

RNA Liv™

<u>Product Name</u>	<u>Product Code</u>	<u>Kit Packing</u>
RNA Liv™	ML161-100ML ML161-250ML	100 ml 250 ml

Intended Use

Recommended for isolation of RNA from cells, tissue samples.

Introduction:

RNA Liv™ stabilizes and protects RNA in tissue samples, which eliminates the need of immediate processing or to freeze samples in liquid nitrogen for later processing. It is a single reagent that immediately inactivates RNases and stabilizes RNA within tissues or cells. RNA Liv™ stabilizes RNA for 1 day at 37°C, 1 week at 25°C, 1 month at 4°C, or at -20°C (up to 20 freeze–thaw cycles).

Application:

RNA Liv™ is ideal for:

- Protecting RNA integrity in cells/ tissues rich in RNases
- Collecting samples from different time points without having to process the samples from each time point immediately
- Archiving tissues for future microdissection
- Submerging animal cavities or organs to stabilize RNA during lengthy dissection procedures
- Collecting samples at locations (e.g. hospitals, field sites) where immediate RNA isolation is not possible
- Shipping samples on wet ice or even at room temperature if shipped overnight

Properties:

Appearance : Colorless solution
Clarity : Clear and free of particles
DNase & RNase : None detected
Suitability Test : This reagent has been tested and is suitable for stabilization of RNA in tissue samples.

Storage conditions:

Store RNA Liv™ solution at room temperature (15-25°C) and is stable for 12 months from the date of manufacture. Storage of RNA Liv™ Reagent at lower temperatures may cause precipitation prior to use, preheat the reagent to 37°C with agitation, till the precipitate dissolves.

NOTE: RNA Liv™ Reagent is not suitable for stabilization of RNA in animal cells, whole blood, plasma, or serum. The reagent also cannot be used to stabilize RNA in adipose tissue due to the high abundance of fat (however, RNA stabilization of other fatty tissues such as brain is possible).

Specimen Handling and Collection

Collect tissues in a sterile container. Store the samples at 2-8°C for short term storage or -20°C for long term storage. Ensure that the tissues are at room temperature (15-25°C) before beginning the protocol. After use, contaminated material must be sterilized by autoclaving before discarding.

Types of Specimen

Clinical samples: tissue sample

Procedure:

1. Determine the appropriate amount of tissue sample to be stabilized for RNA extraction.
2. To a collection tube (Nuclease free), add appropriate volume of RNA Liv™. For e.g. add 100 µl of RNA Liv™ for 10 mg of tissue.

Table 1. Tissue Weights and Amount of RNA Liv™ Reagent to be added

Mouse organ	Weight (mg)	Minimum amount of RNA Liv™ Reagent (ml)
Kidney	180–250	1.8–2.5
Spleen	100–160	1–1.6
Lung	190–210	1.9–2.1
Heart	100–170	1–1.7
Liver	1000–1800	10–18

3. Cut the weighed sample into pieces (if required) and place it in a tube containing solution.
4. Ensure that the tissue is completely submerged in reagent.
5. Store the tissue submerged in RNA Stabilization Reagent for up to 4 weeks at 2–8°C, up to 7 days at 15–25°C, or up to 1 day at 37°C.

For long term Storage at -20°C: Incubate the tissue overnight in the RNA Liv™ reagent at 2–8°C. Then transfer the tissue, in the reagent, to -20°C for storage.

For long term Storage at -80°C: Incubate the tissue overnight in the RNA Liv™ reagent at 2–8°C. Then remove the tissue from the reagent, and transfer it to -80°C for storage.

NOTE: Tissues stored in RNA Liv™ Reagent at -20°C may not freeze. The low temperature may cause the formation of crystals or a precipitate in the reagent. This will not affect subsequent RNA purification. There is no need to dissolve the precipitate.

RNA stabilized tissues stored at -20°C or -80°C can be thawed at room temperature and frozen again for up to 20 freeze-thaw cycles without affecting RNA quality or yield.

For Transportation: While transporting tissue samples in reagent, ensure that the tissues always remain submerged in the reagent. Either keep the tubes upright during transport or fill the tubes completely with RNA Liv™ Reagent.

6. **After Storage, extract RNA from the tissues using HiMedia’s HiPurA® Total RNA Miniprep Purification Spin Kit (MB602).**

NOTE: Make sure to remove tissues from RNA Liv™ Reagent prior to disruption and homogenization in the RNA purification procedure. If tissues were stored at –20°C, remove any crystals that may have formed.

Trouble Shooting Guide

Problem	Solution
<u>RNA degraded</u>	
Harvested animal tissue not immediately stabilized	Submerge the tissue in the appropriate volume of RNA Liv™ Reagent immediately after harvesting.
Too much animal tissue for proper stabilization	Reduce the amount of tissue, increase the amount of RNA Liv™ Reagent
Animal tissue too thick for stabilization	Cut large samples into slices less than 0.5 cm thick for stabilization in RNA Liv™ Reagent.
Animal tissue not fully submerged in RNA Liv™ Reagent	Ensure that the tissue remains fully submerged in the RNA Liv™ Reagent. Smaller tissues may tend to stick to the lid or the side of the container.
Frozen animal tissue used for stabilization	Use only fresh, unfrozen tissue for stabilization in RNA Liv™ Reagent.
Storage duration in RNA Liv™ Reagent exceeded	RNA stabilized tissue can be stored for up to 1 day at 37°C, up to 7 days at 15–25°C, or up to 4 weeks at 2–8°C, and can be archived at –20°C or –80°C. We recommend lower temperatures whenever possible.

Warning and Precautions

Not for Medicinal Use. Read the procedure carefully before beginning the protocol. Wear protective gloves/protective clothing/eye protection/face protection. Follow good clinical laboratory practices while handling clinical samples. Standard precautions should be followed as per established guidelines. Safety guidelines may be referred in safety data sheets of the product.

Limitations

1. The yield of RNA depends upon the type and the volume of starting material used.

Please refer disclaimer Overleaf.

Performance and Evaluation

Performance of the solution is expected when the solution is used as per the protocol mentioned in the product insert within the expiry period when stored at recommended temperature.

Quality Control

Type of Sample	RNA Purity
Human tissue	1.8-2.1

Safety Information

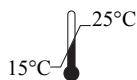
The RNA Liv™ contains irritants. Take appropriate laboratory safety measures and wear gloves when handling. Not compatible with disinfecting agents containing bleach. Please refer the Safety Data Sheet (SDS) for information regarding hazards and safe handling practices.

Disposal

User must ensure safe disposal by autoclaving and/or incineration of used or unusable preparations of this product. Follow established laboratory procedures in disposing of infectious materials and material that comes into contact with clinical sample must be decontaminated and disposed off in accordance with current laboratory techniques.

Technical Assistance

At HiMedia, we pride ourselves on the quality and availability of our technical support. For any kind of technical assistance, mail to mb@himedialabs.com.



Storage temperature



Do not use if package is damaged



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Disclaimer :

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