

## Species *Natronospora cellulosivora*<sup>Ts</sup>

### 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: JBBJH000000000.1](#)<sup>Ts</sup>

### 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) N<sub>2</sub> 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<sup>+</sup> 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* » “*Ilocasiaceae*” » *Natronospora* » *Natronospora cellulosivora*<sup>Ts</sup>

### 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