

Species *Planktophila primivernalis*

Etymology

[pri.mi.ver.na'lis] **L. masc. adj.** *primus*, first or foremost; **L. fem. adj.** *vernalis*, of spring; **N.L. fem. adj.** *primivernalis*, of early spring, due to its occurrence in lakes during spring months

Nomenclatural type

[Genome sc|0004084](#) ^{Is}

Description

Etymology. It is named from 'prima vera', meaning early spring in Latin, due to its occurrence in lakes during spring months.

Brief description. *Planktophila primaveralis* MRE-185 (ENA accession number GCA_965267735) was isolated from the epilimnion (0.5m depth) of Římov Reservoir, Czech Republic (date: 2021-11-01) and it is the only isolated representative of the species. It has a circular genome with a size of 1,474,018 bp, a GC content of 47.25% and a coding density of 95.94%. It encodes for one rRNA operon and 37 tRNA genes. It encodes actinorhodopsin and heliorhodopsin, as well as the ability to *de novo* synthesize retinal. It can synthesize most amino acids, except asparagine. The closest relative is *Planktophila aestivalis* MRE-130 with whom it shares an average nucleotide identity of 86.8%. Recruitment analysis showed that it was present in Římov, Žlutice and Klíčava Reservoirs (Czech Republic) during the spring months, and at the coast of the Baltic Sea. It is usually present in the surface waters, but in Římov Reservoir it is also present in hypolimnion. The Current GTDB classification (r220) is d__Bacteria; p__Actinomycetota; c__Actinomycetia; o__Nanopelagiales; f__Nanopelagicaceae; g__Planktophila; s__.

Classification

Bacteria » *Actinomycetota* » *Actinomycetes* » *Nanopelagiales* » *Nanopelagicaceae* » *Planktophila* » *Planktophila primivernalis*

References

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

Registry URL

<https://seqco.de/i:51470>

References

1. Chiriac et al. (2025). Ecological success in freshwater lakes: insights from novel cultivated lineages of the abundant Nanopelagiales order. *Microbiome*. DOI: [10.1186/s40168-025-02272-x](https://doi.org/10.1186/s40168-025-02272-x)