



Mole[®]

MoleStrips[™] RNA Tissue
Product No MG11-105

MGM-105-008

MoleStrips™ RNA Tissue

Intended Use

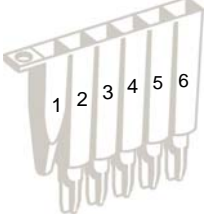
MoleStrips™ RNA Tissue is used together with the GeneMole® instrument for purification of RNA and non fibrous animal tissues. For research use only.

Important

Before first time use, add 0.5 mL sterile water to the tube containing glycogen. Put the cap back on and vortex thoroughly to dissolve the glycogen.

Materials Supplied

Prod. No.	MG11-105
No. of preps	64
MoleStrips™	64
Lysis Buffer	2 x 12.5 ml
Glycogen	1

Content of each well in the MoleStrips™ RNA Tissue	 <p>MoleStrip™ RNA Tissue</p>
1. Empty	
2. Magnetic Beads	
3. Buffer	
4. Wash 1	
5. Wash 2	
6. Elution Buffer (2.5 mM Tris, pH 8.0)	

Additional Material Required for Prod. No. MG11-105

Product	Prod. No.
MoleTips	MG10-012
MoleTubes (non sterile/sterile)	MG10-013/MG10-014
MoleCaps	MG10-015
Disposable waste bins*	MG10-008

*Optional (When working with RNA it is highly recommended to use disposable waste bins)

Storage

MoleStrips™ RNA Tissue should be stored dry, at room temperature (15-25 °C). Store the glycogen solution at 4 °C.

Starting Material

Fresh animal tissue, tissue stored in RNAlater or tissue frozen directly on dry ice or in liquid nitrogen and stored at < -70 °C prior to RNA extraction.

Recommended Input and Expected Performance

The MoleStrips™ RNA Tissue kit is used together with the GeneMole® instrument to purify RNA from non-fibrous animal tissues. For RNA extraction GeneMole® can process up to 8 samples in one run.

For RNA extraction with the MoleStrips™ RNA Tissue, two different software protocols have been developed, “RNA Tissue” and “RNA Tissue DNase”. The “RNA Tissue DNase” protocol includes DNase treatment within the isolation procedure. From both software protocols the GeneMole® elution volume can be specified as 100 or 200 µl.

The table on top of the next page shows recommended maximum input and expected performance with respect to obtained RNA yields for various tissues tested on the GeneMole® instrument.

Example of material	GeneMole® software protocol	Input	Typical yield* [µg]
Liver (mouse)	RNA Tissue	10 mg	30-80
Spleen (mouse)	RNA Tissue	2 mg	10-20
Lung (mouse)	RNA Tissue	10 mg	3 - 10
Kidney (mouse)	RNA Tissue	10 mg	10 - 25
Liver (zebra fish)	RNA Tissue	10 mg	40 - 80
Liver (rabbit)	RNA Tissue	10 mg	25 - 35

*Typical yield when eluting in 100µl. The yield will vary depending on the quality of the material, the way of storage (for example direct frozen or preserved in RNAlater) and the homogenization technique. All samples were homogenized using the Precellys 24 “bead-beater” system from Bertin Technologies, 2x30 sec at 6000 rpm with MoleBead tubes (MoleBeads C1, MoleBeads C2 or MoleBeads C12).

Protocol

1. Switch on the GeneMole® instrument. Wait until the power indicator turns green (may take 2 min).
2. Open the GeneMole® door and lift out the work tray.
3. Resuspend the **MoleStrips™** content by turning the strips upside-down 3 times. Open the jig handles (ref. 6 in figure 1) and place the black adapter plate with the **MoleStrips™** in the jig. Fasten the **MoleStrips™** to the jig by closing the jig handles.
Important: Please make sure the black adapter plate is positioned between the jig and the **MoleStrips™** and ensure the **MoleStrips™** are pressed all the way down into position before locking the **MoleStrips™** in place with the jig handles.
4. Using Figure 1 as a reference load the worktray with tips, elution tubes and **MoleStrips™** according to the number of samples to be processed. Please note that tips, tubes and strips are loaded on the left hand side of the tray.

