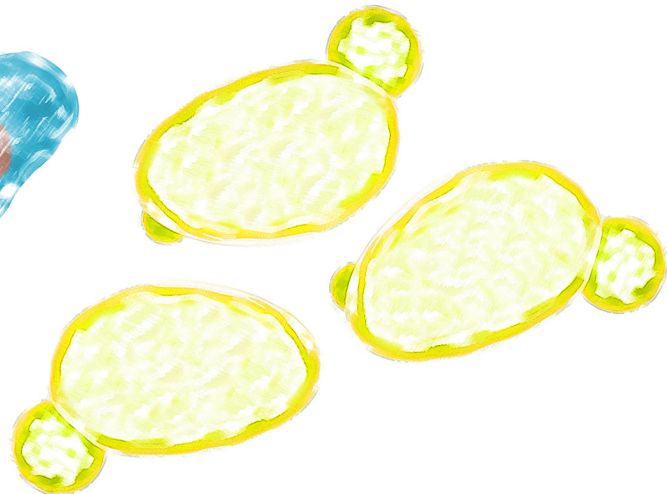
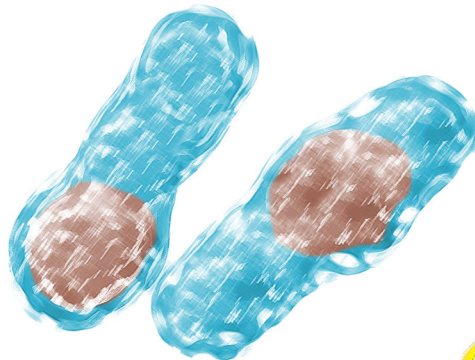
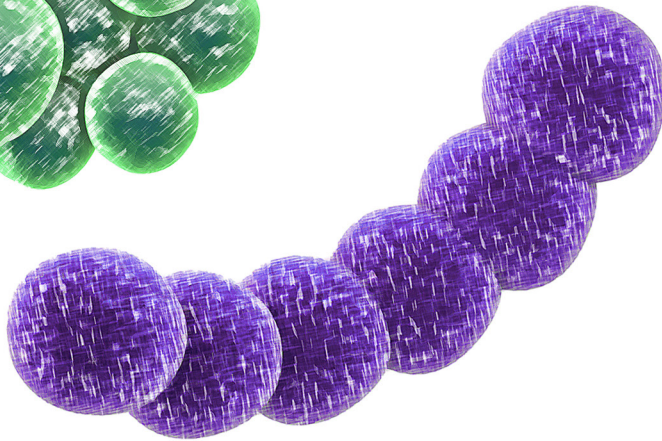
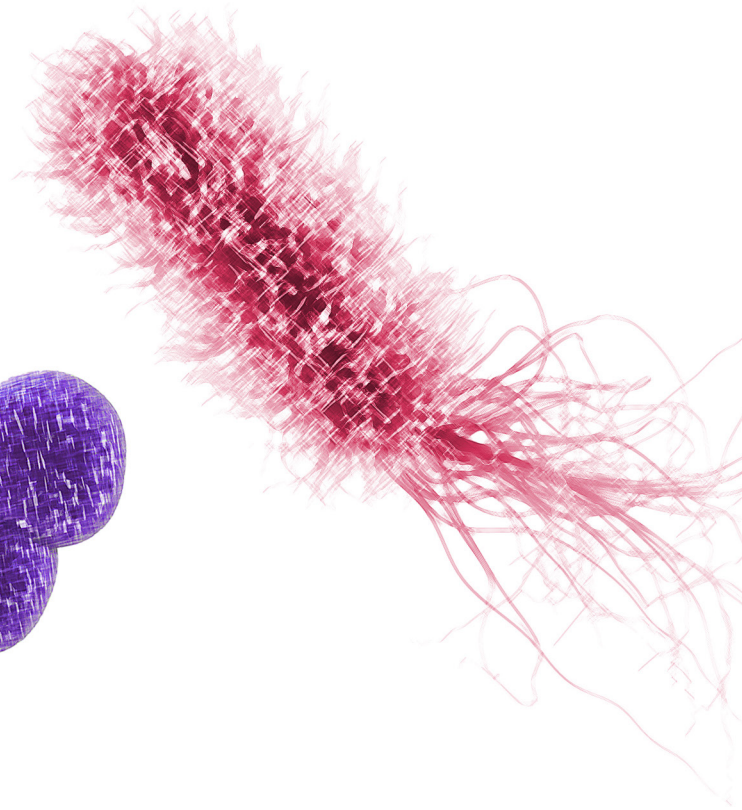
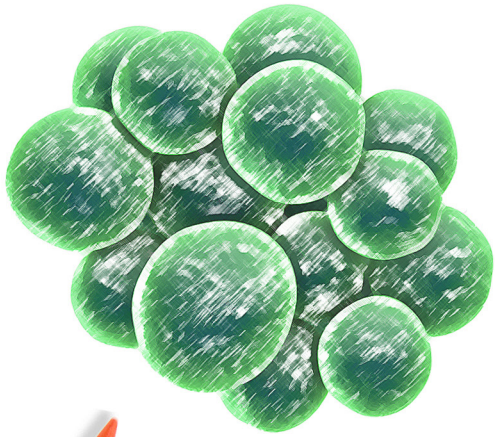




ZYMO RESEARCH
The Beauty of Science is to Make Things Simple



Microbiomics Made Simple™



The Complete Microbiome Solution

Sample Collection & Preservation

DNA/RNA Shield™ Reagent & Collection Devices

Page 2-4



Microbiome Standards

ZymoBIOMICS™ Microbial Community Standards

ZymoBIOMICS™ HMW DNA Standard

ZymoBIOMICS™ Fecal Reference with TruMatrix™ Technology

ZymoBIOMICS™ Gut Microbiome Standard

ZymoBIOMICS™ Spike-in Controls

Page 5-8

Nucleic Acid Extraction

ZymoBIOMICS™ DNA Extraction Kits

ZymoBIOMICS™ RNA Miniprep Kit

ZymoBIOMICS™ DNA/RNA Miniprep Kit

HostZERO™ Microbial DNA Kit

Quick-DNA™ HMW MagBead Kit

Automated Extraction

Page 9-12



Library Prep, Sequencing Services, & Custom Solutions

Quick-16S™ Plus NGS Library Prep Kits

Quick-ITS™ Plus NGS Library Prep Kit

Quick-16S™ NGS Library Prep Kit

Microbiome Sequencing Services

Custom Microbiome Solutions

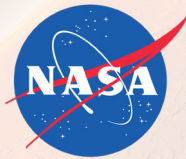
Page 13-15



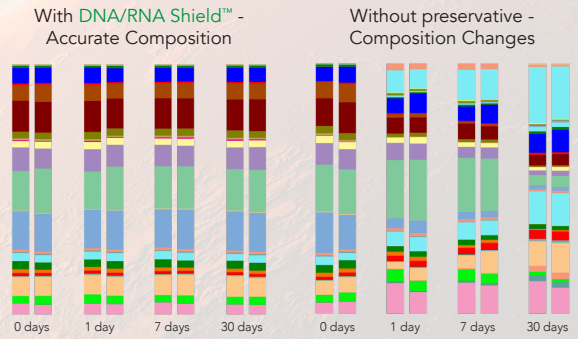
Sample Collection & Cold-Free Preservation

DNA/RNA Shield™ preserves the genetic integrity of a sample at time of collection for sensitive down-stream analyses (i.e., Next-Gen Sequencing, RT-PCR, etc.). Any biological sample can be stored in DNA/RNA Shield™ for transport at ambient temperature, even in the most extreme conditions.

