



# **SEA DWELLERS AND FRIENDS**

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**[www.sea-dweller.com](http://www.sea-dweller.com)**



## REVERSE OSMOSIS TECH SHEET

Tap water can (and usually does) contain impurities that are not advantageous to your aquarium. Impurities can include: copper (toxic to invertebrates), nitrates (harmful to invertebrates in high levels and makes algae grow) and phosphates (makes algae grow). Here at Sea Dwellers and Friends we use reverse osmosis water in all of our marine aquariums. We also use it in many of our freshwater aquariums.

Reverse osmosis is a type of water purification. This process removes most of the harmful impurities that are found in tap water. Reverse osmosis water has a very low Ph and a very low carbonate hardness. These low levels make it very easy to adjust the Ph to whatever level that you desire. This is great for freshwater when you are trying to adjust the Ph to a low level. You should add a buffer if you are trying to maintain a freshwater Ph above 7. The buffer that we use is a Kent Marine product called RO Right.

However, for marine aquariums you should add a buffer to the reverse osmosis water before you add it to the aquarium. We use a Kent Marine product called Osmoprep Marine. This is an inexpensive powder that buffers the Ph and carbonate hardness to levels normally found in seawater. Synthetic sea salt already contains these buffers, but some salt companies use lower quality buffers to make their product cheaper. These buffers may not last that long and could lead to fluctuations in the Ph and carbonate hardness levels. This is why we use a buffer-even if we may not actually need it!

Some people use a milk jug with a couple of inches of aragonite gravel (Carib Sea) in the bottom to store their top off water. The aragonite slowly dissolves into the water and increases the Ph and the carbonate hardness. This is another way to buffer small quantities of reverse osmosis water for your marine aquarium.

Personally, I perform 5-gallon water changes on my aquarium. I have a spare submersible heater that is set to the same temperature as my aquarium. Reverse osmosis water is put into a 5-gallon bucket, Osmoprep and salt is added to the water, and the heater is plugged in on the day before a water change. The old water is siphoned out of the aquarium into another 5-gallon bucket and the new water is added to the aquarium from the other bucket. The pump does not even have to shut off because the sump holds 7 gallons. The aquarium inhabitants are not stressed by any temperature or salinity fluctuation. The aquarium does not even get cloudy because the new water was mixed up a day before.

We sell reverse osmosis water or it could be purchased from any box store or water filtration store. We recommend purchasing your own home filtration unit so that you may also benefit from the water. Since I started using reverse osmosis in my home there has been no calcium deposits in my coffee maker, the coffee tastes better, and there is no white residue left behind when ice cubes melt in your drink.

Joel Gramling  
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