

Sulfuricystis multivorans gen. nov., sp. nov. and Sulfuricystis thermophila sp. nov.

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Table 1: Complete list of names proposed in the current register list.

Proposed Taxon	Etymology	Description	Parent Taxon	Type	Registry URL
Genus <i>Sulfuricystis</i>	[Sul.fu.ri.cys'tis] L. neut. n. <i>sulfur</i> , sulphur; Gr. fem. n. <i>kystis</i> , a bag; N.L. fem. n. <i>Sulfuricystis</i> , sulfur-oxidizing bag	Grows by oxidation of sulfur compounds. Facultatively anaerobic and neutrophilic. Gram-stain-negative. Major cellular fatty acids are C16:0 and C16:1 (C16:1ω7c and/or C16:1ω6c). Phylogenetically, belongs the family <i>Sterolibacteriaceae</i> . The type species is <i>Sulfuricystis multivorans</i> .	<i>Sterolibacteriaceae</i>	<i>Sulfuricystis multivorans</i> ^{Ts}	seqco.de/i:38887
Species <i>Sulfuricystis multivorans</i> ^{Ts}	[mul.ti.vo'rans] L. masc. adj. <i>multus</i> , many; L. pres. part. <i>vorans</i> , devouring, eating; N.L. fem. part. adj. <i>multivorans</i> , devouring various substrates	Kojima et al., 2022 (modified): In addition to properties listed in the genus description, cells are rod-shaped, 0.8–2.0 µm long and 0.4–0.5 µm wide. Uses oxygen and nitrate as electron acceptor. Under nitrate-reducing conditions, grows chemolithoautotrophically on thiosulfate and elemental sulfur, but not on sulfide, tetrathionate, or hydrogen gas. Grows heterotrophically on pyruvate, lactate, acetate, propionate, succinate, fumarate, malate, and butyrate. Does not grow on benzoate, isobutyrate, methanol, ethanol, formate, citrate, glucose, xylose, phenol, <i>o</i> -cresol, and <i>m</i> -cresol. Temperature range for growth is 28–55 °C, with an optimum of 45–50 °C. Growth occurs at pH 5.8–8.7, with an optimum of pH 6.7–7.4. G + C content of genomic DNA of the reference strain is 62.4 mol%. The reference strain J5B(T) (= BCRC 81386(T) = DSM 104688(T) = NBRC 112605(T)) was isolated from a microbial mat of a hot spring in Japan. The GenBank/EMBL/DDBJ accession numbers for the chromosome and two plasmids of reference strain are AP018718 and AP018719-AP018720, respectively.	<i>Sulfuricystis</i>	NCBI Assembly: GCF_003966565.1 ^{Ts}	seqco.de/i:38886
		Kojima et al., 2022 (modified): In addition to			

Proposed Taxon	Etymology	Description	Parent Taxon	Type	Registry URL
Species <i>Sulfuricystis thermophila</i>	[ther.mo'phi.la] Gr. masc. adj. <i>thermos</i> , hot; Gr. masc. adj. <i>philos</i> , loving; N.L. fem. adj. <i>thermophila</i> , heat-loving	properties listed in the genus description, cells are rod-shaped, 1.8–3.2 µm long, 0.5 µm wide. Uses oxygen and nitrate as electron acceptor. Under nitrate-reducing conditions, grows chemolithoautotrophically on thiosulfate, tetrathionate and elemental sulfur, but not on sulfide or hydrogen gas. Grows heterotrophically on pyruvate, lactate, acetate, propionate, succinate, fumarate, malate, and butyrate and isobutyrate. Does not grow on benzoate, methanol, ethanol, formate, citrate, glucose, xylose, phenol, <i>o</i> -cresol, and <i>m</i> -cresol. Temperature range for growth is 18–55 °C, with an optimum of 50 °C. Growth occurs at pH 5.5–8.6, with an optimum of pH 6.6–6.9. G + C content of genomic DNA of the reference strain is 63.6 mol%. The reference strain M52(T) (= BCRC 81387(T) = NBRC 114016(T)) was isolated from a microbial mat of a hot spring in Japan. The GenBank/EMBL/DDBJ accession number for the complete genome of the reference strain is AP019373.	<i>Sulfuricystis</i>	NCBI Assembly: GCF_004323595.1 Ts	seqco.de/i:39151