Scientists at NASA are utilizing DNA/RNA Shield™ to collect biological specimens from astronauts to assess how the human microbiome is affected by a microgravity environment. DNA/RNA Shield™ serves a vital role in preserving the genetic profiles of their samples in ever-changing and uncontrollable conditions.



Preserve Microbiome Profiles

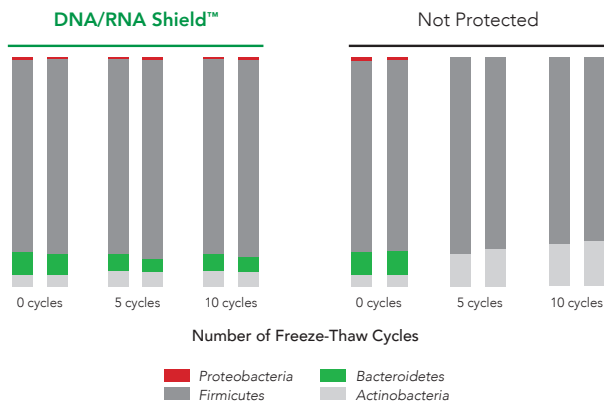


Microbial composition of stool is unchanged after one month at ambient temperature with DNA/RNA Shield™. The extracted DNA was subjected to microbial composition profiling via 16S rRNA gene targeted sequencing.

DNA/RNA Shield™

- **Microbiome DNA/RNA Preservation:** Preserves genetic integrity and expression profiles of samples at ambient temperatures.
- **Safe Transport:** Inactivates infectious agents (virus, bacteria, parasites, yeasts).
- **Streamlined Workflow:** DNA and RNA can be isolated directly from preserved samples without lengthy precipitation or reagent removal steps.

Prevent the Effects of Freeze-Thaw Cycling



Human stool samples were subjected to 10 freeze-thaw cycles. Samples protected by DNA/RNA Shield™ preserved their microbial profile while Bacteroidetes and Proteobacteria became undetectable in unprotected samples.

Inactivation of Pathogens for Safe Sample Handling

Used by Scientists around the world for studying:

Bacteria	Viruses	Yeast & Eukaryotes
<i>B. subtilis</i>	SARS-CoV-2	<i>C. albicans</i>
<i>E. faecalis</i>	Parvovirus	<i>C. neoformans</i>
<i>E. coli</i>	Chikungunya Virus	<i>S. cerevisiae</i>
<i>L. fermentum</i>	Dengue Virus	<i>P. malariae</i>
<i>L. monocytogenes</i>	Ebolavirus	
<i>M. tuberculosis</i>	Herpes Simplex Virus-1	
<i>P. aeruginosa</i>	Herpes Simplex Virus-2	
<i>S. enterica</i>	Influenza A	
<i>S. aureus</i>	Rhinovirus	
<i>S. pneumoniae</i>	MERS-coronavirus	
<i>X. fastidiosa</i>	West Nile Virus	

Safe Sample Handling



510(k)-Cleared
FDA Class II Medical Device



Specimen Preservation
Up To 30 Days at Ambient Temperature

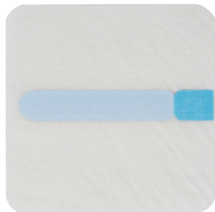


Safe Sample Processing
Pathogen Inactivation
including SARS-CoV-2

Biosafety is an important concern when collecting and processing samples for microbiome research. The inactivation of pathogens such as SARS-CoV-2 is a major consideration as fecal shedding of the virus is frequently detected¹.

DNA/RNA Shield™ has been demonstrated to inactivate pathogens, including SARS-CoV-2, *Salmonella enterica*, and *Candida albicans*, making microbiome sample collection and processing safer.

Collection Devices for Any Sample



Fecal Collection Wipe
Bunny Wipe™ - Fecal Collection Kit (R1133)



Fecal Collection Tube
DNA/RNA Shield™ Fecal Collection Tube (R1101)



Swab
DNA/RNA Shield™ SafeCollect Swab Collection Tube (R1160)



Saliva
DNA/RNA Shield™ SafeCollect Saliva Collection Tube (R1211)



Sample Lysis
DNA/RNA Shield™ Lysis Tubes (R1103)



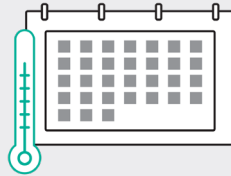
Urine
Urine Collection Kit (D3062)

1. Jones, D. L., Baluja, M. Q., Graham, D. W., Corbislely, A., McDonald, J. E., Malham, S. K., ... & Farkas, K. (2020). Shedding of SARS-CoV-2 in feces and urine and its potential role in person-to-person transmission and the environment-based spread of COVID-19. *Science of the Total Environment*, 749, 141364.

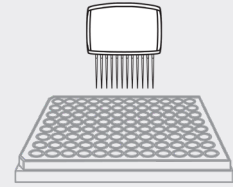
SafeCollect™ At-Home Sample Collection Devices



Unparalleled User Safety
(No Spill)

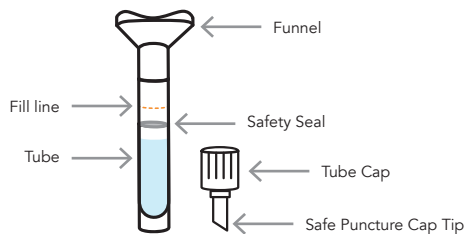


Room Temperature Shipping & Storage



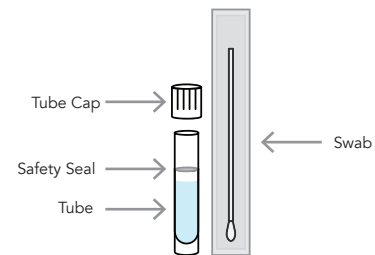
Automation-Ready for High-Throughput Sample Processing

Available in Multiple Formats



SafeCollect™ Saliva Collection Kit

- ✓ Funnel included for the collection of saliva and other liquid samples
- ✓ SafePuncture cap pierces the safety seal, releasing the reagent
- ✓ Prefilled with 2ml of DNA/RNA Shield™ (R1211)



