

PRESS RELEASE



Towards healthy and sustainable breakfasts.

The HEFESTO project begins, which aims to develop new baking systems to reduce consumption and process times.



The vast majority of industrial cooking and baking lines use large tunnel kilns that run on gas and emit CO₂ into the atmosphere. The CO₂ emissions from the heat application in the food industry are of the order of 0.0772 kg of CO₂-equivalent per megajoules of heat generated (8.3 % of the whole industry total emissions, and 1.3 % of the gross total of emissions). With these yields, during the year 2014 the Spanish agri-food industry emitted 253,435.94 tons of CO₂ to the atmosphere, 90 % of which come from heat application processes.

However, since the Montreal (1989) and Kyoto (1997) protocols, a roadmap towards emission reductions and better resource management is initiated, this culminating with the Europe 2020 objectives and subsequent agreement (the first one of a global nature) of the Paris summit, in which the world major powers commit themselves for the first time to a marked reduction in their CO₂ emissions.

The objectives of Europe 2020 in relation to climate change and energy sustainability are:

- Reduce greenhouse gas (GHG) emissions by 20 % compared to 1990 levels.
- 20 % renewable energy.
- 20 % increase in energy efficiency.

Objectives that are very difficult to fulfil while the energy efficiency of the production lines is such that it is not profitable to undertake it with clean technologies, and while the use of fossil fuels (whose cost is less) is still necessary.

Microwave treatments are within the so-called emerging technologies that are currently being used in various agro-food processes.

Microwave technology has found important applications and is expected to continue to improve in order to achieve added value in the processes. It is perceived that, given the needs of alternative energy sources, and provided that current deficiencies can be minimized,

microwave technology can greatly contribute to economic development, in addition to the unique advantages it possesses, given its environmentally friendly character.

The HEFESTO project aims to make a quantum leap in the application of microwaves to the industrial processes of the food industry and specifically in the breakfast sector, with practical application in biscuit, pastry and cereal lines.

The consortium, lead by “Imasdea” (Grupo Siro), is complemented by institutes and research centres with grade of excellence and wide experience in the fields of microwave radiation, food engineering or technologically advanced materials, such as ITACA and IIAD of the Universitat Politècnica de València and the Institute of Ceramics and Glass belonging to the CSIC. “RBT Sistemas”, is a SME with a long history of collaborating in R&D. It has great experience in the design and construction of microwave ovens with special characteristics and it is the perfect element for transferring the results to the industrial fabric.



"Generation of new sustainable baking systems to reduce consumption and processing times". Project RTC-2016-4946-3 founded by MINECO within the National Program for Research, Development and Innovation Oriented to the Challenges of the Society, within the framework of the National Plan for Scientific, Technical and Innovation Research 2013-2016. Project Co-financed with ERDF (European Regional Development Fund) of the European Union.

