Trypan Blue Cell Viability Indicator

Ordering info

TBB0402, Trypan Blue Cell Viability Indicator, 100 mL

TBB0403, Trypan Blue Cell Viability Indicator, 5x1.5 mL

Description

Trypan Blue Cell Viability Indicator is a highly used solution to test cell viability routinely. This large negatively charged molecule is excluded by cells which have intact cell membranes, while it can penetrate cells with a damaged membrane. The assay, based on the dye exclusion, allows to differentiate living cells (bright) from dead cells (blue) under the microscope.

Storage

Store at 25°C.

Quality Control

- Functionally tested.

Features

- Sterile by filtration.
- pH=7.4 ± 0.05.
- Toxic, known carcinogen.
- Time of effectiveness since cell death (50 minutes).

Material required (not included)

- DBPS or PBS buffer.
- Hemocytometer chamber.

Applications

- Cell viability determination.

Also available:

Resazurin Viability Assay Kit (TBK0506, TBK0507)

DPBS 1x (TBB0405, TBB0406)

PROTOCOL

1. Centrifuge the cell suspension at 350 g, 5 minutes. Discard the supernatant.
2. Resuspend the pellet in **1 mL media without serum** or **DPBS/ PBS solution.**

   A cell concentration between 10^6 -2•10^6 cells / mL is optimal in order to have between 50-100 cells in the hemocytometer grid.
3. Add **100 µL Trypan Blue Cell Viability Indicator** to **100 µL cell suspension**.

   For accurate results, check that you have single cells suspension with <10% cellular aggregates.
4. Incubate 1-2 minutes at room temperature.

   Avoid incubation times of more than 30 minutes. Trypan Blue is toxic.
5. Fill hemocytometer chamber carefully.
6. Count the unstained cells (viable cells) and blue stained cells (nonviable cells) under microscope.
7. Determine cell viability,

$$\text{Cell Viability (\%)} = \frac{\text{Total viable cells}}{\text{Total cells}} \times 100$$

Cells with viability lower than 70% may not be optimal to be measure with Trypan Blue Cell Viability Indicator[1,2].

[1] Altman S.A., RandersL, Rao G (1993) Comparison of Trypan Blue Dye Exclusion and Fluorometric Assays for Mammalian Cell Viability Determinations. Biotechnology Progress 9: 671-674.

[2] Louis K.S., Siegel A.C (2011) Cell Viability Analysis Using Trypan Blue: Manual and Automated Methods, in Mammalian Cell Viability: Methods and Protocols, M.J. Stoddart, Editor Springer, 7-12.