

Species *Minusculum obligatum*^{Ts}

Etymology

[o.bli.ga'tum] **L. neut. adj.** *obligatum*, to bind, oblige, or require

Nomenclatural type

[NCBI Assembly: GCA_045401155.1](#)^{Ts}

Description

This is a Patescibacteria group bacterium that is a symbiont of the microalgae *Nannochloropsis oceanica* strain IMET1 and *Tetrademus obliquus* strain HTB1. Both microalgae are grown with 10% CO₂ in our laboratory for carbon mitigation research. This bacterium was found at the 1 L and 500 L scale and has a genome size of 578,798 bp. It is a dominant bacterium based on relative abundance of the 16S rRNA gene at both scales regardless of whether the algae are bubbled with 10% CO₂ or ambient air. Its hyper reduced genome suggests its symbiosis may be obligatory.

Classification

Bacteria » *Patescibacteriota* » “Paceibacteria” » *Phycocordibacterales* » *Phycocordibacteraceae* » *Minusculum* » *Minusculum obligatum*^{Ts}

References

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

Registry URL

<https://seqco.de/i:49173>

References

1. Jonas et al. (2025). Two novel Patescibacteria: *Phycocordibacter aenigmaticus* gen. nov. sp. nov. and *Minusculum obligatum* gen. nov. sp. nov., both associated with microalgae optimized for carbon dioxide sequestration from flue gas. *mBio*. [DOI:10.1128/mbio.01231-25](https://doi.org/10.1128/mbio.01231-25)