Pseudomonas saxonica sp. nov., isolated from raw milk and skimmed milk concentrate.

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Abstract

A polyphasic approach was used to investigate the taxonomic status of two bacterial strains, WS 5072T and WS 5092, isolated from skimmed milk concentrate and raw cow's milk. The 16S rRNA and rpoD gene sequences affiliated the strains to the same, hitherto unknown, Pseudomonas species. Further examinations of the draft genomes based on multilocus sequence analysis and average nucleotide identity confirmed the presence of a novel Pseudomonas species. It was most closely related to Pseudomonas fragi DSM 3456T with 86.3% ANIm. The DNA G+C content of strain WS 5072T was 56.3 mol%. Cells were aerobic, Gram-negative, catalase and oxidase positive, rod-shaped and motile. Growth occurred at 4-34 °C, pH 5.5-8.0 and with salt concentrations of up to 7%. The major cellular polar lipids were phosphatidylethanolamine, phosphatidylglycerol, and diphosphatidylglycerol. The dominating quinone was Q-9 with 94%, with noticeable amounts of Q-8 (5%) and traces of Q-7 and Q-10. Fatty acid profiles showed a composition common for Pseudomonas with the major component C16:0. Based on these results, the novel species Pseudomonas saxonica sp. nov. is proposed, with the type strain WS 5072T (=DSM 108989T=LMG 31234T) and the additional strain WS 5092 (=DSM 108990=LMG 31235).

KEYWORDS:
Pseudomonas; raw milk