	
W	1.46	0.378436436	74.3	891.6	0.615	
Y	2.08	0.732367894	50	350	0.391	
A	13.2	2.58021683	11.7	11.7	2.376	M. tuberculosis CDC
1551	0.66	-0.51 -0.56	-0.68	-0.83	0.78	

C	0.93	-7.2570693e-2	24.7	741	1.037
D	5.79	1.756132292	12.7	114.3	1.037
E	4.66	1.539015448	15.3	76.5	1.037
F	2.91	1.068153081	52	208	0.391
G	9.77	2.279316466	11.7	11.7	2.376
H	2.26	0.815364813	38.3	536.2	1.037
I	4.21	1.437462648	32.3	64.6	0.686
K	2.05	0.717839793	30.3	242.4	0.391
L	9.7	2.272125886	27.3	54.6	1.963
M	1.99	0.688134639	34.3	445.9	-3.1e-2
N	2.47	0.904218151	14.7	147	0.391
P	5.88	1.771556762	20.3	60.9	2.376
Q	3.12	1.137833002	16.3	130.4	1.037
R	7.51	2.016235466	27.3	109.2	2.609
S	5.56	1.715598108	11.7	70.2	2.135
T	5.91	1.776645831	18.7	112.2	1.73
V	8.46	2.135349174	23.3	46.6	1.73
W	1.48	0.392042088	74.3	891.6	0.615
Y	2.06	0.722705983	50	350	0.391

A	11.7	2.459588842	11.7	11.7	2.123	M. leprae
0.58	-0.53	-0.58	-0.72	-0.87	0.79	
C	0.94	-6.1875404e-2	24.7	741	1.115	
D	5.89	1.773255998	12.7	114.3	1.115	
E	5.08	1.625311262	15.3	76.5	1.115	
F	2.97	1.088561953	52	208	0.8	
G	8.42	2.130609828	11.7	11.7	2.123	
H	2.22	0.797507196	38.3	536.2	1.115	
I	4.83	1.574846468	32.3	64.6	1.152	
K	2.67	0.982078472	30.3	242.4	0.8	
L	10	2.302585093	27.3	54.6	2.119	

M	1.97	0.678033543	34.3	445.9	0.252	
N	2.65	0.97455964	14.7	147	0.8	
P	5.36	1.678963975	20.3	60.9	2.123	
Q	3.28	1.187843422	16.3	130.4	1.115	
R	6.94	1.937301775	27.3	109.2	2.434	
S	5.96	1.785070481	11.7	70.2	2.213	
T	6.09	1.806648082	18.7	112.2	1.808	
V	9.2	2.219203484	23.3	46.6	1.808	
W	1.38	0.322083499	74.3	891.6	0.567	
Y	2.24	0.806475866	50	350	0.8	

A	10.1	2.312535424	11.7	11.7	1.94	T. pallidum
0.53	-0.49	-0.61	-0.73	-0.87	0.82	
C	1.91	0.647103242	24.7	741	1.136	
D	4.52	1.508511994	12.7	114.3	1.136	
E	5.97	1.786746927	15.3	76.5	1.136	
F	4.45	1.492904096	52	208	1.025	
G	6.96	1.940179474	11.7	11.7	1.94	
H	2.75	1.011600912	38.3	536.2	1.136	
I	4.9	1.589235205	32.3	64.6	1.412	
K	3.97	1.378766095	30.3	242.4	1.025	
L	10.1	2.312535424	27.3	54.6	2.199	
M	2.09	0.737164066	34.3	445.9	0.386	
N	2.48	0.90825856	14.7	147	1.025	
P	4.2	1.435084525	20.3	60.9	1.94	
Q	3.84	1.345472367	16.3	130.4	1.136	
R	7.43	2.005525859	27.3	109.2	2.31	
S	6.62	1.89009537	11.7	70.2	2.235	
T	5.3	1.667706821	18.7	112.2	1.83	
V	8.25	2.1102132	23.3	46.6	1.83	

W	0.97	-3.0459207e-2	74.3	891.6	0.497	
Y	3.03	1.10856262	50	350	1.025	
A	7.52	2.017566138	11.7	11.7	1.452	C. trachomatis
0.41	-0.48	-0.61	-0.77	-0.92	0.81	
C	1.62	0.482426149	24.7	741	1.109	
D	4.52	1.508511994	12.7	114.3	1.109	
E	6.59	1.885553349	15.3	76.5	1.109	
F	4.83	1.574846468	52	208	1.459	
G	6.34	1.846878768	11.7	11.7	1.452	
H	2.3	0.832909123	38.3	536.2	1.109	
I	6.61	1.888583654	32.3	64.6	1.921	
K	5.76	1.750937475	30.3	242.4	1.459	
L	11.2	2.415913778	27.3	54.6	2.338	
M	2.05	0.717839793	34.3	445.9	0.576	
N	3.5	1.252762968	14.7	147	1.459	
P	4.37	1.474763009	20.3	60.9	1.452	
Q	4.18	1.430311247	16.3	130.4	1.109	
R	4.84	1.576914721	27.3	109.2	1.988	
S	8.11	2.093097868	11.7	70.2	2.208	
T	5.11	1.631199404	18.7	112.2	1.802	
V	6.42	1.859418118	23.3	46.6	1.802	
W	0.95	-5.1293294e-2	74.3	891.6	0.225	
Y	3.07	1.121677562	50	350	1.459	
A	6.04	1.798404012	11.7	11.7	0.743	R. prowazekii
0.29	-0.33	-0.51	-0.67	-0.86	0.76	
C	1.09	8.6177696e-2	24.7	741	0.945	
D	4.83	1.574846468	12.7	114.3	0.945	
E	5.77	1.752672081	15.3	76.5	0.945	
F	4.88	1.58514522	52	208	1.841	
G	5.41	1.688249093	11.7	11.7	0.743	

H	1.91	0.647103242	38.3	536.2	0.945	
I	10.8	2.379546134	32.3	64.6	2.377	
K	8.38	2.125847914	30.3	242.4	1.841	
L	10.1	2.312535424	27.3	54.6	2.438	
M	2.14	0.760805829	34.3	445.9	0.603	
N	6.64	1.893111963	14.7	147	1.841	
P	3.14	1.1442228	20.3	60.9	0.743	
Q	3.14	1.1442228	16.3	130.4	0.945	
R	3.39	1.220829921	27.3	109.2	1.542	
S	6.75	1.909542505	11.7	70.2	2.044	
T	5.21	1.650579856	18.7	112.2	1.639	
V	5.6	1.722766598	23.3	46.6	1.639	
W	0.71	-0.342490309	74.3	891.6	-0.293	
Y	3.89	1.358409158	50	350	1.841	

A	6.77	1.912501087	11.7	11.7	0.847	C. jejuni
0.31	-0.33	-0.51	-0.64	-0.84	0.73	
C	1.22	0.198850859	24.7	741	0.975	
D	5.24	1.656321498	12.7	114.3	0.975	
E	6.98	1.943048917	15.3	76.5	0.975	
F	6.03	1.796747011	52	208	1.797	
G	5.6	1.722766598	11.7	11.7	0.847	
H	1.64	0.494696242	38.3	536.2	0.975	
I	8.68	2.161021529	32.3	64.6	2.324	
K	9.49	2.250238613	30.3	242.4	1.797	
L	10.8	2.379546134	27.3	54.6	2.428	
M	2.2	0.78845736	34.3	445.9	0.611	
N	6.3	1.840549633	14.7	147	1.797	
P	2.67	0.982078472	20.3	60.9	0.847	
Q	3.12	1.137833002	16.3	130.4	0.975	

R	2.98	1.091923301	27.3	109.2	1.607	
S	6.45	1.864080131	11.7	70.2	2.074	
T	4.06	1.401182974	18.7	112.2	1.669	
V	5.28	1.663926098	23.3	46.6	1.669	
W	0.65	-0.430782916	74.3	891.6	-0.21	
Y	3.69	1.305626458	50	350	1.797	

