

**Bacillus anthracis, Strain Sterne 34F2 (LLNL A0517)**

**Catalog No. NR-1400**

This reagent is the property of the U.S. Government.

**Product Description:**

*Bacillus anthracis* (*B. anthracis*) is an aerobic, Gram-positive, spore-forming, rod-shaped bacillus that causes the acute infectious disease anthrax. **NR-1400 is a mixture of two colony types. Neither colony type contains the pXO2 plasmid. Only colony type 1 contains the pXO1 plasmid.**

**Lot: 5352322**

**Manufacturing Date: 11MAY2006**

TEST	SPECIFICATIONS	RESULTS	RESULTS
		Colony Type 1	Colony Type 2
<b>Phenotypic Analysis</b> Cellular morphology Colony morphology Tryptic Soy Agar, 5% sheep blood <sup>2</sup>  PLET Agar <sup>2</sup>  Sporulation Motility (wet mount) β-hemolysis Capsule (India ink staining) Tenacious Analytical profile index (API® 50 CHB)  FAME analysis	Gram-positive rod  Report results  Report results  Positive Non-motile Non-hemolytic Report results Positive Consistent with <i>B. anthracis</i>  Report results	Gram-positive rod  Circular, entire, ground-glass, grey, sporulation bumps (Figure 1A)  Circular, entire, ground-glass, white Positive Non-motile <sup>3</sup> Non-hemolytic Negative Positive Consistent with <i>B. anthracis</i>  Consistent with <i>B. anthracis</i>	Gram-positive rod  Circular with irregular edges, convex, grey, no sporulation bumps (Figure 1B)  Circular, entire ground glass, beige Positive Non-motile <sup>3</sup> Non-hemolytic Negative Positive Consistent with <i>B. anthracis</i>  No match
<b>Genotypic Analysis</b> Sequencing of 16S ribosomal RNA gene (~ 1300 base pairs)	Consistent with <i>Bacillus cereus</i> group <sup>4</sup>	Consistent with <i>Bacillus cereus</i> group <sup>4</sup>	Consistent with <i>Bacillus cereus</i> group <sup>4</sup>
<b>PCR Assay of Extracted DNA</b>  16S ribosomal RNA gene  Presence of virulence plasmids pXO1 ( <i>aat</i> ) pXO2 ( <i>at, capA, capB, capC</i> )	~ 1500 base pair amplicon  Report results No amplicons	~ 1500 base pair amplicon  ~ 120 base pair amplicon No amplicons	~ 1500 base pair amplicon  No amplicons No amplicons
<b>Viability (post vialing)<sup>2</sup></b>	Growth	Growth	Growth

<sup>1</sup>*B. anthracis*, strain Sterne 34F2 (Colorado Serum Company vaccine strain) was deposited by Lawrence Livermore National Laboratory. NR- 1400 was prepared by broth/agar culture of the deposited material.

<sup>2</sup>24 hours at 37°C and 5% CO<sub>2</sub>.

<sup>3</sup>Performed on NR-1400 (mix of both colony types)

<sup>4</sup>*Bacillus cereus* group species (*B. cereus*, *B. thuringiensis*, *B. mycoides*, and *B. anthracis*) 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

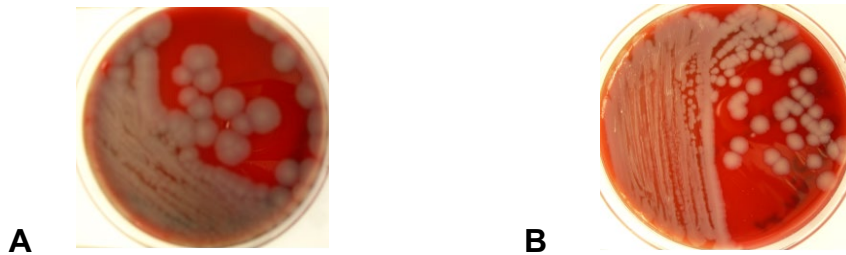


Figure 1. *Bacillus anthracis*, strain Sterne 34F2. Colony type 1 on Tryptic Soy Agar with 5% sheep blood is shown in (A) and colony type 2 is shown in (B).

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