

Case Study: Confidential Client

The Challenge

As required by the Virginia Department of Health/ Division of Shellfish Sanitation (DSS), processors must develop and implement a Hazard Analysis Critical Control Point (HACCP) plan. The cooking process of blue crabs must be validated, and repeatable in a consistent manner to ensure that harmful microorganisms are destroyed.

This validation is performed by evaluating heating times, internal product temperatures, and environmental temperatures.

Mesa Labs conducted an experiment to ensure a crab processing retort cooking process met HACCP requirements.



Mesa experts installed 15 MPRF DataTrace temperature data loggers, 2 DataTrace pressure data loggers, and 1 DataTrace Repeater, equipped with a DataTrace Antenna, into a saturated steam retort. All of the data loggers were programmed using version 1.3 of the DataTrace Pro Software and set to record data at 15 second intervals, with a 15 second RF data transmission rate.

The crabs were steamed in 3 vertically-stacked cages, with each cage containing approximately 368 lbs. of live crab. The cooking operation was conducted for 8-10 minutes and reached between 240 °F and 250 °F. The DataTrace Pro Software monitored the data logger pressure and temperature data in real time and verified that the cooking operation was progressing through the required steps to successfully achieve the conditions required to kill any microbes, specifically *Listeria monocytogenes*, in the crabs and crab meat.

By using Mesa's MPRF data loggers to monitor their cooking operations in real time, the company was able to meet the HACCP requirements and ensure the safety of their crab meat and crab products.

