PIC

2ND PLANT INTERCLUSTER MEETING

RIBATEJO - PORTUGAL

INOV' LINEA

TECNOLOGIA ALIMENTAR

Centro de Transferência de Tecnologia Alimentar

mais CENTRO
Programa Operacional Regional do Centro
QREN
QUADRO DE REFERÊNCIA ESTRATÉGICO NACIONAL
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INOV.LINEA is an integral part of TAGUSVALLEY - Associação para a Promoção e Desenvolvimento do Tecnopolo do Vale do Tejo, located in Abrantes.

TAGUSVALLEY Associates: **CMA . NERSANT . IPT + TEJO ENERGIA . IPS**

Intervention Areas:
> Metalworking
> Communication and Information Technologies
> Renewable Energies
> Food Technology

INOV.LINEA IS AN ANCHOR PROJECT OF CLUSTER AGRO-INDUSTRIAL DO RIBATEJO

COLLECTIVE EFFICIENCY STRATEGIES – DEVELOPMENT OF INNOVATIVE PRESERVATION PROCESSES AND TECHNOLOGIES.

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Objectives

- ✓ **To support the food and agricultural sectors**;
- ✓ **To encourage the use and experimentation of alternate food preservation technologies;**
- ✓To contribute to the increase of production quality and to the improvement of the sectorial competitiveness;
- ✓To support companies increasing their productive efficiency and efficacy;
- ✓To promote cooperative relationships between different entities (Universities, Technological Centers, Institutes, Companies, among others);
- ✓To promote technology transfer and food industry innovation processes;
- ✓To support Mediterranean feedstock;

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INOV.LINEA supports food and agricultural sectors

Valorization of traditional products, specially those contained in the Mediterranean diet, such as: quince, bell pepper, kaki persimmon, pomegranate, tomato, sausage - enchidos, olive oil, among others;

Technology: Encouragement and experimentation of innovative preservation technologies;

- Applied investigation;
- Direct answer to companies request and problems;
- Connection between knowledge generation centers and the industry;

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Technological Capability

Pilot Plants: Wide range of equipment capable of real scale reproduction of industry processes;

Process: olive oil; meat; fruit, vegetables and pulps;
Preservation: all foods;

Advantage to enterprises?

No need to occupy technical resources or infrastructure of the company

No need to stop the production lines

With pre-industrial scale for the scale-up is effective

Chance to test conservation technologies without need acquisition

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Food Preservation lines:

✓ Providing to entreprises a range of alternative technologies, or complementary, processes commonly used with the effect of temperature.

Advantage?

- ✓ To increase shelf life
- ✓ To increase quality
- ✓ Reduce use of food aditives
- ✓ Clean tecnology
- ✓ Development of news produts

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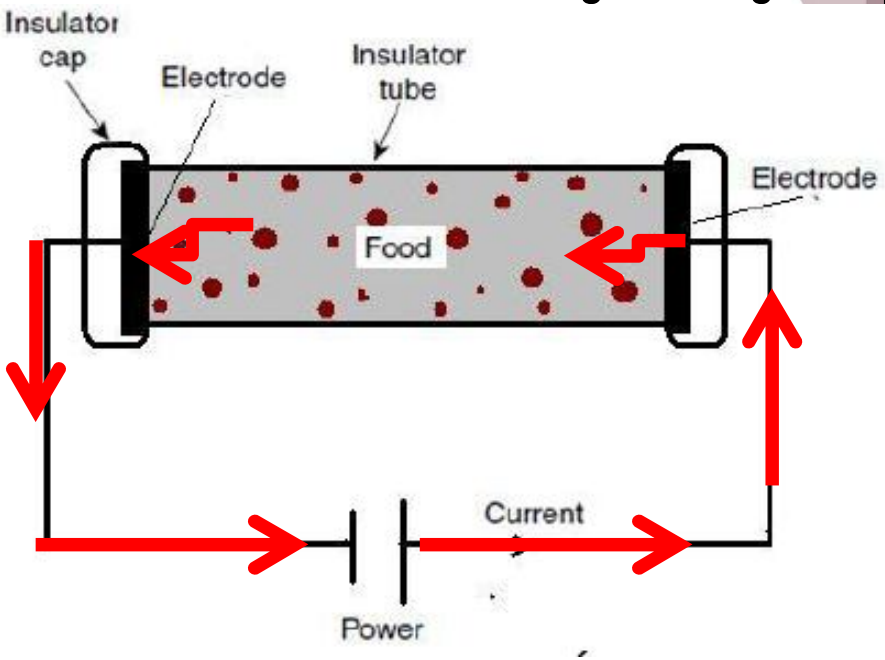
Food Preservation lines:

