WelPrep™ Total RNA Isolation Reagent

Catalog Number **PR 101-01**
Storage Temperature 4 °C

Product Description
WelPrep Total RNA Isolation Reagent is isolated quality total RNA, DNA, and proteins from a variety of cell and tissue sample. The reagent is a ready to use solution and does not require enzyme or column treatment.

Contents
WelPrep™ Total RNA Isolation Reagent 200 ml X 1 ea

Storage/Stability
The reagent should be stored at 4 °C.

Precautions
Because the reagent contains phenol and guanidine thiocyanate, Always use gloves and eye protection. Avoid contact with skin or clothing. For In vitro use only.

Protocols
- Make sure all equipment and solution are RNAse free. Using DEPC or RNAse inhibitor is recommended.

1. **[Sample Preparation]** Adherent cell : rinse cell with cold PBS and add the reagent described to the table below. After adding reagent, incubate 5 minutes at room temperature.

Culture ware	Growth area (cm^2)	Reagent volume (ml)
96-well	0.3	0.1~0.2
48-well	0.7	0.2~0.4
24-well	2	0.4~0.7
12-well	4	0.7~1
6-well	10	1~1.5
60 mm dish	20	1.5~2
75T flask	75	2~3

Suspension cell : Add 1 ml of the reagent per 0.5 ~ $1X10^7$ cells and incubate 5 minutes at room temperature.

Tissue : Homogenize in 1 ml of the reagent per 50 ~ 100 mg tissues and incubate 5 ~ 10 minutes at room temperature.

2. **[Cell Lysis]** Add 0.2 ml of chloroform per 1 ml of the reagent. Vortex samples vigorously for 10 seconds and incubate them at room temperature for 2 ~ 3 minutes.

3. **[Phase Separation]** Centrifuge the samples at 12,000 X g for 15 minutes at 2 ~ 8 °C. Following centrifugation, the mixture separates into lower green, phenol-chloroform phase, an interphase, and a colorless upper aqueous phase. Transfer upper aqueous phase carefully without disturbing the interphase into fresh tube.
*Note : The volume of the aqueous phase is about 60% of the volume of the reagent added.

4. **[RNA Precipitation]** Use 1 volume of isopropyl alcohol per transferred aqueous phase. Incubate the mixer for 10 minutes at room temperature and centrifuge at 12,000 X g for 10 minutes at 2 ~ 8 °C. The RNA precipitate forms a white pellet on the side and bottom of the tube.

5. **[RNA Wash]** Remove the supernatant carefully. Wash the RNA pellet with 1 ml 75% ethanol per 1 ml of the reagent. Mix the samples by vortexing and centrifuge at 10,000 X g for 5 minutes at 2 ~ 8 °C.

6. **[Solving RNA]** Air dry RNA pellet for 5 ~ 10 minutes. Do not overdry the RNA pellet. Dissolve RNA in DEPC-treated water for 5 ~ 10 minutes at 55 ~ 60 °C.

References
Chomczynski, P and Sacchi, N (1987) Anal. Biochem 162: 156

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