



ENVIRONMENTAL DISINFECTION:

ProvaCharge™ Foam Trial in Cherryfield Pork Processing Plant

AREA OF CONCERN

Sterilex was contacted by Cherryfield Ltd, a leading pork processing company, to assist in penetrating biofilms and eradicating biofilm bacteria.

ISSUE

Biofilms, complex structures formed by microorganisms, pose a significant concern as they harbour harmful bacteria and compromise the quality and safety of food products. Conventional disinfection methods are often insufficient in killing biofilm bacteria.

BACKGROUND

Cherryfield operates in a state-of-the-art facility and is renowned for their commitment to deliver safe, high-quality pork products. With a strong focus on innovation and continuous improvement, Cherryfield has earned an excellent reputation in the food industry.

Recognising the importance of food safety, the plant sought out the latest technology to address a biofilm challenge. Sterilex was able to help the plant detect biofilm on belt joints and butcher blocks with cut marks. After extensive research and consultation, Cherryfield partnered with Sterilex to trial ProvaCharge Foam, a cutting-edge specialty disinfectant designed to penetrate and disrupt biofilms.

The plant conducted a comprehensive trial of ProvaCharge Foam against their standard cleaning procedure, which currently uses common disinfectant chemistries. During the trial, Cherryfield used ProvaCharge Foam to treat a cutting line at their facility as part of a multi-day shock treatment.

Figure 1: Cutting Line Diagram with Sampling Points



TREATMENT PLAN

1. Foam all surfaces with a <cleaner> followed by a water rinse.
2. Prepare a solution containing 17 mLs **ProvaCharge P500** and 100 mLs of **ProvaCharge F100** for every litre of water in a portable foaming unit.
3. Generously foam the Primals Line to ensure thorough coverage. The product should maintain a minimum contact time of 10 minutes.
4. Rinse surface thoroughly with potable water.
5. Complete steps 3 and 4 a total of 5 times. Prepare additional solution as needed.
6. After final potable water rinse, apply final, no-rinse food contact sanitizer.

RESULTS

Microbial Testing

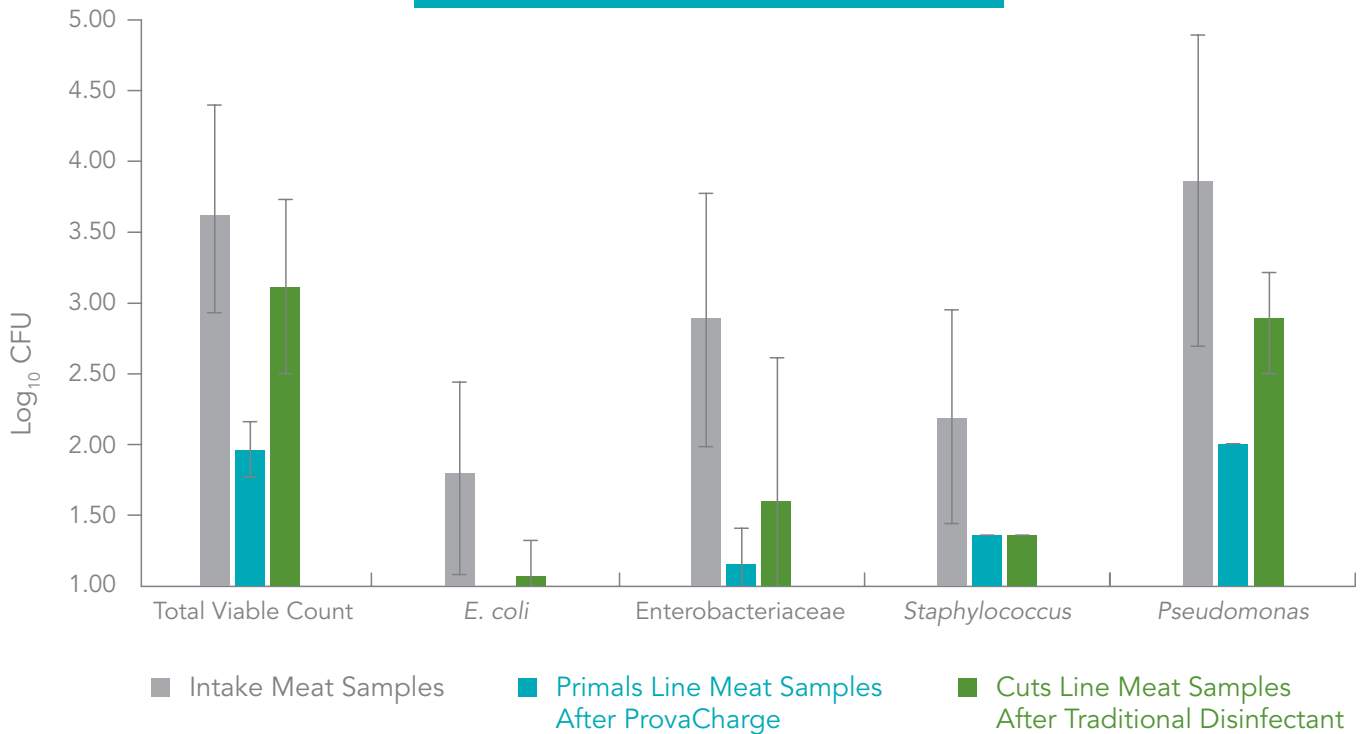
ProvaCharge Foam was applied to specific points on the Primals Line, while the Cuts Line was cleaned with a traditional disinfectant as per the plant's standard procedure. Environmental swabs were taken at various points before and after applying ProvaCharge Foam and the standard disinfectant to assess bacteria concentration and biofilm presence. Meat samples were also collected from different stages of the production process to evaluate the disinfectant's effectiveness against cross contamination.

