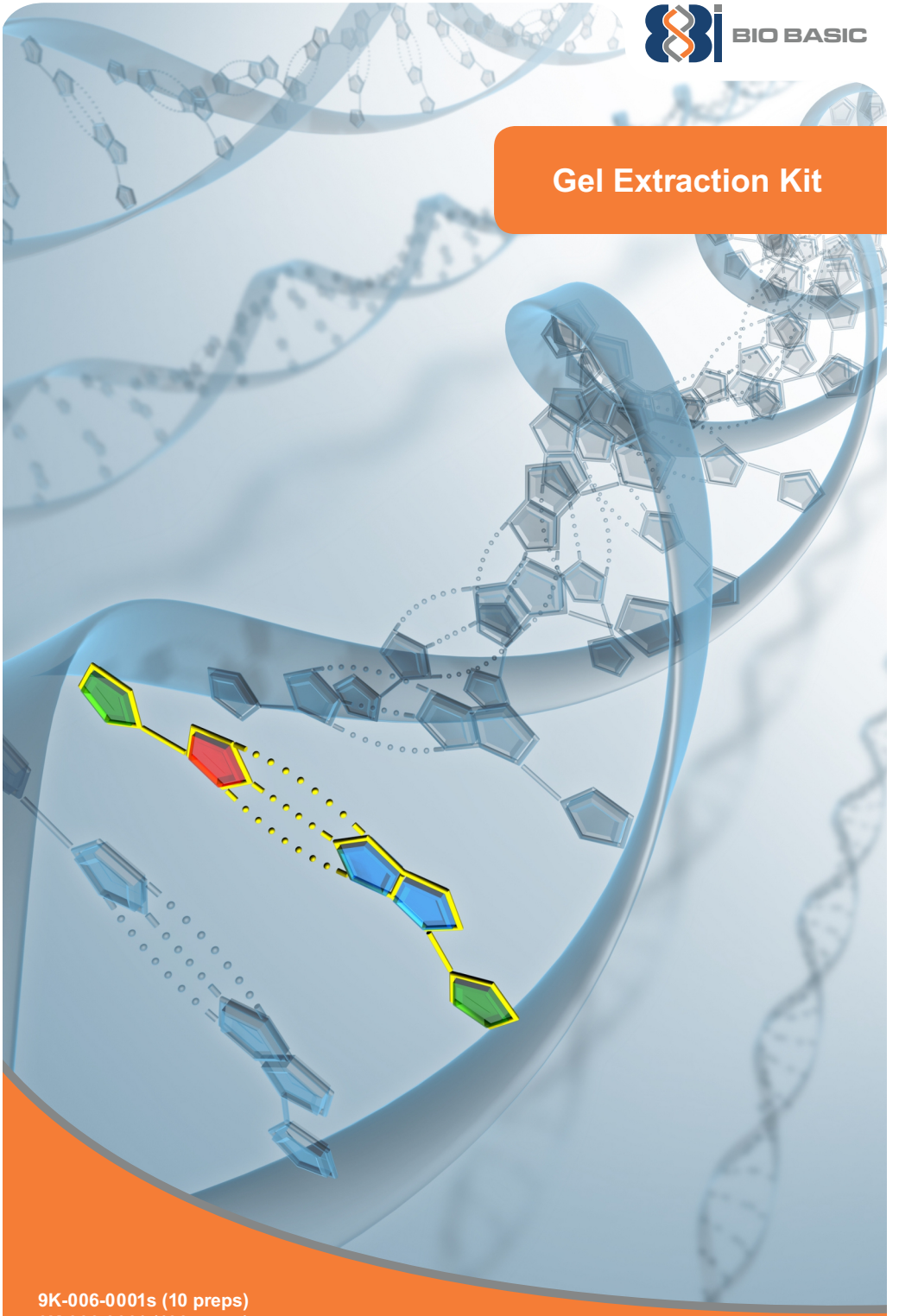
BIO BASIC

Gel Extraction Kit



9K-006-0001s (10 preps)
9K-006-0001 (100 preps)
9K-006-0002 (200 preps)

For Research Use Only

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Gel Extraction Kit

BIO BASIC INC.

Introduction

Bio Basic Gel Extraction Kit is an excellent tool offering a rapid and economic method to extract DNA from an agarose gel. This technology is based on binding DNA to silica-based membrane, followed by subsequent wash steps and then elute pure ready-to-use DNA. The high quality of extracted DNA can be used directly for any critical downstream application.

Specification

Sampling	Recovery	Volume of eluate	Handling Time
Up to 200 mg Agarose Gel	70 ~ 95 %	25 ~ 50 µL	Within 25 min

Kit Contents

	9K-006-0001s (10 preps)	9K-006-0001 (200 preps)	9K-006-0002 (200 preps)
GEL 1 Solubilization Solution	10 mL	100 mL	200 mL
GEL 2 Washing Solution*	3 mL	30 mL	60 mL
GEL 3 Elution Solution	1 mL	10 mL	20 mL
GEL Column	10 pcs	100 pcs	200 pcs
Collection Tube	10 pcs	100 pcs	200 pcs

* Add 7 mL / 70 mL / 140 mL of ethanol (96 ~ 100%) to **GEL 2** Washing Solution when first open.

