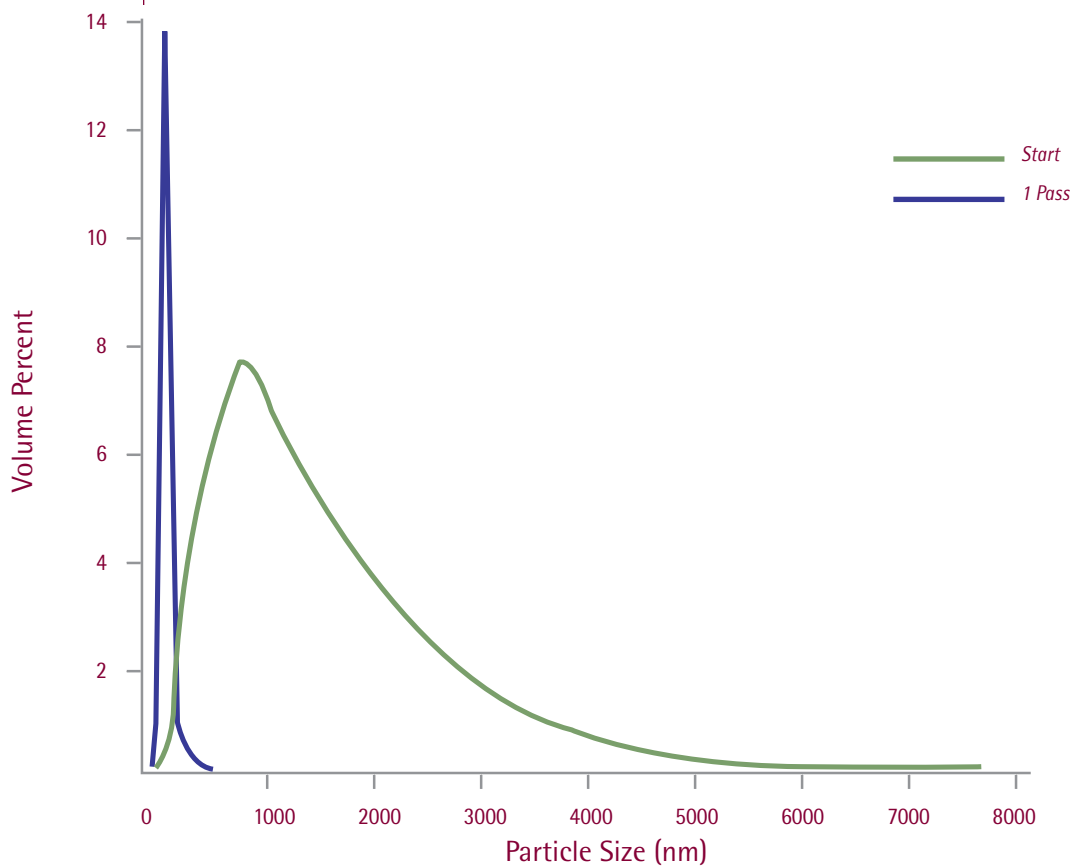


Materials Processing Data Sheet

Microfluidizer® Processor Laboratory Results

Industry:	Cosmetic
Product:	Cosmetic Emulsion
Test Objective:	Reduce particle size to < 150 nm
Processor:	M-210B
Chambers:	<ul style="list-style-type: none">• Interaction Chamber (upstream) J30Y (125 µm)• Auxiliary Processing Module (downstream) Q50Z (425 µm)
Number of passes:	1
Shear per pass:	4,636,900 sec ⁻¹
Process Pressure:	15,000 psi (1000 bar)
Particle Size:	Premix: 1000 nm (mean diameter) 1 Pass: 130 nm (mean diameter)



Summary of Results:

Mean particle size of 150 nm was achieved in one pass at 15,000 psi (1000 bar) using an M-210EH-B Microfluidizer® materials processor.

Materials Processing Data Sheet

HC-2000 GMP Pneumatic HC-5000 GMP Pneumatic

The HC-2000 is our lightweight, easy to use, low pressure homogenizer. With sanitary fittings and 300 series stainless steel parts, processing with the HC-2000 meets GMP requirements. The HC-2000 is suitable for batch and continuous processing with flowrates to 2 liters/minute. The HC-5000 is identical to the HC-2000 but with higher pressure capabilities (to 5,000 psi) and flow rates to 950 ml/minute.

Pressure Range 250–2,000 psi
Pressure Range 500–5,000 psi

HC-8000 Sanitary Pneumatic

The HC-8000 complies with sanitary standards to meet demanding product specifications and tight quality control. This unit employs a flow-through, sanitary pressure transducer with digital display and generates liquid pressures up to 8,000 psi and flowrates to 1 liter/minute.

Pressure Range 1,000–8,000 psi

M-110S Small Volume Pneumatic

The M-110S is an air-powered unit designed to process smaller sample volumes than the other Microfluidizer processors with greater product recovery. For samples as small as 14 ml (with >12ml recovery) up to continuous operation.

Pressure Range 3,000–23,000 psi

M-110Y High Pressure Pneumatic

The M-110Y provides the highest operating pressure of our laboratory units. It is specifically designed for applications that require optimum pressure, such as cell rupture. The M-110Y is ideally suited for improving product yield and minimizing downtime.

Pressure Range 3,000–23,000 psi

M-110P Electric "Plug and Play"

The M-110P produces a flow rate range of 110–155 ml/min at any process pressure. Powered by a standard 20 amp, single phase "household" electrical outlet, it requires no compressed air and no hydraulic cooling water. It incorporates a PLC for all on-board system functions.

Pressure Range 2,000–30,000 psi

M-110EH-30 Electric-Hydraulic

The M-110 EH is specifically designed for those customers that prefer an electrically-driven unit over a pneumatically-driven one. The unit reaches pressures as high as 30,000 psi and is mounted on locking casters for mobility.

Pressure Range 2,500 – 30,000 psi

M-140K High Pressure Electric-Hydraulic

The M-140K is built to sustain prolonged high pressure demands and provide users with the opportunity to create new formulations, and improve existing products. The unit reaches pressures as high as 40,000 psi and is mounted on locking casters for mobility.

Pressure Range 8,000 – 40,000 psi

M-700 Series

The M-700 Series offers pilot and production performance levels with specific features amenable to industrial applications, including coatings, waxes, inks, pigments, sealants, etc. The units are available in 15, 25, and 50 horsepower models, and can be fitted with 1 or 2 intensifier pumps that can be operated with independent product streams and flow rates.

Pressure Range to 40,000 psi

M-610 Custom Designed Electric-Hydraulic Production

The M-610 Series Production Microfluidizer processor is capable of flowrates to 18 gpm and can process samples from one gallon to continuous operation. These custom built units employ an electric/hydraulic intensifier pump which can be designed to generate process stream pressures up to 40,000 psi.

Pressure Range to 40,000 psi



HC-8000



M-700



M-710