

Certificate of Analysis for NR-2490

Paenibacillus macerans, Strain NRS 888

Catalog No. NR-2490

(Derived from ATCC® 8244™)

Product Description: Paenibacillus macerans (P. macerans) are Gram-positive, dinitrogen-fixing, spore-forming rods belonging to a class of bacilli of the phylum Firmicutes.

Lot¹: 4874326 Manufacturing Date: 17NOV2005

| TEST | SPECIFICATIONS | RESULTS |
|---|--|---|
| Phenotypic Analysis | Consistent with ATCC [®] 8244 [™] | Consistent with ATCC [®] 8244 [™] |
| Cellular morphology | Gram-positive rod | Gram-positive rod |
| Colony morphology ² | Report results | Round, shiny |
| Sporulation | Positive | Positive |
| Anaerobic growth | Positive | Positive |
| Motility | Motile | Motile |
| β-hemolysis | Non-hemolytic | Non-hemolytic |
| Capsule (India ink staining) | Negative | Negative |
| Tenacious | Negative | Negative |
| Analytical profile index (API® 50 CHB) | Consistent with P. macerans | Consistent with P. macerans |
| Biochemical tests | | |
| Nitrate | Negative | Negative |
| Arginine dihydrolase | Report results | Positive |
| Glycerol | Positive | Positive |
| Salicin | Positive | Positive |
| Glycogen | Positive | Positive |
| Trehalose | Positive | Positive |
| Nutrient agar with 0.7% sodium bicarbonate | No growth | No growth |
| FAME analysis | Consistent with P. macerans | Consistent with P. macerans |
| Genotypic Analysis | | |
| Sequencing of 16S ribosomal RNA gene (~ 645 bp) | Consistent with <i>P. macerans</i> Identical to GenBank AB073196 | Consistent with <i>P. macerans</i> ³ Identical to GenBank AB073196 |
| Viability (post-vialing) ² | Growth | Growth |

¹NR-2490 was produced by propagation of seed stock (BEI Resources NRS-2490) in Nutrient Broth for 48 hours at 30°C and aerobic atmosphere. NRS-2490 was produced by propagation of ATCC[®] 8244[™] (Lot 3841708) in Nutrient Broth for 48 hours at 30°C and aerobic atmosphere.

Date: 02 OCT 2007 **Signature:** Signature on File

Title: Technical Manager, BEI Authentication or designee

ATCC®, on behalf of BEI Resources, hereby represents and warrants that the material provided under this certificate has been subjected by the contractor to the tests and procedures specified and that the results described, along with any other data provided in this certificate, are true and accurate to the best of ATCC®'s knowledge.

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Biodefense and Emerging Infections Research Resources Repository

P.O. Box 4137

Manassas, VA 20108-4137 USA

Fax: 703-365-2898

E-mail: contact@beiresources.org

800-359-7370

²48 hours at 30°C and aerobic atmosphere on Nutrient Agar.

³Also consistent with other *Paenibacillus* species.