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PureLink® Quick Gel Extraction Kit

Catalog numbers K2100-12 and K2100-25

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Excising and Dissolving the Gel

1. Equilibrate a water bath or heat block to 50°C.
2. Excise a minimal area of gel containing the DNA fragment of interest.
3. Weigh the gel slice containing the DNA fragment using a scale sensitive to 0.001 g.
4. Add Gel Solubilization Buffer (L3) to the excised gel in the tube size indicated in the following table:

Gel	Tube	Buffer L3 Volume
≤2% agarose	1.7-mL polypropylene	3:1 (i.e., 1.2 mL Buffer L3: 400 mg gel piece)
>2% agarose	5-mL polypropylene	6:1 (i.e., 2.4 mL Buffer L3: 400 mg gel piece)

5. Place the tube with the gel slice and Buffer L3 into a 50°C water bath or heat block. Incubate the tube at 50°C for 10 minutes. Invert the tube every 3 minutes to mix and ensure gel dissolution.

   Note: High concentration gels (>2% agarose) or large gel slices may take longer than 10 minutes to dissolve.
6. After the gel slice appears dissolved, incubate the tube for an additional 5 minutes.
7. *Optional:* For optimal DNA yields, add 1 gel volume of isopropanol to the dissolved gel slice. Mix well.
8. Purify the DNA using a Centrifuge or Vacuum Manifold (see the following pages).

Intended Use
For research use only. Not intended for any animal or human therapeutic or diagnostic use.

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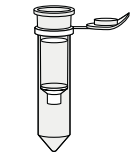
Purifying DNA Using a Centrifuge

Before Starting

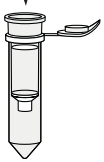
Add ethanol to the Wash Buffer (W1) according to the label on the bottle.



1. **Load.** Pipet the dissolved gel piece onto a Quick Gel Extraction Column inside a Wash Tube. Use 1 column per 400 mg of agarose gel.

   Note: The column reservoir capacity is 850 µL.

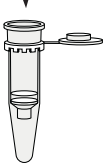
2. **Bind.** Centrifuge the column at >12,000 × g for 1 minute. Discard the flow-through and place the column into the Wash Tube.



3. **Wash.** Add 500 µL Wash Buffer (W1) containing ethanol to the column.

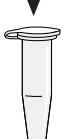
4. **Remove Buffer.** Centrifuge the column at >12,000 × g for 1 minute. Discard the flow-through and place the column into the Wash Tube.

5. **Remove Ethanol.** Centrifuge the column at maximum speed for 1–2 minutes. Discard the flow-through.



6. **Elute.** Place the column into a Recovery Tube. Add 50 µL Elution Buffer (E5) to the center of the column. Incubate the tube for 1 minute at room temperature.

7. **Collect.** Centrifuge the tube at >12,000 × g for 1 minute.

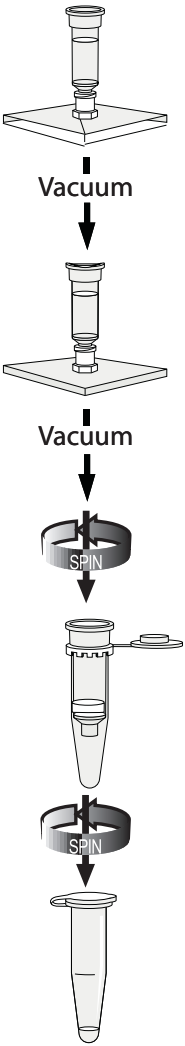


8. **Store.** *The elution tube contains the purified DNA.* Store the purified DNA at 4°C for immediate use or at –20°C for long-term storage.

Purifying DNA Using a Vacuum Manifold

Before Starting

Add ethanol to the Wash Buffer (W1) according to the label on the bottle.



1. **Load.** Attach a Quick Gel Extraction Column to a vacuum manifold. Pipet the dissolved gel mixture containing the DNA fragment of interest onto the center of the column. Use 1 column per 400 mg of agarose gel.

   Note: The column reservoir capacity is 850 µL.

2. **Bind.** Apply vacuum until all of the liquid passes through the column.

3. **Wash.** Add 500–700 µL Wash Buffer (W1) containing ethanol to the column.

4. **Remove Buffer.** Apply vacuum until all of the liquid passes through the column.

5. **Remove Ethanol.** Place the column into a Wash Tube. Centrifuge the column at maximum speed for 1–2 minutes. Discard the flow-through.

6. **Elute.** Place the column into a Recovery Tube. Add 50 µL Elution Buffer (E5) to the center of the column. Incubate the tube for 1 minute at room temperature.

7. **Collect.** Centrifuge the tube at >12,000 × g for 1 minute.

8. **Store.** *The elution tube contains the purified DNA.* Store the purified DNA at 4°C for immediate use or at –20°C for long-term storage.

Troubleshooting

Problem	Solution
Low DNA yield	• Ensure that the correct volume of Gel Solubilization Buffer (L3) is added for every 1 volume of gel used, based on the agarose gel percentage. • Verify that the temperature of water bath or heat block is 50°C. • Cut large gel slices into several pieces to accelerate the gel dissolution. • Mix the gel slice in the buffer every 3 minutes during the dissolution step. • Increase the incubation time for elution to >10 minutes. **Note:** This kit is not designed to purify supercoiled plasmid DNA.
Low $A_{260/230}$ ratio	• Do not get any buffer solution in the cap area of the tube. • Add a second wash step with Wash Buffer (W1): After your first wash with Wash Buffer (step 3 in **Purifying DNA Using a Centrifuge** or **Purifying DNA Using a Vacuum Manifold**: 1. Add another 500–700 µL Wash Buffer containing ethanol. 2. Centrifuge the tube at 12,000 × g. Discard the flow-through and return the column into the Wash Tube. 3. Centrifuge at the tube at maximum speed for 2–3 minutes.
Enzymatic reactions are inhibited	To remove Wash Buffer, discard Wash Buffer flow-through from the Wash Tube. Place the column into the Wash Tube and centrifuge the column at >12,000 × g for 2–3 minutes to completely dry the column.

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