

10 **Table S4. Comparison of abundances of archaeal clades detected using 3 different primer sets (ArL, ArS, and ArBa) in all**
 11 **analyzed samples.** Comparison of primer pairs targeting methanogenic archaea in regards to their coverage of major clades. Clades are
 12 ranked according to their abundances using primer pair ArL and added up in that order for primer pairs ArS and ArBa to give a
 13 cumulative total (Sum). *Mbb.* = *Methanobrevibacter*.

Clade	ArL			ArS			ArBa		
	Rank	Abundance	Sum	Rank	Abundance	Sum	Rank	Abundance	Sum
		[%]	[%]		[%]	[%]		[%]	[%]
<i>Mbb. ruminantium</i>	1	37.2	37.2	1	36.0	36.0	2	33.2	33.2
<i>Mbb. gottschalkii</i>	2	34.0	71.2	2	35.2	71.2	1	43.6	76.8
Rumen Cluster C	3	17.6	88.8	4	11.2	82.4	4	6.2	83.0
<i>Methanosphaera</i>	4	9.8	98.6	3	16.9	99.3	3	15.6	98.6
<i>Methanosarcina</i>	5	1.0	99.6	8	0.11	99.4	8	0.07	98.7
<i>Mbb. smithii</i>	6	0.14	99.7	-	-	99.4	-	-	98.7
<i>Sulfolobus</i>	7	0.12	99.8	-	-	99.4	-	-	98.7
<i>Methanobacterium</i>	8	0.12	99.9	5	0.17	99.6	6	0.15	98.8
<i>Methanimicrococcus</i>	9	0.11	100	6	0.16	99.7	7	0.11	98.9
<i>Methanocorpusculum</i>	10	0.03	100	-	-	99.7	-	-	98.9

<i>Methanomicrobium</i>	11	0.02	100	11	0.01	99.8	-	-	98.9
<i>Mbb. wollinii</i>	12	0.01	100	9	0.04	99.8	-	-	98.9
<i>Mbb. arboriphilus</i>	-	-	100	7	0.13	99.9	5	1.1	100
<i>Mbb. woesii</i>	-	-	100	10	0.02	99.9	-	-	100
<i>Methanoculleus</i>	-	-	100	12	0.001	99.9	-	-	100