

Stool Nucleic Acid Isolation Kit

CAT. 45600

A CONVENIENT AND RAPID METHOD TO ISOLATE TOTAL DNA AND RNA FROM FRESH, FROZEN AND PRESERVED STOOL SAMPLES



This kit provides a rapid spin column method to isolate total DNA and RNA from fresh or frozen stool samples, as well as from stool collected using Norgen's Stool Nucleic Acid Collection and Preservation Tubes (Cat. 45660).

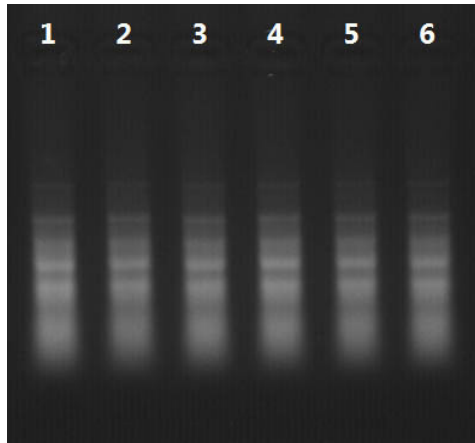
The universal protocol conveniently allows for the isolation of total genomic DNA and total RNA from all the various microorganisms and host cells found in the stool sample simultaneously.

- ✓ Simultaneous isolation of both host and microbial DNA and RNA
- ✓ Eliminates PCR inhibitors including humic acids
- ✓ High quality total RNA and DNA for sensitive downstream applications
- ✓ Purification is based on spin column chromatography that uses Norgen's proprietary resin



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Advantages You Will Bring to Your Lab



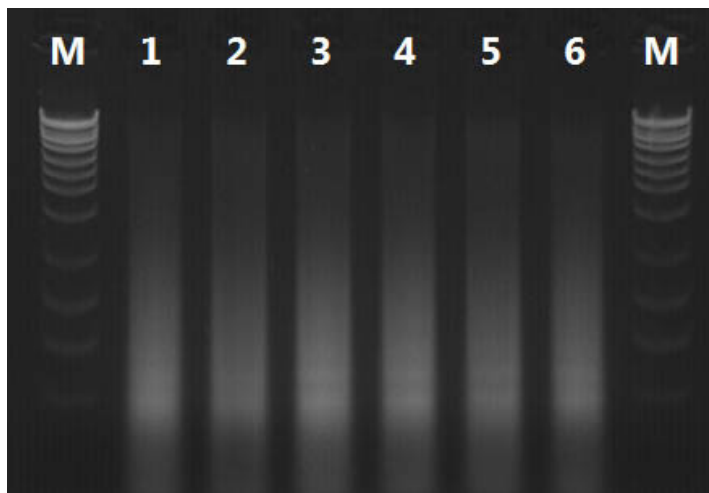
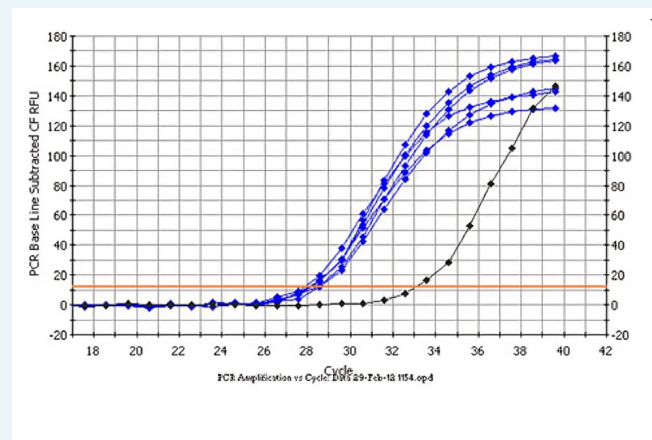
GOOD RNA INTEGRITY AND TOTAL RNA PROFILE THAT INCLUDES LARGE AND SMALL RNA

Figure 1. Total RNA Profile from Different Stool Samples. Total RNA and DNA were isolated from 6 different 200 mg human stool samples using Norgen's Stool Nucleic Acid Isolation Kit. For analysis, 7.5 μ L from each 75 μ L elution were loaded on 1.2 % MOPS agarose gel. All six samples showed a good RNA integrity and total RNA profile that includes large and small RNA.

