

# GenTegra®-RNA Active Chemical Protection™

## Better than Freezing and better than shipping frozen

RNA is precious and labile and GenTegra-RNA is the only product that provides immediate protection against RNase attack, protects against high temperatures when shipping remotely collected RNA samples to the central analysis lab and delivers higher quality RNA when it arrives.

A recent independent publication<sup>1</sup> reports GenTegra-RNA delivered a better quality RNA with 17% more scaffolds than shipping frozen. Your RNA samples are stabilized in both the liquid form for safer handling in the laboratory, and after drying, for shipping or long term storage. GenTegra RNA is like insurance against delays when shipping samples. Delays of a few days or even weeks will not damage your precious samples, which can happen if the delay exhausts the dry ice. The cost of shipping one sample on dry ice is 25 times the cost of a single tube of GenTegra-RNA.

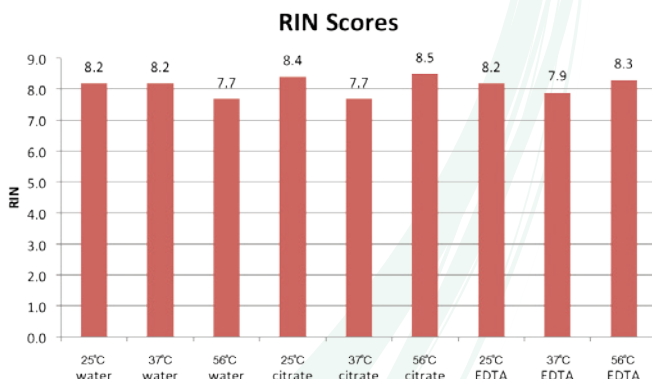
Recovering your sample after storage or shipping is fast and easy. Simply add molecular biology grade water to recover 100% of your sample, and it is immediately ready for all downstream applications.

But wait a minute, you say, isn't frozen the only safe way to protect and store RNA? The answer is no and another recent publication<sup>2</sup> reports that RNA frozen at -80°C

showed degradation after only 8-months of storage. Our data for RNA stored for 4-years and temperature stressed to simulate >9 years shows the RNA to be very well protected<sup>3</sup>.

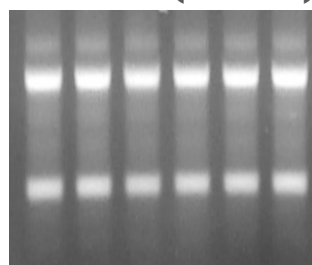
## Better than Protected, Protected BETTER!

GenTegra-RNA is the only dry storage product available that protects against both RNase contamination and against the high temperature experienced when shipping samples by express carriers. Your GenTegra-RNA protected sample can be used safely at room temperature for up to 100 hours before it should be dried for long term storage or for shipping. GenTegra-RNA can also be used with all the common buffers TE, EDTA, H<sub>2</sub>O etc. without affecting its protection. And no special requirements for desiccation are necessary when shipping or storing RNA samples protected on GenTegra-RNA. Just drop the tube in a shipping envelope and send it on its way, knowing its better protected than if it were in several pounds of dry ice.



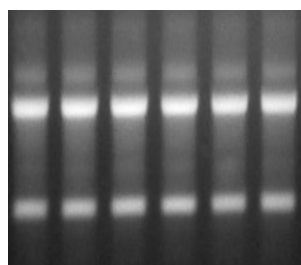
Agilent Bioanalyzer (RIN) scores for purified HeLa RNA samples after 3.5 years of mixed temperature, dry state preservation on GenTegra RNA.

### Frozen ctrl (RIN = 10)



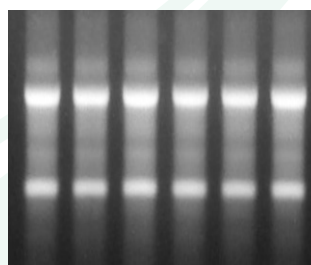
water citrate EDTA  
RIN Score

### 25 °C



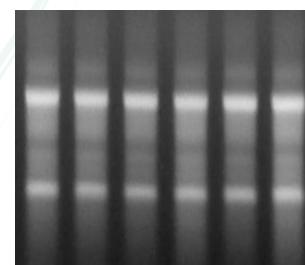
water citrate EDTA  
10 10 10

### 37 °C



water citrate EDTA  
9.6 9.3 9.7

### 56 °C



water citrate EDTA  
8 8.1 8.5

2% agarose gels of purified HeLa RNA samples in water, citrate, and EDTA solutions stored frozen (controls) or applied to GenTegra RNA, then air-dried and stored at 25 °C, 37 °C, and 56 °C for six months. High Agilent Bioanalyzer (RIN) scores reveal the high quality of samples preserved on GenTegra RNA.

