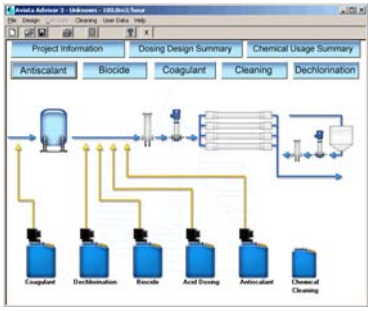
avista technologies

Vitec®

Antiscalants/Dispersants - Liquid
Selection Guide

In most applications, reverse osmosis membranes and their flow passages will foul without some means of upstream scale inhibition due to precipitation of sparingly soluble salts. Common examples of scale are calcium carbonate ($CaCO_3$), calcium sulfate ($CaSO_4$), barium sulfate ($BaSO_4$), and strontium sulfate ($SrSO_4$). Less common but equally problematic are silica (SiO_2) and calcium fluoride (CaF) scales.



To address membrane scaling, Avista formulates a full range of antiscalants under the Vitec® trade name. These specialty liquids are suitable for treating well, surface, municipal and recycled feedwaters under the following guidelines:

CCPP:	> 900	LSI:	3
$CaSO_4$:	7 x Ksp	$BaSO_4$:	300 x Ksp
$SrSO_4$:	35 x Ksp	SiO_2:	2 x Ksp
CaF:	1000 x Ksp		

The Avista Advisor chemical projection program uses water analysis and system data to assist customers in selecting the most appropriate antiscalant for site specific applications and to the determine the minimum effective dose rate. The antiscalants are certified by various global entities for use in systems producing potable water including NSF International and the UK drinking water inspectorate. The products have also been thoroughly tested to demonstrate compatibility with the elements distributed by the major membrane manufacturers.

The table below details the functionality of the antiscalants.

Guide to Selection of Vitec® Antiscalants/Dispersants

Product Name	Compatible with RoQuest® Coagulants	Certified for Use in Drinking Water Production		Scale Inhibitor						Iron Dispersant	Colloid and Silt Dispersant	Silica Inhibitor
		NSF	UK	$CaCo_3$	$CaSO_4$	$SrSO_4$	$CaPO_4$	$BaSO_4$	MgOH			
Vitec 1000		X		X								
Vitec 2000			X	X	X	X	X	X	X	X	X	
Vitec 3000	X	X	X	X	X	X		X			X	
Vitec 4000		X	X	X	X	X		X		XX	X	XX
Vitec 5000	X		X	X	X	X		X			X	
Vitec 5100	X	X		X	X	X		X			X	
Vitec 7000	X		X	X	XX	X		X			X	

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Avista Technologies, Inc.
Phone: + 1 760 744 0536
Info@avistatech.com

Avista Technologies (UK) Ltd.
Phone: + 44 131 449 6677
Info@avistatech.co.uk

Visit www.avistatech.com for a list of global offices and distributors.