

## **Certificate of Analysis for NR-19145**

## Streptococcus pneumoniae, Strain GA41565

## Catalog No. NR-19145

**Product Description:** *Streptococcus pneumoniae* (*S. pneumoniae*), strain GA41565 was isolated in 2004 from the blood of a patient with pneumonia in Georgia, USA. *S. pneumoniae*, strain GA41565 was deposited as a member of serotype 19A.

Lot<sup>1</sup>: 62743344 Manufacturing Date: 02JUL2014

(~ 900 base pairs) Riboprinter® Microbial Characterization System  Consistent with S. pneumoniae  Consistent with S. pneumoniae	TEST	SPECIFICATIONS	RESULTS
Cellular morphology <sup>2</sup> Colony morphology <sup>2</sup> Gram-positive cocci Report results	Phenotypic Analysis		
Colony morphology²  Hemolysis on blood agar² Motility (wet mount) Catalase VITEK® MS (MALDI-TOF)  Antibiotic Susceptibility Profile³  Benzylpenicillin³ Ciprofloxacin³ Benzylpenicillin³ Ciprofloxacin³ Sensitive Report results Sensitive Report results Sensitive Report results Sensitive Sensitive (1 µg/mL) Sensitive (1 µg/mL) Sensitive (1 µg/mL) Sensitive (1 µg/mL) Sensitive (2 µg/mL) Sensitive (3 µg/mL) Sensitive (4 µg/mL) Sensitive (5 µg/mL) Sensitive (7 µg/mL) Resistant (8 µg/mL) Sensitive (1 µg/mL) Resistant (8 µg/mL) Sensitive (1 µg/mL) S		Gram-positive cocci	Gram-positive cocci
Hemolysis on blood agar² Motility (wet mount) Catalase VITEK® MS (MALDI-TOF)  Antibiotic Susceptibility Profile³  Benzylpenicillin³ Ciprofloxacin³ Benzylpenicillin³ Beport results Sensitive (1 μg/mL) Sensitive (0.19 μg/mL) Sensitive (0.19 μg/mL) Sensitive (2 μg/mL) Benzitive			•
Hemolysis on blood agar² Motility (wet mount) Catalase VITEK® MS (MALDI-TOF)  Benzylpenicillin⁴ Ciprofloxacin⁴ Sensitive Gatifloxacin⁵ Gatifloxacin⁴ Sensitive Ciprofloxacin⁴ Sensitive Sensitive Sensitive Sensitive (1 μg/mL) Sensitive (2 μg/mL) Sensitive (3 0.25 μg/mL) Sensitive (4 0.38 μg/mL) Sensitive (5 0.25 μg/mL) Sensitive (5 0.25 μg/mL) Sensitive (5 0.25 μg/mL) Sensitive (5 0.25 μg/mL) Sensitive Sensitive (5 0.38 μg/mL) Sensitive Sensitive (5 0.38 μg/mL) Sensitive Sensitive (5 μg/mL) Sensitive Sensitive (5 μg/mL) Sensitive Sensitive (6 0.38 μg/mL) Sensitive Sensitive (5 μg/mL) Sensitive Sensitive (5 μg/mL) Sensitive Sensitive (6 μg/mL) Sensitive Sensitive Sensitive (6 μg/mL) Sensitive Sensitive Sensitive (6 μg/mL) Sensitive Sensit	, -13)	,	
Motility (wet mount)         Report results Negative         Non-motile Negative           VITEK® MS (MALDI-TOF)         Report results Consistent with S. pneumoniae         Non-motile Negative           Antibiotic Susceptibility Profile³         Sensitive Consistent with S. pneumoniae         Sensitive (1 μg/mL)           Benzylpenicillin⁴         Sensitive Report results         Sensitive (1 μg/mL)           Levofloxacin⁴         Sensitive Sensitive (2 μg/mL)           Gatifloxacin⁵         Report results         Sensitive (0.19 μg/mL)           Ofloxacin⁴         Report results         Sensitive (0.19 μg/mL)           Erythromycin⁴         Resistant         Resistant (2 μg/mL)           Tellthromycin⁴         Sensitive         Sensitive (3 0.25 μg/mL)           Clindamycin⁵         Sensitive         