Avanti Research
A CRODA BRAND

MilliporeSigma

equipment

Liposome Production Tools Mini Extruder for LUV Preparation

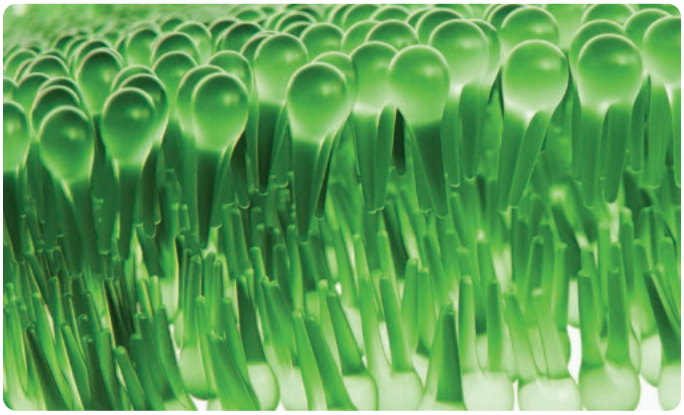
MilliporeSigma is the U.S. and Canada Life Science business of Merck KGaA, Darmstadt, Germany.

* MilliporeSigma is the exclusive supplier of Avanti Research™ to customers in Canada

Avanti's Mini-Extruder for LUV Preparation

Convenient

- Prepare large, unilamellar vesicles (LUVs) by extrusion in an easy, rapid, and efficient manner.
- Design allows for the rapid cleaning of all wetted parts, reducing downtime between production of vesicles from different lipid species.
- Generate uniform populations of unilamellar liposomes without the use of solvents or detergents.
- Control vesicle size via polycarbonate membrane selection.

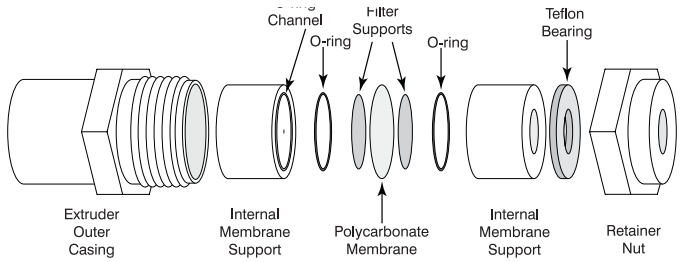


Complete set

- Mini extruder
- Heating block
- 2 o-rings
- 2 gas-tight syringes
- 100 polycarbonate membranes
- 100 filter supports

Durable and Affordable

- Constructed of stainless steel and PTFE.
- Guaranteed to give years of trouble-free service.
- Replacement parts are available from one source.
- A fraction of the price of a larger model



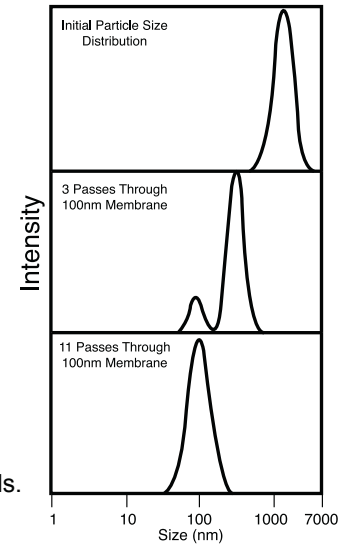
Flexible

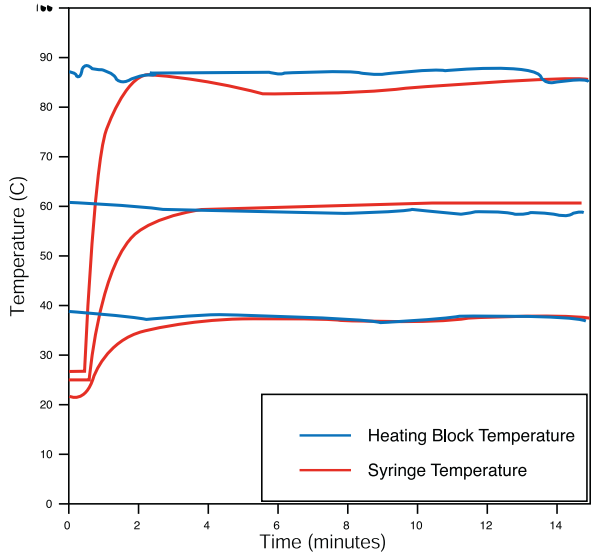
- The optional heating block allows the extrusion of vesicles at elevated temperatures, which is critical for the successful production of vesicles from phospholipids with a phase transition temperature above room temperature.
- Generate unilamellar liposomes ranging from 30 nm–1 µm when assembled with appropriate polycarbonate membrane.
- Useful for a wide variety of lipid compositions.
- Interchangeable with 250 µL and 1 mL syringes.

Reliable

The particle size distribution of unilamellar vesicles prepared by extrusion is a function of the number of passes through the extruder membrane.

Hydrated lipid solutions will initially form large, multi-lamellar vesicles. After the initial pass through a membrane, the particle size distribution will tend towards bimodal. After sufficient passes through the membrane, a unimodal, normal distribution is obtained. A minimum of eleven passes through the extruder membrane is recommended for most lipids.





Placing the heating block assembly on a hot plate achieves rapid temperature control for lipids that have transition temperatures above room temperature.

Learn more about adjuvants on

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Access technical notes and find procedures and protocols to guide your liposome preparation, transfection, and more.

You can also watch these short online videos about the mini extruder

- Introduction
- Extrusion technique
- Assembly
- Care

Product Showcase

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- Phospholipids
- Natural and synthetic lipids
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- Sterols
- Fluorescent lipids
- Detergents
- Lipidomics
- Bioactive lipids
- Fatty acid modified lipids
- Headgroup modified lipids
- Coenzyme A and derivatives
- Stable isotopes and ESR probes
- Polymers and polymerizable lipids
- Cationic lipids (transfection)
- Neutral lipids

MilliporeSigma
400 Summit Drive
Burlington, MA 01803

SigmaAldrich.com/Avanti

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Polar Bear photo provided by: Kyriakos Kaziras