

RNA Safer™ LS Reagent

(Liquid sample RNA protection solution)

Introduction

RNA Safer™ LS Reagent is a RNA protective solution specifically designed for liquid samples (blood, saliva, cell culture fluids). The protective reagent contains cationic surfactants, which can rapidly and efficiently lyse cells and form stable electroneutral complexes with RNA to protect from degradation. After mixing liquid samples such as blood, saliva, serum, plasma, urine, and cell culture fluid with RNA Safer™ LS Reagent, it can be stored at room temperature for three days, at 2-8°C for one week, at -20°C/-80°C for at least six months. This protocol has been successfully applied to the protection of cell culture, saliva RNA, and blood RNA.

Content

Product Name	P8340
RNA Safer™ LS Reagent	500ml

Storage

RNA Safer™ LS Reagent can be stored at room temperature. If crystal precipitation occurs during storage, shake it at 55°C to completely dissolve.

Usage

1. Use suitable containers to collect blood, saliva, urine, and cell culture.
2. Immediately add 3 times the volume of RNA Safer™ LS Reagent to the sample. Mix upside down 10-15 times and place at room temperature for 30 minutes.

Note: After mixing with RNA Safer™ LS Reagent, adherent cells will fall from the culture bottle, no need to treat with trypsin. During storage, sediment may adsorb onto the wall of the culture bottle (the surface of the cell culture bottle has strong adsorption). It is recommended to transfer the sample to a suitable centrifuge tube to avoid RNA loss after mixing. To process cell precipitates that have been collected by centrifuge, add 300µl of RNA Safer™ LS Reagent to the cell precipitates and vortex to resuspend the cells.

3. The mixture can be stored at room temperature (15-25°C) for 3 days, at 2-8°C for one week, at -20/-80°C for at least six months. RNA will not degrade.

Blood RNA extraction

1. Take the blood/ RNA Safer™ LS Reagent mixture and place it at room temperature for 30 minutes, recover the sample to room temperature.
2. Centrifuge at 3,000~5,000xg for 10 minutes at room temperature to collect RNA/cationic complexes ;
3. Discard the supernatant and invert it onto absorbent paper to absorb the residual liquid;
4. Add 2 times the blood volume of DEPC treated water to the precipitate. Vortex to disperse precipitates.
5. Centrifuge at 3,000~5,000xg for 10 minutes at room temperature to collect RNA/cationic complexes ;
6. Add 100µl DEPC treated water to resuspend precipitation, and extract by MagZol Reagent or Trizol Reagent. Due to the high amount of impurities in blood samples, it is recommended to use HiPure Paxigen Blood RNA Kit (Magen #R4168) for extraction to obtain the highest yield.

Saliva and Cell RNA extraction

1. Take the sample/ RNA Safer™ LS Reagent mixture and place it at room temperature for 30 minutes, recover the sample to room temperature.
2. Centrifuge at 3,000~5,000xg for 10 minutes at room temperature to collect RNA/cationic complexes ;
3. Discard the supernatant and invert it onto absorbent paper to absorb the residual liquid;
4. Add 1ml DEPC treated water to the precipitate. Vortex to disperse precipitates.
5. Centrifuge at 3,000~5,000xg for 10 minutes at room temperature to collect RNA/cationic complexes ;
6. Add 100µl DEPC treated water to resuspend precipitation, and follow MagZol Reagent (Magen #R4801), Trizol Reagent or HiPure Total RNA Plus Kit (Magen #R4111) for RNA extraction.