

# Rhizobium alarense and Rhizobium halophilum

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## Species *Rhizobium halophilum*

### Etymology

[ha.lo.phi'lum] Gr. masc. n. *hals*, salt; N.L. neut. adj. suff. *-philum*, loving (from Gr. neut. adj. *philon*, friend); N.L. neut. adj. *halophilum*, salt loving

### Nomenclatural type

[NCBI Assembly: GCF\\_021648825.1](#) <sup>Ts</sup>

### Reference Strain

[Strain scl0038882](#): TRM95001

### Description

Colonies on NA agar plates were circular, convex, light yellow colored and rod shaped (1.12–1.20 µm in length and 0.45–0.50 µm in width) for 3 days at 30 °C. Growth occurred at 12–37 °C (optimum, 25 °C); growth occurred at pH 6.0–9.0 (optimum, pH 6.5–7.0) and at 0–7% (w/v) NaCl (optimum, 1%). The following substrates were utilized on Biolog GENIII microplates: d-arabitol, i-erythritol, d-fructose, l-fructose, α-d-glucose, inosine, myo-inositol, α-d-lactose, d-mannose, d-mannitol, d-maltose, d-malic acid, l-malic acid, d-melibiose, d-raffinose, l-rhamnose, sorbitol, sucrose, d-trehalose, d-cellobiose, d-galactose, gentiobiose, glycogen, 3-methyl-glucose, glycerol, propionic acid, d-salicin, stachyose, d-turanose, β-methyl-d-glucoside, N-acetyl-d-glucosamine, N-acetyl-β-d-mannosamine, d-serine, N-acetyl-d-galactosamine, N-acetylneuraminic acid, d-glucose-6-PO<sub>4</sub>, d-fructose-6-PO<sub>4</sub>, d-aspartic acid, gelatin, glycyl-l-proline, l-alanine, l-arginine, l-aspartic acid, l-glutamic acid, d-gluconic acid, l-histidine, l-pyroglutamic, l-serine, pectin, d-glucuronic glucuronamide, mucic acid, quinic acid, α-keto-glutaric acid and urea. Positive for catalase, oxidase, urease, lipase, starch hydrolysis, milk coagulation and hydrogen peroxide. Negative for H<sub>2</sub>S production, reduction of nitrate to nitrite and melanin production. The whole-cell sugars consisted mainly of arabinose, galactose, glucose and ribose. Contained D, d-diaminopimelic acid as the diagnostic cell wall amino acid. The detected polar lipids were unidentified aminophospho lipids, unidentified phospholipids, phosphatidylcholine, unidentified lipids, hydroxy phosphatidyl ethanolamine and phospholipids of unknown structure containing glucosamine. Major fatty acids were Summed Feature 8 (68.4%), C19:0 cyclo ω8c, and C16:0. Q-10 was major the quinone. Resistant to ampicillin, chloramphenicol, erythromycin, gentamicin, nalidixic acid, streptomycin, tetracycline and vancomycin, but sensitive to amikacin and kanamycin.

### Classification

*Bacteria* » *Pseudomonadota* » *Alphaproteobacteria* » *Hyphomicrobiales* » *Rhizobiaceae* » *Rhizobium* » *Rhizobium halophilum*

### References

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

### Registry URL

<https://seqco.de/i:49636>

## Species *Rhizobium alarense*

### Etymology

[a.la.ren'se] N.L. neut. adj. *alarense*, pertaining to Alar, a city in Northwest China, where the type strain was isolated

### Nomenclatural type

[NCBI Assembly: GCF\\_021555155.1](#) <sup>Ts</sup>

**Reference Strain**

[Strain scl0038879](#): TRM95111

**Description**

Cells on YMA agar plates were circular, smooth, convex, white colored and rod shaped (1.05–1.10 µm in length and 0.26–0.30 µm in width) for 3 days at 25 °C. Growth occurred at 12–37 °C (optimum, 25 °C); growth occurred at pH 6.0–9.0 (optimum, pH 7.0) and 0–3% (w/v) NaCl (optimum, 1%). The following substrates were utilized on Biolog GENIII microplates: D-arabitol, acetic acid, D-aspartic acid, L-aspartic acid, D-cellobiose, i-erythritol, d-fructose, l-fructose, d-fructose-6-PO<sub>4</sub>, d-galactose, gentiobiose, α-d-glucose, d-glucose-6-PO<sub>4</sub>, d-gluconic acid, d-glucuronic acid, l-glutamic acid, glycerol, 3-methyl-glucose, myo-inositol, inosine, α-d-lactose, d-maltose, d-mannose, d-mannitol, d-melibiose, d-raffinose, l-rhamnose, stachyose, sucrose, d-trehalose, d-turanose, pectin, N-acetylneuraminic acid, α-keto-glutaric acid, d-malic acid, l-malic acid, mucic acid, propionic acid, quinic acid, d-salicin, d-saccharic acid, l-alanine, l-arginine, N-acetyl-d-galactosamine, N-acetyl-d-glucosamine, N-acetyl-β-d-mannosamine, β-methyl-d-glucoside, glucuronamide, l-histidine, l-serine, l-pyroglutamic and urea. The nitrate reduction, oxidase, starch hydrolysis and urease were positive. H<sub>2</sub>S production, lipase, catalase production, melanin production, milk coagulation and peptonization were negative. Cellulose and tween 20, 40, 60 and 80 were hydrolyzed. The whole-cell sugars consisted mainly of arabinose, glucose and ribose. Contained *meso*-diaminopimelic acid as the diagnostic cell wall amino acid. The detected polar lipids were unidentified aminophospholipids, unidentified phospholipids, phosphatidylcholine, unidentified lipids and phospholipids of unknown structure. The predominant menaquinone was identified as Q-10. Major fatty acids (> 5% of the total amounts) were Summed Feature 8 (C18:1ω7c and/or C18:1 ω6c), C19:0 cyclo ω8c, C16:0 and C18:1 ω7c 11-methyl. Resistant to ampicillin, chloramphenicol, erythromycin, gentamicin, nalidixic acid, tetracycline and vancomycin, but sensitive to amikacin, kanamycin and streptomycin.

**Classification**

*Bacteria* » *Pseudomonadota* » *Alphaproteobacteria* » *Hyphomicrobiales* » *Rhizobiaceae* » *Rhizobium* » *Rhizobium alarense*

**References**

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

**Registry URL**

<https://seqco.de/i:49635>

**References**

1. Shen et al. (2022). *Rhizobium alarense* sp. nov. and *Rhizobium halophilum* sp. nov. isolated from the nodule and rhizosphere of *Lotus japonicus*. *Archives of Microbiology*. DOI:10.1007/s00203-022-03202-3

## 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:xsogat83](https://seqco.de/r:xsogat83) submitted by **Van Lill, Melandre** and including 2 new names has been successfully validated.

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