Sensitive (3 0.25 μg/mL)           Clindamycin⁵         Sensitive         Sensitive (5 0.25 μg/mL)           Vancomycin⁴         Sensitive         Sensitive (5 0.25 μg/mL)           Vancomycin⁴         Sensitive         Sensitive (6 0.28 μg/mL)           Varectline⁴         Resistant         Resistant (2 1 μg/mL)           Rifampicin⁵         Resistant         Resistant (2 1 μg/mL)           Rifampicin⁵         Resistant         Resistant (2 1 μg/mL)           Resistant         Resistant (2 1 μg/mL)	Hemolysis on blood agar <sup>2</sup>	α-hemolytic	
Catalase VITEK® (MALDI-TOF)  Antibiotic Susceptibility Profile³  Benzylpenicillin⁴ Ciprofloxacin⁴ Catifloxacin⁴ Catifloxacin⁴ Cofloxacin⁴ Cofloxacin⁴ Ciprofloxacin⁴ Ciprofloxacin⁴ Catifloxacin⁴ Catifloxacin⁴ Ciprofloxacin⁴ Ciprofloxacin⁴ Catifloxacin⁴ Catifloxacin⁴ Ciprofloxacin⁴ Ciprofloxacin⁴ Catifloxacin⁴ Ciprofloxacin⁴ Ciprofloxacin⁴ Catifloxacin⁴ Ciprofloxacin⁴ Ciprofloxacin* Ciprofloxacin⁴ Ciprofloxacin⁴ Ciprofloxacin* Ciprofloxa			
Antibiotic Susceptibility Profile³         Benzylpenicillin⁴       Sensitive       Sensitive (1 μg/mL)         Ciprofloxacin⁴       Sensitive       Sensitive (1 μg/mL)         Gatifloxacin⁴       Report results       Sensitive (0.19 μg/mL)         Ofloxacin⁴       Report results       Sensitive (0.19 μg/mL)         Erythromycin⁴       Resistant       Resistant (≥ 1 μg/mL)         Telithromycin⁴       Sensitive       Sensitive (≤ 0.25 μg/mL)         Clindamycin⁵       Sensitive       Sensitive (0.125 μg/mL)         Clindamycin⁵       Sensitive       Sensitive (0.125 μg/mL)         Sensitive       Sensitive (5 2 μg/mL)         Sensitive (6 1 μg/mL)       Sensitive (5 2 μg/mL)         Sensitive (6 1 μg/mL)       Sensitive (6 1 μg/mL)         Resistant (8 μg/mL)       Sensitive (6 1 μg/mL)         Sensitive (1 μg/mL)       Sensitive (1 μg/mL)         Sensitiv	Catalase		Negative
Benzylpenicillin <sup>4</sup> Ciprofloxacin <sup>5</sup> Levofloxacin <sup>4</sup> Sensitive Gatifloxacin <sup>5</sup> Ofloxacin <sup>4</sup> Sensitive Report results Sensitive (1 µg/mL) Sensitive (0.19 µg/mL) Sensitive (2 µg/mL) Erythromycin <sup>4</sup> Resistant Resistant Resistant (2 1 µg/mL) Sensitive (2 0.25 µg/mL) Clindamycin <sup>5</sup> Sensitive Sensitive Clindamycin <sup>5</sup> Sensitive Sensitive Sensitive (0.125 µg/mL) Sensitive Sensitive (0.38 µg/mL) Sensitive Sensitive (2 2 µg/mL) Sensitive Sensitive (2 1 µg/mL) Sensitive Sensitive (2 1 µg/mL) Vancomycin <sup>4</sup> Sensitive Sensitive Sensitive (2 1 µg/mL) Resistant Resistant (2 16 µg/mL) Resistant Resistant (2 16 µg/mL) Resistant Resistant (80 µg/mL) Sensitive (0.047 µg/mL) Intermediate Intermediate Intermediate (0.5 µg/mL) Cefotaxime Cefotaxime Cefotaxime Sensitive Sensitive Sensitive (1 µg/mL) Resistant (2.0 µg/mL) Resistant (2.0 µg/mL) Resistant Resistant (2.0 µg/mL) Resistant	VITEK <sup>®</sup> MS (MALDI-TOF)	Consistent with S. pneumoniae	Consistent with S. pneumoniae
