

DNA/RNA Shield™



ZYMO RESEARCH

The Beauty of Science is to Make Things Simple

Catalog Nos: R1100-50 (50 ml)
R1100-250 (250 ml)
R1200-25 (25 ml) 2X concentrate
R1200-125 (125 ml) 2X concentrate

Storage: Reagent stable -80°C to 70°C.

Shelf Life: Prior to use, stable at room temperature for at least 60 months.

Product Description

- DNA/RNA Shield™ reagent is a lysis solution for stabilizing nucleic acids in any biological sample.
- Eliminates cold-chain. Ensures DNA/RNA stability during sample transport/storage at ambient temperatures.
- Inactivates infectious agents (viral, bacterial, fungal and parasitic).
- Easy sample processing. DNA/RNA can be isolated directly without sample precipitation or reagent removal (compatible with most DNA and RNA purification kits/ high-throughput workflows).

Sample Stability

Samples in DNA/RNA Shield™ are stable for until subsequent purification of high-quality DNA/RNA (see table below).

Temperature	Time
-20°C and below	Indefinite
5°C – 30°C (ambient)	Minimum 30 days
35-40°C	Up to 7 days

Instructions for Sample Storage/Transport

Just add DNA/RNA Shield™



Transport at ambient temperature
(No cold-chain or dry-ice needed)

Unsure of sample type? Just add 9 volumes of DNA/RNA Shield™.
If sample is viscous, add more DNA/RNA Shield™.

Suggested Volumes

DNA/RNA Shield™	300 µl	600 µl
Cell pellets	10 ⁶	10 ⁷
Tissue & Environmental samples	30 mg	60 mg
Biological liquids	100 µl	200 µl
Swabs	Enough reagent to submerge swab tip	

For larger amounts of sample scale ratios proportionately.

DNA/RNA Shield™ (2X concentrate):
(1) Use only for immediate sample processing/purification.
(2) For sample storage, dilute with nuclease-free water (1:1) prior to use.

DNA/RNA Purification

Samples in DNA/RNA Shield™ are directly compatible with:

- All Zymo Research Purification Kits.
- Most kits and workflows from Qiagen, Roche, Thermo-Fisher, Macherey Nagel, etc.
- High-throughput automated workflows from Hamilton, Tecan, bioMérieux, PerkinElmer, Eppendorf, Promega, etc.

Recommended Purification Kits for DNA/RNA Shield™:

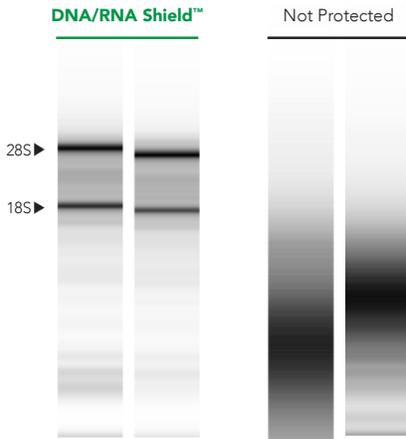
Product / Format	Size	Cat. No.
Quick-DNA/RNA™ Miniprep Plus Spin Column	50 preps	D7003
Quick-DNA/RNA™ MagBead Magnetic Bead	96 preps 384 preps	R2130 R2131

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Protection from Freeze-thaw Damage

DNA/RNA Shield™ is not only beneficial for sample transport, but also for the long-term storage of biological samples. DNA/RNA Shield™ protects DNA/RNA from multiple freeze-thaw cycles, even in the most complex of samples (i.e., whole blood).



High quality RNA from blood stored in DNA/RNA Shield™ that was freeze-thawed from -80°C to room temperature.

Pathogen Inactivation

Validated inactivated organisms by various research groups:

Bacteria	Viruses	Yeast & Eukaryotes
B. subtilis	Monkeypox virus	C. albicans
E. faecalis	SARS-CoV-2	C. neoformans
E. coli	Parvovirus	S. cerevisiae
L. fermentum	Chikungunya virus	P. malariae
L. monocytogenes	Dengue virus	
M. tuberculosis	Ebolavirus	
P. aeruginosa	Herpes Simplex Virus-1	
S. enterica	Herpes Simplex Virus-2	
S. aureus	Influenza A	
S. pneumoniae	Rhinovirus	
X. fastidiosa	MERS-coronavirus	
	West Nile virus	

Working with organisms not listed? Contact us for product samples to evaluate.



Frequently Asked Questions

A white precipitate occurred in DNA/RNA Shield™ (with or without sample).

Components of the reagent (or sample) may have precipitated out of solution during storage. Vortex the sample to bring precipitate back into solution. Furthermore, try heating samples 37°C for 5 minutes and vortex.

What downstream applications are compatible with the DNA/RNA Shield™?

DNA & RNA stored in the reagent is intended for nucleic acid-based applications such as Next-Gen Sequencing, qPCR, microarray, etc. Other applications such as proteomics and metabolomics have not been validated.

DNA/RNA Shield™ appears to have a yellow tint, is this normal?

The reagent's appearance is normally clear to yellowish in tint. Some components of the reagent may oxidize when exposed to sunlight, heat, or stored over time. The tint does not affect the performance of the reagent.

Do I remove the DNA/RNA Shield™ reagent when processing samples?

DNA/RNA Shield™ is a lytic reagent and nucleic acid from collected samples can be released in suspension. We recommend processing both solid (if any) and liquid components of a sample.

How do I dispose of samples collected in DNA/RNA Shield™?

Sample disposal is dependent on the biological sample collected in the reagent. Dispose of contents/container in accordance with local/regional/national/international regulations. Refer to SDS.

DNA/RNA Shield™ Collection Devices

Product	Description	Recommended processing
Fecal collection tube R1101, R1137	20 x 76 mm container prefilled with 9 ml DNA/RNA Shield™ for the direct collection of up to 1 gram or 1 ml stool. Collection spoon is included in the container screwcap. R1137 contains glass beads for sample homogenization.	ZymoBIOMICS™ DNA/RNA D4301 (spin-column); D4302 (magbead)
Collection tube w/ swab R1106, R1107, R1108, R1109	12 x 80 mm self-centering screwcap container filled with DNA/RNA Shield™ (1 ml, 2 ml) and a sterile swab for specimen collection.	
SafeCollect™ Swab Kit R1160, R1161	Self-collection swab collection device pre-filled with DNA/RNA Shield™ (1 ml, 2 ml) and a sterile swab for specimen collection.	
SafeCollect™ Saliva Kit R1211	Self-collection saliva collection tube with funnel. Pre-filled with 2 ml of DNA/RNA Shield™ for the direct collection of 2 ml saliva.	Quick-DNA/RNA™ Plus D7001 (spin-column); R2130 (magbead)
Lysis tubes R1102, R1103, R1104, R1105	2 ml screw-cap tube with DNA/RNA Shield™ and Bashing Beads (lysis tubes: microbe, tissue, pathogen) for the collection and homogenization of tough-to-lyse samples.	
Blood collection tube R1150	16 x 100 mm evacuated blood tube filled with 6 ml of DNA/RNA Shield™ for the direct collection of 3 ml whole-blood (human or animal).	Quick-DNA/RNA™ Blood Tube R1151 (spin-column); R2130 (magbead)

For bulk reagent, large volume, and custom device requests, please contact Zymo Research directly. Certain devices available in CE-marked formats, please inquire.

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