A	6.98	1.943048917	11.7	11.7	1.415	C. pneumoniae
0.41	-0.46	-0.59	-0.76	-0.91	0.81	
C	1.59	0.463734016	24.7	741	1.103	
D	4.51	1.506297154	12.7	114.3	1.103	
E	6.61	1.888583654	15.3	76.5	1.103	
F	4.74	1.556037136	52	208	1.485	
G	6.23	1.829376333	11.7	11.7	1.415	
H	2.38	0.867100488	38.3	536.2	1.103	
I	6.92	1.93441577	32.3	64.6	1.951	
K	6.14	1.814824742	30.3	242.4	1.485	
L	11.3	2.424802726	27.3	54.6	2.346	
M	1.93	0.657520003	34.3	445.9	0.583	
N	3.81	1.337629189	14.7	147	1.485	
P	4.48	1.499623046	20.3	60.9	1.415	
Q	4.03	1.393766376	16.3	130.4	1.103	
R	4.56	1.517322624	27.3	109.2	1.964	
S	8.02	2.081938422	11.7	70.2	2.202	
T	5.27	1.662030363	18.7	112.2	1.796	
V	6.12	1.811562097	23.3	46.6	1.796	
W	1.01	9.950331e-3	74.3	891.6	0.201	
Y	3.26	1.181727195	50	350	1.485	

A	5.85	1.766441661	11.7	11.7	1.677	T. maritima
0.46	-0.35	-0.4	-0.72	-0.86	0.64	
C	0.7	-0.356674944	24.7	741	1.134	

D	4.96	1.601405741	12.7	114.3	1.134	
E	8.92	2.188295947	15.3	76.5	1.134	
F	5.19	1.646733697	52	208	1.284	
G	6.9	1.931521412	11.7	11.7	1.677	
H	1.58	0.457424847	38.3	536.2	1.134	
I	7.18	1.971299383	32.3	64.6	1.714	
K	7.61	2.029463172	30.3	242.4	1.284	
L	10	2.302585093	27.3	54.6	2.285	
M	2.4	0.875468737	34.3	445.9	0.513	
N	3.6	1.280933845	14.7	147	1.284	
P	3.99	1.383791231	20.3	60.9	1.677	
Q	2.01	0.698134722	16.3	130.4	1.134	
R	5.53	1.710187816	27.3	109.2	2.135	
S	5.65	1.731655545	11.7	70.2	2.232	
T	4.52	1.508511994	18.7	112.2	1.827	
V	8.6	2.151762203	23.3	46.6	1.827	
W	1.1	9.531018e-2	74.3	891.6	0.363	
Y	3.57	1.272565596	50	350	1.284	

A	12.1	2.493205453	11.7	11.7	2.406	D. radiodurans
0.67	-0.5	-0.53 -0.69	-0.86	0.73		
C	0.67	-0.400477567	24.7	741	1.022	
D	5.05	1.619388243	12.7	114.3	1.022	
E	5.72	1.743968805	15.3	76.5	1.022	
F	3.15	1.147402453	52	208	0.332	
G	9.19	2.218115936	11.7	11.7	2.406	
H	2.09	0.737164066	38.3	536.2	1.022	
I	3.27	1.184789985	32.3	64.6	0.62	
K	2.73	1.004301609	30.3	242.4	0.332	
L	11.6	2.451005098	27.3	54.6	1.939	

M	1.89	0.636576829	34.3	445.9	-7.4e-2	
N	2.41	0.879626748	14.7	147	0.332	
P	6.06	1.8017098	20.3	60.9	2.406	
Q	4.12	1.415853163	16.3	130.4	1.022	
R	7.38	1.998773639	27.3	109.2	2.63	
S	5.2	1.648658626	11.7	70.2	2.121	
T	5.81	1.759580571	18.7	112.2	1.716	
V	7.68	2.038619547	23.3	46.6	1.716	
W	1.38	0.322083499	74.3	891.6	0.616	
Y	2.3	0.832909123	50	350	0.332	

A	10.1	2.312535424	11.7	11.7	1.899	N. meningiditis
0.52	-0.54	-0.59	-0.8	-0.94	0.68	
C	1.05	4.8790164e-2	24.7	741	1.138	
D	5.27	1.662030363	12.7	114.3	1.138	
E	6.15	1.816452082	15.3	76.5	1.138	
F	4.1	1.410986974	52	208	1.07	
G	7.76	2.048982334	11.7	11.7	1.899	
H	2.21	0.792992516	38.3	536.2	1.138	
I	5.86	1.768149604	32.3	64.6	1.464	
K	5.65	1.731655545	30.3	242.4	1.07	
L	9.83	2.285438934	27.3	54.6	2.215	
M	2.44	0.891998039	34.3	445.9	0.411	
N	4.11	1.413423029	14.7	147	1.07	
P	4.17	1.427916036	20.3	60.9	1.899	
Q	4.01	1.388791241	16.3	130.4	1.138	
R	5.49	1.702928256	27.3	109.2	2.283	
S	5.55	1.713797928	11.7	70.2	2.237	
T	5.24	1.656321498	18.7	112.2	1.831	
V	6.76	1.91102289	23.3	46.6	1.831	
W	1.17	0.157003749	74.3	891.6	0.479	

Y	2.97	1.088561953	50	350	1.07	
A	10.2	2.32238772	11.7	11.7	1.935	X. fastidiosa
0.53	-0.52	-0.59	-0.75	-0.9	0.79	
C	1.19	0.173953307	24.7	741	1.137	
D	5.3	1.667706821	12.7	114.3	1.137	
E	5.06	1.621366483	15.3	76.5	1.137	
F	3.46	1.241268589	52	208	1.032	
G	7.58	2.0255132	11.7	11.7	1.935	
H	2.74	1.00795792	38.3	536.2	1.137	
I	5.33	1.673351238	32.3	64.6	1.42	
K	3.55	1.266947603	30.3	242.4	1.032	
L	10.7	2.370243741	27.3	54.6	2.202	
M	2.41	0.879626748	34.3	445.9	0.39	
N	3.34	1.205970807	14.7	147	1.032	
P	4.93	1.595338988	20.3	60.9	1.935	
Q	4.22	1.439835128	16.3	130.4	1.137	
R	6.7	1.902107526	27.3	109.2	2.306	
S	5.97	1.786746927	11.7	70.2	2.235	
T	5.8	1.757857918	18.7	112.2	1.83	
V	7.33	1.991975516	23.3	46.6	1.83	
W	1.46	0.378436436	74.3	891.6	0.495	
Y	2.61	0.959350221	50	350	1.032	
A	9.14	2.212660385	11.7	11.7	1.73	V. cholerae
0.47	-0.52	-0.58	-0.79	-0.93	0.69	
C	1.05	4.8790164e-2	24.7	741	1.137	
D	5.01	1.611435915	12.7	114.3	1.137	
E	6.19	1.822935087	15.3	76.5	1.137	
F	4.07	1.403642999	52	208	1.237	
G	6.68	1.899117988	11.7	11.7	1.73	

H	2.4	0.875468737	38.3	536.2	1.137	
I	6.04	1.798404012	32.3	64.6	1.659	
K	4.93	1.595338988	30.3	242.4	1.237	
L	10.8	2.379546134	27.3	54.6	2.27	
M	2.73	1.004301609	34.3	445.9	0.493	
N	3.9	1.360976553	14.7	147	1.237	
P	4.01	1.388791241	20.3	60.9	1.73	
Q	5.17	1.642872689	16.3	130.4	1.137	
R	4.94	1.597365331	27.3	109.2	2.17	
S	6.33	1.845300236	11.7	70.2	2.236	
T	5.19	1.646733697	18.7	112.2	1.83	
V	7.01	1.947337701	23.3	46.6	1.83	
W	1.32	0.277631737	74.3	891.6	0.392	
Y	2.96	1.085189268	50	350	1.237	

