

Microfiltration (MF)

Microfiltration (MF) is a membrane separation process that filters out colloidal and suspended particles in the range of 0.1 to 10 microns. The process utilizes low water pressure and high velocity to separate contaminants via a semipermeable membrane. Retained matter does not accumulate on the membrane surface and leaves with the process outlet stream.

Although pore size of MF membranes is much larger than Reverse Osmosis, Nanofiltration and Ultrafiltration membranes, they are useful for drinking water applications and are effective against waterborne pathogens like *Giardia Lamblia* and *Cryptosporidium*. For such microorganisms, an absolute micron rating of 1.0 micron or below is essential.

Microfiltration does not remove chlorine, odour or taste from water, nor does it remove small bacteria or viruses. Therefore, heavily contaminated water requires treatment with Activated Carbon, Reverse Osmosis and/or Ultraviolet treatment units in order to achieve higher purification levels.

MF is used in various applications including cold sterilization of beverages, clearing of fruit juices and separation of oil/water emulsions, among others.



Microfiltration is used industrially to filter fruit juices