NAUTIAGENE

Product Information

NautiaZ Stool/Soil DNA Extraction Mini Kit

(100/300 prep)

Cat. No. : NGST-S100/NGST-S300

Sample : 30 - 100 mg of Stool/Soil sample

Yield : Up to 50 µg

NGCZ-S100	NautiaZ Culture Cell DNA Extraction Mini Kit (100 prep)
NGCZ-S300	NautiaZ Culture Cell DNA Extraction Mini Kit (300 prep)
NGBZ-S100	NautiaZ Blood DNA Extraction Mini Kit (100 prep)
NGBZ-S300	NautiaZ Blood DNA Extraction Mini Kit (300 prep)
NGBAZ-S100	NautiaZ Bacteria/Fungi DNA Extraction Mini Kit (100 prep)
NGBAZ-S300	NautiaZ Bacteria/Fungi DNA Extraction Mini Kit (300 prep)
NGPZ-S100	NautiaZ Plant DNA Extraction Mini Kit (100 prep)
NGPZ-S300	NautiaZ Plant DNA Extraction Mini Kit (300 prep)
NGTZ-S100	NautiaZ Tissue DNA Extraction Mini Kit (100 prep)
NGTZ-S300	NautiaZ Tissue DNA Extraction Mini Kit (300 prep)
NGST-S100	NautiaZ Stool/Soil DNA Extraction Mini Kit (100 prep)
NGST-S300	NautiaZ Stool/Soil DNA Extraction Mini Kit (300 prep)
NGCF-S100	NautiaZ Cell-Free DNA Extraction Mini Kit (100 prep)
NGPK-S100	NautiaZ Whole Blood DNA Extraction Mini Kit (100 prep)

Contents

	NGST-S100T	NGST-S100	NGST-S300
Bead Tube	4 pcs	100 pcs	300 pcs
ST1 Buffer	1.5 ml	35 ml	95 ml
ST2 Buffer	0.5 ml	12 ml	35 ml
W1 Buffer	2 ml	45 ml	125 ml
W2 Buffer*	300 ul x2	15 ml	25 ml x2
Elution Buffer	1 ml	10 ml	30 ml
Proteinase K**	100 ul	40 mg	40 mg x3
GZ Column	4 pcs	100 pcs	300 pcs
Collection Tube	4 pcs	100 pcs	300 pcs
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* Add 1.2 ml x2 / 60 ml / 100 ml x2 ethanol (96-100%) to W2 Buffer prior to the initial use.

** Add 2 ml / 2 ml x3 ddH_2O to Proteinase K prior to the initial use.

High Quantity Pack (NGST-S100P)

	-	NGST-S100P	NGST-S100P x3
ST1 Buffer	-	70 ml	70 ml x3
ST2 Buffer	-	25 ml	25 ml x3
Proteinase K*	-	40 mg x2	40 mg x6

* Add 2 ml x2 / 2 ml x6 ddH_2O to Proteinase K prior to the initial use.

Important Notes

1. Buffers provided in this system contain irritants. Wear gloves and lab coat when handling these buffers.
2. Add ethanol (96- 100 %) to W2 Buffer when first open.
3. Prepare dry baths or water baths before the operation.
4. Resolve any precipitate by warming at 37°C.

Description

The NautiaZ Stool/Soil DNA Extraction Mini Kit is designed for rapid extraction of pure genomic DNA from animal stool /Soil sample. Efficiently remove cellular debris and inhibitors, this kit using column-type tube in purification process through three simple steps of binding, washing and then elution for the safe and convenient extraction of high-purity genomic DNA. The entire process can be completed in less than 1 hour without phenol/chloroform, and the final product can be used in PCR or other downstream experiments.

Buffer Preparation

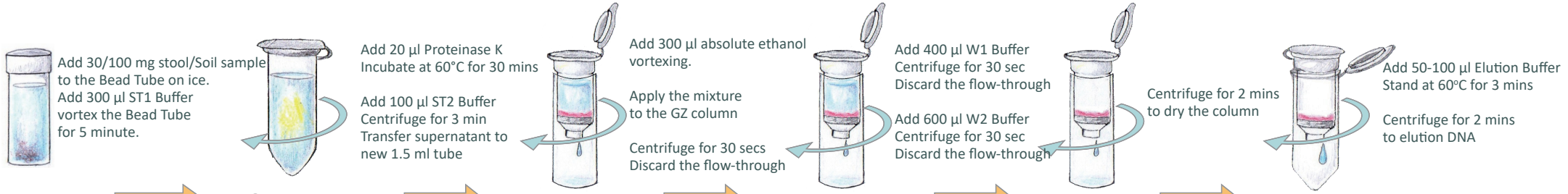
• Add ethanol (96-100%) to the Wash Solution prior to first use