NO PCR INHIBITION WAS OBSERVED FROM 300 NG OF TOTAL RNA IN 20 μ L PCR REACTION

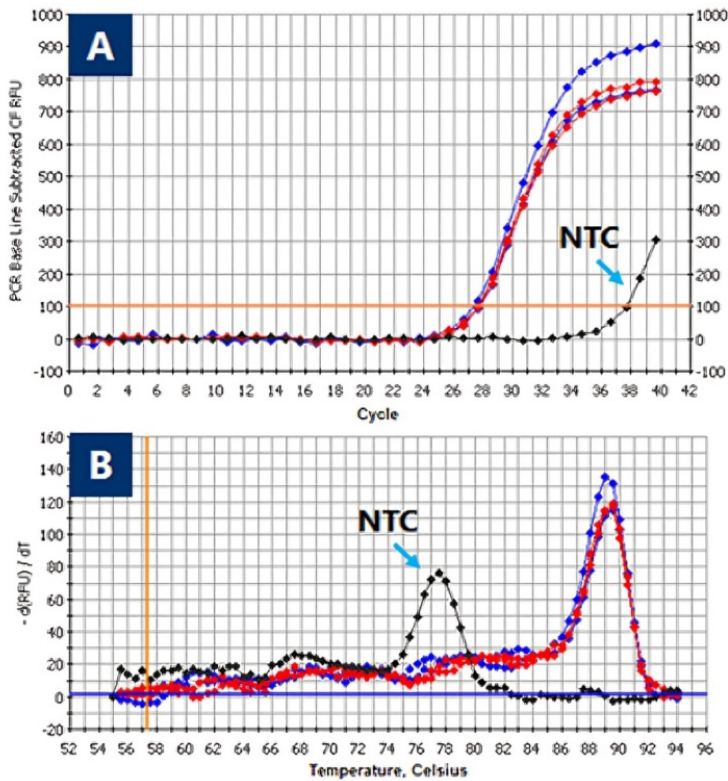
Figure 2. Detection of Bacterial RNA from Stool Samples.

Real-time one step RT-PCR analysis (SYBR Green) was carried out to detect the bacterial 16S rRNA expression from six stool samples isolated using Norgen's Stool Nucleic Acid Isolation Kit. The RNA template was treated with DNase I and concentrated with Norgen's RNA Clean-Up and Concentration Kit (Cat. 23600, 43200). No PCR inhibition was observed from 300 ng of total RNA in 20 μ L PCR reaction. Black diamond: negative control, Blue diamond: six stool RNA samples.



HIGH QUALITY DNA

Figure 3. Isolation of Genomic DNA from Human Stool Samples. Total RNA and DNA was isolated from 6 different 200 mg human stool samples using Norgen's Stool Nucleic Acid Isolation Kit. For analysis, 10 μ L of each 75 μ L elution was run on a 1.2% 1xTAE agarose gel. High quality DNA was isolated from all six stool samples. M: Norgen's HighRanger 1kb DNA ladder (Cat. 11900).



PCR INHIBITORS WERE REMOVED AND THE KIT ISOLATED HIGH QUALITY OF DNA FROM STOOL

Figure 4. 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 DNA elution was used in 20 μ L of Norgen's 2X PCR Mastermix spiked with SYBR green (Bio-Rad), using 0.3 μ M 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. PCR quantification data (A) and melting curve analysis data (B) are shown.

KIT SPECIFICATIONS

Description	Specifications
Maximum Stool Input	200 mg
Type of Stool Processed	Preserved, fresh, and frozen stool from humans and animals
Maximum Column Binding Capacity	50 μ g
Maximum Column Loading Volume	650 μ L
Time to Complete 10 Purifications	30 minutes

KIT COMPONENTS

Description	Specifications
Lysis Buffer C	60 mL
Binding Buffer E	6 mL
Wash Solution A	38 mL
Elution Buffer E	6 mL
Bead Tube	50
Spin Columns	50
Collection Tubes	50
Elution Tubes (1.7 mL)	50
Product Insert	1

Ordering Information

Description	Size	Cat #
Stool Nucleic Acid Isolation Kit	50 Preps	45600

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APPLICATION

Related Products	Prep Size	Cat. #
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