FavorPrep™ Gel/PCR Purification HE Mini Kit

■ Kit Contents

Cat. No.	FAGC1030 (4 Preps)	FAGC1033 (50 Preps)	FAGC1034 (100 Preps)
GPP Buffer	7 ml	90 ml	180 ml
Wash Buffer (Concentrate) ▲	1.5 ml	15 ml	30 ml
Elution Buffer	0.5 ml	5 ml	7 ml
HE Columns	4 pcs	50 pcs	50 pcs x 2
HE Collection Tubes	8 pcs	100 pcs	100 pcs x 2
Elution Tubes	4 pcs	50 pcs	100 pcs
User Manual	1	1	1
Preparation of **Wash Buffer** by adding 96~100% ethanol.			
Volume of ethanol for Wash Buffer ▲	6 ml	60 ml	120 ml

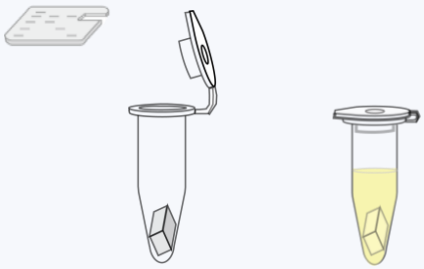
All kit components are shipped at room temperature and should be stored at room temperature between 15~25°C upon receipt.

■ Specification

Format/Principle	Spin column (Silica matrix)
Binding Capacity	≤125 μg DNA/Column
Operation Time	<20 mins for gel extraction <10 mins for PCR clean up
Sample Size	≤500 mg agarose gel ≤300 μl PCR product or enzymatic reaction
DNA Size	50 bp~10 kbp
Recovery	70~95% for gel extraction 90~95% for PCR clean up
Elution Volume	30 μl

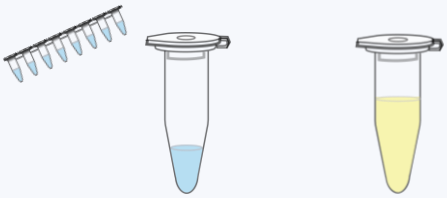
Procedure Overview

For gel extraction



- Transfer up to 500 mg agarose gel into microcentrifuge tubes and add 2.5x gel volumes of GPP Buffer. (If the input gel exceeds 300 mg, transfer the gel and GPP Buffer to a 15 ml centrifuge tube.)
- Incubation at 55˚C for 10 mins (invert per 2~3 mins).
- Incubate the sample mixture at room temperature for 2 mins.

For PCR clean up



- Transfer up to 300 µl PCR product into a microcentrifuge tube and add 5x gel volumes of GPP Buffer. (If the input PCR product exceeds 200 µl, transfer the PCR product and GPP Buffer to a 15 ml centrifuge tube.)

HE Column

Centrifuge
12,000 xg, 1 min

- Transfer up to 1000 µl of the sample mixture into the HE Column for DNA binding.
- Repeat the step if the sample mixture exceeds 1000 µl.

Centrifuge
12,000 xg, 1 min

Centrifuge
12,000 xg, 2 mins

- Add 900 µl Wash Buffer (ethanol contained).
- Add 500 µl ethanol (96~100%) and dry the column membrane.

Centrifuge
12,000 xg, 2 mins

- Add 30 µl Elution buffer.
- Stand the column for 5 mins.
- Obtain purified DNA.

■ Preparation Before Starting

1. Additional materials: 100% Isopropanol and 96~100% ethanol.
2. Add the indicated volume of ethanol (96~100%) into the **Wash Buffer**, mix well, and store at room temperature.
3. Set up a water bath or dry bath at 55°C and preheat the **Elution Buffer** to 55°C for the elution step.
4. All centrifugation steps should be performed at **12,000 ×g** at room temperature.

