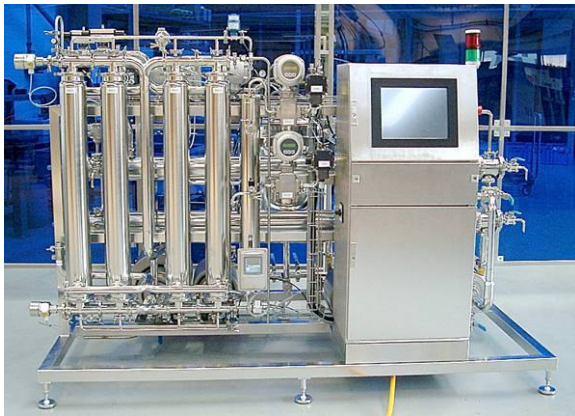


*Microfiltration (MF) systems enable the selective removal of larger macro-molecules yielding a filtrate crystal clear.*

The **Microfiltration** systems from **MMS** can clarify plant extract solutions removing sub-micron particles and molecules. microfiltration physically retains larger molecules including microbes making your filtrate not only clear, but also sterile.



The **MMS SwissFlow** MF systems enables the clarification and stabilization of plant extracts either in aqueous or alcohol solutions. For clarification of plant extracts MMS select either ceramic or polymer based membranes in hollow fibre modules.

#### Additional **MMS** plant extract Equipment

- **Microfiltration** for extract clarification
- **Ultrafiltration** for macro-molecule concentration, fractionation and de-salting.
- **Nanofiltration** for small molecule concentration and de-salting.
- **Reverse osmosis** for concentration of extracts using low to moderate temperature



#### Benefits

- Physical means of clarification
- No additives, flocculating agents required
- No solvents required
- Low operating temperatures
- Low energy requirements
- **Sterilizes** and clarifies in one step

#### Features

- Fully automated systems
- Supported by specialists
- CIP system included
- Complete solutions including tanks, post and pre-treatment

#### Options

- Diafiltration for higher product yield
- Post-treatment with RO for concentration
- On-line control of total solids
- On-line pH adjustment
- Remote access for system support and rapid troubleshooting
- Additional polishing step of permeate
- Scalable for more capacity



**MMS** produce a range of MF systems capable of handling feed rates from 10 L/h – 25'000 l/h. The capacity of the system is a function of several parameters, including feed concentration, level of retentate concentration and operating temperature. With our specialists we will enable you to select the correct system for your product and processing requirements.

**MMS** enable a process from the conceptual phase to be developed, designed, constructed, installed and implemented by our customers, *successfully*.



Clarification system for 5000 L/h

#### Other Extract Applications

- Aloe Vera clarification and concentration
- Algae extract de-slating and concentration
- Chocolate extract clarification
- Herbal extract concentration
- Soya milk de-bittering
- Polyphenolics fractionation and concentration

*MMS supports customers during the develop of their membrane process.*

*Our infrastructure allows for the screening of membranes and scale-up of processes using out pilot systems.*



MMS AG Membrane Systems  
Im Grossherweg 11  
8902 Urdorf  
Switzerland

# MMS

Tel. +41 44 735 59 00  
Fax +41 44 735 59 01  
Email: [info@mmsx.com](mailto:info@mmsx.com)  
[www.mmsx.com](http://www.mmsx.com)