A	11.6	2.451005098	11.7	11.7	2.405	P. aeruginosa
0.67	-0.47	-0.54	-0.68	-0.86	0.71	
C	1	0	24.7	741	1.023	
D	5.32	1.671473303	12.7	114.3	1.023	
E	6.08	1.805004696	15.3	76.5	1.023	
F	3.55	1.266947603	52	208	0.335	
G	8.45	2.134166441	11.7	11.7	2.405	
H	2.17	0.774727168	38.3	536.2	1.023	
I	4.17	1.427916036	32.3	64.6	0.623	
K	2.86	1.050821625	30.3	242.4	0.335	
L	12.4	2.517696473	27.3	54.6	1.94	
M	2.06	0.722705983	34.3	445.9	-7.2e-2	
N	2.64	0.970778917	14.7	147	0.335	
P	5.07	1.623340818	20.3	60.9	2.405	
Q	4.25	1.446918983	16.3	130.4	1.023	
R	7.62	2.03077637	27.3	109.2	2.629	

S	5.51	1.706564623	11.7	70.2	2.122	
T	4.16	1.425515074	18.7	112.2	1.716	
V	6.88	1.928618652	23.3	46.6	1.716	
W	1.48	0.392042088	74.3	891.6	0.616	
Y	2.53	0.928219303	50	350	0.335	

A	4.47	1.497388409	11.7	11.7	0.552	Buchnera sp.
0.26	-0.26	-0.45	-0.58	-0.81	0.78	
C	1.21	0.19062036	24.7	741	0.886	
D	4.32	1.463255402	12.7	114.3	0.886	
E	5.51	1.706564623	15.3	76.5	0.886	
F	5.04	1.617406082	52	208	1.914	
G	5.43	1.691939134	11.7	11.7	0.552	
H	2.11	0.746687947	38.3	536.2	0.886	
I	11.5	2.442347035	32.3	64.6	2.466	
K	9.88	2.290512512	30.3	242.4	1.914	
L	9.9	2.292534757	27.3	54.6	2.454	
M	2.17	0.774727168	34.3	445.9	0.58	
N	7.16	1.968509981	14.7	147	1.914	
P	3	1.098612289	20.3	60.9	0.552	
Q	3.2	1.16315081	16.3	130.4	0.886	
R	3.79	1.332366019	27.3	109.2	1.426	
S	7.27	1.983756292	11.7	70.2	1.985	
T	4.56	1.517322624	18.7	112.2	1.58	
V	4.85	1.578978705	23.3	46.6	1.58	
W	0.9	-0.105360516	74.3	891.6	-0.447	
Y	3.61	1.283707772	50	350	1.914	

A	7.73	2.045108863	11.7	11.7	1.283	L. monocytogenes
	0.38	-0.47	-0.5	-0.79	-0.9	0.64
C	0.6	-0.510825624	24.7	741	1.08	

D	5.44	1.693779061	12.7	114.3	1.08	
E	7.43	2.005525859	15.3	76.5	1.08	
F	4.53	1.510721939	52	208	1.57	
G	6.66	1.896119485	11.7	11.7	1.283	
H	1.77	0.570979547	38.3	536.2	1.08	
I	7.83	2.05796251	32.3	64.6	2.053	
K	7.16	1.968509981	30.3	242.4	1.57	
L	9.5	2.251291799	27.3	54.6	2.37	
M	2.74	1.00795792	34.3	445.9	0.602	
N	4.62	1.530394705	14.7	147	1.57	
P	3.47	1.244154594	20.3	60.9	1.283	
Q	3.45	1.238374231	16.3	130.4	1.08	
R	3.65	1.294727168	27.3	109.2	1.88	
S	5.79	1.756132292	11.7	70.2	2.179	
T	6.11	1.809926773	18.7	112.2	1.773	
V	7.03	1.950186706	23.3	46.6	1.773	
W	0.93	-7.2570693e-2	74.3	891.6	0.112	
Y	3.44	1.235471471	50	350	1.57	

A	7.67	2.037316615	11.7	11.7	1.251	L. innocua
0.37	-0.47	-0.49	-0.79	-0.9	0.63	
C	0.59	-0.527632742	24.7	741	1.074	
D	5.47	1.699278616	12.7	114.3	1.074	
E	7.51	2.016235466	15.3	76.5	1.074	
F	4.52	1.508511994	52	208	1.589	
G	6.58	1.884034745	11.7	11.7	1.251	
H	1.76	0.565313809	38.3	536.2	1.074	
I	7.81	2.055404964	32.3	64.6	2.075	
K	7.35	1.994700313	30.3	242.4	1.589	
L	9.42	2.242835089	27.3	54.6	2.375	
M	2.71	0.996948635	34.3	445.9	0.605	

N	4.72	1.5518088	14.7	147	1.589	
P	3.41	1.226712291	20.3	60.9	1.251	
Q	3.43	1.232560261	16.3	130.4	1.074	
R	3.7	1.30833282	27.3	109.2	1.86	
S	5.8	1.757857918	11.7	70.2	2.172	
T	6.08	1.805004696	18.7	112.2	1.767	
V	6.96	1.940179474	23.3	46.6	1.767	
W	0.94	-6.1875404e-2	74.3	891.6	9e-2	
Y	3.46	1.241268589	50	350	1.589	

A	9.71	2.273156282	11.7	11.7	1.906	S. typhi
0.52	-0.51	-0.57	-0.78	-0.92	0.71	
C	1.15	0.139761942	24.7	741	1.138	
D	5.21	1.650579856	12.7	114.3	1.138	
E	5.6	1.722766598	15.3	76.5	1.138	
F	3.85	1.348073148	52	208	1.063	
G	7.36	1.996059933	11.7	11.7	1.906	
H	2.29	0.828551818	38.3	536.2	1.138	
I	5.9	1.774952351	32.3	64.6	1.456	
K	4.32	1.463255402	30.3	242.4	1.063	
L	10.7	2.370243741	27.3	54.6	2.212	
M	2.75	1.011600912	34.3	445.9	0.407	
N	3.78	1.32972401	14.7	147	1.063	
P	4.47	1.497388409	20.3	60.9	1.906	
Q	4.37	1.474763009	16.3	130.4	1.138	
R	5.7	1.740466175	27.3	109.2	2.287	
S	5.79	1.756132292	11.7	70.2	2.237	
T	5.47	1.699278616	18.7	112.2	1.831	
V	7.06	1.954445052	23.3	46.6	1.831	
W	1.53	0.425267735	74.3	891.6	0.482	

Y	2.87	1.05431203	50	350	1.063	
A	9.19	2.218115936	11.7	11.7	1.735	Y. pestis
0.48	-0.53	-0.58 -0.79	-0.94	0.73		
C	1.04	3.9220713e-2	24.7	741	1.137	
D	5.11	1.631199404	12.7	114.3	1.137	
E	5.48	1.701105101	15.3	76.5	1.137	
F	3.82	1.340250423	52	208	1.233	
G	7.22	1.976854953	11.7	11.7	1.735	
H	2.28	0.824175443	38.3	536.2	1.137	
I	6.21	1.826160896	32.3	64.6	1.654	
K	4.38	1.477048724	30.3	242.4	1.233	
L	10.9	2.388762789	27.3	54.6	2.269	
M	2.63	0.966983846	34.3	445.9	0.491	
N	4.05	1.398716881	14.7	147	1.233	
P	4.38	1.477048724	20.3	60.9	1.735	
Q	4.87	1.583093937	16.3	130.4	1.137	
R	5.41	1.688249093	27.3	109.2	2.173	
S	6.24	1.830980182	11.7	70.2	2.236	
T	5.4	1.686398954	18.7	112.2	1.83	
V	6.89	1.930071085	23.3	46.6	1.83	
W	1.36	0.3074847	74.3	891.6	0.395	
Y	3	1.098612289	50	350	1.233	
A	6.39	1.854734268	11.7	11.7	0.992	S. aureus Mu50
0.33	-0.46	-0.52 -0.78	-0.9	0.67		
C	0.63	-0.46203546	24.7	741	1.014	
D	5.83	1.763017	12.7	114.3	1.014	
E	6.52	1.874874376	15.3	76.5	1.014	
F	4.48	1.499623046	52	208	1.73	
G	6.01	1.793424749	11.7	11.7	0.992	
H	2.31	0.837247525	38.3	536.2	1.014	

