



Sample Collection & Preservation



Sample Collection & Preservation INDEX

1. INTRODUCTION
2. SALIVA
3. SWABS
4. STOOL
5. BLOOD
6. URINE
7. MICROBIAL SAMPLES
8. TISSUE
9. MILK
10. ACCESSORIES

Ordering

Orders may be placed by any of the following methods:

Web: www.nordicbiosite.com
E-mail: order@nordicbiosite.com
Phone: +46 (0)8 5444 33 40
Norway: 2396 0418
Denmark: 8844 8801
Finland: 020 7432 007
Fax: +46 (0)8 756 94 90

1. INTRODUCTION



Collection



Isolation



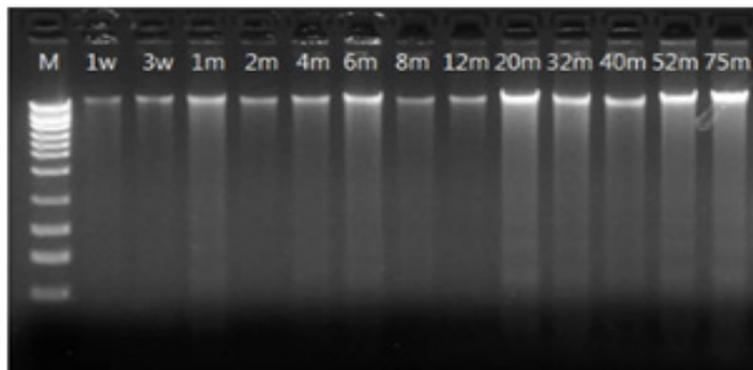
Analysis

The collection and transportation of samples for subsequent nucleic analysis is usually challenging due to nucleic acid degradation, modifications caused by environmental factors, or the presence of pathogens in the sample. Most collection and transportation methods require the use of a cold-chain to prevent or slow down the degradation process. In addition, shipping of biological samples often requires a series of pathogen-inactivation steps.

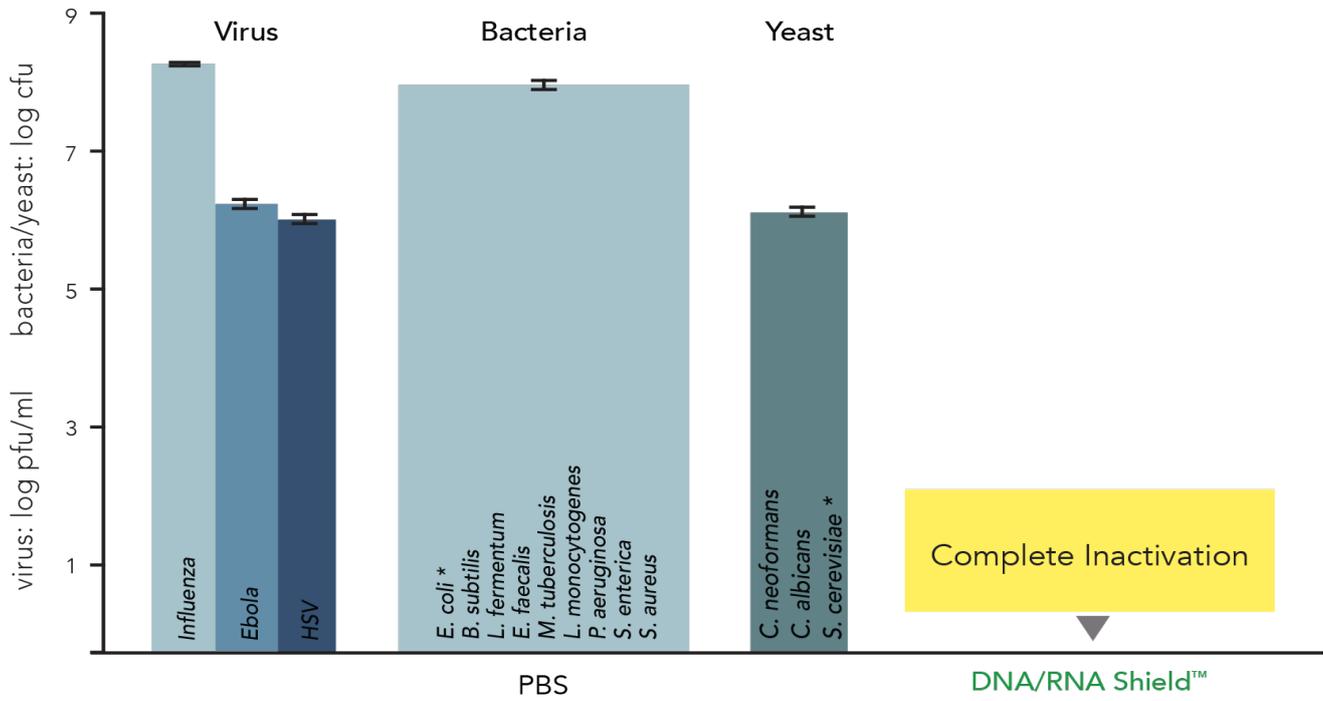
We offer a wide range of sample collection devices that are tailored to the needs of scientists in the lab and out in the field.

