

DATA SHEET

 Version: 04
 Revision date: 15/07/2025

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1. Identification

Product name	HigherPurity™ Stool DNA Isolation Kit
Cat. No.	AN0130 (50 rxn)
Cat. No.	AN0131 (100 rxn)
Cat. No.	AN0131-XL (250 rxn)

2. Description

HigherPurity™ Stool DNA Isolation Kit provides a simple and convenient technique to isolate high quality DNA from fresh or frozen stool samples. Extraction is based in DNA ability to bind silica in the presence of high concentrations of chaotropic salts as guanidinium thiocyanate. Fecal samples are rapidly and efficiently lysed by bead beating. The sample DNA is then bound to the surface of a Silica Membrane Mini Spin Column and washed, and the bound DNA is then desorbed from the surface of the Spin column. The inhibitors of the downstream PCR will be removed by utilizing the DNA binding column and the buffers system in this kit.

2. Kit Components

Component	Quantity		
	AN0130 (50 rxn)	AN0131 (100 rxn)	AN0131-XL (250 rxn)
Lysis Solution 1 (LS1)	55 ml	110 ml	3 x 90 ml
Buffer A	10 ml	15 ml	30 ml
Buffer B	16 mL ^a	28 mL ^b	68 mL ^c
Wash Buffer 1 * (WB1)	12 mL ^d	24 mL ^e	3 x 20 mL ^f
EB Buffer	15 mL	15 mL	30 mL
Proteinase K** (4°C)	30 mg ^g	2 x 30 mg ^g	150 mg ^h
Proteinase K Resuspension Buffer	1.5 mL	2 x 1.5 mL	10 mL
CleanEasy™ MiniSpin Columns	50	100	250
Collection tube (2mL)	50	100	250

^a Add 24 mL isopropanol and mix by shaking.

^b Add 42 mL isopropanol and mix by shaking.

^c Add 102 mL isopropanol and mix by shaking.

^d Add 48 mL absolute ethanol and mix by shaking.

^e Add 96 mL absolute ethanol and mix by shaking.

^f Add 80 mL absolute ethanol and mix by shaking.

^g Dissolve the 30 mg Proteinase K in 1.5 mL of Proteinase K Resuspension Buffer and store at -20°C.

^h Dissolve the 140 mg Proteinase K in 7 mL of Proteinase K Resuspension Buffer and store at -20°C. It is recommended to do several aliquots to avoid many thaw/freeze cycles.



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! Caution: Please wear gloves when using this product. Avoid all skin contact with kit reagents. In case of contact, wash thoroughly with water.

4. Storage specifications

Store Proteinase K **at 4°C and -20°C once dissolved**. All other kit components can be stored at room temperature.

5. Features

- Quick, simple, and cost-efficient procedure.
- Effectively removes PCR inhibitors, including humic acids.
- Produces high-quality DNA ($A_{260}/_{280} = 1.8 \pm 0.2$; $A_{260}/_{230} = 1.8 \pm 0.2$).
- Safe method with no need for phenol extraction.
- Typical yield ranges from 3 to 15 μ g, depending on the quality and amount of starting material.

6 Applications

All molecular biology applications, such as:

- Digestion with restriction enzymes.
- Automated sequencing.
- PCR template.
- Southern Blots.

7. Quality Certifications

Soil DNA Isolation Kit is tested for isolation of DNA from soil sample. The quantity and quality of purified DNA attend to:

- Ratio 260/ 280.
- Agarose gel electrophoresis.
- Digestion with restriction endonucleases

8. Assay Procedure

Sample preparation

- **Stool Sample:** Weight 180 -200 mg of stool into a 2 mL microcentrifuge tube (not included). Add 1 mL of LS1 buffer and vortex for approximately 1–2 minutes to thoroughly mix the stool with the lysis solution.

Ensuring complete homogenization is essential for optimal lysis.

- **Sample in Preservation Solution (e.g., Canvax's Stool DNA Collection & Stabilization Kit):** Transfer 1 mL of the preserved sample into a 2 mL microcentrifuge tube (not included).

To facilitate pipetting, cut the end of the pipette tip if necessary.



DNA purification

- 1.** Homogenize by continuously horizontal shaking at 100 x g for 10 minutes.
- 2.** Incubate at 70 °C for 10 minutes.

For detection of human DNA, it is sufficient to incubate at 70°C. If necessary, the temperature can be increased to 95°C to isolate DNA from bacteria or parasites.

- 3.** Keep at room temperature for 1 minute.
- 4.** Centrifuge at 13,000 x g for 2 minutes.
- 5.** Carefully aspirate 600 µL supernatant to a new 1.5 mL microcentrifuge tube (not provided).

A surface layer of debris may be present on top. Do not disturb the pellet or transfer any debris.

- 6.** Add 100 µL of prechilled Buffer A and mix by vortex. Incubate at 4°C for 5 minutes.
- 7.** Centrifuge at 13,000 x g for 5 minutes and take 600 µL of clear supernatant.

A layer of fat may appear on the surface. Avoid taking it.

- 8.** Add 25 µL of Proteinase K (20 mg/mL) and incubate at 70 °C for 10 minutes.
- 9.** If precipitation occurs, centrifuge at 13,000 x g for 1 minute and carefully transfer the supernatant to a new 1.5 mL microcentrifuge tube.
- 10.** Add 600 µL of Buffer B and mix thoroughly by pipetting or gentle inversion.

Check isopropanol has been added to Buffer B.

- 11.** Transfer up 700 µL mixture to a CleanEasy™ MiniSpin Column placed into a Collection Tube.
- 12.** Centrifuge at 10,000 x g for 1 minute. Remove the flow-through and place back the CleanEasy™ MiniSpin Column into the Collection Tube. Repeat steps 11 and 12 with the remaining mixture.
- 13.** Add 500 µL WB1. Centrifuge at 10,000 x g for 1 minute. Remove the flow-through and place back the CleanEasy™ MiniSpin Column into the Collection Tube.

Check absolute ethanol has been added to Washing Buffer.

- 14.** Repeat step 13 once.
- 15.** To dry Spin Column and eliminate residual ethanol, centrifuge again at 10,000 x g for 1 minute.
- 16.** Place the CleanEasy™ MiniSpin Columns into a clean 1.5 mL Tube (not provided) and add 50-100 µL prewarmed EB Buffer directly to the center of the membrane.
- 17.** Incubate at room temperature for 2 minutes. Centrifuge at 10,000 x g for 1 minute to elute purified DNA.
- 18.** The purified genomic DNA can be stored at -20°C.



9. Further information

**Product Use
Limitations**

This product is developed, designed, and sold exclusively only for research purposes use. The product was not tested for use in diagnostics or for drug development, nor is it suitable for administration to humans or animals.

**Safety
Information**

When working with chemicals, always wear a suitable lab coat, disposable gloves, and protective goggles. For more information, please consult the appropriate material safety data sheets (MSDS). These are available online in convenient and compact PDF format at www.canvaxbio.com where you can find, view, and print the MSDS for each CANVAX kit.

