



ZYMO RESEARCH

The Beauty of Science is to Make Things Simple

INSTRUCTION MANUAL

ZR DNA Sequencing Clean-up Kit™

Catalog Nos. **D4050 & D4051**

Highlights

- Simple 2 Minute Bind, Wash, Elute Procedure
- Flexible 6-20 µl Elution Volumes Allow for Direct Loading of Samples with no Precipitation or Drying Steps
- Complete Elimination of “Dye Blobs” with High Quality Phred Scores and Long Read Lengths
- Reusable Spin Columns that Support Both Gel and Capillary Electrophoresis Platforms

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Product Contents

ZR DNA Sequencing Clean-up Kit™ (Kit Size)	D4050 (50 preps.)	D4051 (200 preps.)	Storage Temperature
Sequencing Binding Buffer	14 ml	55 ml	Room Temp.
Sequencing Wash Buffer	20 ml	70 ml	Room Temp.
Zymo-Spin™ IB Columns	50 columns	200 columns	Room Temp.
Collection Tubes	50 tubes	200 tubes	Room Temp.
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Note - Integrity of kit components is guaranteed for up to one year from date of purchase. Reagents are routinely tested on a lot-to-lot basis to ensure they provide maximal performance and reliability.

Note: Satisfaction of all Zymo Research products is guaranteed. If you should be dissatisfied with this product, please call 1-888-882-9682.

Specifications

- **Format** – Spin Column.
- **Sample Sources** – Dye terminator sequencing reactions: Big Dye Terminator and other fluorescent based sequencing reactions.
- **DNA Purity** – High quality, sequencing-ready DNA products that are free of unincorporated dye terminators, dNTPs, enzymes, and residual salts.
- **Equipment** – Microcentrifuge

Note - ™ Trademarks of Zymo Research Corporation. This product is for research use only and should only be used by trained professionals. It is not intended for use in diagnostic procedures. Some reagents included with this kit are irritants. Wear protective gloves and eye protection. Follow the safety guidelines and rules enacted by your research institution or facility. pGem is a registered trademark of Promega Corporation.

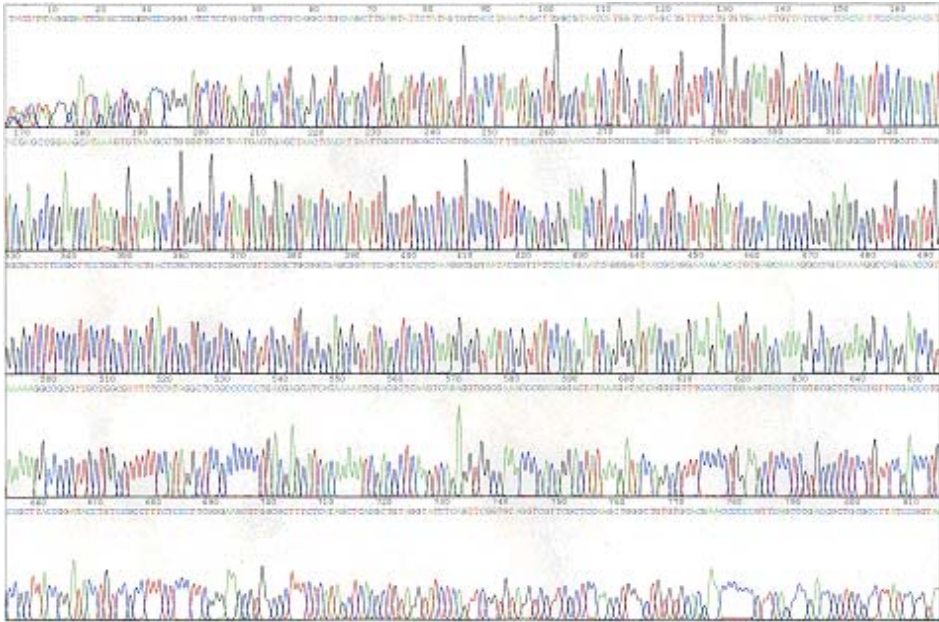
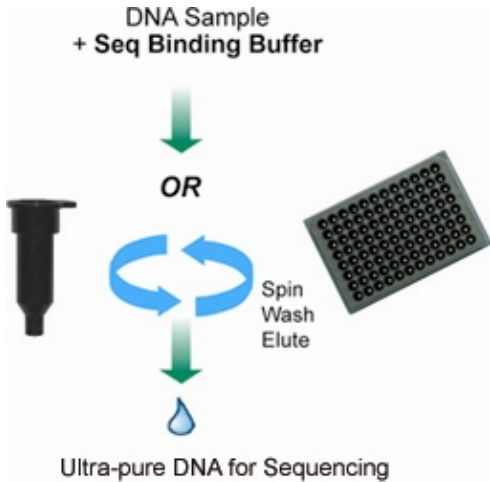
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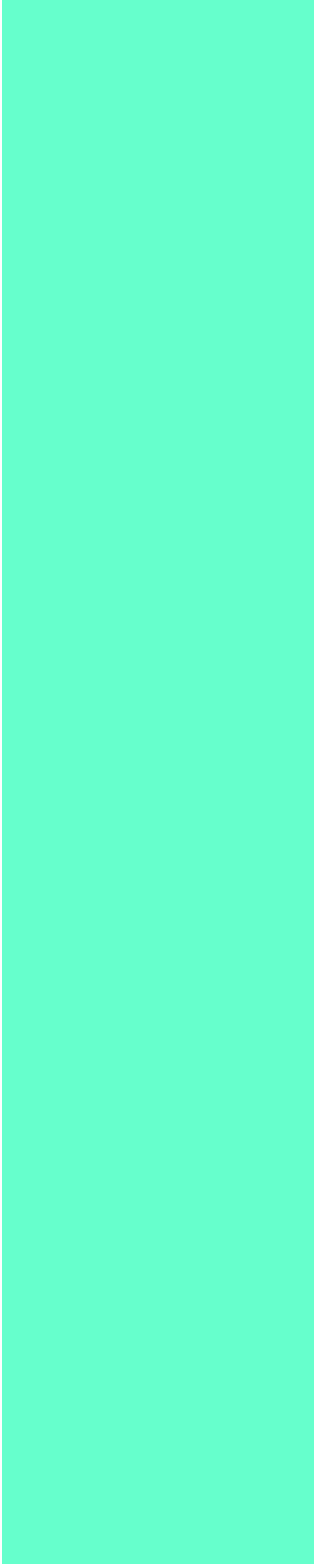
Product Description

