

Phylum *Bacillota*

Etymology

[Ba.cil.lo'ta] N.L. masc. n. *Bacillus*, type genus of the phylum; *-ota*, ending to denote a phylum; N.L. pl. neut. n. *Bacillota*, the *Bacillus* phylum

Nomenclatural type

Genus *Bacillus*

Description

Gibbons and Murray, 1978: Prokaryotes having a gram-positive type of cell wall. Reproduction mainly by binary fission. Cells may be spheres, rods, or filaments; the filaments may be branching or nonbranching. Some form endospores; some produce spores on hyphae or in sporangia. Some are motile by means of flagella; the majority are nonmotile. These organisms may be aerobic, anaerobic, or facultatively anaerobic.

Several orders that cover some of the groups in this division are listed in *Index Bergeyana*. *Actinomycetales* Buchanan 1917, 162 was the only order provided by the authors of the 8th edition of the *Manual*, and it might be considered the type order on the basis of priority. However, *Bacillales* Pribram 1933, 79 is proposed as the type order, based on the priority of the genus *Bacillus* Cohn 1972 over *Actinomyces* Harz 1877. It is also a more typical representative of gram-positive organisms.

Oren and Garrity, 2021: The properties of the taxon are as described by Gibbons and Murray, 1978. Effectively published synonyms: Firmacutes Gibbons and Murray 1978; Firmicutes corrig. Murray 1984. Type genus: *Bacillus* Cohn 1872 (Approved Lists 1980).

Classification

Bacteria » *Bacillota*

References

Proposed: Gibbons, Murray, 1978
Corrigendum: Oren, Garrity, 2021 (from "Firmicutes")
Emendavit: Oren, Garrity, 2021

Registry URL

<https://seqco.de/i:778>

References

1. Gibbons, Murray (1978). Proposals Concerning the Higher Taxa of Bacteria. *International Journal of Systematic Bacteriology*. DOI:10.1099/00207713-28-1-1
2. Oren, Garrity (2021). Valid publication of the names of forty-two phyla of prokaryotes. *International Journal of Systematic and Evolutionary Microbiology*. DOI:10.1099/ijsem.0.005056