

## **Certificate of Analysis for NR-13400**

## Streptococcus pneumoniae, Strain EMC23F

## Catalog No. NR-13400

**Product Description:** The antibiotic-resistant variant *Streptococcus pneumoniae* (*S. pneumoniae*), strain EMC23F is a human wild-type clinical isolate that was found to be naturally resistant to trimethoprim.

Lot<sup>1</sup>: 70015163 Manufacturing Date: 10MAY2018

TEST	SPECIFICATIONS	RESULTS
Phenotypic Analysis		
Cellular morphology	Gram-positive cocci	Gram-positive cocci
Colony morphology <sup>2</sup>	Report results	Circular, raised, entire, smooth and gray (Figure 1)
Hemolysis <sup>2</sup>	α-hemolytic	α-hemolytic
Motility (wet mount)	Report results	Non-motile
Biochemical tests:		
Catalase	Report results	Negative
VITEK® MS (MALDI-TOF)	S. pneumoniae	S. pneumoniae (99.9%)
Antibiotic Susceptibility Profile <sup>3</sup> Etest® antibiotic test strips <sup>4</sup>		
Trimethoprim	Resistant	Resistant (> 32 µg/mL)
Genotypic Analysis		
Sequencing of 16S ribosomal RNA gene (~ 1480 base pairs)	≥ 99% sequence identity to S. pneumoniae type strain (GenBank: AF003930.1)	99.8% sequence identity to S. pneumoniae type strain (GenBank: AF003930.1) <sup>5</sup>
Purity (post-freeze) <sup>6</sup>	Growth consistent with expected colony morphology	Growth consistent with expected colony morphology
Viability (post-freeze) <sup>2</sup>	Growth	Growth

NR-13400 lot 70015163 was produced by the inoculation of BEI Resources NRS-13400 lot 2009020 into Todd-Hewitt broth containing 0.5% (w/v) yeast extract and incubated for 1 day at 37°C in an aerobic atmosphere with 5% CO<sub>2</sub>. Broth inoculum was added to Tryptic Soy agar with 5% defibrinated sheep blood kolles, which were grown for 1 day at 37°C in an aerobic atmosphere with 5% CO<sub>2</sub> to produce this lot.

Figure 1: Colony Morphology



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<sup>&</sup>lt;sup>2</sup>1 day at 37°C in an aerobic atmosphere with 5% CO<sub>2</sub> on Tryptic Soy agar with 5% defibrinated sheep blood

<sup>&</sup>lt;sup>3</sup>Minimum Inhibitory Concentration (MIC); MIC Interpretation Guideline: CLSI M100-S22 (2012)

<sup>&</sup>lt;sup>4</sup>1 day at 37°C in an aerobic atmosphere with 5% CO<sub>2</sub> on Mueller Hinton agar with 5% defibrinated sheep blood

<sup>&</sup>lt;sup>5</sup>Also consistent with other *Streptococcus* species

<sup>&</sup>lt;sup>6</sup>Purity of this lot was assessed for 7 days at 37°C in an aerobic atmosphere with 5% CO₂ on Tryptic Soy agar with 5% defibrinated sheep blood.



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/Heather Couch/

Heather Couch 11 JUL 2018

Program Manager or designee, ATCC Federal Solutions

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