

Certificate of Analysis for NR-4056

Bacillus samanii, Strain C1

Catalog No. NR-4056

Product Description: Bacillus samanii (B. samanii) is a newly discovered filamentous Grampositive, spore-forming bacteria. B. samanii, strain C1 was isolated from soil covered with clean snow in a secluded area of the Massbay College, Wellesley campus grounds in February 2006.

Lot¹: 58533415 Manufacturing Date: 13MAR2009

TEST	SPECIFICATIONS	RESULTS
Phenotypic Analysis		
Cellular morphology	Gram-positive rod	Gram-positive rod
Colony morphology ²	Report results	Filamentous, flat, erose, opaque, gray (Figure 1)
Sporulation	Report results	Sub-terminal
Motility	Report results	Motile
β-hemolysis	Report results	Positive
Capsule (India ink staining)	Report results	Negative
Tenacious	Report results	Negative
Analytical profile index (API® 50 CHB/API® 20E)	Report results	Consistent with B. mycoides ³
Nitrate reduction	Report results	Positive
Genotypic Analysis		
Sequencing of 16S ribosomal RNA gene (~ 1430 bp)	Consistent with B. samanii	Consistent with B. samanii ⁴
PCR Assay of Extracted DNA		
16S ribosomal RNA gene	~ 1500 bp amplicon	~ 1500 bp amplicon
Viability (post-freeze) ²	Growth	Growth

¹NR-4056 was produced by inoculation of Tryptic Soy Broth with the deposited material and grown 24 hours at 37°C. Broth inoculum was added to Kolles which were grown 24 hours at 37°C to produce this lot.

Figure 1



Date: 13 JUL 2009 **Signature:** Signature on File

Title: Technical Manager, BEI Authentication or designee

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²24 hours at 37°C and aerobic atmosphere on Tryptic Soy Agar with 5% sheep's blood

³B. samanii is a new organism and is currently not in the API database.

⁴Also consistent with *B. pseudomycoides* and the *B. cereus* group which includes species *B. cereus*, *B. thuringiensis*, *B. mycoides*, and *B. anthracis*. *B. samanii* cannot be classified based on 16S sequence (Spencer, R. C. "*Bacillus anthracis*." <u>J. Clin. Pathol.</u> 56 (2003): 182-187. PubMed: 12610093).