

***Clostridium difficile*, Isolate 7**

**Catalog No. NR-13433**

**Product Description:** *Clostridium difficile* (*C. difficile*), isolate 7 was obtained from a human patient from the Mid-Atlantic region of the United States in 2008/2009.

**Lot<sup>1</sup>: 58670120**

**Manufacturing Date: 22JUL2009**

TEST	SPECIFICATIONS	RESULTS
<b>Phenotypic Analysis<sup>2</sup></b> Cellular morphology Colony morphology <sup>3,4</sup>  Hemolysis <sup>4</sup> Obligate anaerobe Ultraviolet fluorescence <sup>5</sup> Biochemical tests: RapID™ ANA II Panel Esculin hydrolysis Gelatin hydrolysis Catalase activity Lecithinase Lipase Nitrate reduction Hydrogen sulfide production	Gram-positive rod Report results  Report results Positive Positive  Consistent with <i>C. difficile</i> Positive Positive Negative Negative Negative Negative Negative Negative	Gram-positive rod Colony type 1: Irregular, flat, undulate, glossy, opaque and gray (Figure 1) Colony type 2: Irregular, flat, undulate, glossy, opaque and white (Figure 1) Non-hemolytic Positive Positive  Consistent with <i>C. difficile</i> Positive Positive Negative Negative Negative Negative Negative
<b>Genotypic Analysis</b> Sequencing of 16S Ribosomal RNA Gene (~ 1420 base pairs)	Consistent with <i>C. difficile</i>	Consistent with <i>C. difficile</i> <sup>6</sup>
<b>PCR Assay of Extracted DNA</b> 16S ribosomal RNA gene	~ 1500 bp amplicon	~ 1500 bp amplicon
<b>Viability (post-freeze)<sup>4</sup></b>	Growth	Growth

<sup>1</sup>The deposited material was inoculated into Modified Reinforced Clostridial Broth ([ATCC medium 2107](#)) and incubated for 48 hours at 37°C and anaerobic atmosphere (80% N<sub>2</sub>:10% CO<sub>2</sub>:10% H<sub>2</sub>). The material from the initial growth was passaged three times in Modified Reinforced Clostridial Broth at 37°C and anaerobic atmosphere [80% N<sub>2</sub>:10% CO<sub>2</sub>:10% H<sub>2</sub>]. NR-13433 was produced from the third passage.

<sup>2</sup>Specifications described in Holdeman, L. V., E. P. Cato, and W. E. C. Moore, Eds. *Anaerobe Laboratory Manual*. 4th ed., Blacksburg: Virginia Polytechnic Institute and State University, 1977.

<sup>3</sup>Two colony types were observed. Plating of the individual colony types showed that they reverted to the mixed colony type. The 16S ribosomal RNA gene of each colony type was sequenced and determined to be 100% identical.

<sup>4</sup>48 hours at 37°C and anaerobic atmosphere (80% N<sub>2</sub>:10% CO<sub>2</sub>:10% H<sub>2</sub>) on Tryptic Soy Agar with 5% defibrinated sheep blood

<sup>5</sup>48 hours at 37°C and anaerobic atmosphere (80% N<sub>2</sub>:10% CO<sub>2</sub>:10% H<sub>2</sub>) on CDC anaerobic blood agar

**Figure 1**



**Date:** 26 JUL 2010

**Signature:** Signature on File

**Title:** Technical Manager, BEI Authentication or designee

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