The collection devices are filled with reagents that

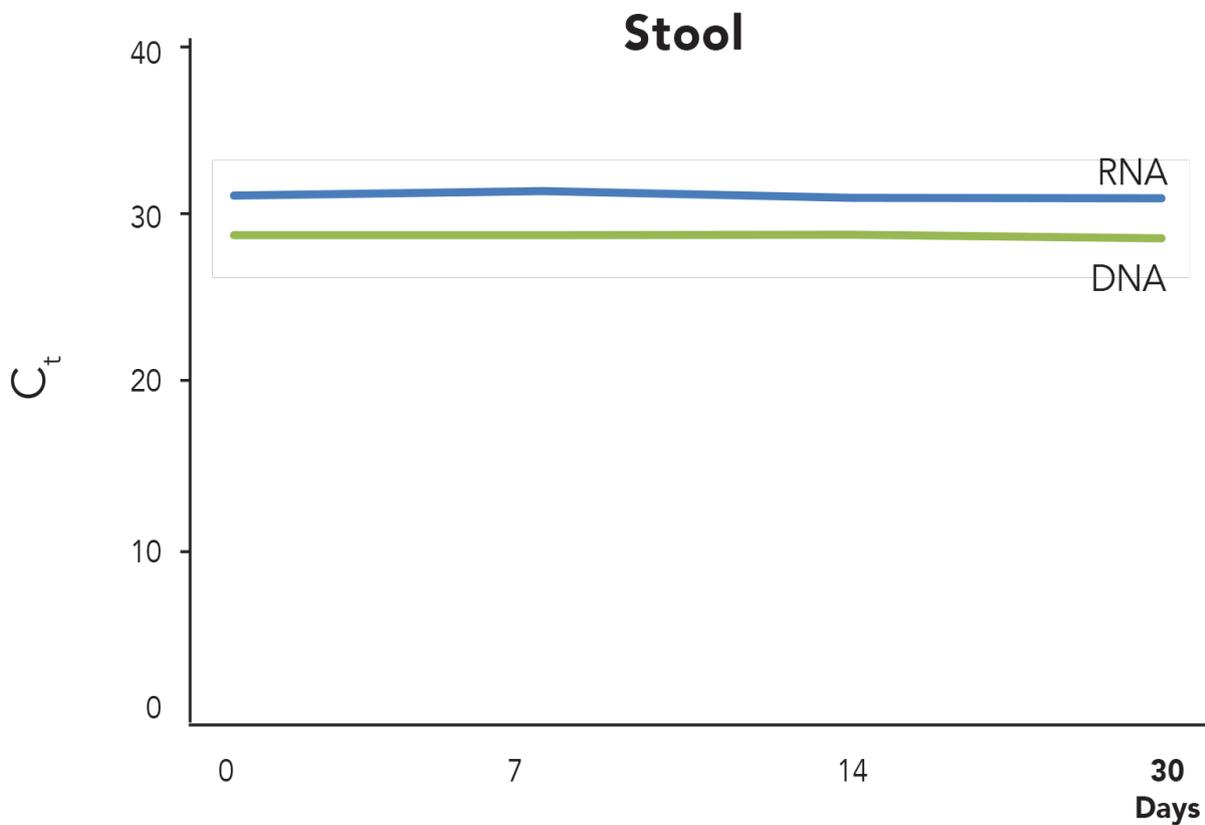
- preserve the nucleic acid content of the sample
- stabilize the sample for transport and storage at ambient temperature
- renders the sample non-infectious for safe transport and handling



Picture 1 Stability of genomic DNA isolated from a saliva sample preserved from 1 week (1w) to 75 months (75m) at ambient temperature. [Norgen Biotek](#)



Picture 2 Viruses, bacteria and yeast are effectively inactivated by DNA/RNA Shield™. Samples containing the infectious agents were treated with DNA/RNA Shield™ or mock (PBS) treated for 5 minutes. Titer (PFU) was subsequently determined by plaque assay. [Zymo Research](#)



Picture 3 RNA in stool is effectively stabilized in DNA/RNA Shield™ at ambient temperature. Graphs show spike-in DNA and RNA controls from stool purified at the indicated time-point and analyzed by (RT)qPCR. [Zymo Research](#)

2. SALIVA

The Saliva Collection and Preservation Devices are designed for simple and non-invasive saliva collection and subsequent preservation of nucleic acids in saliva samples at ambient temperature. The Saliva Preservative is an aqueous storage buffer designed for rapid cellular lysis that also renders the samples non-infectious and allows for safe transport and handling. Nucleic acids can be isolated from the stored saliva samples using most commercially available isolation kits. The isolated nucleic acids are of high quality and are suitable for all downstream applications such as PCR, microarrays, SNP analysis, methylation studies, sequencing, etc.

