FavorPrep™ MicroElute Gel Extraction Kit

(Sample: 4 Preps)

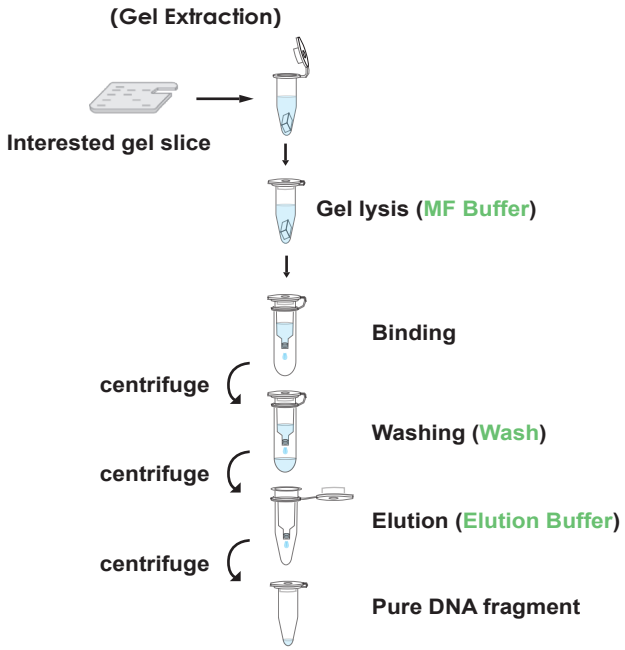
(Cat.: FAMGK000, 4 Preps)

(For Research Use Only)

Kit Contents:

MF Buffer	**1.5 ml x 2**
Wash Buffer (concentrated)	**1.0 ml**
Elution Buffer	**0.5 ml**
MF Column Set	**4 pcs**
(MF Column + Collection Tube)	

***Add 4 ml ethanol (96-100%) to Wash Buffer when first open.**



Specification:

Sampling: agarose gel up to 180 mg

Recovery : 80-90%.

Binding capacity : 5 µg

Very small elution volumn : 10 µl

Handling Time: 20 min for gel extraction.

Important Notes:

1. **Buffers provided in this system contain irritants. Wear gloves and lab coat when handling these buffer.**
2. **Add required volume of ethanol (96~100%) to Wash Buffer as bottle indicated when first open.**
3. **For gel DNA extraction, excising the extra agarose gel to minimize the size of the gel. The maximum amount of gel slice is 180 mg; If the excised gel is more than 180 mg, separate it into multiple tubes.**

Protocol:

Please Read Important Notes Before Starting The Following steps.

HINT: Prepare a 55 °C dry bath or water bath for step 4.

1. **Excise the agarose gel with a clean scalpel.**
   - Remove the extra agarose gel to minimize the size of the gel slice.
2. **Transfer up to 180 mg of the gel slice into a 1.5 ml microcentrifuge tube.(not provided).**
   - The maximum volume of the gel slice is 180 mg. If the excised gel is more than 180 mg, separate it into multiple tubes.
3. **Add 3 volumes of MF Buffer to the sample and mix by vortexing.**
   - For example, Add 540 µl of MF Buffer to 180 mg of gel.
   - For >2% agarose gels, Add 6 volume of MF Buffer.
4. **Incubate at 55°C for 10 ~15 min and vortex the tube every 3 min until the gel slice dissolved completely.**
   - During incubation, interval vortex can accelerate the gel dissolved.
   - Make sure that the gel slice has been dissolved completely before proceed the next step.
5. **Transfer sample mixture to MF Column set. Centrifuge *at 6,000 rpm* for 1 min then discard the flow-through.**
   - If the sample mixture is more than 700 µl, repeat the step 6 for the rest sample mixture.
6. **Add 600 µl of Wash Buffer (ethanol added) to MF Column. Centrifuge *at 6,000 rpm* for 1 min then discard the flow-through.**
   - Make sure that ethanol (96~100%) has been added into Wash Buffer when first open.

7. Centrifuge at *14,000 rpm* for an additional 3 min to dry MF column.

-Important Step! This step will avoid the residual liquid to inhibit subsequent enzymatic reactions.

8. Place MF Column into a new 1.5 ml microcentrifuge tube (not provided).

9. Add 10 µl of Elution Buffer or ddH2O (pH7.0~8.5) to the membrane center of MF Column. Stand MF Column for 2 min.

- Important Step! For effective elution, make sure that the elution solution is dispensed onto the membrane center and is absorbed completely.

10. Centrifuge at 14,000 rpm for 1 min to elute DNA.

-The average eluate volume is 9 µl from 10 µl elution buffer volume.

Troubleshooting

Problems	Possible reasons	Solutions
The gel slice is hard to dissolve	Agarose gel of high percentage (> 2 %) is used	Add 6 volumes of Gel Lysis Buffer Buffer to 1 volume of the gel slice.
	The size of the gel slice is too large	If the gel slice is more than 180 mg, separate it into multiple tubes.
Low or none recovery of DNA fragment	The column is loaded with too much agarose gel	The maximum volume of the gel slice is 180 mg per column.
	Elution of DNA fragment is not efficient	Make sure the pH of Elution Buffer or ddH2O is between 7.0- 8.5.
		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	Using a new or clean scalpel.
	DNA fragment is dena-tured	Incubate eluted DNA at 95 °C for 2 min, then cool down slowly to reanneal denatured DNA.
Poor perfor-mance in the downstream applications	Salt residue remains in eluted DNA fragment	Wash the column twice with Wash Buffer.
	Ethanol residue remains in eluted DNA fragment	Do discard the flow-through after washing with Wash Buffer and centrifuge for an additional 3 min.