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FOOD INNOVATION AUSTRALIA LIMITED
SHARING KNOWLEDGE

low temperature | preservation | perishable foods

High pressure processing

What the technology does

High pressure processing (HPP) is a technology developed to pasteurise food products without heat in order to destroy yeasts, moulds and harmful bacteria, and extend the shelf life of chilled perishable products. The process involves placing products into a liquid bath, then very high pressures (around 500 megapascals) are applied within a pressurised container to destroy spoilage bacteria.

HPP is already in regular commercial use in Australia. Globally it has been applied to a wide range of products and most recently, was extended to dairy with an HPP-treated milk.

How is the technology different?

HPP is an energy-productive alternative to traditional preservation methods such as heating, chemical preservatives or formulation. The benefits of HPP are that the character of the original product is maintained, with its sensorial and nutritional properties remaining almost unchanged, like that of raw material. A further benefit is that juices treated by the HPP method can be stored longer than other traditional chilled products.

FAST FACTS

- Type of innovation:** New to category
- Time to commercialise:** Available now
- Approximate cost:** Medium (more than \$100,000) to large (more than \$1 million)
- Complexity:** Specialist

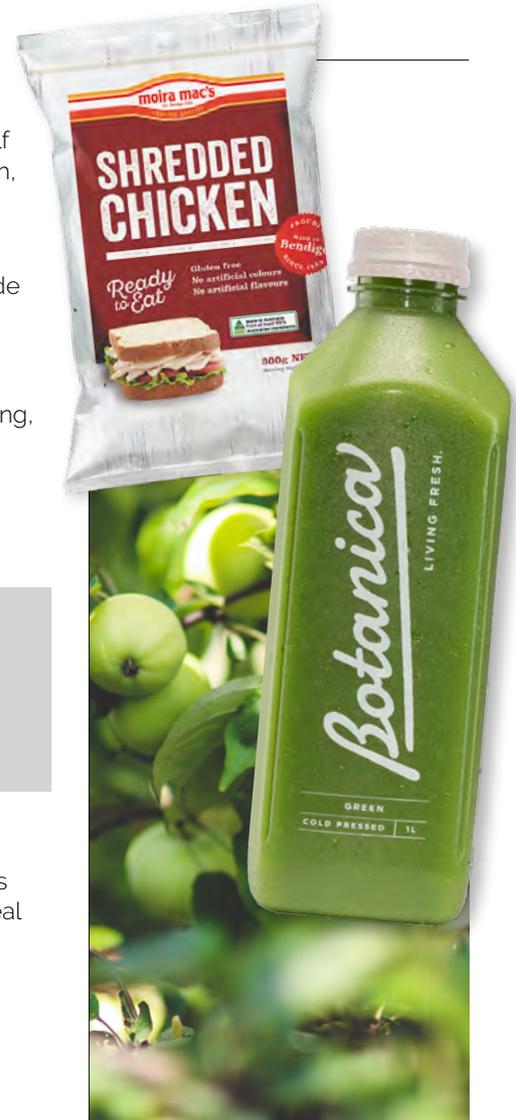
Application and uses

HPP technology is suitable for chilled perishable products such as juices, dips and sauces made from fruit and/or vegetables. It can also be used for meat, poultry, seafood and meal solutions. The original product needs to be non-compressible and packed in a watertight packaging in order to be successfully processed by this method.

CSIRO's food innovation centre developed the HPP technique and has a pilot plant in Werribee, Victoria which is now being used by a number of companies.

What the experts say

HPP is fast becoming world's best practice for fresh, clean, natural food and beverage preservation. It works best with solid/liquid materials which can benefit from a reduced heat exposure during processing. There are a number of local third-party tolling companies with know-how, processing capacity, NPD insights, incubation investment and commercialisation pathways to assist. The current market opportunity is great and adopting HPP can also open exciting new distribution channels to domestic and export markets.



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