

Carbon: Everything you ever wanted to know

Q How do I know when it's time to change Granular Activated Carbon (GAC)?

A When to change a GAC filter is a matter of determining whether or not the GAC is still performing its intended job. In simple prefilters such as those in counter-tops and pre-reverse osmosis, a chlorine test will tell if the GAC is still up to par. However, if the GAC was intended for something other than chlorine removal—such as tri-halomethanes (THMs)—it is best to refer to the manufacturer's guidelines and change the media (or cartridge) out on a time-interval basis. General rule for GAC is one year on THMs and two- to-three on chlorine and general purpose. Cartridges should be changed out at six months and one year respectively.

As GAC begins to "load up/" it may release natural organics (tannins) and impart an off-taste to the water. This is an early sign to change out the media. Regular back washing of whole-house GAC filters will prolong the useful life of the filter by ridding the bed of accumulated organic debris, carbon fines and dirt. Non-backwashed beds may provide a good breeding ground for bacteria, which feed on accumulated organics. This will also impart taste and odor to the filtered water.

Non-backwashed beds
may provide a
good breeding ground
for bacteria, which
feed on accumulated
organics.

Q What is acid-washed carbon and why should I buy it?

A Activated carbon contains ash components such as calcium, magnesium, potassium and iron oxides which are water soluble over time. When these components dissolve, they will raise the pH and the TDS of the filtered water.

This can cause problems with precipitation of hardness, conductivity and taste. Acid-washed GACs will contain a much-reduced amount of these components and will give a more neutral pH and quicker rinse-up than non-acid washed.

Q What are the differences in extruded carbon and pressure molded carbon blocks?

A The differences are in the manufacturing process. "Block" carbons are made by mixing a fine grain or powdered GAC with a fusible binder and "molding" this mixture into the desired shape using heat and pressure. Both processes use the same or similar raw materials and the intended end product properties are pretty much the same. Extrusion has obvious limitations as to the final shape—usually limited to cylindrical. However, it has no limits on length. This usually results in a somewhat lower manufacturing cost. Molded products can be any shape