

Bacillus paralicheniformis, Strain NRS 712

Catalog No. NR-52267

(Derived from ATCC® 9945™)

Product Description:

Bacillus paralicheniformis (*B. paralicheniformis*), strain NRS 712 was isolated from flour and reportedly produces D-glutamic acid polypeptide. NR-52267 lot 70033123 was produced by inoculation of the deposited material into Nutrient broth and grown for 1 day at 37°C in an aerobic atmosphere. Broth inoculum was added to Nutrient agar kolles, which were grown for 1 day at 37°C in an aerobic atmosphere to produce this lot.

Lot: 70033123

Manufacturing Date: 28FEB2020

TEST	SPECIFICATIONS	RESULTS
Phenotypic Analysis Cellular morphology Colony morphology 1 day at 37°C in an aerobic atmosphere on Nutrient agar Hemolysis Motility (wet mount) VITEK® MS (MALDI-TOF)	Gram-positive rods Report results Report results Report results <i>Bacillus</i> sp.	Gram-positive rods Circular, flat, erose, rough and white (Figure 1) Non-hemolytic Motile <i>B. licheniformis</i> (99.9%) ¹
Genotypic Analysis Digital DNA-DNA hybridization (dDDH) ² Sequencing of 16S ribosomal RNA gene (1490 base pairs)	≥ 70% for species identification ≥ 99% sequence identity to <i>B. paralicheniformis</i> type strain (GenBank: CP005965.1)	<i>B. paralicheniformis</i> (95.2%) ³ 99.9% sequence identity to <i>B. paralicheniformis</i> type strain (GenBank: CP005965.1) ⁴
Purity (post-freeze) 7 days at 37°C in an aerobic atmosphere with 5% CO ₂ on Nutrient agar	Growth consistent with expected colony morphology	Growth consistent with expected colony morphology
Viability (post-freeze) 1 day at 37°C in an aerobic atmosphere on Nutrient agar	Growth	Growth

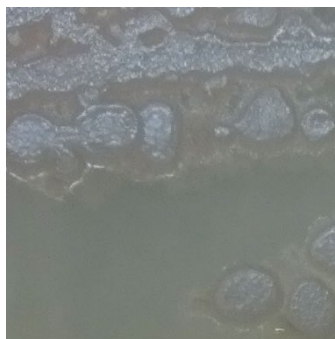
¹VITEK® MS (MALDI-TOF) database does not contain *B. paralicheniformis*. The test was used to confirm genus.

²Relatedness between bacterial strains has traditionally been determined using DDH. For additional information, refer to Auch, A. F., et al. "Digital DNA-DNA Hybridization for Microbial Species Delineation by Means of Genome-to-Genome Sequence Comparison." *Stand. Genomic Sci.* 2 (2010): 117-134. PubMed: 21304684. dDDH analysis was performed using the Type (Strain) Genome Server.

³The whole genome of *B. paralicheniformis*, strain NRS 712 was sequenced using the Illumina® MiSeq® system. *De novo* contig sequences were generated using Unicycler v0.4.8-beta.

⁴Also consistent with other *Bacillus* species

Figure 1: Colony Morphology



/Heather Couch/

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