

Species *Planktophila landstejnensis*

Etymology

[lan.dstej.nen'sis] **N.L. fem. adj.** *landstejnensis*, of Landstejn, named for Landštejn Reservoir (Czech Republic), the place from which the representative strain was isolated

Nomenclatural type

[Genome sc|0004097](#) ^{Is}

Description

Etymology. It is named after Landštejn Reservoir (Czech Republic), the place from which the representative strain was isolated.

Brief description. The representative strain of *Planktophila landstejnensis* Bala-138 (ENA accession number GCA_965267445), was isolated from Vistula River, Poland (date: 2022-07-05). Other 15 isolates of the same species were obtained in our laboratory, most of them from Vistula River and Lagoon, and the coast of the Baltic Sea (date: 2022-07-05), as well as from the Landštejn Reservoir, Czech Republic (date: 2020-06-16). The closest isolated species is *Planktophila ubiquitis* MKE-26, with which it shares an average nucleotide identity of 93.2%. *Planktophila landstejnensis* strains shared 100% average nucleotide identity among themselves. The circular genome of the Bala-138 strain has a size of 1,431,437 bp, a GC content of 46.5%, and a coding density of 95.8%. It encodes one rRNA operon and 38 tRNA genes. The oxidative part of the pentose phosphate pathway is not encoded by any strain of this species. The recruitment analysis indicates that the species is distributed worldwide in freshwaters, and sometimes in high abundances, including places such as Lake Loclat and Zurich (Switzerland), Torrens River (Australia), Lake Biwa (Japan), Římov, Žlutice and Klíčava Reservoirs (Czech Republic), Lake Michigan and Mendota, as well as the Delaware River and Bay (USA), and boreal lakes Bissett and Roche (Canada). The Current GTDB classification (r220) is d__Bacteria; p__Actinomycetota; c__Actinomycetia; o__Nanopelagicales; f__Nanopelagicaceae; g__Planktophila; s__.

Classification

Bacteria » *Actinomycetota* » *Actinomycetes* » *Nanopelagicales* » *Nanopelagicaceae* » *Planktophila* » *Planktophila landstejnensis*

References

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

Registry URL

<https://seqco.de/i:51481>

References

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