



Case Study

Patties Foods Stays Cool with Loma Scientific

Patties Foods Pty Ltd is a family owned company that produces frozen pies, pasties, sausage rolls, quiches, Danish pastries, doughnuts, waffles, cheesecakes and fruit pies under a variety of labels including the iconic Australian brands of Patties, Four'N Twenty, Herbert Adams and Nanna's. It was established in the small seaside town of Lakes Entrance in Victoria, Australia, in 1966 where it started as a small cake shop. Since then Patties Foods has grown into the largest pie manufacturer in Australia producing over 30,000 tonnes of goods each year. Many of the products are sold through Australia's major retail outlets including Woolworths, Coles Myer and Metcash as well as many foodservice companies.

Patties Foods first learnt about Loma approximately 10 years ago when its Australian distributor, Inspection Systems, installed a pipeline metal detector at their plant. In 2001, Brad Grubb, Inspection Systems' Managing Director, advised Patties that a high quality new temperature-measuring device was becoming available and lent them a prototype model of Celsius to test out in their production facility. Until then Patties Foods had been measuring temperatures of products coming out of their spiral freezer at about -18°C by drilling a hole to insert a hand-held temperature probe at least every 30 minutes, 24 hours a day. There were all sorts of issues associated with this procedure, the most important of which was the risk of injury to the operator from the power drill or, even worse, by sticking the probe into his/her hand.

Patties Foods recognized that by using Celsius they would not only eliminate the risk of injury to their staff, but they would also avoid an incredible amount of waste since a probed pie is no longer fit for sale.

Celsius is a temperature-sensing device designed to accurately sense the temperature of chilled food packs through the use of microwave thermometry. Microwave thermometry revolutionises the temperature testing of chilled food due to its non-contact and non-destructive nature that eliminates the need for intrusive probes causing product wastage. Results are recorded electronically and the user-friendly control panel incorporates an easy read display. The temperature trend of a product can be displayed to determine the efficiency of the freezer. Barcode identification of a product also allows the results of several products to be tested and displayed separately so the performance of the three spiral freezers used by Patties Foods can be monitored.



After trialling Celsius for just a few days, the benefits of the machine were obvious. The procedure was considerably quicker and more reliable. Products coming out of the freezer are not always at

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the same temperature so the temperature of one sample may not be representative of all the products. Loma's Celsius is able to sense the temperature of a number of samples at once and displays the average temperature of the products - a far more valuable parameter.

According to Adrian Rijs, Scientific & Regulatory Affairs Manager at Patties Foods, "The benefits of Loma Celsius were felt immediately by our temperature testing staff. Indeed after just a few days of trialling it, they could not imagine working without it. We are not aware of any other system that can provide the same service, let alone rival Celsius."

Adrian continues: "Our customers demand that products we supply meet a certain temperature but they do not specify how we should measure it. The requirement is to preserve the food safety and quality not only of Patties' products but also to protect any other frozen products which they may come in contact with when transported or stored. Celsius has certainly made this quality control objective easier to achieve with more reliable results.

Patties Foods, which is currently using three spiral freezers, reveals that Celsius has enabled them to save as much as \$18,000 in a year by allowing them to measure the temperature of at least 6 products in an hour. Additionally Patties Foods is also saving on the cost of replacing probes that used to be lost or damaged prior to using Celsius. The quicker temperature measurement has also impacted on the work efficiency of their packaging employees.

As well as improving the quality control process, Loma Celsius can also lead to overall energy efficiencies in the production environment. With strict temperature monitoring capabilities, production managers can guarantee that product is at the correct temperature and can keep chillers at the most energy-efficient levels, without unnecessary wastage.

Adrian concludes: "We are very happy with Loma's Celsius and can only commend the research team and manufacturers who developed this fantastic instrument. We are also pleased to have played a small part in testing Celsius in a manufacturing environment."
