Desulfamplus magnetovallimortis gen. nov. sp. nov.

Submitted by Monteil, Caroline L.

Genus *Desulfamplus*

Etymology
[De.sul.fam'plus] **N.L. pref.** *desulf-*, desulfuricating; **L. masc. adj.** *amplus*, large; **N.L. masc. n.** *Desulfamplus*, a large sulfate-reducer

Nomenclatural type
Species *Desulfamplus magnetovallimortis*[Ts]

Description
Cells are Gram-negative, relatively large rods and motile by mean of a single polar flagellum. They are strict anaerobes, using sulfate as terminal electron acceptor that is reduced to sulfide. The two main cellular fatty acids are C16:1 7c and C16:0 while the major respiratory quinone is the menaquinone MK-7. The genus *Desulfamplus* belongs to the *Desulfobacterota* phylum with its closest relative species belonging to genus *Desulfobacterium*. The type species is *D. magnetovallimortis* BW-1T. The taxonumber is GA00026.

Classification
Bacteria » *Desulfobacterota* » *Desulfobacteria* » *Desulfobacterales* » *Desulfobacteraceae* » *Desulfamplus*

References
Effective publication: Descamps et al., 2017 [1]
Original (not valid) publication: Lefèvre et al., 2011 [2]

Registry URL
https://seqco.de/i:37069

Species *Desulfamplus magnetovallimortis*[Ts]

Etymology

[mag.ne.to.val.li.mor'tis] **Gr. masc. n.** *magnes*, pertaining to a magnet; **L. fem. n.** *vallis*, valley; **L. fem. n.** *mors*, death; **N.L. gen. n.** *magnetovallimortis*, of the magnetic valley of death, referring to the presence of magnetosomes and the organism's association with extreme or anoxic environments, metaphorically described as a "valley of death."

Nomenclatural type

Genome sc|0006236 [Ts]

Reference Strain

Strain sc|0042135: BW-1 = DSM 103535 = JCM 18010

Description

Species description is as for genus, with the following additional characteristics. Cells are, on average, 2 m long and 1 m wide.
Capable of chemoorganoheterotrophic growth, using fumarate, lactate, pyruvate, malate and succinate as electron donors and carbon sources. Sulfate and thiosulfate are used as terminal electron acceptors. Addition of at least 10 g NaCl L−1 is necessary for growth; optimum NaCl concentration for growth is 15–25 g L−1. Temperature requirements: Tmin, 10 ◦C; Topt, 28 ◦C; Tmax, 35 ◦C. The pH range for growth is 6.5–7.5; optimum 7. The G–C content of the genome is 41 mol%. The major cellular fatty acids are C16:1 7c, C16:0, C17:1 6c, C15:0, C17:0, C15:1 6c, C18:1 7c, C17:1 8c and C14:0. The type strain, BW-1T (= JCM 18010T = DSM 103535T) was isolated from a brackish spring in Death Valley National Park (California, USA). The taxonumber is TA00086.

Classification

Bacteria » *Desulfobacterota* » *Desulfobacteria* » *Desulfobacterales* » *Desulfobacteraceae* » *Desulfamplus* » *Desulfamplus magnetovallimortis*[Ts]

References

Effective publication: Descamps et al., 2017 [1]
Original (not valid) publication: Lefèvre et al., 2011 [2]
Corrigendum: Descamps et al., 2017 [1] (from "Desulfamplus magnetomortis")
Assigned taxonomically: Descamps et al., 2017 [1]

Registry URL

https://seqco.de/i:37070

References

1. Descamps et al. (2017). Desulfamplus magnetovallimortis gen. nov., sp. nov., a magnetotactic bacterium from a brackish desert spring able to biomineralize greigite and magnetite, that represents a novel lineage in the Desulfobacteraceae. *Systematic and Applied Microbiology*. DOI: 10.1016/j.syapm.2017.05.001
2. Lefèvre et al. (2011). A Cultured Greigite-Producing Magnetotactic Bacterium in a Novel Group of Sulfate-Reducing Bacteria. *Science*. DOI: 10.1126/science.1212596

Register List Certificate of Validation

On behalf of the *Committee on the Systematics of Prokaryotes Described from Sequence Data* (SeqCode Committee), we hereby certify that the Register List **seqco.de/r:mdxiw6u8** submitted by **Monteil, Caroline L.** and including 2 new names has been successfully validated.

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