# Mesorhizobium denitrificans

**Submitted by Van Lill, Melandre**

**Table 1:** Complete list of names proposed in the current register list.

| Proposed Taxon | Etymology | Description | Parent Taxon | Type | Registry URL |
|---|---|---|---|---|---|
| Species *Mesorhizobium denitrificans* | [de.ni.tri.fi'cans] **N.L. neut. part. adj.** *denitrificans*, denitrifying | Cells are facultative anaerobic, oxidase negative, and catalase positive. Colonies grown on R2A agar are opaque, circular, and milky coloured. Growth occurs at 18–40°C in the presence of 1–4% NaCl (w/v) and at pH 6–8. Optimum growth occurs at 30°C and pH 6.5–7.0 in the absence of NaCl. In both aerobic and anaerobic conditions it reduces nitrate to nitrite. Negative for the hydrolysis of casein, DNase, starch, Tween 80, and Tween 20. The strain grows well on R2A agar medium, whereas it weakly grows on TSA, NA, and LB agar media, but did not grow on DNAse agar and MacConkey agar. In commercial API (ZYM, 20NE, and 32GN) kits positive for arginine dihydrolase, urease, esculin hydrolysis, alkaline phosphatase, esterase, esterase lipase, leucine arylamidase, trypsin, acid phosphatase, naphthol-AS-BI-phosphohydrolase, α-glucosidase, β-glucosidase, D-glucose, L-arabinose, D-mannose, D-mannitol, D-maltose, L-fucose, D-sorbitol, L-arabinose, valerate, L-histidine, 2-ketogluconate, 3-hydroxy-butyrate, L-proline, L-rhamnose, N-acetyl-D-glucosamine, D-ribose, inositol, D-sucrose, suberate, acetate, L-lactate, alanine, and glycogen. Negative for indole production, glucose acidification, gelatin hydrolysis, α-galactosidase, β-galactosidase, β-glucuronidase, lipase, valine arylamidase, cystine arylamidase, α-chymotrypsin, gluconate, caprate, adipate, malate, citrate, phenyl-acetate, salicin, D-melibiose, propionate, caprate, 4-hydroxy-benzoate, itaconate, malonate, 5-ketogluconate, 3-hydroxy-benzoate, L-serine, α-mannosidase, and α-fucosidase. The predominant quinone is Q-10. The major cellular fatty acids are C16:0, C19:0 cyclo ω8c, and summed feature 8. The polar lipids are PG, PE, PME, and PC, and one unidentified phospholipid PL. The DNA G+C content of genomic DNA is 61.2 mol%. The type strain, LA-28 T (= KACC 19675T = LMG 30806 T) was isolated from the sludge of wastewater treatment plant Hanam city, South Korea. | *Mesorhizobium* | NCBI Assembly: GCF_003403035.1 Ts | seqco.de/i:49628 |