

# Water Wisdom

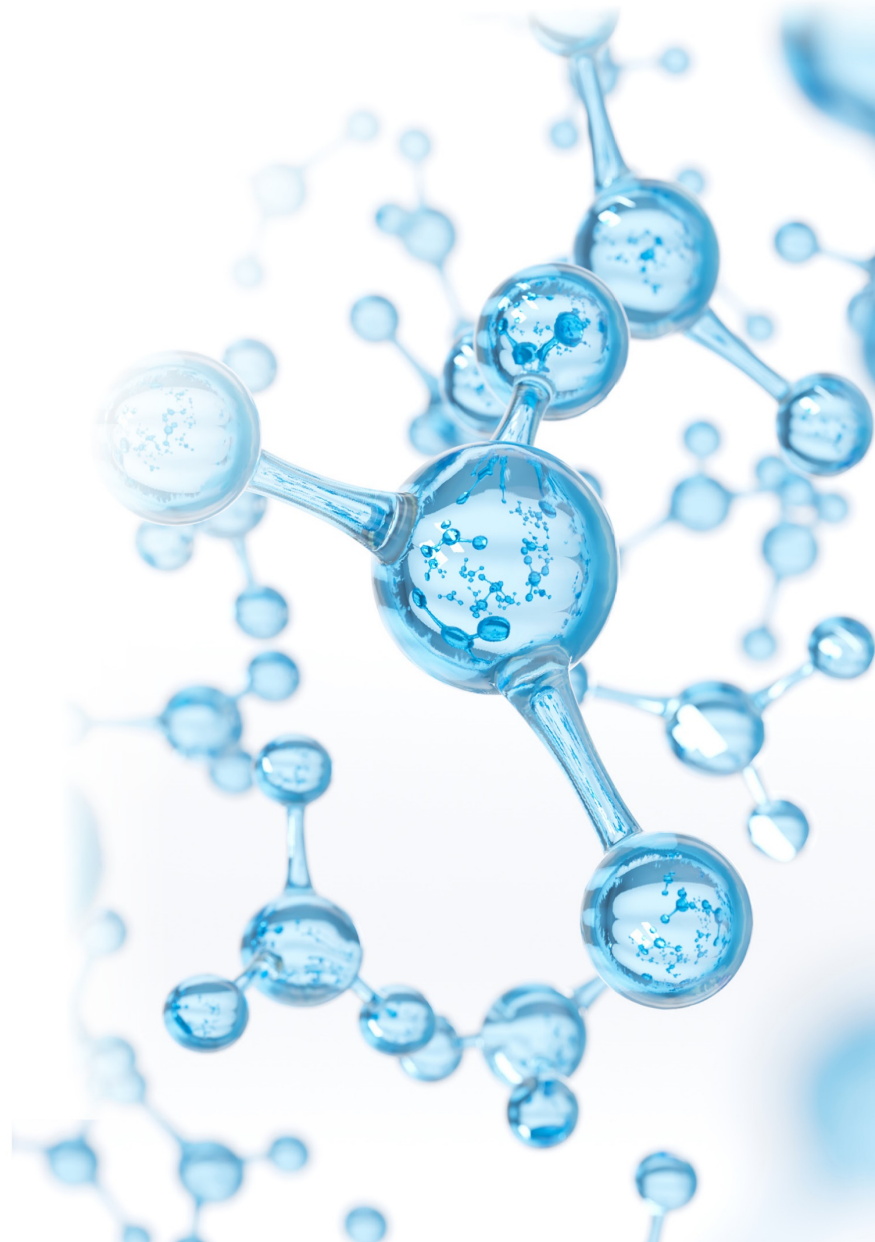
## Bisulfite Dosing 101

### Advantages of Activated Carbon over Bisulfite for Chlorine Removal



GLOBAL • WATER • SOLUTIONS

[www.Aqua-Chem.com](http://www.Aqua-Chem.com)



# Water Wisdom- Carbon vs. Bisulfite



## Advantages of Carbon

### **Granular Activated Carbon**

GAC is a coal or coconut shell based media that is used in water treatment to safely remove color, taste, odors and other impurities via adsorption.

