

Biomedical



Improving
efficiency
in cell culture
and upscaling

Dissolvable
microcarriers

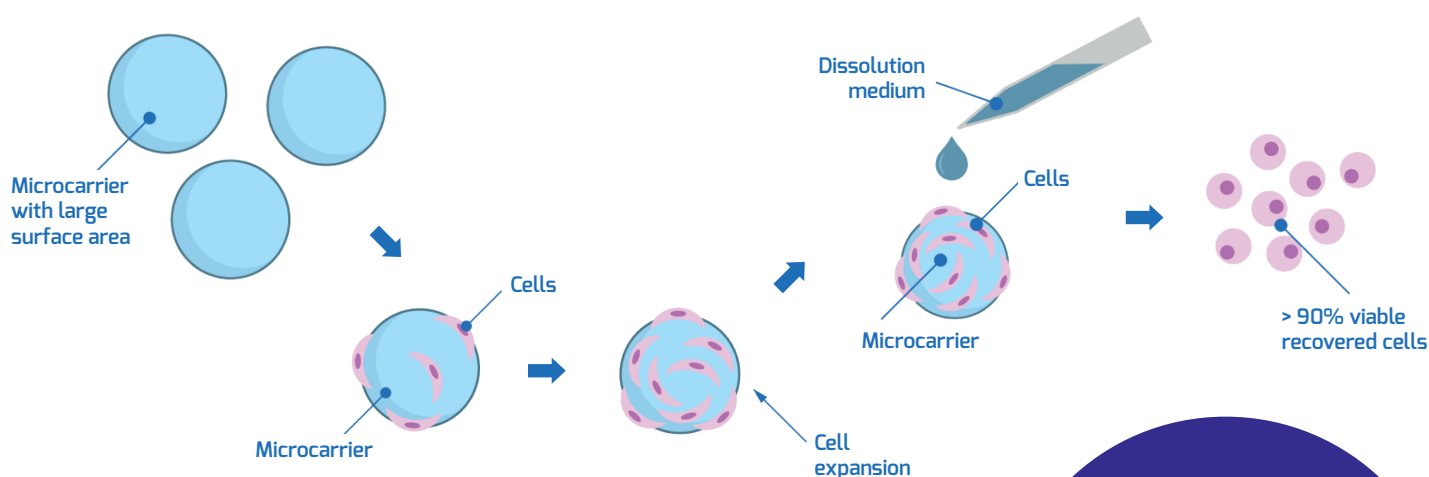
rousselot.com

Rousselot |  **IamFluidics**
| by Darling Ingredients revolutionize microparticles

As demand for cell culturing systems continues to rise — driven by applications in personalized medicine, cell therapies, biologics, and cultivated meat — there is a growing need for efficient and scalable cell culture systems.

The new dissolvable microcarrier makes scalable cell culturing efficient

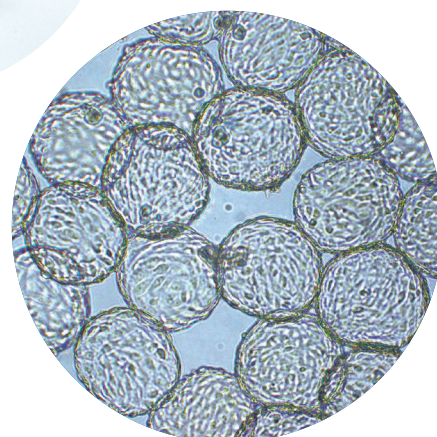
The dissolvable microcarrier (DMC), developed through the collaboration between Rousselot® and lamFluidics®, unlocks the full potential of cell culturing in bioreactors. By providing an unmatched efficiency in cell recovery paired with seamless integration into standard cell culture processes, our dissolvable microcarrier will drastically improve process efficiency.



Features

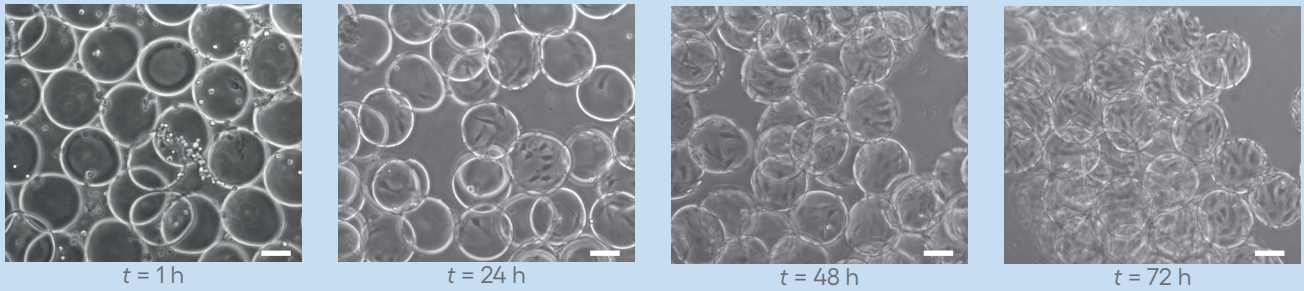
- + **Dissolvable** within 15 minutes
- + **High harvesting yield** (> 90%)
- + **Transparent for easy visualization** of cells during culture
- + **Collagen (denatured) coating** – purity controlled and excellent batch-to-batch consistency
- + **Full traceability** and documentation (virus inactivation) available
- + **Easy integration into standard cell culture procedures**
- + **Uniform size & shape** (CV < 10%) for consistent sedimentation & seeding
- + **Physiological soft cell-material interface**
- + **100% free of microplastics**
- + **Compatible with widely used adherent cell types** (e.g., Mesenchymal stromal cells, iPSC/ESC-derived cells, and producer cell lines like VERO, CHO & HEK)