Benzylpenicillin <sup>4</sup> Ciprofloxacin <sup>5</sup> Levofloxacin <sup>4</sup> Sensitive Gatifloxacin <sup>5</sup> Ofloxacin <sup>4</sup> Sensitive Report results Sensitive (1 µg/mL) Sensitive (0.19 µg/mL) Sensitive (2 µg/mL) Erythromycin <sup>4</sup> Resistant Resistant Resistant (2 1 µg/mL) Sensitive (2 0.25 µg/mL) Clindamycin <sup>5</sup> Sensitive Sensitive Clindamycin <sup>5</sup> Sensitive Sensitive Sensitive (0.125 µg/mL) Sensitive Sensitive (0.38 µg/mL) Sensitive Sensitive (2 2 µg/mL) Sensitive Sensitive (2 1 µg/mL) Sensitive Sensitive (2 1 µg/mL) Vancomycin <sup>4</sup> Sensitive Sensitive Sensitive (2 1 µg/mL) Resistant Resistant (2 16 µg/mL) Resistant Resistant (2 16 µg/mL) Resistant Resistant (80 µg/mL) Sensitive (0.047 µg/mL) Intermediate Intermediate Intermediate (0.5 µg/mL) Cefotaxime Cefotaxime Cefotaxime Sensitive Sensitive Sensitive (1 µg/mL) Resistant (2.0 µg/mL) Resistant (2.0 µg/mL) Resistant Resistant (2.0 µg/mL) Resistant	Antibiotic Susceptibility Profile <sup>3</sup>		
Ciprofloxacin be a consistent with S. pneumoniae  Ciprofloxacin be sensitive (1.0 µg/mL)  Catifloxacin be sensitive (1.0 µg/mL)  Catifloxacin be sensitive (1.0 µg/mL)  Consistent with S. pneumoniae		Sensitive	Sensitive (1 µg/mL)
Levofloxacin <sup>4</sup> Gatifloxacin <sup>5</sup> Ofloxacin <sup>4</sup> Erythromycin <sup>4</sup> Report results Report results Resistant Res		Report results	
Gatifloxacin <sup>5</sup> Ofloxacin <sup>4</sup> Report results       Sensitive (0.19 μg/mL)         Erythromycin <sup>4</sup> Telithromycin <sup>4</sup> Clindamycin <sup>5</sup> Quinupristin/dalfopristin <sup>5</sup> Resistant Sensitive Sensitive Sensitive (≤ 0.25 μg/mL)         Clindamycin <sup>5</sup> Quinupristin/dalfopristin <sup>5</sup> Sensitive Sensitive Sensitive Sensitive (≤ 0.25 μg/mL)       Sensitive Sensitive (0.125 μg/mL)         Linezolid <sup>4</sup> Vancomycin <sup>4</sup> Sensitive Sensitive Sensitive (≤ 2 μg/mL)       Sensitive (≤ 2 μg/mL)         Vancomycin <sup>4</sup> Sensitive Sensitive Sensitive (≤ 1 μg/mL)       Sensitive (≤ 1 μg/mL)         Tetracycline <sup>4</sup> Resistant Resistant Resistant (≥ 16 μg/mL)       Resistant (≥ 16 μg/mL)         Trimethoprim/sulfamethoxazole <sup>4</sup> Resistant Sensitive Sensitive (1 μg/mL)       Sensitive (1 μg/mL)         Amoxicillin <sup>4</sup> Sensitive Sensitive Sensitive (1 μg/mL)       Sensitive (1 μg/mL)         Meropenem <sup>4</sup> Cefotaxime <sup>4</sup> Sensitive Sensitive Sensitive (1 μg/mL)       Sensitive (1 μg/mL)         Cefactorine <sup>5</sup> Resistant Resistant Resistant (256 μg/mL)       Sensitive (1 μg/mL)         Ceftriaxone <sup>4</sup> Sensitive Resistant (256 μg/mL)       Resistant (256 μg/mL)         Ceftriaxone <sup>4</sup> Ceftriaxone <sup>4</sup> Chloramphenicol <sup>4</sup> Resistant Resistant (256 μg/mL)       Resistant (8 μg/mL)         Centypic Analysis Sequencing of 16S ribosomal RNA gene (~900 base pairs)       Consistent with S. pneumoniae       Consistent with S. pneumoniae         Consistent with S. pneumoniae       Consistent with S. pneumoniae		·	
