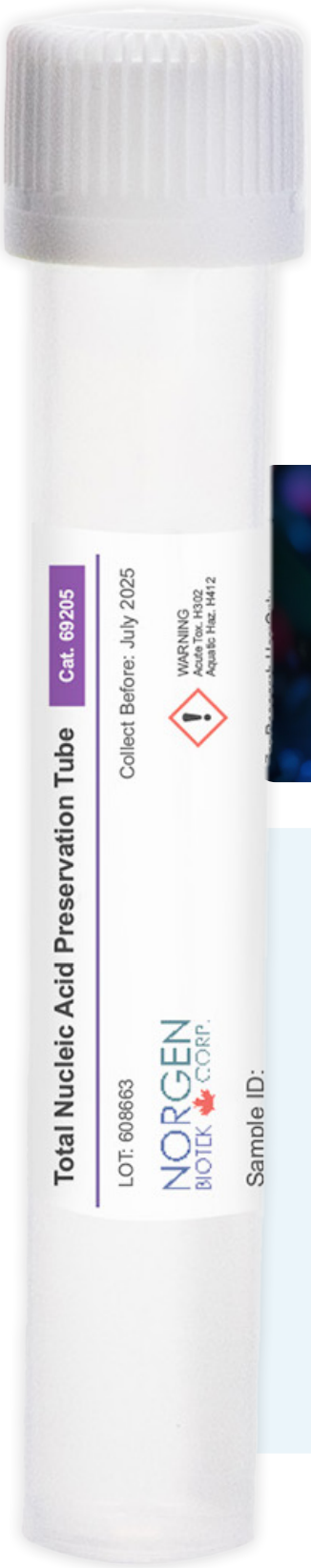
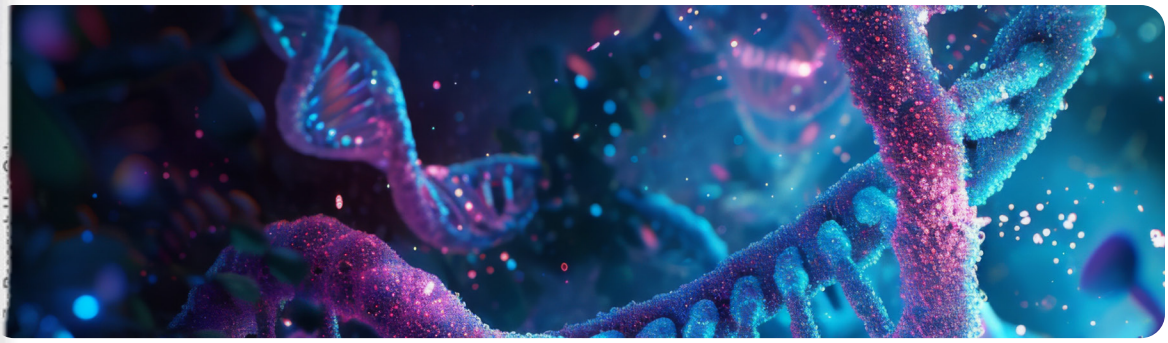


Total Nucleic Acid Preservation Tubes

CAT.69200 Dx69200

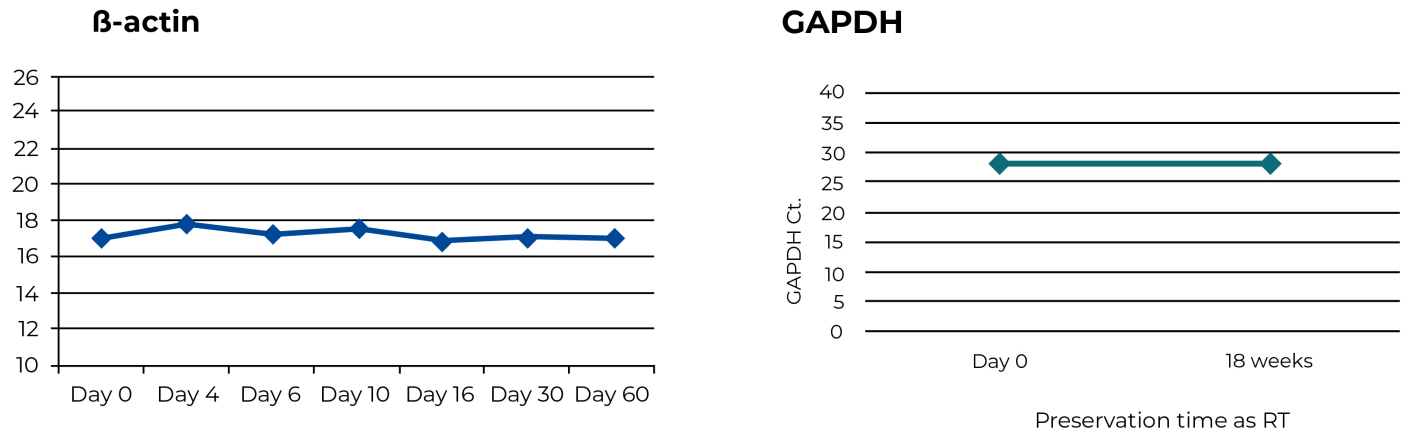
For ambient preservation and transport of total nucleic acids (DNA and RNA) from samples collected using a swab



