ZYMO RESEARCH

RNA Purification Made Simple™

Zymoclean™ Gel RNA Recovery Kit

Clean-up RNA from agarose gels

Highlights

- Quick, 30-minute method for the recovery of purified RNA fragments from agarose gels.
- Ultra-pure RNA is ≥ 6 µl and is ready for subsequent analysis and molecular manipulation.

Catalog Numbers:
R1011

Scan with your smart-phone camera to view the online protocol/video.

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Product Contents

Zymoclean ™ Gel RNA Recovery Kit	R1011 (50 prep)
RAD Buffer	50 ml
RNA Prep Buffer	25 ml
RNA Wash Buffer (concentrate)	12 ml
DNase/RNase-Free Water	1 ml
Zymo-Spin™ IC Columns	50
Collection Tubes	50
Instruction Manual	1

Storage Temperature - Store all kit components (i.e., buffers, columns) at room temperature.
Before use:
1 Before starting, add 48 ml 100% ethanol (52 ml of 95% ethanol) to the 12 ml **RNA Wash Buffer** concentrate.

Specifications

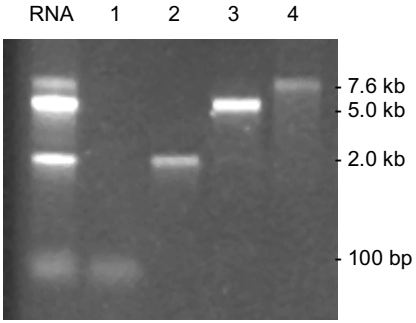
- **Sample Sources –** Single- or double-stranded RNA fragments (≥ 200 nucleotides) resolved in MOPS, TAE and TBE buffered agarose gels. Compatible with formaldehyde up to 2% final concentration.
- **Purity –** A_{260}/A_{280} & A_{260}/A_{230} > 1.8. RNA is ready for all downstream manipulations.
- **Recovery –** For ≥ 500 nt, the recovery rate is ≥ 80%.
- **Binding Capacity –** 10 µg RNA (**Zymo-Spin™ IC Column**).
- **Elution Volume –** ≥ 6 µl **DNase/RNase-Free Water**.
- **Equipment Needed** (user provided) **–** Microcentrifuge, heat source (37-65°C).

Product Description

The **Zymoclean™ Gel RNA Recovery Kit** provides a quick and efficient purification method for recovery of RNA fragments from agarose gels.

The procedure combines a unique, single-step agarose dissolving **RAD Buffer** with **Zymo-Spin™ Column** technology to yield high quality, purified RNA in just minutes. The purified RNA is eluted with DNase/RNase-Free Water into small volumes and is highly concentrated and suitable for subsequent RNA-based manipulations including RT-PCR.

High-quality Recovery of RNA from Agarose Gels



RNAs of a various size on the left were excised and recovered using the **Zymoclean™ Gel RNA Recovery Kit** (lanes 1-4).

Protocol

The protocol consists of:
(I) Buffer Preparation and (II) RNA Clean-Up

(I) Buffer Preparation

- ✓ Before starting, add 48 ml 100% ethanol (52 ml of 95% ethanol) to the 12 ml **RNA Wash Buffer** concentrate.

(II) RNA Clean-up

✓ Perform all steps at room temperature and centrifugation at 10,000-16,000 x g for 30 seconds, unless specified.

1. With a scalpel or razor blade, excise the RNA fragment from the agarose gel[1] and transfer it into a nuclease-free tube (not provided).

2. Add 3 volumes **RAD Buffer™** to each volume of excised agarose gel.

   Example: Mix 300 µl buffer and 100 µl gel (visually).

3. Incubate[2] at 37-55°C for 5 minutes (or until gel is completely dissolved). To facilitate dissolving, mix the sample during incubation.

4. Transfer the mixture to the **Zymo-Spin™ IC Column**[3] in a **Collection Tube** and centrifuge. Discard the flow-through.

5. Add 400 µl **RNA Prep Buffer** to the column and centrifuge. Discard the flow-through.

6. Add 700 µl **RNA Wash Buffer** to the column and centrifuge. Discard the flow-through.

7. Add 400 µl **RNA Wash Buffer** to the column and centrifuge for 1 minute ensure complete removal of the wash buffer. Carefully, transfer the column into a nuclease-free tube (not provided).

8. Add 15 µl **DNase/RNase-Free Water**[4] directly to the column matrix and centrifuge.

   Alternatively, for highly concentrated RNA use ≥ 6 µl elution.

   The eluted RNA can be used immediately or stored frozen.

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1 The amount of agarose gel excised should be as small as possible.
2 Do not incubate ≥ 60°C as this may result in RNA degradation.
3 To process samples > 700 µl, **Zymo-Spin™** columns may be reloaded.
4 TE buffer may be used for elution (if required). To increase yield, incubate the column for 1 minute prior to eluting and/or perform a 2nd elution step, then pool the eluates into a nuclease-free tube (not provided).

Ordering Information

Product Description	Catalog No.	Size
Zymoclean™ Gel RNA Recovery Kit	R1011	50 preps.

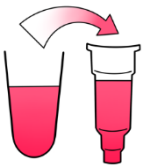
Individual Kit Components	Catalog No.	Amount
RAD Buffer	R1011-1-50	50 ml
RNA Prep Buffer	R1060-2-10 R1060-2-25	10 ml 25 ml
RNA Wash Buffer (concentrate)	R1003-3-12 R1003-3-24	12 ml 24 ml
Zymo-Spin™ IC Columns	C1004-50	50
DNase/RNase-Free Water	W1001-1 W1001-4	1 ml 4 ml
Collection Tubes	C1001-50	50

Complete Your Workflow

✓ For tough-to-lyse samples in TRIzol, use ZR BashingBead Lysis Tubes:

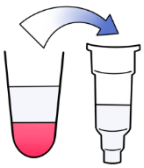
ZR BashingBead Lysis Tubes	
2.0 mm beads #S6003	For plant/animal tissue
0.1 + 0.5 mm beads #S6012	For microbes
0.1 + 2.0 mm beads #S6014	For microbes in tissue/insects

✓ The only **direct**, high-throughput and automatable RNA purification from sample lysates in TRIzol (DNase I Set included with all formats):



Direct-zol RNA kits	
Microprep #R2060-R2063	From 1 cell and up
Miniprep #R2050-R2053	Up to 50 ug RNA
Miniprep Plus #R2070-R2073	Up to 100 ug RNA
96-well #R2054-R2057	Spin-plate
MagBeads #R2100-R2105	Automatable (Tecan, Hamilton, Kingfisher, etc.)

✓ For RNA clean-up (purification) from the aqueous phase (e.g., TRIzol, TRI Reagent or similar) or from any enzymatic reaction (e.g., DNase I treated RNA):



RNA Clean & Concentrator kit	
#R1013-R1014	DNase I Set included

✓ For NGS:

Zymo-Seq RiboFree Total RNA Library Prep kit	
#R3000	12 preps
#R3003	96 preps

Notes

100% satisfaction guarantee on all Zymo Research products, or your money back.

Zymo Research is committed to simplifying your research with quality products and services. If you are dissatisfied with this product for any reason, please call 1(888) 882-9682.

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.

This product is for research use only and should only be used by trained professionals. It is not 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.

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