Ofloxacin <sup>4</sup> Erythromycin <sup>4</sup> Telithromycin <sup>4</sup> Sensitive Clindamycin <sup>5</sup> Quinupristin/dalfopristin <sup>5</sup> Linezolid <sup>4</sup> Vancomycin <sup>4</sup> Sensitive (0.125 μg/mL) Sensitive Sensitive (2 μg/mL) Sensitive Sensitive (1.25 μg/mL) Sensitive Sensitive (2 μg/mL) Sensitive Sensitive (1.25 μg/mL) Sensitive Sensitive Sensitive (1 μg/mL) Resistant Resistant Resistant (2 1 μg/mL) Sensitive (1 μg/mL) Resistant Resistant (2 1 μg/mL) Resistant Resistant Resistant (2 1 μg/mL) Resistant Resistant Resistant (2 1 μg/mL) Resistant Resistant Resistant (2 1 μg/mL) Sensitive (1 μg/mL) Resistant Resista			
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Telithromycin <sup>4</sup> Clindamycin <sup>5</sup> Sensitive Se			
Clindamycin <sup>5</sup> Quinupristin/dalfopristin <sup>5</sup> Sensitive ≤ 2 μg/mL) Sensitive Sensitive ≤ 1 μg/mL) Sensitive Sensitive ≤ 1 μg/mL) Sensitive Sensitive (≤ 1 μg/mL) Resistant Resistant Resistant Sensitive Sensitive Sensitive (0.047 μg/mL) Resistant Sensitive Sensitive Intermediate Sensitive Sensitive (1 μg/mL) Intermediate (0.5 μg/mL) Sensitive (1 μg/mL) Sensitive Sensitive Sensitive (1 μg/mL) Resistant Resistant Resistant Resistant Resistant Resistant (2.0 μg/mL) Sensitive Sensitive Sensitive Sensitive Sensitive Sensitive Sensitive (1 μg/mL) Resistant (2.0 μg/mL) Resistant (2.0 μg/mL) Resistant (2.0 μg/mL) Resistant (2.0 μg/mL) Ceftriaxone <sup>4</sup> Sensitive Sensitive Sensitive Ceftriaxone <sup>4</sup> Coftriaxone <sup>4</sup> Coftriaxone <sup>4</sup> Coftriaxone <sup>4</sup> Coftriaxone <sup>4</sup> Coftriaxone <sup>4</sup> Resistant Resistant Resistant Resistant Resistant (2.0 μg/mL) Coftriaxone <sup>4</sup> Coftriaxone <sup>4</sup> Coftriaxone <sup>4</sup> Coftriaxone <sup>4</sup> Coftriaxone <sup>4</sup> Coftriaxone <sup>4</sup> Resistant Resista		Sensitive	
Quinupristin/dalfopristin <sup>5</sup> Sensitive       Sensitive (0.38 μg/mL)         Linezolid <sup>4</sup> Sensitive       Sensitive (≤ 2 μg/mL)         Vancomycin <sup>4</sup> Resistant       Resistant (≥ 16 μg/mL)         Tetracycline <sup>4</sup> Resistant       Resistant (≥ 16 μg/mL)         Resistant (≥ 16 μg/mL)       Resistant (≥ 16 μg/mL)         Trimethoprim/sulfamethoxazole <sup>4</sup> Resistant       Resistant (≥ 16 μg/mL)         Amoxicillin <sup>4</sup> Sensitive       Sensitive (1 μg/mL)         Meropenem <sup>4</sup> Intermediate       Intermediate (0.5 μg/mL)         Cefotaxime <sup>4</sup> Sensitive       Resistant (2.0 μg/mL)         Cefotaclor <sup>5</sup> Resistant       Resistant (2.0 μg/mL)         Ceftriaxone <sup>4</sup> Sensitive       Resistant (2.6 μg/mL)         Chloramphenicol <sup>4</sup> Resistant       Resistant (2.6 μg/mL)         Resistant       Resistant (8 μg/mL)         Genotypic Analysis       Sequencing of 16S ribosomal RNA gene (~ 900 base pairs)       Consistent with S. pneumoniae       Consistent with S. pneumoniae         Riboprinter® Microbial Characterization System       Consistent with S. pneumoniae       Consistent with S. pneumoniae		Sensitive	
