

# Crystalgen Inc.

[www.crystalgen.com](http://www.crystalgen.com)

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# Product Profile

Product Name: RNASstay™ RNA Stabilization Solution

## 1. Product Description

RNA degradation is a serious problem and very hard to prevent since RNA is even degraded in -80°C or liquid nitrogen storage. RNASstay™ Solution is a revolution reagent that can stabilize and protect RNA in tissues or cells at room temperature and thus allows users to isolate the intact RNA or downstream storage of the treated tissue without the risk of RNA degradation. RNASstay™ is an aqueous, non-toxic tissue and cell storage reagent that stabilizes and protects cellular RNA in intact, unfrozen tissue and cell samples. More conveniently, RNASstay™ eliminates the need to immediately process samples or to freeze samples in liquid nitrogen for later processing. Samples treated with RNASstay™ can be used with various downstream applications including mRNA and total RNA isolation kits such as phenol based kit or affinity binding isolation kit. Samples can be used for histology and immunocytochemistry or continued storage in liquid nitrogen for a long period without the risk of RNA degradation.

## 2. Features and Benefits

Rapid Protection	Rapidly permeates tissues to stabilize and protect cellular RNA with immediate RNase inactivation.
Highly Quality	No compromise in RNA quality following mRNA or total RNA Isolation.
Stable	Stabilizes samples at room temperature for up to 1-4 weeks or Indefinitely at -20°C for archiving needs.
Safe	Aqueous non-toxic solution allows downstream tissue processing

## 3. Protocol

- a. Small organs, such as rat spleen, kidney, liver can be stored in whole in RNASstay™. For large organ or tissues, cut tissue samples to be stored and into less than 0.5-0.8cm in one dimension.
- b. Quickly rinse the samples with RNASstay™ solution.
- c. Submerge the samples in 5-6 volumes of RNASstay™ for 5-10 min. When ready to isolate the RNA, remove the tissue from RNASstay™ and process as though just harvested. For cell storage, wash pelleted cells in a small amount of 1x PBS and add 5-10 volumes of RNASstay™ Centrifuge at >5000rpm to pellet cells and discard supernatant before isolate the RNA.

## 4. Applications of RNASstay™

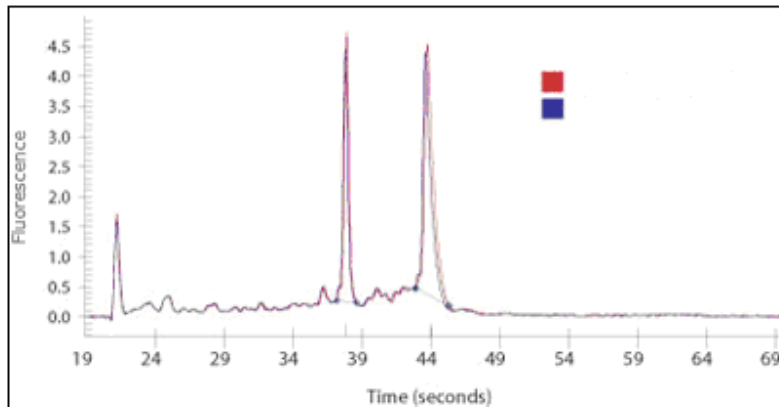
Genomic DNA from RNAS<sup>TM</sup> Solution-Stored samples

DNA can be isolated from RNAS<sup>TM</sup> Solution-stored samples.

Isolating protein from RNAS<sup>TM</sup> Solution-stored samples.

Proteins are also preserved in RNAS<sup>TM</sup> Solution. RNAS<sup>TM</sup> Solution will denature proteins, therefore, protein obtained from samples stored in it will be suitable for applications such as Western blotting or 2D gel electrophoresis, but not for applications that require native protein.

## 5. High Quality of intact RNA



RNA from a colon cancer tissue storage in RNAS<sup>TM</sup> solution and Analysed with Agilent 2100 BioAnalyzer to show the integrity (red line). The data shows that there is no degradation in integrity

## 6. Yield of RNA

Tissue	Mouse ug/mg Tissue	Rat Yield ug/mg Tissue
Brain	0.65	0.54
Embryo	2.15	1.90
Heart	0.42	0.43
Kidney	1.50	1.80
Liver	3.40	3.10
Lung	0.49	0.85
Spleen	2.40	2.0
Testicle	1.70	1.40
Thymus	2.05	1.95

Mouse and rat tissues were storage in RNAS<sup>TM</sup> solution for 1 hours at 4 °C and then Processed with the phenol based purification.

## 7. Guidelines for Use of RNAS<sup>TM</sup> Solution

Before immersion in RNAS<sup>TM</sup> Solution, cut large tissue samples to 0.5-0.8cm in any single dimension.

- Use RNAS<sup>TM</sup> Solution with fresh tissue only; do not freeze tissue before immersion in RNAS<sup>TM</sup> Solution.

- Place the fresh tissue in 5-10 volumes of RNASay™ Solution.
- Most samples in RNASay™ Solution can be stored at room temp for 1-4 weeks without compromising RNA quality, or at -20°C or -80°C indefinitely.
- Do not freeze samples in RNASay™ Solution, store at 4°C overnight(to allow the solution to thoroughly penetrate the tissue), remove supernatant, then move to -20°C or -80°C for long-term storage.
- Plant tissues may be extended the length of time such as 20-30 minute for fully reaction and protection.

#### Storage and Stability

- Store RNASay™ Solution at room temperature.
- If any precipitation occurs, heat it to 45°C and agitate to re-dissolve it.

#### Disposal of RNASay™ Solution

RNASay™ Solution can be safely discarded down the sink and flushed with water.

#### Chemical reactivity with oxidants

##### WARNING

RNASay™ Solution is known to react with oxidizing agents, such as bleach. The reaction releases toxic chlorine gas, and generate heat. If you suspect that samples may contain bleach, work in a fume hood with adequate protective clothing and equipment.

#### Range of Product applications

RNASay™ has been proven effective for RNA preservation in animal tissue, E. coli, Drosophila, tissue culture cells, white blood cells, and most plant tissues.

#### IMPORTANT!!!

RNase inactivation is reversible; do not rinse RNASay™ Solution from samples before using. Blot tissues with a wipe, or pellet cells to remove excess RNASay™ Solution.

#### Order Information:

Product Cat#	Packing	Price \$
RNAS-50	50ml	49.0
RNAS-250	250ml	179.0
RNAS-500	500ml	290.0