

**Genomic DNA from Microbial Mock Community B (Staggered, High Concentration), v5.2H, for Whole Genome Shotgun Sequencing**

**Catalog No. HM-277D**

**Product Description:** A mixture of genomic DNA from 20 bacterial strains containing staggered ribosomal RNA operon counts (10,000 to 10,000,000 copies per organism per µL). **Note: The label for HM-277D is incorrect. HM-277D contains genomic DNA from microbial mock community B and not microbial mock community A.**

**Lot<sup>1,2</sup>: 70005858**

**Manufacturing Date: 17JUL2017<sup>3</sup>**

TEST	SPECIFICATIONS	RESULTS
DNA Sequencing of Individual 16S Ribosomal RNA Genes from Mock Community B (~ 1500 base pairs)	Consistent with <i>Acinetobacter baumannii</i> Consistent with <i>Actinomyces odontolyticus</i> Consistent with <i>Bacillus cereus</i> Consistent with <i>Bacteroides vulgatus</i> Consistent with <i>Clostridium beijerinckii</i> Consistent with <i>Deinococcus radiodurans</i> Consistent with <i>Enterococcus faecalis</i> Consistent with <i>Escherichia coli</i> Consistent with <i>Helicobacter pylori</i> Consistent with <i>Lactobacillus gasseri</i> Consistent with <i>Listeria monocytogenes</i> Consistent with <i>Neisseria meningitidis</i> Consistent with <i>Propionibacterium acnes</i> Consistent with <i>Pseudomonas aeruginosa</i> Consistent with <i>Rhodobacter sphaeroides</i> Consistent with <i>Staphylococcus aureus</i> Consistent with <i>Staphylococcus epidermidis</i> Consistent with <i>Streptococcus agalactiae</i> Consistent with <i>Streptococcus mutans</i> Consistent with <i>Streptococcus pneumoniae</i>	Consistent with <i>Acinetobacter baumannii</i> <sup>§</sup> Consistent with <i>Actinomyces odontolyticus</i> <sup>§</sup> Consistent with <i>Bacillus cereus</i> <sup>§</sup> Consistent with <i>Bacteroides vulgatus</i> <sup>§</sup> Consistent with <i>Clostridium beijerinckii</i> <sup>†</sup> Consistent with <i>Deinococcus radiodurans</i> <sup>§</sup> Consistent with <i>Enterococcus faecalis</i> <sup>§</sup> Consistent with <i>Escherichia coli</i> <sup>‡</sup> Consistent with <i>Helicobacter pylori</i> <sup>†</sup> Consistent with <i>Lactobacillus gasseri</i> <sup>†</sup> Consistent with <i>Listeria monocytogenes</i> <sup>§</sup> Consistent with <i>Neisseria meningitidis</i> <sup>†</sup> Consistent with <i>Propionibacterium acnes</i> <sup>§,4</sup> Consistent with <i>Pseudomonas aeruginosa</i> <sup>‡</sup> Consistent with <i>Rhodobacter sphaeroides</i> <sup>‡</sup> Consistent with <i>Staphylococcus aureus</i> <sup>§,5</sup> Consistent with <i>Staphylococcus epidermidis</i> <sup>§,5</sup> Consistent with <i>Streptococcus agalactiae</i> <sup>§</sup> Consistent with <i>Streptococcus mutans</i> <sup>§</sup> Consistent with <i>Streptococcus pneumoniae</i> <sup>§</sup>
Agarose Gel Electrophoresis	High molecular weight chromosomal DNA	High molecular weight chromosomal DNA (Figure 1)

