

CTS™ Versene Solution

Catalog Number A4239101

Pub. No. MAN0018277 Rev. 1.0



WARNING! Read the Safety Data Sheets (SDSs) and follow the handling instructions. Wear appropriate protective eyewear, clothing, and gloves. Safety Data Sheets (SDSs) are available from [thermofisher.com/support](https://www.thermofisher.com/support).

Product description

Gibco™ CTS™ Versene Solution is an animal origin-free, chemically defined, EDTA solution for use as a gentle, non-enzymatic dissociation reagent. CTS™ Versene Solution can be used to dissociate PSCs cultured in CTS™ Essential 8™ Medium on CTS™ Vitronectin.

Contents and storage

Contents	Amount	Storage	Shelf Life ^[1]
CTS™ Versene Solution ^[2]	100 mL	Store at 2–8°C. Protect from light	18 months

^[1] Shelf Life duration is determined from Date of Manufacture.

^[2] CTS™ Versene Solution (0.48 mM) is formulated as 0.2 g EDTA(Na₄) per liter of Phosphate Buffered Saline (PBS).

Passage PSCs with CTS™ Versene Solution

See “Recommended plating volumes” for recommended volumes.

1. Pre-warm complete CTS™ Essential 8™ Medium, CTS™ Vitronectin (VTN-N)-coated culture vessels, and the CTS™ Versene Solution to room temperature.
2. Aspirate the spent medium from the vessel containing PSCs and rinse the vessel with CTS™ DPBS without calcium chloride, without magnesium chloride.
3. Add CTS™ Versene Solution to the vessel containing PSCs. Swirl the vessel to coat the entire cell surface.
4. Incubate the vessel at room temperature for 5 to 8 minutes or at 37°C for 4 to 5 minutes.
Note: When the cells start to separate and round up, and the colonies appear to have holes when viewed under a microscope, they are ready to be removed from the vessel.
5. Aspirate the CTS™ Versene Solution, and add pre-warmed complete CTS™ Essential 8™ Medium to the vessel.
6. Remove the cells from the well(s) by gently squirting medium over the surface of the well a few times and pipetting the colonies up with a serological pipette.

Note: Avoid creating bubbles.

7. Collect cells in a 15-mL conical tube.

There may be obvious patches of cells that were not dislodged and left behind. Do not scrape the cells from the dish in an attempt to recover them. Two to three triturations should be sufficient. Do not pipet vigorously or the colonies will break apart.

Note: Depending upon the cell line, work with no more than 1 to 3 wells at a time, and work quickly to remove cells after adding CTS™ Essential 8™ Medium to the well(s), which quickly neutralizes the initial effect of the CTS™ Versene Solution. Some lines re-adhere very rapidly after medium addition, and must be removed 1 well at a time. Others are slower to re-attach, and may be removed 3 wells at a time.

8. Add an appropriate volume of pre-warmed complete CTS™ Essential 8™ Medium to each well of a CTS™ VTN-N-coated 6-well plate so that each well contains 2 mL of medium after the cell suspension has been added.
9. Mix the cell suspensions from step 7 by gentle inversion a few times and transfer the appropriate volume of cell suspension into each well containing pre-warmed complete CTS™ Essential 8™ Medium.

Note: It is normal to see cell debris and small colonies after passage.

Optional: To improve efficiency of cell survival 24 hours post passaging, chemically defined, animal-origin free, CTS™ RevitaCell™ Supplement (Cat. No. A4238401) may be used at 1X final concentration (i.e., 20 µL per 2 mL of cell suspension) for the first 24 hours post-passaging.

10. Move the plate in several quick side-to-side motions to disperse the cells across the surface of the wells and place the plate gently into the 37°C, 5% CO₂ incubator.

11. The next day, replace the spent medium with fresh complete CTS™ Essential 8™ Medium.

Replace the medium daily thereafter.

Recommended plating volumes

Table 1 Reagent volumes in (mL per well or per dish)

Culture vessel (approx. surface area)	CTS™ DPBS	CTS™ Versene Solution	Complete medium
6-well (10 cm ²)	2 mL	1 mL	2 mL
12-well (4 cm ²)	1 mL	0.4 mL	1 mL
24-well (2 cm ²)	0.5 mL	0.2 mL	0.5 mL
35-mm (10 cm ²)	2 mL	1 mL	2 mL
60-mm (20 cm ²)	4 mL	2 mL	4 mL
100-mm (60 cm ²)	12 mL	6 mL	12 mL
T-25 (25 cm ²)	5 mL	3 mL	5 mL
T-75 (75 cm ²)	15 mL	8 mL	15 mL

Related products

Unless otherwise indicated, all materials are available through [thermofisher.com](https://www.thermofisher.com).

Item	Source
CTS™ DPBS without calcium chloride, without magnesium chloride	A12856
CTS™ Essential 8™ Medium	A2656101
CTS™ Vitronectin (VTN-N) Recombinant Human Protein, Truncated	A27940
CTS™ RevitaCell™ Supplement	A4238401

Limited product warranty

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