

附录 2 青藏高原湖泊样本细菌 α 多样性指数

Appendix 2 Alpha diversity index of bacteria from lake samples in the Qinghai-Tibet Plateau

样本编号 Sample ID	有效序列 Clean reads	抽平序列 Homogenize sequence	分类操作单元 Operational taxonomic unit	香农指数 Shannon index	辛普森指数 Simpson index	ACE 丰度指数 ACE estimator	Chao1 指数 Chao1 estimator	覆盖度 Good's coverage
Pk1 [△]	43,404	25,358	1,522	5.90	0.01	3,850.01	2,889.66	91.61
Pk2 [△]	48,232	25,358	1,271	5.78	0.02	2,451.08	2,030.11	94.19
Pk3 [△]	51,857	25,358	1,158	5.39	0.03	2,519.20	2,103.00	94.28
Pk4 [△]	33,640	25,358	1,086	5.58	0.01	2,179.70	1,841.54	94.92
Cc1 [△]	49,469	25,358	1,040	4.23	0.05	2,135.61	1,654.12	99.12
Cc2 [△]	45,420	25,358	1,286	4.71	0.02	2,609.61	1,961.66	98.82
Cc3 [△]	41,570	25,358	1,441	4.18	0.01	2,158.82	2,130.21	93.58
Cc4 [△]	35,645	25,358	1,250	5.91	0.01	2,422.06	1,958.27	94.07
Dw1 [△]	47,364	25,358	1,069	5.37	0.01	2,843.84	2,187.68	94.17
Dw2 [△]	40,724	25,358	953	5.38	0.01	2,240.36	1,689.24	95.26
Dw3 [△]	48,330	25,358	973	5.34	0.01	2,369.44	1,859.42	94.95
Dw4 [△]	47,007	25,358	934	5.39	0.01	2,044.51	1,700.46	95.49
Zr1 [△]	30,810	25,358	794	4.67	0.04	1,553.46	1,311.73	96.22
Zr2 [△]	46,569	25,358	969	5.22	0.02	1,872.64	1,538.94	95.59
Zr3 [△]	42,068	25,358	886	5.04	0.02	1,666.10	1,420.09	95.99
Zr4 [△]	44,994	25,358	802	4.94	0.03	1,603.20	1,312.03	96.38
Ga1 [△]	34,325	25,358	722	4.93	0.03	1,060.23	1,088.68	97.04
Ga2 [△]	33,407	25,358	2,921	5.05	0.05	6,587.68	4,937.12	95.59
Ga3 [△]	31,913	25,358	1,535	4.77	0.02	3,390.33	2,530.16	97.73
Ga4 [△]	33,903	25,358	586	4.44	0.03	1,109.05	978.04	97.39
XI1 [△]	33,636	25,358	688	5.00	0.02	1,004.60	999.95	97.27
XI2 [△]	33,811	25,358	1,926	4.82	0.03	4,893.60	3,565.15	97.15
XI3 [△]	33,927	25,358	2,506	5.29	0.02	5,940.03	4,348.50	96.32
XI4 [△]	34,393	25,358	2,553	5.26	0.02	5,877.45	4,449.74	96.39
Q1 [△]	40,794	25,358	350	4.37	0.04	360.76	361.55	99.90
Q2 [△]	32,621	25,358	662	3.86	0.10	1,707.28	1,098.89	96.49
Q3 [△]	36,107	25,358	844	4.72	0.03	2,077.97	1,515.68	95.33
Q4 [△]	39,512	25,358	485	4.56	0.03	518.26	520.36	99.78
Ha1 [△]	33,260	25,358	923	5.09	0.02	2,187.42	1,622.22	95.32
Ha2 [△]	32,486	25,358	2,193	4.52	0.07	5,050.53	3,725.23	96.73
Ha3 [△]	33,288	25,358	2,004	4.53	0.05	4,852.77	3,583.21	97.03
Ha4 [△]	34,446	25,358	1,835	4.58	0.05	4,789.32	3,445.87	97.33
Db1 [†]	34,802	25,358	330	3.65	0.07	408.93	423.07	99.03