Certificate of Analysis for HM-277D

TEST	SPECIFICATIONS	RESULTS
<p><b>Theoretical DNA Concentration for Individual Members of Mock Community B [based on number of ribosomal RNA (rRNA) operons input DNA]<sup>6,7</sup></b></p> <p><i>Acinetobacter baumannii</i> - 100,000 operons  <i>Actinomyces odontolyticus</i> - 10,000 operons  <i>Bacillus cereus</i> - 1,000,000 operons  <i>Bacteroides vulgatus</i> - 10,000 operons  <i>Clostridium beijerinckii</i> - 1,000,000 operons  <i>Deinococcus radiodurans</i> - 10,000 operons  <i>Enterococcus faecalis</i> - 10,000 operons  <i>Escherichia coli</i> - 10,000,000 operons  <i>Helicobacter pylori</i> - 100,000 operons  <i>Lactobacillus gasseri</i> - 100,000 operons  <i>Listeria monocytogenes</i> - 100,000 operons  <i>Neisseria meningitidis</i> - 100,000 operons  <i>Propionibacterium acnes</i> - 100,000 operons  <i>Pseudomonas aeruginosa</i> - 1,000,000 operons  <i>Rhodobacter sphaeroides</i> - 10,000,000 operons  <i>Staphylococcus aureus</i> - 1,000,000 operons  <i>Staphylococcus epidermidis</i> - 10,000,000 operons  <i>Streptococcus agalactiae</i> - 1,000,000 operons  <i>Streptococcus mutans</i> - 10,000,000 operons  <i>Streptococcus pneumoniae</i> - 10,000 operons</p>	Report results	<p>82 pg/μL <i>Acinetobacter baumannii</i><sup>§</sup>  10 pg/μL <i>Actinomyces odontolyticus</i><sup>§</sup>  450 pg/μL <i>Bacillus cereus</i><sup>§</sup>  7.6 pg/μL <i>Bacteroides vulgatus</i><sup>§</sup>  440 pg/μL <i>Clostridium beijerinckii</i><sup>‡</sup>  10 pg/μL <i>Deinococcus radiodurans</i><sup>§</sup>  7.0 pg/μL <i>Enterococcus faecalis</i><sup>§</sup>  6.8 ng/μL <i>Escherichia coli</i><sup>‡</sup>  86 pg/μL <i>Helicobacter pylori</i><sup>†</sup>  32 pg/μL <i>Lactobacillus gasseri</i><sup>‡</sup>  50 pg/μL <i>Listeria monocytogenes</i><sup>§</sup>  58 pg/μL <i>Neisseria meningitidis</i><sup>†</sup>  88 pg/μL <i>Propionibacterium acnes</i><sup>§</sup>  1.6 ng/μL <i>Pseudomonas aeruginosa</i><sup>‡</sup></p> <p>14 ng/μL <i>Rhodobacter sphaeroides</i><sup>‡</sup></p> <p>590 pg/μL <i>Staphylococcus aureus</i><sup>§</sup>  5.1 ng/μL <i>Staphylococcus epidermidis</i><sup>§</sup></p> <p>32 pg/μL <i>Streptococcus agalactiae</i><sup>§</sup></p> <p>4.1 ng/μL <i>Streptococcus mutans</i><sup>§</sup>  5.5 pg/μL <i>Streptococcus pneumoniae</i><sup>§</sup></p>
<b>Total Amount of DNA per vial</b>	≥ 5 μg	5.1 μg
<b>Functional Activity by PCR Amplification</b> 16S ribosomal RNA gene	~ 1500 base pair amplicon	~ 1500 base pair amplicon (Figure 2)
<b>OD<sub>260</sub>/OD<sub>280</sub> Ratio</b>	1.7 to 2.1	2.0
<b>Bacterial Inactivation</b> 10% of total yield plated on agar <sup>8</sup>	No viable bacteria detected	No viable bacteria detected

<sup>1</sup>Extraction of genomic DNA and sequencing of 16S ribosomal RNA genes were performed by Baylor College of Medicine in Houston, Texas, USA. Quality control testing was performed by BEI Resources.

<sup>2</sup>Genomic DNA was extracted using the following methods: <sup>§</sup>SDS Lysis, CsCl, <sup>‡</sup>Modified SDS Lysis, CsCl, <sup>‡</sup>Triton Lysis, CsCl and <sup>†</sup>Omega E.Z.N.A.® Bacterial DNA Kit.

<sup>3</sup>Genomic DNA was extracted on 31AUG2011 by Baylor College of Medicine and dispensed by BEI Resources on 17JUL2017.

<sup>4</sup>Also consistent with other *Propionibacterium* species

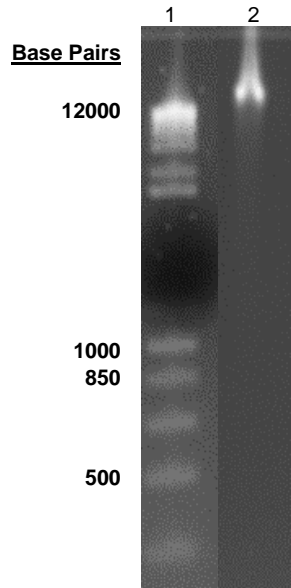
<sup>5</sup>Also consistent with other *Staphylococcus* species

<sup>6</sup>Theoretical DNA concentrations were determined by the contributor.

<sup>7</sup>The types and amounts of organisms present in the mock community is a best estimate. Please confirm these values prior to use.

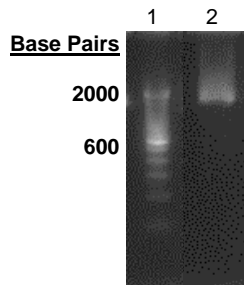
<sup>8</sup>14 days at 37°C in an aerobic atmosphere on Tryptic Soy agar with 5% defibrinated sheep blood.

Figure 1: High Molecular Weight Chromosomal DNA



Lane 1: Invitrogen™ TrackIt 1 Kb Plus DNA Ladder™  
Lane 2: 200 ng of gDNA HM-277D

Figure 2: Functional Activity by PCR Amplification



Lane 1: Invitrogen™ 100 bp Ladder™  
Lane 2: PCR of 16S ribosomal RNA gene from HM-277D

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Program Manager or designee, ATCC Federal Solutions

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