



ZYMO RESEARCH

The Beauty of Science is to Make Things Simple

INSTRUCTION MANUAL

ssDNA/RNA Clean & ConcentratorTM

Catalog Nos. **D7010 & D7011**

Highlights

- Quick (*10 minute*) method for separating, cleaning and concentrating single stranded DNA or RNA.
- Ideal for non-enzymatic elimination of genomic DNA, purification of transcripts, probes, primers *etc.*
- *Fast-Spin* column technology allows for elution into minimal volumes ($\geq 6 \mu\text{l}$).

Contents

Product Contents	1
Specifications.....	1
Product Description.....	2
Buffer Preparation.....	3
Protocol.....	3
Ordering Information	4
Related Products	5

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

Product Contents

ssDNA/RNA Clean & Concentrator™ (Kit Size)	D7010 (20 Preps.)	D7011 (50 Preps.)	Storage Temperature
DNA/RNA Binding Buffer	10 ml	25 ml	Room Temp.
DNA/RNA Prep Buffer	10 ml	25 ml	Room Temp.
DNA/RNA Wash Buffer ¹ (concentrate)	6 ml	12 ml	Room Temp.
DNase/RNase-Free Water	1 ml	1 ml	Room Temp.
Zymo-Spin™ IC Columns	20	50	Room Temp.
Zymo-Spin™ IIC Columns	20	50	Room Temp.
Collection Tubes	40	2x 50	Room Temp.
Instruction Manual	1	1	-

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 the highest performance and reliability.

Specifications

- **Sample Sources** – Mixtures of double and single stranded DNA and RNA species with single stranded fragments 17 to 200 nucleotides (e.g., short transcripts, probes, primers).
- **Format** – Spin column.
- **DNA/RNA Purity** – High quality DNA/RNA ($A_{260}/A_{280} >1.8$, $A_{260}/A_{230} >1.8$) suitable for all downstream manipulations.
- **DNA/RNA Recovery** – Up to 5 µg ssDNA/RNA can be purified and eluted into ≥6 µl water allowing for a highly concentrated sample.
- **RNA Storage** – RNA is eluted with RNase-free water and can be stored at ≤-70 °C. The addition of RNase inhibitors is highly recommended for prolonged storage.
- **Equipment Needed** – Microcentrifuge.

Notes:

¹ Add 24 ml 100% ethanol (26 ml of 95% ethanol) to the 6 ml **DNA/RNA Wash Buffer** concentrate (D7010) or 48 ml 100% ethanol (52 ml of 95% ethanol) to the 12 ml **DNA/RNA Wash Buffer** concentrate (D7011) before use.

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.

ZYMO RESEARCH CORP.

Phone: (949) 679-1190 ▪ Toll Free: (888) 882-9682 ▪ Fax: (949) 266-9452 ▪ info@zymoresearch.com ▪ www.zymoresearch.com

Product Description

ssDNA/RNA Clean & Concentrator™ provides a simple and reliable method for the rapid separation, clean-up and concentration of up to ~5 µg (per prep.) of single stranded DNA and/or RNA from double stranded species (*e.g.*, genomic DNA). This simple procedure is based on the use of a unique single-buffer system and *Fast-Spin* column technology. Single stranded DNA or RNA 17 to 200 nucleotides (*e.g.*, short transcripts, probes, primers) can be safely treated and recovered using this kit. The result is highly-concentrated, purified DNA/RNA that is suitable for subsequent molecular methods including PCR, RT-PCR, hybridization, *etc.*

The entire procedure typically takes about 10 minutes.

For **Assistance**, please contact Zymo Research Technical Support at 1-888-882-9682 or e-mail tech@zymoresearch.com.

ZYMO RESEARCH CORP.

Phone: (949) 679-1190 ▪ Toll Free: (888) 882-9682 ▪ Fax: (949) 266-9452 ▪ info@zymoresearch.com ▪ www.zymoresearch.com

Buffer Preparation

Before starting, add 24 ml 100% ethanol (26 ml 95% ethanol) to the 6 ml **DNA/RNA Wash Buffer** concentrate (D7010) or 48 ml 100% ethanol (52 ml 95% ethanol) to the 12 ml **DNA/RNA Wash Buffer** concentrate (D7011).