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Db2 [#]	36,421	25,358	372	3.65	0.06	456.63	460.89	98.87
Db3 [#]	33,552	25,358	504	3.50	0.08	1,091.46	1,024.03	99.42
Db4 [#]	33,584	25,358	751	4.21	0.05	1,535.84	1,363.26	99.21
Dt1 [#]	36,474	25,358	630	4.08	0.04	1,126.05	1,080.13	99.44
Dt2 [#]	34,301	25,358	363	3.92	0.05	435.71	493.29	98.98
Dt3 [#]	34,034	25,358	410	3.92	0.06	465.50	480.26	99.06
Dt4 [#]	35,476	25,358	854	4.42	0.04	1,097.40	1,289.76	99.29
Zm1 [#]	35,690	25,358	698	4.90	0.02	830.57	825.68	98.06
Zm2 [#]	35,304	25,358	673	3.57	0.11	919.36	912.14	99.39
Zm3 [#]	35,051	25,358	537	1.58	0.46	658.37	659.12	99.55
Zm4 [#]	33,153	25,358	1,126	3.44	0.05	1,598.54	1,541.81	98.80
My1 [#]	34,619	25,358	3,157	4.31	0.02	3,292.24	3,260.70	99.02
My2 [#]	36,132	25,358	624	4.25	0.05	1,139.00	1,120.89	99.48
My3 [#]	34,079	25,358	489	4.15	0.04	564.50	575.68	98.74
My4 [#]	34,377	25,358	502	4.45	0.04	581.72	611.25	98.79
C1 ^{#*}	32,762	25,358	363	3.84	0.05	535.00	513.00	99.57
C2 ^{#*}	27,707	25,358	214	2.63	0.14	730.17	606.35	98.83
C3 ^{#*}	31,365	25,358	125	2.51	0.15	292.62	183.33	99.50
C4 ^{#*}	25,358	25,358	146	2.47	0.15	424.92	254.48	99.32
K1 ^{#*}	35,712	25,358	147	2.48	0.16	480.36	320.44	99.24
K2 ^{#*}	28,357	25,358	198	2.66	0.14	538.69	312.00	99.03
K3 ^{#*}	36,278	25,358	224	2.59	0.15	628.13	419.18	98.84
K4 ^{#*}	33,515	25,358	674	5.09	0.0229	725.00	757.00	99.61
D1 [#]	36,847	25,358	501	3.22	0.12	558.78	564.98	97.56
D2 [#]	35,050	25,358	125	2.56	0.10	25.72	25.00	99.99
D3 [#]	39,388	25,358	255	3.13	0.11	258.21	259.4	98.31
D4 [#]	36,452	25,358	181	1.20	0.44	269.35	46.00	99.97
X1 ^{#*}	26,655	25,358	944	4.50	0.05	2,299.20	1,658.02	95.17
X2 ^{#*}	36,959	25,358	739	5.22	0.0129	794.00	800.00	99.57
X3 ^{#*}	38,985	25,358	1,115	5.15	0.03	2,530.53	1,991.69	94.52
X4 ^{#*}	44,811	25,358	1,141	5.22	0.02	2,932.91	2,017.19	94.15
Hs1 [§]	33,344	25,358	418	3.70	0.06	506.59	487.00	98.78
Hs2 [§]	35,308	25,358	617	4.56	0.03	674.81	664.09	98.84
Hs3 [§]	34,443	25,358	474	3.84	0.06	559.74	541.51	98.75

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Hs4 ^s	33,649	25,358	1,119	5.49	0.01	1,177.81	1,233.00	99.60
Hs5 ^s	35,257	25,358	627	4.03	0.05	1,384.01	1,029.28	99.41
Hs6 ^s	35,591	25,358	305	3.67	0.06	382.57	431.85	99.03
Hs7 ^s	35,687	25,358	533	3.51	0.08	1,393.79	1,039.47	99.40
Hs8 ^s	34,780	25,358	345	3.80	0.06	422.48	481.94	98.98
HI1 ^s	36,498	25,358	579	4.40	0.04	731.53	698.71	98.21
HI2 ^s	35,836	25,358	768	4.32	0.04	1,172.26	1,254.20	99.38
HI3 ^s	34,167	25,358	937	4.56	0.03	1,143.49	1,310.63	99.28
HI4 ^s	34,993	25,358	518	4.46	0.03	631.08	631.14	98.53
QI1 ^s	33,872	25,358	690	4.10	0.05	1,103.94	1,116.73	99.39
QI2 ^s	33,991	25,358	581	4.34	0.04	720.19	743.25	98.12
QI3 ^s	35,254	25,358	516	4.29	0.04	609.97	598.94	98.65
QI4 ^s	35,423	25,358	1,203	4.62	0.04	1,369.01	1,485.94	99.27
Qs1 ^s	34,649	25,358	901	3.08	0.02	1,173.44	1,202.02	99.50
Qs2 ^s	34,528	25,358	834	3.23	0.02	990.69	1,152.16	99.55
Qs3 ^s	33,842	25,358	337	3.79	0.06	437.43	529.60	98.86
Qs4 ^s	34,075	25,358	353	3.93	0.05	425.57	459.95	99.01
Ks1 ^s	33,749	25,358	1,178	3.84	0.13	1,321.52	1,448.01	99.25
Ks2 ^s	34,915	25,358	1,018	1.72	0.61	1,230.55	1,204.62	99.17
Ks3 ^s	33,230	25,358	1,341	5.89	0.01	1,418.44	1,502.00	99.52
Ks4 ^s	35,963	25,358	704	4.62	0.04	805.90	814.90	98.25
BI1 ^s	34,018	25,358	707	4.53	0.03	867.50	856.10	97.80
BI2 ^s	33,764	25,358	459	2.81	0.16	720.03	645.25	97.84
BI3 ^s	33,758	25,358	689	4.92	0.02	756.10	751.01	98.70
BI4 ^s	34,184	25,358	1,518	5.45	0.02	1,655.01	1,729.11	99.26
Ns1 ^s	36,538	25,358	313	3.67	0.06	363.81	386.00	99.22
Ns2 ^s	35,915	25,358	470	4.12	0.04	514.32	510.16	99.09
Ns3 ^s	34,924	25,358	369	3.88	0.06	422.52	441.20	99.14
Ns4 ^s	34,773	25,358	1,035	4.84	0.03	1,153.20	1,228.06	99.45
Gz1 ^{**}	49,042	25,358	1,878	5.27	0.02	3,758.10	3,131.03	98.44
Gz2 ^{**}	48,864	25,358	943	5.25	0.02	1,920.72	1,590.28	95.62
Gz3 ^{**}	49,420	25,358	1,916	5.37	0.02	3,924.88	3,076.59	98.39
Gz4 ^{**}	48,064	25,358	931	5.17	0.02	1,854.97	1,455.00	95.83
Dz1 ^{**}	54,467	25,358	831	5.24	0.01	1,632.12	1,379.89	96.30