■ Protocol: For extraction of DNA fragments from agarose gel

1. Excise the agarose gel with a clean scalpel. Weigh the gel slice in a 1.5 ml microcentrifuge tube (not provided).
   - Remove the extra agarose gel to minimize the size of the gel slice.
   - The maximum volume of the gel slice is 500 mg. If the input gel exceeds 300 mg, transfer the gel to a 15 ml centrifuge tube (not provided).
2. Add 2.5x gel volumes of **GPP Buffer** to 1x volume of gel (100 mg gel ~100 µl).
3. Incubate at 55°C for 5~10 mins and invert the tube every 2~3 mins until the gel slice is dissolved completely.
   - Make sure that the gel slice has been dissolved completely before proceeding to the next step.
   - If the color of the mixture is orange or violet, add 10 µl 3 M sodium acetate, pH 5.0, and mix. The color of the mixture will turn yellow.
4. Cool down the sample mixture to room temperature for 2 mins.
5. **(Optional)** If the desired DNA fragment is ≤200 bp, add 1x gel volume of 100% isopropanol to the sample mixture. Mix thoroughly.
6. Place an **HE Column** in an **HE Collection Tube**, then carefully transfer up to 1000 µl of sample mixture into the HE Column.
   - If the sample mixture is more than 1000 µl, repeat this step for the rest of the sample mixture.
7. Centrifuge for 1 min. Discard the flow-through and place the HE Column in a new HE Collection Tube.
8. Add 900 µl **Wash Buffer** (ethanol contained) to the HE Column. Centrifuge for 1 min, then discard the flow-through.
9. Add 500 µl ethanol (96~100%) to the HE Column. Centrifuge for 2 mins to dry the membrane. Discard flow-through and HE Collection Tube.
   - **Important step!** Don't let the tip of the column touch the flow-through. If in doubt, spin again to remove all residual ethanol.
10. Place the HE Column in an **Elution Tube**, then add 30 µl prewarmed Elution Buffer or ddH_2O (pH 7.5~9.0) directly onto the membrane. Stand the HE Column for 5 mins.
    - **Important step!** For effective elution, ensure that the elution solution is dispensed onto the membrane center and absorbed completely.
11. Centrifuge for 1 min to elute the DNA.

Protocol: For purification of PCR products or reaction mixtures

1. Transfer up to 300 µl of PCR product (excluding oil) to a 1.5 ml microcentrifuge tube (not provided) and add 5x volumes of **GPP Buffer**, mix well by vortexing.
   - If PCR product is more than 200 µl, transfer the PCR product to a 15 ml centrifuge tube (not provided).
   - If the color of the mixture is orange or violet, add 10 µl 3 M sodium acetate, pH 5.0, and mix. The color of the mixture will turn yellow.
2. **(Optional)** If the desired DNA fragment is ≤200 bp, add 1x PCR product volume of 100% isopropanol to the sample mixture. Mix thoroughly.
3. Place an **HE Column** in an **HE Collection Tube**, then carefully transfer all mixture into the HE Column.
   - If the sample mixture is more than 1000 µl, repeat this step for the rest of the sample mixture.
4. Centrifuge for 1 min. Discard the flow-through and place the HE Column in a new HE Collection Tube.
5. Add 900 µl **Wash Buffer** (ethanol contained) to the HE Column. Centrifuge for 1 min then discard the flow-through.
8. Add 500 µl ethanol (96~100%) to the HE Column. Centrifuge for 2 mins to dry the membrane. Discard flow-through and HE Collection Tube.
   - **Important step!** Don't let the tip of the column touch the flow-through. If in doubt, spin again to remove all residual ethanol.
7. Place the HE Column in an **Elution Tube**, then add 30 µl prewarmed Elution Buffer or ddH_2O (pH 7.5~9.0) directly onto the membrane. Stand the HE Column for 5 mins.
   - **Important step!** For effective elution, ensure that the elution solution is dispensed onto the membrane center and absorbed completely.
8. Centrifuge for 1 min to elute the DNA.