

Bacillus thuringiensis, Strain HD-1 (NRRL B-3792)

Catalog No. NR-610

(Derived from ATCC® 33679™)

Product Description: *Bacillus thuringiensis* (*B. thuringiensis*), strain HD-1 was isolated from diseased insect (*Pectinophora gossypiella*) larvae. This strain is well-known for the production of insecticidal toxin during sporulation.

Lot¹: 3967005

Manufacturing Date: 17DEC2004

TEST	SPECIFICATIONS	RESULTS
Phenotypic Analysis Cellular morphology Colony morphology ² Sporulation Motility Anaerobic β-Hemolytic Biochemical Analyses: Nitrate reduction Arginine dihydrolase Trehalose metabolism Salicin metabolism Glycogen metabolism Glycerol metabolism Analytical profile index (API® 50 CHB) FAME analysis	Gram-positive Report results Positive Motile Positive Report results Positive Positive Positive Report results Report results Report results Consistent with <i>B. cereus</i> group Consistent with <i>B. cereus</i> group	Gram-positive Irregular, flat, opaque, rough Positive Motile Positive Negative Positive Positive Positive Positive Positive Negative Consistent with <i>B. cereus</i> group ^{3,4} Consistent with <i>B. cereus</i> group ^{3,5}
Genotypic Analysis Sequencing of 16S ribosomal RNA gene (~ 670 bp)	Consistent with <i>B. thuringiensis</i>	Consistent with <i>B. thuringiensis</i> ⁶
Viability (post-vialing)⁷	Growth	Growth

¹NR-610 was produced by propagation of ATCC® 33679™ (Lot: 3348375) in Tryptic Soy Broth (BD 211825) for 24 hours at 30°C.

²24 hours at 30°C on Tryptic Soy Agar (BD 236950)

³*B. cereus* group species (*B. cereus*, *B. thuringiensis*, *B. mycooides*, and *B. anthracis*)

⁴For the *B. cereus* group, API® 50 CHB may not be sufficiently discriminative [Valero, M., et al. "Characterization of *Bacillus cereus* Isolates from Fresh Vegetables and Refrigerated Minimally Processed Foods by Biochemical and Physiological Tests." *Food Microbiology* 19 (2002): 491-499].

⁵FAME Sim Index was 0.723 for *B. cereus* subgroup A and 0.573 for *B. thuringiensis* serovar *kurstaki*

⁶Also consistent with *B. cereus* group species which cannot be classified based on 16S sequence [Spencer, R. C. "Bacillus anthracis." *J. Clin. Pathol.* 56 (2003): 182-187. PubMed: 12610093].

⁷24 hours at 30°C in Tryptic Soy Broth (BD 236950)

Date: 23 FEB 2009

Signature: Signature on File

Title: Technical Manager, BEI Authentication or designee

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