
Yoshida Rice Nutrient Solution

Cat. No.: Y1526376 | Pack size: 500ml | Storage: Store at 2-8°C

Overview

Rice has long been cultivated in paddy fields with low nutrient concentrations and is adapted to low-nutrient conditions. It prefers ammonium nitrogen ($\text{NH}_4^+\text{-N}$), possesses strong capacity for monophosphate uptake, yet has weak iron (Fe) absorption ability. Accordingly, the phosphate concentration in rice nutrient solution should not be high; 20 mg/L phosphoric acid is sufficient, while the Fe concentration needs to be elevated appropriately. Commonly adopted rice nutrient solutions include Kimura B Solution, Kasugai Solution and the standard Yoshida Solution developed by the International Rice Research Institute (IRRI).

Yoshida Rice Nutrient Solution, also named IRRI Nutrient Solution or Masahiko Yoshida Rice Nutrient Solution, consists of 88.6 mg/L calcium salts, 91.4 mg/L ammonium salts, 71.4 mg/L potassium salts, 40.3 mg/L phosphate and 324 mg/L magnesium sulfate. Its total salt content is approximately 640 mg/L without sodium silicate, and the pH value is 5.0. This reagent is exclusively for scientific research and shall not be applied to clinical diagnosis or other purposes.

Operating Procedures (For Reference Only):

Operate in accordance with specific experimental requirements. The solution can generally be used directly. Sodium silicate may be supplemented up to 200 mg/L if necessary.

Precautions:

1. Sodium silicate plays a vital role in rice growth. Since sodium silicate is alkaline, the pH of the working solution will drop after silicon supplementation. Adjust the pH to the optimal level for rice growth with NaOH.
2. This product is limited to laboratory research. Do not use it for medicine, clinical diagnosis and treatment, food, cosmetics or other commercial applications.
3. Use the reagent promptly after opening to avoid adverse effects on subsequent experiments.
4. For your personal safety and health, wear a lab coat and disposable gloves during operation.
5. This product is for research use only; any unauthorized application is strictly prohibited.

Specifications

Item	Information
Synonyms	Yoshida's Solution for Rice Hydroponics
Specifications & Purity	BioReagent
Stability And Storage	Store at 2-8°C long term (12 months).
Storage	Store at 2-8°C
Shipped In	Wet ice. This product requires cold chain shipping. Ground and other economy services are not available.

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.

NORTH AMERICAN SALES, SUPPORT & GENERAL INQUIRIES Aladdin Scientific Corporation 14078 Meridian Parkway, Riverside, CA 92518, USA Phone: 1-833-552-7181 Sales: sales@aladdinsci.com Customer Service: custserv@aladdinsci.com	EU SALES, LOGISTICS & LOCALIZED SUPPORT Aladdin Biochem Deutschland GmbH Westring 2, 33142 Büren, Germany Phone: +02951 9383958 Support: support.eu@aladdinsci.com
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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 kit for their specific application.
- ☐ Aladdin product labels, SDS, COA, and approved specifications take precedence over this document. If product formulation, label, SDS, storage conditions, pack size, or quality specifications change, this document would be reviewed and reissued.