

Register list for *Natronospora cellulosivora* gen. nov. sp. nov.

Submitted by Merkel, Alexander

Genus *Natronospora*

Etymology

[Na.tro.no.spo'ra] **N.L. pref.** *natrono-*, pertaining to soda; **Gr. fem. n.** *spora*, seed, and, in biology, a spore; **N.L. fem. n.** *Natronospora*, soda loving, spore-forming organism

Nomenclatural type

Species *Natronospora cellulosivora*^{Ts}

Description

The genus *Natronospora* includes moderately salt-tolerant and alkaliphilic, anaerobic, fermentative, heterotrophic, endospore-forming bacteria specialized on utilization of cellulose as the growth substrate. Currently it includes a single species - *Natronospora cellulosivora*, that was isolated from soda lake. A member of the order *Halanaerobiales*.

Classification

Bacteria » *Bacillota* » *Clostridia* » *Halanaerobiales* » "locasiaceae" » *Natronospora*

References

Effective publication: Sorokin et al., 2026 [1]

Registry URL

<https://seqco.de/i:52917>

Species *Natronospora cellulosivora*^{Ts}

Etymology

[cel.lu.lo.si.vo'ra] **N.L. neut. n.** *cellulosum*, cellulose; **N.L. fem. adj. suff.** *-vora*, devouring; **N.L. fem. adj.** *cellulosivora*, devouring cellulose

Nomenclatural type

[INSDC Nucleotide: JBBJJH000000000.1](#)^{Ts}

Reference Strain

[Strain sc|0040323](#): ANBcel28

Description

Cells are thin nonmotile rods of variable length, 0.2-0.3 × 2-10 µm, with the thin monolayer cell-wall structure forming spherical terminal endospores. In the pre-spore state cells are filled with microcompartment-like bodies. The colonies in soft agar with amorphous cellulose are sphaerical and surrounded by cellulose clearance zones. Forms cell-bound yellow-orange pigment. Strictly anaerobic, fermentative, saccharolytic bacterium growing actively only with various forms of insoluble cellulose and less actively with soluble barley beta-glucan, xylan and lichenan. Growth in liquid culture is only possible with a saccharolytic partner from the genus *Natronincola*. Ammonium (but not urea or nitrate) and (potentially) N₂ can serve as the nitrogen source during growth on cellulose. Obligately alkaliphilic, with a pH range for growth between 8.2 and 10.2 (opt. at 9.5) and moderately salt-tolerant, with a total Na⁺ range for growth from 0.3 to 1.75 M (opt. at 0.6-1.0 M). Mesophilic, with a maximum growth temperature at 43°C. G + C content of the genomic DNA is 31.5%.

Classification

Bacteria » *Bacillota* » *Clostridia* » *Halanaerobiales* » “*locasiaceae*” » *Natronospora* » *Natronospora cellulosivora*^{Ts}

References

Effective publication: Sorokin et al., 2026 [1]

Registry URL

<https://seqco.de/i:52915>

References

1. Sorokin et al. (2026). Phenotypic and functional genome characterization of *Herbivorax alkaliphila* sp. nov. and *Natronospora cellulosivora* gen. nov., sp. nov., obligately anaerobic, cellulotrophic, endospore-forming bacteria from soda lakes in southwestern Siberia. *Systematic and Applied Microbiology*. [DOI:10.1016/j.syapm.2025.126682](https://doi.org/10.1016/j.syapm.2025.126682)

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:cvagt1kf** submitted by **Merkel, Alexander** and including 2 new names has been successfully validated.

Date of Priority: 2026-08-01 02:12 UTC

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