Vancomycin⁴       Sensitive       Sensitive (≤ 1 μg/mL)         Tetracycline⁴       Resistant       Resistant (≥ 16 μg/mL)         Rifampicin⁵       Report results       Sensitive (0.047 μg/mL)         Trimethoprim/sulfamethoxazole⁴       Resistant       Resistant (80 μg/mL)         Amoxicillin⁴       Sensitive       Sensitive (1 μg/mL)         Meropenem⁴       Intermediate       Intermediate (0.5 μg/mL)         Cefotaxime⁴       Sensitive       Sensitive (1 μg/mL)         Cefuroxine⁵       Resistant       Resistant (2.0 μg/mL)         Cefaclor⁵       Report results       Resistant (2.56 μg/mL)         Ceftriaxone⁴       Sensitive       Sensitive (1 μg/mL)         Chloramphenicol⁴       Resistant       Resistant (8 μg/mL)         Genotypic Analysis       Sequencing of 16S ribosomal RNA gene (~ 900 base pairs)       Consistent with S. pneumoniae       Consistent with S. pneumoniae         Riboprinter® Microbial Characterization System       Consistent with S. pneumoniae       Consistent with S. pneumoniae	Quinupristin/dalfopristin <sup>5</sup>	Sensitive	Sensitive (0.38 µg/mL)
Tetracycline <sup>4</sup> Rifampicin <sup>5</sup> Trimethoprim/sulfamethoxazole <sup>4</sup> Amoxicillin <sup>4</sup> Meropenem <sup>4</sup> Cefotaxime <sup>4</sup> Cefuroxine <sup>5</sup> Ceftriaxone <sup>4</sup> Chloramphenicol <sup>4</sup> Resistant Sensitive Resistant Sensitive Intermediate Sensitive Sensitive Intermediate Sensitive Sensitive Sensitive Intermediate Sensitive Sensitive Resistant Sensitive Intermediate Sensitive Sensitive Resistant Resistant Sensitive (1 μg/mL) Sensitive (1 μg/mL) Resistant (2.0 μg/mL) Resistant (2.0 μg/mL) Resistant (2.66 μg/mL) Sensitive Resistant Resistant Resistant (2.0 μg/mL) Sensitive (1 μg/mL) Resistant (2.66 μg/mL) Resistant (2.66 μg/mL) Resistant Resistant Resistant (2.0 μg/mL) Resistant (2.0 μg/mL) Resistant (2.0 μg/mL) Ceftriaxone <sup>4</sup> Chloramphenicol <sup>4</sup> Resistant Sensitive Consistent with S. pneumoniae	Linezolid <sup>4</sup>	Sensitive	Sensitive (≤ 2 µg/mL)
Rifampicin <sup>5</sup> Trimethoprim/sulfamethoxazole <sup>4</sup> Amoxicillin <sup>4</sup> Meropenem <sup>4</sup> Cefotaxime <sup>4</sup> Cefuroxine <sup>5</sup> Ceftriaxone <sup>4</sup> Chloramphenicol <sup>4</sup> Resistant Sensitive Resistant Sensitive Intermediate Sensitive Sensitive Intermediate Sensitive Resistant Resistant Sensitive (1 μg/mL) Intermediate (0.5 μg/mL) Sensitive (1 μg/mL) Resistant (2.0 μg/mL) Resistant (2.0 μg/mL) Resistant (256 μg/mL) Sensitive (1 μg/mL) Resistant (256 μg/mL) Resistant (256 μg/mL) Resistant (8 μg/mL) Resistant (2.0 μg/mL) Resistant (256 μg/mL) Resistant (8 μg/mL) Resistant (8 μg/mL) Resistant (256 μg/mL) Resistant (8 μg/mL) Resistant (256 μg/mL) Resista		Sensitive	Sensitive (≤ 1 µg/mL)
Trimethoprim/sulfamethoxazole <sup>4</sup> Amoxicillin <sup>4</sup> Meropenem <sup>4</sup> Cefotaxime <sup>4</sup> Cefotaxime <sup>5</sup> Cefuroxine <sup>5</sup> Ceftriaxone <sup>4</sup> Chloramphenicol <sup>4</sup> Resistant Sensitive Intermediate Sensitive Sensitive Resistant Resistant Sensitive Sensitive Resistant Resis	Tetracycline <sup>4</sup>	Resistant	Resistant (≥ 16 µg/mL)
Amoxicillin <sup>4</sup> Meropenem <sup>4</sup> Cefotaxime <sup>4</sup> Cefuroxine <sup>5</sup> Cefaclor <sup>5</sup> Ceftriaxone <sup>4</sup> Chloramphenicol <sup>4</sup> Genotypic Analysis Sequencing of 16S ribosomal RNA gene (~ 900 base pairs) Riboprinter <sup>®</sup> Microbial Characterization System  Sensitive Intermediate Sensitive Sensitive Resistant Resistant Resistant Report results Sensitive	Rifampicin <sup>5</sup>	Report results	Sensitive (0.047 µg/mL)
