

## Species *Hahnella aquatica*<sup>Ts</sup>

### Etymology

[a.qua.ti'ca] **L. fem. adj.** *aquatica*, living or found in the water.

### Nomenclatural type

[NCBI Assembly: GCA\\_965194505.1](#)<sup>Ts</sup>

### Reference Strain

[Strain sc|0040540](#): MiE-11

### Description

Type species is *Hahnella aquatica* MiE-11 (GCA\_965194505.1), isolated from 5 m depth from Lake Milada, Czechia (date: 2019-07-23), *via* high-throughput dilution to extinction cultivation. MiE-11 has a genome size of 1.8 Mbp with a genomic GC content of 61.8%, contains 3 rRNA genes and 43 tRNAs. The genome is complete, consisting of a circular chromosome. The genome contains genes encoding anoxygenic aerobic phototrophy (*pufABLM*). Genes for flagellar assembly were annotated. Pathways for thiosulfate oxidation (Sox pathway), glycolate oxidation, and the biosynthesis of all amino acids were predicted. Further, pathways for thiamine, riboflavin, NAD, pantothenate, coenzyme A, THF, and heme biosynthesis were identified. The closest cultivated relatives are the undescribed *Burkholderiales* bacterium LSUCC0115 (GCA\_009646425.1), with an average amino acid identity of 67.3% and average nucleotide identity of 71.7% and another newly proposed species, *Hahnella lacustris* MsE-M47 (GCA\_965194655.1), with an AAI of 65.8% and an ANI of 70.4%. The closest validly described relative is *Limnobacter thiooxidans* CS-K2 (GCF\_036323495.1) with an AAI of 54.41% and an ANI of 66.9%. Current GTDB classification (R220): d\_\_Bacteria; p\_\_Pseudomonadota; c\_\_Gammaproteobacteria; o\_\_Burkholderiales; f\_\_Burkholderiaceae\_A; g\_\_UBA2463; s\_\_.

### Classification

*Bacteria* » *Pseudomonadota* » *Betaproteobacteria* » *Burkholderiales* » *Burkholderiaceae* » *Hahnella* » *Hahnella aquatica*<sup>Ts</sup>

### References

Effective publication: Salcher et al., 2025 [1]

### Registry URL

<https://seqco.de/i:49114>

## References

1. Salcher et al. (2025). Bringing the uncultivated microbial majority of freshwater ecosystems into culture. *Nature Communications*. [DOI:10.1038/s41467-025-63266-9](https://doi.org/10.1038/s41467-025-63266-9)