

For life science research only.
Not for use in diagnostic procedures.



Nonidet P-40 Substitute

 **Version: 09**

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Especially purified for membrane research.

Cat. No. 11 754 599 001 100 ml

Store the product at +2 to +8°C.

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1. General Information


1.1. Contents

Vial / Bottle	Label	Function / Description	Content
1	Nonidet P-40 Substitute	<ul style="list-style-type: none"> ▪ Non-ionic detergent ▪ Gel under nitrogen atmosphere. 	1 bottle, 100 ml

1.2. Storage and Stability

Storage Conditions (Product)

When stored at +2 to +8°C, the product is stable through the expiry date printed on the label.

Vial / Bottle	Label	Storage
1	Nonidet P-40 Substitute	Store at +2 to +8°C.  Keep protected from light.

1.3. Additional Equipment and Reagent required

For preparation of working solution

- Double-distilled water or
- Suitable buffer

1.4. Application

Nonidet P-40 Substitute is used for solubilizing membrane proteins during the isolation of membrane-protein complexes.

2. How to Use this Product

2.1. Before you Begin

General Considerations

Critical micelle concentration (CMC)

Approximately 0.25 mM.

Working Solution

Preparation of working solution

- 1 Place the bottle of Nonidet P-40 Substitute into warm water (maximum of +40°C).

- 2 Pour double-distilled water or a suitable buffer into a graduated cylinder and add Nonidet P-40 Substitute gel until the desired concentration is reached.
 - i Use nitrogen-saturated solutions for best results.*

- 3 Store the solution and the reagent under nitrogen at +2 to +8°C.

2.2. Parameters

Absorbance

$A_{254\text{ nm}}$: 0.29 (0.05% w/v)

Chemical Formula

$C_{33}H_{60}O_{10}$ for $n = 9$

Chemical Name

Structural formula

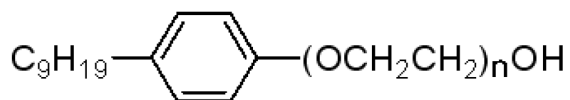


Fig. 1: Chemical structure of Nonidet P-40 Substitute.

Contaminants

Nonidet P-40 Substitute has been purified to reduce levels of unwanted peroxides, carbonyl compounds, and salts.
<2 ppm peroxide content (as H₂O₂).

Molecular Weight

616.83 g/mol for chain length n = 9

Purity

Proven to be free of DNase and RNase, according to the current quality control procedures.

Working Concentration

0.1 to 1%

Use this concentration as a starting point. The optimal working concentration can differ depending on the application.

3. Additional Information on this Product

3.1. Test Principle

Membrane proteins are highly sensitive towards peroxides and carbonyl compounds. While proteins are oxidized by peroxides, the Schiff's base formed during the reaction with carbonyl compounds can influence a protein's function.

- Salts disturb the isolation of membrane-bound proteins.
- Detergents of the polyoxyethylene type may contain, depending on production and storage, contaminations of peroxides, carbonyl compounds, and salts.
- Peroxide formation is strongly enhanced by light.

4. Supplementary Information

4.1. Conventions



To make information consistent and easier to read, the following text conventions and symbols are used in this document to highlight important information:

Text convention and symbols

 *Information Note: Additional information about the current topic or procedure.*

 **Important Note: Information critical to the success of the current procedure or use of the product.**

   etc. Stages in a process that usually occur in the order listed.

   etc. Steps in a procedure that must be performed in the order listed.

* (Asterisk) The Asterisk denotes a product available from Roche Diagnostics.

4.2. Changes to previous version

Layout changes.

Editorial changes.

4. Supplementary Information

4.3. Trademarks

All product names and trademarks are the property of their respective owners.

4.4. License Disclaimer

For patent license limitations for individual products please refer to:

List of biochemical reagent products.

4.5. Regulatory Disclaimer

For life science research only. Not for use in diagnostic procedures.

4.6. Safety Data Sheet

Please follow the instructions in the Safety Data Sheet (SDS).

4.7. Contact and Support

To ask questions, solve problems, suggest enhancements or report new applications, please visit our **Online Technical Support Site.**

To call, write, fax, or email us, visit **sigma-aldrich.com**, and select your home country. Country-specific contact information will be displayed.

