





















2	Aved_18-Q3-R54-62_MAXAC.321	d_Bacteria:p_Elusimicrobiota;c_Elusimicrobia;o_F11;t_FEN-1173;g_;s_	tig00000302-10-25166900	1695374	bcsAl	01477
3	Bjer_18-Q3-R1-45_BATAC.458	d_Bacteria;p_Proteobacteria;c_Gammaproteobacteria;o_Burkholderiales;f_Burkholderiaceae;g_Rhodoferax;s_	tig00001862-10-6955040	304719	bcsAl	00257
4	Damh_18-Q3-R51-60_MAXAC.210	d_Bacteria;p_Elusimicrobiota;c_Elusimicrobia;o_F11:f_FEN-1173:g_;s_	tig00000292-10-7440630	707129	bcsAl	02125
5	Ega_18-Q3-R5-49_MAXAC.112v2	d_Bacteria;p_Planctomycetota;c_Brocadiae;o_Brocadiales;f_Brocadiaceae;g_Brocadia;s_Brocadia sapporoensis	tig00000002-10-32561090	864182	bcsAl	00815
6	Ega_18-Q3-R5-49_MAXAC.199	d_Bacteria;p_Elusimicrobiota;c_Elusimicrobia;o_F11;f_FEN-1173;g_;s_	tig00004062-10-2279720	51224	bcsAl	02055
7	Ejby_18-Q3-R6-50_BATAC.207	dBacteria;pProteobacteria;cGammaproteobacteria;oBurkholderiales;fPalsa-1005;gPALSA-1003;s	tig00001219-10-4727790	59737	bcsAl	00712
8	Ejby_18-Q3-R6-50_MAXAC.192	d_Bacteria;p_Elusimicrobiota;c_Elusimicrobia;o_F11;f_FEN-1173;g_;s_	tig00000024-10-25242610	1615219	bcsAl	01360
9	EsbE_18-Q3-R3-47_BATAC.167	d_Bacteria;p_Proteobacteria;c_Gammaproteobacteria;o_Burkholderiales;f_Palsa-1005;g_PALSA-1005;s_	tig00008171-10-824870	71073	bcsAl	02164
10	EsbW_18-Q3-R4-48_BAT3C.485	d_Bacteria;p_Proteobacteria;c_Gammaproteobacteria;o_Burkholderiales;f_Burkholderiaceae;g_PHCl01;s_	tig00020141-10-609230	22885	bcsAl	03737
11	EsbW_18-Q3-R4-48_BATAC.445	d_Bacteria;p_Elusimicrobiota;c_Elusimicrobia;o_F11;t_FEN-1173;g_;s_	tig00004595-10-3816970	31208	bcsAl	01209
12	EsbW_18-Q3-R4-48_BATAC.453	$\label{thm:def} $$d_Bacteria;p_Proteobacteria;c_Gammaproteobacteria;o_Burkholderiales;f_Burkholderiaceae;g_Simplicispira_A;s_Proteobacteria;o_Burkholderiales;f_Burkholderiaceae;g_Simplicispira_A;s_Proteobacteria;o_Burkholderiales;f_Burkholderiaceae;g_Simplicispira_A;s_Proteobacteria;o_Burkholderiales;f_Burkholderiaceae;g_Simplicispira_A;s_Proteobacteria;o_Burkholderiales;f_Burkholderiaceae;g_Simplicispira_A;s_Proteobacteria;o_Burkholderiales;f_Burkholderiaceae;g_Simplicispira_A;s_Proteobacteria;o_Burkholderiales;f_Burkholderiaceae;g_Simplicispira_A;s_Proteobacteria;o_Burkholderiales;f_Burkholderiaceae;g_Simplicispira_A;s_Proteobacteria;o_Burkholderiaceae;g_Simplicispira_A;s_Proteobacteria;o_Burkholderiaceae;g_Simplicispira_A;s_Proteobacteria;o_Burkholderiaceae;g_Simplicispira_A;s_Proteobacteria;o_Burkholderiaceae;g_Simplicispira_A;s_Proteobacteria;o_Burkholderiaceae;g_Simplicispira_A;s_Proteobacteria;o_Burkholderiaceae;g_Simplicispira_A;s_Proteobacteria;o_Burkholderiaceae;g_Simplicispira_A;s_Proteobacteria;o_Burkholderiaceae;g_Simplicispira_A;s_Proteobacteria;o_Burkholderiaceae;g_Simplicispira_A;s_Proteobacteria;o_Burkholderiaceae;g_Simplicispira_A;s_Proteobacteria;o_Burkholderiaceae;g_Simplicispira_A;s_Proteobacteria;o_Burkholderiaceae;g_Simplicispira_A;s_Proteobacteria;o_Burkholderiaceae;g_Simplicispira_A;s_Proteobacteriaceae;g_Simplicispira_A;s_Proteobacteriaceae;g_Simplicispira_A;s_Proteobacteriaceae;g_Simplicispira_A;s_Proteobacteriaceae;g_Simplicispira_A;s_Proteobacteriaceae;g_Simplicispira_A;s_Proteobacteriaceae;g_Simplicispira_A;s_Proteobacteriaceae;g_Simplicispira_A;s_Proteobacteriaceae;g_Simplicispira_A;s_Proteobacteriaceae;g_Simplicispira_A;s_Proteobacteriaceae;g_Simplicispira_A;s_Proteobacteriaceae;g_Simplicispira_A;s_Proteobacteriaceae;g_Simplicispira_A;s_Proteobacteriaceae;g_Simplicispira_A;s_Proteobacteriaceae;g_Simplicispira_A;s_Proteobacteriaceae;g_Simplicispira_A;s_Proteobacteriaceae;g_Simplicispira_A;s_Proteobacteriaceae;g_Simplicispira_A;s_Proteobacteriaceae;g_Simplicispira_A;s_Proteobacte$	tig00014047-10-1285900	106609	bcsAl	01813
13	EsbW_18-Q3-R4-48_BATAC.523	d_Bacteria;p_Bacteroidota;c_Bacteroidia;o_Chitinophagales;f_Saprospiraceae;g_;s_	tig00002958-10-6732880	188715	bcsAl	00832
14	EsbW_18-Q3-R4-48_MAXAC.050	d_Bacteria;p_Proteobacteria;c_Gammaproteobacteria;o_Burkholderiales;t_Rhodocyclaceae;g_;s_	tig00018082-10-889440	83447	bcsAl	03083
15	Fred_18-Q3-R57-64_BAT3C.662	d_Bacteria;p_Acidobacteriota;c_Acidobacteriae;o_Bryobacterales;f_Bryobacteraceae;g_;s_	tig00006256-10-5425100	396711	bcsBl	01773
16	Fred_18-Q3-R57-64_MAXAC.222	d_Bacteria;p_Elusimicrobiota;c_Elusimicrobia;o_F11;f_FEN-1173;g_;s_	tig00000202-10-25454520	2463238	bcsAl	02108
17	Hade_18-Q3-R52-61_BATAC.364	d_Bacteria;p_Proteobacteria;c_Gammaproteobacteria;o_Burkholderiales;t_Rhodocyclaceae;g_Dechloromonas;s_	tig00407471-10-3182230	146325	bcsAl	03000
18	Hade_18-Q3-R52-61_MAXAC.319	d_Bacteria;p_Elusimicrobiota;c_Elusimicrobia;o_F11;f_FEN-1173;g_;s_	tig00013332-10-1613710	60757	bcsAl	02127
19	Hirt_18-Q3-R61-65_BAT3C.578	d_Bacteria;p_Bacteroidota;c_Bacteroidia;o_Chitinophagales;f_Saprospiraceae;g_;s_	tig00005850-10-2890570	78592	bcsAl	03735
20	Hirt_18-Q3-R61-65_BATAC.551	d_Bacteria;p_Bacteroidota;c_Bacteroidia;o_Chitinophagales;f_Saprospiraceae;g_;s_	tig00006048-10-3784910	6222	bcsAl	02345
21	Hirt_18-Q3-R61-65_MAXAC.022	d_Bacteria;p_Proteobacteria;c_Gammaproteobacteria;o_Burkholderiales;f_Rhodocyclaceae;g_Uliginosibacterium;s_	tig00008471-10-3272170	86112	bgl	00112
22	Hirt_18-Q3-R61-65_MAXAC.245	d_Bacteria;p_Elusimicrobiota;c_Elusimicrobia;o_F11;f_FEN-1173;g_;s_	tig00015913-10-1166340	37940	bcsAl	01910
23	Hjor_18-Q3-R7-51_BAT3C.155	d_Bacteria;p_Proteobacteria;c_Alphaproteobacteria;o_Rhizobiales;f_Beijerinckiaceae;g_;s_	tig00002714-1981250-5975520	159282	bcsAl	01030
24	Kalu_18-Q3-R12-55_BAT3C.186	d_Bacteria;p_Chloroflexota;c_Anaerolineae;o_SBR1031;f_A4b;g_OLB13;s_	tig00000584-10-21303060	280325	bgl	00221
25	Kalu_18-Q3-R12-55_BAT3C.261	d_Bacteria;p_Acidobacteriola;c_Acidobacteriae;o_Bryobacterales;f_Bryobacteraceae;g_;s_	tig00004141-10-2319180	89372	bcsAl	03037
26	Kalu_18-Q3-R12-55_MAXAC.106v2	d_Bacteria;p_Chloroflexota;c_Anaerolineae;o_Promineofilales;f_Promineofilaceae;g_GCA-2699125;s_	tig00100734-10-59431720	2251808	bcsCl	03824
27	Lyne_18-Q3-R50-59_MAXAC.254	d_Bacteria;p_Elusimicrobiota;c_Elusimicrobia;o_F11;f_FEN-1173;g_;s_	tig00002296-10-8929180	853669	bcsAl	00751
28	Lyne_18-Q3-R50-59_MAXAC.259	d_Bacteria;p_Proteobacteria;c_Gammaproteobacteria;o_Burkholderiales;f_Palsa-1005;g_PALSA-1003;s_	tig00005124-10-3344470	80195	bcsAl	01658
