

Chlorophyll Extraction Reagent

C1518212

Storage Room temperature.

Shipping Regular transportation.

Introduction

Chloroplasts are the organelles responsible for photosynthesis. In photosynthesis research, it is often necessary to use isolated chloroplasts for downstream studies. The pigments contained in chloroplasts mainly fall into two categories: chlorophylls (including chlorophyll a and chlorophyll b) and carotenoids (including carotenes and xanthophylls). They bind to proteins on the thylakoid membrane to form pigment-protein complexes. Among them, chlorophyll is also known as chloroplast pigment.

The extraction principle of Chlorophyll Extraction Reagent is that chlorophyll is insoluble in water but soluble in organic solvents. This reagent is used for the crude extraction of chlorophyll with organic solvents, mainly for the extraction of chlorophyll from plant tissues and the determination of chlorophyll content. This reagent is for research use only and is not suitable for clinical diagnosis or other applications.

Components

C1518212	Component	500 mL	Storage
C1518212A	Chlorophyll Extraction Reagent	500 mL	RT.
C1518212B	Extraction Powder	3 g	RT.

Materials Provided by User

1. Electronic balance, mortar or homogenizer, centrifuge tube, filter paper or gauze.
2. Test sample, deionized water.

Protocol (For Reference Only)

1. Take fresh leaves of spinach or other plants, wash and blot dry, remove the midribs. Weigh 0.1 g of cut fresh sample into a mortar or homogenizer. Mix at a ratio of 0.1 g (cut sample): 50 mg (Reagent B): 1 mL (Reagent A), then grind or homogenize into a liquid.
2. Transfer the homogenate to a 10 mL centrifuge tube. Rinse the mortar or homogenizer several times with a small amount of Chlorophyll Extraction Reagent (Reagent A), and pour all rinsing solution and residue into the 10 mL centrifuge tube. Add Chlorophyll Extraction Reagent to a final volume of 10 mL, mix well, and keep in the dark for 5 min-2 h.

Note: For large-scale chlorophyll extraction, scale up the volume according to the ratio of

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adding Chlorophyll Extraction Reagent to 10 mL per 0.1 g of tissue.

3. Extraction is complete when the tissue residue at the bottom is nearly white. If the tissue is still strongly colored, add more Chlorophyll Extraction Reagent and keep in the dark.
4. Filter through filter paper or three layers of gauze. The filtrate obtained is the crude chlorophyll extract.

Precaution

1. To avoid photodegradation of chlorophyll, perform all procedures in the dark as much as possible, and minimize the grinding or homogenization time.
2. If the absorbance value is greater than 1, dilute the sample appropriately before measurement.
3. The crude chlorophyll extract must not be turbid; otherwise, filter again.
4. Please use the reagent as soon as possible after opening to avoid affecting subsequent experimental results.
5. For your safety and health, please wear a lab coat and disposable gloves during operation.