Saliva DNA Collection and Preservation Device (Norgen Biotek)



Collection volume: 2 ml saliva
DNA preservation: 5 years at RT
Renders samples non-infectious
Transport and storage of samples at RT
Package size: 50 individually packed devices

Research use only: Catalog # 298-RU4900
CE marked for diagnostic use: Catalog # 298-4900

Saliva DNA Collection, Preservation and Isolation Kit (Norgen Biotek)



Collection volume: 2 ml saliva
DNA preservation: 5 years at RT
Renders samples non-infectious
Transport and storage of samples at RT
Package size: 50 individually packed devices and reagents for 50 DNA isolations

Research use only: Catalog # 298-RU35700
CE marked for diagnostic use: Catalog # 298-35700

Saliva RNA Collection and Preservation Device (Norgen Biotek)

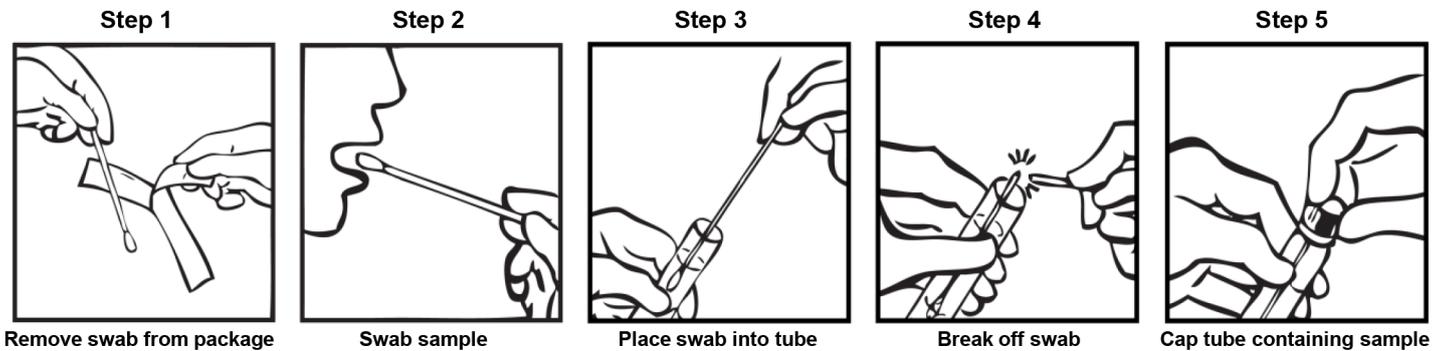


Collection volume: 2 ml saliva
RNA preservation: 2 months at RT
Renders samples non-infectious
Transport and storage of samples at RT
Package size: 50 individually packed devices

Research use only: Catalog # 298-RU53800

3. SWAB

The Swab Collection and Preservation Systems are designed for sample collection using a swab from feces and saliva, as well as nasal, buccal, skin and any other surfaces. Nucleic acids are stabilized and samples are rendered non-infectious, allowing for safe storage and handling at ambient temperature. Nucleic acids can be isolated from the stored samples using most commercially available isolation kits. The isolated nucleic acids are of high quality and are suitable for all downstream applications such as PCR, microarrays, SNPs, methylation studies, sequencing, etc.



Swab Collection and DNA Preservation Kit (Norgen Biotek)

Collect samples from: nose, mouth, saliva, feces, skin, surfaces

Preservative: 1.2 ml

DNA preservation: 2 years at RT

Renders samples non-infectious

Transport and storage of samples at RT

Package size: 50 individually packed devices

Research use only: Catalog # 298-45690



DNA/RNA Shield™ Swab Collection (Zymo Research)

Collect samples from: nose, mouth, saliva, feces, skin, and surfaces

12 x 80 mm screwcap vial prefilled with DNA/RNA Shield™

DNA preservation: 2 years at RT

RNA preservation: 1 month at RT

Renders samples non-infectious

Transport and storage of samples at RT



Product

DNA/RNA Shield™ Collection Tube w/ Swab (1ml fill)

DNA/RNA Shield™ Collection Tube w/ Swab (1ml fill)

DNA/RNA Shield™ Collection Tube w/ Swab (2ml fill)

DNA/RNA Shield™ Collection Tube w/ Swab (2ml fill)

Size

10 pack

50 pack

10 pack

50 pack

Catalog

BioSite-R1106

BioSite-R1107

BioSite-R1108

BioSite-R1109

4. STOOL

The stool collection devices contain a preservation solution that stabilizes both DNA and RNA, inactivates pathogens such as bacteria, fungi and viruses and reduces odor. Samples can subsequently be transported, stored and handled safely at ambient temperature.

