

Neutral Red Stain Solution (0.5%)

Cat. No.: N1511062 | Pack size: 100ml | Storage: Room temperature

Product Information

Item	Description
Product name	Neutral Red Stain Solution (0.5%)
Catalog No.	N1511062
Pack size	100ml
Specifications & Purity	BioReagent, Biological Stain, for microscopy, 0.5% in deionized water
Synonyms	Neutral Red
Storage	Room temperature
Shipped in	Normal
Application	Cell Staining
Stability and storage	Store at room temperature long term (12 months).
CAS	N1511062
Molecular Weight	288.78

Contents & Storage

Pack Size	Storage	Shipping
100ml	Room temperature	Normal

Overview

Neutral Red is a weakly basic pH indicator with a color change range of pH 6.4–8.0 (turning from red to yellow). Its molecular formula is $C_5H_{16}N_4 \cdot HCl$ and the molecular weight is 288.78. In a neutral or slightly alkaline environment, living plant cells can absorb a large amount of Neutral Red and secrete it into vacuoles.

Neutral Red Stain Solution (0.5%) is a commonly used stain for tissue or cell staining that colors cell nuclei red, and it is frequently applied for the red counterstaining of cell nuclei in tissue or cell staining procedures.

Operating Procedures (For Reference Only):

1. Sample Preparation

a) For paraffin sections:

- Dewax in xylene for 5–10 minutes.
- Replace with fresh xylene and dewax for another 5–10 minutes.
- Rinse in absolute ethanol for 5 minutes, 90% ethanol for 2 minutes, 70% ethanol for 2 minutes, and distilled water for 2 minutes.

b) For frozen sections: Rinse in distilled water for 2 minutes.

c) For cultured cells: Fix with 4% paraformaldehyde for more than 10 minutes. Rinse in distilled water for 2 minutes, replace with fresh distilled water, and rinse for another 2 minutes.

2. Neutral Red Staining

a) Stain the above-prepared samples with 0.5% Neutral Red Stain.

b) Rinse thoroughly with distilled water or tap water.

c) Proceed with observation and photography.

Precautions:

1. Xylene, neutral balsam or other mounting media shall be prepared by the user if dehydration, clearing and mounting are required. For paraffin section samples, 70% ethanol, 90% ethanol, absolute ethanol and xylene shall be prepared by the user.
2. A pre-experiment with 1–2 samples is recommended when using this reagent for the first time.
3. The staining time of Neutral Red Staining Solution can be adjusted according to the staining results and experimental requirements.
4. Wear a lab coat and disposable gloves during operation for your safety and health.
5. This product is for research use only and shall not be used for any other purposes.

Safety & Precautions

1. Read the current SDS before use and handle the product according to local laboratory safety and EHS procedures.

2. Avoid direct contact with staining solutions. Protect light-sensitive products from light as indicated on the label.
3. Wear a lab coat, disposable gloves, and appropriate eye protection during operation.
4. For research use only. Do not use for clinical diagnosis, treatment, food, cosmetic, or household applications.

Quality Control

QC Item	Method	Acceptable Range
Appearance and color	Visual inspection	Product-consistent color with no visible microbial contamination or abnormal precipitation
Staining performance	Use on representative samples according to the procedure	Expected staining intensity and contrast are obtained
Storage condition	Review label and COA before use	Stored under recommended conditions, protected from light when indicated

Troubleshooting

Issue	Possible Causes	Corrective Action
Weak staining	<ul style="list-style-type: none"> • Insufficient staining time • Reagent deterioration or improper storage • Sample preparation not optimized 	<ul style="list-style-type: none"> • Extend staining time within the recommended range • Confirm storage condition and protect from light where required • Optimize sample preparation and washing steps
High background or overstaining	<ul style="list-style-type: none"> • Excessive staining time • Inadequate washing or decolorization • Excess reagent carried over 	<ul style="list-style-type: none"> • Shorten staining time • Increase washing/decolorization as appropriate • Use clean tools and recommended volumes
Precipitate or uneven staining	<ul style="list-style-type: none"> • Reagent not mixed well • Contaminated sample or container 	<ul style="list-style-type: none"> • Mix gently before use • Use clean containers and filter only if validated for the assay

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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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 product 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.
- 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.