



Product Specification

cdhfinechemical.com

SCHIFF'S REAGENT FOR DETECTION OF ALDEHYDES

PRODUCT CODE 888040

Intended Use

Schiff's Fuchsin-Sulphite Reagent is recommended for detection of aldehyde and ketones. It can also be used for detection of glycoproteins in acryl amide gel.

Principle And Interpretation

The dye pararosaniline reacts with three molecules sulfur dioxide (provided by adding sodium metabisulfite), forming a colorless reagent. This subsequently reacts with an aldehyde to give an addition product that loses sulfurous acid to form a new colored compound. The ratio of aldehyde to dye in the colored product appears to be approximately 3:1, and permits colorimetric determination of long-chain aldehydes. The reaction apparently does not have straight forward stoichiometry, since formaldehyde gives from three to seven different products depending on the relative amounts of dye, formaldehyde and sulfur dioxide. Schiff-type reagents are used for various biological tissues staining methods, e.g. Feulgen stain and periodic acid- Schiff stain. The mechanism is the same for all aldehydes in the tissues.

PARAMETER

LIMIT

Description	Clear and almost colourless liquid.
Solubility	Miscible with water.
Wt. per ml at 20°C	About 1.01 g
Sensitivity for aldehyde	To pass the test.

Directions

Detection of glycoproteins in PAGE gels

1. Apply 30-100 micrograms of each protein to individual gels and electrophoresis.
2. Remove gels after electrophoresis and insert steel pin into the gel to mark the tracking dye.
3. Fix gels for 30 minutes with 40% ethanol - 7% acetic acid in water. (Methanol may replace ethanol).
4. Wash the gels 4 times, 30 minutes each wash, with fresh fixative solution.
5. Continue the fixation overnight with fresh fixative solution.
6. Next day, wash each gel twice, 30 minutes, with fresh fixative solution.
7. Oxidize the glycoprotein bands by immersing gels in a solution of 1% periodic acid, 3% acetic acid for 60 minutes.
8. Wash the oxidized gels 10 times with water, 10 minutes each wash, to remove traces of periodic acid.
9. Immerse the gels in Schiff's Reagent in the DARK for 60 minutes (Glycoprotein should give visible bands of red purple in about 20 minutes).

Results

Glycoprotein gives red-purple bands.

Note(s): Assay (if applicable) method mentioned.

WARNING

Hazard statements: May cause respiratory irritation. Causes skin irritation. Causes serious eye irritation.

Precautionary statements

Prevention: Avoid breathing dust/fume/gas/mist/vapours/spray. Wash thoroughly after handling. Use only outdoors or in a well-ventilated area. Wear protective gloves/protective clothing/eye protection/face protection.

Response: IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a POISON CENTER or doctor/physician if you feel unwell. If eye irritation persists: Get medical advice/attention.

Disposal: Dissolve the chemical to be disposed, in water and allow it to run to waste, diluting with large quantities of water. The quantities greater than 10g should be dissolved in water and transferred to heavy metal waste drums for collection by specialist disposal company.

Hazard Pictogram(s) :

IMDG Code : --
UN No. : --
IATA :--



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