3. The white blood cells were suspended in a small amount of buffer (PBS).
4. Add 5-10 times the volume of RNAstore and mix well.
5. The collection tube shall be stored under appropriate conditions for a time not exceeding the maximum storage time at this temperature (storage time) See Table 1).
6. Sample processing before RNA extraction:
   1) The white blood cell samples stored at 4°C should be centrifuged first, then the protective solution should be dumped and cells should be collected.
   2) White blood cell samples stored at -20°C or -80°C should be melted at room temperature first.
7. Start RNA extraction or other processing immediately.

Version: 12/2023

RNAstore

Cat. No. : CW0592S (100 mL)
CW0592M (500 mL)

Storage Conditions: Room temperaturee (15-25°C).

Components

Component	CW0592S 100 mL	CW0592M 500 mL
RNAstore	100 mL	500 mL

Introduction

This product is a new RNA stabilization reagent, can quickly penetrate into tissue protection RNA. Its rapid protection ensured the accuracy of downstream gene expression analysis results. The sample protected by the reagent can be preserved for a long time and the RNA will not degrade even after repeated freezing and thawing. Protected RNA can be stored for 2 days at 37°C, 7 days at 18-25°C, 4 weeks at 2-8°C, and long-term storage at -20 °C or -80°C. The tissue preserved by this product can be used for all subsequent experiments on RNA, including total RNA extraction, micro RNA extraction, mRNA extraction, etc.

Table1. Relationship between common storage temperature and maximum storage time

Storage temperature	Storage time
37°C	2 days (Sample RNA stored for 3 days was partially degraded)
18-25°C	1 week (RNA was slightly degraded in samples stored for 2 weeks)
2-8°C	1 month
-20°C and -80°C	Long-term

Precautions

1. If there is precipitation in the preservation of RNAstore, dissolve it at 37°C and use it.
2. The maximum thickness on either side of the tissue sample to be preserved should not exceed 0.5 cm. If the thickness exceeds 0.5 cm, the penetration of RNAstore into tissue samples will be slowed down, resulting in RNA degradation. In this case, the woven samples need to be chopped so that the thickness of each side of the tissue sample is less than 0.5cm, and then the processed tissue blocks are stored in 5-10 times the volume of RNAstore.
3. If tissue samples stored in RNAstore need to be transported over long distances, ensure that the tissue is completely immersed in RNAstore during transportation.
4. If the reagent is used to preserve tissue samples of plant leaves, it is necessary to destroy the wax epidermis on the leaf surface, because the wax on the surface of plant leaves makes it difficult for RNAstore to penetrate into the tissue completely to be preserved with the reagent.

Protocol

i Preserve fresh tissue samples

1. Estimate the amount of RNAstore required for complete immersion of the sample **(5 mL RNAstore for 1 g of tissue).**
2. Mark the collection tube and add the estimated amount of RNAstore required.

3. The sample was cut into pieces with a thickness of less than 0.5 cm at the fastest speed.

   Note: mouse liver, kidney, spleen and other small organ samples and plant samples without waxy protective layer need not be cut and stored directly in this product. Plant samples with waxy protective layer need to be destroyed first.
4. The tissue fragments are completely immersed in the RNAstore in the collection tube.
5. The collection tube shall be stored under appropriate conditions for a time not exceeding the maximum storage time at this temperature **(when stored See Table 1)**.
6. RNA extraction: Remove the preserved tissue samples and immediately begin RNA extraction or other processing.

ii Preserve cultured cells, suspended cells and bacteria

1. Mark collection tube.
2. The cell samples to be preserved were transferred to the centrifuge tube, cells/ bacteria were collected centrifugally, and the supernatant was discarded.
3. Wash once with ice bath buffer (PBS).
4. The cells are suspended in a small amount of buffer.
5. Add 5-10 times the volume of RNAstore and mix well.
6. The collection tube shall be stored under appropriate conditions for a time not exceeding the maximum storage time at this temperature (when stored See Table 1).
7. Sample processing before RNA extraction:

   1) Cell samples stored at 4℃ should be centrifuged first, then the protective solution should be dumped and cells collected.

   2) Samples stored at -20°C or -80°C should be melted at room temperature first.
8. Start RNA extraction or other processing immediately.

iii Preserve white blood cells in whole blood

1. White blood cells are first separated from red blood cells and serum.

   Note: Rnas from whole blood, plasma or serum should not be stored in RNAstore, as they are too high in protein and are similar to RNAstore. It is easy to form insoluble precipitate after mixing.
2. Wash once with ice bath buffer (PBS).