

## SUPPLEMENT-B: THE TOTAL AND THE ACTIVE ARCHAEOAL DIVERSITY TABLE

Table 33: Relative abundance of the total and the active archaeal order. Lonar 1, Lonar 2 and Lonar 3 represent 3 different samples, and the values are average of 3 separate experiments.

Total diversity							
Order	Sample						
	Lonar 1	Lonar 2	Lonar 3	Average	Standard deviation	Maximum	Minimum
<i>Halobacteriales</i>	27.595	93.317	79.298	66.737	28.263	93.317	27.595
<i>MethanoBacteriales</i>	60.992	1.669	11.591	24.751	25.945	60.992	1.669
<i>Methanomicrobiales</i>	2.586	3.226	7.114	4.308	2.001	7.114	2.586
<i>Thermoplasmatales</i>	5.906	1.401	1.182	2.830	2.177	5.906	1.182
<i>Methanosarcinales</i>	2.815	0.320	0.698	1.278	1.098	2.815	0.320
<i>Methanocellales</i>	0.057	0.015	0.116	0.063	0.042	0.116	0.015
<i>WCHA1-57</i>	0.038	0.015	0.000	0.018	0.016	0.038	0.000
<i>20a-9</i>	0.000	0.037	0.000	0.012	0.018	0.037	0.000
<i>South African Goldmine Gp (SAGEG)</i>	0.010	0.000	0.000	0.003	0.004	0.010	0.000
Active community diversity							
Order	Sample						
	Lonar 1	Lonar 2	Lonar 3	Average	Standard deviation	Maximum	Minimum
<i>Halobacteriales</i>	61.410	42.963	34.193	46.189	11.343	61.410	34.193
<i>Methanomicrobiales</i>	7.195	37.771	43.213	29.393	15.853	43.213	7.195
<i>MethanoBacteriales</i>	16.054	10.842	13.148	13.348	2.132	16.054	10.842
<i>Thermoplasmatales</i>	8.538	4.309	3.612	5.486	2.177	8.538	3.612
<i>Methanosarcinales</i>	6.493	3.814	5.654	5.320	1.119	6.493	3.814
<i>Methanocellales</i>	0.012	0.265	0.157	0.145	0.104	0.265	0.012
<i>20a-9</i>	0.262	0.000	0.000	0.087	0.123	0.262	0.000
<i>ANME-1</i>	0.036	0.000	0.000	0.012	0.017	0.036	0.000
<i>South African Goldmine Gp (SAGEG)</i>	0.000	0.035	0.022	0.019	0.015	0.035	0.000

Table 34: Relative abundance of the total and the active archaeal genera. Lonar 1, Lonar 2 and Lonar 3 represent 3 different samples, and the values are average of 3 separate experiments.

