



## Extraction of DNA from Acidic, Hydrothermally Modified Volcanic Soils

**Table 1. Sample descriptions**

Sample	Temp.	pH	Description
D6	46 C	1.6	Surface sample; grey, yellowish dense, sticky soil with very small grain size, and visible yellow and pink crystalline inclusions.
D7	86		

**Table 2. Results of chemical<sup>A</sup> and X-ray diffraction (XRD) analyses**

	E8	F9	F11 <sup>B</sup>
Iron	6710	21900	25400
Nitrate-N	ND <sup>C</sup> (<10)	ND (<10)	ND (<10)
Ammonia-N	0.504	0.952	ND (<0.5)
Sulfide	118	62.9	209
Sulfate	19000	13800	1060
Chloride	ND (<50)	ND (<50)	ND (<50)
Orthophosphate-P	1.53	ND (<0.2)	ND (<0.2)
Specific conductivity	50000	7310	1150
pH	1.4	3.3	3.0
Total organic carb	841	841	841



- [21] D. J. Saul, A. G. Rodrigo, R. A. Reeves, L. C. Williams, K. M. Borges, H. W. Morgan, P. L. Bergquist, *Int. J. Syst. Bacteriol.* **1993**, *43*, 754.
- [22] R. P. Anitori, C. Trott, D. J. Saul, P. L. Bergquist, M. R. Walter, in *Bioastronomy 2002: Life Among the Stars, IAU Symposium 213* (Eds R. P. Norris, F. H. Stootman) **2004**, pp. 374–380 (Astronomical Society of the Pacific: San Francisco, CA).
- [23] M. Dopson, E. B. Lindstrom, *Appl. Environ. Microbiol.* **1999**, *65*, 36.
- [24] M. Dopson, C. Baker-Austin, A. Hind, J. P. Bowman, P. L. Bond, *Appl. Environ. Microbiol.* **2004**, *70*, 2079. doi:10.1128/AEM.70.4.2079-2088.2004
- [25] K. Goto, K. Mochida, M. Asahara, M. Suzuki, H. Kasai, A. Yokota, *Int. J. Syst. Evol. Microbiol.* **2003**, *53*, 1537. doi:10.1099/IJS.0.02546-0
- [26] T. I. Bogdanova, I. A. Tsaplina, T. F. Kondrateva, V. I. Duda, N. E. Suzina, V. S. Melamud, T. P. Tourova, G. I. Karavaiko, *Int. J. Syst. Evol. Microbiol.* **2006**, *56*, 1039.
- [27] U. Krimm, D. Abanda-Nkpwatt, W. Schwab, L. Schreiber, *FEMS Microbiol. Ecol.* **2005**, *53*, 483. doi:10.1016/J.FEMSEC.2005.02.004
- [28] M. Uchino, O. Shida, T. Uchimura, K. Komagata, *J. Gen. Appl. Microbiol.* **2001**, *47*, 247. doi:10.2323/JGAM.47.247
- [29] A. Felske, A. Wolterink, R. Van Lis, A. D. Akkermans, *Appl. Environ. Microbiol.* **1998**, *64*, 871.
- [30] B. Y. Kim, S. W. Kwon, *National Center for Biotechnology Information* **2005**, GenBank sequence accession DQ073394.
- [31] G. F. Rautenbach, C. Bowker, C. A. du Plessis, *National Center for Biotechnology Information* **2004**, GenBank sequence accession AY830840.
- [32] R. B. Hawkes, P. D. Franzmann, J. J. Plumb, in *Proceedings from the Bac-Min 2004 Conference* **2004**, pp. 11–17 (Australian Institute of Mining and Metallurgy: Carlton, Australia).
- [33] T. Fuchs, H. Huber, S. Burggraf, K. O. Stetter, *Syst. Appl. Microbiol.* **1996**, *19*, 56.
- [34] Z. He, Y. Li, P. Zhou, S. Liu, *FEMS Microbiol. Lett.* **2000**, *193*, 217.
- [35] N. Grahm, M. Olofsson, K. Ellnebo-Svedlund, H. J. Monstein, J. Jonasson, *FEMS Microbiol. Lett.* **2003**, *219*, 87. doi:10.1016/S0378-1097(02)01190-4
- [36] M. A. Tanner, B. M. Goebel, M. A. Dojka, N. R. Pace, *Appl. Environ. Microbiol.* **1998**, *64*, 3110.
- [37] S. E. Grasby, C. C. Allen, T. G. Lonzo, J. T. Lisle, D. W. Griffin, B. Beauchamp, *Astrobiology* **2003**, *3*, 583. doi:10.1089/153110703322610672
- [38] M. Dopson, E. B. Lindstrom, *Microb. Ecol.* **2004**, *48*, 19. doi:10.1007/S00248-003-2028-1
- [39] K. J. Edwards, P. L. Bond, T. M. Gihring, J. F. Banfield, *Science* **2000**, *287*, 1796. doi:10.1126/SCIENCE.287.5459.1796
- [40] P. R. Norris, D. A. Clark, J. P. Owen, S. Waterhouse, *Microbiology* **1996**, *142*, 775.
- [41] O. V. Golyshina, T. A. Pivovarova, G. I. Karavaiko, T. F. Kondrat'eva, E. R. B. Moore, W. R. Abraham, H. Lunsdorf, K. N. Timmis, *Int. J. Syst. Evol. Microbiol.* **2000**, *50*, 997.