

### ***Paenibacillus macerans*, Strain NRS 888**

#### **Catalog No. NR-2490**

(Derived from ATCC® 8244™)

#### **For research use only. Not for human use.**

#### **Contributor:**

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#### **Product Description:**

Bacteria Classification: *Paenibacillaceae*, *Paenibacillus*

Species: *Paenibacillus macerans* (formerly *Bacillus macerans*)<sup>1</sup>

Type Strain: NRS 888 (NCTC 6355; NCIB 9368)

Comments: *Paenibacillus macerans*, strain NRS 888 was deposited at ATCC® in 1961 by Dr. N. R. Smith.<sup>2</sup>

*Paenibacillus macerans* are Gram-positive, dinitrogen-fixing, spore-forming rods belonging to a class of bacilli of the phylum *Firmicutes*. These bacteria have been isolated from a variety of sources including soil, water, plants, food, diseased insect larvae, and clinical specimens.

#### **Material Provided:**

Each vial contains approximately 0.5 mL of bacterial culture in Nutrient Broth supplemented with 20% glycerol.

Note: If homogeneity is required for your intended use, please colony-purify prior to initiating work.

#### **Packaging/Storage:**

NR-2490 was packaged aseptically in screw-capped plastic cryovials. The product is provided frozen and should be stored at -60°C or colder immediately upon arrival. For long-term storage, the vapor phase of a liquid nitrogen freezer is recommended. Freeze-thaw cycles should be avoided.

#### **Growth Conditions:**

##### Media:

Nutrient Broth

Nutrient Agar

##### Incubation:

Temperature: 30°C

Atmosphere: Aerobic

##### Propagation:

1. Keep vial frozen until ready for use; thaw slowly.
2. Transfer the entire thawed aliquot into a single tube of broth.
3. Use several drops of the suspension to inoculate an agar slant and/or plate.
4. Incubate the tubes and plate at 30°C for 48 hours.

#### **Citation:**

Acknowledgment for publications should read "The following reagent was obtained through the NIH Biodefense and Emerging Infections Research Resources Repository, NIAID, NIH: *Paenibacillus macerans*, Strain NRS 888, NR-2490."

#### **Biosafety Level: 2**

Appropriate safety procedures should always be used with this material. Laboratory safety is discussed in the following publication: U.S. Department of Health and Human Services, Public Health Service, Centers for Disease Control and Prevention, and National Institutes of Health. Biosafety in Microbiological and Biomedical Laboratories. 5th ed. Washington, DC: U.S. Government Printing Office, 2007; see [www.cdc.gov/od/ohs/biosfty/bmb15/bmb15toc.htm](http://www.cdc.gov/od/ohs/biosfty/bmb15/bmb15toc.htm).

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#### **References:**

1. Ash, C., F. G. Priest, and M. D. Collins. "Molecular Identification of rRNA Group 3 Bacilli (Ash, Farrow, Wallbanks and Collins) Using a PCR Probe Test. Proposal for the Creation of a New Genus *Paenibacillus*."

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2. Tilden, E. B. and C. S. Hudson. "Preparation and Properties of the Amylases Produced by *Bacillus macerans* and *Bacillus polymyxa*." J. Bacteriol. 43 (1942): 527–544. PubMed: 16560519.
  3. Achouak, W., P. Norman, and T. Heulin. "Comparative Phylogeny of *rrs* and *nifH* Genes in the *Bacillaceae*." Int. J. Syst. Bacteriol. 49 (1999): 961–967. PubMed: 10425751.
  4. Xu, D. and J.-C. Côté. "Phylogenetic Relationships between *Bacillus* Species and Related Genera Inferred from Comparison of 3' End 16S rDNA and 5' End 16S–23S ITS Nucleotide Sequences." Int. J. Syst. Evol. Microbiol. 53 (2003): 695–704. PubMed: 12807189.
  5. Heyndrickx, M., et al. "A Polyphasic Reassessment of the Genus *Paenibacillus*, Reclassification of *Bacillus lautus* (Nakamura 1984) as *Paenibacillus lautus* comb. nov. and of *Bacillus peoriae* (Montefusco et al. 1993) as *Paenibacillus peoriae* comb. nov., and Emended Descriptions of *P. lautus* and of *P. peoriae*." Int. J. Syst. Bacteriol. 46 (1996): 988–1003. PubMed: 8863428.
  6. Smith, N. R., T. Gibson, R. E. Gordon, and P. H. A. Sneath. "Type Cultures and Proposed Neotype Cultures of Some Species in the Genus *Bacillus*." J. Gen. Microbiol. 34 (1964): 269–272. PubMed: 14135533.

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