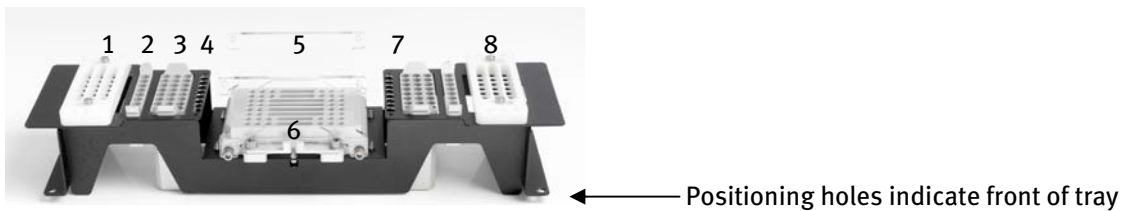


Figure 1: Loading of the worktray for RNA extraction:

1: pipette tips, 2: elution tubes, 3: empty waste bin, 4: sample tubes, 5: Adapter plate and **MoleStrips™**
6: jig handles, For DNase treatment: 7: Tubes with DNase, 8: pipette tips.

5. Preparation of sample:

Step	Tissue sample
Optional DNase step	Load sample tubes containing DNase mix (200µl) on right side of tray, in position 7 in figure 1 (Further description on DNase mix, see table below). Also load tips on the right side of the tray, in position 8 in figure 1 (3 tips per sample).
A) Lysis	Add 375 µl lysis buffer to the tissue sample
B) Homogenization	Homogenize the tissue sample The method used for homogenization need to be optimized for each specific tissue sample. Disruption of a tissue sample by homogenization is often performed using a mechanical shearer, a “bead-beater” (like eg. The Precellys 24 from bertin Technologies) or by grinding the tissue with a mortar and pestle.
C) Centrifugation	Centrifuge the lysate 1 min. at 10000 rpm and proceed to step 6 below.

6. Transfer 350 µl of the lysates to GeneMole® sample tubes and add 5 µl of glycogen solution to each sample. Place the tubes in the worktray according to Figure 1.
7. Place the worktray back into the GeneMole® and ensure it is correctly aligned by using the positioning pins located at the base of the instrument. Fit the pins into the holes located in each front corner of the worktray. Close the GeneMole® door.
8. Use the touch screen to select “**Run A Protocol**” from the GeneMole Menu. The Run Preparation screen will appear.
9. Select the protocol “**RNA Tissue**” (for DNase protocols: “**RNA Tissue DNase**”) from the dropdown menu and confirm your choice by pressing “**Accept**”. Specify the elution volume by activating the relevant window on the run preparation screen. Use the up and down buttons for scrolling.
10. Choose “**Next**”. The Run Preparation screen will appear. Verify correct loading of the worktray by pressing “**OK**”.
11. Start protocol run by pressing “**Start**”.
Note: The blinking green light located below the touch screen indicates that GeneMole® is carrying out a protocol run.
12. The touch screen will display “Run Completed” and the instrument will generate a sound signal when the run is completed. Upon completion of a run, open the GeneMole® door and collect the elution tubes containing the purified RNA. Discard the used tips and tubes.

DNase treatment

DNase treatment may be necessary for certain RNA applications that are sensitive to small amounts of DNA such as real-time PCR applications. With the Total RNA Basic kit you have the option to run a DNase step during the isolation of RNA to remove DNA. We recommend using 30U DNase per isolation in a 200µl volume (see table below). Use the protocol “**RNA Tissue DNase**”. Manual DNase treatment of the RNA eluate after isolation with the “RNA Tissue” protocol can also be performed.

Material	For one isolation
Nuclease free water	Varies
Reaction buffer	1X
DNase	20U - 30U
Total volume	200 µl

Cleaning procedures

Perform cleaning procedures if necessary after a GeneMole® run. It is recommended to clean relevant instrument parts with RNase AWAY wipes between runs when performing RNA extractions. For more detailed cleaning and maintaining instructions please refer to the GeneMole® User Manual.

Safety Information

When working with chemicals always wear protective gear. For more information, please consult the appropriate material safety data sheets. MSDS is available upon request.

Product Warranty and Satisfaction Guarantee

Mole Genetics guarantees the performance of all products in the manner described in our product literature. The purchaser must determine the suitability of the product for its particular use. Product warranty limits Mole Genetics liability only to the cost of the product.

For further information about GeneMole® and available applications see
www.molegenetics.com and www.molecookbook.com