Meropenem <sup>4</sup> Cefotaxime <sup>4</sup> Cefuroxine <sup>5</sup> Cefaclor <sup>5</sup> Ceftriaxone <sup>4</sup> Chloramphenicol <sup>4</sup> Genotypic Analysis Sequencing of 16S ribosomal RNA gene (~ 900 base pairs) Riboprinter <sup>®</sup> Microbial Characterization System  Meropenem <sup>4</sup> Sensitive Sensitive Resistant	Trimethoprim/sulfamethoxazole <sup>4</sup>	Resistant	
Cefotaxime <sup>4</sup> Cefuroxine <sup>5</sup> Cefaclor <sup>5</sup> Ceftriaxone <sup>4</sup> Chloramphenicol <sup>4</sup> Sensitive Resistant Report results Sensitive Resistant (2.0 μg/mL) Resistant (256 μg/mL) Resistant (256 μg/mL) Sensitive (1 μg/mL) Resistant (8 μg/mL) Sensitive Resistant		Sensitive	Sensitive (1 µg/mL)
Cefuroxine5ResistantResistant (2.0 μg/mL)Cefaclor5Report resultsResistant (256 μg/mL)Ceftriaxone4SensitiveSensitive (1 μg/mL)Chloramphenicol4ResistantResistant (8 μg/mL) Genotypic Analysis Sequencing of 16S ribosomal RNA gene (~ 900 base pairs) Riboprinter® Microbial Characterization System Consistent with S. pneumoniae		Intermediate	Intermediate (0.5 µg/mL)
Cefaclor <sup>5</sup> Ceftriaxone <sup>4</sup> Chloramphenicol <sup>4</sup> Resistant Cenotypic Analysis Sequencing of 16S ribosomal RNA gene (~ 900 base pairs) Riboprinter <sup>®</sup> Microbial Characterization System  Resistant Resistant Resistant (256 µg/mL) Sensitive (1 µg/mL) Resistant (8 µg/mL)  Consistent with S. pneumoniae		Sensitive	
Ceftriaxone <sup>4</sup> Sensitive Resistant  Genotypic Analysis Sequencing of 16S ribosomal RNA gene (~ 900 base pairs) Riboprinter <sup>®</sup> Microbial Characterization System  Consistent with S. pneumoniae		Resistant	
Chloramphenicol <sup>4</sup> Resistant  Consistent with S. pneumoniae			
Genotypic Analysis Sequencing of 16S ribosomal RNA gene (~ 900 base pairs) Riboprinter® Microbial Characterization System  Consistent with S. pneumoniae		Sensitive	
Sequencing of 16S ribosomal RNA gene (~ 900 base pairs) Riboprinter® Microbial Characterization System  Consistent with S. pneumoniae	Chloramphenicol <sup>4</sup>	Resistant	Resistant (8 µg/mL)
Sequencing of 16S ribosomal RNA gene (~ 900 base pairs) Riboprinter® Microbial Characterization System  Consistent with S. pneumoniae	Genotypic Analysis		
Riboprinter® Microbial Characterization System  Consistent with S. pneumoniae  Consistent with S. pneumoniae  Consistent with S. pneumoniae	Sequencing of 16S ribosomal RNA gene	Consistent with S. pneumoniae	Consistent with S. pneumoniae <sup>6</sup>
Purity (post-freeze) <sup>7</sup> Consistent with S. pneumoniae Consistent with S. pneumoniae	(~ 900 base pairs)		
	Riboprinter <sup>®</sup> Microbial Characterization System	Consistent with S. pneumoniae	Consistent with S. pneumoniae
Viability (post-freeze) <sup>2</sup> Growth Growth	Purity (post-freeze) <sup>7</sup>	Consistent with S. pneumoniae	Consistent with S. pneumoniae
	Viability (post-freeze) <sup>2</sup>	Growth	Growth

