

# Measurement Solutions for Food and Beverage

A business of

**CallaghanInnovation**



## VALUE TO INDUSTRY

- Optimise process and product development through sensitivity analysis
- Reduce risk that your product will not meet performance and regulatory requirements
- Monitor and control food and beverage manufacturing processes and cold chain storage
- Minimise waste and save money
- Gain traceability to internationally recognised measurement standards

**Measurement is a key input** in the monitoring and control of food processing. Whether it involves temperature, humidity, pressure, volume, or appearance, the Measurement Standards Laboratory of New Zealand (MSL) offers access to internationally accepted and traceable measurements to improve your manufacturing processes.

We have world experts in the measurement of temperature that can help you understand and optimise cold chain control for food storage, and as well as fermentation or other temperature-critical processes in food production. Our non-contact methods for temperature measurement provide assurance that your processes are under control and operating within safe limits.

MSL can help you understand how to meet your regulatory requirements at the beginning of an R&D project so that your product development is compliant.



## CASE STUDY

Currently there is no straightforward and cost-effective method for determining the volume of a packaged carbonated beverage. MSL was approached by New Zealand's trade measurement unit, Trading Standards, to develop a method that can be used by beverage industries such as micro-brewers and soft drink manufacturers. This is to check if the packed carbonated beverages contain the correct quantity after bottling.

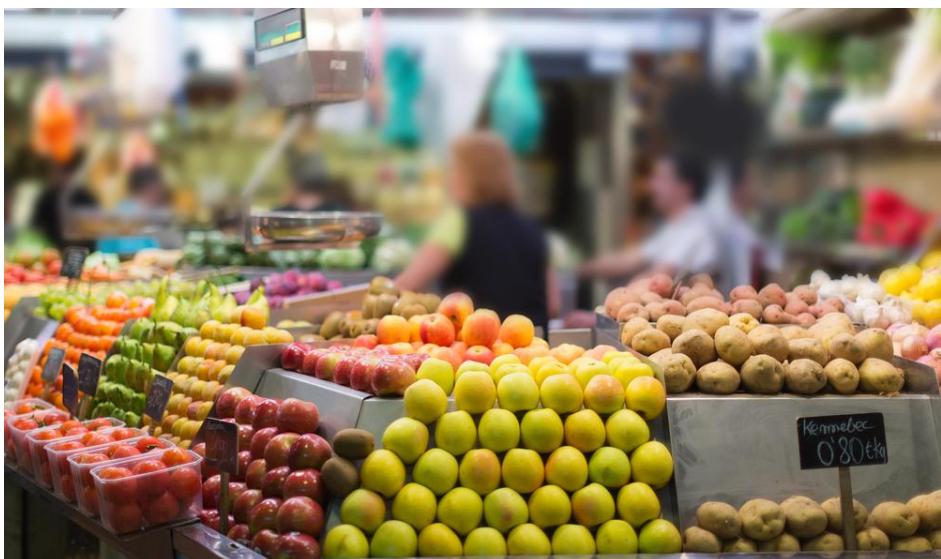
MSL scientists have proposed a simple yet traceable volume determination method that is based on weighing and density measurement. We have investigated the technical issues surrounding the effect of carbonation on the density of the beverage and how the measurement procedure can fit conveniently into the beverage packaging line and the legal enforcement tolerances. This project is underway and the method can potentially be beneficial to Trading Standards and small-scale beverage manufacturers in New Zealand.

## SOLVING YOUR R&D PROBLEMS

Our staff have worked with companies to improve their food packaging; one customer wanted to extend the shelf-life of their milk by controlling exposure to light, another customer needed to solve problems with their food and beverage packaging not sealing properly. We are also developing methods to help companies more accurately measure volume during bottling of their carbonated beverages.

In another industry which uses colour to identify and select produce, MSL identified and provided remedies for an error occurring in those colour measurements.

We've also helped factories meet health and safety requirements around pressure during fermentation processes and lighting in meat processing plants.



## MORE CONSISTENT PROCESS OUTCOMES

The Measurement Standards Laboratory provides measurement advice, training, and calibration of reference equipment. We can help you think about what you need to do in your next iteration of product development or assist in finding those efficiencies in your process.

Whether it is more consistent outcomes you're looking for from your food manufacturing process or you want more confidence in making decisions based on measurement—contact the Measurement Standards Laboratory at Callaghan Innovation.



### CONTACT US

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