

Trypan Blue

CAT N° : P0935

CAS N° : 72-57-1

Molecular weight : 960.8 g/mol

Molecular formula : $C_{34}H_{24}N_6Na_4O_{14}S_4$

Synonym : Direct Blue 14

Storage conditions : Room temperature

Solubility and solution stability :

This product is soluble in water (10 mg/ml), yielding a very dark blue solution. It is also soluble in normal saline or balanced salt solutions.

Recommended use :

Cells should be in suspension in buffered saline before counting.

Since Trypan Blue has a higher affinity for serum proteins than for cellular proteins, suspending the cells in medium containing serum will generate a dark background.

Avoid the exposure of cells to Trypan Blue for a period longer than 30 minutes. In this case, it is possible to observe an increase in the dead cell population (Trypan Blue positive) due to the Trypan toxicity.

- Respect storage conditions of the product
- Do not use the product after its expiry date
- Store the product in a dry area
- Wear clothes adapted to the manipulation of the product to avoid contamination (e.g. : gloves, mask, hygiene cap, overall...)
- Protect the product from any form of humidity
- Use, in one time, after opening, the entire quantity of product of the container, without making a concentrated solution (to avoid the formation of precipitates). If it is not possible, close the container immediately after sampling the quantity of powder required.

The product is intended to be used in vitro, in laboratory only. Do not use it in therapy, human or veterinary applications.

Application :

Trypan Blue is a stain used to distinguish viable from nonviable cells. Nonviable cells will absorb the dye and appear blue, while viable cells will exclude the dye.

The reactivity of Trypan Blue is based on the fact that the chromophore is negatively charged and does not interact with the cell unless the membrane is damaged. Therefore, all the cells which exclude the dye are viable.

Uses instructions :

1. Place 0.5 ml of a suitable cell suspension (dilute cells in complete medium without serum to an approximate concentration of 1×10^5 to 2×10^5 cells per ml) in a screw cap test tube.
2. Add 0.1 ml of 0.5% Trypan Blue Stain. Mix thoroughly.
3. Allow to stand 5 min at 15 to 30°C (room temperature).
4. Fill a hemocytometer as for cell counting.
5. Under a microscope, observe if non-viable are stained and viable cells excluded the stain.