PureLink™ PCR Purification Kit

Catalog Numbers K310001, K310002

Doc. Part No. 7015021 Pub. No. MAN0004375 Rev. B

WARNING! Read the Safety Data Sheets (SDSs) and follow the handling instructions. Wear appropriate protective eyewear, clothing, and gloves. Safety Data Sheets (SDSs) are available from **thermofisher.com/support**.

This Quick Reference is intended as a benchtop reference for experienced users of the PureLink™ PCR Purification Kit. For detailed instructions and troubleshooting, see the *PureLink™ PCR Purification Kit User Guide* (Pub. No. MAN0000446).

Before you begin

Prepare buffers according to the following table.

Table 1 Buffer preparation

Buffer	Preparation		Guidelines for use
	Cat. No. K310001	Cat. No. K310002	
Binding Buffer (B2)	Add 10 mL of isopropanol	Add 48 mL of isopropanol	Use for purifying 100 bp to 12 kb dsDNA PCR fragments
Binding Buffer High-Cutoff (B3)	Add 2.3 mL of isopropanol	Add 11 mL of isopropanol	Use for removing primer dimers or short spurious PCR products (<300 bp)
Wash Buffer (W1)	Add 64 mL of ethanol	Add 160 mL of ethanol per bottle	Use in wash steps of all procedures

Purify PCR products

Prepare all buffers before starting this procedure. See Table 1.

1. Add 4 volumes of Binding Buffer B2 or B3 to 1 volume of PCR sample (50–100 µL), then mix thoroughly.
2. Pipet the sample into a PureLink™ PCR Spin Column in a collection tube.
   a. Centrifuge the column-tube assembly at >10,000 × *g* for 1 minute.
   b. Discard the flow-through.
3. Reinsert the column into the collection tube, then add 650 µL of Wash Buffer (W1).
   a. Centrifuge the column-tube assembly at >10,000 × *g* for 1 minute.
   b. Discard the flow-through, then reinsert the column into the same collection tube.
   c. Centrifuge at maximum speed for 2–3 minutes.
4. Place the column into a PureLink™ Elution Tube (1.7 mL).
   a. Add 50 µL of Elution Buffer to the center of the column.
   b. Incubate the column for 1 minute at room temperature.
   c. Centrifuge the column-tube assembly at maximum speed for 2 minutes.

   The elution tube contains the purified PCR product.

Store the purified PCR product at 4°C for immediate use or at –20°C for long-term storage.

Troubleshooting

Observation	Possible cause	Recommended action
Low DNA yield	PCR conditions were not optimized.	Check the amplicon on a gel to verify the PCR product before purification.
	The binding conditions were not correct.	Be sure to add 100% isopropanol to the Binding Buffers (B2 and B3) before use. For efficient DNA binding, always mix 1 volume of PCR sample (50–100 µL) with 4 volumes of Binding Buffer (B2 or B3).
	Ethanol was not added to the Wash Buffer (W1).	Be sure to add 96–100% ethanol to the Wash Buffer (W1) before use.
	The elution conditions were not correct.	Add Elution Buffer to the center of the column, then incubate for 1 minute before centrifugation.
Primer dimers are present	The Binding Buffer used was not correct.	To efficiently remove primer dimers or short, spurious PCR products (<300 bp), use Binding Buffer B3. Binding Buffer B3 is specifically designed to remove <300 bp DNA fragments, eliminating the need for gel purification.
Downstream enzymatic reactions are inhibited	Ethanol was present in the purified PCR product.	Traces of ethanol from the Wash Buffer (W1) can inhibit downstream enzymatic reactions. To remove traces of ethanol, discard the Wash Buffer (W1) flow-through from the collection tube. Place the column into the collection tube, then centrifuge at >12,000 × *g* for 2–3 minutes to completely dry the column.

Limited product warranty

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For descriptions of symbols on product labels or product documents, go to thermofisher.com/symbols-definition.

Revision history: Pub. No. MAN0004375 B

Revision	Date	Description
B	11 June 2024	• The number of bottles and preparation instructions for the Wash Buffer (W1) provided in Cat. No. K310002 were updated. • The document was rebranded and updated to the current template.
A	14 September 2011	Baseline for this revision history.