FISHER MOLECULAR BIOLOGY

RNA LATER STABILIZATION REAGENT FS-883

RNA*later* Stabilization Reagent immediately **stabilizes RNA in tissues, cell cultures and blood samples** to preserve the gene expression profile.

RNA Later makes it possible for researchers to postpone RNA isolation for days, weeks, or even months after tissue collection without sacrificing RNA integrity.

The reagent preserves RNA for up to 1 day at 37°C, 7 days at 18–25°C, or 4 weeks at 2–8°C, allowing processing, transportation, storage, and shipping of samples without liquid nitrogen or dry ice.
Alternatively, the samples can also be placed at –20°C or –80°C for archival storage.

Advantages:
In addition for RNA stabilization, RNA Solution can be easily integrated into a modified single-step RNA isolation method. This modified single-step method isolates undegraded RNA from tissues or cells in hours and can be used to process a large number of samples.

Protocol for Tissues

1. (Solution up to 100 mg tissue add 1 ml RNA Later)
Store the tube at –20°C until use.
2.When processing thaw and homogenize tissues in RNA Later .
3.Transfer 0.8 ml of the homogenate mix into a 2 ml tube and add 0.8 ml of the acid-phenol, pH 5.2, and 320 ul of chloroform.
4.Vortex the mixture vigorously by mixing 4 times, 30 sec for each.
5.Centrifuge at 12,000 rpm for 2 min
6. Transfer the upper aqueous phase (containing RNA) to a fresh 2 ml tube, taking care not to disturb the interface (containing DNA/protein).
7. Precipitate the RNA by adding an equal volume (0.8 ml) of isopropanol and 80 ul of 3 M NaAc at –20°C for 30 min.
8. Centrifuge at 12,000 rpm for 15 min and discard the supernatant.
9. Wash the RNA pellet by using 200 ul of 70% ethanol and gentle inverting the tube for several times.
10. After a brief spin and careful removing the supernatant, let the RNA pellet to air dry for about 5-10 min.
11. Dissolve the RNA pellet in 20 ul DEPC-treated TE.
12.Store the samples at –20°C and used for cDNA synthesis.

Protocol for Culture Cells

1.Transfer 107 cells (isolated from cell colture) into 1 ml of RNA Later Solution
Store the tube at –20°C until use.
2.When processing thaw and homogenize tissues in RNA Later
3.Transfer 0.8 ml of the homogenate mix into a 2 ml tube and add 0.8 ml of the acid-phenol, pH 5.2, and 320 ul of chloroform.
4.Vortex the mixture vigorously by mixing 4 times, 30 sec for each.
5.Centrifuge at 12,000 rpm for 2 min.
6.Transfer the upper aqueous phase (containing RNA) to a fresh 2 ml tube, taking care not to disturb the interface (containing DNA/protein).
7.Precipitate the RNA by adding an equal volume (0.8 ml) of isopropanol and 80 ul of 3 M NaAc at –20°C for 30 min
8.Centrifuge at 12,000 rpm for 15 min and discard the supernatant.
9.Wash the RNA pellet by using 200 ul of 70% ethanol and gentle inverting the tube for several times.
10. After a brief spin and careful removing the supernatant, let the RNA pellet to air dry for about 5-10 min.
11. Dissolve the RNA pellet in 20 ul DEPC-treated TE.
12.Store the samples at –20℃ and used for cDNA synthesis.

Protocol for Whole Blood

1.Collect fresh human blood in an anticoagulant-treat collection tube.
2.Transfer up to 300 µl fresh blood to a 1.5ml microcentrifuge tube (not provided). If the sample is more than 300 µl (up to 1ml), add the sample to a sterile 15 ml centrifuge tube.
3.Add 3 x the sample volume of RBC Lysis Buffer and mix by inversion. Do not vortex.
4.Incubate at room temperature for 10 minutes. Centrifuge at 3,000 x g for 5 minutes and completely remove the supernatant.
5.Resuspend the pellet with 100 µl of RBC Lysis Buffer.
6. Store 100µl of RBC Lysis Buffer with 1 ml of RNA Stabilization Solution at –20°C until RNA isolation.
7. When processing, thaw and homogenize tissue in RNA Stabilization Solution.
8.Transfer 0.8 ml of the homogenate mix into a 2 ml tube and add 0.8 ml of the acid-phenol, pH 5.2, and 320 ul of chloroform.
9.Vortex the mixture vigorously by mixing 4 times, 30 sec for each.
10. Centrifuge at 12,000 rpm for 2 min.
11. Transfer the upper aqueous phase (containing RNA) to a fresh 2 ml tube, taking care not to disturb the interface (containing DNA/protein).
12. Precipitate the RNA by adding an equal volume (0.8 ml) of isopropanol and 80 ul of 3 M NaAc at –20°C for 30 min
13. Centrifuge at 12,000 rpm for 15 min and discard the supernatant.
14. Wash the RNA pellet by using 200 ul of 70% ethanol and gentle inverting the tube for several times.
15. After a brief spin and careful removing the supernatant, let the RNA pellet to air dry for about 5-10 min.
16. Dissolve the RNA pellet in 20 ul DEPC-treated TE.
17.Store the samples at –20℃ and used for cDNA synthesis.

Cat. No.	Product Name	Samples	Size	Store at
FS-883	RNA LATER STABILIZATION REAGENT	Tissues Cell Cultures	100 ML	Store at +4°C
FS-884	RNA LATER STABILIZATION REAGENT + LYSYS BUFFER	Tissues Cell Cultures **Blood**	100 ML	

For Research Use Only

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