
	Document ID:	TDS-VSN-001-100ML	Version:	001
	Date of Issue:	10-AUG-2023	Approved by:	Dr. Iman Kamranfar
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	Title:	TECHNICAL DATASHEET		

Versene Solution

Filtration, Treatment	0.1 µm sterile filtered, Non-Animal Origin
Product Code	VSN-001-100ML
Shelf Life	24 months from DOM
Storage Temperature	2-8°C
Shipping Temperature	Ambient

QC Specifications

Physical and Chemical Analysis	Method	Specifications	Units
Appearance	Visual	Clear, colorless solution	n/a
pH at RT	Electronic pH Meter	7.0 – 7.4	n/a
Osmolality	Osmometer	280-310	mOsm/kg
Endotoxin	LAL Kinetic	< 1.0 EU/mL	EU/ml
Sterility			
Aerobic Bacteria	Internally Validated	Not detected	n/a
Anaerobic Bacteria	Internally Validated	Not detected	n/a
Fungi (Yeast & Mold)	Internally Validated	Not detected	n/a
Mycoplasma	qPCR	Not detected	n/a
Cell Culture and Virology			
Viability after detachment (L929)	Trypan Blue Exclusion	≥75%	n/a

Formulation

Components	CAS number	Concentration (mg/L)
EDTA Disodium Salt Dihydrate	6381-92-6	292.00
Sodium Phosphate Dibasic Anhydrous	7558-79-4	1150.00
Potassium Chloride	7447-40-7	193.00
Potassium Phosphate Monobasic Anhydrous	7778-77-0	190.00
Sodium Chloride	7647-14-5	7995.00
D-Glucose Anhydrous	50-99-7	198.00

GENERAL INFORMATION

Versene, which contains EDTA (ethylenediaminetetraacetic acid), is used in cell culture primarily as a gentle, non-enzymatic cell dissociation reagent. The Versene is non-Animal-origin solution used instead of Trypsin. It is a chelating agent that detaches the cells by the below processes:



- **Chelation of Calcium Ions:** EDTA in Versene binds to calcium ions in the culture medium. Calcium is essential for cell adhesion molecules, such as cadherins, which help cells stick to each other and to the culture vessel.
- **Disruption of Cell Adhesion:** By chelating calcium, Versene disrupts these cell adhesion molecules, causing cells to detach from the culture surface and from each other.
- **Gentle Cell Dissociation:** Unlike enzymatic methods (e.g., trypsin), Versene provides a gentler way to dissociate cells, reducing cell damage and promoting higher cell viability.

This makes Versene particularly useful for routine passaging of sensitive cell types, such as human pluripotent stem cells (hPSCs), where maintaining cell viability and integrity is crucial.

INSTRUCTION FOR USE

To act, the Versene must be in a medium free of calcium and magnesium ions. It is generally used in PBS amended by deleting the calcium chloride and magnesium chloride.

- 1) Take 75 ml of Versene and complete to 100 ml with PBS. Autoclave at 120°C for 20 minutes.
- 2) Prepare a solution of CaCl₂ at 3.5 g/l and autoclave at 120°C for 20 minutes.

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- 3) Discard the culture medium from the vial to transplant.
- 4) Rinse quickly but carefully the bottle with a little Versene-PBS, to remove calcium and magnesium ions remaining.
- 5) Add the Versene-PBS at 5 ml per 250 ml bottle.
- 6) Turn the bottle flat in the oven for 15 minutes.
- 7) After 15 minutes, take the bottle and add the CaCl₂ solution (0.2 ml per 250 ml) to neutralize the Versene.
- 8) Add the fresh medium directly under the same conditions than with Trypsin.
- 9) Shake, cells disperse.
- 10) Divide and put new bottles in the oven

Product Use: This product is not intended for human or animal diagnostic or therapeutic use.
This product is animal component free.