Protocol

1. Add 2 volumes of **DNA/RNA Binding Buffer** to the sample¹ (e.g., 200 μ l buffer to 100 μ l sample) and mix well.
2. Transfer the mixture to the **Zymo-Spin™ IIC Column** in a **Collection Tube** and centrifuge at $\geq 12,000 \times g$ for 1 minute. *Save the flow-through!*
3. Add 1 volume ethanol (95-100%) to the flow-through in the **Collection Tube** (e.g., 300 μ l ethanol to 300 μ l flow-through), and mix well by pipetting.
4. Transfer the mixture to the **Zymo-Spin™ IC Column** in a **Collection Tube** and centrifuge at $\geq 12,000 \times g$ for 1 minute. Discard the flow-through.
5. Add 400 μ l **DNA/RNA Prep Buffer** to the column and centrifuge at $\geq 12,000 \times g$ for 1 minute. Discard the flow-through.
6. Add 700 μ l **DNA/RNA Wash Buffer** to the column and centrifuge at $\geq 12,000 \times g$ for 30 seconds. Discard the flow-through and repeat *Step 6* with 400 μ l **DNA/RNA Wash Buffer**.
7. Centrifuge the **Zymo-Spin™ IC Column** in an emptied **Collection Tube** at $\geq 12,000 \times g$ for 2 minutes. Transfer the column into an RNase-Free Tube.
8. Add $\geq 6 \mu$ l **DNase/RNase-Free Water**² directly to the column matrix and let stand for 1 minute at room temperature. Centrifuge at $10,000 \times g$ for 30 seconds. The eluted DNA/RNA can be used immediately or stored at or below -20°C .

Notes:

¹ Minimal recommended sample volume is 50 μ l. Adjust samples $< 50 \mu$ l with DNase/RNase-free water.

² To maximize DNA/RNA yield, increase the elution volume ($\geq 15 \mu$ l) and/or repeat the elution.

ZYMO RESEARCH CORP.

Phone: (949) 679-1190 ▪ Toll Free: (888) 882-9682 ▪ Fax: (949) 266-9452 ▪ info@zymoresearch.com ▪ www.zymoresearch.com

Ordering Information

Product Description	Catalog No.	Kit Size
ssDNA/RNA Clean & Concentrator™	D7010	20 Preps.
	D7011	50 Preps.

For Individual Sale	Catalog No.	Amount
DNA/RNA Binding Buffer	D7010-1-10	10 ml
	D7010-1-25	25 ml
	D7010-1-50	50 ml
DNA/RNA Prep Buffer	D7010-2-10	10 ml
	D7010-2-25	25 ml
DNA/RNA Wash Buffer (concentrate)	D7010-3-6	6 ml
	D7010-3-12	12 ml
Zymo-Spin™ IC Columns	C1004-50	50
	C1004-250	250
Zymo-Spin™ IIC Columns	C1011-50	50
	C1011-250	250
Collection Tubes	C1001-50	50
	C1001-500	500
	C1001-1000	1000
DNase/RNase-Free Water	W1001-1	1 ml
	W1001-4	4 ml
	W1001-6	6 ml
	W1001-10	10 ml

ZYMO RESEARCH CORP.

Phone: (949) 679-1190 ▪ Toll Free: (888) 882-9682 ▪ Fax: (949) 266-9452 ▪ info@zymoresearch.com ▪ www.zymoresearch.com

