



PURE IONIC WATER™

The Water of Champions

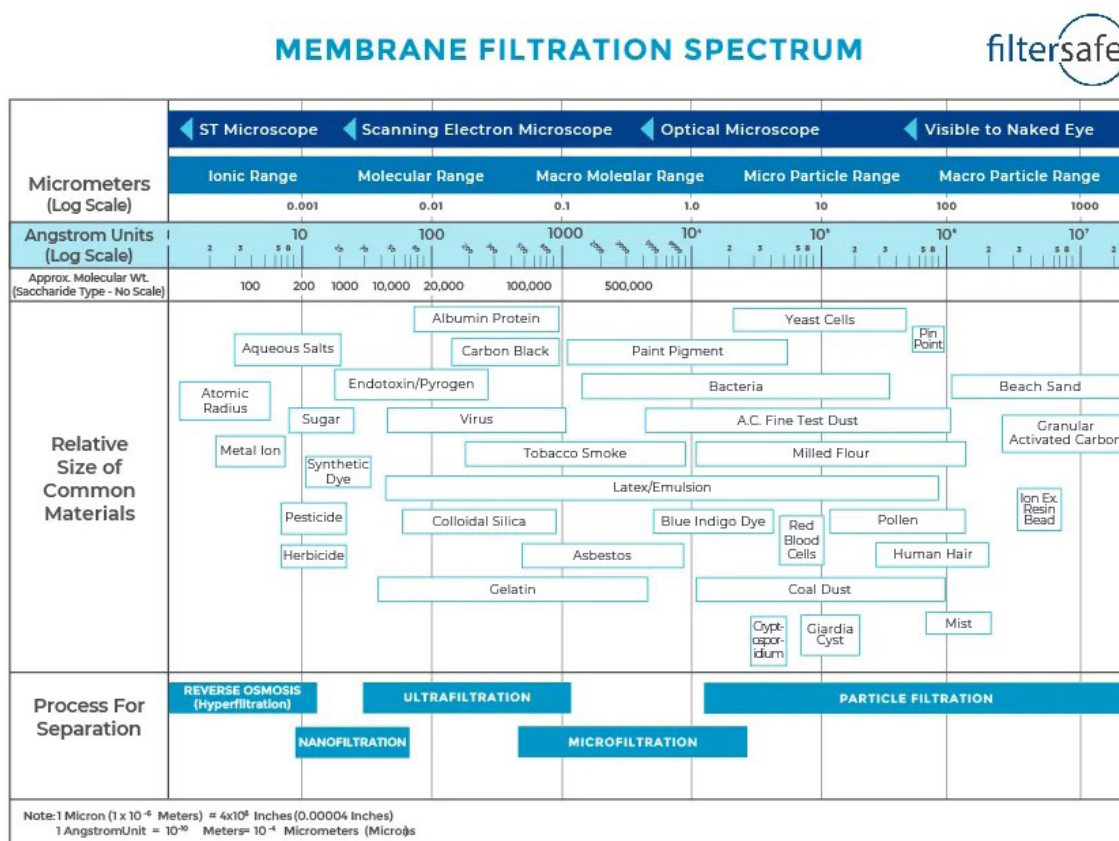
PURE IONIC WATER™ SYSTEMS

Ultrafiltration

ULTRAFILTRATION

Ultrafiltration (UF) is one of the most prevailing processes for water and wastewater treatment. It is a membrane separation process in which water (or a fluid) is placed under pressure on one side of a semi-permeable membrane of a measured pore size. All materials smaller than the measured pore size pass through the membrane, leaving large contaminants concentrated on the feed side of the membrane. Thus, water particles and contaminants are removed based on size exclusion or particle capture. Therefore, there is no need for chemicals (e.g. disinfectants, coagulants, flocculants, etc) in killing water microorganisms (e.g. viruses, bacteria, yeasts, etc) and removing water particles/contaminants. This is not only environmentally-friendly, but it is cost-effective and provides far less exposure to hazardous chemicals.

UF membranes have pore sizes ranging from 1 to 100 nm (0.001 to 0.1 μm) and typically are used to remove viruses, bacteria, colour pigments, some natural organic colloids and other water particles and contaminants that has size larger than UF's pore size. This will put UF in an advantageous position over other filtration processes. Please see diagram below that demonstrate the range of water particles/contaminants:



UF has the further advantage to be an environmentally friendly as it is an energy saver technology compared to reverse osmosis (RO), where considerable higher transmembrane pressure requires substantially larger energy consumption, whereas UF works on pressure ranges of 2-5 Bar.

References:

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