

Phenol Red Solution (0.5%, Sterile)

Cat. No.: P1509625 | Pack size: 100 mL | Storage: Store at 2-8°C

Product Information

Item	Description
Product Name	Phenol Red Solution (0.5%, Sterile)
Cat. No.	P1509625
CAS No.	143-74-8
Molecular Weight	354.38
EC Number	205-609-7
Pack Size	100 mL
Grade & Purity	BioReagent, indicator, sterile, 0.5%
Application	Cell Culture
Storage	Store at 2-8°C
Shipped In	Wet ice
Synonyms	Phenol Red Solution

Overview

Phenol red, also known as phenolsulfonphthalein, is a dark red crystalline powder with a molecular weight of 354.38 and a CAS number of 143-74-8. It is soluble in water, alcohols and acetone, and almost insoluble in ethers and chloroform. When dissolved in alkali hydroxide or alkali carbonate solutions, it turns dark red and remains stable in the air, making it suitable for use as a component in differential media for microbial culture.

The 0.5% Phenol Red Solution is composed of phenol red, deionized water and a small amount of alkali, presenting a dark red color. It can serve as an indicator for solutions such as D-Hanks, Hanks, MEM, RPMI 1640 and DMEM. The color of the solution varies with pH values: it turns purple-red when pH > 7.8; it turns peach-red when pH = 7.6; it turns red when pH = 7.4; it turns orange-red when pH = 7.0; it turns yellow when pH = 6.5; it turns lemon yellow when pH < 6.5. Since the pH of most cell culture solutions is close to 7.4-7.6, the solution usually appears red or peach-red after

adding phenol red solution. A color change from red to yellow indicates a decrease in pH, which is detrimental to the normal growth of cells and reminds experimenters to adjust the pH to an appropriate range. Note: This product is for research use only and not intended for clinical diagnosis or treatment.

Operating Procedures (For Reference Only)

1. Ready to use without further preparation.
2. The concentration of 0.5% phenol red solution is equivalent to 5 mg/mL. Generally, 1-2 mL of the solution can be added to 500 mL of the target medium.
3. The recommended working concentration in solutions like Hanks, MEM, RPMI-1640 and DMEM is 0.01-0.02‰ (i.e., 10-20 mg/L), which means the stock solution should be diluted 250-500 times before use. The dosage can be increased or decreased according to actual needs.

Precautions

1. Ensure aseptic operation during use to avoid microbial contamination.
2. This reagent has been sterilized by filtration through a 0.22 µm membrane. Discard the solution immediately if any suspended matter appears.
3. For your safety and health, wear a lab coat and disposable gloves during operation.

Names and Identifiers

Identifier	Value
Isomeric SMILES	<chem>C1=CC=C2C(=C1)C(OS2(=O)=O)(C3=CC=C(C=C3)O)C4=CC=C(C=C4)O</chem>
Reaxys-RN	326470

Specifications

Item	Description
Synonyms	Phenol Red Solution
Specifications & Purity	BioReagent, indicator, sterile, 0.5%
Stability and Storage	Store at room temperature long term (12 months).
Storage	Store at 2-8°C

Item	Description
Shipped In	Wet ice. This product requires cold chain shipping. Ground and other economy services are not available.

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Limitations & Regulatory Status

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 professional users.

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, disposal, and emergency measures.

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, the current approved Aladdin documentation supersedes this manual.