Product List

Product	Prep.	Contents	Cat. #
JETQUICK Plasmid Miniprep Spin Kit 50	50	50 Spin Columns Solutions, Reagents	400050
JETQUICK Plasmid Miniprep Spin Kit 250	250	250 Spin Columns Solutions, Reagents	400250
JETQUICK Gel Extraction Spin Kit 50	50	50 Spin Columns Solutions, Reagents	420050
JETQUICK Gel Extraction Spin Kit 250	250	250 Spin Columns Solutions, Reagents	420250
JETQUICK PCR Purification Spin Kit 50	50	50 Spin Columns Solutions, Reagents	410050
JETQUICK PCR Purification Spin Kit 250	250	250 Spin Columns Solutions, Reagents	410250
JETQUICK General DNA Clean-Up Kit 50	50	50 Spin Columns Solutions, Reagents	430050
JETQUICK General DNA Clean-Up Kit 250	250	250 Spin Columns Solutions, Reagents	430250

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Protocol

April 1997

JETquick

Spin Column Technique

General DNA Clean-Up

GENOMED

Contents

JETQUICK **General DNA Clean-Up Kit**

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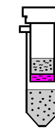
Description / DNA Clean-Up

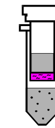
Procedure:	5 min
DNA Yield:	up to 20 µg dsDNA
DNA Recovery:	85 - 95%
DNA Sizes:	80 bp - 20 kb
DNA Purity:	ultrapure
DNA Elution:	buffer or water
Enzyme Removal:	> 99,8%
Salt Removal:	total
Dye Removal:	total
Advantages:	No phenol
	No chloroform
	No toxic reagents

DNA Assay
+
Binding Buffer



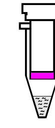
Bind

Centrifuge



Wash

Centrifuge



Elute

Pure DNA

Very important!

- **Before starting the procedure, make sure that solution M2 is reconstituted, as indicated on the bottle´s label.**
- **The JETQUICK procedure is not sensitive to detergents (like Triton X-100, NP40) in the assay. Nevertheless, concentrations > 0.1% of Tween 20 should be avoided.**
- **All centrifugation steps are carried out at maximum speed (approx. 13,000 rpm) in a conventional table-top microfuge.**

1. Sample Preparation Add **400 µl of solution M1** to **up to 100 µl DNA assay** and mix thoroughly.

Important: *Make sure that the volume of your DNA assay does not exceed 100 µl. When* ***DNA assays >100 µl are used****, scale up solution M1 proportionally. In this case, multiple loadings of the spin column (step 2 of the protocol) are required.*

2. Column Loading Place a **JETQUICK spin column** into a 2 ml receiver tube. Load the mixture from step 1 into the prepared spin column. Centrifuge at **maximum speed** for **1 min**. Discard the flowthrough.

3. Column Washing Re-insert the spin column into the empty receiver tube and add **700 µl of reconstituted solution M2**. Centrifuge at **maximum speed** for **1 min**.
Discard flowthrough and place the JETQUICK column back into the same receiver tube. Centrifuge **again** at **maximum speed** for **1 min.**

Important: *Residual solution M2 will not be completely removed unless the flowthrough is discarded before this additional centrifugation. Solution M2 contains ethanol, and residual ethanol may interfere with subsequent reactions. The additional centrifugation assures that no residual ethanol is carried over into the next step of the protocol.*

4. DNA Elution Place the **JETQUICK spin column** into a new 1.5 ml microfuge tube and add **50 µl** of **sterile water** (or **buffer: 10 mM Tris/HCl, pH 8.0**) directly onto the center of the silica matrix of the JETQUICK spin column. Centrifuge at **maximum speed** for **2 min**.

Important: *Higher DNA concentrations will be obtained if the elution is carried out in only 30 µl elution buffer volume. In this case, preheat your elution buffer to 65-70 °C, add the buffer onto the center of the silica matrix of the spin column and let stand for 1 min before centrifugation. Preheated elution buffer is generelly recommended when larger DNA is eluted. DNA eluted in water should be stored at -20 °C.*

Trouble-Shooting / DNA Clean-Up

When yields are low!

The protocol is designed to achieve very high yields of more than 80%. If low yields occur, they might be associated with:

1. **Insufficient DNA amount in your assay:**
   - Make sure that your DNA assay contains the DNA amount you anticipate.
2. **Incorrect DNA binding conditions:**
   - Make sure that the ratio of solution M1 (400 µl) to your DNA assay (up to 100 µl) was correct.
3. **Incomplete DNA elution:**
   - see step 4 of the protocol,
   - preheat your elution buffer to 65 - 70°C, add the buffer directly onto the center of the silica matrix of the spin column and let stand for 1 min. Centrifuge at maximum speed for 1 min.
4. **When DNA fragments are large (>7.5 kb):**
   - preheat your elution buffer to 65 - 70°C, add the buffer directly onto the center of the silica matrix of the spin column and let stand for 1 min. Centrifuge at maximum speed for 1 min.

When enzymatic reactions are inhibited!

After elution the DNA is ready to use for applications. Unsatisfactory results can be caused by the following:

1. **Residual ethanol in the sample after DNA elution:**
   - see step 3 of the protocol
2. **Residual salt in the sample after DNA elution:**
   - see step 3 of the protocol
   - use water or the following buffer to elute your DNA: (10 mM Tris/HCl, pH 8.0 with **no** EDTA)

Solutions / General DNA Clean-Up

Reconstitution of solution M2

The bottle of solution M2 contains concentrated buffer solution. Before use, add ethanol (95-100%) as stated on the bottle´s label.

Solution M1 (Binding) — **Store at RT**

Contains concentrated guanidine hydrochloride, EDTA, Tris/HCl and isopropanol

Solution M2 (Wash, reconstituted) — **Store at RT**

Contains ethanol, NaCl, EDTA and Tris/HCl

RT = room temperature

M1 contains guanidine hydrochloride, use with proper precaution.