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Dz2*	47,976	25,358	2,348	5.59	0.01	4,832.63	3,669.54	97.91
Dz3*	51,994	25,358	809	5.00	0.02	1,736.49	1,486.35	96.13
Dz4*	50,307	25,358	2,333	5.47	0.01	5,983.02	4,214.70	97.76
Zb1*	57,868	25,358	1,011	3.23	0.08	1,250.11	1,206.00	99.48
Zb2*	49,600	25,358	2,028	4.32	0.04	2,658.74	2,501.23	98.65
Zb3*	57,581	25,358	667	4.82	0.03	879.25	853.81	97.68
Zb4*	55,531	25,358	639	4.69	0.03	1,115.38	991.93	97.40
Cn1*	60,343	25,358	1,775	5.22	0.02	3,489.34	2,817.50	98.85
Cn2*	54,948	25,358	738	5.01	0.02	1,358.67	1,126.03	96.88
Cn3*	49,163	25,358	752	5.04	0.02	1,389.13	1,151.56	96.80
Cn4*	45,533	25,358	1,507	4.58	0.04	3,446.93	2,618.67	98.53
Dr1*	42,628	25,358	1,054	5.70	0.01	2,290.55	1,803.18	94.92
Dr2*	39,368	25,358	2,286	5.92	0.01	4,626.00	3,920.13	97.54
Dr3*	50,837	25,358	2,410	5.89	0.01	5,115.24	4,300.17	97.97
Dr4*	50,417	25,358	2,500	5.86	0.01	5,518.04	4,217.59	97.82
B1*	54,110	25,358	1,958	5.07	0.02	4,024.92	3,240.31	98.47
B2*	50,354	25,358	913	5.24	0.01	2,003.95	1,535.54	95.71
B3*	45,014	25,358	927	5.23	0.02	2,020.75	1,527.21	95.58
B4*	49,609	25,358	2,073	5.35	0.02	4,434.62	3,540.35	98.21
Al1*	37,638	25,358	912	5.55	0.01	1,822.86	1,513.94	96.00
Al2*	38,388	25,358	1,727	5.58	0.01	4,062.46	3,310.24	97.99
Al3*	38,522	25,358	1,996	5.77	0.01	4,696.71	3,381.71	97.67
Al4*	34,153	25,358	924	5.46	0.01	1,795.77	1,523.23	95.94
S1*	39,054	25,358	1,420	5.96	0.01	2,901.94	2,318.00	93.12
S2*	34,241	25,358	2,409	5.80	0.01	4,490.84	3,809.89	97.09
S3*	42,220	25,358	2,844	6.24	0.01	5,232.03	4,317.33	97.38
S4*	28,357	25,358	1,481	6.19	0.01	2,770.65	2,333.00	93.04
Mq1*	56,941	25,358	1,415	4.54	0.03	2,773.23	2,186.45	99.02
Mq2*	44,596	25,358	797	5.26	0.01	1,533.52	1,250.10	96.43
Mq3*	44,253	25,358	1,351	5.15	0.02	2,366.04	2,016.16	98.91
Mq4*	43,263	25,358	708	4.97	0.02	1,449.70	1,178.78	96.82

※ 为碳酸盐型组样本; Δ 为 Na₂SO₄ 亚型组样本; # 为 MgSO₄ 亚型组样本; § 为氯化物型组样本; * 为优势属分类中未展现; ☆ 为 2016 年高通量数据

※ indicate carbonate type samples; Δ indicate Na₂SO₄ subtype samples; # indicate MgSO₄ subtype samples; § indicate chloride type samples; * was not shown in the classification of dominant genus; ☆ was shown the high-throughput data of 2016.