

Ideal for quick “what if” trials, the backbone of initial product and process development

MMS Triple System Model F1

The **MMS Triple System** is an easy to use laboratory membrane device for *microfiltration, ultrafiltration, nanofiltration* and *reverse osmosis* operations.

The system is designed specifically to allow for safe, accurate and rapid testing of membranes and operating parameters, and to concentrate, fractionate or selectively enrich micro- & macromolecules.



Applications

- Plant extracts
- Dairy products
- Juices
- Effluents

Features

- Flatsheet membrane system
- Operating pressures 2 – 50 bar
- Membrane types MF, UF, NF and RO
- Available in manual mode and/or with data logging

Membrane Processes

- Microfiltration 0.2 μm
- Ultrafiltration 1 – 250 kDa
- Nanofiltration 150 – 1000 Da
- Reverse Osmosis

Benefits

- Rapid screening of 3 membranes simultaneously
- Small volumes of feed material required
- Wide range of membranes types available
- Easy to handle and CIP'able



The system can be used for process development, membrane screening or small scale production. The system can be operated at a wide range of pressures up to 50 bar. Flatsheet membranes from most suppliers can be incorporated within the system, giving the user the flexibility to test virtually any membrane based application.

The feed vessel is delivered with a heating/cooling jacket for controlled temperature operations ranging from 5 – 100° C. The driving pressure is delivered by compressed N₂, whilst a circulation pump creates the required cross flow velocity.

Due to the unique multi-stage cell design, the system can screen simultaneously up to three different membranes. The membrane cells are easily disconnected and taken apart for rapid and simple installation and cleaning. Uniquely designed flow channels allow for realistic scale-up of the membrane behaviour.



Unit Specifications

- Feed volume: 700 ml
- Pressure range: 2 – 50 bar
- Temp range: 5 – 80°C
- Membrane area: 84 cm²
- Cross flow: 1.2 l/h or 1.5 – 2.5 m/s
- 40 x 30 x 40 (cm) L x B x H
- Weight 35 kg