Gel Extraction Kit

Important Notes

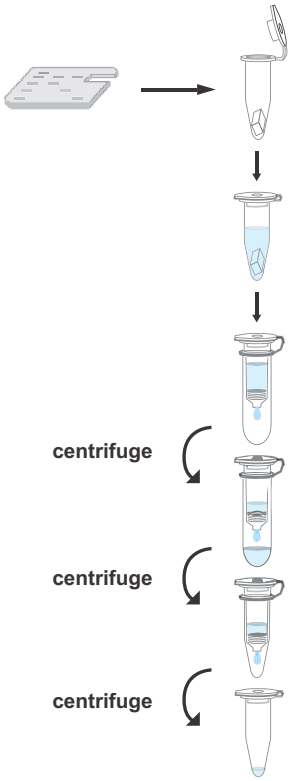
1. Solutions provided in this kit contain irritants, wear gloves and lab coat when handling.

2. For 9K-006-0001s add 7 mL of ethanol (96 ~100%) to **GEL 2** Washing Solution when first open.
   For 9K-006-0001 add 70 mL of ethanol (96 ~100%) to **GEL 2** Washing Solution when first open.
   For 9K-006-0002 add 140 mL of ethanol (96 ~100%) to **GEL 2** Washing Solution when first open.

3. Minimize agarose gel quantity by excising extra gel (up to 200 mg).

4. All centrifuge steps are performed at full speed (14,000 rpm or 10,000 x g) in a microcentrifuge.

Brief Procedure



General Protocol

1. Prepare a 55 °C dry bath or water bath for step 5.

2. Excise the agarose gel containing relevant DNA fragment with a clean scalpel.

3. Transfer up to 200 mg of the gel slice into a 1.5 mL microcentrifuge tube. (not provided)
   - The maximum volume of the gel slice should be 200 mg.

4. Add 3 volumes of **GEL 1** *Solubilization Solution* to the sample (3 µL per mg of gel) and mix by vortexing.
   - For example, add 300 µL of **GEL 1** *Solubilization Solution* to 100 mg of gel.
   - For >2% agarose gels, add 6 volumes of **GEL 1** *Solubilization Solution*.

5. Incubate at 55 °C for 10 ~ 15 min and vortex the tube every 3 min until the gel slice is completely dissolved.
   - During incubation, interval vortex can accelerate dissolution of the gel.
   - Makesure that the gel slice has been completely dissolved before proceeding to the next step.

6. Cool down the sample mixture and place a **GEL Column** into a **Collection Tube**. Transfer to **GEL Column**. Centrifuge for 1 min then discard the flow-through.
   - If the sample mixture is more than 850 µL, simply load and spin again.

7. Add 750 µL of **GEL 2** *Washing Solution* (ethanol added) to **GEL Column**. Centrifuge for 1 min then discard the flow-through.
   - Make sure that ethanol(96 ~100%) has been added to **GEL 2** *Washing Solution* when first open.

8. Centrifuge for an additional 3 minutes to dry the column.
   - **Important:** This step will avoid the residual liquid to inhibit subsequent enzymatic reactions.

9. Place **GEL Column** into an **Elution Tube** (not provided).

10. Add 25 ~ 50 µL of **GEL 3** *Elution Solution* or ddH_2O(pH7.0 ~8.5) to the center of the membrane of **GEL Column**. Stand **GEL Column** for 2 min.
    - **Important:** For effective elution, make sure that the elution solution is dispensed on the center of the membrane and is absorbed completely.

11. Centrifuge for 1 min to elute the DNA.

Troubleshooting

The gel slice is hard to dissolve.

Agarose gel of high percentage (> 2 %) is used.

- Add 6 volumes of **GEL 1** *Solubilization Solution* to 1 volume of the gel slice.

The size of the gel slice is too large.

- If the gel slice is more than 200 mg, separate into multiple tubes.

Low or no recovery of DNA fragment.

The column is loaded with too much agarose gel.

- The maximum volume of the gel slice is 200 mg per column.

Elution of DNA fragment is not efficient

- Make sure the pH of elution solution or ddH_2O is between 7.0~8.5,or use provided **GEL 3** *Elution Solution*.
- Make sure that the elution solution has been completely absorbed by the membrane before centrifuge.

The size of DNA fragment is larger than 5 Kb

- Preheat the elution solution to 60°C before use.

Eluted DNA contains non-specific DNA fragment

Contaminated scalpel.

- Use a new or clean scalpel.

DNA fragment denatured.

- Incubate eluted DNA at 95°C for 2min, then cool down slowly to reanneal denatured DNA.

Poor performance in the downstream applications

Salt residue remains in eluted DNA fragment.

- Wash the column twice with **GEL 2** *Washing Solution*.

Ethanol residue remains in eluted DNA fragment.

- Discard the flow-through after washing with **GEL 2** *Washing Solution* and centrifuge for an additional 3 min.

Notes:

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