SafeCollect™ Swab Collection Kit

- ✓ Swab included for the collection of throat, nasal, fecal, skin, and surface samples
- ✓ Self-centering cap retains the swab during the decapping process
- ✓ Prefilled with DNA/RNA Shield™ (1ml: R1160; 2ml: R1161)

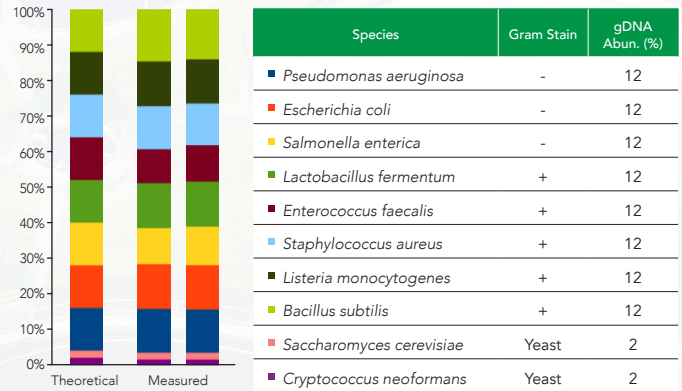
Product	Cat. No.	Size
DNA/RNA Shield™	R1100-50 R1100-250	50 ml 250 ml
Bunny Wipe - Fecal Collection Kit	R1133	1 Collection Kit
DNA/RNA Shield™ - Lysis Tube (Microbe)	R1103	50 pack
DNA/RNA Shield™ - Lysis Tube (Microbe) with Swab	R1104	50 tubes/50 swabs
DNA/RNA Shield™ Collection Tube w/Swab	R1106	10 pack (1 ml fill)
	R1107	50 pack (1 ml fill)
	R1108	10 pack (2 ml fill)
	R1109	50 pack (2 ml fill)
DNA/RNA Shield™ Collection Tube w/ Swab - DX	R1107-E R1109-E	50 pack (1 ml fill) 50 pack (2 ml fill)
DNA/RNA Shield™ - Fecal Collection Tube	R1101	10 pack
DNA/RNA Shield™ Fecal Collection Tube - DX	R1101-E	10 pack
DNA/RNA Shield™ Saliva Collection Kit	R1210	1 x 2 ml fill
DNA/RNA Shield SafeCollect™ Saliva Collection Kit	R1211/R1211-E	1 Collection Kit
DNA/RNA Shield SafeCollect™ Swab Collection Kit	R1160/R1160-E	1 Collection Kit
	R1161/R1161-E	1 Collection Kit

Microbiome Quality Control & Standardization

Precise Composition for Reproducible Data

The ZymoBIOMICS™ Microbial Community Standard is comprised of eight bacterial and two fungal species, representing a wide range of cell wall toughness.

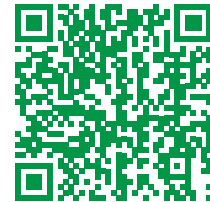
Researchers used the ZymoBIOMICS™ Microbial Community Standard to ensure accurate and unbiased microbial profiling of various points during the sanitization process at the world's largest water reclamation facility¹.



The ZymoBIOMICS™ Microbial Community Standard contains three easy-to-lyse bacteria, five tough-to-lyse bacteria, and two tough-to-lyse yeasts.

The ZymoBIOMICS™ standards are the most cited mock community standards. With nine different standards and controls available, careful consideration should be taken when choosing the best match for your workflow.

Scan to Read the App Note: How to Choose a Microbiome Standard
www.zymoresearch.com/blogs/blog/how-to-choose-a-microbiome-standard



Category	Suggested Applications
Mock Community Microbial Cell Standards	<ul style="list-style-type: none"> • Optimization and benchmarking • Positive control for microbial lysis
Mock Community DNA Standards	<ul style="list-style-type: none"> • Optimization and positive controls for library preparation & bioinformatics
True Diversity Reference	<ul style="list-style-type: none"> • Assess taxonomic assignment and bioinformatics • Enable inter-lab and inter-study data comparisons
Spike-In Controls	<ul style="list-style-type: none"> • Individual sample control • Absolute quantification

1. Stamps BW, Leddy MB, Plumlee MH, Hasan NA, Colwell RA, Spear JR. Characterization of the Microbiome at the Worlds' Largest Potable Water Reuse facility. Front Microbiol. 2018 9: 2435

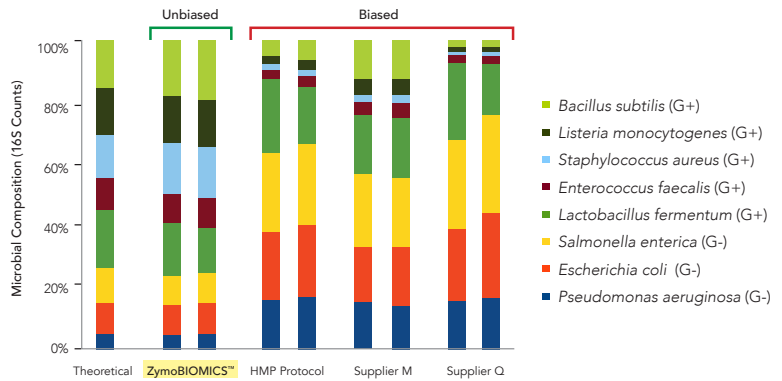
Ensure Accurate Microbial Profiling

ZymoBIOMICS™ Microbial Community Standard

- **Accurate composition:** composition cross-validated using multiple types of measurements.
- **Assessing bias in DNA isolation:** containing microbes of varying size and cell wall toughness (8 bacteria and 2 yeasts).
- **Microbiomics QC:** Ideal for a complete microbiome workflow quality control.

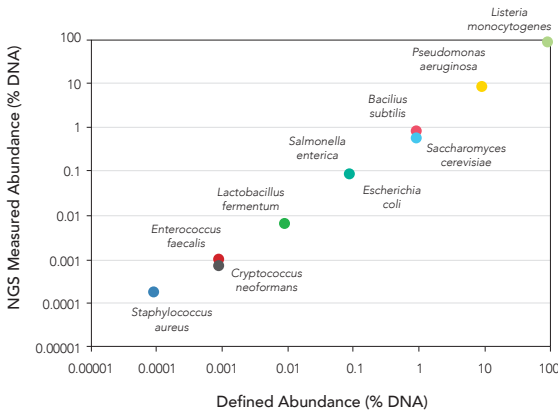
Identify & Eliminate Bias in Your Workflow

The ZymoBIOMICS™ Microbial Community Standard was used to compare different DNA extraction protocols. DNA samples were profiled by 16S rRNA gene targeted sequencing.



ZymoBIOMICS™ Microbial Community Standard II

- **Log abundance distribution:** assess detection limit over a broad range (10^2 to 10^8 cells).
- **Accurate Composition:** cross-validated with multiple measurements.
- **Microbiomics QC:** Quality control for microbiome profiling and pathogen identification.



