

Greenhouse and Nursery Water Treatment Information System

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Activated Carbon Filtration

Removes: Chlorine, chlorine by-products, pesticides/herbicides, copper, other heavy metals

Activated carbon filters are used to remove soluble materials from water (Lenntech, 2011). Substances are removed via adsorption, which involves the adhesion of the ions, atoms, or molecules to the surface of a solid, in this case powdered or granular carbon. The structure of the carbon is such that surface area (the area available for adsorption of dissolved substances) is maximized. These filters are prone to fouling by organic materials, which will reduce filtration effectiveness (Lenntech, 2011). As such, pre-filtration is necessary.

In horticulture, these filters can be employed for the removal of chlorine from irrigation water. Chlorine may be removed as pre-filtration before the water reaches a membrane filter (such as for reverse osmosis), or to prevent accumulation of chlorine and phytotoxic effects on plants.

REFERENCES

Lenntech. 2011. Adsorption/active carbon.
<http://www.lenntech.com/library/adsorption/adsorption.htm>