<sup>&</sup>lt;sup>1</sup>S. pneumoniae, strain GA41565 (also referred to as SPAR73) was deposited by Scott T. Chancey, Ph.D., Division of Infectious Diseases, Department of Medicine, Emory University, Atlanta, Georgia, USA. NR-19145 was produced by inoculation of the deposited material into Tryptic Soy broth and incubated for 24 hours 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 22 hours at 37°C in an aerobic atmosphere with 5% CO<sub>2</sub> to produce this lot.

<sup>2</sup>24 hours at 37°C in an aerobic atmosphere with 5% CO₂ on Tryptic Soy agar with 5% defibrinated sheep blood

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## **Certificate of Analysis for NR-19145**

Minimum Inhibitory Concentration (MIC); MIC Interpretation Guideline: CLSI M100-S22 (2012)

6100% identical to S. pneumoniae, strain GA41565 (GenBank: AGPO01000001.1)

Figure 1

Date: 29 DEC 2014

Signature:

Title: Technical Manager, BEI Authentication or designee

ATCC®, on behalf of BEI Resources, hereby represents and warrants that the material provided under this certificate has been subjected to the tests and procedures specified and that the results described, along with any other data provided in this certificate, are true and accurate to the best of ATCC<sup>®</sup>'s knowledge.

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<sup>&</sup>lt;sup>4</sup>Tested by VITEK® AST-GP74 card (VITEK® 2, version 5.04)

<sup>5</sup>Tested by bioMérieux E-test®: cefuroxime (catalog number 506958), ciprofloxacin (412310), clindamycin (412314), cefaclor (504550), gatifloxacin (530250), rifampicin (412449) and quinupristin/dalfopristin (528750)

<sup>&</sup>lt;sup>7</sup>Purity of this lot was assessed for 7 days on Tryptic Soy agar with 5% defibrinated sheep blood at 37°C in an aerobic atmosphere with 5% CO<sub>2</sub>.