PRODUCT INFORMATION

Rapid Plant RNA Isolation Kit

Product information for PT4191:

Components

Components	PT4191, 50 Preps
Buffer Rlysis-P	35 ml
Buffer PK	4 ml
RNase-free Water	5 ml
Protocol	1

Storage

The kit is valid for 1 year at 4°C.

Introduction

This kit is designed for preparation of high quality total RNA from a wide variety of plant species and tissues types. Plant tissue are lysed and homogenized by Buffer Rlysis-P. All contaminants, such as polysaccharide, are removed by centrifugation. Purified RNA is ready for most downstream applications such as RT-PCR, Northern Blotting, Poly (A) purification, nuclease protection and *in vitro* translation.

Features

- ü Fast. The whole procedure can be completed in 40 minutes.
- ü High Quality of RNA. Purified plant total RNA can be used large range of application. Its OD_{260}/OD_{280} ratio is generally > 1.8.
- ü Versatile. Suitable for isolation of total RNA from a wide range of specimens such as arabidopsis thaliana, tobacco, camphor and other samples.
- ü Easy to scale up.
- ü

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NOTE: Care must be taken when working with RNA. It is important to maintain an RNAse-free environment starting with RNA sample preparation and continue through purification and analysis. Use RNAse free tubes, tips, gels. Wear gloves at all the time.

Materials Supplied by User:

Microcentrifuge capable of at least 12,000 × *g*
RNase-Free pipets and pipet tips
Vortexer
RNase-Free Ethanol (96-100%)
RNase-Free Microcentrifuge tubes (1.5 ml or 2 ml)

Procedures

1. Grind 25~50 mg plant tissue to fine powder in liquid nitrogen. Transfer the powder to a 1.5 ml RNase-free centrifuge tube.

2. Using RNase-free pipet tips, add 600 µl Buffer Rlysis-P and mix by inverting immediately.

3. Incubate at 65°C for 5 minutes to make sure the cells are completely lysed.

4. Add 60 µl Buffer PK to the cell precipitation, mixes by inverting the tube several times. Incubate at -20°C for 3 minutes.

5. Centrifuge at 12,000 x *g* for 5 minutes at room temperature. Transfer the supernatant into a new RNase-free 1.5 ml tube.

6. (Optional) Repeat Step 5 once.

Note: This step can improve the purity of RNA.

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7. Add 1/3 volume of RNase-Free Ethanol (96-100%) to the tube, vortex for 30 seconds.

> **Note:** Incubating at -20°C for 5-10 minutes can improve the RNA yield.

8. Centrifuge at 12,000 x *g* for 5 minutes at 4°C, discard the supernatant carefully.

9. Add 1 ml of RNase-free 75% ethanol to the tube, mix well by inverting 10 times. Centrifuge at 12,000 x *g* for 1 minute, discard the supernatant.

10. Repeat the Step 9 once.

11. Air-dry the pellet at room temperature with the lid open for 2~5 minutes.

> **Note1:** This step is very important, residual ethanol in RNA will interfere with some downstream applications.
>
> **Note2:** Don't over dry.

12. Add 30~50µl of RNase-free Water to dissolve RNA pellet. Purified RNA is ready for use. Or keep at -70°C for long term storage.

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