Figure 2 illustrates that ProvaCharge Foam provided a greater kill [reduction] of bacteria than the traditional disinfectant. Figure 3 shows ProvaCharge Foam also helped reduce TVC (Total Viable Count), Enterobacteriaceae, *E. coli*, *Staphylococcus*, *Pseudomonas* and *Salmonella* counts on meat samples, factors that may contribute to shelf life.

Figure 2: Surface Swab Results

LINE	SAMPLING POINT	ROUND	PRE-CLEANING TVC	POST-TREATMENT TVC
Primals Line	S1	ProvaCharge Treatment 1	>3000	<10
	S1	ProvaCharge Treatment 2	20	<10
	S2		620	<10
	S3		220	<10
Cuts Line	S4	Traditional Disinfectant Treatment	20	<10
	S5		530	440
	S6		80	<10

Microbial Recovery from Meat Samples



ADDITIONAL BENEFITS

Environmentally Friendly

Cherryfield is committed to environmental responsibility. ProvaCharge Foam is a sustainable solution: it's compatible with most waste-water systems, its water-soluble formulation uses less water during rinse, and its active ingredients have a low residual profile.

Easy Implementation

The integration of ProvaCharge Foam into Cherryfield's existing cleaning routine was seamless — saving both time and effort for staff.

Positive Customer Feedback

Cherryfield received positive feedback from customers and suppliers for their proactive approach to consumer safety using innovative technology.

CONCLUSIONS

This trial shows that ProvaCharge Foam is a disinfectant proven to attack and kill bacterial biofilm. Its superior killing power can help plants — like Cherryfield — solve their most challenging micro issues.

ProvaCharge Foam:

- o Demonstrated its ability to effectively penetrate biofilms and significantly reduce microbial presence on various surfaces.
- o Improved Cherryfield's hygiene standards by decreasing bacteria concentration on the Primals Line.
- o Enhanced food safety by playing a pivotal role in reducing harmful pathogens.

By leveraging the latest technology and embracing ProvaCharge as a specialized disinfectant, Cherryfield demonstrated its unwavering commitment to protecting consumers and maintaining the highest food safety standards. The successful implementation of ProvaCharge has elevated their reputation as an industry leader, setting an example for other pork processors to prioritise food safety through the adoption of innovative solutions. With continuous improvement and the application of cutting-edge technology, Cherryfield remains dedicated to delivering safe and top-quality pork products to consumers throughout the United Kingdom.



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