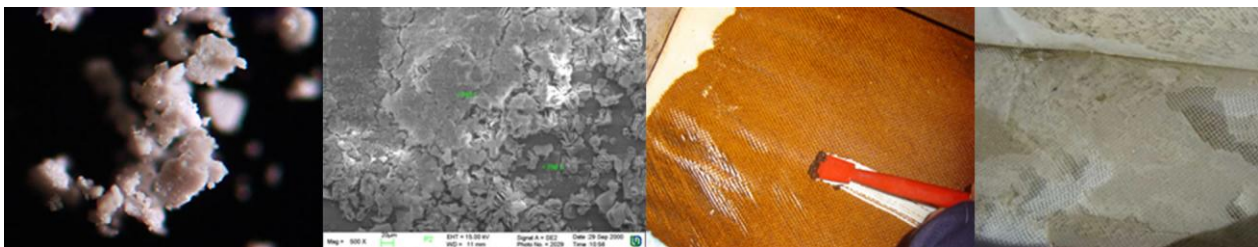


Without some means of upstream scale inhibition, RO membranes and their flow passages will scale up if the solubility limits of sparingly soluble salts is exceeded. Common examples of scale are calcium carbonate (CaCO₃), calcium sulfate (CaSO₄), barium sulfate (BaSO₄), and strontium sulfate (SrSO₄). Less common but equally problematic are silica (SiO₂) and calcium fluoride (CaF) scales.

Avista Technologies provides a range of antiscalants suitable for treating, well, surface, municipal and recycled waters. The **Avista Advisor** chemical projection programme is provided to assist customers in selecting the most appropriate antiscalant for the application and to determine the minimum effective dose rate.



Products are available to prevent scaling up to:

CCPP	900	LSI/S&DI	3
CaSO ₄	7 x Ksp	BaSO ₄	105 x Ksp
SrSO ₄	35 x Ksp	SiO ₂	250mg/l in brine
CaF	1000 x Ksp		

The table below details the functionality of the antiscalants provided and the table overleaf gives a guide to typical waters each is applied to.

Guide to Selection of Vitec [®] Antiscalant/Dispersants:										
Effective against:										
Product Name	Scale						Iron	Colloids and Silt	Silica	CC*
	CaCO ₃	CaSO ₄	SrSO ₄	CaPO ₄	BaSO ₄	MgOH				
Vitec 1000	x									
Vitec 2000	x	x	x	x	x	x	x	x		
Vitec 3000	x	x	x		x			x		x
Vitec 4000	x	x	x		x		xx	x	xx	
Vitec 5000	x	x	x		x			x		x
Vitec 5100	x	x	x		x			x		x
Vitec 7000	x	xx	x		x			x		x

*CC= coagulant compatible



Avista Technologies antiscalants are certified under ANSI/NSF 60 and other national drinking water standards (including the UK drinking water standard) for use in potable water systems. Additionally, the products have been tested to demonstrate compatibility with the major membrane manufacturers' products.

Application	Vitec [®] Product Suitable for Application					
	2000	3000	4000	5000	5100	7000
Well water	x	x		x	x	
Open seawater		x		x	x	
Municipal supply		x		x	x	
Surface Water BWRO	x	x		x	x	
Treated Effluent	x	x		x	x	
Waste Water	x	x				
High Silica BW or SW			x			
High Sulphate						x
High pH feed water	x					

See Also:

Individual product datasheets for particular properties and application notes for each product.

Technical support section (9) which provides information on how antiscalants work, a guide to water sampling for antiscalant projections and system normalisation details so you can monitor your antiscalant effectiveness.

The **Avista Advisor 3** software is also available to allow you to calculate your required antiscalant dose.

Avista Technologies can carry out your water analysis or produce your antiscalant projection. For particularly unusual conditions (or highly variable ones) pilot testing can be carried out in our lab or on site.

Product approvals have been granted by water regulators, membrane manufacturers and industry bodies. Please contact your local representative for up to date information.

09/09