Related Products

Product	Description	Prep/Format	Catalog
RNA Clean-Up			
RNA Clean & Concentrator™ -5	Cleanup and concentration of modified, labeled, impure, diluted, DNase treated RNA (≥ 17 nt) and purification of RNA from aqueous phase of organic extracts. <i>Note: DNA-free RNA Kit™ includes DNase I</i>	50/column 200/column	R1015 R1016
RNA Clean & Concentrator™ -25		50/column 100/column	R1017 R1018
RNA Clean & Concentrator™ -100		25/column	R1019
ZR-96 RNA Clean & Concentrator™		2x 96/plate	R1080
DNA-Free RNA Kit™		50/column 200/column	R1013 R1014
Oligo Clean & Concentrator™	Cleanup and concentration of RNA and/or DNA oligos. Good for clean-up of miRNAs and siRNAs.	50/column 200/column	D4060 D4061
ZR-96 Oligo Clean & Concentrator™		2x 96/plate 4x 96/plate	D4062 D4063
ssDNA/RNA Clean & Concentrator™	Separation of short ssRNA and ssDNA (up to 200 nt) from double stranded species.	20/column 50/column	D7010 D7011
Zymoclean™ Gel RNA Recovery Kit	Recovery of RNA from agarose gels.	50/column	R1011
ZR small-RNA™ PAGE Recovery Kit	Small RNA (> 17nt) from polyacrylamide gels.	20/column	R1070
OneStep™ PCR Inhibitor Removal Kit	Removal of polyphenolics, humic/fulvic acids, tannins, melanin etc. from RNA.	50/column	D6030
OneStep™ -96 PCR Inhibitor Removal Kit		2x 96/plate	D6035
RNA from Samples in TRI Reagent (Small RNA Recovery)			
Direct-zol™ RNA MiniPrep	RNA (>17 nt) from TRI Reagent®, TRIzol®, and all other acid-guanidinium-phenol based reagents without phase separation. DNase I included.	50/column 200/column	R2050 R2052
Direct-zol™ RNA MiniPrep w/ TRI Reagent		50/column 200/column	R2051 R2053
Direct-zol™ -96 RNA		2x 96/plate 4x 96/plate	R2054 R2056
Direct-zol™ -96 RNA w/ TRI Reagent		2x 96/plate 4x 96/plate	R2055 R2057
Direct-zol™ -96 MagBead RNA		2x 96/plate 4x 96/plate 8x 96/plate	R2100 R2102 R2104
Direct-zol™ -96 MagBead RNA w/ TRI Reagent	2x 96/plate 4x 96/plate 8x 96/plate	R2101 R2103 R2105	
RNA from Cells & Tissue			
Quick-RNA™ MicroPrep	Total RNA (>17 nt) from cultured cells, tissue samples, buccal cells, buffy coat, plasma, serum, and other biological liquids. DNase I included.	50/column 200/column	R1050 R1051
Quick-RNA™ MiniPrep		50/column 200/column	R1054 R1055
Quick-RNA™ MidiPrep		25/column	R1056
ZR-96 Quick-RNA™		2x 96/plate 4x 96/plate	R1052 R1053
ZR-Duet™ DNA/RNA MiniPrep		Parallel purification of DNA/RNA from cells.	50/column
Pinpoint™ Slide RNA Isolation System Kit I	RNA from fresh/frozen tissue sections.	50/column	R1003
Pinpoint™ Slide RNA Isolation System Kit II	RNA from paraffin-embedded (FFPE) tissue.	50/column	R1007
RNA from Biological Liquids			
ZR Viral RNA Kit™	RNA (DNA) from body fluids (plasma, serum, CSF, urine).	50/column 200/column	R1034 R1035
ZR-96 Viral RNA Kit™		2x 96/plate 4x 96/plate	R1040 R1041
ZR Viral DNA/RNA Kit™		25/column 100/column	D7020 D7021
ZR Whole-Blood RNA MiniPrep™		50/column 100/column	R1020 R1021
ZR Urine RNA Isolation Kit™	Cellular and endosomal RNA from urine.	20/column 50/column	R1038 R1039
RNA from Tough-to-Lyse Samples			
ZR Fungal/Bacterial RNA MicroPrep™	RNA from bacteria, yeast, fungi; BashingBead™ lysis.	50/column	R2010
ZR Fungal/Bacterial RNA MiniPrep™		50/column	R2014
ZR Plant RNA MiniPrep™	RNA from leaves, stems, buds, flowers, fruits, seeds, etc; BashingBead™ lysis, RT/PCR inhibitor removal.	50/column	R2024
ZR Tissue & Insect RNA MicroPrep™	RNA from insect, arthropod specimen and small tissue samples; BashingBead™ lysis.	50/column	R2030
ZR Soil/Fecal RNA MicroPrep™	RNA from soil, sludge, sediment, feces.	50/column	R2040
YeaStar RNA Kit™	RNA from yeast strains susceptible to Zymolyase.	50/column	R1002
RNA Sample Preservation and Storage			
RNA Shield™	Cells, biological liquid, tissue storage and RNA purification.	50 ml 250 ml	R1100-50 R1100-250
RNA Shield™ Purification Kit (RNA Shield™ reagent included)		50/column	R1100
RNA Shield™ Purification Kit (RNA Shield™ reagent is <u>not</u> included)		50/column	R1101
Enzymes and Markers			
DNase I w/ 10X Reaction Buffer	Lyophilized	250 U	E1009
ZR small-RNA™ Ladder	ssRNA (17, 21, 25, 29 nt)	10 µg	R1090

ZYMO RESEARCH CORP.

Phone: (949) 679-1190 ▪ Toll Free: (888) 882-9682 ▪ Fax: (949) 266-9452 ▪ info@zymoresearch.com ▪ www.zymoresearch.com