RUO

REF	G2MBR4-0650	50 Tests
	G2MBR4-0651	250 Tests

SPINXT Fecal DNA Extraction Kit

Intended Use

The SpinXT Fecal DNA Extraction kit is intended for isolating and purifying DNA from stool samples for Micobiome analysis, pathogen detection and Host DNA analysis. This kit is intended to be used by researchers only.

Intended User

SpiNXT Fungal DNA Extraction Kit is intended for research use only.

Test Principle

A stool sample is collected and mixed with a buffer to break down the fecal material and harmonize properly. The sample-buffer mixture is then subjected to a lysis buffer to lyse the cells and release the nucleic acid. The lysate is then applied to a spin column which contains a silica-based membrane that binds to the DNA. The column is washed with a buffer to remove impurities, such as proteins, salts, and other contaminants. The DNA is then eluted from the column using a low-salt buffer or water, resulting in a purified DNA extract. The column-based method provides a quick, easy, and efficient way to extract DNA from fecal samples, with the benefits of high-quality DNA recovery, reduced contamination risk, simplified workflow and scalability for high-throughput processing. This kit is widely used in various applications, including gut microbiome analysis, infectious disease diagnosis, and cancer research also.

Summary

SpiNXT Fecal DNA Extraction Kit provides a simple and convenient way to isolate pure genomic DNA from fresh or frozen stool or feces samples. The kit is designed for rapid & efficient purification of high quality genomic DNA from all the various micro organisms and host cells found in the stool sample simultaneously. The kit combines the features and advantages of silica binding with a micro spin format, and eliminates the need of hazardous compounds such as phenol/chloroform for extraction and involves very minimum handling. The purified DNA is compatible with all the demanding downstream applications.

Storage, Operating Conditions and Stability

- The kit has a shelf life of 18 months from the date of manufacturing.
- The test kit and its component are stable until the expiration date mentioned on the kit box.
- All the Kit components are shipped and stored at 15°C to 25°C. except Proteinase K which has to be stored at -20C after addition of Protease Dissolving Buffer.

Reagents Provided
Table 1a. (For 50 Tests)

Kit Contents	Kit Content Code	Kit Content Quantity G2MBR4-0650
Buffer FLB-1	G2MBR3-1379-1	1 X 45 ml
Buffer FLB-2	G2MBR3-1380-1	1 X 1 ml
Buffer FLB-3	G2MBR3-1381-1	1 X 15 ml
Binding Buffer	G2MBR3-1382-1	1 X 12 ml
Buffer TE	G2MBR3-1383-1	1 X 10 ml
Proteinase K	G2MBR3-1384-1	1 X 20 mg
Protease Dissolve Buffer	G2MBR3-1385-1	1 X 4 ml
Wash Buffer 1	G2MBR3-1386-1	1 X 15 ml
Wash Buffer 2	G2MBR3-1387-1	1 X 15 ml
Buffer EB	G2MBR3-1388-1	1 X 15 ml

Consumables Provided
Table 1b. (For 50 Tests)

Kit Contents	Kit Content Quantity G2MBR4-0650
Mini Column	1 X 50 Nos.
Collection Tube	1 X 50 Nos.

Reagents Provided
Table 2a. (For 250 Tests)

Kit Contents	Kit Content Code	Kit Content Quantity G2MBR4-0651
Buffer FLB-1	G2MBR3-1379-2	1 X 210 ml
Buffer FLB-2	G2MBR3-1380-2	1 X 5 ml
Buffer FLB-3	G2MBR3-1381-2	1 X 60 ml
Binding Buffer	G2MBR3-1382-2	1 X 55 ml
Buffer TE	G2MBR3-1383-2	1 X 45 ml
Proteinase K	G2MBR3-1384-2	1 X 80 mg
Protease Dissolve Buffer	G2MBR3-1385-2	1 X 10 ml
Wash Buffer 1	G2MBR3-1386-2	1 X 65 ml
Wash Buffer 2	G2MBR3-1387-2	2 X 35 ml
Buffer EB	G2MBR3-1388-2	1 X 60 ml

Consumables Provided
Table 2b. (For 250 Tests)

Kit Contents	Kit Content Quantity G2MBR4-0651
Mini Column	2 X 125 Nos.
Collection Tube	2 X 125 Nos.

