



ZYMO RESEARCH

The Beauty of Science is to Make Things Simple

INSTRUCTION MANUAL

DNA Clean & Concentrator-25™

Catalog Nos. **D4005, D4006, D4033, & D4034**

Highlights

- Quick (2 minute) recovery of ultra-pure DNA from PCR, endonuclease digestions, cell lysates, etc.
- Column design allows DNA to be eluted at high concentrations into minimal volumes of water.
- Eluted DNA is well suited for use in PCR, DNA sequencing, DNA ligation, endonuclease digestion, RNA transcription, radiolabeling, etc.
- Omits the use of organic denaturants as well as proteinases.

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

Note: For vacuum based applications use capped column formats (D4033 & D4034).

Product Contents:

DNA Clean & Concentrator-25™ Kit Size	D4005, D4033 (50 Preps.)	D4006, D4034 (200 Preps.)	Storage Temperature
DNA Binding Buffer	50 ml	2x100 ml	Room Temp.
DNA Wash Buffer*	6 ml	24 ml	Room Temp.
Zymo-Spin™ II Columns	50 ct. D4005 – w/ uncapped columns D4033 – w/ capped columns	200 ct. D4006 – w/ uncapped columns D4034 – w/ capped columns	Room Temp.
Collection Tubes	50 ct.	200 ct.	Room Temp.
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* Ethanol must be added prior to use as indicated on **DNA Wash Buffer** label.

Specifications:

- **DNA Purity** – High-quality, purified DNA is eluted with water and is especially well suited for sequencing, ligation reactions, and restriction endonuclease digestions.
- **DNA Size Limits** – From 75 bp to 23 kb.
- **DNA Recovery** – Typically, up to 25 µg total DNA can be eluted into as little as 25 µl water. For DNA 75 bp to 10 kb the recovery is 70-90%. For DNA 11 kb to 23 kb the recovery is 50-70%.
- **Sample Sources** – DNA from PCR, restriction endonuclease digestions, plasmid preparations, kinase reactions, etc.
- **Product Detergent Tolerance** – ≤5% Triton X-100, ≤5% Tween-20, ≤5% Sarkosyl, ≤0.1% SDS.
- **Stability of Product Reagents** – Integrity of kit components is guaranteed for up to one year from date of purchase.
- **Quality Control** – Reagents are routinely tested on a lot-to-lot basis to ensure they provide maximal performance and reliability.

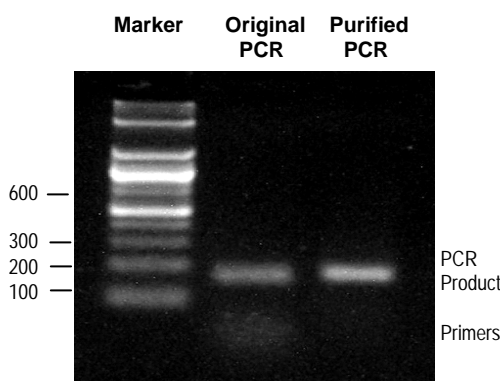
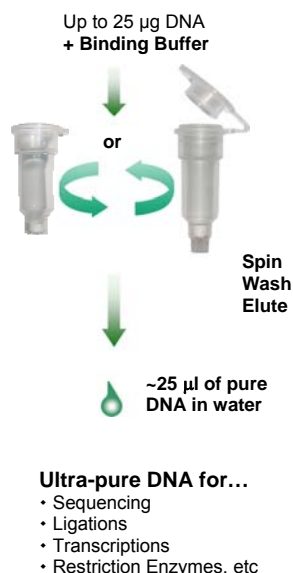
Note - ™ Trademarks of Zymo Research Corporation. This product is for research use only and should only be used by trained professionals. Some reagents included with this kit are irritants. Wear protective gloves and eye protection. Follow the safety guidelines and rules enacted by your research institution or facility.

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Product Description:

Zymo Research's **DNA Clean & Concentrator-25™** product provides a hassle-free method for the rapid purification and concentration of up to 25 µg of high-quality DNA from PCR, endonuclease digestions, or DNA from cell lysates. Simply add the specially formulated **DNA Binding Buffer** to your sample and transfer to the supplied **Zymo-Spin™ Column**. There is no need for organic denaturants or chloroform. Instead, the product features *Fast-Spin* column technology to yield high-quality, purified DNA in just minutes. DNA purified using the **DNA Clean & Concentrator-25™** product is suitable for nucleotide sequencing, microarray analysis, PCR, nucleotide blotting, and restriction endonuclease digestion procedures.



DNA samples, such as the PCR products shown here, can be efficiently purified and concentrated using the **DNA Clean & Concentrator-25™** product.

