

Bacillus cereus, Strain BAG50-1

Catalog No. NR-28605

Product Description: *Bacillus cereus* (*B. cereus*), strain BAG50-1 was isolated in 2008 from a soil sample collected in Boston, Massachusetts, USA.

Lot¹: 61646462

Manufacturing Date: 29MAR2013

TEST	SPECIFICATIONS	RESULTS
Phenotypic Analysis² Cellular morphology Colony morphology ³ Motility ⁴ Hemolysis Biochemical characterization ⁵ Production of acid from trehalose Production of acid from salicin ⁶ Production of acid from glycerol Nitrate reduction Arginine dihydrolase activity ⁷	Gram-positive rods Report results Motile Report results Positive Report results Report results Report results Report results	Gram-positive rods Circular, umbonate, opaque, rough and ground-glass (Figure 1) Motile β-hemolytic Positive Positive Negative Positive Negative
PCR Assay of Extracted DNA⁸ 16S ribosomal RNA gene <i>B. anthracis</i> specific chromosomal marker ⁹ Presence of virulence plasmids ¹⁰ pXO1 (four targets) pXO2 (three targets)	~ 560 base pair amplicon No amplicon No amplicons No amplicons	~ 560 base pair amplicon No amplicon No amplicons No amplicons
Genotypic Analysis Sequencing of 16S ribosomal RNA gene (~ 1500 base pairs)	Consistent with <i>B. cereus</i> group	Consistent with <i>B. cereus</i> group ¹¹
Viability (post-freeze)³	Growth	Growth

¹NR-28605 was produced by inoculation of the deposited material into Tryptic Soy broth and grown for 24 hours at 30°C in an aerobic atmosphere. Broth inoculum was added to kolles, which were grown for 24 hours at 30°C in an aerobic atmosphere to produce this lot.

²Presumptive identification of *B. cereus* was accomplished using phenotypic tests that eliminate other *B. cereus* group (*B. cereus*, *B. anthracis*, *B. thuringiensis* and *B. mycoides*) members (see footnotes 5, 7, 8).

³24 hours at 30°C in an aerobic atmosphere on Tryptic Soy agar

⁴24 hours at 30°C in an aerobic atmosphere on motility test media with triphenyltetrazolium chloride (TTC). In the *B. cereus* group, *B. cereus* and *B. thuringiensis* are motile, whereas *B. anthracis* and *B. mycoides* are non-motile.

⁵Negative tests are observed for >7 days.

⁶*B. anthracis* is negative for salicin.

⁷*B. thuringiensis* is positive for arginine dihydrolase activity.

⁸DNA was extracted from a broth culture produced from NR-28605 lot 61646462.

⁹A proprietary (Patent Pending) PCR-based assay capable of differentiating *B. anthracis* from the remainder of the *B. cereus* group was used to further eliminate *B. anthracis* as a possible species.

¹⁰Presence of virulence plasmids was verified using a proprietary (Patent Pending) PCR-based assay.

¹¹*Bacillus cereus* group species cannot be classified based on 16S sequence (Spencer, R. C. "Bacillus anthracis." *J. Clin. Pathol.* 56 (2003): 182-187. PubMed: 12610093).

Figure 1: Colony Morphology



Date: 20 MAR 2017

Signature:

A handwritten signature in black ink, appearing to read "David C. Anderson".

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