

FILTRATION

TECHNICAL INFORMATION 2

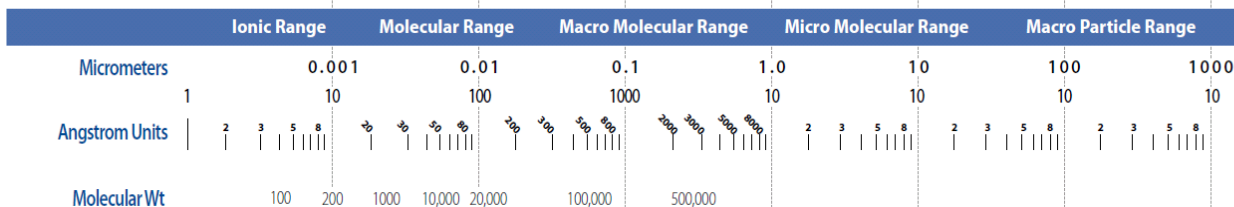
PARTICLES SEPARATION PROCESSES

The size of liquid and solid particles dispersoids will vary markedly depending upon the source and nature of the operation generating the particular particles. To be able to design the equipment necessary to reduce or eliminate particles from a fluid stream, it is important to know the data about range and distribution of the particles size, or either to be in a position to intelligently estimate the normal and extreme expectancies. The table below gives a good overall picture of the dimensions as well as the descriptive terminology and the filtration process used.

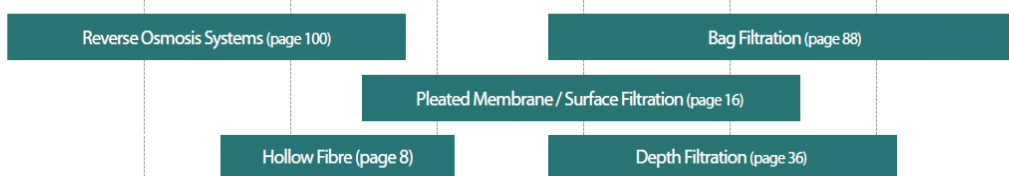
Relative Size of Common Materials



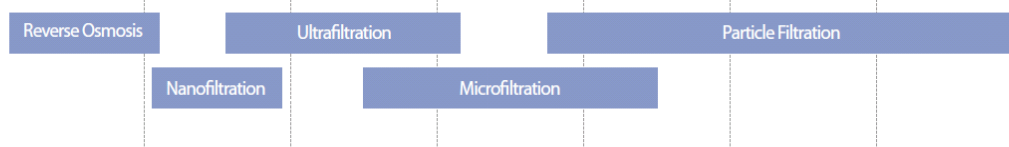
► ST Microscope ► Scanning Electron Microscope ► Optical Microscope ► Visible to Naked Eye



Typical Product Selection



Separation Processes



Particle separation processes such as sedimentation, flotation and filtration are significantly influenced by the size of particles, and the process chosen can depend on the size of the particles to be removed. For many operations there is an optimum particle size and in many practical cases the actual particles have a smaller size range. Consequently, separation can be greatly enhanced by increasing the particle size and this is achieved through a sort of aggregation process. An obvious example is sedimentation, where colloidal particles would have too decrease the settling rate for practical purposes. Aggregation (flocculation) of such particles is often essential in order to have a more rapid settling.

