

## SUCCESS STORY 98

# VALIDATION OF THE CLEAN IN PROCESS (CIP) SANITIZATION OF FREEZER EQUIPMENT USED IN READY-TO-COOK APPLICATIONS



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How can I validate the “CIP” thermal sanitization of processing equipment, such as spiral freezers used in daily clean down?

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### Situation and background

Abbyland Foods, a supplier of ready-to-eat meat products in the U.S., was already using the Datapaq® system to successfully validate their conveyor cookers and freezers as part of HACCP compliance procedures. The value of the MultiPaq21 data logger was further increased by using it to also validate the CIP sanitization process applied to spiral freezers during daily clean down operations. The Datapaq system allowed monitoring of the internal metal surface temperatures to validate that they reach the necessary safe 74°C (165°F) to kill microorganisms through the application of in situ hot water jets. The MultiPaq21 system was hardwired externally to the freezer with thermocouples inserted into metal test plate “coupons” located strategically around the freezer tunnel.

### The winning solution

- Single temperature monitoring solution flexible enough to be adapted to suit varying product and process requirements
- Lethality calculations based on thermal profiles of product cook cycles assist in validating HACCP Critical Control Points for Biological Hazards.
- Thermograph “Thermal Contour Map” view of cook and freezer allows quick identification of hot and cold spots.
- Accurate quick validation tool for freezer clean down sanitization

### Savings made

- Optimization of zone settings in linear ovens to maximize throughput and certify product safety
- Characterization of heating effects across the mesh belt in ovens and freezers to maintain product quality and cook consistency
- Investment in single system provides a value solution for multiple plant temperature monitoring needs.

### KEY FACTS

**Customer’s End Product**  
Sausage and burgers

**Max Temperature Reached**  
Cooking:  
150 to 260°C (300 to 500°F)  
Freezing:  
-18 to -30°C (0 to -20°F)  
Sanitization: 74°C

**Duration of Process**  
Cooking 3 to 15 mins  
Freezing 30 mins  
Sanitization <1 hour

### PRODUCT AND BENEFITS



#### MultiPaq21 DP2186

- 8 Channel IP67 data logger with  $\pm 0.2^\circ\text{C}$  (0.4°F) accuracy

#### Food Insight™ software

- Thermal contour view of temperature deviation across cooker or freezer belt
- Fully certified and traceable validation report with accurate lethality data

#### Thermal barrier TB5011 Food Core probe

- Interchangeable probe types to suit product/application need (Cook, freeze, sanitization, and others)

### Contact us.

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