

OSMOFOOD®

The OSMOFOOD® system combines an exclusive extrusion-laminating system with an osmotic dehydration technique in order to produce a dried meat roll.

This process is the result of a partnership between ADIV and Kaufler. It is the first true continuous process introduced in the dried meat industry.

Developed by:



and



Industrial property:

- **ADIV DEVELOPMENT Patent:**
 - registered on July 13th 2001
 - delivered on October 16th 2004 with n° A235-b-9749 FR
 - This patent covers the process allowing the production of a continuous band of dried meat. The title is "Minced meat transformation".
- **Extensions:**
 - USA: A 235-B-9749-WO
 - Brazil: A 235-B-9749-BR
 - Europe: EP 1406501 of July 1st 2002

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OSMOFOOD®

An ADIV DEVELOPMENT Patent

The OSMOFOOD® system produces a dried meat roll by combining an exclusive extrusion-laminating system with an osmotic dehydration technique.



This technology has been demonstrated in the framework of the ProSafeBeef project (FOOD-CT-2006-36241, Integrated Project in FP6) on 27th February 2008 in Clermont-Ferrand, France. The following information was provided by ADIV and KAUFLE, the OSMOFOOD® equipment manufacturer.

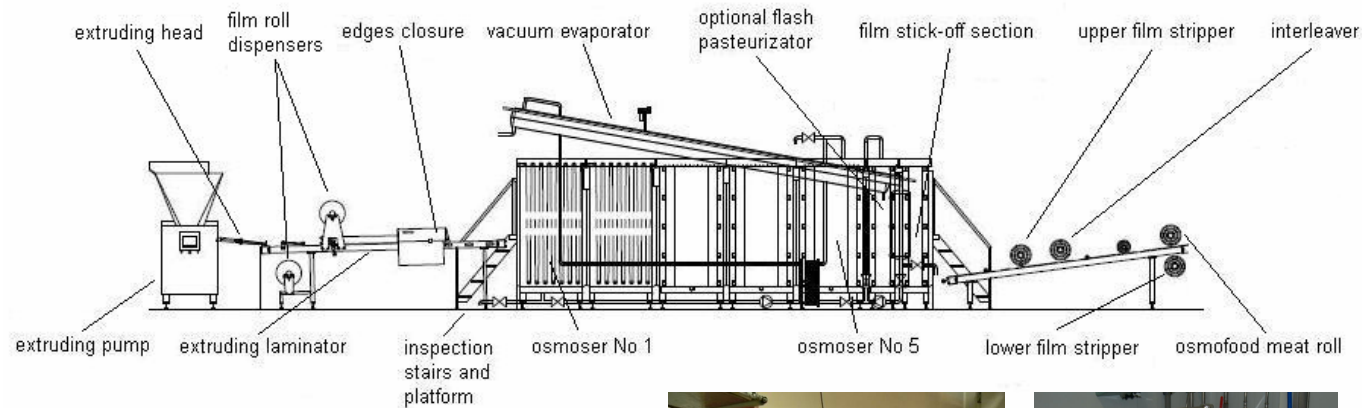
OSMOFOOD® process

1. Addition of salt, nitrite, spices and flavours to the chopped meat
2. Introduction of the meat in the extruding pump
3. Processing of the extruded meat band of 500 mm wide and 2.5 mm thick packed between two films into a textured and dried meat band of 500 mm wide and 1.5 mm thick
4. Immersion into dehydrating osmotic bath during which the meat dries and get coloured through nitrosation
5. Continuous exit of the dehydrated product



Raw materials

- Raw materials for which the process is known to be secure:
 - Beef, pork, lamb
 - Poultry including palmipeds
 - Mix meat/vegetable (for specific raw materials)
- Raw materials for which the process has to be improved:
 - Fish
 - Vegetables



Pilot plant facilities

- A 1000 m² pilot plant is at your disposal at ADIV, Clermont-Ferrand, FRANCE
- Capacity of 120 kg dried meat/hour



Transformation possibilities

- Snacking, ready meals, sandwiches
- Substitute meat products
- Nutritional products

Storage

Under vacuum or modified atmosphere:

- during several weeks at room temperature
- during several months under controlled temperature

Further possible processes and packaging

- Direct delivery of OSMOFOOD® meat rolls to further processors
- On line cutting in various shapes and packing
- On line topping, saucing, and assembling
- OSMOFOOD® meat rolls slicing and packaging
- In line cooking/boiling
- Etc.

Benefits of the OSMOFOOD® technology

Innovation:

- Opening of new niche markets for meat consumption
- Creation of new and innovative products with superior texture and flavour
- Application possible to all meats

Efficiency:

- Time saved: total process time around 3 hours, 5 to 100 times less than traditional drying methods

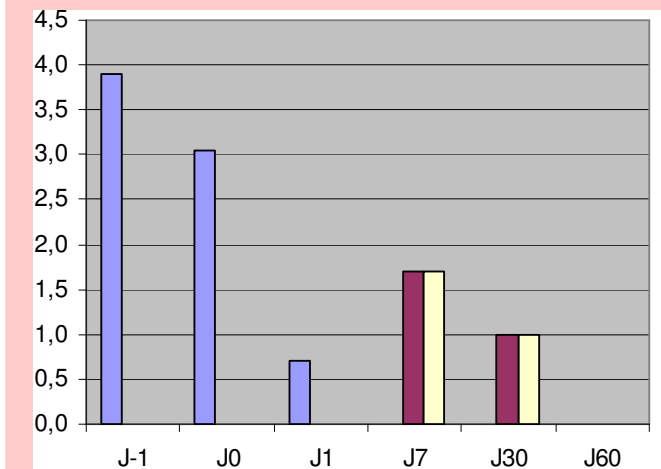
Cost:

- Low production costs

Safety:

- Safe processes (salt, light acidification, drying) resulting in dramatic water activity reduction
- Decontamination effect: immediate bacterial account drop down

Histogram: Decontamination with the basic process (cold drying ≈ 15°C) on the *Staphylococcus aureus* (e.g. of turkey meat for a drying yield of 58%)



Staphylococcus aureus reduction by 10

- Under modified atmosphere packaging
- Under vacuum atmosphere

