

Bacillus cereus, Strain MSX-A1

Catalog No. NR-22166

Product Description: *Bacillus cereus* (*B. cereus*), strain MSX-A1 was isolated in 2004 from an air sample collected in Antarctica.

Lot¹: 63817648

Manufacturing Date: 21OCT2015

TEST	SPECIFICATIONS	RESULTS
Phenotypic Analysis² Cellular morphology Colony morphology ³ Motility ⁴ Hemolysis Biochemical tests Production of acid from trehalose Production of acid from salicin ⁵ Production of acid from glycerol ⁵ Nitrate reduction Arginine decarboxylase activity	Gram-positive rods Report results Motile Report results Positive Report results Report results Report results Report results	Gram-positive rods Irregular, flat, undulate, opaque, rough and gray (Figure 1) Motile β-hemolytic Positive Negative Negative Positive Negative
Presence of Virulence Plasmids⁶ pXO1 (four targets) pXO2 (three targets)	Not present Not present	Not present Not present
Genotypic Analysis Sequencing of 16S ribosomal RNA gene (~ 1410 base pairs)	≥ 99% sequence identity to <i>B. cereus</i> , strain MSX-A1 (GenBank: AHEO01000058.1)	99.9% sequence identity to <i>B. cereus</i> , strain MSX-A1 (GenBank: AHEO01000058.1) ⁷
Purity (post-freeze)⁸	Growth consistent with expected colony morphology	Growth consistent with expected colony morphology
Viability (post-freeze)³	Growth	Growth

¹The deposited material was passaged on Tryptic Soy broth for 1 day at 30°C in an aerobic atmosphere, and the resulting subculture was vialled and frozen. NR-22166 was produced by inoculation of the frozen subculture into Tryptic Soy broth and grown for 1 day at 30°C in an aerobic atmosphere. Broth inoculum was added to Tryptic Soy agar with 5% defibrinated sheep blood kolles, which were grown for 1 day at 30°C in an aerobic atmosphere to produce this lot.

²Presumptive identification of *B. cereus* was performed using phenotypic tests that eliminate other *B. cereus* group (*B. cereus*, *B. thuringiensis* and *B. mycooides*) members.

³1 day at 30°C in an aerobic atmosphere on Tryptic Soy agar with 5% defibrinated sheep blood

⁴Motility test performed on Remel™ Motility Test Medium w/TTC Indicator for 1 day at 30°C in an aerobic atmosphere. In the *B. cereus* group, *B. cereus* and *B. thuringiensis* are motile, whereas *B. anthracis* and *B. mycooides* are non-motile.

⁵Negative tests are observed for >7 days.

⁶Presence of plasmid targets was determined by *in silico* PCR of the complete genome sequence obtained by BEI Resources.

⁷*B. cereus* group species cannot be classified based on 16S sequence (Spencer, R. C. "Bacillus anthracis." *J. Clin. Pathol.* 56 (2003): 182-187. PubMed: 12610093).

⁸Purity of this lot was assessed for 7 days at 30°C in an aerobic atmosphere on Tryptic Soy agar with 5% defibrinated sheep blood.

Figure 1: Colony Morphology



Date: 29 AUG 2016

Signature:



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