Determine Workflow Detection Limits

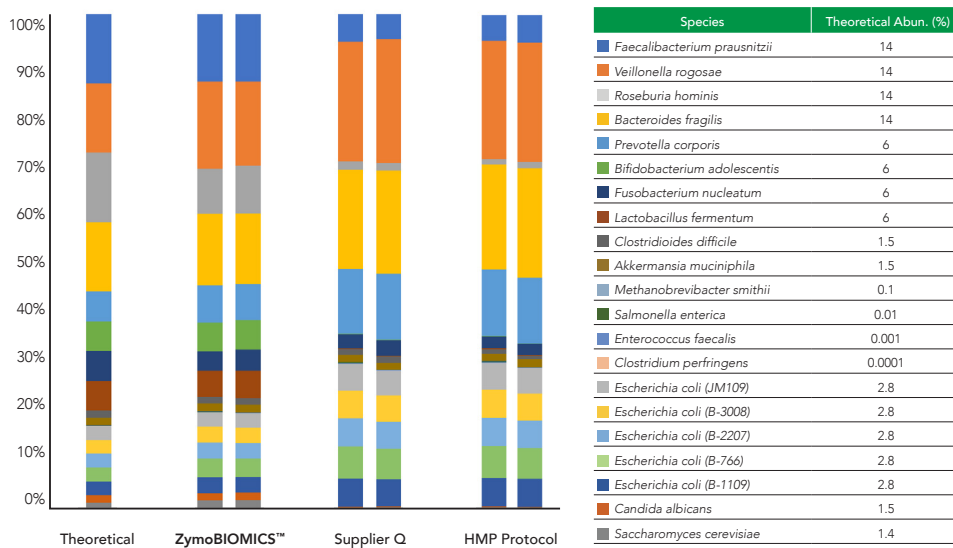
The ZymoBIOMICS™ Microbial Community Standard II contains a log distributed abundance of microbes. It can help determine the detection limit of a microbe in a community.

Product	Cat. No.	Size
ZymoBIOMICS™ Microbial Community Standard	D6300	10 preps
ZymoBIOMICS™ Microbial Community DNA Standards	D6305 D6306	200 ng 2,000 ng
ZymoBIOMICS™ Microbial Community Standard II (Log Distribution)	D6310	10 preps
ZymoBIOMICS™ Microbial Community DNA Standard II (Log Distribution)	D6311	220 ng
ZymoBIOMICS™ HMW DNA Standards	D6322	5,000 ng

Quality Controls for Gut Microbiome Analysis

ZymoBIOMICS™ Gut Microbiome Standard

- **True to Life:** Comprised of 21 different strains to mimic the human gut microbiome.
- **Accurate Composition:** Allows for benchmarking and validation of NGS microbiome workflows .
- **Cross Kingdom Representation:** Includes Bacteria, Fungi, and Archaea.

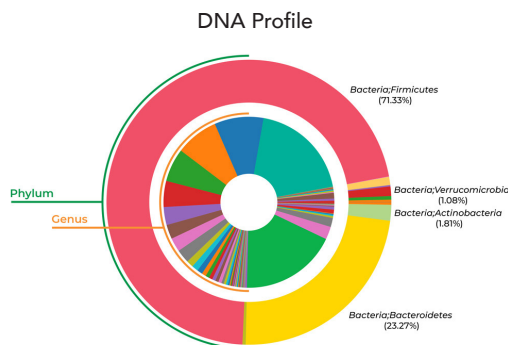


Optimize Microbiome Analysis of The Gut

The ZymoBIOMICS™ Gut Microbiome Standard consists of a mix of hard-to-lyse bacteria, easy-to-lyse bacteria, two yeasts and an archaea species in ratios mimicking the human gut microbiome. The standard was used to compare different DNA extraction protocols. The resulting DNA was profiled using metagenomic shotgun sequencing.

ZymoBIOMICS™ Fecal Reference with TruMatrix™ Technology

- **Real-Life Representation:** A microbiome quality control made from real human fecal material preserved in DNA/RNA Shield™.
- **Consistent:** Two million uniform preps available to act as a reliable, single point of reference for all microbiome researchers.
- **Well-Characterized:** Deeply sequenced using targeted, metagenomic, and metatranscriptomic sequencing.



THE BIOCOLLECTIVE



High Microbial Diversity

The fecal reference contains hundreds of microbial species including bacteria, fungi, and archaea, replicating the diversity of real stool. Metagenomic profiling was performed using the ZymoBIOMICS™ DNA Miniprep extraction kit, Illumina® DNA Prep kit, and sequenced on Illumina® NovaSeq®.

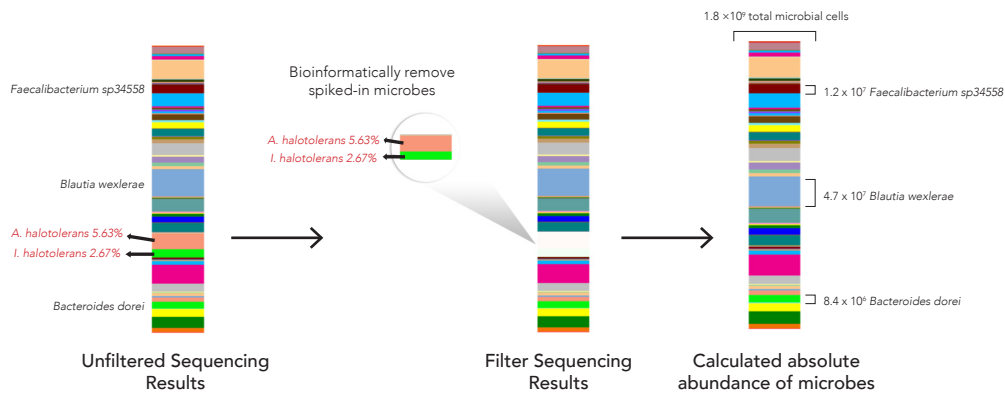
Product	Cat. No.	Size
ZymoBIOMICS™ Gut Microbiome Standard	D6331	10 preps
ZymoBIOMICS™ Fecal Reference with TruMatrix™ Technology	D6323	10 preps

Spike-in Controls for Absolute Quantification

ZymoBIOMICS™ Spike-in Control I (High Microbial Load)

- **Absolute Quantification:** Enables cell number measurements using Next-Gen Sequencing.
- **In situ Quality Control:** Ensures each sample is quantified accurately.
- **Unique composition:** Comprised of two microbes not found in the human microbiome.

