

Neutral Red Staining Solution (1%)

Cat. No.: N774840 | Pack size: 100 mL | Storage: Protected from light, Room temperature

Overview

Neutral Red is a weakly basic pH indicator with a transition range of pH 6.4–8.0 (from red to yellow). In neutral or slightly alkaline environments, living plant cells can absorb a large amount of Neutral Red and secrete it into the vacuoles. Neutral Red Staining Solution (1%) is a commonly used reagent for tissue or cell staining, which stains the nucleus red. It is often used as a red nuclear counterstain in tissue or cell staining.

Key Features

- ☐ Ready-to-use staining or processing reagent for microscopy workflows as specified in the source file.
- ☐ 1% grade/format as specified for this product.
- ☐ Designed for Cell Staining workflows.
- ☐ Storage condition: Protected from light, Room temperature.

Kit Contents & Storage

Cat. No.	Component	Size	Storage
N774840	Neutral Red Staining Solution (1%)	100 mL	Protected from light, Room temperature

Storage: Protected from light, Room temperature.

Shipped in: Normal.

Materials Required But Not Supplied

Item	Recommended Specification	Purpose
Pipettes, centrifuge tubes, and appropriate containers	Clean laboratory grade	Reagent handling
Personal protective equipment	Lab coat, gloves, and eye protection	Safe operation
Application-specific samples and instruments	Prepared according to laboratory protocol	Product use

Specifications

Attribute	Value
Synonyms	Neutral Red
Specifications & Purity	1%
Application	Cell Staining
Shipped In	Normal
Specifications & Purity	BioReagent, Biological Stain, for microscopy, 1%
Stability And Storage	Store at room temperature long term (12 months). Store in the dark.
Storage	Protected from light, Room temperature

Protocol

I. Sample Preparation

1. For Paraffin Sections

- (1) Deparaffinize in xylene for 5–10 min.
- (2) Replace with fresh xylene and deparaffinize for another 5–10 min.
- (3) Absolute ethanol for 5 min.
- (4) 90% ethanol for 2 min.
- (5) 70% ethanol for 2 min.
- (6) Distilled water for 2 min.

2. For Frozen Sections

Equilibrate to room temperature, then rinse with distilled water for 2 min.

3. For Cultured Cells

- (1) Fix with 4% paraformaldehyde for ≥ 10 min.
- (2) Rinse with distilled water for 2 min.
- (3) Replace with fresh distilled water and rinse for another 2 min.

II. Neutral Red Staining

1. Stain the prepared samples with Neutral Red Staining Solution for 0.5–1 h.

2. Wash thoroughly with distilled or tap water.

3. Observe and photograph.

Staining Result

Structure	Color
Nuclei	Red

Sample Handling

Prepare sections, cells, or plant tissues according to the staining workflow specified in the protocol. Ensure complete washing or pretreatment before applying the staining or preservation solution.

Protect light-sensitive staining reagents and stained samples from strong light where indicated, and avoid drying artifacts unless the protocol specifically requires drying.

Safety & Precautions

1. If dehydration, clearing and mounting are required, prepare xylene, neutral balsam or other mounting media by yourself. For paraffin sections, prepare 70% and 90% ethanol, absolute ethanol and xylene by yourself.
2. It is recommended to perform a pilot experiment on 1–2 samples when using this reagent for the first time.
3. The staining time with Neutral Red Staining Solution can be adjusted according to the staining results and requirements.
4. For your safety and health, please wear a lab coat and disposable gloves during operation.
5. Read the current SDS before use. Wear lab coat, gloves, and eye protection. Handle reagents according to local laboratory safety and EHS procedures.
6. Use clean or sterile consumables as required by the application and avoid contamination during handling.
7. Follow the storage condition on the product label. Protect from light or freezing where specified.

Quality Control

QC Item	Method	Acceptable Range
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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
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 Staining.

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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