	NGST-S100T	NGST-S100	NGST-S300
Proteinase K ddH_2O	- -	40 mg 2 ml	40 mg x3 2 ml x3
W2 Buffer ethanol (96 ~ 100%)	300 ul x2 1.2 ml x2	15 ml 60 ml	25 ml x2 100 ml x2

Storage

Proteinase K should be store at -20°C, the other Buffer and Columns store at room temperature.

Ver. 2020-05



30mg Sample

STEP	PROCEDURE
1 Sample prepare	Add 30 mg of stool/Soil sample to the **Bead Tube** on ice. **Add 300 µl ST1 Buffer** to the sample, vortex the **Bead Tube** at maximum speed for 5 minute.
2 Cell Lysis	**Add 20 µl Proteinase K (20mg/ml)** to the sample. Incubate at 60°C for 30 mins until the sample lysate is clear. Invert the tube every 5 minutes during incubation. Pre-heat the Elution Buffer at 60°C. Tansfer sample mixture to a new enpendorf tube as much as possible. Centrifuge 3 mins at 14,000 x g. Transfer the supernatant to a new 1.5 ml tube.
Optional Step: RNase	*If RNA-free genomic DNA is required, perform this optional step.* **Add 5 µl of RNase** (10 mg/ ml) to sample lysate and mix by vortexing. Incubate at room temperature for 5 mins.
3 Protein Removal	**Add 100 µl ST2 Buffer** to the sample and shake vigorously. Centrifuge 3 mins at 14,000 x g. Transfer the supernatant to a new 1.5 ml tube. **Add 300 µl absolute ethanol** and shake vigorously.
4 DNA Binding	Place a **GZ column** in Collection Tube. Transfer the sample mixture to GZ column and centrifuge 30 seconds at 14,000 x g. Discard the flow-through and place GZ Column back in the Collection tube.

100mg Sample

STEP	PROCEDURE
1 Sample prepare	Add 100 mg of stool/Soil sample to the **Bead Tube** on ice. **Add 1 ml ST1 Buffer** to the sample, vortex the **Bead Tube** at maximum speed for 5 minute.
2 Cell Lysis	**Add 60 µl Proteinase K (20mg/ml)** to the sample. Incubate at 60°C for 30 mins until the sample lysate is clear. Invert the tube every 5 minutes during incubation. Pre-heat the Elution Buffer at 60°C. Tansfer sample mixture to a new enpendorf tube as much as possible. Centrifuge 3 mins at 14,000 x g. Transfer the supernatant to a new 1.5 ml tube.
Optional Step: RNase	*If RNA-free genomic DNA is required, perform this optional step.* **Add 15 µl of RNase** (10 mg/ ml) to sample lysate and mix by vortexing. Incubate at room temperature for 5 mins.
3 Protein Removal	**Add 350 µl ST2 Buffer** to the sample and shake vigorously. Centrifuge 3 mins at 14,000 x g. Transfer the supernatant to a new 1.5 ml tube. **Add 1 ml absolute ethanol** and shake vigorously.
4 DNA Binding	Place a **GZ column** in Collection Tube. Transfer the sample mixture to GZ column and centrifuge 30 seconds at 14,000 x g. Discard the flow-through and place GZ Column back in the Collection tube.

PURIFICATION PROTOCOLS

STEP	PROCEDURE
5-1 Wash	**Add 400 µl W1 Buffer** to GZ Column. Centrifuge at 14,000 x g for 30 seconds. Discard the flow-through and place GZ Column back in the Collection tube.
5-2 Wash	**Add 600 µl W2 Buffer** (ethanol added) to GZ Column. Centrifuge at 14,000 x g for 30 seconds. Discard the flow-through and place GZ Column back in the Collection tube.
6 Dry	Centrifuge at 14,000 x g for 2 minutes to dry the column.
7 Elution	Place GZ Column to a clean 1.5 ml microcentrifuge tube *(not provided)*. **Add 50-100 µl of preheated Elution Buffer** (60°C) into the center of the column matrix. Stand at 60°C for 3 minutes.
	Centrifuge at 14,000 x g for 2 minutes to elute purified DNA.
8 Pure DNA	Store the DNA fragment at 4 °C or -20 °C.