

TriZol

Product description

TriZol is a ready-to-use reagent for the isolation of total RNA from cells and tissues. TriZol combines phenol and guanidine thiocyanate in a mono-phase solution to inhibit RNase. After lysis and centrifugation, RNA remains in the aqueous phase and others in the interphase or organic phase. RNA is precipitated by addition of isopropanol.

- Isolate RNA from a variety of species: animal, plant, yeast, bacteria and virus.
- The whole procedure can be completed in one hour.
- Simultaneous isolation of RNA, DNA and protein from the same sample.
- Pink solution for easy visualizing different phases.
- Unique dissolving solution for long-term RNA storage.

Components

Components No.	Name	Package
QET101	TriZol	100 mL

Storage

The product should be stored at 2°C ~ 8°C in the dark, valid for one year.

Procedures

Reagents provided by customers: chloroform, isopropanol, 75% ethanol(prepared with RNase-free water) and RNase-free water.

1. Homogenization

a. Adherent cells

- Wash culture dish once with 1×PBS
- Detach cells with cell spatula. Add 1mL of TriZol to per 10cm³ culture dish. Pipetting up and down to lysis the cells.
- Transfer lysate to a microcentrifuge tube.
- Incubate at room temperature for 5 minutes.

b. Suspension cells

- Transfer suspension cells to a microcentrifuge tube. Centrifuge the sample at 8,000×g for 2 minutes at 2-8°C, discard the supernatant.
- Add 1 mL of TriZol to per 10⁷ cells.
- Pipetting up and down until no visible precipitates are present in lysate.
- Incubate at room temperature for 5 minutes.

c. Animal tissue and plant materials

- After weighing, quickly transfer the frozen sample into mortar with liquid nitrogen. Grind thoroughly to a powder. Use more liquid nitrogen if needed. Incomplete grind can affect RNA yield and quality.
- Transfer the tissue powder to a microcentrifuge tube. Add 1mL of TriZol to per 50-100 mg tissue. Homogenize tissue samples with a homogenizer and repetitively pipette up and down.

- Incubate at room temperature for 5 minutes.
- 2. Add 0.2mL of chloroform for per ml TriZol used. Shake the tube vigorously by hand for 30 seconds. Incubate at room temperature for 3 minutes.
- 3. Centrifuge the sample at 10,000×g for 15 minutes at 2-8°C. The mixture separates into a lower pink organic phase, an interphase, and a colorless upper aqueous phase which contains the RNA. The volume of the aqueous upper phase is around 60% volume of TriZol reagent.
- 4. Transfer the colorless, upper phase containing the RNA to a fresh RNase-free tube. Add 0.5mL of isopropanol for per mL TriZol used. Mix thoroughly by inverting tube. Incubate at room temperature for 10 minutes.
- 5. Centrifuge the sample at 10,000×g for 10 minutes at 2-8°C. Discard the supernatant. Colloidal precipitate can be seen at the wall and the bottom of the tube.
- 6. Add 1mL of 75% ethanol(prepared with RNase-free water), vortexing vigorously(add at least 1mL of 75% ethanol for 1mL TriZol used).
- 7. Centrifuge the sample at 7,500×g for 5 minutes at 2-8°C.
- 8. Discard the supernatant. Air-dry the RNA pellet(about 5 minutes).
- 9. RNA pellet is dissolved in 50-100μL of dissolving solution.
- 10. Incubate at 55-60°C for 10 minutes for long-term storage, store the purified RNA at -70°C.

Notes

- 1. It is important to mix well after adding chloroform to ensure extraction performance.
- 2. Please wear the necessary PPE, such lab coat and gloves, to ensure your health and safety!
- 3. This product is for research use ONLY!