Materials Required But Not Provided

- Water bath or Heat block
- Micro-pipettes
- Disposable barrier (Filter) pipette tips
- 1.5 ml micro-centrifuge tubes
- Table top Micro-centrifuge
- Molecular biology grade ethanol (96-100%)
- Personal protection equipment (Aprons, gloves, goggles etc).
- Disposable gloves
- Mortar and Pestle

Instructions Before Use

- Preheat a water bath or heating block at 70°C.
- Wash buffer 1 and Wash Buffer 2 are supplied as concentrates. Before using for the first time, add the appropriate volume of molecular biology grade ethanol (96-100%) as indicated on the bottle and shake thoroughly. Wash buffer 1 and Wash Buffer 2 are stable for at least 1 year after the addition of molecular biology grade ethanol (96-100%) when stored closed at room temperature (15-25°C).
- Add Proteinase K into absolute amount of protease dissolve buffer as mentioned on the label and store it at -20°C.

Procedure

A. DNA Purification from Fecal sample

1) Add up to 200 mg of stool sample along with 800 µl of FLB-1 in a 2ml micro-centrifuge tube. Mix properly and incubate it at 70°C for 20 minutes.

2) Thereafter, add 20 µl of FLB-2 and again incubate it at 70°C for 5-7 min followed by centrifugation at 5000x*g* for 5 minutes.

3) Collect the supernatant and carefully transfer it to a fresh 1.5 ml micro-centrifuge tube. Add 200 µl of Binding Buffer and incubate it on ice for 5 min followed by centrifugation at 5000x*g* for 5 min.

4) Collect the supernatant and carefully transfer it to a fresh 1.5 ml micro-centrifuge tube. Add equal volume of chilled isopropanol and incubate it on ice for 20 min followed by centrifugation at 16000x*g* for 15 min at 4°C.

5) Discard the supernatant and wash the pellet with 100 µl of molecular biology grade ethanol (96-100%). Centrifuge it at 16000x*g* for 1 min. Discard the supernatant and allow it to air dry for 1-2 min at room temperature.

6) Re-suspend the pellet in 150 µl Buffer TE along with 15 µl of Proteinase K and 200 µl of Buffer FLB-3. Mix throughly by vortexing and incubate it at 70°C for 10 min.

7) Further add 200 µl of molecular biology grade ethanol (96-100%) and mix throughly.

8) Pipette whole mixture on the mini spin column and centrifuge it at 6000x*g* for 1 min. Discard the collection tube with the flow-through.

9) Place the mini column into a fresh collection tube and add 500 µl wash buffer 1. Centrifuge it for 1 minute at 20000x*g*. Discard the flow-through.

10) Place the mini column back into the collection tube and add 500µl wash buffer 2. Centrifuge it for 3 minutes at 20000x*g*. Discard the flow through.

11) Repeat step 10.

12) Dry spin: Centrifuge the tube one more time at 20000x*g* for 2 minutes. Air dry the column again for 2 minutes.

13) Place the column into a fresh 1.5 ml micro-centrifuge tube and apply 100-200 µl of pre-warmed Buffer EB directly to the center of the silica membrane and incubate it for 1 min at room temperature. Centrifuge it at 6000x*g* for 1-2 minutes.

14) Store the purified DNA at -20ºC for long term storage.

Symbols for Use in the Labeling	
Symbols	**Definition**
	KEEP AWAY FROM SUNLIGHT
	TEMPERATURE LIMIT
RUO	RESEARCH USE ONLY
	UPWARD
	CONSULT INSTRUCTIONS FOR USE
LOT	BATCH CODE
REF	CATALOGUE NUMBER
	USE BY DATE
	DATE OF MANUFACTURE
	MANUFACTURER
	CONTAINS SUFFICIENT FOR <n> TESTS
	CAUTION
	DO NOT USE IF PACKAGE IS DAMAGED

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