

Glycolate Oxidase (GO) Extraction Reagent

Cat. No.: G1509484 | Pack size: 2×500 mL | Storage: Store at 2-8°C; protected from light; room temperature

Overview

Glycolate Oxidase (GO) is an enzyme involved in the glycolate cycle. In the glycolate metabolic pathway, glycolate is converted to glyoxylate under the catalysis of glycolate oxidase. Photosynthesis and respiration are the two core processes of plant metabolism. Photosynthesis is the process of substance synthesis and energy storage, belonging to anabolism; it provides materials and energy for the survival of almost all organisms, including humans. Respiration is the process of substance decomposition and energy release, belonging to catabolism; it supplies energy for life activities. Determination of glycolate oxidase activity in samples is a basic method to analyze photosynthetic and respiratory metabolism in plants.

Glycolate Oxidase (GO) Extraction Reagent is mainly used for the extraction of glycolate oxidase from plant tissues or fruits. This reagent is for research use only and is not suitable for clinical diagnosis or other applications.

Contents & Storage

Cat. No.	Component	Size	Storage
G1509484A	GO Extraction Reagent	2×500 mL	2-8°C. Store in the dark.
G1509484B	Protein Precipitant	100 g	RT. Store in the dark.

Materials Provided by User

Mortar or homogenizer, gauze or filter paper, centrifuge tubes or test tubes, centrifuge, pH meter.

Protocol (For Reference Only)

1. Take fresh plant leaves, wash clean, blot dry with absorbent paper, and weigh 18 g. Add 18 mL of pre-cooled GO Extraction Reagent, then homogenize or grind thoroughly in an ice bath. Filter through gauze or filter paper, and transfer the filtrate to a centrifuge tube or test tube.
2. Centrifuge at $1000 \times g$ for 15 min. Transfer the supernatant to a new centrifuge tube or test tube, adjust the pH to 5.4, then centrifuge at $4000 \times g$ for 15 min. Collect the supernatant.
3. Add Protein Precipitant at a ratio of supernatant: Protein Precipitant = 10 mL:1.15 g, mix continuously for 30 min, then centrifuge at $4000 \times g$ for 20 min. Collect the supernatant.

4. Add Protein Precipitant at a ratio of supernatant: Protein Precipitant = 10 mL:0.6 g, mix continuously for 30 min, then centrifuge at 4000 × g for 20 min. Discard the supernatant; the pellet is the crude glycolate oxidase product.

Precautions

1. Experimental materials should be as fresh as possible. If not used immediately after collection, store at -20 to -80°C.
2. Please use the reagent as soon as possible after opening to avoid affecting subsequent experimental results.
3. For your safety and health, please wear a lab coat and disposable gloves during operation.

Storage and Shipping

Attribute	Value
Storage Conditions	Store at 2-8°C, Protected from light, Room temperature
Shipped In	Wet ice
Stability And Storage	Each component has a shelf life of 1 year under corresponding storage conditions.

Contact & Global Offices

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