The **ZR DNA Sequencing Clean-up Kit™** provides a simple method for the rapid removal of post-cycle sequencing reaction contaminants (i.e., unincorporated fluorescent dyes, residual salts, dNTPs, primers, and enzymes) from DNA extension products. These contaminants can often interfere with the quality and signal strength of sequencing data. In particular, unincorporated dyes can result in dye peaks (“dye blobs”) which may obscure portions of the sequencing chromatogram and interfere with base-calling accuracy of sequencing analysis software.

The **ZR DNA Sequencing Clean-up Kit™** employs a single-buffer system that allows for efficient DNA adsorption onto the matrix of the supplied **Zymo-Spin™ IB Column**. The DNA is washed then eluted with a small volume of water or loading dye containing formamide. The entire DNA purification procedure typically takes about 2 minutes.



Sequencing chromatogram of pGEM® DNA generated using an ABI 3730xl DNA analyzer. DNA was labeled with ABI BigDye v3.1 terminators and cleaned using the ZR DNA Sequencing Clean-up Kit™.



Protocol

1. Add 240 µl of **Sequencing Binding Buffer** to a 5-20 µl sequencing reaction.
2. Transfer mixture to a provided **Zymo-Spin™ IB Column** in a **Collection Tube**.
3. Centrifuge at 13,000 rpm (15,000 - 16,000 x g) for 30 seconds.
4. Add 300 µl **Sequencing Wash Buffer** to the column. Centrifuge at 13,000 rpm (15,000 - 16,000 x g) for 30 seconds.
5. Add 6-20 µl water directly to the column matrix. Transfer the column to a 1.5 ml microcentrifuge tube and centrifuge at 13,000 rpm (15,000 - 16,000 x g) for 15 seconds to elute the DNA.

Ultra-pure DNA is now ready to be loaded into the sequencer.

Procedure For Spin Column Re-generation

(**Note:** Columns may be regenerated up to 10X pending no damage to the column or matrix. If columns are regenerated, additional buffers will have to be ordered separately.)

1. Add 500 µl of 0.1% HCl to spin column and incubate at room temperature for 30 minutes.
2. Centrifuge at 13,000 rpm (15,000 - 16,000 x g) for 30 seconds.
3. Let dry overnight at 37 °C.
4. Spin columns are now ready for use.

Note: Alternatively, 5-20 µl sequencing reaction can be mixed with 240 µl Sequencing Binding Buffer that has already been added to the Zymo-Spin™ IB Column.

Note: A formamide solution ($\leq 20\%$) may also be used to elute the DNA.

For **Technical Assistance**, please contact those at **Zymo Research's Technical Department** at 1-888-882-9682 or E-mail to tech@zymoresearch.com.

Ordering Information

Product Description	Catalog No.	Kit Size
ZR DNA Sequencing Clean-up Kit™	D4050	50 preps.
ZR DNA Sequencing Clean-up Kit™	D4051	200 preps.
ZR-96 DNA Sequencing Clean-up Kit™	D4052	(2) 96-well plates
ZR-96 DNA Sequencing Clean-up Kit™	D4053	(4) 96-well plates

For Individual Sale	Catalog No.	Amount
Sequencing Binding Buffer	D4050-1-14	14 ml
	D4050-1-55	55 ml
Sequencing Wash Buffer	D4050-2-20	20 ml
	D4050-2-70	70 ml
Zymo-Spin™ IB Columns	C1014-50	50 columns
Collection Tubes	C1001-50	50 tubes
	C1001-500	500 tubes
	C1001-1000	1,000 tubes

