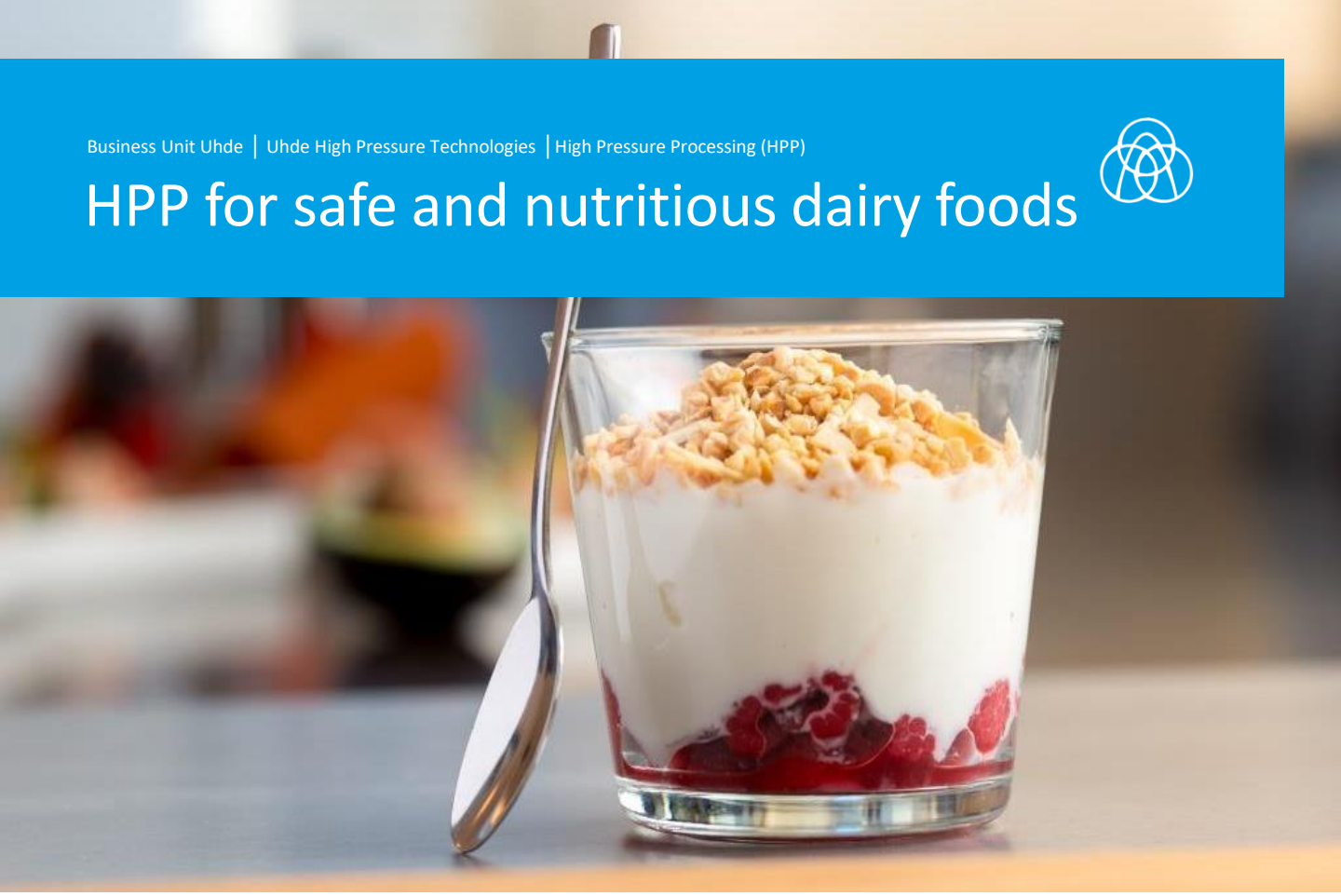
Business Unit Uhde | Uhde High Pressure Technologies | High Pressure Processing (HPP)

HPP for safe and nutritious dairy foods



Safe – fresh- nutritious

High-pressure processing (HPP) efficiently inactivates pathogen and spoilage microorganisms in yoghurts, dressings, sandwich fillings, cheese, raw milk, milk smoothies, without using heat or additives. Delivering subtle energy to dairy products preserves at the same time minerals, vitamins, flavour, bioactive compounds and pigments.