- No need to immediately process samples
- Total DNA, including viral DNA, preserved at room temperature over 4 months
- Total RNA, including viral RNA, preserved at room temperature over 2 months
- Inactivate microorganisms including bacteria, fungi, yeast and viruses
- Inactivates SARS-CoV-2 virus
- Ship swab samples at room temperature safely
- Compatible with most DNA and RNA isolation methods
- CE-IVD marked version available

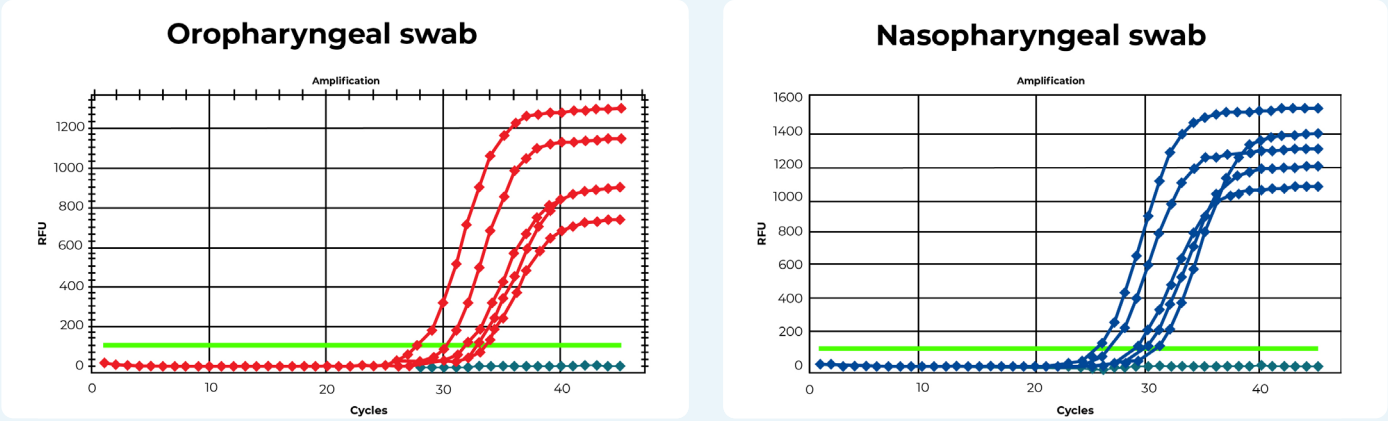
NORGEN BIOTEK

Advantages to Bring to Your Lab



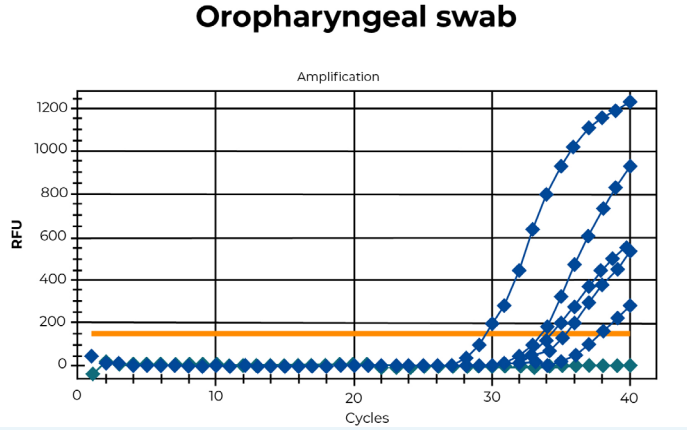
Long-Term Stability of RNA and DNA in Norgen's Total Nucleic Acid Preservative