- **Conventional Pasteurization**

Use of temperature, applied through a surface, promote pasteurization.

- **Ohmic heating**

Use of electric current causing heating and promote pasteurization



Different in the delivery of energy to the product

Without surface to the heat transfer

Fast and uniform heating

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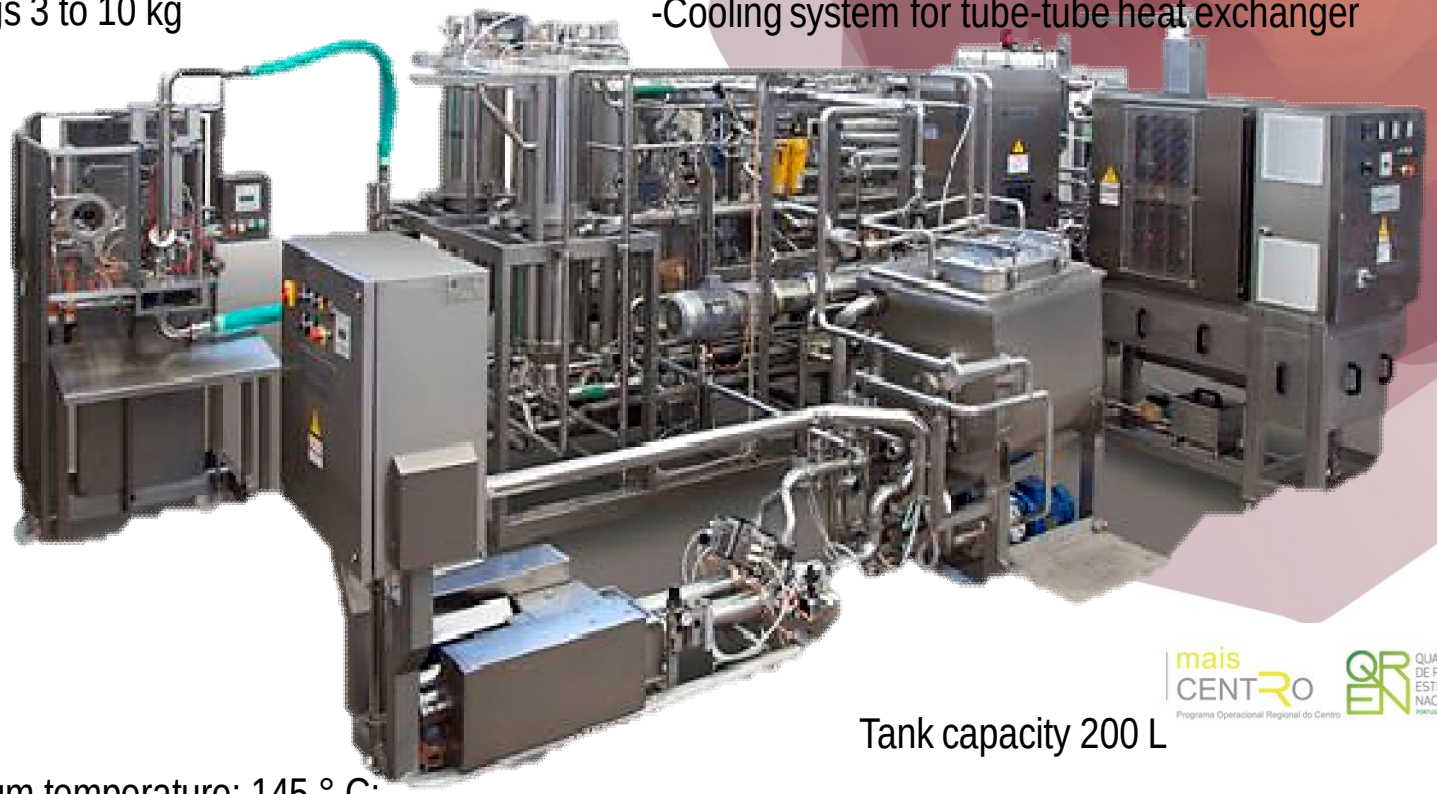
Food Preservation lines:

- **Conventional and ohmic heating**

An aseptic filling machine head, the filling capacity of 200 kg/h in bags 3 to 10 kg

-Heating system scraped surface heat exchanger with heated water;
-Cooling system for tube-tube heat exchanger



Generator ohmic double-stage

Tank capacity 200 L

Maximum temperature: 145 ° C;

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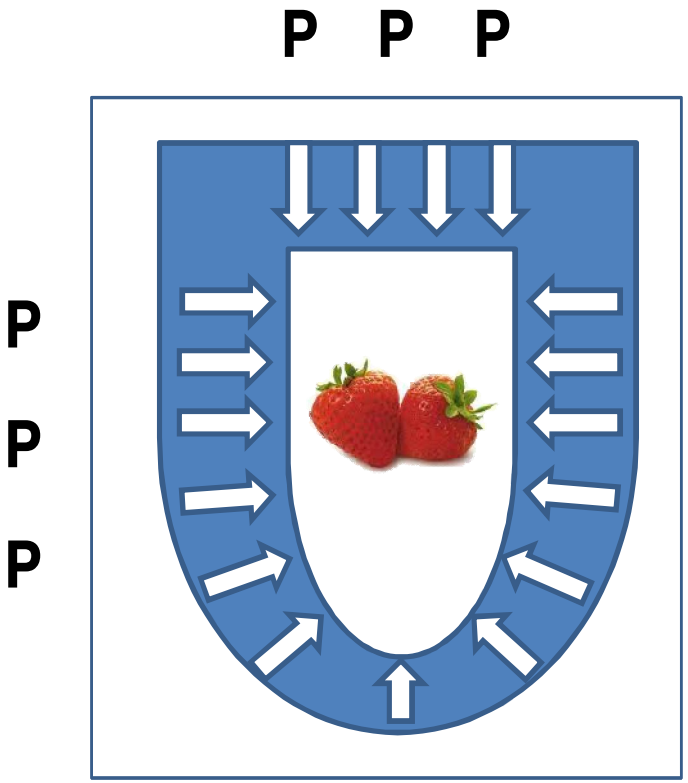
Preservation lines:

- **high hidrostatic pressure**

Use of high pressure that applied to food, promotes a cold pasteurization.



Provides a uniform transmission of pressure on the food;

Promote the microbiological stability without the use of chemical additives;

Use for the development of products with functional properties.

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Food Preservation lines:

• high hidrostatic pressure

Maximum pressure: 800 MPa
Temperature: -20 ºC to 130 °C
Capacity of 5 l
105 mm diameter of the basket;
590 mm of height of a basket;

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Food Preservation lines:

- Ultra-sounds
- UltraViolets
- Microwave or Radiofrequency

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Main Capabilities

- Experimentation with High Pressure, Ohmic, Ultra-Sound and U.V. technologies, among others.

- Real scale reproduction of primary unit operations and industrial processes of several sectors – development, process maximization and yield improvement;

- New products support and development;

- Consumer panel: acceptance and preference tests; consumer analysis;

- Chemical and Microbiological analysis with our partner a.logos;

- Rheological tests and analysis;

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Main Capabilities (cont.)

- Stability Tests;
- Technical and economic evaluation of industrial processes;
- Encouragement of the substitution of synthetic compounds with natural ones;
- Product characterization; qualitative evaluation (from an analytical and sensorial perspective) of food products;
- Definition and evaluation of normalization standards for food and agricultural industrial feedstock.

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