I	8.58	2.149433913	32.3	64.6	2.243	
K	7.56	2.02287119	30.3	242.4	1.73	
L	9.11	2.209372711	27.3	54.6	2.412	
M	2.64	0.970778917	34.3	445.9	0.616	
N	5.68	1.736951233	14.7	147	1.73	
P	3.2	1.16315081	20.3	60.9	0.992	
Q	4.16	1.425515074	16.3	130.4	1.014	
R	3.52	1.25846099	27.3	109.2	1.696	
S	6.14	1.814824742	11.7	70.2	2.113	
T	5.8	1.757857918	18.7	112.2	1.707	
V	6.68	1.899117988	23.3	46.6	1.707	
W	0.74	-0.301105093	74.3	891.6	-9.9e-2	
Y	3.92	1.366091654	50	350	1.73	

A	6.43	1.860974538	11.7	11.7	0.99	S. aureus N315
0.33	-0.46	-0.52 -0.78	-0.9	0.66		
C	0.63	-0.46203546	24.7	741	1.014	
D	5.82	1.761300262	12.7	114.3	1.014	
E	6.49	1.870262531	15.3	76.5	1.014	
F	4.48	1.499623046	52	208	1.73	
G	6.04	1.798404012	11.7	11.7	0.99	
H	2.32	0.841567186	38.3	536.2	1.014	
I	8.6	2.151762203	32.3	64.6	2.244	
K	7.53	2.018895042	30.3	242.4	1.73	
L	9.13	2.211565695	27.3	54.6	2.412	
M	2.64	0.970778917	34.3	445.9	0.616	
N	5.65	1.731655545	14.7	147	1.73	
P	3.22	1.16938136	20.3	60.9	0.99	
Q	4.16	1.425515074	16.3	130.4	1.014	
R	3.5	1.252762968	27.3	109.2	1.695	

S	6.13	1.81319475	11.7	70.2	2.112	
T	5.79	1.756132292	18.7	112.2	1.707	
V	6.71	1.903598951	23.3	46.6	1.707	
W	0.74	-0.301105093	74.3	891.6	-0.101	
Y	3.89	1.358409158	50	350	1.73	

A	7.81	2.055404964	11.7	11.7	1.31	S. pyogenes
0.39	-0.48	-0.52	-0.8	-0.92	0.67	
C	0.63	-0.46203546	24.7	741	1.085	
D	5.78	1.754403683	12.7	114.3	1.085	
E	6.38	1.853168097	15.3	76.5	1.085	
F	4.4	1.481604541	52	208	1.553	
G	6.45	1.864080131	11.7	11.7	1.31	
H	2.05	0.717839793	38.3	536.2	1.085	
I	7.4	2.00148 32.3	64.6	2.032		
K	7.04	1.95160817	30.3	242.4	1.553	
L	10.1	2.312535424	27.3	54.6	2.365	
M	2.56	0.940007258	34.3	445.9	0.599	
N	4.36	1.472472057	14.7	147	1.553	
P	3.35	1.208960346	20.3	60.9	1.31	
Q	4.3	1.458615023	16.3	130.4	1.085	
R	3.96	1.376244025	27.3	109.2	1.897	
S	6.18	1.821318271	11.7	70.2	2.184	
T	5.87	1.769854634	18.7	112.2	1.778	
V	6.7	1.902107526	23.3	46.6	1.778	
W	0.84	-0.174353387	74.3	891.6	0.131	
Y	3.67	1.300191662	50	350	1.553	

A	12.3	2.509599262	11.7	11.7	2.279	M. loti
0.63	-0.51	-0.54	-0.73	-0.89	0.68	
C	0.86	-0.15082289	24.7	741	1.075	
D	5.67	1.735189118	12.7	114.3	1.075	

E	5.37	1.680827909	15.3	76.5	1.075	
F	3.84	1.345472367	52	208	0.564	
G	8.61	2.152924318	11.7	11.7	2.279	
H	2.06	0.722705983	38.3	536.2	1.075	
I	5.38	1.682688374	32.3	64.6	0.882	
K	3.69	1.305626458	30.3	242.4	0.564	
L	9.84	2.286455711	27.3	54.6	2.03	
M	2.49	0.91228271	34.3	445.9	9.4e-2	
N	2.71	0.996948635	14.7	147	0.564	
P	5.06	1.621366483	20.3	60.9	2.279	
Q	3.11	1.134622726	16.3	130.4	1.075	
R	6.98	1.943048917	27.3	109.2	2.541	
S	5.69	1.738710248	11.7	70.2	2.173	
T	5.3	1.667706821	18.7	112.2	1.768	
V	7.34	1.993338843	23.3	46.6	1.768	
W	1.36	0.3074847	74.3	891.6	0.605	
Y	2.21	0.792992516	50	350	0.564	

A	12.1	2.493205453	11.7	11.7	2.268	S. meliloti
0.62	-0.5	-0.54 -0.73	-0.89	0.68		
C	0.86	-0.15082289	24.7	741	1.078	
D	5.48	1.701105101	12.7	114.3	1.078	
E	6.03	1.796747011	15.3	76.5	1.078	
F	3.91	1.363537374	52	208	0.582	
G	8.52	2.142416341	11.7	11.7	2.268	
H	2.05	0.717839793	38.3	536.2	1.078	
I	5.47	1.699278616	32.3	64.6	0.902	
K	3.43	1.232560261	30.3	242.4	0.582	
L	10	2.302585093	27.3	54.6	2.037	
M	2.51	0.920282753	34.3	445.9	0.106	

N	2.67	0.982078472	14.7	147	0.582	
P	4.95	1.599387577	20.3	60.9	2.268	
Q	2.9	1.064710737	16.3	130.4	1.078	
R	7.19	1.972691172	27.3	109.2	2.534	
S	5.66	1.733423892	11.7	70.2	2.177	
T	5.15	1.638996715	18.7	112.2	1.772	
V	7.44	2.006870849	23.3	46.6	1.772	
W	1.3	0.262364264	74.3	891.6	0.603	
Y	2.27	0.819779831	50	350	0.582	

A	11.5	2.442347035	11.7	11.7	2.165	A. tumefaciens
0.59	-0.52	-0.55	-0.76	-0.91	0.67	
C	0.83	-0.186329578	24.7	741	1.106	
D	5.54	1.711994501	12.7	114.3	1.106	
E	5.79	1.756132292	15.3	76.5	1.106	
F	4.05	1.398716881	52	208	0.741	
G	8.25	2.1102132	11.7	11.7	2.165	
H	2.02	0.703097511	38.3	536.2	1.106	
I	5.75	1.749199855	32.3	64.6	1.084	
K	3.9	1.360976553	30.3	242.4	0.741	
L	9.86	2.288486169	27.3	54.6	2.097	
M	2.68	0.985816795	34.3	445.9	0.214	
N	2.98	1.091923301	14.7	147	0.741	
P	4.82	1.572773928	20.3	60.9	2.165	
Q	3.12	1.137833002	16.3	130.4	1.106	
R	6.64	1.893111963	27.3	109.2	2.463	
S	5.98	1.788420568	11.7	70.2	2.205	
T	5.37	1.680827909	18.7	112.2	1.799	
V	7.28	1.985130862	23.3	46.6	1.799	
W	1.25	0.223143551	74.3	891.6	0.579	
Y	2.3	0.832909123	50	350	0.741	

