



# Cooking

## Background

The process of cooking food can be achieved by many different methods and using all manner of different equipment, from simple domestic cookers to large scale continuous industrial cooking tunnels. Optimisation of cooking conditions and temperature measurement/control is something that often concerns companies when wishing to maximise their product yield.

Over the years staff at frperc have built up a considerable wealth of experience both from carrying out research and through problem solving for industry involving most types of cooking, including forced air, steam, immersion, microwave and pressure cooking processes.

## How frperc can help

We can help clients optimise their cooking processes to ensure the desired quality and microbial safety while maximizing yield. The optimisation of the cooking process requires an in depth knowledge about the nature of the product being cooked as well as the method of heat transfer being used. At frperc we have many different tools at our disposal to investigate what is happening to the product and what is happening within the cooking equipment.

Temperature is obviously one of the most important parameters that needs to be measured during cooking and we have a range of different thermocouple (multipoint probes), thermistor, infra-red and other devices to monitor and record temperature within, on the surface and around food products.

We have a food processing hall that allows us to carry out practical cooking (and cooling) trials using pilot and industrial scale systems away from the restrictions of the production environment.

As well as performing practical trials (on or off-site) we can offer our computer modelling techniques to investigate the effect of an extended range of cooking conditions, including cooking temperatures, product sizes and compositions on cooking time, etc.

**To discuss any aspects of developing a new cooking process, optimising an existing process or solving a processing problem, please contact us on +44 (0)1472 582400 or email us on [frperc@grimsby.ac.uk](mailto:frperc@grimsby.ac.uk)**