Stool Nucleic Acid Collection and Preservation Tubes (Norgen Biotek)



Stool input: 2 g
DNA preservation: 2 years at RT
RNA preservation: 7 days at RT
Renders samples non-infectious
Transport and storage of samples at RT
Package size: 50 individually packed devices

Research use only: Catalog # 298-45660
CE marked for diagnostic use: Catalog # 298-Dx45660

Stool Nucleic Acid Collection and Preservation System (Norgen Biotek)

Stool input: 2 g
DNA preservation: 2 years at RT
RNA preservation: 7 days at RT
Renders samples non-infectious
Transport and storage of samples at RT
Package size: 50 individually packed devices incl. Alcohol Swabs, Fe-col® Collection Paper and Nitrile Gloves

Research use only: Catalog # 298-63700



DNA/RNA Shield™ Fecal Collection (Zymo Research)



Stool input: 1 g
DNA preservation: 2 years at RT
RNA preservation: 1 month at RT
Renders samples non-infectious
Transport and storage of samples at RT
Package size: 10 tubes

Research use only: Catalog # Biosite-R1101



Don't let the sample go into the toilet



Collect stool into a clean container



Scoop a portion of the stool sample into the DNA/RNA Shield™ Fecal Collection Tube



Wash hands well

Fecal DNA Collection & Preservation Mini Tubes (Norgen Biotek)

Stool input: 30 mg
DNA preservation: 27 months at RT
Renders samples non-infectious
Transport and storage of samples at RT
Package size: 12 tubes containing preservative and beads

Research use only: Catalog # 298-27650



Fecal Swab Collection and Preservation System (Norgen Biotek)

Stool input: 30 mg
DNA preservation: 2 years at RT
RNA preservation: 7 days at RT
Renders samples non-infectious
Transport and storage of samples at RT
Package size: 50 individually packed devices

Research use only: Catalog # 298-45670



5. BLOOD

We offer blood storage devices for the stabilization and preservation of nucleic acids from blood cells, the preservation of cell-free circulating nucleic acids, or the stabilization of blood cells for immunophenotyping. Conveniently collect whole blood directly into the vacuum tubes and store/transport your sample safely at ambient temperature.

Stabilization of nucleic acids (DNA/RNA)

The nucleic acid stabilization buffers are designed for rapid cellular lysis and subsequent preservation of nucleic acids from fresh blood samples.

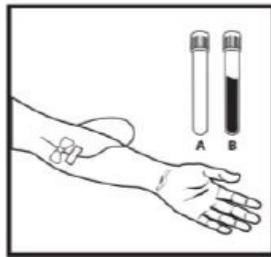
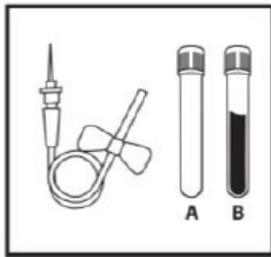


DNA/RNA Shield™ Blood Sample Collection (Zymo Research)

Blood draw volume: 3 ml
DNA preservation: 2 years at RT
RNA preservation: 1 month at RT
Renders samples non-infectious
Transport and storage of samples at RT
Package size: 50 tubes

Research use only: Catalog # Biosite-R1150

Draw Order:
Tube A - Discard Tube
Tube B - DNA/RNA Shield Blood Tube



DNA/RNA Shield™ (2X concentrate) (Zymo Research)

DNA preservation: 2 years at RT
RNA preservation: 1 month at RT
Renders samples non-infectious
Transport and storage of samples at RT
Research use only

Size	Catalog #
25 ml	Biosite-R1200-25
125 ml	Biosite-R1200-125



Blood DNA Preservation Buffer (3X concentrate) (Norgen Biotek)

DNA preservation: 2 weeks at RT
Renders samples non-infectious
Transport and storage of samples at RT
Research use only

Size	Catalog #
25 ml	298-29111
100 ml	298-29112



Cell-Free DNA or RNA BCT® (Streck)

Cell-Free BCT are blood collection tubes with a patented preservative which stabilizes cell-free DNA or RNA in plasma and prevents the release of non-target background nucleic acids from nucleated blood cells during sample processing and storage.

