FavorPrep™ Gel Purification Mini Kit

-For extraction of DNA fragments from agarose gel

Cat. No.: FAGPK 000
FAGPK 001
FAGPK 001-1
FAGPK 001-2

(For Research Use Only)

Kit Contents:

Cat. No:	FAGPK 000 (4 preps)	FAGPK 001 (50 preps)	FAGPK 001-1 (200 preps)	FAGPK 001-2 (300 preps)
FAGP Buffer	1.5 ml × 2	50 ml	200 ml	300 ml
Wash Buffer (Concentrate)[a]	1 ml	15 ml	45 ml	50 ml × 2
Elution Buffer	0.5 ml	5 ml	20 ml	20 ml
FAGP Column	4 pcs	50 pcs	200 pcs	300 pcs
Collection Tube	4 pcs	50 pcs	200 pcs	300 pcs
Elution Tube	4 pcs	50 pcs	200 pcs	300 pcs
User Manual	1	1	1	1
Preparation of Wash Buffer by adding ethanol (96~100%)				
Ethanol volume for Wash Buffer [a]	4 ml	60 ml	180 ml	200 ml

Specification:

Principle: Spin column (Silica matrix)

DNA Binding capacity of spin column: 20 µg

Sample size: Up to 200 mg of agarose gel

DNA size: 65 bp~10 kbp

Recovery: 70%~85% for Gel extraction

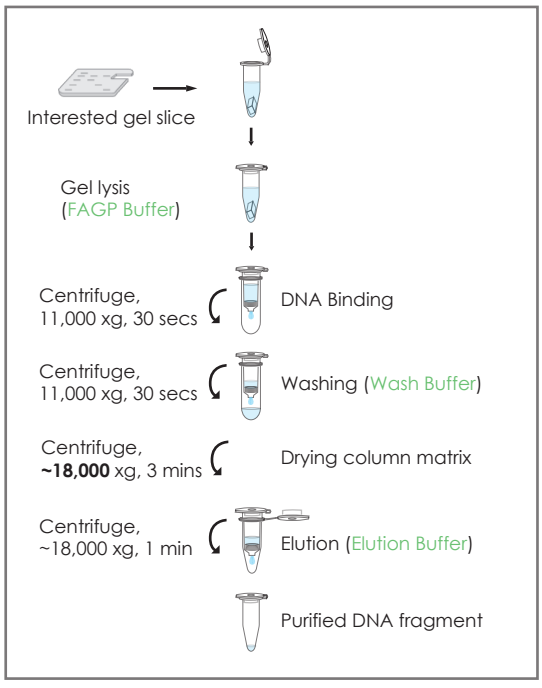
Operation time: ≤25 mins

Elution volume: ≥20 µl

Important Notes:

1. Buffer provided in this kit contain irritants. Wear gloves and lab coat when handling these buffer.
2. Add the required volume of ethanol (96~100%) to Wash Buffer before use.
3. Excise the extra agarose gel to minimize the size of the gel (up to 200 mg).
4. Centrifugation steps are done by a microcentrifuge capable of the speed at 11,000~18,000 xg.

Brief procedure:



General Protocol:

Please Read Important Notes Before Starting 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 200 mg of the gel slice into a microcentrifuge tube. (not provided).
-The maximum volume of the gel slice is 200 mg.

3. Add 3X volumes of FAGP Buffer to the sample and mix by vortexing.
-For example, Add 300 µl of FAGP Buffer to 100 mg of gel.
-For >2% agarose gels, add 6 volumes of FAGP Buffer to the sample.

4. Incubate at 55°C for 5~10 mins and vortex the tube every 2~3 mins until the gel slice dissolved completely.
-During incubation, interval vortexing can accelerate the gel dissolved.
-Make sure that the gel slice has been dissolved completely before proceed the next step.
-After gel dissolved, make sure that the color of sample mixture is yellow. If the color is violet, add 10 µl of sodium acetate, 3M, pH 5.0. Mix well to make the color of sample mixture turned to yellow.

5. Cool down the sample mixture to room temperature. Place a FAGP Column into a Collection Tube.

6. Transfer up to 750 µl of the sample mixture to the FAGP Column. Centrifuge at 11,000 xg for 30 secs, then discard the flow-through.
-If the sample mixture is more than 750 µl, repeat this step for the rest of the sample mixture.

7. Add 750 µl of Wash Buffer (ethanol added) to the FAGP Column. Centrifuge at 11,000 xg for 30 secs, then discard the flow-through.
-Make sure that ethanol (96~100%) has been added into Wash Buffer at the first use.

8. Centrifuge again at full speed (~18,000 xg) for an additional 3 mins to dry the column matrix.
-**Important step!** The residual liquid should be removed thoroughly on this step.

9. Place the FAGP Column to a Elution Tube (provided).

10. Add ≥20 µl of Elution Buffer or ddH_2O to the membrane center of the FAGP Column. Stand the FAGP Column for 1 min.
-**Important step!** For effective elution, make sure that the elution solution is dispensed onto the membrane center and is absorbed completely.
-**Important :** Do not elute the DNA using less than suggested volume (40 µl). It will lower the final yield.

11. Centrifuge at full speed (~18,000 xg) for 1 min to elute DNA.

Troubleshooting

Problems	Possible reasons	Solutions
The gel slice is hard to dissolve	Agarose gel of high percentage (>2%) is used	Add 6X volumes of Gel Lysis Buffer Buffer to 1X volume of the gel slice.
	The size of the gel slice is too large	If the gel slice is more than 200 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 200 mg per column.
	Elution of DNA fragment is not efficient	Make sure the pH of Elution Buffer or ddH_2O 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 denatured	Incubate eluted DNA at 95°C for 2 mins, 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 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 mins.