# Water Wisdom- Carbon vs. Bisulfite



## Advantages of Carbon

### **Chlorine / Chloramine Removal**

GAC is effective at removing chlorine and is often used to protect (pretreat) industrial or pharmaceutical reverse osmosis, ion exchange, or vapor compression water systems.

# Water Wisdom- Carbon vs. Bisulfite



## Advantages of Carbon

### Low Risk

Activated Carbon filtration is low-risk, robust, and requires little maintenance compared to chlorine removal using bisulfite dosing.

# Water Wisdom- Carbon vs. Bisulfite



## Advantages of Carbon

### **Low Maintenance**

Carbon filters are 'set it and forget it'. Chemical dosing systems require daily, weekly, and monthly attention while carbon filtration can operate for more than a year before intervention is required.

# Water Wisdom- Carbon vs. Bisulfite

## Carbon Essentials

### How much carbon do I need?

Carbon vessels and media volume are sized for contact time.

Chlorine Removal = 3.0 gpm/ft<sup>3</sup>

Chloramine Removal = 0.75 – 1.0 gpm/ft<sup>3</sup>

\*Aqua-Chem recommends catalytic-type activated carbon for enhanced performance when removing chloramine compounds.



# Water Wisdom- Carbon vs. Bisulfite

## Carbon Essentials

### Replacement Frequency

Carbon media has a large removal capacity and common industrial applications can be sized for anywhere between 3-7 years between exchanges.

Due to organic loading, Aqua-Chem recommends annual GAC replacement for our pharmaceutical applications.





# Water Wisdom- Carbon vs. Bisulfite



## Carbon Essentials

### Microorganism Control

For sensitive applications, activated carbon can be steamed or hot water sanitized to prevent growth of microorganisms.

This is performed at lower flows and pressures to prevent shearing of the media.

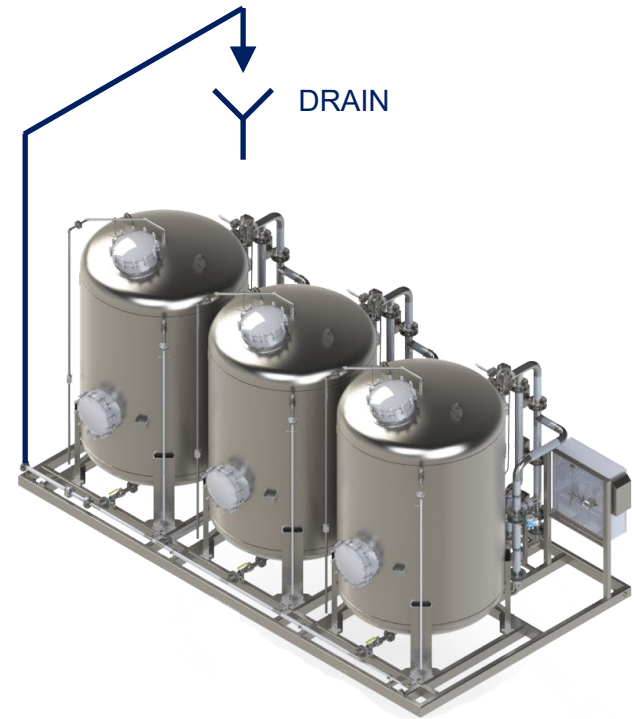


# Water Wisdom- Carbon vs. Bisulfite

## Carbon Essentials

### Backwashing

In order to prevent loading or exhausting media at the bottom of a carbon filter, Aqua-Chem recommends backwashing as little as possible or only backwashing using filtered and de-chlorinated water.





Stay tuned for  
our next episode...

## ORP Sensors in Lieu of Chlorine Analyzers



[sales@aqua-chem.com](mailto:sales@aqua-chem.com)  
1-800-964-7035