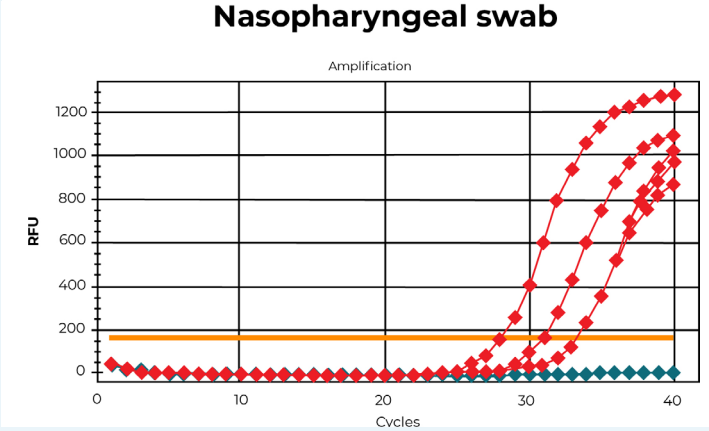
Figure 1. Stability of RNA and DNA stored in Norgen's Total Nucleic Acid Preservative. GAPDH (for DNA) and β-actin (for RNA) were monitored over an 18 week period for DNA and 60 days for RNA from swab samples stored at ambient temperature in Norgen's Total Nucleic Acid Preservation Tubes. RNA was isolated from 250 µL of preserved swab samples on day 0, day 4, day 6, day 10, day 16, day 30 and day 60 using Norgen's Total RNA Isolation Kit (Cat.# 17200). DNA was isolated from 250 µL of preserved swab samples on day 0 and 18 weeks using Norgen's Saliva DNA Isolation Kit (Cat# Dx45400). Next, 4 µL of elution was used in a 20 µL real-time PCR reaction using CFX96 Touch™ Real-Time PCR Detection System (Bio-Rad). RNA can be stored in Norgen's Total Nucleic Acid Preservative for up to 60 days and DNA can be stored for up to 18 weeks at room temperature with no change in quality and quantity of RNA and DNA.



High RNA Stability Across Swab Sample Types with Norgen's Total Nucleic Acid Preservative

Figure 2. Stability of RNA from different swab sample types stored in Norgen's Total Nucleic Acid Preservative. Amplification of the RNase Protein (RP) gene from 5 oropharyngeal swab samples and 5 nasopharyngeal swab samples purified using Norgen's Total RNA Purification Kit were successfully validated from both swab sample types with high efficiency (<40 Ct.) by TaqMan One-Step RT-PCR.





High DNA Stability Across Swab Sample Types with Norgen's Total Nucleic Acid Preservative

Figure 3. Stability of DNA from different swab sample types stored in Norgen's Total Nucleic Acid Preservative. Amplification of the GAPDH gene from 5 oropharyngeal swab samples and from 5 nasopharyngeal swab samples purified using Norgen's Saliva DNA Isolation Kit were successfully validated from both swab sample types with high efficiency (<40 Ct.) by TaqMan PCR.

G+, G- bacteria and Yeast	Viability test mix	RT incubation time				
		5 min	10 min	15 min	30 min	1 h
staphylococcus aureus	Media only (Background control)	-	-	-	-	-
	with media	++++	++++	++++	++++	++++
	with Saliva RNA preservative	-	-	-	-	-
E.coli	Media only (Background control)	-	-	-	-	-
	with media	++++	++++	++++	++++	++++
	with Saliva RNA preservative	-	-	-	-	-
Saccharomyces cerevisiae	Media only (Background control)	-	-	-	-	-
	with media	++++	++++	++++	++++	++++
	with Saliva RNA preservative	-	-	-	-	-
Virus	**Viability test mix**	**No Treatment**	**0 min**	**2 min**	**5 min**	**10 min**
Adenovirus	Uninfected Cell (- Control)	-	N/A	N/A	N/A	N/A
	infected Cells (+ Control)	++++	N/A	N/A	N/A	N/A
	Infected with Saliva RNA Preservative treated virus	N/A	-	-	-	-

Norgen's Total Nucleic Acid Preservative Effectively Inhibits Microbial Growth

Figure 4. Inhibitory Effects of Norgen's Total Nucleic Acid Preservative on the Growth of Bacteria, Yeast and Viruses. The effect of Norgen's Total Nucleic Acid Preservative on the growth of microorganisms clearly demonstrated that Norgen's preservative inhibits the growth of virus, bacteria and yeast, thereby resulting in non-infectious samples that can be handled and shipped safely.

Selected Publications Supporting Our Technology

Luc Magloire Anicet Boumba, Aubièrge Victoire Kimpamboundi-Matondo, Parfait Christy Nganga, Colombe Sagesse Luzayisu, Ragive Parode Takale, et al. (2022) Sars-Cov-2 and COVID-19: Epidemiological, Diagnostic, and Therapeutic Aspects in Pointe-Noire, Republic of the Congo. Journal of Virology Research & Reports. SRC/JVRR-145. DOI: doi.org/10.47363/JVRR/2022(3)144

Romina Fakhraei, Erica Erwin, Kameela M. Alibhai, Malia S.Q. Murphy, Alysha L.J. Dingwall-Harvey, Ruth Rennicks White, Sheryll Dimanlig-Cruz, Rosemary LaRose, Kimberly Grattan, Jian-Jun Jia, George Liu, Corey Arnold, Yannick Galipeau, Khatereh Shir-Mohammadi, Gillian D. Alton, Jessica Dy, Mark C. Walker, Deshayne B. Fell, Marc-André Langlois, Darine El-Chaâr Jul 2022, 10 (3) E643-E651; DOI: 10.9778/cmajo.20210228

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RNA/DNA Purification Kits	50 Prep	48700
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