Typical DCC™ Applications:

- **DNA from PCR:** efficient desalting of DNA with the removal of DNA polymerases, primers, and free dNTPs.
- **DNA from Enzymatic Reactions:** Efficient desalting of DNA with the removal of DNA polymerases, modifying enzymes, RNA polymerases, ligases, kinases, nucleases, phosphatases, endonucleases, etc.
- **cDNA:** Efficiently purifies DNA following RT, either as a DNA/RNA complex or as single stranded cDNA following chemical hydrolysis of the RNA template.
- **Plasmid DNA:** The **DCC™** can be used to purify plasmid DNA from cell-free lysates from "home-made" preparations or from commercial kits. Plasmid DNA purified and concentrated using the **DCC™** has proven an excellent substrate for high quality DNA sequencing.
- **Isotope and Dye removal:** The **DCC™** efficiently removes unincorporated fluorescent (i.e., AMCA, FITC, BIO, DIG, Cy3, Cy5, FAME, etc.) and radiolabeled dNTP derivatives from DNA following *in vitro* labeling reactions.
- **M13 ssDNA:** The **DCC™** can be used for the rapid isolation of single stranded M13 phage DNA directly from phage infected *E.coli* culture supernatant.

For DNA samples <5 µg, use the **DNA Clean & Concentrator-5™** (D4003, D4004, D4013 & D4014).

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

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Reagent Preparation:

Alternatively, add 26 ml and 104 ml of 95% ethanol to the 6 ml and 24 ml sizes of the **DNA Wash Buffer** concentrate, respectively.

- Before starting, add 24 ml 100% ethanol to the 6 ml **DNA Wash Buffer** concentrate (96 ml 100% ethanol to the 24 ml **DNA Wash Buffer** concentrate) to obtain the final **DNA Wash Buffer** solution.

Add 100 μ l binding buffer to all samples \leq 50 μ l.

For ssDNA (e.g., single stranded cDNA), add 7 volumes to each volume of sample. For example, 350 μ l binding buffer to 50 μ l sample.

The sample capacity of the column is 800 μ l. Therefore, it may be necessary to load and spin a column multiple times if a sample has a volume larger than 800 μ l.

Elution of DNA from the column is dependent on pH and temperature. If water is used, make sure the pH is $>$ 5.0. Waiting 1 minute after adding water to the column may improve the yield of larger ($>$ 6 kb) DNA. For even larger DNA ($>$ 10 kb) the total yield may be improved by eluting the DNA with 60-70°C water.

TE buffer (10 mM Tris-HCl, 1 mM EDTA, pH 8.0) or modified TE (10 mM Tris, 0.1 mM EDTA, pH 8.5) can also be used for elution if required by your experiment.



Protocol:

1. In a 1.5 ml microcentrifuge tube, add 2 volumes of **DNA Binding Buffer** to each volume of DNA sample. (e.g., 300 μ l binding buffer to 150 μ l DNA sample). Mix briefly by vortexing.
2. Transfer mixture to a provided **Zymo-Spin™ Column** in a **Collection Tube**.
3. Centrifuge at \geq 10,000 x *g* for 30 seconds. Discard the flow-through.
4. Add 200 μ l **Wash Buffer** to the column. Centrifuge at \geq 10,000 x *g* for 30 seconds. Repeat wash step.
5. Add 30 - 50 μ l water or elution buffer directly to the column matrix. Transfer the column to a 1.5 ml microcentrifuge tube and centrifuge at \geq 10,000 x *g* for 30 seconds to elute the DNA.

Ultra-pure DNA in water is now ready for use.

Ordering Information:

Product Description	Catalog No.	Kit Size
DNA Clean & Concentrator-25™ supplied w/ uncapped columns	D4005	50 Preps.
DNA Clean & Concentrator-25™ supplied w/ capped columns	D4033	50 Preps.
DNA Clean & Concentrator-25™ supplied w/ uncapped columns	D4006	200 Preps.
DNA Clean & Concentrator-25™ supplied w/ capped columns	D4034	200 Preps.

For Individual Sale	Catalog No.	Amount
DNA Binding Buffer	D4003-1-L	50 ml
	D4004-1-L	100 ml
DNA Wash Buffer (concentrate)	D4003-2-6	6 ml
	D4003-2-24	24 ml
Zymo-Spin™ II Columns (uncapped)	 C1008-50	50 ct.
	C1008-250	250 ct.
Zymo-Spin™ IIC Columns (capped)	 C1011-50	50 ct.
	C1011-250	250 ct.
Collection Tubes	C1001-50	50 ct.
	C1001-500	500 ct.
	C1001-1000	1,000 ct.

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 (uncapped)
		200	D4006 (uncapped)
			D4033 (capped)
			D4034 (capped)
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	Pellet-Free™ plasmid DNA purification in minutes: (alkaline lysis/spin column format for low 30 µl elution volume).	50	D4036
		100	D4019
		400	D4020
Zyppy™ Plasmid Midiprep Kit	Pellet-Free™ 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	D4027
		20	D4028
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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