



# PRODUCT INFORMATION

## Plant Protein Extraction Kit (Cat# PEP-5000)

### Product information for PEP-5000:

#### Introduction:

The kit is designed for extraction of total proteins from various plant species or tissue. The protocol does not require any ultracentrifugation or aqueous polymer two-phase partition (APTP). The procedure includes plant cell lysis and protein extraction. The isolated protein is compatible with many downstream applications, including SDS-PAGE, Western blotting. It is sufficient for 50x100 mg of liquid-nitrogen frozen plant samples.

#### Component:

Components	PEP-5000
Solution A	50 ml
Solution B	100 ml
Solution C	120 $\mu$ l
Solution D	1 ml

#### Protocol:

- 1 Keep the plant tissue sample at  $-80^{\circ}\text{C}$  to fully freeze them, then cut it into small pieces, add liquid nitrogen and grind them fully.
- 2 Transfer about 100 mg ground plant tissue powder into a new centrifuge tube, then add 1 ml of solution A and 0.7  $\mu$ l of Solution C. Vortex and keep the mixture at  $-20^{\circ}\text{C}$  for 45 minutes, then centrifuge at 17,000 x g (16,000 rpm) for 15 minutes at  $4^{\circ}\text{C}$ , discard supernatant.
- 3 Add 1 ml of Solution B, 10  $\mu$ l of Solution D and 0.7  $\mu$ l of solution C into the above precipitates, vortex and keep at  $-20^{\circ}\text{C}$  for 60 minutes. Centrifuge at 17,000 x g (16,000 rpm) for 15 minutes at  $4^{\circ}\text{C}$ , discard supernatant.
- 4 Add 1 ml of Solution B, 10  $\mu$ l of Solution D and 0.7  $\mu$ l of Solution C into the above precipitates, vortex and then centrifuge at 17,000 x g (16,000 rpm) for 15 minutes, discard supernatant.
- 5 Keep protein precipitates and store at  $-80^{\circ}\text{C}$ .
- 6 For the purpose of further research, add corresponding sample buffer to dissolve protein precipitates, then centrifuge at 16,000 rpm for 5 minutes and transfer some protein solution for further experiments or store at  $-20^{\circ}\text{C}$ .

#### Note:

1. Fully grind the plant tissue sample while the plant tissue sample is in frozen, so as to fully release protein from plant tissue cell.
2. Solution A and Solution B tend to be volatile, irritant and combustible, please carry out the operation in fume hood.
3. After use, please close the lid of reagents tightly, in case the reagent reacts with compounds in air.
4. Only can be used for *in vitro* experiments.

#### Storage:

Keep all contents at  $-20^{\circ}\text{C}$