Site C0020, Table T41. Overview of samples used for DNA extraction and target groups analyzed by quantitative and conventional PCR, Hole C0020A.

Sample/ Core, section	Sample type	Sample depth (mbsf)	Extraction method	Cell quantifications (cells/cm³)		Checks for contaminant sources							Total Bacteria (16S rRNA gene copies/cm³)			Total Archaea (16S rRNA gene copies/cm³)			Functional genes				
						Seawater		Viscosifier		Sewage									*mcrA*		*dsrB*		
				Direct cell counts	Predicted contaminants	SAR11 (16S)	MG1 Archaea (16S)	*Xanthomonas*	*Halomonas*	*Bifidobacterium*	*Blautia*	*Methanobrevibacter*	806Fmod-908R	908F-1075R	27F-338R	806F-915R	915F-1059R	806F-958R	mcrIRD	ANME-1-mcrI	F1-4RSI1	F2-4RSI2	*fhs* 49F-574R
337-C0020A-																							
23-LMT	Drilling mud	NA	Chem. lysis	1.1E+08	NA	+	+	BD	+	BD	+	BD	1.3E+06	1.0E+07		1.9E+03	1.2E+03		BD	BD			
49-LMT	Drilling mud	NA	Chem. lysis	3.3E+08	NA	++	BD	++	+	BD	+	BD	1.8E+07	1.3E+07		6.6E+03	2.3E+03		BD	BD	BD		
76-LMT	Drilling mud	NA	Chem. lysis	5.5E+08	NA	+	BD	+	+	+	+	BD	2.1E+06	1.0E+07		1.2E+03	1.4E+03		BD	BD			
86-LMT	Drilling mud	NA	Chem. lysis		NA	+	BD	BD	+	BD	+	BD	6.7E+05	1.1E+05		8.0E+02	2.4E+02		BD	BD			
106-LMT	Drilling mud	NA	Chem. lysis	1.6E+08	NA	++	BD	+++	++	BD	BD	BD	1.8E+07	1.3E+07		2.3E+02	3.3E-04		BD	BD	BD	BD	+
108-LMT	Drilling mud	NA	Chem. lysis	2.1E+08	NA	BD	BD	++++	++	BD	BD	BD	2.8E+06	1.7E+07		3.0E+02	1.1E+01		BD	BD	BD	BD	+
159-LMT	Drilling mud	NA	Chem. lysis		NA	BD	BD	+++	++	BD	BD	BD	4.7E+06	2.3E+07		BD	8.4E+01		BD	BD	BD	BD	+
165-LMT	Drilling mud	NA	Chem. lysis	2.0E+08	NA	BD	BD	+	++	BD	BD	BD	6.8E+07	5.3E+07		6.9E+02	7.4E+01		BD	BD	BD	BD	+
182-LMT	Drilling mud	NA	Chem. lysis		NA	BD	BD	++	++	BD	BD	BD	6.8E+06	1.6E+07		2.2E+02	4.4E+01		BD	BD	BD	BD	+
214-LMT	Drilling mud	NA	Chem. lysis		NA	BD	BD	++	++	BD	BD	BD	1.5E+07	5.9E+07		9.8E-01	1.4E+01		BD	BD	BD	BD	+
237-LMT	Drilling mud	NA	Chem. lysis		NA	BD	BD	++++	++	BD	BD	BD	5.5E+06	1.9E+07		4.0E+02	1.6E+02		BD	BD	BD	BD	+
256-LMT	Drilling mud	NA	Chem. lysis	1.4E+08	NA	BD	BD	++	++	BD	BD	BD	9.0E+06	2.5E+07		2.5E+02	3.1E+02		BD	BD	BD	BD	BD
348-LMT	Drilling mud	NA	Chem. lysis		NA	BD	BD	++	++	BD	BD	BD	1.0E+06	2.3E+06		BD	BD		BD	BD	BD	BD	±
30-SMW	Unwashed cuttings	696.5	Chem. lysis	2.6E+07	2.4E+07	+	±	BD	+	BD	+	BD	3.5E+06	1.7E+07		5.6E+03	1.5E+04		+	BD			
45-SMW	Unwashed cuttings	846.5	Chem. lysis	2.4E+07	3.1E+07	+	±	BD	+	BD	+	BD	1.1E+06	2.4E+06		1.1E+03	4.1E+03		BD	BD			