29	Mari_18-Q3-R65-66_BAT3C.310_sub	d_Bacteria;p_Proteobacteria;c_Gammaproteobacteria;o_Burkholderiales;f_Rhodocyclaceae;g_Ulliginosibacterium;s_	tig00004204-10-2745170	212189	bgl	00260
30	OdNE_18-Q3-R46-58_BATAC.187	d_Bacteria;p_Proteobacteria;c_Gammaproteobacteria;o_Burkholderiales;f_Gallionellaceae;g_UBA7399;s_	tig00013603-10-1108760	12689	bcsAl	01449
31	OdNE_18-Q3-R46-58_MAXAC.011	$\label{eq:d_bacteria} d_Bacteria; p_Proteobacteria; c_Gamma proteobacteria; o_Chromatiales; t_Chromatiaceae; g_; s_$	tig00001185-10-6730500	406363	bcsAl	03704
32	OdNW_18-Q3-R42-56_MAXAC.029	d_Bacteria;p_Proteobacteria;c_Gammaproteobacteria;o_Burkholderiales;f_Rhodocyclaceae;g_Uliginosibacterium;s_	tig00008739-10-1323550	51832	bgl	02965
33	Rand_18-Q3-R56-63_MAXAC.170	d_Bacteria;p_Proteobacteria;c_Gammaproteobacteria;o_Burkholderiales;f_Palsa-1005;g_PALSA-1003;s_	tig00224048-10-1871190	154794	bcsAl	03451
34	Rand_18-Q3-R56-63_MAXAC.175	d_Bacteria;p_Elusimicrobiota;c_Elusimicrobia;o_F11;f_FEN-1173;g_;s_	tig00052853-10-132870	3044	bcsAl	01612
35	Ribe_18-Q3-R11-54_BAT3C.208	d_Bacteria;p_Proteobacteria;c_Gammaproteobacteria;o_Burkholderiales;f_Palsa-1005;g_PALSA-1003;s_	tig01078798-10-7283700	84619	bcsAl	02150
36	Ribe_18-Q3-R11-54_MAXAC.186	d_Bacteria;p_Elusimicrobiota;c_Elusimicrobia;o_F11;f_FEN-1173;g_;s_	tig00001126-10-9167150	12722	bcsAl	00014
37	Ribe_18-Q3-R11-54_MAXAC.235	$\label{eq:d_bacteria} $$ d_Bacteria; p_Chloroflexota; c_Chloroflexia; o_Chloroflexales; f_Roseiflexaceae; g_Kouleothrix; s_Chloroflexota; o_Chloroflexota; o_$	tig00000009-10-56372800	5353663	bgl	04180
38	Skiv_18-Q3-R9-52_BATAC.176	d_Bacteria;p_Proteobacteria;c_Gammaproteobacteria;o_Burkholderiales;f_Gallionellaceae;g_UBA7399;s_	tig00025195-10-609250	40291	bcsAl	01730
39	Skiv_18-Q3-R9-52_BATAC.396	d_Bacteria;p_Acidobacteriota;c_Acidobacteriae;o_Bryobacterales;t_Bryobacteraceae;g_UBA690;s_	tig00002691-10-6419970	11117	bcsBl	00856
40	Skiv_18-Q3-R9-52_MAXAC.078_sub	d_Bacteria;p_Proteobacteria;c_Gammaproteobacteria;o_Burkholderiales;f_Rhodocyclaceae;g_Dechloromonas;s_	tig00014165-10-544790	30935	bcsAl	00765
41	Skiv_18-Q3-R9-52_MAXAC.277	d_Bacteria;p_Elusimicrobiota;c_Elusimicrobia;o_F11;t_FEN-1173;g_;s_	tig01148445-10-14237630	760958	bcsAl	01708
42	Viby_18-Q3-R106-67_MAXAC.151	d_Bacteria;p_Elusimicrobiota;c_Elusimicrobia;o_F11;f_FEN-1173;g_;s_	tig00591490-10-8803150	834623	bcsAl	02104
43	AaIE_18-Q3-R2-46_BAT3C.357	${\tt d_Bacteria;p_Proteobacteria;c_Gammaproteobacteria;o_Steroidobacterales;f_Steroidobacteraceae;g_;s_matching and the state of the st$	tig00004397-10-3020980	53916	bcsAl	00957
44	AaIE_18-Q3-R2-46_BATAC.155	d_Bacteria;p_Acidobacteriota;c_Blastocatellia;o_UBA7656;f_;g_;s_	tig00003873-10-3436420	242886	bcsAl	01757
45	AaIE_18-Q3-R2-46_BATAC.345	d_Bacteria;p_Proteobacteria;c_Gammaproteobacteria;o_Burkholderiales;t_Palsa-1005;g_PALSA-1003;s_	tig00002178-10-4724040	236998	bcsAl	00195
46	AaIE_18-Q3-R2-46_MAXAC.086	d_Bacteria;p_Proteobacteria;c_Gammaproteobacteria;o_Burkholderiales;f_Palsa=1005;g_;s_	tig00015706-10-216600	4737	bcsAl	01656