



FOOD INGREDIENTS  
SERVICE CENTER EUROPE



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## Food-safe steam pasteurization that leaves organic product qualities intact

The rapid rise in popularity of organically grown products combined with an increasing focus on food safety means effective treatment is of the essence. Regulatory and market-specific requirements are strict and consumer expectations are high. While perceived as healthier because of the absence of chemical residues, organic products are still especially vulnerable to microbiological contamination because of their specific agricultural practices and the complexity of their supply chain. Without proper treatment, this could result in non-compliance, costly product recalls and consumers losing confidence in organic trademarks.





### The urgency of a homogeneous and highly effective treatment

Pasteurization and sterilization have gradually gained in importance for organic products as their popularity grew and the range of processed organic food products increased. However, as 'organic' is a generic term for a group of very different products and ingredients, and consequently is not a uniform product itself, an effective treatment for all remains challenging.

### The solution for this problem: the FISCe pasteurization unit

At the heart of our pasteurization unit is the ROTOSOL® dynamic pasteurizer, which offers steam-vacuum pasteurization in a rotating autoclave. Fully controlled double-jacket heating in a closed vessel ensures precise adjustment of pasteurization temperatures from 60°C to 121°C (140°F to 249°F). Full and equal penetration with dry saturated steam in a partial vacuum ensures a highly effective treatment. Steam pasteurization significantly and effectively reduces microbial load and infestations, such as:

- Pathogens (salmonella, E. coli, enterobacteria)
- Spoilage microorganisms (moulds, yeasts)
- Thermal-resistant spores
- Insects at all stages of their lifecycle

### Minimal impact on product quality

The pasteurization treatment is effective even at the low end of the temperature range, which makes it safe for a broad range of delicate and heat-sensitive organic products. It excludes moisture pick-up, does not require drying after treatment and has a minimal impact on the organoleptic qualities of your products. Delicate products are safe in the autoclave's gentle and pre-adjustable rotation. The process can be adapted to your desired log reduction.

### Guaranteed no cross-contamination of products

Steam pasteurization is 100% natural and completely chemical and radiation free, and approved by all (international) organic authorities. Short batch processes are ideal for organic products and provide full traceability for each load, with automatic recordings of all critical process parameters such as temperature, pressure and timing. An automated, integrated CIP system ('cleaning in place'), with multiple high-impact spray heads for efficient cleaning, ensures the exclusion of cross-contamination with conventional products.

### Fully certified for FSSC 22000 and Skal

Food Ingredients Service Center Europe (FISCe), strategically located between the major European ports of Rotterdam and Antwerp, is your trusted partner for the pasteurization and sterilization of organic products. We are certified for food safety (FSSC 22000) and organic processing (Skal). Our systems and processes are constantly verified through periodic assessments by accredited certifying agencies and the Dutch Food Safety Authority, as well as through regular internal audits.

### Wide range of products

The design of the pasteurizer as a rotating autoclave enables a free-flowing process. This dynamic process is ideally suited for treatment of organic products of all shapes and sizes, such as whole kernels or pieces, leaves and roots, as well as cut, diced and sliced products, even the most delicate. The system is well-equipped for the following low-moisture organic product groups:

- Spices
- Dehydrated herbs
- Edible seeds
- Dehydrated vegetables
- Cereals and grains
- Pulses

### Fully controlled processing environment

The design of the pasteurization unit and its processes guarantee the highest level of food safety and reliability, with no compromises on quality. Incoming product is checked for quality, after which it is placed in a dedicated bin above the automatic loading gate. The product is then loaded into the autoclave through a retractable tube that makes a closed connection between the bin and the gate. After the scientifically developed pasteurization programme is finished, the treated product is unloaded through an automatic gate in a fully controlled and isolated clean room, where it is cooled and packed according to your requirements and specifications. Throughout the entire process, strict cleaning and sanitation programmes exclude cross-contamination. After a round of strict final checks, the treated product leaves the clean room for transport in fully closed packaging.