A	13.2	2.58021683	11.7	11.7	2.377	M. bovis
0.66	-0.51	-0.55 -0.68	-0.83	0.78		
C	0.88	-0.127833372	24.7	741	1.037	
D	5.8	1.757857918	12.7	114.3	1.037	
E	4.66	1.539015448	15.3	76.5	1.037	
F	2.95	1.08180517	52	208	0.39	
G	10	2.302585093	11.7	11.7	2.377	
H	2.23	0.802001585	38.3	536.2	1.037	
I	4.25	1.446918983	32.3	64.6	0.685	
K	2.03	0.708035793	30.3	242.4	0.39	
L	9.75	2.277267285	27.3	54.6	1.962	
M	1.84	0.609765572	34.3	445.9	-3.1e-2	
N	2.52	0.924258902	14.7	147	0.39	
P	5.81	1.759580571	20.3	60.9	2.377	
Q	3.08	1.124929597	16.3	130.4	1.037	
R	7.32	1.990610328	27.3	109.2	2.609	
S	5.48	1.701105101	11.7	70.2	2.135	
T	5.92	1.778336449	18.7	112.2	1.73	
V	8.57	2.148267733	23.3	46.6	1.73	
W	1.46	0.378436436	74.3	891.6	0.615	
Y	2.06	0.722705983	50	350	0.39	

A	13.7	2.617395833	11.7	11.7	2.562	S. coelicolor
0.72	-0.49	-0.51 -0.64	-0.77	0.78		
C	0.77	-0.261364764	24.7	741	0.924	
D	6.12	1.811562097	12.7	114.3	0.924	
E	5.69	1.738710248	15.3	76.5	0.924	
F	2.65	0.97455964	52	208	-2e-2	
G	9.66	2.267993648	11.7	11.7	2.562	
H	2.34	0.850150929	38.3	536.2	0.924	

I	2.86	1.050821625	32.3	64.6	0.227	
K	2.05	0.717839793	30.3	242.4	-2e-2	
L	10.2	2.32238772	27.3	54.6	1.795	
M	1.57	0.451075619	34.3	445.9	-0.349	
N	1.69	0.524728529	14.7	147	-2e-2	
P	6.2	1.824549292	20.3	60.9	2.562	
Q	2.63	0.966983846	16.3	130.4	0.924	
R	8.36	2.123458427	27.3	109.2	2.74	
S	4.97	1.60341984	11.7	70.2	2.023	
T	6.15	1.816452082	18.7	112.2	1.617	
V	8.67	2.159868791	23.3	46.6	1.617	
W	1.51	0.412109651	74.3	891.6	0.596	
Y	2.05	0.717839793	50	350	-2e-2	

A	4.89	1.587192303	11.7	11.7	0.486	U. urealyticum
0.26	-0.27	-0.4	-0.58	-0.8	0.72	
C	0.66	-0.415515444	24.7	741	0.865	
D	5.68	1.736951233	12.7	114.3	0.865	
E	5.75	1.749199855	15.3	76.5	0.865	
F	5.15	1.638996715	52	208	1.937	
G	4.13	1.418277407	11.7	11.7	0.486	
H	1.73	0.548121409	38.3	536.2	0.865	
I	10.3	2.332143895	32.3	64.6	2.494	
K	9.94	2.296567021	30.3	242.4	1.937	
L	10	2.302585093	27.3	54.6	2.458	
M	1.68	0.518793793	34.3	445.9	0.57	
N	9.06	2.20386912	14.7	147	1.937	
P	2.65	0.97455964	20.3	60.9	0.486	
Q	3.83	1.342864803	16.3	130.4	0.865	
R	2.77	1.01884732	27.3	109.2	1.386	
S	5.98	1.788420568	11.7	70.2	1.963	

T	5.01	1.611435915	18.7	112.2	1.558	
V	5.36	1.678963975	23.3	46.6	1.558	
W	0.87	-0.139262067	74.3	891.6	-0.502	
Y	4.44	1.490654376	50	350	1.937	

A	9.44	2.24495598	11.7	11.7	1.858	S. flexneri
0.51	-0.52	-0.58	-0.78	-0.92	0.72	
C	1.2	0.182321557	24.7	741	1.139	
D	5.03	1.615419984	12.7	114.3	1.139	
E	5.85	1.766441661	15.3	76.5	1.139	
F	3.78	1.32972401	52	208	1.113	
G	7.31	1.989243274	11.7	11.7	1.858	
H	2.33	0.845868268	38.3	536.2	1.139	
I	5.83	1.763017	32.3	64.6	1.514	
K	4.49	1.501852702	30.3	242.4	1.113	
L	10.6	2.360854001	27.3	54.6	2.229	
M	2.86	1.050821625	34.3	445.9	0.433	
N	3.81	1.337629189	14.7	147	1.113	
P	4.37	1.474763009	20.3	60.9	1.858	
Q	4.45	1.492904096	16.3	130.4	1.139	
R	5.88	1.771556762	27.3	109.2	2.255	
S	5.82	1.761300262	11.7	70.2	2.238	
T	5.34	1.675225653	18.7	112.2	1.832	
V	7.06	1.954445052	23.3	46.6	1.832	
W	1.54	0.431782416	74.3	891.6	0.459	
Y	2.85	1.047318994	50	350	1.113	

A	7.36	1.996059933	11.7	11.7	1.138	L. lactis
0.35	-0.46	-0.45	-0.78	-0.89	0.62	
C	0.45	-0.798507696	24.7	741	1.049	
D	5.28	1.663926098	12.7	114.3	1.049	

E	6.98	1.943048917	15.3	76.5	1.049	
F	4.76	1.560247668	52	208	1.654	
G	6.58	1.884034745	11.7	11.7	1.138	
H	1.79	0.58221562	38.3	536.2	1.049	
I	7.7	2.041220329	32.3	64.6	2.153	
K	7.41	2.002830439	30.3	242.4	1.654	
L	9.88	2.290512512	27.3	54.6	2.392	
M	2.52	0.924258902	34.3	445.9	0.614	
N	5.2	1.648658626	14.7	147	1.654	
P	3.22	1.16938136	20.3	60.9	1.138	
Q	3.69	1.305626458	16.3	130.4	1.049	
R	3.62	1.286474026	27.3	109.2	1.788	
S	6.62	1.89009537	11.7	70.2	2.148	
T	5.72	1.743968805	18.7	112.2	1.743	
V	6.58	1.884034745	23.3	46.6	1.743	
W	1	0	74.3	891.6	9e-3	
Y	3.54	1.264126727	50	350	1.654	

A	6.45	1.864080131	11.7	11.7	0.967	R. conirii
0.32	-0.37	-0.52	-0.7	-0.88	0.75	
C	1.04	3.9220713e-2	24.7	741	1.008	
D	4.95	1.599387577	12.7	114.3	1.008	
E	6.15	1.816452082	15.3	76.5	1.008	
F	4.73	1.553925203	52	208	1.741	
G	5.46	1.69744879	11.7	11.7	0.967	
H	1.83	0.604315967	38.3	536.2	1.008	
I	9.97	2.299580584	32.3	64.6	2.258	
K	8.37	2.124653885	30.3	242.4	1.741	
L	10	2.302585093	27.3	54.6	2.415	
M	2.27	0.819779831	34.3	445.9	0.616	
N	6.43	1.860974538	14.7	147	1.741	

P	3.3	1.193922468	20.3	60.9	0.967	
Q	3.2	1.16315081	16.3	130.4	1.008	
R	3.41	1.226712291	27.3	109.2	1.681	
S	6.74	1.908059925	11.7	70.2	2.106	
T	5.28	1.663926098	18.7	112.2	1.701	
V	5.66	1.733423892	23.3	46.6	1.701	
W	0.76	-0.274436846	74.3	891.6	-0.118	
Y	3.81	1.337629189	50	350	1.741	

