Trypan Blue

Reagent for counting viable mammalian cells

Catalog # 07050 100 mL

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Product Description

Trypan Blue is recommended for counting viable mammalian cells. Viable cell counts should be performed when a decrease in cell viability may be expected, for example, when working with cryopreserved cells or cells manipulated ex vivo.

Properties

Storage: Store at 15 - 25°C.

Shelf Life: Stable until expiry date (EXP) on label.

Contains:
- Trypan blue (0.4%)
- Phosphate-buffered saline

Please refer to the Safety Data Sheet (SDS) for hazard information.

Handling / Directions For Use

1. Dilute cells 1:1 in Trypan Blue.
   NOTE: If the cell count appears high, the cells may first be diluted with a balanced salt solution such as D-PBS (Without Ca++ and Mg++; Catalog #37350) before Trypan Blue is added.
2. Allow the resulting solution to sit for 5 - 15 minutes. Only non-viable cells will be stained with the Trypan Blue dye; viable cells will remain unstained.
   NOTE: If cells are incubated for > 15 minutes in Trypan Blue, toxicity effects may occur and the viable cell count will be inaccurate.
3. Prepare a hemocytometer by first cleaning the chamber surface with alcohol. Wipe dry.
4. Position the coverslip over the chambers. Carefully transfer sufficient volume of the Trypan Blue/cell solution to each chamber using a capillary tube or pipetman. Do not over- or underfill.
5. Count the cells in one chamber. Keep a separate count of viable (unstained) and non-viable (blue) cells. Count all cells in each 1 mm square of each chamber. If cells are on the border outlining each square, count only the cells on the top and left border of the square.
   NOTE: Each square has a total volume of 0.1 mm^3 (or 10^-4 cm^3, which is approximately equivalent to 10^-4 mL).
6. Determine the cell count (cells per mL) as follows:
   average cell count per square x dilution factor x 10^4 = cell count per mL
7. Determine the cell viability (%) as follows:
   (cell count [viable]) / (total cell count [viable + non-viable]) = cell viability (%)