Corrigendum to "Halapricum hydrolyticum sp. nov., a beta-1,3-glucan utilizing haloarchaeon from hypersaline lakes" [Syst. Appl. Microbiol. 46(6) (2023) 126471](S0723202023000309)(10.1016/j.syapm.2023.126421)

Sorokin, Dimitry Y.; Elcheninov, Alexander G.; Merkel, Alexander Y.; Bale, Nicole J.; Sininghe-Damste, Jaap; Kublanov, Ilya V.

DOI
10.1016/j.syapm.2023.126475

Publication date
2023

Document Version
Final published version

Published in
Systematic and Applied Microbiology

Systematic and Applied Microbiology xxx (xxxx) xxx

Contents lists available at ScienceDirect

Systematic and Applied Microbiology

journal homepage: www.elsevier.com/locate/syapm

Corrigendum

Corrigendum to "*Halapricum hydrolyticum* sp. nov., a beta-1,3-glucan utilizing haloarchaeon from hypersaline lakes" [Syst. Appl. Microbiol. 46 (6) (2023) 126471]

Dimitry Y. Sorokin [a,b,*], Alexander G. Elcheninov [a], Alexander Y. Merkel [a], Nicole J. Bale [c], Jaap Sininghe-Damste [c], Ilya V. Kublanov [a]

[a] *Winogradsky Institute of Microbiology, Research Centre of Biotechnology, Russian Academy of Sciences, Moscow, Russia*
[b] *Department of Biotechnology, Delft University of Technology, Delft, The Netherlands*
[c] *NIOZ Royal Netherlands Institute for Sea Research, Den Burg, Texel, The Netherlands*

The authors regret that there is a mistake in the strain collection number: instead of UQ 51487 it should be UQM 51487 in the protologue Table 3 of their paper. The corrected protologue Table is presented below.

DOI of original article: https://doi.org/10.1016/j.syapm.2023.126421.
* Corresponding author at: Winogradsky Institute of Microbiology, Research Centre of Biotechnology, Russian Academy of Sciences, Moscow, Russia.
E-mail addresses: d.sorokin@tudelft.nl, soroc@inmi.ru (D.Y. Sorokin).

https://doi.org/10.1016/j.syapm.2023.126475

Available online 30 November 2023

Table 3
Halapricum hydrolyticum: protologue.