61-SMW	Unwashed cuttings	946.5	Chem. lysis	6.7E+07	1.5E+07	+	BD	BD	+	BD	+	BD	3.4E+06	1.5E+07		5.7E+03	9.9E+03		+	BD			
90-SMW	Unwashed cuttings	1196.5	Chem. lysis		3.1E+06	+	BD	BD	+	BD	+	BD	7.0E+05	3.1E+06		2.4E+03	1.1E+03		BD	BD			
122-SMW	Unwashed cuttings	1346.5	Chem. lysis		4.5E+07	BD	BD	++	++	BD	BD	BD	3.0E+06	3.3E+06		1.1E+01	BD		BD	BD	BD	BD	+
153-SMW	Unwashed cuttings	1496.5	Chem. lysis		1.3E+07	BD	BD	++	++	BD	BD	BD	4.5E+04	4.9E+04		BD	4.9E+01		BD	BD	BD	BD	BD
198-SMW	Unwashed cuttings	1696.5	Chem. lysis		1.5E+08	BD	BD	++	++	BD	BD	BD	4.1E+06	4.3E+06		1.4E+03	4.8E+01		BD	BD	BD	BD	+
212-SMW	Unwashed cuttings	1796.6	Chem. lysis		2.7E+08	BD	BD	++	+	BD	BD	+	2.4E+05	1.7E+05		BD	8.1E+02		BD	BD	BD	BD	BD
254-SMW	Unwashed cuttings	1996.5	Chem. lysis		7.1E+07	BD	BD	+	+	BD	BD	BD	BD	BD		BD	BD		BD	BD	BD	BD	BD
285-SMW	Unwashed cuttings	2196.5	Chem. lysis		3.4E+08	BD	BD	++	+	BD	BD	BD	5.1E+06	3.3E+06		1.3E+03	6.6E+02		BD	BD	BD	BD	+
358-SMW	Unwashed cuttings	2346.5	Chem. lysis		1.7E+08	BD	BD	+	+	BD	BD	BD	2.7E+05	1.6E+05		BD	1.8E+02		BD	BD	BD	BD	+
390-SMW	Unwashed cuttings	2446.5	Chem. lysis		9.2E+07	BD	BD	++	+	BD	BD	BD	8.7E+05	4.5E+05		1.0E+03	2.0E+02		BD	BD	BD	BD	+
25-SMW	Washed cuttings	646.5	Chem. lysis	1.6E+07	1.9E+07	+	BD	BD	BD	BD	BD	BD	6.7E+05	2.9E+06		BD	1.2E+02		BD	BD			
35-SMW	Washed cuttings	746.5	Chem. lysis	3.4E+07	2.5E+07	±	BD	BD	BD	BD	+	BD	6.4E+03	3.3E+03		1.0E+02	6.5E+02		BD	BD			
56-SMW	Washed cuttings	896.5	Chem. lysis	3.2E+07	2.1E+07	±	±	BD	BD	BD	BD	BD	1.9E+04	8.4E+03		BD	7.0E+00		BD	BD			
61-SMW	Washed cuttings	946.5	Chem. lysis	6.7E+07	1.5E+07	+	±	BD	BD	BD	BD	BD	2.8E+04	6.4E+04		1.2E+03	5.0E+02		BD	BD			
3R-3	Core, interior	1372.6	Chem. lysis		4.1E+04			BD	BD				BD	BD					BD				
7R-1	Core interior	1599.5	Chem. lysis		[6.5E+03]			BD	BD				BD	BD			3.3E+00		BD				
10R-2	Core interior	1631.4	Chem. lysis		[8.6E+03]			BD	BD				BD	BD		1.1E+02	5.1E+01		BD				
15R-2	Core interior	1920.4	Chem. lysis		2.9E+04			+	+				1.8E+04	4.4E+04					BD				
15R-5	Core interior	1923.6	Chem. lysis	(5.7E+01)	[6.5E+03]			BD	BD				BD	BD					BD				
16R-2	Core interior	1929.5	Chem. lysis		4.6E+05			BD	BD				BD	BD					+				
20R-3	Core interior	1961.6	Chem. lysis		[5.4E+03]			BD	BD				6.2E+05	4.5E+03		5.9E+00			+				
24R-3	Core interior	1993.8	Chem. lysis	(2.3E+01)	5.6E+04			+	+				2.5E+04	3.9E+04					BD				
26R-7	Core interior	2127	Chem. lysis	3.3E+02	[2.5E+04]			BD	BD				BD	BD			1.1E+01		BD				