<sup>1</sup> Johnson, Marc T. J., et al. Evaluating Methods for Isolating Total RNA and Predicting the Success of Sequencing Phylogenetically Diverse Plant Transcriptomes. PLOS ONE, 2012; 7, (11) e50226: 1-12.

<sup>2</sup> Olivieri, Eloisa H. R., et al. Biobanking Practice: RNA Storage at Low Concentration Affects Integrity. BIOPRESERVATION AND BIOBANKING, 2014;12, (1): 46-52

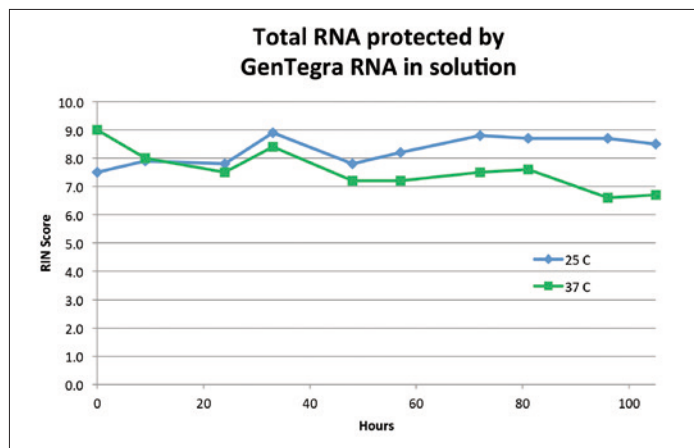
<sup>3</sup> Data available upon request.

**GenTegra**

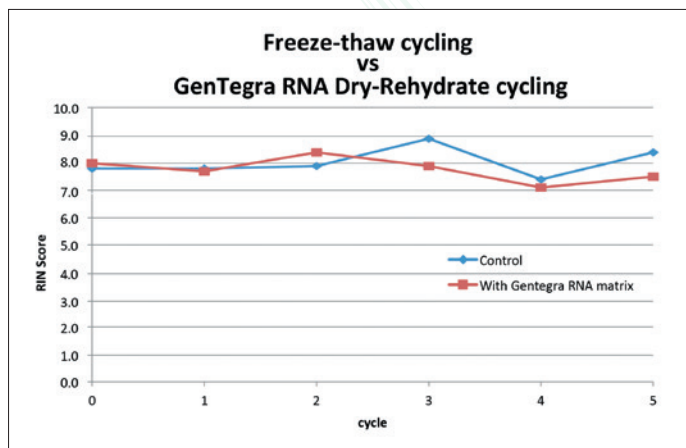
## Protect in solution and dry state

GenTegra RNA protects your samples in three ways. In liquid form, it preserves sample integrity for up to 100 hours at 25 °C. When dried, it stabilizes samples

for indefinite periods of storage at ambient temperature. And, it provides quantitative integrity of samples through several cycles of drying and rehydration.



GenTegra RNA stabilizes Total RNA samples at 25 °C and 37 °C in solution for 100 hours.



GenTegra RNA protects RNA samples through several cycles of drying and rehydration. Control was frozen and thawed for each cycle.

**Stabilize in GenTegra RNA**



**Dry for storage or shipping at ambient temperature**



**Recover by adding water and use in downstream applications**

Product Specification	Product Claims
Format	0.5 mL screw cap tubes 0.3 mL 96-tube racks 96-well microtiter plate* Dry bulk
Total RNA application amount	≤ 20 µg
Sample Application Volume	1-50 µl
Recovery volume	Equals application volume (20 – 50 µL of molecular biology water)
Stability for transport	Tolerance for extreme temperatures and extreme temperature shifts (-80 °C to 76 °C) Exceeds Military specifications (-60 °C to 71 °C) Exceeds Federal Express® specifications (-51 °C to 60 °C)
Shelf life	3 years (prior to use)
Drying	FastDryer™: Overnight SpeedVac®: 2 – 4 hours, depending on volume/type of SpeedVac Under Biosafety Hood: 14 hours
Recover	>99%

\*barcode optional

# GenTegra

**For more info visit our website:**

Toll free: 844.540.4000 • Tel: 925.461.3010 • Fax: 925.461.3086 • [www.GenTegra.com](http://www.GenTegra.com)

Copyright© 2015 GenTegra LLC.. All rights reserved. GenTegra, Gentegra design, and FastDryer are trademarks of Gentegra LLC.. All other brands and names are the sole property of their respective owners. Product specifications may change. 07/2015.