Blood Draw Volume: 10.0 ml or 2.0 ml (DNA only)

cfDNA/gDNA Sample Stability: 14 days at 6°C to 37°C

Circulating Tumor Cells (CTC) Sample Stability: 7 days at 15°C to 30°C

cfRNA stability: 7 days at 6°C to 37°C

Product	Size	Catalog #
Cell-Free DNA BCT®	6 tube pack	309-218961
Cell-Free DNA BCT®	100 tube box	309-218962
Cell-Free DNA BCT®	1,000 tube case	309-218992
Cell-Free DNA BCT CE	6 tube	309-218996
Cell-Free DNA BCT CE	100 tube	309-218997
Cell-Free DNA BCT CE	1000/case	309-230244
Cell-Free DNA BCT®	6 x 2.0 ml	309-230242
Cell-Free DNA BCT®	100 x 2.0 ml	309-230243
Cell-Free DNA BCT CE	6 x 2.0 ml	309-230250
Cell-Free DNA BCT CE	100 x 2.0 ml	309-230251
Cell-Free DNA BCT®	6 vials Plastic	309-230252*
Cell-Free DNA BCT®	100 vials Plastic	309-230253*
Cell-Free DNA BCT®	1,000/case Plastic	309-230254*
Cell-Free DNA BCT CE	6 vials Plastic	309-230255*
Cell-Free DNA BCT CE	100 vials Plastic	309-230256*
Cell-Free DNA BCT CE	1000/case Plastic	309-230257*
Cell-Free RNA BCT®	6 tube pack	309-218975
Cell-Free RNA BCT®	100 tube box	309-218976
Cell-Free RNA BCT CE	6 tube	309-230248
Cell-Free RNA BCT CE	100 tube	309-230249
Cell-Free RNA BCT®	6 vials Plastic	309-230308*
Cell-Free RNA BCT®	100 vials Plastic	309-230309*
Cell-Free RNA BCT CE	6 vials Plastic	309-230310*
Cell-Free RNA BCT CE	100 vials Plastic	309-230311*

*to be launched during Q3 or Q4 2017



cf-DNA Preservative Tubes (Norgen Biotek)

Blood draw volume: 8.3 ml
 Plasma recovery: 6-7 ml
 cf-DNA preservation: 30 days at RT or 8 days at 37°C
 Inhibits apoptosis of blood cells
 Transport and storage of samples at RT
 Research use only



Size	Catalog #
50 tubes	298-63950
100 tubes	298-63960

Stabilization of blood cells for immunophenotyping

TransFix® is a cellular antigen stabilization solution that prevents cellular degradation in a variety of specimen types for flow cytometric analysis: whole blood, cerebrospinal fluid (CSF), bone marrow, circulating tumour cells and animal blood.

TransFix®/EDTA Vacuum Blood Collection Tubes - CE/IVD (Cytomark)

Cellular antigen stabilization: 14 days at 2-8°C



Blod draw volume	Size	Catalog #
3 ml	1 tube	TVT-03-1
	2 tubes	TVT-03-2
	50 tubes	TVT-03-50
9 ml	1 tube	TVT-09-1
	2 tubes	TVT-09-2
	50 tubes	TVT-09-50

Cyto-Chex® BCT (Streck)

Cellular antigen stabilization: 14 days at 18°C to 22°C and up to 7 days at 30°C
 Contains K3EDTA as an anticoagulant

Product	Size	Catalog #
Cyto-Chex® BCT	5.0 ml, 6 tube pack	309-213361
Cyto-Chex® BCT	5.0 ml, 25 tube box	309-213362
Cyto-Chex® BCT	5.0 ml, 100 tube box	309-213386
Cyto-Chex® BCT	2.0 ml, 6 tube pack	309-213559
Cyto-Chex® BCT	2.0 ml, 100 tube box	309-218980
Cyto-Chex® BCT	4.0 ml, 6 tubes Plastic	309-230304
Cyto-Chex® BCT	4.0 ml, 25 tubes Plastic	309-230305
Cyto-Chex® BCT	4.0 ml, 100 tubes Plastic	309-230306



TransFix® Sample Storage Tubes - CE/IVD (Cytomark)

Cellular antigen stabilization: 14 days at 2-8°C
 1.2 ml tubes containing 0.2 ml of TransFix
 No anticoagulant

Size	Catalog #
2 tubes	TF-01-2
10 tubes	TF-01-10
25 tubes	TF-01-25
50 tubes	TF-01-50

TransFix/EDTA CSF Sample Storage Tubes - RUO (Cytomark)



Cellular antigen stabilization: 14 days at 2-8°C
 Tubes containing 0.2 ml of TransFix stabilize 5 ml of CSF
 Research use only

Size	Catalog #
2 tubes	TF-CSF-01-2
10 tubes	TF-CSF-01-10
25 tubes	TF-CSF-01-25
50 tubes	TF-CSF-01-50



TransFix bulk - CE/IVD (Cytomark)

Cellular antigen stabilization: 14 days at 2-8°C

Size		Catalog #
1 ml/tube	1 tube	TFB-01-1
	10 tubes	TFB-01-10
	50 tubes	TFB-01-50
20 ml/tube	1 tube	TFB-20-1

Streck Cell Preservative™ (Streck)

