A&A BIOTECHNOLOGY
innovating life science

Manual

Clean-Up Concentrator

Kit for DNA cleanup after PCR and other enzymatic reactions using restriction enzymes, ligase, kinase, etc. Low elution volume (from 15 µl).

catalog #	size
021-50C	50 isolations
021-250C	250 isolations

For research use only.

Guarantee
A&A Biotechnology provides a guarantee on this product.
The company does not guarantee the correct performance of this kit in the event of:

- not adhering to the supplied protocol
- use of not recommended equipment or materials
- use of other reagents than recommended or which are not a component of the product
- use of expired or improperly stored product or its components

Table of Contents

Contents

component	021-50C	021-250C	storage
Microcolumns	50 pcs	250 pcs	15–25 °C
1.5 ml elution tubes	50 pcs	250 pcs	15–25 °C
GI binding solution	30 ml	140 ml	15–25 °C
A1 wash solution	30 ml	140 ml	15–25 °C
Sodium acetate (3M, pH 5.5)	500 µl	3 ml	15–25 °C
Tris buffer (10 mM, pH 8.5)	2 ml	9 ml	15–25 °C

Additional equipment and reagents

Necessary

- 1.5 ml sterile Eppendorf tubes
- Vortex
- Microcentrifuge

Comments

- Binding capacity of microcolumn: up to 10 µg of DNA
- DNA fragments range: 100-10 000 bp
- Typical DNA recovery: 70-90%
- Elution volume: 15-30 µl

Isolation protocol

1. Mix DNA samples (up to 100 µl) with **5 volumes** of **GI** binding solution. Mix the samples by inverting the tubes or vortexing

   GI binding solution contains the color pH indicator. Upon mixing the DNA sample with GI binding solution, yellow color of the mixture indicates an optimal pH for DNA binding.

   If the mixture color turns pink the pH of the solution is too high. In such conditions DNA binds ineffectively to the silica membranes and may be lost.

   Too high pH can be corrected by adding 1-10 µl of 3M sodium acetate solution (pH 5.5) (included) and mix. Purification can be continued after reaching a yellow color.

    optimal condition pH ≤7.2

    too high pH

2. Briefly centrifuge the samples to remove the leftovers of solution from the tube walls and caps.

3. Apply samples onto the microcolumns. Close the tubes with the caps.

4. Centrifuge for **30-60 s** at **10 000-15 000 RPM**.

5. Remove the microcolumns, discard the filtrates. Place the microcolumns to **the same** tubes.

6. Add **300 µl** of **A1** wash solution. Close the tubes with the caps.

7. Centrifuge for **30-60 s** at **10 000-15 000 RPM**.

8. Add **200 µl** of **A1** wash solution. Close the tubes with the caps.

9. Centrifuge for **2 min** at **10 000-15 000 RPM**.

10. Transfer the microcolumns to **new** 1.5 ml tubes (not included).

11. Add **15-30 µl** of **Tris** buffer directly onto the microcolumn resin. Close the tubes with the caps.

    Applying Tris buffer onto the column be sure that liquid is applied directly onto the resin. If some of the liquid stays on the column wall the elution will be less effective.
    Elution in a smaller volume is less efficient, but the extracted DNA has a higher concentration. Elution in 30 µl is recommended for fragments over 2000 bp.

12. Incubate for **3 min** at **room temp.**

13. Centrifuge for **2 min** at **10 000-15 000 RPM**.

14. Remove the microcolumns, close the tubes. Store the tubes with purified DNA at **4-8°C** until later use.

Elution tube has a long elastic cap connector. It's important to start closing the tube by carefully pressing the cap on the connector side. A "click" - sound confirms proper closure. Different ways of closing may cause opening of the tube during storage.

Safety information

WARNING

GI binding solution

H302 Harmful if swallowed.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
P305+P351+P338 If in eyes: rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

DANGER

A1 wash solution

H225 Highly flammable liquid and vapor.
H319 Causes serious eye irritation.
H336 May cause drowsiness or dizziness.
P210 Keep away from heat, sparks, open flames, hot surfaces. No smoking.
P261 Avoid breathing vapors.
P305+P351+P338 If in eyes: rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

A&A BIOTECHNOLOGY
innovating life science

A&A Biotechnology, ul. Strzelca 40, 80-299 Gdańsk, Poland
phone +48 883 323 761, +48 600 776 268
info@aabiot.com, www.aabiot.com

version 2023-1