The advantages at a glance:

Save costs – grow reputation

Fresh dairy products are highly perishable due to high nutritional value and water content, and almost neutral pH value. HPP efficiently eliminates pathogens such as Listeria, Salmonella and E.coli in dairy products which extends shelf life and minimizes the risk of costly recalls.

Minimize post-contamination risk

Hydrostatic pressure acts uniformly and instantly throughout the product. It prevents product deformation and ensures sophisticated pathogen inactivation. And a big plus: the products are treated in their final packaging so there is no recontamination e.g. from transport or packaging.

Contact

Boris Brockhaus
Product Manager HPP
P: +49 2331 967- 302
F: +49 2331 967- 370
boris.brockhaus@thyssenkrupp.com

Jasna Ivanovic
Food Technologist HPP
P: +49 2331 967- 386
F: +49 2331 967- 370
jasna.ivanovic@thyssenkrupp.com

Uhde High Pressure Technologies GmbH
Buschmühlenstraße 20
58093 Hagen

www.uhde-hpp.de

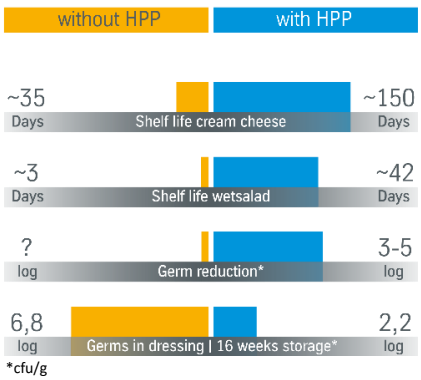
Reducing risk and prolonging shelf life

High hydrostatic pressure between 400 MPa and 600 MPa reduces pathogens in dairy foods in just a few minutes.

Using HPP reduces Salmonella and Listeria in raw milk for up to 5-6log and extends its shelf life to 40 days.

Today, HPP is used to preserve yoghurts, fresh and semi-cured cheeses, salad dressings, sandwich fillings, probiotic and colostrum drinks.

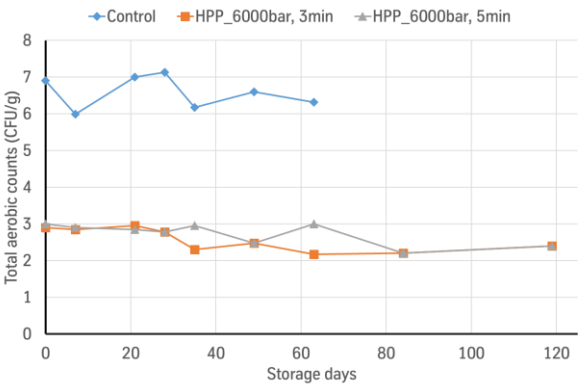
HPP effects on safety and shelf life of dairy products



*cfu/g

Note: Values can vary depending on product

Fresh cheese stored at 5 °C (with and without HPP)



Source: High Pressure Research

HPP TREATED

High added value products

Quality

Non-thermal treatment preserves vitamins, aromas, antioxidants, pigments, amino acids, simple sugars.

High-pressure treatment affects size and distribution of milk fat globules and improves stability against creaming off.

HPP induces structural changes of casein and whey proteins which are relevant for improving functional and sensorial properties of dairy products.

Improved technological properties and functionality

High-pressure treatment induces structural alteration of milk proteins, which helps faster rennet coagulation and cheese ripening, improves water holding capacity and yields creamier yoghurts.

HPP favours fat crystallization which shortens the ageing time of ice-cream mix or enhanced ripening of cream for butter. Most recently, HPP has been considered for the preservation of human milk and decreasing allergenicity of dairy products.