## **R/O PURIFICATION SUMMARY**



## **Reverse Osmosis Overview**

## How effective is Reverse Osmosis filtration compared to other methods?

RO is the most convenient and effective method of water filtration. It filters water by squeezing water through a semi-permeable membrane, which is rated at 0.0001 micron (equals to 0.000000004 inch!). This is the technology used to make bottled water, it is also the only technology capable of desalinating sea water, making it into drinking water.

Non-RO water filters are much less effective, and the pore size on these filter media are much bigger, generally 0.5 - 10 micron. They can filter out coarse particles, sediments and elements only up to their micron rating. Anything finer and most dissolved substances cannot be filtered out. As a result, water is far less clean and safe compare to reverse osmosis filtration.

Reverse osmosis uses a membrane that is semi-permeable, allowing the fluid that is being purified to pass through it, while rejecting the contaminants that remain. Most reverse osmosis technology uses a process known as cross flow to allow the membrane to continually clean itself. As some of the fluid passes through the membrane the rest continues downstream, sweeping the rejected species away from the membrane, in a concentrated brine reject water.

> "Reverse Osmosis removes virtually all pharmaceutical contaminants" Source: AP news reports provided by USA Today article & Fox News report

"to remove contaminants that carbon filters can't eliminate, like arsenic and perchlorate (rocket fuel)." Source: Environmental Working Group- ewg.org/reports/bottledwater