Parameter	Species: *Halapricum hydrolyticum* sp. nov.
Species name	*hydrolyticum*
Genus name	*Halapricum*
Species status	sp. nov.
Etymology	hyd.ro.ly'ti.cum Gr. neut. n. *hydor*, water; Gr. adj. *lytikos*, dissolving, splitting; N.L. neut. adj. *hydrolyticum*, polymer dissolving
Description of the new taxon	The cells are nonmotile coccoids 1-2 μm producing red pigments. The cells lyze in distilled water. The core membrane diether lipids are dominatedby C_{20}-C_{20} DGE (archaeol) and C_{20}-C_{25} DGE (extended archaeol) with 0-3 double bonds. The polar lipid head groups include phosphatidylglycerolphosphate methyl ester (PGP-Me) as a major component and less abundant phosphatidylglycerol (PG). The dominant respiratory quinone is MK-8:8 with the MK-8:7 second in abundance and a minor fraction of MK7:7. It is a saccharolytic and facultatively anaerobic heterotroph. Capable of anaerobic growth either by sugar fermentation or by anaerobic nitrate/nitrite respiration with H_2 as the electron donor presumably to the level of N_2O. Do not grow by anaerobic respiration with sulfur compounds as acceptors. Represents first example of haloarchaea capable of utilizing insoluble beta-1,3-glucans (curdlan and pachyman) for growth. Also can grow with soluble beta-1,3/1,6-glucan laminarin, beta-fructan inulin and alpha-glucans starch and glycogen. The spectrum of utilized sugars include hexoses glucose, fructose, raffinose, trehalose, maltose, sucrose, melezitose and melibiose. Ammonium, but not nitrate or urea, serves as the N-source. Oxidase is weakly positive, catalase is negative. Maximum growth temperature is 48°C. It is a low Mg-demanding, extreme halophile, with a range of NaCl for growth from 2.5 to 5 M (optimum at 4 M) and a neutrophile, with a pH range for growth from 6.8 to 7.8 (optimum at 7.5). The G+C content of the DNA is 63.0-63.1 % (two genomes). Habitat - hypersaline salt lakes. The type strain (HArc-curdl5-1^T=DSM 114193^T=UQM 41587^T) was isolated from sediments of hypersaline salt lakes in Kulunda Steppe (Altai, Russia). The species also includes a second, closely related strain HArc-curdl7.
Authors	Dimitry Y. Sorokin, Alexander G. Elcheninov, Alexander Y. Merkel, Michel Koenen, Nicole J. Bale and Ilya V. Kublanov
Title	*Halapricum hydrolyticum* sp. nov., a beta-1,3-glucan utilizing haloarchaeon from hypersaline lakes
Journal	Systematic and Applied Microbiology
Corresponding author	Dimitry Y. Sorokin
E-mail of corresponding author	soroc@inmi.ru; d.sorokin@tudelft
Designation of the type strain	HArc-curdl5-1
Strain collection numbers	DSM 114193; UQM 41587
16S rRNA gene accession numbers	Genomic locus tags for HArc-curdl5-1^T: OB916_11930; OB916_16655
Genome assembly accession numbers	GCA_025517535; GCA_025517565
Genome status	Drafts
G+C, %	63.0-63.1 (genomes of 2 strains)
Country of origin	Russian Federation
Region of origin	Altai region
Date of isolation	2015-11-15
Source of isolation	Surface sediments from hypersaline salt lakes
Sampling dates	2015-08-05
Geographic location	south-western Siberia, Kulunda Steppe
Latitude	51°39' N; 49°10' N; 48°14' N
Longtitude	79°48' E; 46°39' E; 46°35' E
Depth	0.05 m
Temperature of the sample	20°C
pH of the sample	7.5-8.0
Salinity of the sample	22-24%
Number of strains in study	2
Source of isolation of non-type strains	Same as for the type strain
Growth medium, incubation conditions	4 M total NaCl, pH 7; incubation – 35-37°C; shaker 150 rpm
Conditions of preservation	Deep freezing in 15% glycerol (v/v)
Gram stain	Negative
Cell shape	Coccoids
Cell size	1-2 μm in diameter
Motility	Nonmotile
Sporulation	None
Colony morphology	Red, convex, smooth, up to 2 mm
Temperature range for growth	Nd
Lowest temperature for growth	Nd
Highest temperature for growth	45
Optimal temperature for growth	35-40
Lowest pH for growth	6.8
Highest pH for growth	7.8
Optimum pH for growth	7.5
pH category	Neutrophilic
Lowest NaCl concentration for growth	2.5 M
Highest NaCl concentration for growth	5.0 M
Optimum salt concentration for growth	4.0 M
Other salts important for growth	KCl (5 mM); $MaSO_4$ (1-5 mM)
Salinity category	Extremely halophilic
Relation to oxygen	Facultative anaerobe
O_2 conditions for strain testing	Fully aerobic
Carbon source used (class)	Carbohydrates
Specific compounds	beta-1,3-glucans curdlan and pachyman
Nitrogen source	Ammonium
Terminal electron acceptor	O_2, NO_3^- and NO_2^-
Energy metabolism	Chemoorganotrophic
Phospholipids	Core membrane lipids are C_{20}-C_{20} DGE (archaeol) and C_{20}-C_{25} DGE (extended archaeol). Polar head groups are phosphatidylglycerophosphate methylester (PGP-Me) and phosphatidylglycerol (PG)
Respiratory lipoquinones	MK-8:8 (major); MK-8:7 and MK7:7 (minor)
Glycolipids and sulfolipids	Absent
Habitat	Hypersaline lakes
Extraordinary feautures	Utilization of insoluble beta-1,3-glucans for growth