

Species *Macondimonas diazotrophica*^{Ts}

Etymology

[di.a.zo.tro'phi.ca] Gr. **pref.** *di-*, in two; N.L. **neut. n.** *azotum*, from Fr. n. azote (from Gr. prep. a, not; Gr. n. zôê, life; N.Gr. n. azôê, not sustaining life), nitrogen; N.L. **pref.** *diazo-*, pertaining to dinitrogen; Gr. **adj.** *trophikos -ê -on*, feeding, tending; N.L. **fem. adj.** *diazotrophica*, one that feeds on dinitrogen, named after its ability to fix atmospheric nitrogen

Nomenclatural type

[NCBI Assembly: GCF_004684205.1](#)^{Ts}

Description

Cells grown on solidified mineral artificial seawater media using hexadecane as substrate show a coccobacillus morphology, of about 0.6 µm in length and 0.35 µm in width, and formed circular colonies. Members of the species are aerobes, growing at a pH range of 6.5–8.5 with a pH optimum of 7.5, and a salinity range of 250–500 mM of NaCl, with an optimum concentration of 330 mM. The temperature range for optimal growth is 22–30 °C, with no growth observed at 4 °C and above 34 °C. Cells can grow with hexadecane and pyruvate as a sole carbon sources and fix nitrogen. Genome size is ~2.8 Mbp with a G+C% content of 61.56. The designated type material is strain KTK01, and its genome sequence can be found under NCBI BioSample accession number SAMN11302943.

Classification

Bacteria » *Pseudomonadota* » *Gammaproteobacteria* » *Chromatiales* » *Ectothiorhodospiraceae* » *Macondimonas* » *Macondimonas diazotrophica*^{Ts}

References

Effective publication: Karthikeyan et al., 2019 [1]

Registry URL

<https://seqco.de/i:277>

References

1. Karthikeyan et al. (2019). "Candidatus *Macondimonas diazotrophica*", a novel gammaproteobacterial genus dominating crude-oil-contaminated coastal sediments. *The ISME Journal*. DOI:10.1038/s41396-019-0400-5