Popular DNA Purification & Analysis Products from Zymo

Product	Description	Kit Size (Preps.)	Catalog No. (Column Format)
DNA Clean & Concentrator™-5	Clean & concentrate DNA from any reaction or “crude” preparation in 2 minutes. A 6 µl minimum elution volume allows for highly concentrated DNA. Designed for samples containing up to 5 µg of DNA.	50	D4003 (uncapped)
		200	D4004 (uncapped)
		50	D4013 (capped)
		200	D4014 (capped)
DNA Clean & Concentrator™-25	Clean & concentrate DNA in minutes. 25 µl minimum elution volume allows for highly concentrated DNA. Designed for purifying up to 25 µg of DNA.	50	D4005
		200	D4006
DNA Clean & Concentrator™-100	Clean & concentrate DNA in minutes. 100 µl minimum elution volume allows for highly concentrated DNA. Designed for purifying up to 100 µg of DNA.	25	D4029
		50	D4030
DNA Clean & Concentrator™-500	Clean & concentrate DNA in minutes. 1 ml minimum elution volume allows for highly concentrated DNA. Designed for samples containing up to 500 µg of DNA.	10	D4031
		20	D4032
ZR-96 DNA Clean & Concentrator™-5	Quick (15 minute), high-output recovery of pure DNA from PCR, endonuclease digestions, plasmid preparations, etc. 10-15 µl minimum elution volume allows for highly concentrated DNA. Designed for samples containing up to 5 µg of DNA.	2x96	D4023
		4x96	D4024
Zymoclean™ Gel DNA Recovery Kit	Purify DNA from high and low-melting agarose gels in minutes	50	D4001
		200	D4002
ZR-96 Zymoclean™ Gel DNA Recovery Kit	High-throughput DNA purification from high and low-melting agarose gels.	2x96	D4021
		4x96	D4022
Pinpoint Slide DNA Isolation System™	Recover genomic DNA from paraffin-embedded or fresh tissue sections for PCR. Ideal for isolating DNA from clinical tissue samples.	50	D3001
Zyppy™ Plasmid Miniprep Kit	High-purity plasmid DNA purification in minutes: (alkaline lysis/spin column format for low 25 µl elution volume).	100	D4019
		400	D4020
Zyppy™ Plasmid Midiprep Kit	High-purity plasmid DNA purification in minutes: (alkaline lysis/spin column format and 150 µl minimum elution volume).	25	D4025
		50	D4026
Zyppy™ Plasmid Maxiprep Kit	High-purity plasmid DNA purification in minutes: (alkaline lysis/spin column format and 2 ml minimum elution volume).	10	D4019
		20	D4020
ZR Genomic DNA I Kit™	Genomic DNA isolation from whole blood, tissue culture cells, solid tissue and liquid samples. (Silica bead format is scalable to fit your requirements).	100	D3004
		400	D3005
ZR Genomic DNA II Kit™	Genomic DNA purification from whole blood, tissue culture cells, solid tissue and liquid samples. No requirement for beads or phenol chloroform.	50	D3006 (uncapped)
		200	D3007 (uncapped)
		50	D3024 (capped)
		200	D3025 (capped)
ZR-96 Genomic DNA Kit™	High-output genomic DNA purification from whole blood, tissue culture cells, solid tissue and liquid samples. No requirement for beads or phenol chloroform.	2x96	D3010
		4x96	D3011
ZR Soil microbe DNA Kit™	Simple, rapid isolation of humic-free, PCR-quality genomic DNA from soil microbes.	50	D6001
ZR Fungal/Bacterial DNA Kit™	Simple, rapid isolation of PCR-quality genomic DNA from fungi.	50	D6005
ZR Fecal DNA Kit™	Simple, rapid isolation of PCR-quality genomic DNA from feces.	50	D6010
ZR Viral DNA Kit™	Isolation of viral DNA from cell-free body fluids or sample mixtures containing cells at concentrations less than 10 ⁵ cells per ml.	50	D3015
		200	D3016
ZR-96 Viral DNA Kit™	High-output (96-well) isolation of viral DNA from cell-free body fluids or sample mixtures containing cells at concentrations less than 10 ⁵ cells per ml.	2x96	D3017
		4x96	D3018
EZ DNA Methylation Kit™	Streamlined kit for the conversion of unmethylated cytosines in DNA to uracil via the <u>chemical-denaturation</u> of DNA using our specially designed CT Conversion Reagent™. DNA is then desulphonated and subsequently cleaned using <i>Fast-Spin</i> column technology. Ultra-pure recovered DNA can be used for PCR and bisulfite sequencing applications.	50	D5001
		200	D5002
		2x96	D5003
EZ DNA Methylation-Gold Kit™	Streamlined kit for the conversion of unmethylated cytosines in DNA to uracil via <u>heat-denaturation</u> of DNA using our specially designed CT Conversion Reagent™. DNA is then desulphonated and subsequently cleaned using <i>Fast-Spin</i> column technology. Ultra-pure recovered DNA can be used for PCR and bisulfite sequencing applications. <i>3 hour processing time!</i>	50	D5005
		200	D5006
		2x96	D5007

*Bulk quantities are available upon request. Please contact: busdev@zymoresearch.com or call 1-888-882-9682 for assistance.

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