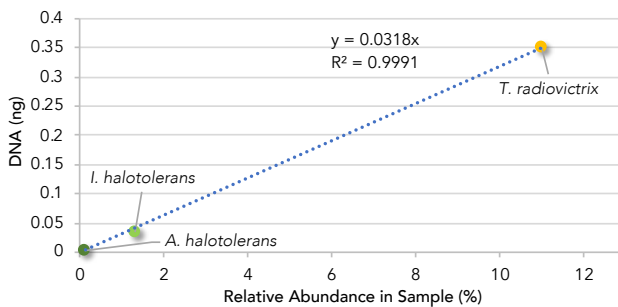
Quantify Absolute Abundance of Microbes



The ZymoBIOMICS™ Spike-in Control I was added to a fecal sample. The sample was analyzed by 16S sequencing. The composition percentage of *Imtechella halotolerans* and *Allobacillus halotolerans* was then calculated. Using this percentage and the known input of cells spiked into the sample, the absolute abundance is calculated for the organisms originally present.

ZymoBIOMICS™ Spike-in Control II (Low Microbial Load)

- **Absolute Quantification:** Enables cell number measurements from low bacterial load samples using Next-Gen Sequencing.
- **In situ Quality Control:** Ensures individual samples are quantified accurately.
- **Log Abundance Distribution:** Three microbes not found in the human microbiome in log-distribution from 10³ to 10⁵ cells.



Spike-in a Standard Curve

Once spiked into a sample and analyzed by NGS, the log distribution of the three species creates a standard curve which is used to accurately calculate the absolute abundance of the sample's microbiome.

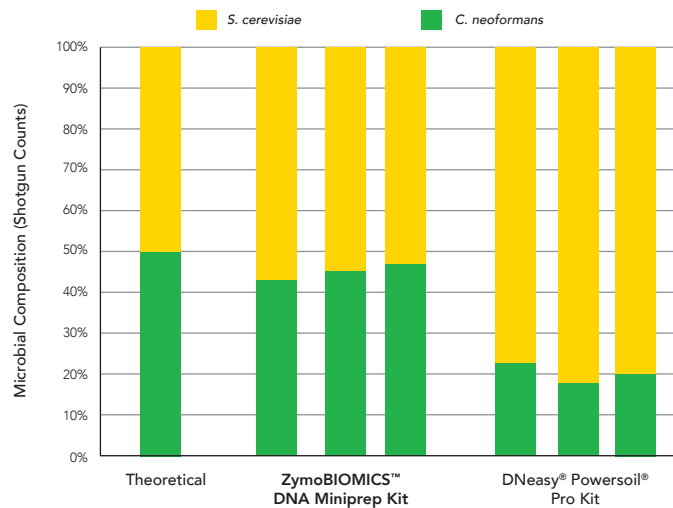
Product	Cat. No.	Size
ZymoBIOMICS™ Spike-in Control I (High Microbial Load)	D6320 D6320-10	25 preps 250 preps
ZymoBIOMICS™ Spike-in Control II (Low Microbial Load)	D6321 D6321-10	25 preps 250 preps

Unbiased DNA Purification from Any Sample

ZymoBIOMICS™ DNA Extraction Kits (*feces, soil, swabs, water, biofilms, body fluids, etc.*)

- **Validated Unbiased for Microbiome Measurements:** Unbiased cellular lysis validated using the ZymoBIOMICS™ Microbial Community Standard.
- **Inhibitor-Free DNA from Any Sample:** Isolate ultra-pure DNA ready for any downstream application.
- **Certified Low Bioburden:** Boost your detection limit for low abundance microbes.

Extract DNA from the Toughest Microbes



The ZymoBIOMICS™ DNA Miniprep kit effectively lyses both fungal species in the ZymoBIOMICS™ Microbial Community Standard, while the DNeasy® PowerSoil® Pro kit failed to effectively lyse *Cryptococcus neoformans*. Data was generated with shotgun metagenomic sequencing.



CERTIFIED
Ultra-Clean
 Low Bioburden

Product	Cat. No.	Size
ZymoBIOMICS™ DNA Miniprep Kit	D4300	50 preps
ZymoBIOMICS™ DNA Microprep Kit	D4301	50 preps
ZymoBIOMICS™ 96 DNA Kit (includes ZR BashingBead™ Lysis Rack)	D4303	2 x 96 preps
ZymoBIOMICS™ 96 DNA Kit (includes ZR BashingBead™ Lysis Tubes)	D4309	2 x 96 preps

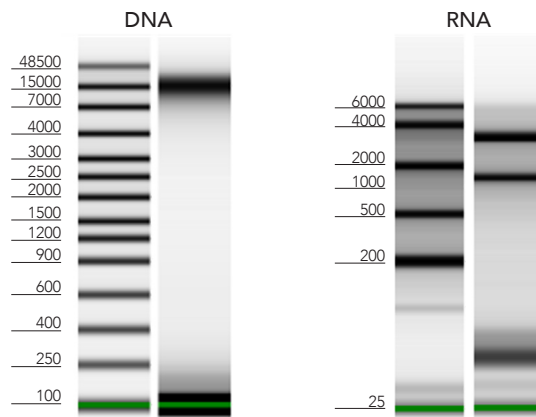
Ultra-Pure Microbial DNA/RNA Co-Purification

ZymoBIOMICS™ DNA/RNA Miniprep Kit

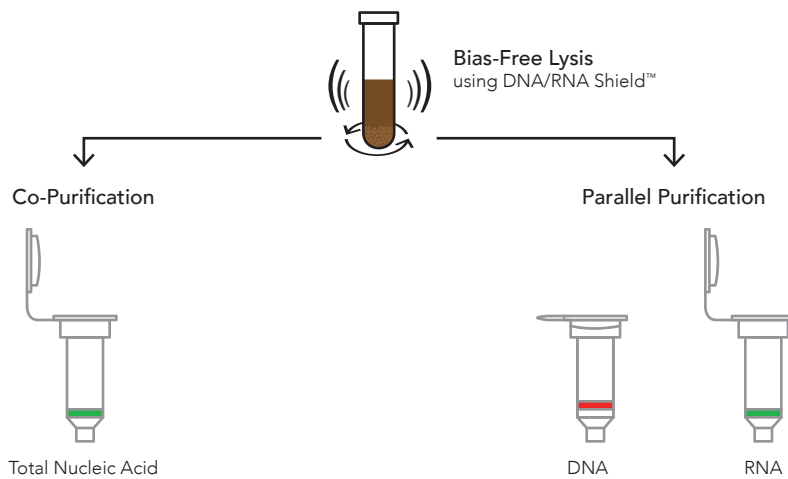
- **Unbiased Lysis:** Efficient and unbiased lysis of microbes including Gram-positive/negative bacteria, fungi, protozoans, and viruses from any sample.
- **Ultra-Pure:** DNA/RNA (including small/micro RNAs) is inhibitor-free and ready for qPCR and microbiome measurements using Next-Gen Sequencing.
- **High Sensitivity:** Increased detection limit of very low abundance organisms.

High-Quality DNA & RNA

Genomic DNA and total RNA was isolated from human stool with the ZymoBIOMICS™ DNA/RNA Miniprep Kit and is highly intact. Quality was assessed using the Agilent 2200 TapeStation® system. Parallel purification of DNA and RNA can be extracted into separate fractions.



