BeadReady™

Preservation of Cells Suspended in Gel Beads

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1 Components

1.1 Kit contents

Product Code	Components	Units	Unit Volume
BR-MNS-001	Component A (2x)	1 tube	0.4 mL
	Component B	1 tube	4 mL
	Dissolution Buffer	1 tube	6 mL
BR-MNS-003	Component A (2x)	1 tube	1 mL
	Component B	3 tubes	4 mL
	Dissolution Buffer	3 tubes	6 mL
BR-MNS-006	Component A (2x)	1 tube	2 mL
	Component B	6 tubes	4 mL
	Dissolution Buffer	6 tubes	6 mL
BR-MNS-012	Component A (2x)	1 tube	4 mL
	Component B	12 tubes	4 mL
	Dissolution Buffer	12 tubes	6 mL
BR-MNS-024	Component A (2x)	1 tube	8 mL
	Component B	24 tubes	4 mL
	Dissolution Buffer	24 tubes	6 mL

NOTE: Remove components from 2-8°C storage for at least 20 minutes before use

1.2 Components to be supplied by the user

Sterile microcentrifuge tubes or other suitable tubes

21 G Needle

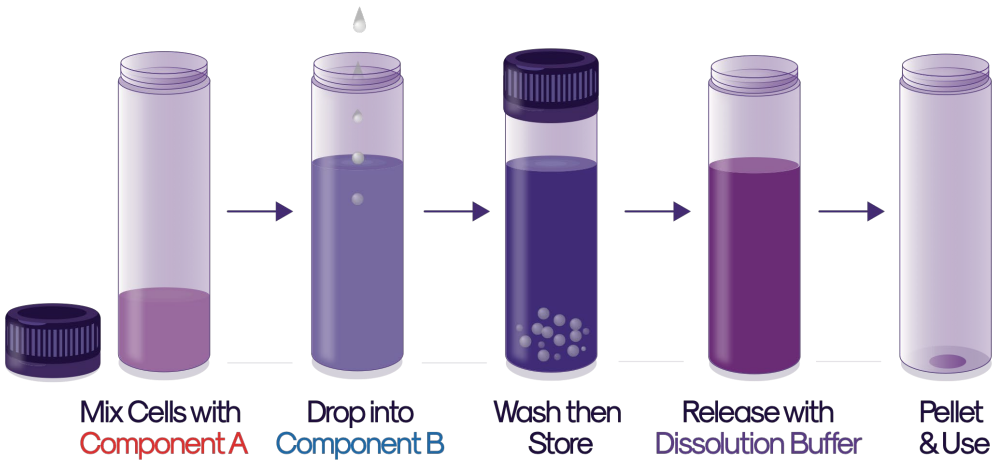
1 mL Syringe

1000 µL and 200 µL micropipettes and tips

Cell culture medium

2 Step-by-Step guide

2.1 Overview



2.2 Gelation

1. Ensure that all components are allowed to equilibrate to room temperature before use and conduct all steps in a laminar flow hood at room temperature.
2. Resuspend cells in 0.275 mL culture medium per sample at a density 2x that of the final desired encapsulated cell density.[1]
3. Add 0.275 mL of Component A to 0.275 mL of cell suspension per sample in a suitable sterile tube.
4. Mix thoroughly but slowly using a micropipette 5-10 times, or until cells are fully suspended.
5. Draw up the solution into a 1 mL syringe.

   N.B. Before drawing solution, ensure there is an air-space to allow full purge of the solution volume when dispensed.
6. Slowly drop 0.5 mL of the cell/gel solution through a 21G needle into Component B at a height of approximately 1-2 cm above the surface of the liquid to form beads.[2]
7. Allow beads to stabilize at room temperature for 8 minutes in Component B.

8. Remove Component B using a 1000 µL pipette or syringe with needle, guiding the tip of the pipette or syringe needle down the inside of the tube to avoid disturbing gelled beads.
9. Wash beads with 1 mL culture medium for **2 minutes**.
10. Remove washing medium before replacing with 5.5 mL culture medium for storage.
11. Tightly seal the tube and store at an appropriate temperature (either 2-8°C in a refrigerator, or between 10 and 20°C in Controlled Room Temperature (CRT) Packaging or in a temperature-controlled room).[3]

[1]Recommended encapsulated cell density is up to 1 x 10^7 cells per sample.

[2]Use the collection tube provided containing Component B for encapsulation, storage and release.

[3]Atelerix can recommend an appropriate storage temperature for your particular cell type. Please contact technical@atelerix.co.uk

2.3 Release

1. Ensure that all components are allowed to equilibrate to room temperature before use and conduct all steps in a laminar flow hood at room temperature.
2. Remove culture medium from beads and add 5 mL of Dissolution Buffer.
3. Allow beads to dissolve for up to **10 minutes** with gentle agitation, ensuring by eye that all beads are fully dissolved.
4. Either use full cell suspension directly or sediment cells by centrifugation at 350RCF for **5 minutes**, remove supernatant, and re-suspend cells in excipient of choice.

2.4 Conditioning Chronos Advance CRT container

1. Remove the six orange 'Cool Phase' PCM panels from the CRT container and place them un-stacked at a temperature of approximately 2-8°C for at least 24 hours.
2. Reassemble the container placing the bottom and side PCM panels in place, ensuring that the side with the writing is facing outwards (as shown in the diagram below).
3. Load the final PCM panel on top of the payload box ensuring that the side with the writing is facing outwards.
4. Place the polystyrene lid onto the system ensuring it is tightly sealed.
5. Allow 12 hours or overnight for the temperature of the container to equilibrate by placing at a temperature of approximately 20°C.
6. Remove lid, top PCM panel and silver central payload box before placing samples in the box.
7. Carefully return the payload box to the centre of the container and reassemble as per steps 3-4.
8. Close the outer carton.

Please consult Chronos Advance Pack-Out Instructions for a video detailing the assembly instructions.

3 Statements

3.1 Kit storage and stability

This kit is stable at 4°C for 6 months. Bring components up to room temperature before use.

Atelerix does not recommend using the kit after the expiry date stated on the packaging.

3.2 Cellular material

Cellular monolayers, spheroids/organoids and tissue biopsy's can be used. Please ensure that cell cultures are free of fungal and bacteriological contamination before proceeding.

3.3 Trademarks

BeadReady ™ is a trademark of Atelerix Ltd.