28R-6	Core interior	2306.7	Chem. lysis		[4.3E+03]			BD	BD				BD	BD					BD				
30R-4	Core interior	2449.8	Chem. lysis		[5.5E+03]			BD	BD				BD	BD					BD				
3R-3	Core exterior	1372.6	Chem. lysis		1.4E+07			+	+				2.1E+05	5.9E+05					BD				
7R-1	Core exterior	1599.5	Chem. lysis		3.9E+06			+	+				3.1E+05	7.2E+05		2.4E+00			BD				
10R-2	Core exterior	1631.4	Chem. lysis		3.6E+07			+	+				6.3E+05	1.3E+06		1.7E+02	4.2E+02		BD				
15R-2	Core exterior	1920.4	Chem. lysis		1.9E+06			+	+				3.6E+05	8.4E+05		3.2E+00	2.5E+00		BD				
15R-5	Core exterior	1923.6	Chem. lysis		1.9E+06			BD	BD				BD	BD					BD				
16R-2	Core exterior	1929.5	Chem. lysis		2.1E+07			BD	BD				BD	BD					BD				
20R-3	Core exterior	1961.6	Chem. lysis		7.1E+05			BD	BD				BD	BD					BD				
24R-3	Core exterior	1993.8	Chem. lysis		1.5E+06			+	+				2.7E+05	2.8E+05		2.6E+01	9.6E+00		BD				
26R-7	Core exterior	2127	Chem. lysis		4.5E+06			+	+				2.2E+06	2.8E+06		5.7E+01	2.3E+01		BD				
28R-6	Core exterior	2306.7	Chem. lysis		5.6E+03			BD	BD				BD	BD					BD				
30R-4	Core exterior	2449.8	Chem. lysis		1.3E+06			BD	BD				BD	BD					BD				
MS	Core master slurry	NA	Chem. lysis					BD	BD				BD	BD					BD				
1R-2	Sediment cores	1278.4	Alkaline lysis	4.9E+05	2.5E+07										1.2E+06			1.9E+01					
2R-3	Sediment cores	1289.4	Alkaline lysis		3.8E+06										1.7E+05			1.5E+01					
3R-3	Sediment cores	1372.6	Alkaline lysis		4.1E+04										BD			1.3E+01					
4R-3	Sediment cores	1378.1	Alkaline lysis		2.3E+05										2.7E+05			2.1E+01					
5R-3	Sediment cores	1492.1	Alkaline lysis	1.3E+05	6.3E+06										5.1E+05			1.1E+01					
7R-1	Sediment cores	1599.5	Alkaline lysis		[6.5E+03]										BB			BD					
8L-5	Sediment cores	1607.4	Alkaline lysis		2.5E+04										4.8E+04			6.6E+02					
8L-9	Sediment cores	1611.2	Alkaline lysis	(6.7E+01)	[5.9E+03]										BB			BD					
10R-2	Sediment cores	1631.4	Alkaline lysis		[8.6E+03]										BD			BD					
11R-3	Sediment cores	1739.6	Alkaline lysis		8.8E+04										5.9E+06			BD					
12R-7	Sediment cores	1754.7	Alkaline lysis		[8.5E+03]										2.7E+04			3.1E+01					
13R-2	Sediment cores	1758.3	Alkaline lysis		9.7E+04										BB			BD					
14R-2	Sediment cores	1822.5	Alkaline lysis		[7.3E+03]										BD			BD					
15R-2	Sediment cores	1920.4	Alkaline lysis		2.9E+04										BB			BD					
15R-5	Sediment cores	1923.6	Alkaline lysis	(5.7E+01)	[6.5E+03]										BB			BD					