Purify DNA & RNA in Single Or Separate Fractions Without Splitting Samples

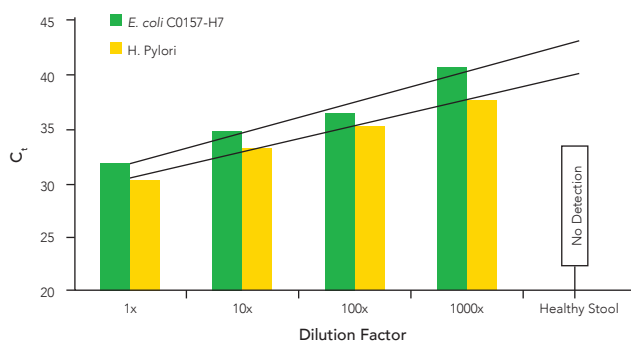


Product	Cat. No.	Size
ZymoBIOMICS™ RNA Miniprep Kit	R2001	50 preps
ZymoBIOMICS™ DNA/RNA Miniprep Kit	R2002	50 preps

Automated Nucleic Acid Extraction for High-Throughput Microbiomics Applications

ZymoBIOMICS™ 96 MagBead DNA Kit

- High throughput purification of high quality, inhibitor-free DNA from any sample including feces, soil, water, biofilms, swabs, saliva, and body fluids.
- This ZymoBIOMICS™ innovative lysis system enables efficient and unbiased lysis of microbes including Gram positive/negative bacteria, fungi, protozoans, algae, etc.
- The automation friendly workflow enables nearly any sample to be processed in as little as 90 minutes for 96 preps.

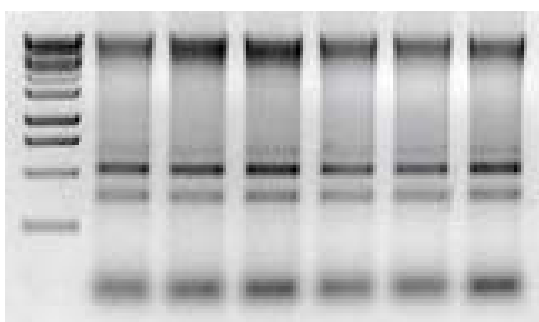


Linear Recovery With Unparalleled Sensitivity

The ZymoBIOMICS™ 96 Magbead DNA Kit produces linear recovery of DNA for sensitive applications, detecting pathogenic organisms such as *E. coli* and *H. pylori* in assays with up to a 1000x dilution factor. A dilution series was created using stool infected with 1×10^6 shiga-toxin producing *E. coli* O157:H7 cells and stool infected with *H. pylori* cells. These stool samples were then extracted using the ZymoBIOMICS™ 96 Magbead DNA Kit, showing effective purification and qPCR amplification, even at 1000:1 dilution. N=8

ZymoBIOMICS™ MagBead DNA/RNA

- Efficient, unbiased lysis of microbes including gram positive/negative bacteria, fungi, protozoans, and viruses from any sample including feces, soil, plant, water, biofilms, swabs, saliva, body fluids, etc.
- High-throughput, magnetic bead-based purification of high-quality DNA/RNA (including small/microRNAs) that is inhibitor-free and ready for RT/qPCR and microbiome measurements using Next-Gen sequencing.
- High-sensitivity and increased detection limit of very low abundance organisms.



High Quality DNA and RNA

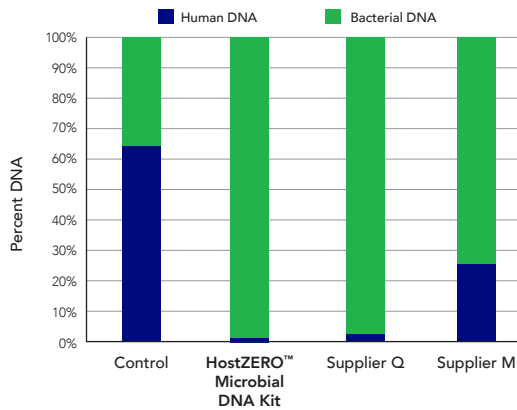
DNA & RNA from human stool are high quality using the ZymoBIOMICS™ MagBead DNA/RNA kit. Final eluate were analyzed on a 1% TAE/agarose gel, 1 KB DNA ladder (Zymo Research).

Product	Cat. No.	Size
ZymoBIOMICS™ 96 MagBead DNA Kit (includes ZR BashingBead™ Lysis Tubes)	D4308	2 x 96 preps
ZymoBIOMICS™ 96 MagBead DNA Kit (includes ZR BashingBead™ Lysis Rack)	D4302	2 x 96 preps
ZymoBIOMICS™ MagBead DNA/RNA	R2135 R2136	1 x 96 preps 4 x 96 preps
ZymoBIOMICS™ MagBead RNA	R2137 R2138	1 x 96 preps 4 x 96 preps

Simple Depletion of Host DNA

HostZERO™ Microbial DNA Kit

- **Efficient Depletion of Host DNA:** ≥90% depletion in applicable sample types.
- **Preserves Microbial DNA:** ≥85% recovery of microbial DNA and minimum impact on microbiome profile.
- **Simple and Fast:** Only 30 minutes of hands-on time.



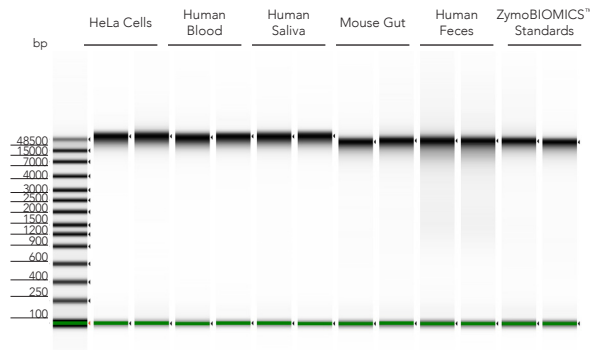
Ensure the Best Depletion of Host DNA

The HostZERO™ Microbial DNA Kit depletes host DNA. The same human saliva sample was processed using the HostZERO™ Microbial DNA Kit or kits from Suppliers Q and M. Triplicate samples of purified DNA were evaluated by Real-time PCR. The composition of the DNA is shown in terms of relative bacterial and human DNA abundance. The control sample was processed with the ZymoBIOMICS™ DNA Microprep Kit, which extracts total DNA from the sample without host DNA depletion.

High Molecular Weight DNA

Quick-DNA™ HMW MagBead Kit

- **Third-Generation Sequencing Ready:** Optimized for long read sequencing assays.
- **High Quality HMW DNA:** Extract high molecular weight DNA > 100 kb size from any sample type.
- **Unmatched Recovery:** Highest DNA yield and purity.



Obtain High Quality HMW DNA from Any Sample Type

The Quick-DNA™ HMW MagBead Kit was used to extract high molecular weight DNA from a variety of samples including human feces and the ZymoBIOMICS™ Microbial Community Standard. Quality was assessed using Agilent 2200 TapeStation®.

