

## Urine Preservation Products

Norgen's Urine Preservative is designed for the rapid preservation of nucleic acids and proteins from fresh urine samples. The Urine Preservative prevents the growth of Gram-negative and Gram-positive bacteria and fungi, and also inactivates viruses allowing the resulting non-infectious samples to be handled and shipped safely. In addition, the Urine Preservative eliminates the need to immediately process or freeze samples and allows the samples to be shipped to centralized testing facilities at ambient temperatures. The components of the Urine Preservative allow samples to be stored for over 2 years at room temperature with no detected degradation of urine DNA, RNA or proteins.



Norgen's Urine Preservative is available in 2 convenient formats:

### 1. Urine Preservative Single Dose Ampules

With this product Norgen's Urine Preservative is supplied in a liquid format in single dose ampules. The user simply collects 5 - 50 mL of urine into a urine collection container and adds the contents of the Urine Preservative Single Dose (Cat# 18124). The urine and preservative are then mixed, and the urine nucleic acids and proteins are preserved at room temperature.

### 2. Urine Collection and Preservation Tubes/Cups

Norgen's Urine Preservative is also available in a dried format in Norgen's Urine Collection and Preservation Tubes/Cups. The user simply collects urine into the tube/cup and mixes gently until the orange preservative pellet in the tube has dissolved. Norgen's Urine Collection and Preservation Tubes/Cups are available in 4 convenient sizes:

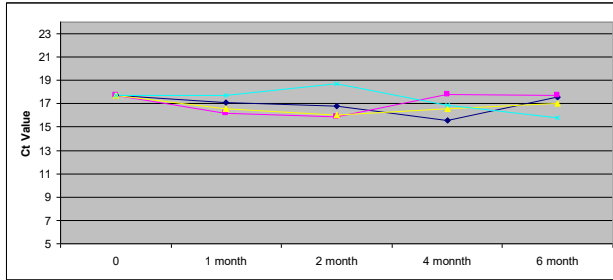
- 5 cc tubes, 1 - 5 mL of urine
- 15 cc tubes, 5 - 15 mL of urine
- 50 cc tubes, 5 - 50 mL of urine
- 120 cc cup, 100 - 120 mL of urine

### Urine Preservative Benefits

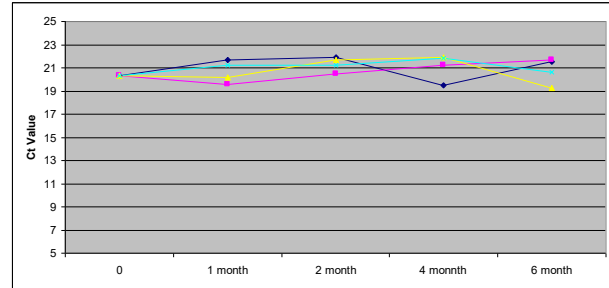
Norgen's Urine Preservative is available in 2 formats	Available as a liquid in convenient single-dose ampules, as well as in a dried format in Urine Collection and Preservation Tubes/Cups
No need to immediately process samples	The urine preservative eliminates the need to immediately process or freeze samples.
Nucleic acid and protein preservation at room temperature for up to 2 year	Intact, biologically active urine DNA, RNA and proteins have been isolated from samples stored in Norgen's Urine Preservative for over 2 years.
Ship urine samples at room temperature safely	The preservative prevents the growth of Gram-negative and Gram-positive bacteria and inactivates viruses, allowing urine samples stored in the Urine Collection and Preservation Tubes/Cups to be safely shipped at room temperature.
Compatible with most DNA/RNA/Protein isolation methods	Urine DNA/RNA/Proteins can be isolated from the preserved samples using a number of different methods, including Norgen's urine-based sample preparation kits.

## Urine Preservation Products

**A.**



**B.**



**Stability of DNA and RNA in Norgen's Urine Preservative.** Two 50 mL urine samples were collected into Urine Collection and Preservation Tubes (50 cc) and were mixed well with the dried preservative. The preserved urine was stored at  $-20^{\circ}\text{C}$ ,  $4^{\circ}\text{C}$ , room temperature and  $55^{\circ}\text{C}$  for up to 6 months. Urine DNA and urine RNA were subsequently isolated at time 0, 1 month, 2 months, 4 months and 6 months from the preserved urine sample. The DNA isolated from the preserved urine samples stored at  $-20^{\circ}\text{C}$ ,  $4^{\circ}\text{C}$ , room temperature and  $55^{\circ}\text{C}$  at the various time points was used as the template in a real-time PCR reaction to detect the 5S gene (Panel A), while the RNA isolated from the urine at the various time points and temperatures was used as the template in a reverse-transcription real-time PCR reaction to detect the 5S gene (Panel B). As it can be seen, all the DNA and RNA samples were successfully amplified. Furthermore, the quality of the preserved urine DNA and RNA stored at all 4 temperatures did not change from 0 months to 6 months, as indicated by the fact that the Ct value remained consistent. The urine samples stored at  $55^{\circ}\text{C}$  can allow us to extrapolate results based on accelerated-aging, and therefore the samples stored at  $55^{\circ}\text{C}$  for 6 months show equal stability to concentrated urine preserved for 2.5 years at room temperature ( $24^{\circ}\text{C}$ ). Therefore, based on the successful PCR results for samples stored at  $55^{\circ}\text{C}$  shown above, the DNA and RNA in urine samples stored in Norgen's Urine Preservative is stable at room temperature for up to 2.5 years.

Cat #	Description	Quantity
18118	Urine Collection and Preservation Tubes (5cc)	1 tube
18118	Urine Collection and Preservation Tubes (5 cc)	50 tubes
18120	Urine Collection and Preservation Tubes (15 cc)	1 tube
18122	Urine Collection and Preservation Tubes (15 cc)	50 tubes
18111	Urine Collection and Preservation Tubes (50 cc)	1 tube
18113	Urine Collection and Preservation Tubes (50 cc)	50 tubes
18129	Urine Collection and Preservation Cup (120 cc)	1 cup
18124	Urine Preservative Single Dose Ampule	1 ampule
18126	Urine Preservative Single Dose Ampule	50 ampules