Total diversity							
Genus	Sample						
	Lonar 1	Lonar 2	Lonar 3	Average	Standard deviation	Maximum	Minimum
<i>Natronococcus</i>	63.79473	73.79651	79.27383	72.28835	6.40867	79.27383	63.79473
<i>Haloterrigena</i>	6.82674	13.36178	11.95159	10.71337	2.80791	13.36178	6.82674
<i>Methanosaeta</i>	13.22976	0.32004	1.26072	4.93684	5.87654	13.22976	0.32004
<i>Methanocalculus</i>	7.53296	0.18669	0.50429	2.74131	3.39068	7.53296	0.18669
<i>Natrialba</i>	1.45951	4.90732	1.61372	2.66018	1.59021	4.90732	1.45951
<i>Halovivax</i>	1.50659	1.36018	1.15986	1.34221	0.14212	1.50659	1.15986
<i>Methanobacterium</i>	0.51789	0.13335	1.41200	0.68775	0.53565	1.41200	0.13335
<i>Natronorubrum</i>	0.23540	1.24017	0.30257	0.59271	0.45864	1.24017	0.23540
<i>Candidatus Nitrososphaera</i>	0.98870	0.42672	0.40343	0.60628	0.27058	0.98870	0.40343
<i>Halobiforma</i>	0.80038	0.96013	0.45386	0.73812	0.21132	0.96013	0.45386
<i>Halonotius</i>	0.32957	0.70676	0.15129	0.39587	0.23157	0.70676	0.15129
<i>Halorubrum</i>	0.09416	0.57341	0.05043	0.23933	0.23690	0.57341	0.05043
<i>Candidatus Nitrosopumilus</i>	0.00000	0.56007	0.00000	0.18669	0.26402	0.56007	0.00000
<i>Methanosarcina</i>	0.32957	0.14669	0.50429	0.32685	0.14600	0.50429	0.14669
<i>Natronolimnobius</i>	0.32957	0.28004	0.05043	0.22001	0.12161	0.32957	0.05043
<i>Rice Cluster I</i>	0.18832	0.02667	0.30257	0.17252	0.11319	0.30257	0.02667
<i>Candidatus Halobonum</i>	0.28249	0.16002	0.00000	0.14750	0.11566	0.28249	0.00000
<i>Natrinema sp. B77A</i>	0.28249	0.20003	0.00000	0.16084	0.11861	0.28249	0.00000
<i>Candidatus Methanoperedens</i>	0.23540	0.06668	0.05043	0.11750	0.08363	0.23540	0.05043
<i>Halalkalicoccus</i>	0.23540	0.04001	0.00000	0.09180	0.10285	0.23540	0.00000
<i>Natronomonas</i>	0.00000	0.21336	0.00000	0.07112	0.10058	0.21336	0.00000
<i>Natronobacterium</i>	0.14124	0.02667	0.05043	0.07278	0.04937	0.14124	0.02667
<i>Halopenitus</i>	0.00000	0.06668	0.10086	0.05584	0.04188	0.10086	0.00000
<i>Methanobrevibacter</i>	0.00000	0.00000	0.10086	0.03362	0.04754	0.10086	0.00000
<i>Haladaptatus</i>	0.09416	0.04001	0.05043	0.06153	0.02346	0.09416	0.04001
<i>Halosimplex</i>	0.09416	0.02667	0.05043	0.05709	0.02795	0.09416	0.02667
<i>Methanocella</i>	0.09416	0.00000	0.00000	0.03139	0.04439	0.09416	0.00000
<i>Methanoculleus</i>	0.09416	0.01334	0.05043	0.05264	0.03303	0.09416	0.01334
<i>Halomicrobium</i>	0.00000	0.00000	0.05043	0.01681	0.02377	0.05043	0.00000
<i>Halopiger</i>	0.04708	0.02667	0.05043	0.04139	0.01050	0.05043	0.02667
<i>Methanosphaera</i>	0.00000	0.00000	0.05043	0.01681	0.02377	0.05043	0.00000
<i>Halogranum</i>	0.04708	0.00000	0.00000	0.01569	0.02219	0.04708	0.00000
<i>Halopelagius</i>	0.04708	0.00000	0.00000	0.01569	0.02219	0.04708	0.00000
<i>Halorussus</i>	0.04708	0.00000	0.00000	0.01569	0.02219	0.04708	0.00000
<i>Methanolobus</i>	0.04708	0.00000	0.00000	0.01569	0.02219	0.04708	0.00000

<i>Salinarchaeum</i>	0.04708	0.00000	0.00000	0.01569	0.02219	0.04708	0.00000
<i>Natrinema</i>	0.00000	0.02667	0.00000	0.00889	0.01257	0.02667	0.00000
<i>ANME-3</i>	0.00000	0.01334	0.00000	0.00445	0.00629	0.01334	0.00000
<i>Halolamina</i>	0.00000	0.01334	0.00000	0.00445	0.00629	0.01334	0.00000
<i>Halovenus</i>	0.00000	0.01334	0.00000	0.00445	0.00629	0.01334	0.00000
<i>Methanococcooides</i>	0.00000	0.01334	0.00000	0.00445	0.00629	0.01334	0.00000
<i>Methanogenium</i>	0.00000	0.01334	0.00000	0.00445	0.00629	0.01334	0.00000
<i>Methanomassiliicoccus</i>	0.00000	0.01334	0.00000	0.00445	0.00629	0.01334	0.00000
<i>Methermicoccus</i>	0.00000	0.01334	0.00000	0.00445	0.00629	0.01334	0.00000
<i>Natronoarchaeum</i>	0.00000	0.01334	0.00000	0.00445	0.00629	0.01334	0.00000

