

Trypan blue

Cell Culture Tested

Product Code: TC193

Product Description :

Molecular weight: 960.81

Molecular formula: $C_{34}H_{24}N_6O_{14}S_4Na_4$

CAS No.: 72-57-1

Synonyms: Direct blue 14, Niagara blue

Trypan blue is an azo dye derived from toluidine. It is extensively used for assessment of viability of cells. It works on the principle of cell permeability dependent dye exclusion. Normal cells or those that are in the early phase of apoptosis have intact plasma membranes and thus exclude the dye whereas, dead cells or those that are in late phase of apoptosis with lysed cell membranes are permeable to the dye. Thus, viable cells appear colourless and non-viable cells appear blue. Both adherent as well as suspension cell lines can be easily stained with trypan blue and counted on hemocytometer under a light microscope.

Usefulness of trypan blue assay for cell viability assessment is somewhat limited to some cell types because, uptake of trypan blue is time sensitive and the dye may be taken up by viable cells during prolonged incubation periods. Additionally, trypan blue has high affinity for serum proteins and may produce a high background staining.

For cell culture applications, trypan blue solution is generally used at 0.4 % to 0.5% concentration.

Directions :

Preparation instructions:

Trypan blue is soluble in water.

For cell culture applications, trypan blue solutions are prepared in Dulbecco's Phosphate Buffered Saline at concentration of 0.4% to 0.5%. Constant stirring may be required for complete dissolution of powder. The solutions are sterilized by filtering through a sterile membrane filter with porosity of 0.22 microns or less.

Quality Control:

Appearance

Dark brown to black powder

Solubility

Clear dark blue solution at 1 gm in 100ml water

Loss on drying

NMT 10%

Cell Culture Test

Passes

Storage and Shelf Life:

Store trypan blue powder at 15-30°C away from bright light.

Shelf life is 48 months.

Use before expiry date given on the product label.

Disclaimer :

User must ensure suitability of the product(s) in their application prior to use. Products conform solely to the information contained in this and other related HiMedia™ Publications. The information contained in this publication is based on our research and development work and is to the best of our knowledge true and accurate. HiMedia™ Laboratories Pvt Ltd reserves the right to make changes to specifications and information related to the products at any time. Products are not intended for human or animal diagnostic or therapeutic use but for laboratory, research or further manufacturing use only, unless otherwise specified. Statements contained herein should not be considered as a warranty of any kind, expressed or implied, and no liability is accepted for infringement of any patents.