Streck Cell Preservative is used as a liquid preservative for bone marrow aspirates, surgical tissue samples, fine needle aspirates and peripheral and cord blood.
 Sample preservation: 7 days at RT

Product	Size	Catalog #
Streck Cell Preservative™	6 x 1.0 ml	309-213350
Streck Cell Preservative™	24 x 1.0 ml	309-213352
Streck Cell Preservative™	50 x 1.0 ml	309-213355
Streck Cell Preservative™	2 x 10 ml vial	309-213358



TransFix Phlebotomy Packs - CE/IVD (Cytomark)

Cellular antigen stabilization: 14 days at 2-8°C

Each pack contains one safety holder with an integrated and orientated needle and one TransFix/EDTA Vacuum Blood Collection Tube.

Available for the stabilization of 3 ml or 9 ml of blood

Needle is available in 6 different sizes

6. URINE

The urine collection and preservation devices are designed for the rapid stabilization of fresh urine samples. The samples are rendered non-infectious for safe handling and shipping at ambient temperature.



Urine Preservative Single Dose (Norgen Biotek)

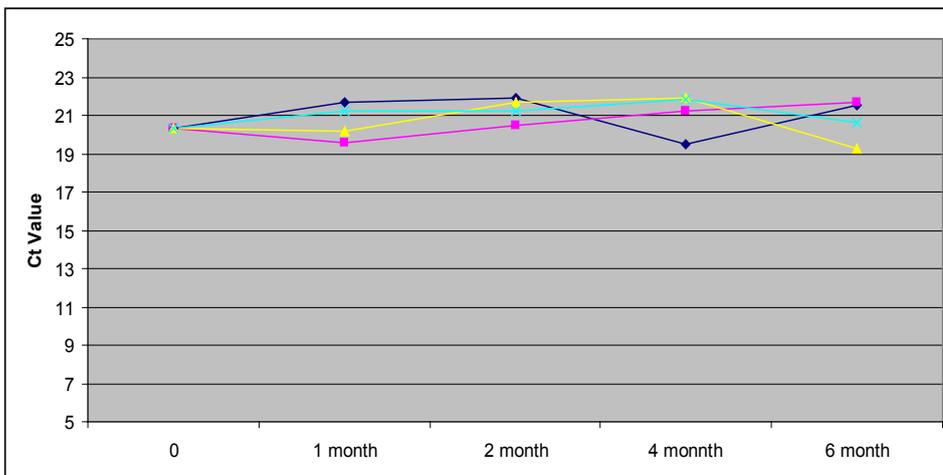
Urine input: 5-50 ml
 Preservation of RNA/microRNA/DNA/Proteins: > 2 years at RT
 Renders samples non-infectious
 Transport and storage of samples at RT
 Preserves cell-free macromolecules, exfoliated cells and microorganisms
 Research use only

Size	Catalog #
1 ampule	298-18124
50 ampules	298-18126

Urine Collection and Preservation Tubes (Norgen Biotek)

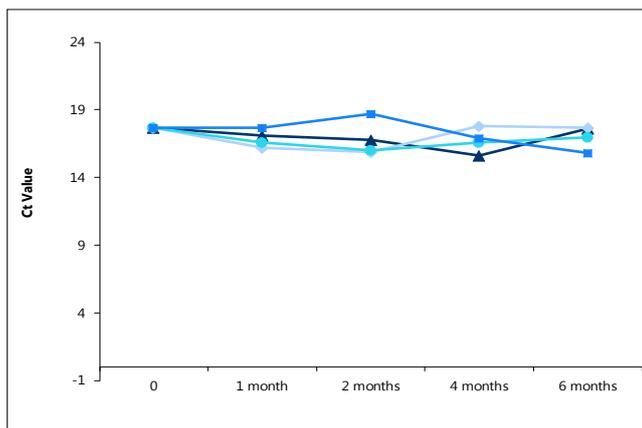
Preservation of RNA/microRNA/DNA/Proteins: > 2 years at RT
 Renders samples non-infectious
 Transport and storage of samples at RT
 Preserves cell-free macromolecules, exfoliated cells and microorganisms
 Research use only

Size		Catalog #
1-5 ml	1 tube	298-18116
1-5 ml	50 tubes	298-18118
5-15 ml	1 tube	298-18120
5-15 ml	50 tubes	298-18122
5-45 ml	1 tube	298-18111
5-45 ml	50 tubes	298-18113