#### Active community diversity

Genus	Sample						
	Lonar 1	Lonar 2	Lonar 3	Average	Standard deviation	Maximum	Minimum
<i>Natronococcus</i>	54.61326	51.53453	46.21343	50.78707	3.46971	54.61326	46.21343
<i>Methanosaeta</i>	13.89503	10.99744	19.79346	14.89531	3.65995	19.79346	10.99744
<i>Methanobrevibacter</i>	17.54144	17.32737	15.83477	16.90119	0.75912	17.54144	15.83477
<i>Haloterrigena</i>	5.99448	7.16113	4.47504	5.87688	1.09974	7.16113	4.47504
<i>Methanocalculus</i>	1.38122	2.17391	3.44234	2.33249	0.84889	3.44234	1.38122
<i>Methanosarcina</i>	1.18785	2.74936	1.72117	1.88613	0.64807	2.74936	1.18785
<i>Methanobacterium</i>	1.49171	2.23785	2.32358	2.01771	0.37358	2.32358	1.49171
<i>Methanomassiliicoccus</i>	0.02762	0.00000	2.15146	0.72636	1.00776	2.15146	0.00000
<i>Halovivax</i>	1.35359	1.85422	1.11876	1.44219	0.30672	1.85422	1.11876
<i>Natrialba</i>	0.71823	1.15090	0.60241	0.82385	0.23604	1.15090	0.60241
<i>Rice Cluster I</i>	0.02762	0.95908	0.51635	0.50102	0.38042	0.95908	0.02762
<i>Candidatus Nitrosopumilus</i>	0.30387	0.83120	0.17212	0.43573	0.28477	0.83120	0.17212
<i>Natronorubrum</i>	0.46961	0.12788	0.08606	0.22785	0.17180	0.46961	0.08606
<i>Halobiforma</i>	0.41436	0.25575	0.17212	0.28075	0.10046	0.41436	0.17212
<i>Halonotius</i>	0.11050	0.00000	0.34423	0.15158	0.14350	0.34423	0.00000
<i>Methanocorpusculum</i>	0.19337	0.31969	0.00000	0.17102	0.13147	0.31969	0.00000
<i>Methanoculleus</i>	0.00000	0.00000	0.25818	0.08606	0.12171	0.25818	0.00000
<i>Natrinema</i>	0.00000	0.00000	0.25818	0.08606	0.12171	0.25818	0.00000
<i>Methanospirillum</i>	0.00000	0.19182	0.17212	0.12131	0.08616	0.19182	0.00000
<i>Methanolobus</i>	0.00000	0.06394	0.17212	0.07869	0.07104	0.17212	0.00000
<i>Halopiger</i>	0.13812	0.00000	0.00000	0.04604	0.06511	0.13812	0.00000
<i>Methanocella</i>	0.00000	0.00000	0.08606	0.02869	0.04057	0.08606	0.00000
<i>Natronolimnobius</i>	0.00000	0.00000	0.08606	0.02869	0.04057	0.08606	0.00000
<i>Candidatus Nitrososphaera</i>	0.08287	0.00000	0.00000	0.02762	0.03907	0.08287	0.00000
<i>Halorussus</i>	0.00000	0.06394	0.00000	0.02131	0.03014	0.06394	0.00000
<i>Halorubrum</i>	0.02762	0.00000	0.00000	0.00921	0.01302	0.02762	0.00000
<i>Natronomonas</i>	0.02762	0.00000	0.00000	0.00921	0.01302	0.02762	0.00000