NAUTIAGENE

Product Information

NautiaZ Blood DNA Extraction Mini Kit

(100/300 prep)

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

Sample : 300 µl Whole Blood
200 µl Buffy Coat

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

	NGBZ-S100T	NGBZ-S100	NGBZ-S300
B1 Buffer	2 ml x2	100 ml	100 ml x3
B2 Buffer	1.5 ml	35 ml	95 ml
BC Buffer	2 ml	45 ml	125 ml
W1 Buffer	2 ml	45 ml	125 ml
W2 Buffer*	0.3 ml x2	15 ml	25 ml x2
Elution Buffer	1 ml	10 ml	30 ml
BZ Column	4 pcs	100 pcs	300 pcs
Collection Tube	4 pcs	100 pcs	300 pcs
User Manual	1	1	1

* Add 1.2 ml x2 / 60 ml / 100 x2 ml ethanol (96-100%) to W2 Buffer prior to the initial use.

Buffer Preparation

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

	NGBZ-S100T	NGBZ-S100	NGBZ-S300
W2 Buffer ethanol (96 ~ 100%)	300 ul x2 1.2 ml x2	15 ml 60 ml	25 ml x2 100 ml x2

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.

Preparation for buffy coat

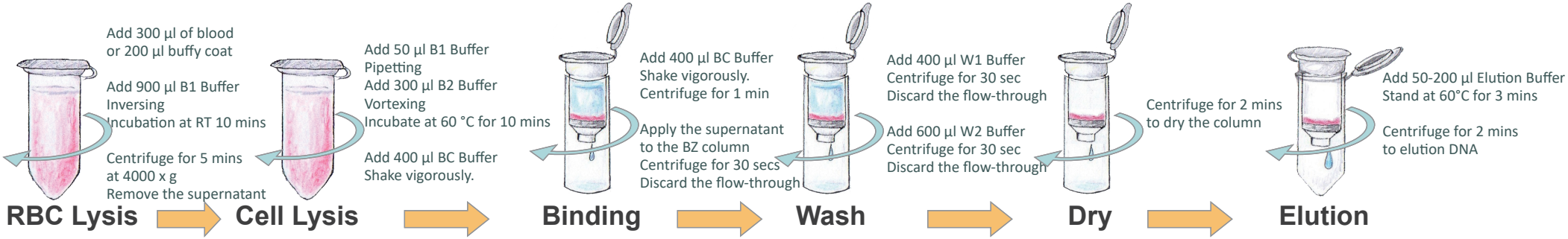
1. Centrifuge whole blood at 3,300 xg for 10 minutes at room temperature and you will get three different fractions:
   ---the upper clear layer is plasma
   ---the intermediate layer is buffy coat, containing concen trated leukocytes
   ---the bottom layer contains concentrated erythrocytes

Note: Extraction total DNA from buffy coat will yield 5-10

Description

The NautiaZ Blood DNA Extraction Mini Kit is designed for rapid extraction of pure genomic DNA from whole blood,buffy coat, body fluids, cultured cell, and fungal cell. 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.

Ver. 2020-05



PURIFICATION PROTOCOLS

STEP	PROCEDURE
1 Sample prepare	Collect blood in EDTA-Na_2 treated collection tubes (or other anticoagulant mixtures). **Transfer up to 300 µl of Blood** or **200 µl Buffy Coat** to a microcentrifuge tube *(not provided).*
2 RBC Lysis	**Add 900 µl B1 Buffer** to the tube and mix by inversing. Incubate the mixture at room temperature for 10 minutes. During incubation, invert the tube every 5 minutes.
3 Cell Lysis	Centrifuge 5 mins at 4000 x g. Remove the supernatant completely. Resuspend the cell with **50 µl B1 Buffer.** **Add 300 µl B2 Buffer** to the sample and mix thoroughly by pulse-vortexing. Incubate at 60 °C for 10 mins until the sample lysate is clear. Invert the tube every 3 minutes during incubation. *Preheat required Elution Buffer (50-200 µl per sample) to 60°C.*
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.
4 Protein Removal	**Add 400 µl BC Buffer** to the sample and shake vigorously. Centrifuge 1 min at 12,000 x g.
5 DNA Binding	Place a **BZ Column** to a collection tube. Transfer the supernatant carefully to **BZ Column**. Centrifuge at 14,000 x g for 30 seconds. Discard the flow-through and place **BZ Column** back in the Collection tube.
6-1 Wash	**Add 400 µl W1 Buffer** to **BZ Column**. Centrifuge at 14,000 x g for 30 seconds. Discard the flow-through and place **BZ Column** back in the Collection tube.
6-2 Wash	**Add 600 µl W2 Buffer** (ethanol added) to **BZ Column**. Centrifuge at 14,000 x g for 30 seconds. Discard the flow-through and place **BZ Column** back in the Collection tube.
7 Dry	Centrifuge at 14,000 x g for 2 minutes to dry the column.
8 Elution	Place **BZ Column** to a clean 1.5 ml microcentrifuge tube (not provided). **Add 50-200 µl of pre-heated Elution Buffer** (60°C) or ddH_2O (pH7.5-8.0) 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.
9 Pure DNA	Store the DNA fragment at 4 °C or -20 °C.