

Fruit processing plant reduces product losses

Disinfection of bore water critical for ensuring product quality

Situation

A local subsidiary of a global food brand had challenges with the fresh water used in their plant for fruit washing operations and direct integration into the concentrated fruit pulp finished product. The raw water for the plant was coming from a subterranean bore, which is normally considered safer in terms of proclivity to contamination by pathogens compared to surface waters. However, there were moderate levels of bacteria present indicating that the water was not intrinsically clean. And of more concern was the presence of *Escherichia coli* (*E. coli*), a bacteria species that lives in the gut of animals and humans and can cause sickness if ingested.

Detection of *E. coli* in the finished product results in rejection and the plant was experiencing intermittent detections and product losses.

It was clear that the raw water source could no longer be used without proper disinfection.

Solution

After a thorough review of different chemical technologies and service offerings, Visentia was chosen to provide a disinfection system for the raw water and the specification was to provide a full turnkey project for the supply of chemical, equipment and ongoing service.

Visentia supplied an acid/chlorite type chlorine dioxide generator system including automation to measure and control chlorine dioxide levels in the treated water. The entire project was managed by Visentia including installation and commissioning.

Since start up, Visentia has been providing routine service on site, which includes operation checks on the generator, review of historical trends and water quality testing.

Results

Since implementation of the raw water disinfection system, the customer has not reported a single instance of *E. coli*. A substantial return on investment for the system has been realised due to elimination of rejected product related to microbiological contamination. Additionally, the site now has a complete site water plan, which meets the global standards of their parent company and the disinfection system is seen as a cornerstone of the site's risk reduction programme. The customer considers that a key factor in the success of the solution is the reliable and proactive service from Visentia.

Further Information

If you require any further details on Visentia's products or services, please call your local Visentia water treatment consultant or directly to our Auckland head office on +64 9 216 9824.