



FOOD & DRINK PROCESSING & PACKAGING

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**TRUSTED PERFORMANCE.  
UNBEATABLE VALUE.**

# Efficient Accurate Cook CCP validation with full $P_u$ Analysis

As part of any Food processors HACCP program validation of cook and chill processes is a critical and significant task taking time, effort, and resources.

Phoenix<sup>TM</sup> have developed a thru-process temperature monitoring technology specifically for this task designed to meet the challenges of the food processing market. Ideal for the validation process for any new cook regime, new product, or annual process certification.

From a temperature profile it is possible to accurately quantify product safety (pasteurisation) knowing both the temperature, and time at temperature, of the product.

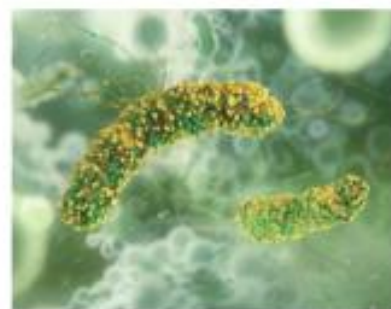
The Pasteurisation Value ( $P_u$ ) is the equivalent cook time for the temperature profile at the nominated reference cook temperature. Basically, the calculation converts each data point in the profile trace to an equivalent time at the reference temperature which is then summed. The  $P_u$  value (mins) is divided by the decimal reduction time to give the resulting number of log/decimal reductions in the micro-organism population. Many processors look for a minimum lethality of 6 log. For L Mono (*listeria monocytogenes*) the minimum target  $P_u$  is therefore  $6 \log \times 16.2 \text{ s (Dt)} = 1.62 \text{ mins}$  which is rounded up to 2 mins hence the specification  $70 \text{ }^\circ\text{C} / 158 \text{ }^\circ\text{F}$  for 2 mins.

The Phoenix<sup>TM</sup> system is offered with a custom designed software package, Thermal View Food software. The software allows set-up and control of the data logger but also full review and analysis of the profile data collected. As part of the comprehensive analysis suit the software provides recognised and approved lethality calculations allowing quantification of food cook safety. For a specific target micro-organism, the software will calculate  $F_0/P_u$  and or number of log/decimal

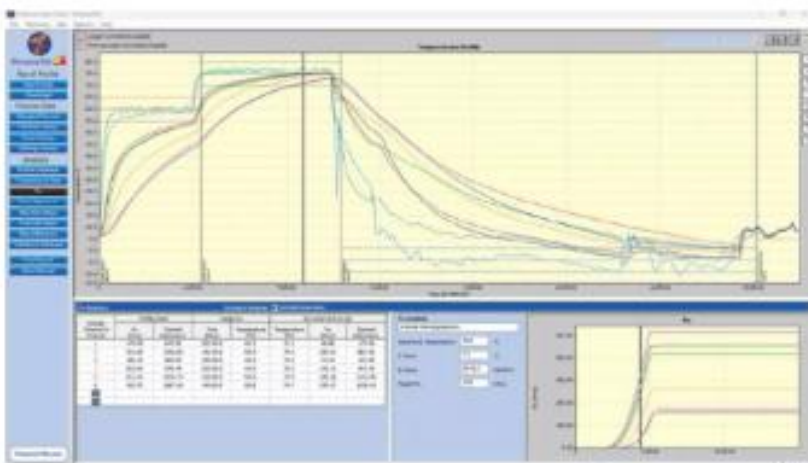


reductions achieved by the cook profile to quickly determine whether the Cook Critical Control Point (CCP) has been achieved. The lethality results can be viewed either numerically or graphically.

The lethality calculation gives you the accuracy you need to prove food safety. At the same time the confidence to potentially reduce cook time or temperature to improve productivity, yield, and quality without compromising safety.



**Contact Phoenix<sup>TM</sup> to help Find, Fix and Forget your Food Cook Problems! further Information [www.phoenixbxtm.com](http://www.phoenixbxtm.com)**



# Efficient HACCP Cook & Chill CCP Validation



**PhoenixTM**  
Phoenix Temperature Measurement

*Where experience counts!*



**Product Safety**  
**Process Efficiency**  
**Improved Product Yields**  
**Rapid Fault Finding**  
**Full HACCP Certification**

**Thru-process temperature monitoring solutions for all your cook applications**

## PhoenixTM Technology

- Accurate IP67 data logger (Type K or T)
- 10 Measurement Points for full oven mapping
- Thermal barrier options to suit cook regime
- Comprehensive thermocouple range
- Standard miniature thermocouple plugs
- Calibrated thermocouple options
- Food trays and thermocouple jig options
- Full lethality (Fo/Pu) and reporting
- Real Time RF Telemetry options
- Local efficient calibration and service support



## Phoenix Temperature Measurement

25 Earith Business Park, Meadow Drove, Earith, Cambridgeshire PE28 3QF, UK  
T: 01353 223100 E: [sales@phoenixtm.com](mailto:sales@phoenixtm.com)

[www.phoenixtm.com](http://www.phoenixtm.com)