

Regnicoccus frigidus sp. nov.

Submitted by Allen, Michelle

Species *Regnicoccus frigidus*

Etymology

[fri'gi.dus] L. masc. adj. *frigidus*, cold, referring to the cold environment

Nomenclatural type

[INSDC Nucleotide: JAOANE000000000](#)^{Ts}

Description

Cold-adapted planktonic cyanobacterium using aerobic oxygenic photoautotrophy (Calvin-Benson-Bassham cycle) in the light. Under dark conditions has possible aerobic heterotrophic metabolism (using exogenous sugars and glycerol); possible facultative anaerobic metabolism under dark and anoxic conditions (fermentation using stored glycogen coupled to evolution of H₂).

Carbon sources include: CO₂, urea, cyanate, sugars, glycerol.

Nitrogen sources include: nitrate, ammonia, urea, cyanate, amino acids, peptides, free cyanide, nitriles.

Capable of glycogen storage.

Possesses ABC transporters for urea, amino acids, and sugars, as well as other transporters for peptides, glycerol, nitrate/nitrite, and ammonium.

Bacterial defense systems include a BREX type 1 system, a Retron anti-phage system and Type I restriction-modification.

Classification

Bacteria » *Cyanobacteriota* » *Cyanophyceae* » “*Synechococcales*” » *Synechococcaceae* » *Regnicoccus* » *Regnicoccus frigidus*

References

Effective publication: Panwar et al., 2022 [1]

Assigned taxonomically: Panwar et al., 2022 [1]

Registry URL

<https://seqco.de/i:23579>

References

1. Panwar et al. (2022). Population structure of an Antarctic aquatic cyanobacterium. *Microbiome*.
[DOI:10.1186/s40168-022-01404-x](https://doi.org/10.1186/s40168-022-01404-x)

Register List Certificate of Validation

On behalf of the *Committee on the Systematics of Prokaryotes Described from Sequence Data* (SeqCode Committee), we hereby certify that the Register List seqco.de/r:3vln6qqf submitted by **Allen, Michelle** and including 1 new name has been successfully validated.

Date of Priority: 2025-08-17 11:27 UTC

DOI: 10.57973/seqcode.r:3vln6qqf

