

Genus *Allorhodoferax*

Etymology

[A.llo.rho.do.fe'rax] **Gr. masc. pron.** *allos*, another, other, different; **N.L. masc. n.** *rhodoferax*, a bacterial genus name; **N.L. masc. n.** *Allorhodoferax*, another Rhodoferax.

Nomenclatural type

Species *Allorhodoferax aquaticus*^{Ts}

Description

The genus contains two species, *Allorhodoferax aquaticus* (GCA_965194715.1) and *Allorhodoferax lacus* (GCA_965194635.1), both isolated from freshwater lakes. Type species is *Allorhodoferax aquaticus* MsE-M22 (GCA_965194715.1). The genus is classified as d__Bacteria; p__Pseudomonadota; c__Gammaproteobacteria; o__Burkholderiales; f__Burkholderiaceae; Rhodoferax_C in GTDB (R220) and contains bacteria with various names such as *Curvibacter*, *Rhodoferax*, etc. The closest cultivated relative is *Curvibacter* sp. AEP1-3 (GCF_002163715.1), with average amino acid identities of 86.2-90.7% and average nucleotide identities of 81-9-86.6%. The type strain of the genus *Rhodoferax* (*Rhodoferax fermentans* JCM 7819; GCA_002017865.1) is classified as d__Bacteria; p__Pseudomonadota; c__Gammaproteobacteria; o__Burkholderiales; f__Burkholderiaceae; g__Rhodoferax; s__Rhodoferax fermentans, with AAls of 66.0-66.8% and ANIs of 72.4-72.6%. We therefore suggest a reclassification of this genus (GTDB genus Rhodoferax_C) with the proposed name *Allorhodoferax*.

Classification

Bacteria » *Pseudomonadota* » *Betaproteobacteria* » *Burkholderiales* » *Comamonadaceae* » *Allorhodoferax*

References

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

Registry URL

<https://seqco.de/i:49941>

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