

The Truth about Filtersorb SP. Scale Prevention or Scale Deception?

How does Filtersorb SP compare to nextScaleStop?

CWG GmbH and CWG/USA, the manufacturer and distributor of Filtersorb SP claim that Filtersorb SP operates via a similar mechanism as nextScaleStop. However, our tests of the Filtersorb SP's physical and chemical composition, combined with field test results clearly indicate that Filtersorb SP is in no way equivalent.

If it's not equivalent to nextScaleStop, what is it?

Based on our initial analysis, Filtersorb SP appears to be buffered Weak Acid Cation resin that has been partially converted from the Hydrogen form to the Calcium form.

Do you have other evidence to support claim?

Please see data in the column to the right. The chemical profile (not shown) combined with the SEM analysis is consistent with the properties of WAC resin.

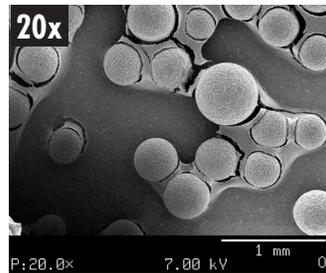
Further evidence is provided by the requirement that Filtersorb SP "rest" periodically. The need for "rest" is defined as 8 hours per day if used in a residential application or for no more than 4 hours of continuous use without "resting" in commercial applications. This is consistent with the behavior of an absorptive media that would recover some of its capacity after resting due to diffusion into the pores of the media. The need for "rest" is completely inconsistent with a media that claims to catalytically create crystals. If the media is truly "not used up" in the reaction, and if the media behavior is consistent with any known crystallization mechanism, there should be no requirement for "resting".

CWG claims that Filtersorb SP has been proven effective for 5 years in Europe. How can this be true if the media works as described above?

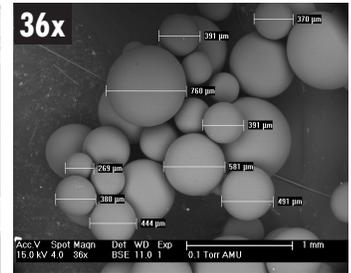
The claims of years of experience with Filtersorb SP are false. Filtersorb SP was manufactured for the first time in May 2006. It's also worth noting that

Scanning Electron Microscope Photos

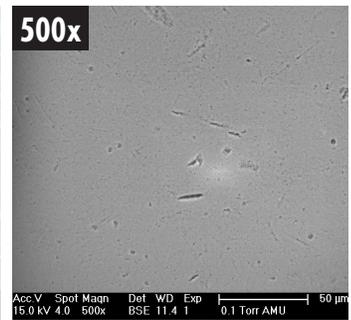
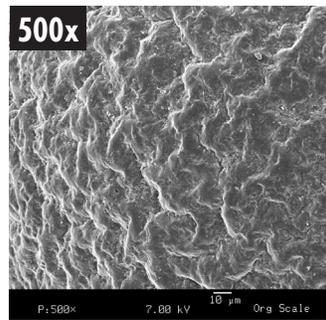
nextScaleStop



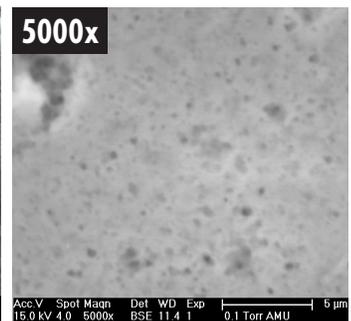
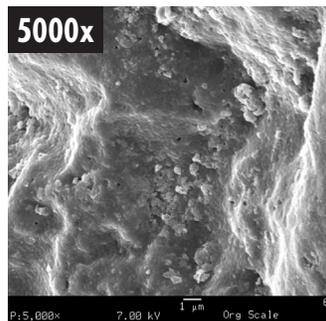
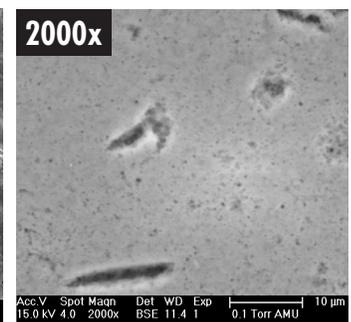
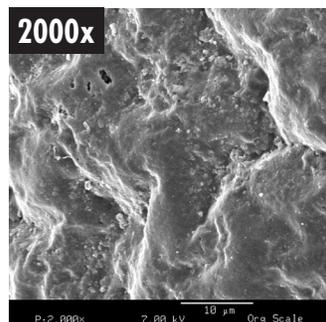
Filtersorb SP



Even at low level magnification, the profound difference in the surface characteristics are apparent.



The complex, template-rich surface of the ScaleStop bead stands in stark contrast to the smooth, unmodified surface of the Filtersorb bead



At these magnifications, sub-micron scale crystals can be seen on the surface of the ScaleStop bead. The Filtersorb bead is completely free of any crystal formations.

since its release in May 2006, there have been 3 “new” formulations or versions of the product. ***Would a product proven with years of experience need 3 revisions in less than 2 years?***

Does Filtersorb SP work as a de-scaler and scale prevention media?

Weak Acid Cation resin is a proven scale prevention method. It is routinely used in disposable cartridges for treating water used in low volume devices such as espresso machines and coffee brewers. As used by CWG, Filtersorb SP may provide de-scaling effects (due to a temporary reduction in pH due to the release of Hydrogen ions) as well as temporary prevention of scale formation through the combined effects of pH reduction and Calcium adsorption.

The important thing to note is that these effects are temporary. Once the resin is fully loaded with Calcium, both the de-scaling effect and the scale prevention effect will stop.

There have been reports of some evidence of crystal formation with Filtersorb SP. How do you explain that?

When the Filtersorb SP bead becomes loaded with calcium, the calcium on the bead will serve as a very weak nucleation site. Accordingly, under some conditions, Filtersorb SP will produce an extremely small volume of crystals, but nowhere near enough to provide effective scale prevention.

People claim to have had success with Filtersorb SP, especially in residential applications. Do you have an explanation? Yes. It’s important to note that residential applications are highly subjective. With that in mind, the answer is two-fold. First, when the system is new, the scale prevention benefits they promise will occur due to the characteristics of the WAC resin. Second, because the systems are almost always sold with a whole-house carbon filter, the customer perceives the combined effect of improved taste and reduced scale as attributes of the “system”. As the ion exchange capacity of the resin is depleted and the scale prevention benefits decline, the customer may not notice change in performance. This is due

to the gradual nature of the decline, combined with the gradual formation of scale and the time it takes for the scale to become noticeable. Plus, because the carbon filter is still delivering improvements in taste, etc., the system is perceived as “working.”

I’ve seen claims of success on objective equipment-based tests. Can you offer an explanation?

Yes. All of the “testimonial” and references that we’ve seen that were provided to prospective customers as “proof” of performance have been for tests of extremely short duration, usually covering just a few weeks of testing on new systems with fresh media. Further, these testimonials have been so lacking in detailed water quality measurements that they are anecdotal at best. ***As noted before, Filtersorb SP does work as a de-scaler and scale prevention media, but only for a short period of time!***

Summary.

Our current understanding based on an on-going analysis of the media and its performance, is that Filtersorb SP does not act via the mechanism claimed by the manufacturer, and does not deliver the benefits they claim. As previously noted, Filtersorb SP does offer short-term de-scaling and scale prevention performance that deteriorates and eventually stops after a short period of time (consistent with the characteristics of WAC resin).

If you’re interested in a true proven, alternative scale prevention system, please consider:



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