16R-2	Sediment cores	1929.5	Alkaline lysis		4.6E+05										BB			BD					
17R-1	Sediment cores	1936.5	Alkaline lysis		5.9E+04										2.5E+04			BD					
18R-1	Sediment cores	1946.6	Alkaline lysis		2.6E+05										BB			BD					
19R-1	Sediment cores	1951.2	Alkaline lysis		[8.2E+03]										BB			7.5E+00					
19R-5	Sediment cores	1954.1	Alkaline lysis												BB			BD					
19R-8	Sediment cores	1958.4	Alkaline lysis		7.2E+03										6.9E+04			2.3E+01					
20R-3	Sediment cores	1961.6	Alkaline lysis		[5.4E+03]										BD			BD					
20R-7	Sediment cores	1966.3	Alkaline lysis		4.5E+04										BB			1.6E+01					
21R-4	Sediment cores	1969.3	Alkaline lysis		[5.3E+03]										BB			BD					
23R-8	Sediment cores	1989.3	Alkaline lysis		[4.2E+03]										3.3E+04			BD					
24R-3	Sediment cores	1993.8	Alkaline lysis	(2.3E+01)	5.6E+04										BB			BD					
25R-2	Sediment cores	1997.1	Alkaline lysis	1.6E+02	4.5E+04										BB			BD					
25R-3	Sediment cores	1999	Alkaline lysis	1.2E+02	[5.9E+03]										BD			BD					
25R-4	Sediment cores	1999.2	Alkaline lysis		[1.9E+05]										BB			BD					
26R-2	Sediment cores	2111.4	Alkaline lysis	(6.1E+01)	9.0E+04										3.4E+04			1.3E+02					
27R-2	Sediment cores	2201	Alkaline lysis		[5.8E+03]										BB			1.7E+01					
28R-6	Sediment cores	2306.7	Alkaline lysis		[4.3E+03]										BB			1.6E+01					
29R-2	Sediment cores	2401.6	Alkaline lysis	(3.4E+01)	5.1E+04										BB			BD					
30R-4	Sediment cores	2449.8	Alkaline lysis	(9.3E+01)	[5.5E+03]										BB			BD					
32R-2	Sediment cores	2458.4	Alkaline lysis	(8.6E+01)	2.0E+05										BB			2.5E+01					

Direct cell counts (data below detection limit is shown in brackets) and predicted numbers of contaminant cells are shown for comparison. Predicted contaminant cells for samples in which PFC was below detection are shown in brackets. These values should be considered maximum values, since they were calculated assuming the detection limit PFC concentration. + = detection by MPN-PCR; number of + indicates the highest dilution factor of DNA extract at which PCR detection could be obtained (+ = 1×, ++ = 10×, +++ = 100×, and ++++ = 1000× dilution). AT = active tank, LMT = liquid mud tank, SMW = solid (cuttings) from mud water, NA = not applicable, BD = below detection, BB = below the background. mcrIRD targets all *mcrA* except ANME-1. ANME-1-mcrI is specific to *mcrA* of ANME-1. ± = faint band was detected.