Harnessing the biocompatibility of naturally derived collagen while safeguarding against animal-derived pathogen transmission



Enhanced cell attachment and proliferation

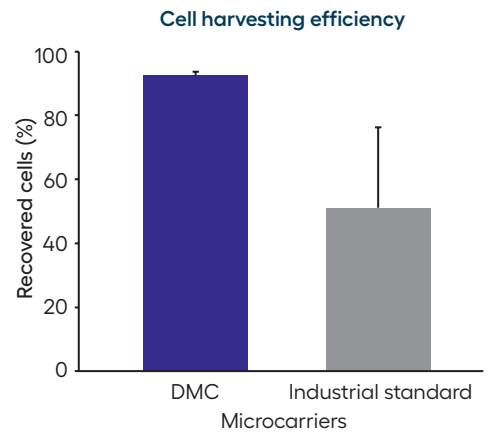
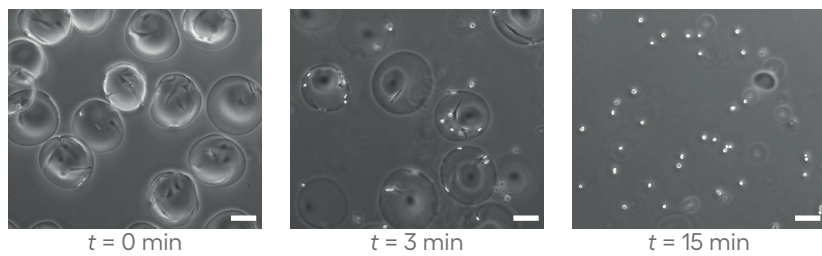
The denatured collagen coating promotes cell attachment and proliferation, and supports physiological interactions between cells and the material. The dissolvable microcarriers are suitable for mesenchymal stem cells (MSCs) and other adherent cell lines.



hMSCs (human mesenchymal stem cells) grown on dissolvable microcarriers show uniform cell attachment within the first 24 hours and confluency after 72 hours. This proves that the MSC's have a great bead-to-bead transfer on these DMC's.

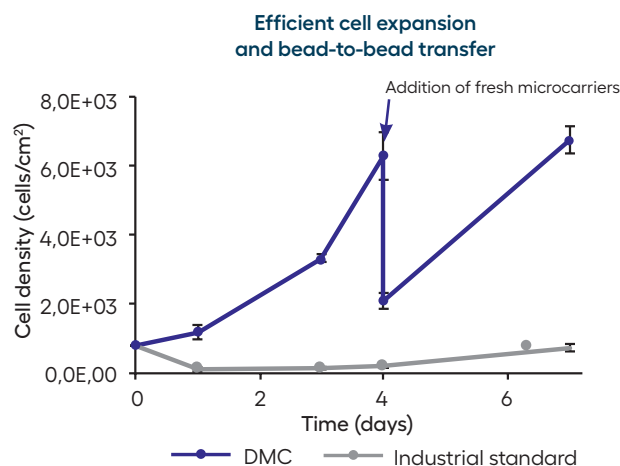
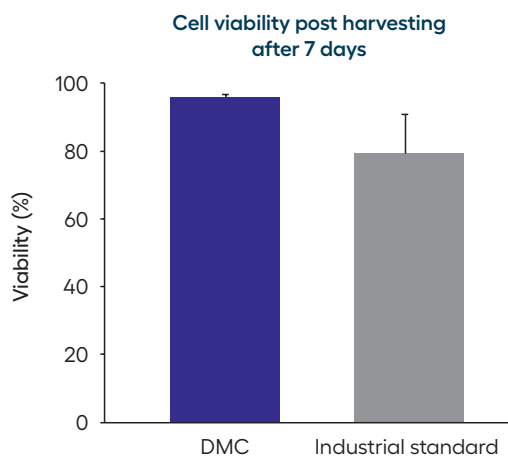
Readily dissolvable using standard culture reagents

The microcarriers can dissolve within 15 minutes after the addition of standard cell culturing reagents such as EDTA/TrypLE™ or Trypsin, allowing for efficient cell harvesting, cell recovery and swift integration into existing cell-expansion systems.



Over 90% cell viability

With over 90% cell harvesting efficiency and viability, the dissolvable microcarriers dramatically reduce cell loss compared to the typical 50% seen with non-dissolvable microcarriers.



In a bioreactor, cells expanded for 7 days with surface area expansion at day 4, showed excellent cell viability above 97%.

Monodisperse & transparent for consistent and easy handling

The monodisperse and transparent microcarriers enable reproducible and easy handling, following standard cell culturing protocols.

Product range

We offer the dissolvable microcarriers as dry powder standard in 1 gram and 10 grams.

Larger quantities (100 grams and 1 kg) are available on request.

Available online
www.microparticles.shop



Scan QR code for more information, cooperation and questions on GMP.

Rousselot can help you with virtually any product requirement or innovation you have in mind, offering:



Transparency



Full traceability



High standards of quality and safety



Committed to the environment and to our clients





Global support and expert advice

Your sales contact information



Rousselot, Darling Ingredients' premier collagen and gelatin brand, and lamFluidics, a microparticle innovator, have partnered to launch dissolvable microcarriers for adherent cell culturing. Combining Rousselot's premium collagen expertise with lamFluidics' patented IN-AIR MICROFLUIDICS™ technology, the microcarriers enhance cell attachment, rapidly dissolve for efficient harvesting, and offer over 90% cell viability. This scalable, cost-effective solution addresses industry challenges in advanced cell therapies, biologics manufacturing, and cultured meat production, positioning both companies as leaders in biopharmaceutical innovation.

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