

Plant Amino Acid (AA) Extraction Reagent

Cat. No.: P1509596 | Pack size: 500 mL | Storage: Room temperature

Overview

Amino acids (AA) are the basic units of proteins and also the degradation products of proteins. The liver and kidneys of animals are the primary organs for amino acid metabolism. Therefore, changes in amino acids in urine can best reflect the physiological status of the liver and kidneys. The amino acid content in plants is of great significance for studying nitrogen metabolism changes in plants under different conditions and at different growth and development stages, as well as plant nitrogen uptake, transport, assimilation, and nutritional status. In addition, amino acids can also indicate conditions such as burns and typhoid fever.

This Plant Amino Acid (AA) Extraction Reagent is mainly used for lysing plant tissues and extracting the total free amino acid content from plant tissues, food, pharmaceuticals, and other samples. Note: This reagent is intended for research purposes only and not for clinical diagnosis or any other applications.

Key Features

- ☐ Ready-to-use reagent or supplement formulation for the indicated research workflow.
- ☐ Designed for Cell fractionation, 500ml workflows.
- ☐ Storage condition: Room temperature.

Kit Contents & Storage

Cat. No.	Component	Size	Storage
P1509596	Plant Amino Acid (AA) Extraction Reagent	500 mL	Room temperature

Storage: Room temperature.

Shipped in: Normal.

Materials Required But Not Supplied

Item	Recommended Specification	Purpose
Deionized water or ammonia-free distilled water	User-prepared	Required for use
Centrifuge tubes or test tubes, homogenizers or mortars	User-prepared	Required for use

Specifications

Attribute	Value
Synonyms	Plant Amino Acid Extraction Reagent Plant AA Extraction Reagent
Application	Cell fractionation, 500ml
Shipped In	Normal
Specifications & Purity	BioReagent, Suitable for plant cell and tissue extracts, for amino acid analysis
Stability And Storage	Store at room temperature long term (12 months).
Storage	Room temperature

Protocol

1. Plant Samples: Take fresh plant tissues, rinse them thoroughly, dry them, cut them into small pieces, and weigh 0.5 g of the samples quickly.
2. Add the amino acid extraction reagent at a ratio of 1 g plant tissue: 5 ml extraction reagent, then homogenize or grind the mixture.
3. Dilute the homogenate to 10 ml with deionized water, mix well, and filter the solution with filter paper. The filtrate is the crude amino acid extract, which can be stored at 4°C for later use.
4. If the sample contains a high concentration of amino acids, it can be appropriately diluted with the Plant Amino Acid Extraction Reagent.

Sample Handling

Use clean or sterile containers and consumables appropriate for the intended workflow. Bring reagents to the working condition recommended in the protocol or laboratory method before use.

Avoid repeated contamination, unnecessary freeze-thaw cycles, or prolonged exposure to room temperature unless the product label specifically permits it.

Safety & Precautions

1. Experimental materials should be as fresh as possible. If not used immediately after sampling, they should be stored at 4°C.
2. The Plant Amino Acid Extraction Reagent should be stored in a sealed container to avoid volatilization.

3. If the concentration of the measured sample is too high, dilute the sample with the Plant Amino Acid Extraction Reagent.
4. Please use the reagent as soon as possible after opening to prevent affecting the subsequent experimental results.
5. For your safety and health, wear a lab coat and disposable gloves during operation.
6. Read the current SDS before use. Wear lab coat, gloves, and eye protection. Handle reagents according to local laboratory safety and EHS procedures.
7. Use clean or sterile consumables as required by the application and avoid contamination during handling.
8. Follow the storage condition on the product label. Protect from light or freezing where specified.

Quality Control

QC Item	Method	Acceptable Range
Appearance	Visual inspection	Clear or expected appearance without leakage, contamination, or abnormal precipitate
Application performance	Representative staining, coating, extraction, or culture workflow	Result is consistent with the product description and lot-specific specification
Storage condition verification	Receipt and storage review	Stored according to product label and protected from light where required

Troubleshooting

Issue	Possible Causes	Corrective Action
Weak or uneven result	• Insufficient sample preparation • Incorrect incubation time or temperature • Reagent stored improperly	• Prepare sample according to protocol • Optimize incubation within recommended range • Verify storage condition and expiry/COA
Background or nonspecific staining/effect	• Incomplete washing or deparaffinization • Over-treatment or over-oxidation • Contaminated water or containers	• Wash thoroughly and prepare sections completely • Shorten treatment time as needed • Use clean containers and fresh water

Issue	Possible Causes	Corrective Action
Product deterioration after opening	- Exposure to air/light or contamination - Repeated temperature cycling	- Keep container sealed and protected from light where required - Use aseptic technique and avoid repeated temperature changes

Recommended Applications

Cell fractionation, 500ml.

Contact & Global Offices

Whether you have a technical question, need help with a quotation, or want to inquire about an order, our regional teams are ready to assist. Please contact the office for your region; for general inquiries, the North American office is the corporate primary.

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Limitations & Disclaimer

- ☐ For Research Use Only (RUO). Not for use in human or animal diagnostics, therapeutics, or in vivo applications. Not for food, cosmetic, or household use.
- ☐ This product is not a CE-marked in vitro diagnostic device under IVDR (EU) 2017/746 and is not an FDA-cleared device under 21 CFR. Use is restricted to verified businesses, institutions, and qualified professionals for research and development purposes.
- ☐ Where any kit component is classified as hazardous under CLP (EC) 1272/2008 or OSHA HCS (29 CFR 1910.1200), the product Safety Data Sheet (SDS) takes precedence over this document for handling, storage, and disposal information.
- ☐ Performance depends on sample type, sample condition, handling, and operator technique. Users are responsible for validating the product for their specific application.
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