A	13.7	2.617395833	11.7	11.7	2.424	C. crescentus
0.67	-0.5	-0.53	-0.69	-0.86	0.68	
C	0.74	-0.301105093	24.7	741	1.013	
D	5.79	1.756132292	12.7	114.3	1.013	
E	5.4	1.686398954	15.3	76.5	1.013	
F	3.54	1.264126727	52	208	0.296	
G	8.96	2.192770227	11.7	11.7	2.424	
H	1.8	0.587786665	38.3	536.2	1.013	
I	4.37	1.474763009	32.3	64.6	0.579	
K	3.52	1.25846099	30.3	242.4	0.296	
L	10	2.302585093	27.3	54.6	1.925	
M	2.26	0.815364813	34.3	445.9	-0.102	
N	2.36	0.858661619	14.7	147	0.296	
P	5.48	1.701105101	20.3	60.9	2.424	
Q	3.21	1.166270937	16.3	130.4	1.013	
R	7.34	1.993338843	27.3	109.2	2.642	
S	5.1	1.62924054	11.7	70.2	2.112	
T	5.22	1.652497402	18.7	112.2	1.706	
V	7.54	2.020222182	23.3	46.6	1.706	
W	1.41	0.343589704	74.3	891.6	0.616	
Y	2.1	0.741937345	50	350	0.296	

A	8.05	2.085672091	11.7	11.7	1.449	Nostoc sp.
0.41	-0.52	-0.55 -0.82	-0.94	0.72		
C	0.93	-7.2570693e-2	24.7	741	1.108	
D	4.79	1.566530411	12.7	114.3	1.108	
E	6.08	1.805004696	15.3	76.5	1.108	
F	3.95	1.373715579	52	208	1.461	
G	6.69	1.900613874	11.7	11.7	1.449	
H	1.83	0.604315967	38.3	536.2	1.108	
I	6.93	1.935859813	32.3	64.6	1.923	
K	4.67	1.541159072	30.3	242.4	1.461	
L	11	2.397895273	27.3	54.6	2.339	
M	1.79	0.58221562	34.3	445.9	0.576	
N	4.56	1.517322624	14.7	147	1.461	
P	4.69	1.545432582	20.3	60.9	1.449	
Q	5.55	1.713797928	16.3	130.4	1.108	
R	5.02	1.613429934	27.3	109.2	1.986	
S	6.35	1.848454813	11.7	70.2	2.207	
T	5.83	1.763017	18.7	112.2	1.802	
V	6.67	1.89761986	23.3	46.6	1.802	
W	1.42	0.350656872	74.3	891.6	0.223	
Y	3.07	1.121677562	50	350	1.461	

A	9.75	2.277267285	11.7	11.7	1.984	T. elongatus
0.54	-0.47	-0.53 -0.73	-0.88	0.77		
C	1.13	0.122217633	24.7	741	1.133	
D	4.45	1.492904096	12.7	114.3	1.133	
E	5.85	1.766441661	15.3	76.5	1.133	
F	3.52	1.25846099	52	208	0.976	
G	7.14	1.965712776	11.7	11.7	1.984	
H	2.2	0.78845736	38.3	536.2	1.133	
I	5.54	1.711994501	32.3	64.6	1.355	

K	3.11	1.134622726	30.3	242.4	0.976	
L	12	2.48490665	27.3	54.6	2.182	
M	1.92	0.652325186	34.3	445.9	0.358	
N	2.91	1.068153081	14.7	147	0.976	
P	5.77	1.752672081	20.3	60.9	1.984	
Q	5.78	1.754403683	16.3	130.4	1.133	
R	6.62	1.89009537	27.3	109.2	2.339	
S	5.17	1.642872689	11.7	70.2	2.232	
T	5.49	1.702928256	18.7	112.2	1.826	
V	7	1.945910149	23.3	46.6	1.826	
W	1.7	0.530628251	74.3	891.6	0.516	
Y	2.85	1.047318994	50	350	0.976	

A	6.5	1.871802177	11.7	11.7	1.261	T. tengcongensis
	0.38	-0.36 -0.46	-0.71	-0.87	0.68	
C	0.76	-0.274436846	24.7	741	1.076	
D	4.94	1.597365331	12.7	114.3	1.076	
E	8.4	2.128231706	15.3	76.5	1.076	
F	4.37	1.474763009	52	208	1.583	
G	6.84	1.922787732	11.7	11.7	1.261	
H	1.44	0.364643114	38.3	536.2	1.076	
I	8.95	2.191653532	32.3	64.6	2.069	
K	8.86	2.181546765	30.3	242.4	1.583	
L	9.53	2.254444718	27.3	54.6	2.374	
M	2.52	0.924258902	34.3	445.9	0.605	
N	4.35	1.470175845	14.7	147	1.583	
P	3.56	1.269760545	20.3	60.9	1.261	
Q	2.33	0.845868268	16.3	130.4	1.076	
R	4.35	1.470175845	27.3	109.2	1.866	
S	5.25	1.658228077	11.7	70.2	2.174	

T	4.59	1.523880024	18.7	112.2	1.769	
V	7.54	2.020222182	23.3	46.6	1.769	
W	0.8	-0.223143551	74.3	891.6	9.7e-2	
Y	4.02	1.391281903	50	350	1.583	
A	4.56	1.517322624	11.7	11.7	0.628	B. floridanus
0.27	-0.3	-0.48 -0.63	-0.82	0.81		
C	1.57	0.451075619	24.7	741	0.91	
D	4.58	1.521698998	12.7	114.3	0.91	
E	4.43	1.488399584	15.3	76.5	0.91	
F	4.45	1.492904096	52	208	1.886	
G	5.7	1.740466175	11.7	11.7	0.628	
H	2.58	0.947789399	38.3	536.2	0.91	
I	11.4	2.433613355	32.3	64.6	2.432	
K	7.16	1.968509981	30.3	242.4	1.886	
L	10	2.302585093	27.3	54.6	2.448	
M	2.5	0.916290732	34.3	445.9	0.591	
N	6.88	1.928618652	14.7	147	1.886	
P	3.18	1.156881197	20.3	60.9	0.628	
Q	3.89	1.358409158	16.3	130.4	0.91	
R	4.08	1.406096988	27.3	109.2	1.472	
S	7.02	1.948763218	11.7	70.2	2.009	
T	4.86	1.581038438	18.7	112.2	1.604	
V	5.75	1.749199855	23.3	46.6	1.604	
W	1.03	2.9558802e-2	74.3	891.6	-0.385	
Y	4.23	1.442201993	50	350	1.886	
A	6.9	1.931521412	11.7	11.7	1.2	P. marinus CCMP1375
	0.36	-0.47 -0.56	-0.75	-0.89	0.7	
C	1.22	0.198850859	24.7	741	1.063	
D	4.93	1.595338988	12.7	114.3	1.063	
E	6.43	1.860974538	15.3	76.5	1.063	

F	4.06	1.401182974	52	208	1.619	
G	6.87	1.927164106	11.7	11.7	1.2	
H	1.81	0.593326845	38.3	536.2	1.063	
I	7.81	2.055404964	32.3	64.6	2.111	
K	6.6	1.887069649	30.3	242.4	1.619	
L	11.5	2.442347035	27.3	54.6	2.383	
M	1.94	0.662687973	34.3	445.9	0.61	
N	4.97	1.60341984	14.7	147	1.619	
P	4.25	1.446918983	20.3	60.9	1.2	
Q	3.66	1.297463147	16.3	130.4	1.063	
R	4.92	1.593308531	27.3	109.2	1.827	
S	7.71	2.042518188	11.7	70.2	2.162	
T	4.69	1.545432582	18.7	112.2	1.756	
V	5.7	1.740466175	23.3	46.6	1.756	
W	1.46	0.378436436	74.3	891.6	5.4e-2	
Y	2.44	0.891998039	50	350	1.619	

