

**Genomic DNA from *Bacillus* sp., Strain NRS 201**

**Catalog No. NR-52269**

**Product Description:**

Genomic DNA was extracted from a preparation of *Bacillus* sp., strain NRS 201. The bacterial preparation used for extraction of genomic DNA was produced by culture of BEI Resources NR-52256 lot 70033084. Genomic DNA was extracted using proprietary technology and is provided in TE buffer (10 mM Tris-HCl and 1 mM EDTA, pH 8.5).

**Lot: 70033331**

**Manufacturing Date: 10MAR2020**

TEST	SPECIFICATIONS	RESULTS
<b>Genotypic Analysis</b> Digital DNA-DNA hybridization (dDDH) <sup>1</sup>	≥ 70% for species identification	< 70% dDDH value for identity to any <i>Bacillus</i> type species <sup>2,3</sup>
<b>Agarose Gel Electrophoresis</b>	High molecular weight chromosomal DNA	High molecular weight chromosomal DNA (Figure 1)
<b>Concentration by PicoGreen® Measurement</b>	0.7 to 1.5 µg in 25 to 100 µL per vial	1.1 µg in 31 µL per vial (34 µg per mL)
<b>Amount per Vial</b>	0.7 to 1.5 µg	1.1 µg
<b>Functional Activity by PCR Amplification</b> 16S ribosomal RNA gene	~ 1500 base pair amplicon	~ 1500 base pair amplicon
<b>OD<sub>260</sub>/OD<sub>280</sub> Ratio</b>	1.7 to 2.1	1.9
<b>Bacterial Inactivation</b> 100 and 10% of total yield from different pellets plated on agar for 14 days <sup>4,5</sup>	No viable bacteria detected	No viable bacteria detected

<sup>1</sup>Relatedness 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.

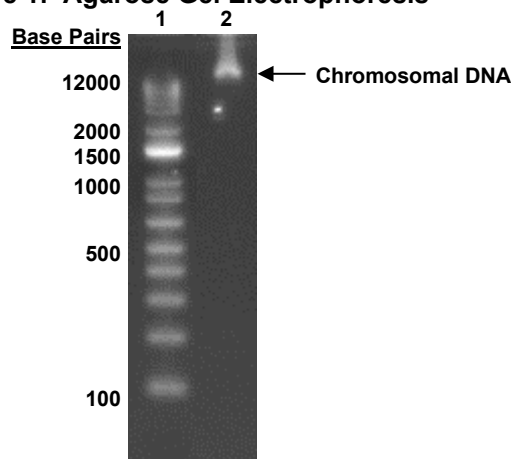
<sup>2</sup>The whole genome of *Bacillus* sp., Strain NRS 201 was sequenced using the Illumina® MiSeq® system. *De novo* contig sequences were generated using Unicycler v0.4.8-beta.

<sup>3</sup>The closest matching type strain is *B. paranthracis*, strain MCC1A00395 with a dDDH value of 61.3%. This result suggests that NR-52256 may represent a new *Bacillus* species.

<sup>4</sup>14 days under propagation conditions

<sup>5</sup>An extraction procedure was used that has been shown to consistently inactivate 100% of Gram-negative and Gram-positive bacteria.

**Figure 1: Agarose Gel Electrophoresis**



Lane 1: Invitrogen™ TrackIt™ 1 Kb Plus DNA Ladder  
Lane 2: ~ 200 ng of NR-52269

/Heather Couch/

Heather Couch

28 JUN 2021

Program Manager or designee, ATCC Federal Solutions

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