ATCC

Product Sheet

Non-Enzymatic Cell Dissociation Solution (ATCC® 30-2103™)

Please read this FIRST

Storage Temp.
When stored at 2°C to 8°C, the product is stable until the expiration date on the label.

Biosafety Level
1

Description

Product Description:
Trypsin is the most commonly used enzyme for harvesting cells in culture. A non-enzymatic approach is needed when non-protein and animal-component free materials are required. ATCC Non-Enzymatic Cell Dissociation Solution is a sterile, phenol-red free solution composed of a proprietary mixture of chelators representing an optimized alternative to protein-digesting enzymes. This product is totally free of animal-derived components.
Volume: 100 mL

Directions for Use

General Subculture Procedure using Non-Enzymatic Cell Dissociation Solution*
Each type of cell or cell line responds to Non-Enzymatic Cell Dissociation Solution in a unique manner. For optimum results, frequently observe the cells during the dissociation process to prevent damage. For cell-specific information, please refer to the product sheet supplied with the cells or cell line.

Note: The use of Non-Enzymatic Cell Dissociation Solution is not recommended for highly adherent cell types, such as keratinocytes.

1. Bring D-PBS to room temperature before use. Warm the Non-Enzymatic Cell Dissociation Solution and complete growth medium to 37°C prior to use with the cells.
2. For each vessel, carefully aspirate the spent media without disturbing the monolayer. The type of rinsing agent to use is dependent on the composition of the complete growth medium; proceed with one of the following options.
   - Option 1: If the cell culture medium contains serum, each flask should be rinsed with D-PBS twice prior to adding the Non-Enzymatic Cell Dissociation Solution.
   - Option 2: If working with serum-free medium, each flask should be rinsed twice with 1 mM EDTA in D-PBS prior to adding the Non-Enzymatic Cell Dissociation Solution.
3. Using 1.5 mL for every 25 cm^2, add the appropriate volume of Non-Enzymatic Cell Dissociation Solution to each vessel (e.g., each T-25 vessel would be dissociated with 1.5 mL Non-Enzymatic Cell Dissociation Solution).
4. Gently rock each flask to ensure complete coverage of the Non-Enzymatic Cell Dissociation Solution over the cells.
5. Place the flask(s) in a 37°C, 5% CO_2, incubator.
6. Observe the cells every 5 to 10 minutes under the microscope. When the cells pull away from each other and round up, remove the flask from the microscope and gently tap the culture vessel from several sides to promote detachment of the cells from the flask. (Some cell types may require more vigorous tapping.)
7. When the majority of cells appear to have detached, disperse the cells into suspension by repeated pipetting.
8. Transfer the dissociated cells to a sterile centrifuge tube and set aside while processing any remaining cells in the culture vessel.
9. Add 3 to 5 mL D-PBS to the tissue culture vessel to collect any additional cells that might have been left behind.
10. Transfer the cells and D-PBS to the centrifuge tube containing the Non-Enzymatic Cell Dissociation Solution-dissociated cells.
11. Repeat steps 8 and 9 as needed until all cells have been collected from all vessels.
12. Centrifuge the cells at 125 x g for 5 to 10 minutes.
    a. Do not over-centrifuge cells as this may cause cell damage.
    b. After centrifugation, the cells should form a clean loose pellet.
13. Aspirate neutralized dissociation solution and resuspend the cell pellet in 2 to 8 mL fresh, pre-warmed, complete growth medium.
14. Count the cells and seed new culture vessels at the recommended density.
15. Place newly seeded vessels in a 37°C, 5% CO_2, incubator, and incubate for at least 24 to 48 hours before processing the cells further.

ATCC Warranty

The viability of ATCC® products is warranted for 30 days from the date of shipment, and is valid only if the product is stored and cultured according to the information included on this product information sheet. ATCC lists the media formulation that has been found to be effective for this strain. While other, unspecified media may also produce satisfactory results, a change in media or the absence of an additive from the ATCC recommended media may affect recovery, growth and/or function of this strain. If an alternative medium formulation is used, the ATCC warranty for viability is no longer valid.

American Type Culture Collection
PO Box 1549
Manassas, VA 20108 USA
www.atcc.org

800.638.6597 or 703.365.2700
Fax: 703.365.2750
Email: Tech@atcc.org

Or contact your local distributor

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Disclaimers

This product is intended for laboratory research purposes only. It is not intended for use in humans.

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Please see the enclosed Material Transfer Agreement (MTA) for further details regarding the use of this product. The MTA is also available on our Web site at www.atcc.org

Additional information on this culture is available on the ATCC web site at www.atcc.org.

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American Type Culture Collection
PO Box 1549
Manassas, VA 20108 USA
www.atcc.org

800.638.6597 or 703.365.2700
Fax: 703.365.2750
Email: Tech@atcc.org

Or contact your local distributor