



Revolutionizes
Ready-to-Eat Meats



Eliminate preservatives, increase shelf life,
enhance/maximize food safety

The All-Natural Way to Extend Your Products Shelf Life



High Pressure Processing

HIGH PRESSURE PROCESSING (HPP) is cold pasteurization in pure water; it uses ultra-high pressure purified water to keep packaged food pathogen-free and stay fresh longer. At very high pressures bacteria such as *Listeria*, *E. coli*, *Salmonella*, and *Campylobacter* are inactivated. HPP helps producers increase food safety and extend shelf-life while providing consumers with nutritious, natural, flavorful food.

AVURE helps producers implement HPP from recipe development and process validations to installation, regulatory affairs, and post-installation support.

Avure operates an in-house HPP research and development facility in Erlanger, Kentucky, USA to help partners perfect their products, formulas and packaging. Additionally, Avure collaborates/partners with several certified laboratories worldwide to facilitate HPP product and process optimization and regulatory requirements. Avure has an extensive library of process and package validated studies conducted for regulatory approval, which are available for clients considering HPP technology.

Avure's HPP Technology Revolutionized the Ready-to-Eat Meat Industry

High Pressure Processing from Avure provides food safety, quality extension, and longer shelf-life while reducing dependence on preservatives.

More than ever, consumers are demanding natural Ready-To-Eat Meats (RTE) that have fresh, just prepared characteristics, without preservatives. Processors want to meet consumer demand for these clean-label products, but can't sacrifice shelf-life or food safety.

Regulatory agencies such as the US FDA, USDA/FSIS, Health Canada, and others require processes that are reliable, traceable, and effective. Commercially proven, high pressure processing (HPP) technology from Avure meets or exceeds the demands of consumers, processors, and regulatory agencies by giving enterprising processors the ability to create clean label products and extend market reach while at the same time lowering safety risks.

HPP Product Advantages

- Increases food safety without the use of heat, chemicals or irradiation, and creates no by-products.
- Maintains the just off the production line sensory and nutritional properties.
- Pressure transmission is instantaneous and uniform.
- Extended shelf life increases distribution opportunities, reduces returns and sensitivity to cool chain irregularities, and allows more efficient production scheduling.



Avure's HPP processing inactivates pathogens, extends shelf life.

FOOD SAFETY OF CHICKEN SAUSAGES

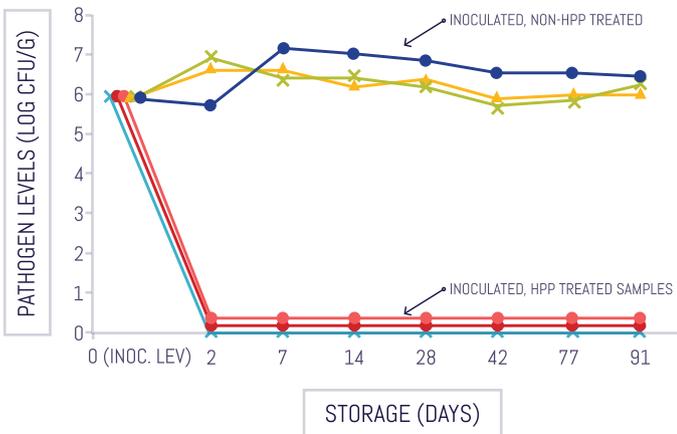


Figure 2. The fate of inoculated pathogens in cooked chicken sausages with and without HPP (5930 bars; 180 seconds) during storage at 4°C (Average, n=3). <10 CFU/g (confirmed as Negative/25g with enrichment procedure) is plotted as 0.

SHELF LIFE EXTENSION

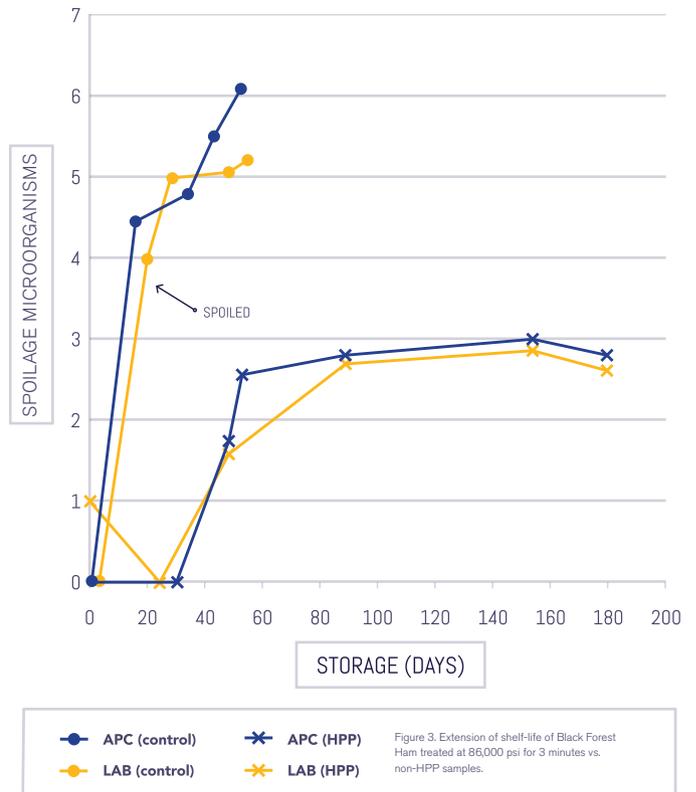


Figure 3. Extension of shelf-life of Black Forest Ham treated at 86,000 psi for 3 minutes vs. non-HPP samples.

Extended Shelf Life for Exceptional Profitability

Many products that have a 30-day shelf-life using chemical preservatives and/or other heat treatments can achieve up to a 120-day shelf-life with HPP.

What would the effect be of more than doubling the shelf-life of product in your current distribution channels? Longer product shelf life can enable you to reach new markets, release new products, and reduce returns. And, the regulatory approvals of HPP, which have been achieved with Avure's collaboration, reduce border restrictions as well – including meeting the USA's zero tolerance policy on Listeria. Let Avure, with our HPP science, technology and application know-how, help you reach those possibilities.

When RTE meat products, including cold cuts and hams, are subjected to the very high pressures of HPP for a few minutes or less, the levels of spoilage organisms are reduced significantly, and pathogens are inactivated. HPP-treated meats retain their original sensory qualities such as texture, color and nutritional content throughout their shelf-life. Their quality extension reduces product spoilage and returns.

In addition to retaining the natural properties in RTE meats, while reducing dependence on chemicals and other quality degrading processes, HPP also extends product shelf-life to more than twice as long as "traditional" preservation methods.

Trusted Science and Technology

The HPP science and technology behind Avure's HPP systems is well proven. Exposing food to the pressures generated by HPP (600 MPa/87,000 psi) inactivates foodborne pathogens while leaving the natural organoleptic qualities of food intact. HPP enables consumers to get the natural and safe RTE meat products they demand, right on their local grocer's shelf.

A Post-Package Process

Products are processed in the final consumer package, eliminating the potential for recontamination. Most existing plastic food packages are already suitable for HPP, including vacuum and gas-flushed. The load/unload process can be fully automated, integrating with conventional equipment and HACCP programs while allowing for rapid changeover between product line variations in food type, package size, and format.



Avure HPP for Ready-To-Eat Meat Application



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JBT's greatest value in PRoCARE® services comes from preventing unexpected costs through smart, purposeful, and timely maintenance based on unmatched knowledge and expertise. PRoCARE service packages are offered as a maintenance agreement in various service levels, depending on your production and cost management requirements.



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OUR BRANDS



ALSO REPRESENTING



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