

Order *Methyloaequorales*

Etymology

[Me.thy.lae.quo.ra'les] **N.L. neut. n.** *Methyloaequor*, the type genus of the order; *-ales*, ending to denote an order; **N.L. fem. pl. n.** *Methyloaequorales*, the Methyloaequor order

Nomenclatural type

Genus *Methyloaequor*

Description

Uncultivated bacteria in the order Methyloaequorales (previously GTDB o_TMED127) have small, streamlined genomes (~1.5 Mb) and appear to be obligate lanthanide-dependent methylotrophs that use the serine cycle for carbon assimilation.

Classification

Bacteria » *Pseudomonadota* » *Alphaproteobacteria* » *Methyloaequorales*

References

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

Registry URL

<https://seqco.de/i:51452>

References

1. Glass et al. (2025). Diel cycle of lanthanide-dependent methylotrophy by TMED127/Methyloaequorales bacteria in oligotrophic surface seawater. *Applied and Environmental Microbiology*. DOI:[10.1128/aem.01181-25](https://doi.org/10.1128/aem.01181-25)