# ZR DNA Sequencing Clean-up Kit™

## Simplest, Most Reliable Method for Dye-Terminator Removal From DNA!



- 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 and 96-well filtration plates that support both gel and capillary electrophoresis platforms.

The **ZR DNA Sequencing Clean-up Kit**<sup>™</sup> 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 the base-calling accuracy of sequencing analysis software.

The **ZR DNA Sequencing Clean-up Kit**<sup>™</sup> features a single-buffer system that allows for efficient DNA adsorption onto the matrix of the supplied spin column or filtration plate. 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.



Diagram of the ZR Sequencing Clean-up procedure.

#### Comparative Overview (Single Column Format)

	ZR DNA Sequencing Clean-up Kit™	Competitor PS	EtOH Precipitation
Processing Time	2 min.	> 40 min.	> 45 min.
Ready-to-Use Format	Yes	No	No
Avg. Cost per prep.	\$1.64 (reusable)	\$2.50	-
96-well Format	Yes	Yes	Yes
Reusable	Yes	No	No



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### ZR DNA Sequencing Clean-up Kit™ Short Protocol (Spin Column)

- 1. Add 240 μl **Sequencing Binding Buffer** to 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.
- Add 300 μl Sequencing Wash Buffer to the column. Centrifuge at 13,000 rpm (15,000 - 16,000 x g) for 30 seconds.
- 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 30 seconds to elute the DNA.

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



Figure 1. Phred20 scores obtained with the ZR DNA Sequencing Clean-up Kit<sup>™</sup> are consistently higher than those obtained with Competitors PS and Q and ethanol precipitation procedures. DNA samples were labeled using the BigDye Terminator Cycle Sequencing Kit then sequenced using an ABI 3730xI DNA Analyzer.



**Figure 2**. Sequencing chromatogram of pGEM<sup>®</sup> DNA generated using an ABI 3730xI DNA analyzer. DNA was labeled with ABI BigDye v3.1 Terminators and cleaned using the **ZR DNA Sequencing Clean-up Kit**<sup>™</sup>.

#### **Ordering Information**

Product Description	Catalog No.	Quantity
ZR DNA Sequencing Clean-up Kit™	D4050 D4051	50 preps. 200 preps.
ZR-96 DNA Sequencing Clean-up Kit™	D4052 D4053	2x96 preps. 4x96 preps.

Note - ™ Trademarks of Zymo Research Corporation. This product is for research use only and should only be used by trained professionals. 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.