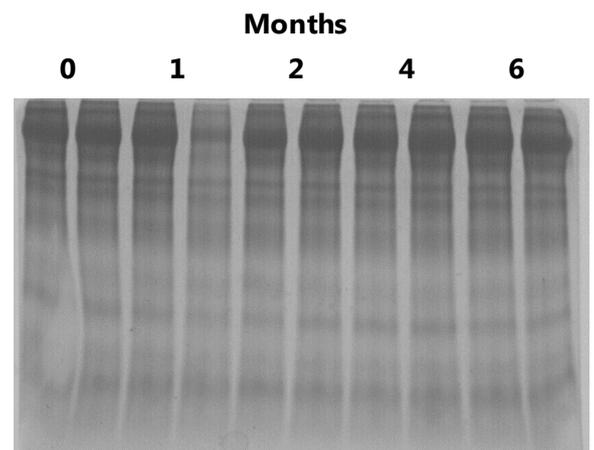


Picture 1 Stability of RNA Norgen Biotek

Stability of DNA, RNA and protein in Norgen's urine preservative. Urine collected into a Urine Collection and Preservation Tube was stored at -20°C, 4°C, ambient temperature or 55°C for 6 months. DNA, RNA and protein were isolated at time points 0, 1, 2, 4 and 6 months from the preserved urine sample. The isolated DNA was used as a template in a real-time PCR reaction to detect the 5S gene; the isolated RNA was used as a template in a reverse-transcription PCR reaction to detect the 5S gene; the isolated proteins were analyzed on a 12% SDS-PAGE gel.



Picture 2 Stability of DNA Norgen Biotek



Picture 3 Stability of Proteins Norgen Biotek

Urine Conditioning Buffer (UCB) (Zymo Research)

Urine input: 70 µl UCB per 1 ml urine
Preservation of RNA/DNA: 1 month at RT
Renders samples non-infectious
Transport and storage of samples at RT
Research use only

Size Catalog

8 ml Biosite-D3061-1-8
140 ml Biosite-D3061-1-140



Urine Collection Kit (Zymo Research)

Urine input: up to 100 ml
Preservation of RNA/DNA: 1 month at RT
Renders samples non-infectious
Transport and storage of samples at RT
Package size: 10 devices incl. urine collection cup and urine conditioning buffer
Research use only: Catalog # Biosite-D3062

Cell-Free DNA Urine Preserve (Streck)

Urine input: 25-100 ml
Stabilizes all cellular components and cfDNA
Preservation of cfDNA: 7 days at 6 °C to 37 °C

Product

Cell-Free DNA Urine Preserve 20 x 5 ml
Cell-Free DNA Urine Preserve 5 x 5 ml

Size

Catalog

309-230216
309-230230



7. MICROBIAL SAMPLES

During the collection and transportation phase, microbes can continue to grow and decay and nucleic acids can degrade due to exposure to nucleases, elevated temperatures, pH extremes, and other harsh conditions. These factors can lead to overall misrepresentation of the original community profile, causing downstream bias. The collection devices and sample stabilization buffer DNA/RNA Shield™ are designed to provide an unbiased molecular snapshot of your sample at the time of collection, thus ensuring accurate microbial community profiling, genetic identification and expression profiling. Samples can be collected from the environment, animals, cultured organisms, or from anywhere where microbes are the target of analysis.

DNA/RNA Shield™ Lysis Tube w/ Swab (Microbe) (Zymo Research)



2 ml screwcap tube filled with 1 ml DNA/RNA Shield™ and ultra-high density Bashingbeads™ (0.5 mm & 0.1 mm beads)
Nylon swab with 20 mm breakpoint
DNA preservation: 2 years at RT
RNA preservation: 1 month at RT
Renders samples non-infectious
Transport and storage of samples at RT
Package size: 50 tubes

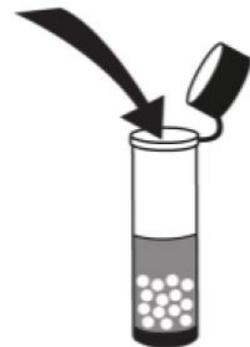
Research use only: Catalog # Biosite-R1104

DNA/RNA Shield™ Lysis Tube (Microbe) (Zymo Research)



2 ml screwcap tube filled with 1 ml DNA/RNA Shield™ and ultra-high density Bashingbeads™ (0.5 mm & 0.1 mm beads)
DNA preservation: 2 years at RT
RNA preservation: 1 month at RT
Renders samples non-infectious
Transport and storage of samples at RT
Package size: 50 tubes

Research use only: Catalog # Biosite-R1103



Place collected sample into DNA/RNA Shield™ Lysis Tube

DNA/RNA Shield™ Collection Tube (Zymo Research)

2 ml screwcap tube filled with 1 ml DNA/RNA Shield™
DNA preservation: 2 years at RT
RNA preservation: 1 month at RT
Renders samples non-infectious
Transport and storage of samples at RT
Package size: 50 tubes

Research use only: Catalog # Biosite-R1102



8. TISSUE

Tissue samples, whole insects and a variety of other environmental samples (soil, plant material, feces, etc.) can be stabilized in DNA/RNA Shield™. The samples are rendered non-infectious and can be safely handled and stored at ambient temperature. The genetic integrity and expression profiles of the sample is preserved and the samples can be processed with most commercially available nucleic acid isolation kits without the need for removal of the DNA/RNA Shield™.

