ZYMO RESEARCH

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INSTRUCTION MANUAL

Zymoclean™ Gel RNA Recovery Kit

Catalog No. **R1011**

Highlights

- Quick *(30 minute)* recovery of purified RNA fragments from agarose gels.
- *Fast-Spin* column technology allows RNA to be eluted into minimal volumes (≥ 6 µl).
- Eluted RNA is ultra clean and ready for subsequent analysis and molecular manipulation.

Contents

Product Contents…….. 1
Specifications…… 1
Product Description…….. 2
Buffer preparation…….... 3
Protocol…….. 3
Ordering Information…… 4

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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.

Product Contents

Zymoclean™ Gel RNA Recovery Kit (Kit Size)	R1011 (50 preps.)	Storage Temperature
RAD Buffer™	50 ml	Room Temp.
RNA Prep Buffer	25 ml	Room Temp.
RNA Wash Buffer[1] (concentrate)	12 ml	Room Temp.
DNase/RNase-Free Water	1 ml	Room Temp.
Zymo-Spin™ IC Columns	50 ct.	Room Temp.
Collection Tubes	50 ct.	Room Temp.
Instruction Manual	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.

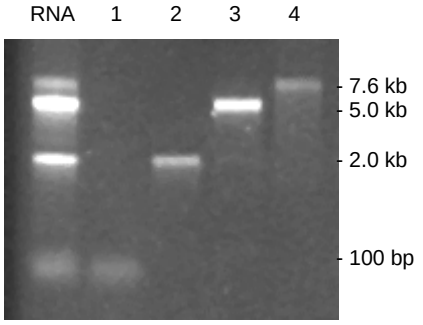
Specifications

- **Sample Sources** – Single- or double-stranded RNA fragments (≥200 nucleotides) resolved in MOPS, TAE and TBE buffered agarose gels. Compatible with formaldehyde to 2.0% (final conc).
- **Format** – Spin column.
- **RNA Purity** - High quality RNA (A_{260}/A_{280} >1.8, A_{260}/A_{230} >1.8) suitable for all downstream RNA-based manipulations.
- **RNA Recovery** – The recovery rate for fragments ≥500 nucleotides is ≥80 %. Total binding capacity of the supplied **Zymo-Spin™ IC Columns** is ≥10 µg.
- **RNA Storage** – RNA is eluted with RNase-free water and can be stored at ≤-70 ºC. The addition of RNase inhibitors is optional but highly recommended for prolonged storage.
- **Equipment Needed** – Microcentrifuge, 37 to 65 ºC heat source.

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.

Product Description

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/RNA binding buffer with *Fast-Spin* column technology to yield high quality, purified RNA in just minutes. The purified RNA eluted with RNase-free water into small volumes is highly concentrated and suitable for subsequent RNA-based manipulations including RT-PCR.



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

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

Note:

For recovery of DNA fragments from agarose gels see **Zymoclean™ Gel DNA Recovery Kits** (Catalog No. D4001, D4002, D4021, D4022).

Make sure guidelines are followed to ensure the RNA isolation procedure is performed in an RNase-free environment.

Buffer Preparation

Before starting, add 48 ml 100% ethanol (51 ml 95% ethanol) to the 12 ml **RNA Wash Buffer** concentrate (R1011).

Protocol

1. Excise the RNA fragment from the agarose[1] gel using a razor blade or scalpel and transfer it to a 1.5 ml microcentrifuge tube.
2. Add 3 volumes of **RAD Buffer™** to each volume of agarose excised from the gel.
3. Incubate[2] at 37-55°C for 5-10 minutes or until the gel slice is completely dissolved.
4. Transfer the mixture to **Zymo-Spin™ IC Column** in a **Collection Tube**.
5. Centrifuge at ≥12,000 x g for 2 minutes. Discard the flow-through.
6. Add 400 µl **RNA Prep Buffer** to the column. Centrifuge at ≥12,000 x *g* for 1 minute. Discard the flow-through and replace the **Zymo-Spin™ IC Column** back into the **Collection Tube**.
7. Add 800 µl **RNA Wash Buffer** to the column. Centrifuge at ≥12,000 x *g* for 30 seconds. Discard the flow-through and replace the **Zymo-Spin™ IC Column** back into the **Collection Tube**. Repeat the wash step with 400 µl **RNA Wash Buffer**.
8. Centrifuge the **Zymo-Spin™ IC Column** at ≥12,000 x *g* for 2 minutes in the emptied **Collection Tube** to ensure complete removal of the wash buffer.
9. Carefully remove the **Zymo-Spin™ IC Column** from the **Collection Tube** and place into an RNase-free tube (not provided). Add ≥6 µl **DNase/RNase-Free Water**[3] directly to the column matrix and let stand for 1 minute.
10. Centrifuge at 10,000 × *g* for 30 seconds to elute the RNA from the column. RNA can be used immediately or stored at ≤-70 °C (see **Specifications**, page 1).

Notes:

[1] The amount of agarose excised from the gel should be as small as possible.

[2] Do not incubate above 60°C for higher temperatures may result in RNA degradation. It is important that the gel slice dissolves completely. This can be facilitated by gentle mixing during the incubation.

[3] Water is strongly recommended to elute the RNA. TE buffer (10 mM Tris-HCl, 1 mM EDTA, pH 8.0) can also be used for elution if required by your experiment. Waiting for one minute prior to eluting the RNA may increase RNA yield. Also, the yield may be increased by performing a second elution with another 6-8 µl of water and pooling it with the first.

Ordering Information

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

For Individual Sale	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)	R1003-3-6 R1003-3-12 R1003-3-24 R1003-3-48	6 ml 12 ml 24 ml 48 ml
DNase/RNase-Free Water	W1001-1 W1001-4 W1001-6 W1001-10	1 ml 4 ml 6 ml 10 ml
Zymo-Spin™ IC Columns	C1004-50 C1004-250	50 250
Collection Tubes	C1001-50 C1001-500 C1001-1000	50 500 1,000

RNA MADE SIMPLE

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