



Need a safer alternative to Trypan Blue? Try [SafeCount™](#), a non-toxic alternative for cell counting applications that functions identically to Trypan Blue.



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Invitrogen™

Colorimetric Cell Viability Stains

SafeCount Cell Viability Stain represents a significant advancement in cell viability assessment, offering a non-toxic alternative to traditional Trypan Blue staining for cell counting applications. As a membrane integrity dye, SafeCount stain functions identically to Trypan Blue as a membrane integrity exclusion dye while minimizing the associated safety and handling concerns that have long plagued laboratory workflows.

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Catalog Number	Type
T10282	Trypan Blue Stain

Catalog number T10282 

Price (MDL)

-

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Type:

Trypan Blue Stain

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SafeCount stain has been specifically validated for use with Countess 3 and Countess 3FL automated cell counters in conjunction with Countess chamber slides, ensuring a smooth integration into existing automated counting workflows.

Features of SafeCount Cell Viability Stain include:

- **Non-carcinogenic formulation**—provides a safer alternative for laboratory personnel while maintaining equivalent functionality for cell viability assessment
- **Enhanced solution stability**—does not precipitate during storage or use, unlike Trypan Blue which is prone to precipitation formation
- **Equivalent staining mechanism**—maintains the same exclusion dye principle for distinguishing viable from non-viable cells based on membrane integrity

Non-toxic safety profile minimizes hazardous material handling concerns

SafeCount Cell Viability Stain represents a significant advancement in cell viability assessment by addressing the inherent safety limitations of traditional Trypan Blue staining. Unlike Trypan Blue, which is known to be toxic to both people and cells and requires hazard label warnings, SafeCount stain is formulated to be non-toxic and carries no hazard label warnings. This fundamental difference in toxicity profile allows for simpler disposal procedures and, more importantly, provides non-toxic conditions for laboratory personnel. Minimizing hazardous material handling requirements reduces regulatory compliance burdens and enhances overall laboratory safety protocols.

Enhanced stability prevents precipitation-related counting errors

The formulation of SafeCount stain addresses a critical limitation observed with Trypan Blue, which is prone to precipitation over time or under certain storage conditions. These precipitates can form aggregates that may be erroneously counted as cells during analysis, leading to inaccurate measurements of both cell count and viability assessments. SafeCount stain's superior stability characteristics reduce this source of measurement error, ensuring more reliable and reproducible results throughout the product's shelf life.

SafeCount dye entry, causing these non-viable cells to appear dark. This membrane integrity exclusion method is identical to Trypan Blue, enabling SafeCount stain to serve as a direct replacement without requiring protocol modifications.

Streamlined application protocol optimizes workflow efficiency

The use of SafeCount stain follows a simplified two-step protocol designed for compatibility with automated counting systems. The procedure requires mixing 10 μ L of SafeCount dye with 10 μ L of cell sample, followed by analysis using the Countess 3 or 3FL automated cell counter. This straightforward approach maintains the ease of use expected from cell viability assays while enabling enhanced safety and stability benefits inherent to the SafeCount formulation.

For Research Use Only.

Specifications	
Color	Blue
Detection Method	Colorimetric
For Use With (Equipment)	Countess Automated Cell Counter
Label or Dye	Trypan Blue
Quantity	2 x 1 mL
Shipping Condition	Room Temperature
Type	Trypan Blue Stain
Unit Size	2 x 1 mL

Contents & Storage
Trypan blue stain, 0.4% solution, 2 x 1 mL vials
Store at room temperature.



Have questions about this product? Ask our AI assisted search.

Can trypan blue solution be used to differentiate between apoptotic and necrotic cells?

How much Trypan Blue solution should I add to my cell suspension before counting?

Do you have a protocol for cell counting via trypan blue exclusion?

How does trypan blue solution stain viable cells?

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Frequently asked questions (FAQs)

- ▼
 Why am I getting a much higher bead count on the Countess 3 Standard Slide (Cat. No. A51876)?
- ▼
 Is there a limit to the number of times I can warm up Trypan Blue Stain (0.4%) for use with the Countess Automated Cell Counter (Cat. No. T10282)? What is the importance of warming up in aliquots of 1 mL?
- ▼
 What is the shelf life of Trypan Blue Stain (0.4%) for use with the Countess Automated Cell Counter?
- ▼
 How long can cells be exposed to trypan blue before all cells are stained with the dye?
- ▼
 What causes trypan blue to form a precipitate?


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Certificates

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Safety Data Sheets



Product Information

Manuals



-  [Product Information Sheet: SafeCount](#)
-  [User Guide: Countess II Automated Cell Counter](#)
-  [User Guide: Countess II FL Automated Cell Counter](#)
-  [Quick Ref: Countess II Automated Cell Counter](#)

Scientific Resources

Application Notes



-  [Application Note: Panel Design and Analysis of Natural Killer Cell Populations Using Spectral Unmixing on the Attune Xenith Flow Cytometer](#)


Reference Materials



-  [Green Fact Sheet: SafeCount Cell Viability Stain](#)
-

Citations & References (1)

Citations & References

[Role of hepatic transporters in the disposition and hepatotoxicity of a HER2 tyrosine kinase inhibitor CP-724,714.](#) 

Authors: Feng B, Xu JJ, Bi YA, Mireles R, Davidson R, Duignan DB, Campbell S, Kostrubsky VE, Dunn MC, Smith AR, Wang HF,

Journal: Toxicol Sci

PubMed ID: 19223659

Abstract

'CP-724,714, a potent and selective orally active HER2 tyrosine kinase inhibitor, was discontinued from clinical development due to unexpected hepatotoxicity in cancer patients. Based on the clinical manifestation of the toxicity, CP-724,714 likely exerted its hepatotoxicity via both hepatocellular injury and hepatobiliary cholestatic mechanisms. The direct cytotoxic effect, hepatobiliary disposition ... [More](#)