A	9.63	2.264883226	11.7	11.7	1.862	P. marinus MIT 9313
	0.51	-0.51 -0.61	-0.71	-0.87	0.79	
C	1.32	0.277631737	24.7	741	1.139	
D	5.07	1.623340818	12.7	114.3	1.139	
E	5.83	1.763017	15.3	76.5	1.139	
F	3.25	1.178654996	52	208	1.11	
G	7.84	2.059238834	11.7	11.7	1.862	
H	2.17	0.774727168	38.3	536.2	1.139	
I	4.9	1.589235205	32.3	64.6	1.51	
K	3.51	1.255616037	30.3	242.4	1.11	
L	12.5	2.525728644	27.3	54.6	2.228	
M	2.13	0.75612198	34.3	445.9	0.431	
N	3.21	1.166270937	14.7	147	1.11	

P	5.17	1.642872689	20.3	60.9	1.862	
Q	4.88	1.58514522	16.3	130.4	1.139	
R	6.5	1.871802177	27.3	109.2	2.258	
S	6.78	1.913977102	11.7	70.2	2.238	
T	4.71	1.549687908	18.7	112.2	1.832	
V	6.79	1.915450942	23.3	46.6	1.832	
W	1.72	0.542324291	74.3	891.6	0.461	
Y	1.98	0.683096845	50	350	1.11	

A	5.35	1.677096561	11.7	11.7	0.864	P. marinus CCMP1378
	0.31	-0.38 -0.49	-0.68	-0.85	0.7	
C	1.16	0.148420005	24.7	741	0.98	
D	5.06	1.621366483	12.7	114.3	0.98	
E	6.62	1.89009537	15.3	76.5	0.98	
F	4.89	1.587192303	52	208	1.789	
G	6.28	1.83736998	11.7	11.7	0.864	
H	1.5	0.405465108	38.3	536.2	0.98	
I	9.22	2.221375038	32.3	64.6	2.315	
K	8.56	2.14710019	30.3	242.4	1.789	
L	10.7	2.370243741	27.3	54.6	2.426	
M	1.83	0.604315967	34.3	445.9	0.612	
N	6.56	1.880990603	14.7	147	1.789	
P	3.62	1.286474026	20.3	60.9	0.864	
Q	2.99	1.095273387	16.3	130.4	0.98	
R	3.92	1.366091654	27.3	109.2	1.617	
S	7.72	2.043814364	11.7	70.2	2.079	
T	4.46	1.495148766	18.7	112.2	1.673	
V	5.25	1.658228077	23.3	46.6	1.673	
W	1.25	0.223143551	74.3	891.6	-0.198	
Y	2.87	1.05431203	50	350	1.789	

A	7.87	2.063058062	11.7	11.7	1.77	W. succinogenes
0.48	-0.41	-0.5 -0.73	-0.89	0.67		
C	0.94	-6.1875404e-2	24.7	741	1.138	
D	4.33	1.465567542	12.7	114.3	1.138	
E	8.25	2.1102132	15.3	76.5	1.138	
F	4.8	1.568615918	52	208	1.2	
G	7.09	1.958685341	11.7	11.7	1.77	
H	2.07	0.727548607	38.3	536.2	1.138	
I	7.12	1.962907725	32.3	64.6	1.616	
K	6.76	1.91102289	30.3	242.4	1.2	
L	11.5	2.442347035	27.3	54.6	2.258	
M	2.47	0.904218151	34.3	445.9	0.476	
N	3.43	1.232560261	14.7	147	1.2	
P	3.72	1.313723668	20.3	60.9	1.77	
Q	3.18	1.156881197	16.3	130.4	1.138	
R	5	1.609437912	27.3	109.2	2.196	
S	6.95	1.93874166	11.7	70.2	2.237	
T	4.24	1.444563269	18.7	112.2	1.832	
V	5.86	1.768149604	23.3	46.6	1.832	
W	0.98	-2.0202707e-2	74.3	891.6	0.414	
Y	3.31	1.196948189	50	350	1.2	

A	7.96	2.074429	11.7	11.7	1.523	P. luminescens
0.43	-0.53	-0.58 -0.82	-0.94	0.74		
C	1.1	9.531018e-2	24.7	741	1.119	
D	5.23	1.654411278	12.7	114.3	1.119	
E	5.91	1.776645831	15.3	76.5	1.119	
F	3.92	1.366091654	52	208	1.407	
G	6.8	1.916922612	11.7	11.7	1.523	
H	2.38	0.867100488	38.3	536.2	1.119	
I	6.9	1.931521412	32.3	64.6	1.86	

K	5.19	1.646733697	30.3	242.4	1.407	
L	10.5	2.351375257	27.3	54.6	2.323	
M	2.42	0.88376754	34.3	445.9	0.56	
N	4.66	1.539015448	14.7	147	1.407	
P	4.2	1.435084525	20.3	60.9	1.523	
Q	4.72	1.5518088	16.3	130.4	1.119	
R	5.12	1.633154439	27.3	109.2	2.034	
S	6.49	1.870262531	11.7	70.2	2.217	
T	5.41	1.688249093	18.7	112.2	1.812	
V	6.36	1.850028377	23.3	46.6	1.812	
W	1.35	0.300104592	74.3	891.6	0.271	
Y	3.26	1.181727195	50	350	1.407	

A	8.56	2.14710019	11.7	11.7	1.638	V. parahaemolyticus
	0.45	-0.55 -0.59	-0.81	-0.94	0.69	
C	1.04	3.9220713e-2	24.7	741	1.131	
D	5.5	1.704748092	12.7	114.3	1.131	
E	6.54	1.877937165	15.3	76.5	1.131	
F	4.19	1.432700734	52	208	1.317	
G	6.77	1.912501087	11.7	11.7	1.638	
H	2.24	0.806475866	38.3	536.2	1.131	
I	6.17	1.819698838	32.3	64.6	1.752	
K	5.38	1.682688374	30.3	242.4	1.317	
L	10.1	2.312535424	27.3	54.6	2.295	
M	2.74	1.00795792	34.3	445.9	0.526	
N	4.26	1.44926916	14.7	147	1.317	
P	3.89	1.358409158	20.3	60.9	1.638	
Q	4.53	1.510721939	16.3	130.4	1.131	
R	4.47	1.497388409	27.3	109.2	2.11	
S	6.58	1.884034745	11.7	70.2	2.229	
T	5.4	1.686398954	18.7	112.2	1.824	

V	7.19	1.972691172	23.3	46.6	1.824	
W	1.23	0.207014169	74.3	891.6	0.341	
Y	3.04	1.111857515	50	350	1.317	
A	8.8	2.174751721	11.7	11.7	1.696	V. vulnificus
0.47	-0.53	-0.58 -0.8	-0.93	0.69		
C	1.07	6.7658648e-2	24.7	741	1.135	
D	5.26	1.660131027	12.7	114.3	1.135	
E	6.36	1.850028377	15.3	76.5	1.135	
F	4.18	1.430311247	52	208	1.268	
G	6.68	1.899117988	11.7	11.7	1.696	
H	2.36	0.858661619	38.3	536.2	1.135	
I	6.06	1.8017098	32.3	64.6	1.695	
K	5.18	1.644805056	30.3	242.4	1.268	
L	10.4	2.341805806	27.3	54.6	2.28	
M	2.75	1.011600912	34.3	445.9	0.506	
N	4.11	1.413423029	14.7	147	1.268	
P	3.84	1.345472367	20.3	60.9	1.696	
Q	4.89	1.587192303	16.3	130.4	1.135	
R	4.69	1.545432582	27.3	109.2	2.147	
S	6.55	1.87946505	11.7	70.2	2.234	
T	5.26	1.660131027	18.7	112.2	1.828	
V	7.03	1.950186706	23.3	46.6	1.828	
W	1.29	0.254642218	74.3	891.6	0.373	
Y	3.07	1.121677562	50	350	1.268	
A	11.5	2.442347035	11.7	11.7	2.489	Thermo-thermophilus
	0.69	-0.35 -0.35	-0.61	-0.78	0.62	
C	0.39	-0.94160854	24.7	741	0.976	
D	3.58	1.2753628	12.7	114.3	0.976	
E	8.61	2.152924318	15.3	76.5	0.976	

