

RNAfixer (sample stabilizing solution)

Code No. : NG308S 100 ml
NG308M 250 ml

Product storage and stability:

Clear liquid, store at room temperature (18-25 °C) is 12 months. If precipitation or crystallization is observed during use, can be redissolved by heating at 37 °C before use, which does not affect the product quality.

Introduction :

Applicable to animal tissues (heart, liver, kidney, muscle, testis, brain, spleen, etc.), cultured cells, RNA viruses, Drosophila bacteria, leukocytes, whole blood, some plant tissues, etc. RNAfixer is an aqueous, non-toxic tissue preservation liquid that can rapidly penetrate the cytoplasm of fresh tissue cells stabilizing and protecting intracellular RNA in situ under non-frozen conditions. Immediately immersing tissue slices in RNAfixer for preservation does not affect the quality and quantity of future RNA extraction. RNAfixer eliminates the inconvenience of RNA samples needing immediate processing or mandatory liquid nitrogen storage. After immersion in RNAfixer, RNA in fresh tissue cells can be perfectly preserved for one day at 37 °C, one week at 25 °C, one month at 4 °C, and long-term at -20 °C or -80 °C. RNA virus samples (such as HCV and HIV) can be preserved at 37 °C for one month.

Information:

1. Easy to operate: Simply cut the tissue into an appropriate size and immerse it in RNAfixer to prevent its RNA from degrading.
2. No liquid nitrogen required: enables sample preservation without liquid nitrogen, dry ice, or -80 °C freezers, making it particularly suitable for the rapid and large-scale collection of clinical and field samples.
3. Convenient transportation: The processed samples can be stored at 25 °C for a week, making sample mailing and transportation easy and inexpensive, which is for academic cooperation and exchange.
4. Multiple freeze-thaw cycles: Samples treated with RNAfixer can be frozen and thawed multiple times, during which various treatments can be applied to without affecting the quality of the finally extracted RNA.
5. High comparability: RNAfixer can reduce errors in large-scale sample processing and increase comparability between experiments, which is particularly useful for the analysis of largescale gene expression profiles.
6. Broad compatibility: A variety of total RNA extraction reagents can be used to extract samples preserved in RNAfixer. It can also be used directly for tissue slice, immunology, and flow cytometry without affecting the quality of RNA extraction.

Operation Procedure:

RNAfixer is only for fresh tissues; do not freeze tissues before immersing them in RNAfixer. Simply cut the fresh tissue into pieces with any one dimension (length, width, or height) less than 0.5 cm in thickness and quickly immerse in RNAfixer (as long as one dimension is no more than 0.5 cm, RNAfixer can rapidly penetrate, and the dimensions of the other two sides are unimportant). Immerse fresh tissue in 5 volumes of RNAfixer and store at the appropriate temperature according to the instructions.

1. Animal tissue

RNAfixer does not destroy or dissolve tissue structures, so tissues that have reached osmotic equilibrium by soaking in RNAfixer can be removed, cut into smaller, and then put back into RNAfixer for continued use. Small

organs such as mouse liver, kidney, and spleen do not need to be cut and can be stored intact in RNAfixer.

2. Plant tissue

Many plant tissues can be directly immersed in RNAfixer, while some plants have natural osmotic barriers such as a waxy protective layer, which needs to be destroyed to facilitate the penetration of RNAfixer.

3. Tissue culture cells

After the cells are detached by pipetting, centrifuge to collect the cells, discard the supernatant, and wash once with ice-cold PBS buffer to remove residual culture. Suspend the cells in a small volume of PBS buffer. Add five to ten volumes of RNAfixer and mix well.

4. Blood and plasma

Leukocytes separated from red blood cells and serum can be preserved in the same way as tissue culture cells. RNAfixer can also preserve anticoagulated whole blood, serum, and plasma. For whole blood, add 3 volumes of RNAfixer and mix well.

5. Yeast

Centrifuge to collect 3×10^8 cells ($>12,000g$, 2 min), and immediately resuspend the cell in 0.5–1 ml of RNAfixer. Yeast cells can be stored in RNAfixer at 25 °C for 8 hours or at 4 °C for one week. For longer storage, after incubating the yeast cells in RNAfixer for one hour, centrifuge again at $>12,000g$ for 5 minutes flash-freeze the yeast cell pellet in liquid nitrogen, and store at -80 °C.

6. Bacteria

Bacteria cannot grow in RNAfixer, but RNAfixer does not destroy bacteria; intact RNA can still be extracted from E. coli stored at 4 °C for one month.