

# DNA/RNA Shield™



**ZYMO RESEARCH**  
The Beauty of Science is to Make Things Simple

**Catalog Nos:** R1100-50 (50 ml)  
R1100-250 (250 ml)

**Storage:** Room Temperature

## Product Information

### Features

- ✓ Preserves genetic integrity and expression profiles of samples (*cells, tissues, blood, plasma, serum, saliva, urine, feces etc.*) at ambient temperatures.
- ✓ DNA and RNA can be isolated directly without precipitation or reagent removal (*compatible with most DNA and RNA purification kits*).
- ✓ Inactivates infectious agents (*virus*).

### Description

DNA/RNA Shield™ ensures nucleic acid stability during sample storage/transport at ambient temperatures. There is no need for refrigeration or specialized equipment. DNA/RNA Shield™ effectively lyses cells and inactivates nucleases and infectious agents (virus), and it is compatible with various collection and storage devices (vacutainers, swabs, nasal, buccal, fecal etc.).

### For Sample Storage

In an appropriate tube or collection device, add ≥2.5 volumes DNA/RNA Shield™ to each volume of liquid sample (≥600 µl for up to 10<sup>6</sup> animal cells or up to 50 mg tissue) and homogenize\*. Store/transport for later purification of high-quality DNA and/or RNA.

Temperature	Time
4°C - 25°C (room temp.)	Up to 30 days
37°C	Up to 3 days
-20°C and below	>1 year

\* Some tissues and tough-to-lyse organisms may require mechanical homogenization prior to storage.

### DNA/RNA Purification

Add samples in DNA/RNA Shield™ directly to Zymo's DNA or RNA purification kits. Bind, wash, and then elute the DNA and/or RNA.

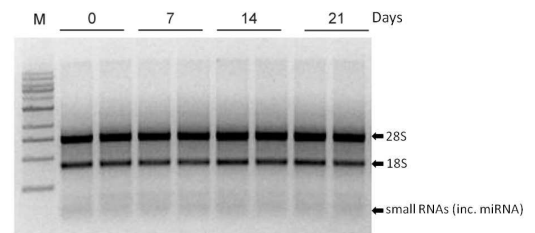
	Product	Size	Cat. No.
RNA	Quick-RNA™ Kits	50 preps	R1050, R1054
		200 preps	R1051, R1055
DNA	Quick-gDNA™ Kits	50 preps	D3020, D3024
		200 preps	D3021, D3025
DNA & RNA	ZR-Duet™ Kits	50 preps	D7001

Note: Samples in DNA/RNA Shield™ can also be processed with other commercially available DNA and RNA purification kits.

### Trademarks and Disclaimers

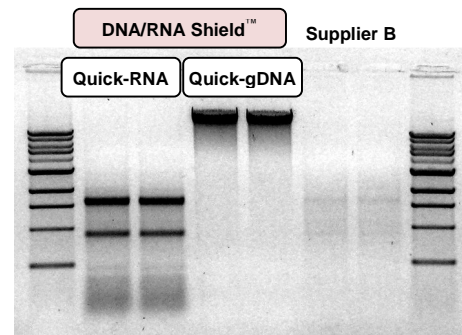
™ Trademarks of Zymo Research Corporation. Other trademarks: TRI Reagent® and TRIzol® (Molecular Research Center, Inc.), RNAlater® (Ambion, Inc.). Some technologies included in this product are patent pending. This product is for research use only and should only be used by trained professionals. It is not intended for use in diagnostic applications. Wear protective gloves and eye protection. Follow the safety guidelines and rules enacted by your research institution or facility. DNA/RNA Shield™ is available for OEM and integration into sample collection technologies.

### RNA Stabilization



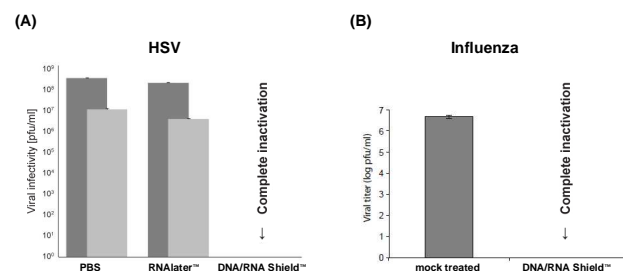
Cellular RNA is effectively stabilized in DNA/RNA Shield™ at ambient temperature. RNA was purified from cells (HCT 116) stored in DNA/RNA Shield™ at the designated times (days).

### Nucleic Acid Purification



High quality DNA and RNA is efficiently purified from blood stored in DNA/RNA Shield™ using the Quick-gDNA™ and Quick-RNA™ Kits from Zymo Research, respectively. High molecular weight DNA was intact with no apparent degradation. Also, RNA was high quality, DNA-free, and included small RNAs when purified from DNA/RNA Shield™. This was not the case using another reagent/kit from Supplier B.

### Virus Inactivation



(A) Herpes Simplex Virus is effectively inactivated by DNA/RNA Shield™. HSV-1 (dark gray) & HSV-2 (light gray) inactivation following a 5 minute incubation in the DNA/RNA Shield™. (H. Oh, F. Diaz and D. Krnjevic, Harvard Medical School)

(B) Influenza virus is effectively inactivated by DNA/RNA Shield™. Influenza A virus was treated with four volumes of DNA/RNA Shield™ or mock treated for 5 minutes. Titer was subsequently determined by plaque assay. (D. Poole and A. Mehle, University of Wisconsin-Madison)

Version 1.1.0

## ZYMO RESEARCH CORP.

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## Related Products

Product	Description	Prep/Format	Catalog
<b>RNA Clean-Up</b>			
RNA Clean & Concentrator™-5	Cleanup and concentration of modified, labeled, impure, diluted, DNase treated RNA (≥ 17nt) and purification of RNA from aqueous phase of organic extracts. (DNase I included with R1013 and R1014.)	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
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
<b>RNA from Samples in Trizol®, TRI Reagent®, etc.</b>			
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 w/ (50 ml) 200/column w/ (100 ml)	R2051 R2053
Direct-zol™-96 RNA		2x 96/plate 4x 96/plate	R2054 R2056
Direct-zol™-96 RNA w/ TRI Reagent®		2x 96/plate w/ (200 ml) 4x 96/plate w/ (400 ml)	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 w/ (200 ml) 4x 96/plate w/ (400 ml) 8x 96/plate w/ (800 ml)	R2101 R2103 R2105
<b>RNA from Cells and Tissue</b>			
Quick-RNA™ MicroPrep	Total RNA from cells and tissue. 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
<b>RNA from Biological Liquids</b>			
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™	RNA from whole blood or partitioned blood.	50/column 100/column	R1020 R1021
ZR Urine RNA Isolation Kit™	Cellular and endosomal RNA from urine.	20/column 50/column	R1038 R1039
<b>RNA from Tough-to-Lyse Samples</b>			
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
<b>DNA and RNA Sample Preservation and Storage</b>			
DNA/RNA Shield™	Cells, biological liquid, tissue storage and DNA/RNA purification.	50 ml 250 ml	R1100-50 R1100-250
DNA/RNA Shield™ w/ Quick-RNA™ MiniPrep		50/column w/ (50 ml)	R1100
<b>Enzymes and Markers</b>			
DNase I w/ 10X Reaction Buffer	Lyophilized	250 U	E1009
ZR small-RNA™ Ladder	ssRNA (17, 21, 25, 29 nt)	10 µg	R1090

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