Stool Nucleic Acid Isolation Kit

Norgen's Stool Nucleic Acid Isolation kit provides a convenient and rapid method to isolate total DNA and RNA from fresh or frozen stool samples. The universal protocol conveniently allows for the isolation of total genomic DNA and total RNA from all the various microorganisms and host cells found in the stool sample simultaneously. The kit removes all traces of humic acid using the provided Bead Tubes and a combination of chemical and physical homogenization and lysis, without the use of phenol-chloroform extractions. A simple and rapid spin column procedure is then used to further purify the DNA and RNA. The purified DNA and RNA are of the highest quality and are fully compatible with downstream PCR applications, as all humic acid substances and PCR inhibitors are removed during the isolation. Purification is based on spin column chromatography using Norgen's proprietary resin as the separation matrix.

Kit Specifications			
Maximum Stool Input (Fresh or Frozen Stool)	200 mg	Maximum Column Binding Capacity	50 µg
Time to Complete 10 Purifications	30 minutes	Maximum Column Loading Volume	650 µL

Stool Nucleic Acid Isolation Kit Benefits	
Universal procedure	Simultaneous isolation of both host and microbial RNA and DNA using a single convenient procedure
Remove all humic acid from RNA and DNA samples	The kit removes all traces of humic acid using the provided Bead Tubes and a combination of chemical and physical homogenization and lysis.
No organic extractions	Isolated high quality RNA and DNA without the use of phenol or chlorofom
Fast and easy processing	Rapid and convenient spin column format allows for the isolation of total stool RNA and DNA in 30 minutes.
Isolate high yields of total RNA and DNA	Isolate consistent, high yields of RNA and DNA free from all inhibitors including humic acid, that can used directly in downstream applications including PCR.

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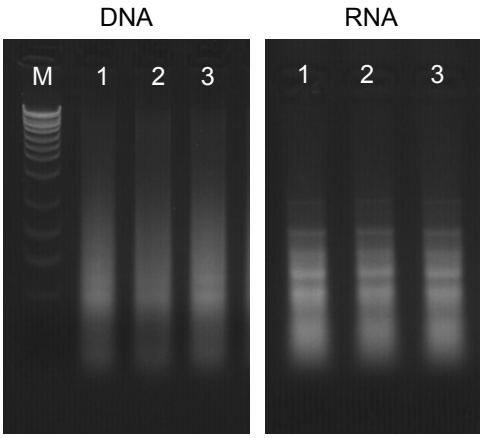

Figure 1. Isolation of Stool DNA and RNA
Total RNA and DNA was isolated from 3 different stool samples using Norgen's Stool Nucleic Acid Isolation Kit. The DNA was analyzed by running 10 µL of the 75 µL elution on a 1.2% 1xTAE agarose gel. M: Norgen's HighRanger 1kb DNA ladder (Cat. 11900). High quality genomic DNA was isolated. To analyze the RNA 7.5 µL of the elution was loaded on a 1.2 % MOPS agrarose gel. All samples showed good RNA integrity and total RNA profile that includes large and small RNA.

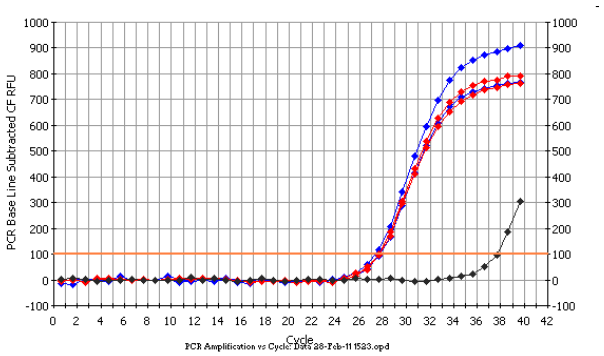

Figure 2. Detection of Human DNA from Stool Samples. Total RNA and DNA were isolated from two different stool samples using Norgen's Stool Nucleic Acid Isolation Kit. Two microliters of each elution was used in 20 µL of Norgen's 2X PCR Mastermix spiked with SYBR green (Bio-Rad), using 0.3µM of primers against GAPDH. As can be seen in the amplification plot, all four samples were successfully amplified, indicating that PCR inhibitors were removed and the kit isolated high quality of DNA from stool.

Stool Nucleic Acid Isolation Kit Contents

1. Lysis Buffer C
2. Binding Buffer E
3. Wash Solution A
4. Elution Buffer E
5. Bead Tube
6. Spin Columns
7. Collection Tubes
8. Elution tubes (1.7 mL)
9. Product Insert

Shipping Conditions
The Stool Nucleic Acid Isolation Kit is shipped at room temperature.

Customer-Supplied Reagents and Equipment

- Benchtop microcentrifuge
- DNase and RNase-free microcentrifuge tubes
- Flat bed vortex or bead beater equipment
- 96 - 100% ethanol
- 70% ethanol

Storage Conditions
All solutions should be kept tightly sealed and stored at room temperature. All the reagents should remain stable for at least 1 year in their unopened containers.

Cat #	Description	Quantity
45600	Stool Nucleic Acid Isolation Kit	50 preps

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