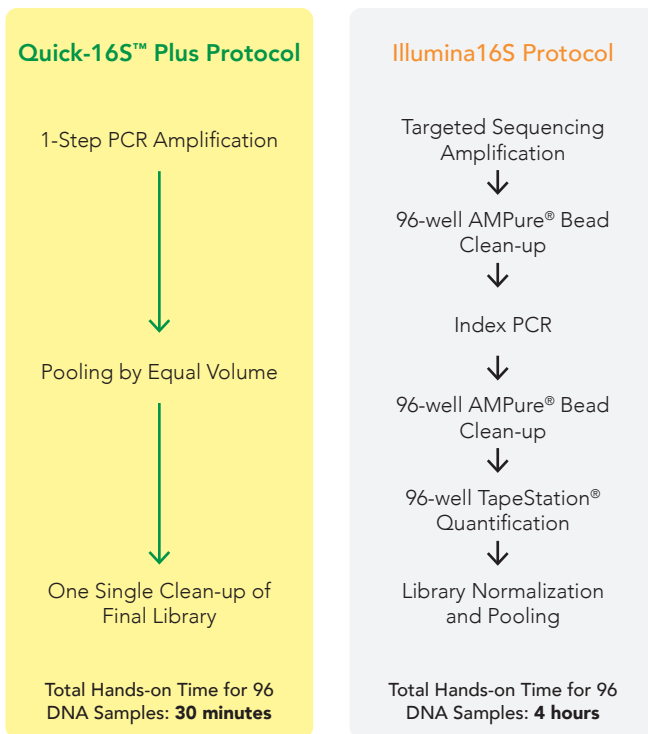
Product	Cat. No.	Size
HostZERO™ Microbial DNA Kit	D4310	50 preps
Quick-DNA™ HMW MagBead Kit	D6060	96 preps

The Easiest 16S & ITS Library Preps Ever

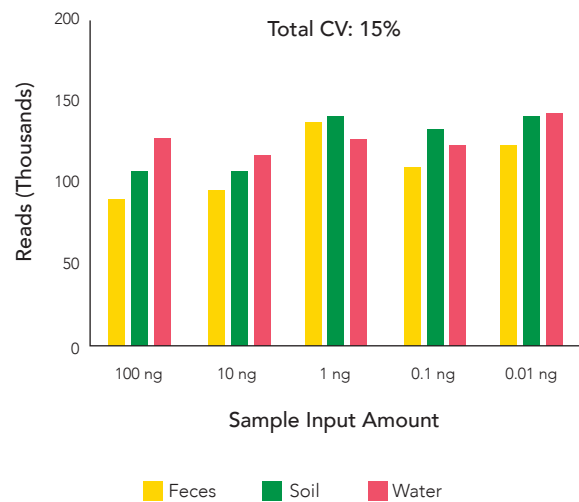
Quick-16S™ Plus NGS Library Prep Kit (V3-V4)

- The most streamlined NGS kit with only 30 minutes of hands-on time for 96 samples.
- 100% automation ready with only a single PCR step and no normalization needed.
- Real-time PCR enables absolute microbial copy number quantification.

Fastest 16S Workflow



Normalization Free



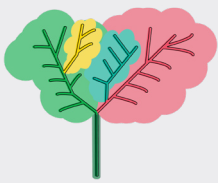
The Quick-16S™ Plus NGS Library Prep Kit (V3-V4) results in similar amounts of reads across different input amounts. 0.01-100 ng fecal, soil, and water DNA were used as inputs. Libraries were pooled by equal volumes (2 µl each) without further normalization and sequenced using MiSeq® Reagent Kit v3 (600-cycle). The CV (coefficient of variation) is the ratio of the standard deviation to the mean with lower values corresponding to less dispersion around the mean.

The Quick-16S™ Plus workflow versus the Illumina® 16S Protocol.

Total hands-on time calculations are based on the preparation of 96 DNA samples.

Product	Cat. No.	Size
Quick-16S™ Plus NGS Library Prep Kit (V3-V4)	D6420	96 rxns
	D6422	24 rxns
Quick-16S™ Plus NGS Library Prep Kit (V4)	D6430	96 rxns
	D6432	384 rxns
Quick-ITS™ Plus NGS Library Prep Kit	D6424	96 rxns
	D6426	24 rxns
Quick-16S™ NGS Library Prep Kit	D6400	96 rxns
	D6410	24 rxns

Comprehensive Microbiome Sequencing Services



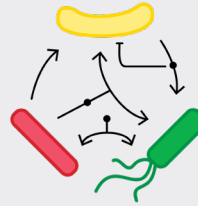
Amplicon Sequencing

Species-level resolution for bacteria and fungi, targeting regions of 16S, 18S & ITS.



Shotgun Metagenomic Sequencing

Multiple kingdom identification & functional profiling with industry-leading sensitivity & precision.



Metatranscriptomic Sequencing

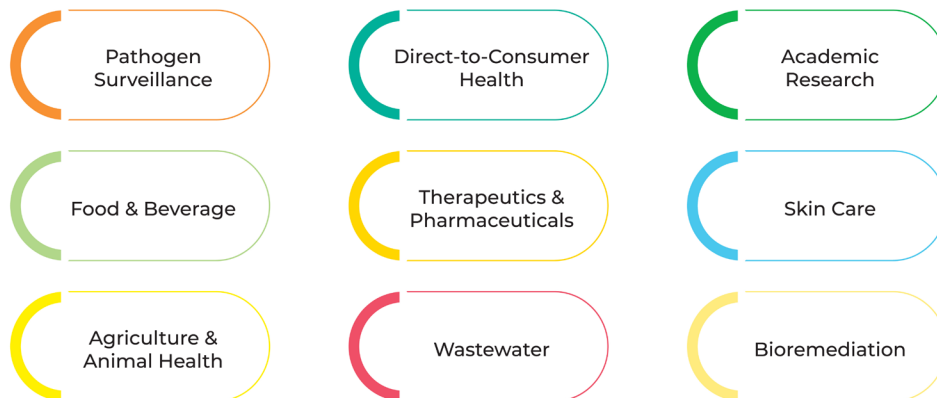
Microbiome gene expression analysis.



Custom Solutions for Industry Partners

Our microbiome analysis services can be customized to meet the individual needs of your application.

Potential Industries & Applications



End-to-End Microbiome Sequencing Services Include:

- ✓ Quick Turnaround Times
- ✓ Unmatched Data Quality
- ✓ Industry-Leading Taxonomic Resolution
- ✓ Comprehensive Bioinformatics Analysis



Visit www.zymoresearch.com/pages/zymbiomic-services for a custom microbiome services quote.

