

# **Specialty Membrane Chemistry**

## **ANTISCALANTS**

## **OPTIMIZING SYSTEM PERFORMANCE, EXTENDING MEMBRANE LIFE**

Scale formation is one of the leading causes of membrane performance decline. Dissolved minerals crystallize and build up on the membrane surface, increasing operating pressure, reducing permeate flow, and requiring frequent cleanings.

At H<sub>2</sub>O Innovation, our antiscalants are designed to tackle a broad range of scaling challenges, even under difficult feedwater conditions. With the support of advanced dosing and projection tools, we provide optimized performance that translates directly into lower operating costs and more sustainable operations.

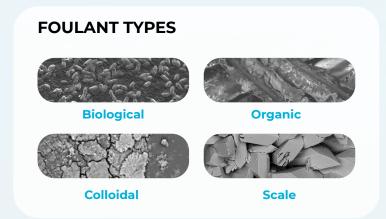
## What this means for you:

- Less downtime from cleanings
- Extended membrane life and fewer replacements
- Lower energy consumption through stabilized operation
- Peace of mind knowing your system is protected

## MEMBRANE CLEANERS

## **GENTLE ON MEMBRANES, TOUGH ON FOULING**

From organics to mineral scale, fouling does not discriminate. Our cleaners are precisely engineered to break down specific foulants while safeguarding membrane integrity. Our multi-component formulations include:



- **pH Buffers** Ensure pH stability for effective cleaning
- **Chelating Agents** Bind to metal ions and prevent re-deposition
- **Surfactants** Disperse grease, oils, and hydrophobic material
- Membrane-Safe Oxidizers Break down biological and organic fouling
- Enzymes Help degrade resilient organic compounds gently and effectively

Chemistry is just one part of effective cleaning—we can help create customized cleaning protocols based on your system's operational conditions. Optimizing for temperature, circulation, and soak times to achieve the best results and restore membrane performance.



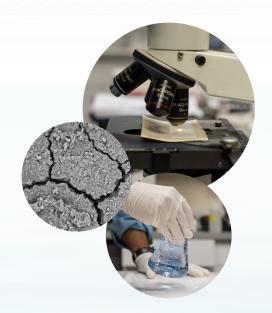
# **Insight-Driven Lab Services**

## REAL INSIGHTS FOR REAL RESULTS

YOUR SYSTEM IS UNIQUE—SO ARE OUR DIAGNOSTICS

Understanding what's happening inside your membranes and filters is key to making smart decisions. Our lab services go beyond standard analysis—we provide actionable insights that help you solve problems, prevent failures, and operate more sustainably.

With over 2,000 autopsies performed worldwide, we bring unmatched expertise to every case. Whether you're troubleshooting a specific issue or optimizing your cleaning process, our team delivers the kind of detail that drives confident decision-making.



## **OUR CORE SERVICES INCLUDE:**

## **MEMBRANE & CARTRIDGE FILTER AUTOPSIES**

Comprehensive investigation, advanced foulant analysis, and performance testing to identify root causes of decreased membrane longevity and performance.

### **WATER QUALITY & PRETREATMENT OPTIMIZATION**

Identification of contaminants, particle size, and distribution allows for intelligible pretreatment adjustments leading to a reduction in fouling and chemical consumption.

## **CLEANING PROCEDURE OPTIMIZATION**

Lab-scale simulations replicate fouling to help identify the most effective cleaners and cleaning regimen.

### What you gain:

- Increased water production
- Lower chemical and energy consumption
- Reduced frequency of cleanings and replacements
- A clear path to more sustainable, cost-effective treatment

# Contact us today to learn more