F	3.78	1.32972401	52	208	0.157	
G	9.29	2.228938553	11.7	11.7	2.489	
H	1.87	0.625938431	38.3	536.2	0.976	
I	2.68	0.985816795	32.3	64.6	0.424	
K	3.62	1.286474026	30.3	242.4	0.157	
L	14.5	2.674148649	27.3	54.6	1.868	
M	1.56	0.444685821	34.3	445.9	-0.208	
N	1.55	0.438254931	14.7	147	0.157	
P	6.46	1.865629318	20.3	60.9	2.489	
Q	2.46	0.90016135	16.3	130.4	0.976	
R	8.46	2.135349174	27.3	109.2	2.688	
S	3.39	1.220829921	11.7	70.2	2.075	
T	3.76	1.324418957	18.7	112.2	1.669	
V	8.14	2.09679018	23.3	46.6	1.669	
W	1.31	0.270027137	74.3	891.6	0.611	
Y	2.87	1.05431203	50	350	0.157	

A	11.5	2.442347035	11.7	11.7	2.491	Thermus-
thermophilus	0.7	-0.35	-0.35	-0.61	-0.78	0.62
C	0.39	-0.94160854	24.7	741	0.974	
D	3.59	1.278152203	12.7	114.3	0.974	
E	8.65	2.157559321	15.3	76.5	0.974	
F	3.76	1.324418957	52	208	0.151	
G	9.29	2.228938553	11.7	11.7	2.491	
H	1.86	0.620576488	38.3	536.2	0.974	
I	2.67	0.982078472	32.3	64.6	0.417	
K	3.61	1.283707772	30.3	242.4	0.151	
L	14.5	2.674148649	27.3	54.6	1.866	
M	1.55	0.438254931	34.3	445.9	-0.213	
N	1.55	0.438254931	14.7	147	0.151	
P	6.52	1.874874376	20.3	60.9	2.491	

Q	2.44	0.891998039	16.3	130.4	0.974	
R	8.5	2.140066163	27.3	109.2	2.69	
S	3.41	1.226712291	11.7	70.2	2.073	
T	3.75	1.32175584	18.7	112.2	1.668	
V	8.14	2.09679018	23.3	46.6	1.668	
W	1.32	0.277631737	74.3	891.6	0.611	
Y	2.87	1.05431203	50	350	0.151	

A	7.36	1.996059933	11.7	11.7	1.34	S. thermophilus
CNRZ1066		0.39	-0.47	-0.5	-0.8	-0.91	0.67
C	0.58	-0.544727175	24.7	741	1.091	
D	5.79	1.756132292	12.7	114.3	1.091	
E	6.79	1.915450942	15.3	76.5	1.091	
F	4.63	1.532556868	52	208	1.535	
G	6.55	1.87946505	11.7	11.7	1.34	
H	1.91	0.647103242	38.3	536.2	1.091	
I	7.41	2.002830439	32.3	64.6	2.01	
K	6.95	1.93874166	30.3	242.4	1.535	
L	9.94	2.296567021	27.3	54.6	2.36	
M	2.56	0.940007258	34.3	445.9	0.595	
N	4.62	1.530394705	14.7	147	1.535	
P	3.27	1.184789985	20.3	60.9	1.34	
Q	3.76	1.324418957	16.3	130.4	1.091	
R	4.14	1.420695788	27.3	109.2	1.916	
S	6.27	1.835776355	11.7	70.2	2.189	
T	5.69	1.738710248	18.7	112.2	1.784	
V	7.05	1.953027617	23.3	46.6	1.784	
W	0.84	-0.174353387	74.3	891.6	0.151	
Y	3.78	1.32972401	50	350	1.535	

A	7.37	1.997417706	11.7	11.7	1.34	S. thermophilus LMG
18311	0.39	-0.47 -0.5	-0.8	-0.91	0.67	
C	0.58	-0.544727175	24.7	741	1.091	
D	5.82	1.761300262	12.7	114.3	1.091	
E	6.8	1.916922612	15.3	76.5	1.091	
F	4.6	1.526056303	52	208	1.534	
G	6.53	1.876406943	11.7	11.7	1.34	
H	1.91	0.647103242	38.3	536.2	1.091	
I	7.41	2.002830439	32.3	64.6	2.01	
K	6.96	1.940179474	30.3	242.4	1.534	
L	9.93	2.295560478	27.3	54.6	2.36	
M	2.57	0.943905899	34.3	445.9	0.595	
N	4.62	1.530394705	14.7	147	1.534	
P	3.25	1.178654996	20.3	60.9	1.34	
Q	3.76	1.324418957	16.3	130.4	1.091	
R	4.16	1.425515074	27.3	109.2	1.916	
S	6.27	1.835776355	11.7	70.2	2.189	
T	5.68	1.736951233	18.7	112.2	1.784	
V	7.07	1.95586048	23.3	46.6	1.784	
W	0.84	-0.174353387	74.3	891.6	0.151	
Y	3.77	1.327075001	50	350	1.534	

A	12	2.48490665	11.7	11.7	2.467	S. thermophilum IAM
14863	0.69	-0.46 -0.5	-0.68	-0.84	0.71	
C	0.87	-0.139262067	24.7	741	0.989	
D	4.86	1.581038438	12.7	114.3	0.989	
E	6.6	1.887069649	15.3	76.5	0.989	
F	3.1	1.131402111	52	208	0.205	
G	8.98	2.194999882	11.7	11.7	2.467	
H	1.97	0.678033543	38.3	536.2	0.989	
I	4.38	1.477048724	32.3	64.6	0.477	
K	2.5	0.916290732	30.3	242.4	0.205	

L	10.9	2.388762789	27.3	54.6	1.888	
M	2.25	0.810930216	34.3	445.9	-0.171	
N	2.07	0.727548607	14.7	147	0.205	
P	5.79	1.756132292	20.3	60.9	2.467	
Q	3.42	1.229640551	16.3	130.4	0.989	
R	8.36	2.123458427	27.3	109.2	2.673	
S	4.3	1.458615023	11.7	70.2	2.088	
T	4.96	1.601405741	18.7	112.2	1.682	
V	8.49	2.138889	23.3	46.6	1.682	
W	1.45	0.371563556	74.3	891.6	0.613	
Y	2.51	0.920282753	50	350	0.205	

A	9.23	2.222459049	11.7	11.7	1.91	G. kaustophilus
0.52	-0.46	-0.49	-0.78	-0.9	0.64	
C	0.86	-0.15082289	24.7	741	1.138	
D	4.85	1.578978705	12.7	114.3	1.138	
E	7.41	2.002830439	15.3	76.5	1.138	
F	4.16	1.425515074	52	208	1.059	
G	7.23	1.978239036	11.7	11.7	1.91	
H	2.32	0.841567186	38.3	536.2	1.138	
I	6.36	1.850028377	32.3	64.6	1.451	
K	5.62	1.726331664	30.3	242.4	1.059	
L	9.94	2.296567021	27.3	54.6	2.211	
M	2.66	0.978326123	34.3	445.9	0.404	
N	3.08	1.124929597	14.7	147	1.059	
P	4.27	1.451613827	20.3	60.9	1.91	
Q	3.66	1.297463147	16.3	130.4	1.138	
R	6.09	1.806648082	27.3	109.2	2.29	
S	4.91	1.591273942	11.7	70.2	2.236	
T	4.97	1.60341984	18.7	112.2	1.831	

V	7.62	2.03077637	23.3	46.6	1.831
W	1.29	0.254642218	74.3	891.6	0.484
Y	3.36	1.211940974	50	350	1.059