Custom Microbiome Solutions

In addition to being a premier biotechnology manufacturer, Zymo Research is a global, vertically integrated, research driven company. We are your innovation partner motivated to collaborate with you to create your custom contract manufacturing solutions. Whether it's sample preservation, nucleic acid extraction, microbiome analysis, or entire custom workflows, Zymo Research experts work closely with you to facilitate your custom manufacturing needs and bring your vision to life.



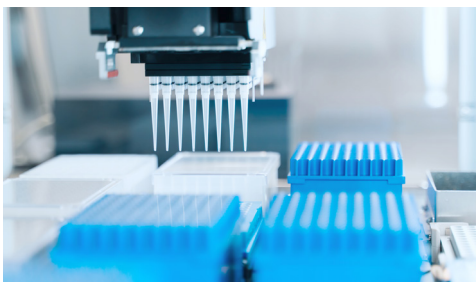
Custom At-Home Sample Collection Kits

- Collection and transportation media for any sample (swab, saliva, fecal, blood etc.)
- Custom labeling & barcoding
- Custom design, kitting and packaging
- Additional components available (gloves, IFU, biohazard bags, return labels)



Barcoded, High-Throughput Sample Tracking

- End-to-end sample tracking
- Automatable microbiome DNA & RNA extraction



Tailor-Made NGS Services

- Targeted and Shotgun Metagenomic Sequencing
- Customized Bioinformatics and Data Reporting
- Automated Nucleic Acid Extraction



Learn more and inquire about custom microbiome solutions at www.zymoresearch.com/pages/custom-manufacturing-solutions

Custom Microbiome Data Reporting



Automatically Generated Plots



Customizable Data Reports



Report Pathogens, Antibiotic Resistance, etc.

Simplify NGS Data Interpretation for Your Clients

Patient: John Doe DOB: 6/7/89
 Test: Metagenomic Pathogen Detection Ordered by: Dr. Smith

Comprehensive Microbial Analysis

Pseudomonas aeruginosa

Brevibacterium otitidis

Detected Pathogens

Bacteria

Species Name	Relative Abundance (%)	Absolute Abundance (# of cells)	Associated Disorder (if any)
Pseudomonas aeruginosa	55.9	1.7 × 10 ⁷	
Brevibacterium otitidis	37.7	1.6 × 10 ⁷	Bacteremia, Endocarditis, Ear Infections [1] [7]
Staphylococcus aureus	3.13	6.7 × 10 ⁵	Otitis Media, Upper Respiratory Infection, Throat infections [2] [3] [4]



Learn more and inquire about custom microbiome solutions at www.zymoresearch.com/pages/custom-manufacturing-solutions

Microbiome Products

Sample Collection & Storage

Product	Cat. No.	Size
DNA/RNA Shield™	R1100-50 R1100-250	50 ml 250 ml
DNA/RNA Shield™ - Lysis Tube (Microbe)	R1103	50 pack
DNA/RNA Shield™ - Lysis Tube (Microbe) with Swab	R1104	50 tubes/50 swabs
DNA/RNA Shield™ Collection Tube w/Swab	R1106 R1107 R1108 R1109	10 pack (1 ml fill) 50 pack (1 ml fill) 10 pack (2 ml fill) 50 pack (2 ml fill)
DNA/RNA Shield™ Collection Tube w/ Swab - DX	R1107-E R1109-E	50 pack (1 ml fill) 50 pack (2 ml fill)
Bunny Wipe - Fecal Collection Kit	R1133	1 Collection Kit
DNA/RNA Shield™ - Fecal Collection Tube	R1101	10 pack
DNA/RNA Shield™ Fecal Collection Tube - DX	R1101-E	10 pack
DNA/RNA Shield™ Saliva Collection Kit	R1210	1 x 2 ml fill
DNA/RNA Shield SafeCollect™ Saliva Collection Kit	R1211 R1211-E	1 Collection Kit 1 Collection Kit
DNA/RNA Shield SafeCollect™ Swab Collection Kit	R1160 R1160-E R1161 R1161-E	1 Collection Kit 1 Collection Kit 1 Collection Kit 1 Collection Kit

Microbiome Standards

Product	Cat. No.	Size
ZymoBIOMICS™ Microbial Community Standard	D6300	10 preps
ZymoBIOMICS™ Microbial Community DNA Standards	D6305 D6306	200 ng 2,000 ng
ZymoBIOMICS™ Microbial Community Standard II (Log Distribution)	D6310	10 preps
ZymoBIOMICS™ Microbial Community DNA Standard II (Log Distribution)	D6311	220 ng
ZymoBIOMICS™ HMW DNA Standards	D6322	5,000 ng
ZymoBIOMICS™ Fecal Reference with TruMatrix™ Technology	D6323	10 preps
ZymoBIOMICS™ Gut Microbiome Standard	D6331	10 preps
ZymoBIOMICS™ Spike-in Control I (High Microbial Load)	D6320 D6320-10	25 preps 250 preps
ZymoBIOMICS™ Spike-in Control II (Low Microbial Load)	D6321 D6321-10	25 preps 250 preps

Nucleic Acid Extraction

Product	Cat. No.	Size
ZymoBIOMICS™ DNA Miniprep Kit	D4300	50 preps
ZymoBIOMICS™ DNA Microprep Kit	D4301	50 preps
ZymoBIOMICS™ RNA Miniprep Kit	R2001	50 preps
ZymoBIOMICS™ DNA/RNA Miniprep Kit	R2002	50 preps
ZymoBIOMICS™ 96 DNA Kit (includes ZR BashingBead™ Lysis Rack)	D4303	2 x 96 preps
ZymoBIOMICS™ 96 DNA Kit (includes ZR BashingBead™ Lysis Tubes)	D4309	2 x 96 preps
ZymoBIOMICS™ 96 MagBead DNA Kit (includes ZR BashingBead™ Lysis Tubes)	D4308	2 x 96 preps
ZymoBIOMICS™ 96 MagBead DNA Kit (includes ZR BashingBead™ Lysis Rack)	D4302	2 x 96 preps
ZymoBIOMICS™ MagBead DNA/RNA	R2135 R2136	1 x 96 preps 4 x 96 preps
ZymoBIOMICS™ MagBead RNA	R2137 R2138	1 x 96 preps 4 x 96 preps
Quick-DNA™ HMW MagBead Kit	D6060	96 preps
HostZERO™ Microbial DNA Kit	D4310	50 preps

Library Prep

Product	Cat. No.	Size
Quick-16S™ Plus NGS Library Prep Kit (V3-V4)	D6420 D6422	96 rxns 24 rxns
Quick-16S™ Plus NGS Library Prep Kit (V4)	D6430 D6432	96 rxns 384 rxns
Quick-ITS™ Plus NGS Library Prep Kit	D6424 D6426	96 rxns 24 rxns
Quick-16S™ NGS Library Prep Kit	D6400 D6410	96 rxns 24 rxns



ZYMO RESEARCH
The Beauty of Science is to Make Things Simple

Cat. No. B1007 Version 05

*The **BEAUTY** of **SCIENCE** is to Make Things **SIMPLE**[®]*