

Phenol red

CAS Number: 143-74-8

Storage Temperature: Room Temperature

Product Description :

Appearance: Bright red powder

Molecular Formula: C₁₉H₁₄O₅S

Molecular Weight: 354.37

Synonyms: phenolsulfonphthalein, phenolsulfonephthalein

This product is cell culture tested and appropriate for use in cell culture applications.

Phenol red is used as a pH indicator. A solution of phenol red will have a yellow color at a pH of 6.4 or below and a red color at a pH of 8.2 and above.

Phenol red is used widely in culture media to identify changes from neutral to acidic pH values. It is typically used in cell culture media at 11 mg/L. Phenol red in tissue culture media can act as a weak estrogen, especially with human breast cancer cells. Lipophilic impurities, not the phenol red dye itself, account for the estrogenic activity. 95-99% of these impurities can be removed from the sodium salt of phenol red with a reduction in estrogen-like activity.

Storage/Stability :

Phenol red added as a component to tissue culture media can be autoclaved.

Preparation Instructions:

Phenol red is slightly soluble in water (3 mg/ml) and in alcohol (4 mg/ml). Phenol red is readily soluble in aqueous alkali hydroxides or carbonates with formation of a red colored solution. Phenol red sodium salt is soluble in water (25 mg/ml). This product is soluble (1 mg/ml) in 1 N sodium hydroxide.

Procedure :

An indicator solution can be formed by dissolving 0.1 g of phenol red in 14.20 ml of 0.02 N NaOH and diluting to 250 ml with deionized water.

Phenol red can be used to measure hydrogen peroxide in supernatants from cultured macrophages in multiwell plates. The assay used 2 units of peroxidase/100 ml volume with 0.5 mM phenol red, pH 7 at 37°C. The reaction was stopped and color developed by adding 10 ml of 1 N NaOH and reading the absorption of the oxidized phenol red at 600-610 nm. Calculations were accomplished by comparison to a standard curve of hydrogen peroxide.

Precautions and Disclaimer :

For Laboratory Use Only. Not for drug, household or other uses.