DNA/RNA Shield™ (Zymo Research)

100 mg tissue per 1 ml DNA/RNA Shield™
DNA preservation: 2 years at RT
RNA preservation: 1 month at RT
Renders samples non-infectious
Transport and storage of samples at RT
Research use only

Size Catalog

50 ml Biosite-R1100-50
250 ml Biosite-R1100-250

DNA/RNA Shield™ Lysis Tube (Tissue) (Zymo Research)



2 ml screwcap tube filled with 1 ml DNA/RNA Shield™ and ultra-high density Bashingbeads™ (2 mm beads)
DNA preservation: 2 years at RT
RNA preservation: 1 month at RT
Renders samples non-infectious
Transport and storage of samples at RT
Package size: 50 tubes

Research use only: Catalog # Biosite-R1105

9. MILK

This kit provides a rapid all-in-one procedure for the preservation and isolation of milk DNA at ambient temperatures. The milk samples are stable for 1 month at room temperature (or 1 week at 37°C) in the preservation solution and high quality DNA from somatic cells and bacteria present in the milk can be isolated and detected from as little as 100 µL of milk.

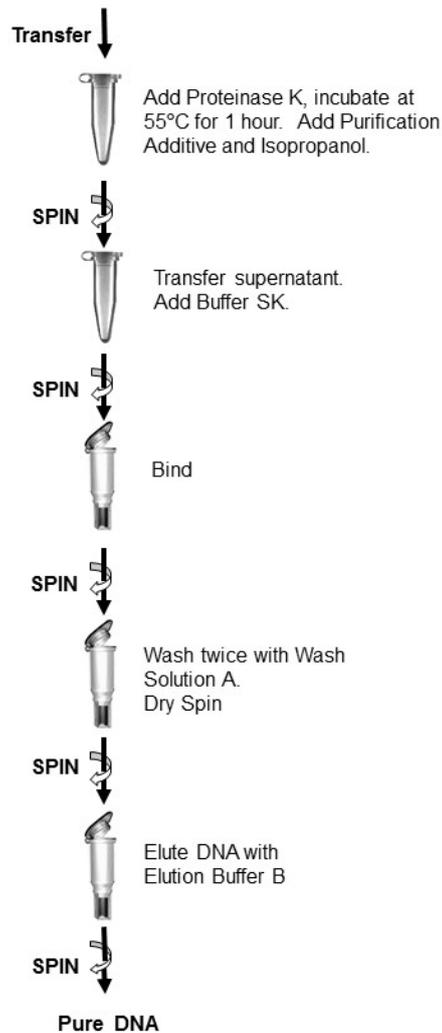
Milk DNA Preservation and Isolation (Norgen Biotek)



Collection volume: 0.5 ml milk
DNA preservation: 1 month at RT
Renders samples non-infectious
Transport and storage of samples at RT
Package size: 25 preparations

Research use only: Catalog # 298-44800

Collect milk sample into vials containing **Preservation Solution E** (1:1)



10. ACCESSORIES

Sterile Individually Wrapped Swabs (Norgen Biotek)



Collect samples: saliva
Package size: 50 individually packed devices
Research use only: Catalog # 298-RU49060

Shipping Accessories - 50 Mailers (Norgen Biotek)

All shipping requirements in one convenient mailer:

- Leak-proof biohazard bags with adsorbent pads for enhanced safety
- A Bubble Envelope
- 2 blank labels

Matches the standards of OSHA as well as the IATA regulations

Package size: 50

Research use only: Catalog # 298-38300



Urine Collection Cup (120 ml) (Zymo Research)



Collect samples: 100 ml urine
Package size: 10 cups
Research use only: Catalog # Biosite-D3062-1

TerraLyzer™ (Zymo Research)

- For cordless, portable, and convenient homogenization of tough-to-have biological and environmental samples
- Allows the researcher to "Take the Lab to the Field" and to the site of sample collection with Zymo Research's state of the art products for environmental DNA and RNA purification
- Ideal for both field and lab use

Size **Catalog #**
1 unit Biosite-S6022



A detailed microscopic image of plant roots, showing various root types and structures in shades of purple, pink, and brown against a dark blue background. The roots are intertwined and show cellular details.

Tell us more about your research
– we can help you reach your goals

Sweden +46 (0)8 5444 3340
Denmark +45 8844 8801
Norway +47 2396 0418
Finland +358 (0)20 7432 007
Estonia +358 (0)20 7432 007
Latvia +358 (0)20 7432 007
Lithuania +358 (0)20 7432 007

info@nordicbiosite.com
www.nordicbiosite.com