



**Presentation of the vocational programme  
for employees in bakery sector.  
Methodology of the development of  
teaching material and tools of assessment**

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- ▣ **The consumers demand bakery products to be safe, hygiene with special nutritional characteristics :**

**With reduced fat content, sugar, with reduced saturated lipids, with reduced concentration in salt, fibre content, inorganic salt, vitamins.**

## **In order the baker to reach the demands of the consumer**

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**It is necessary for the staff of the baker to be educated at the following issues;**

- **Improvement of the produced bakery and staff products.**
- **Design and production of new bakery and pastry products.**
- **Knowledge in new technologies, novel ingredients and additives in bakery and pastry.**

# EFET-QBake

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**The Hellenic Food Authority (EFET) takes part to the project on behalf of Greece «Qualifications for the European Bakery Industry(Q-Bake)».**

**The project is financed by the European Commission (Leonardo da Vinci Development of Innovation Project, funded by the EC through the EACEA).**

**Organizations that participate in Greece:  
SEVT, PETET**

# The main tasks in QBake

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**The main objective is to develop an appropriate training course for employees of the sector who otherwise will not have the opportunity of updating their knowledge and skills with respect to new Technologies implemented in the Bakery Industry.**

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- The QBake course for baking technologies addressed the current Training Needs in 4 European countries (UK, Romania, Greece, SPAIN). The course comprises 4 modules, each aimed at updating the knowledge of those workers in the bakery sector with some years' experience but with no formal certification.
- **The modules are the following:**
  - Fats and Oils in baking-fat substitutes
  - Sourdough in baking technology
  - Shelf life issues, preservatives, packaging, water activity
  - Improving agents in bakery products

# Contents of QBake

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- The Project will develop the course and validate it with a group of trainees, who will obtain the Europass certificate, acknowledging their new competencies.
- A predictive training analysis study has been performed by the participants in the project in the 4 participating countries (Greece, Romania, Spain and the United Kingdom).
- Based on the Training need analysis results, the consortium undertakes the building of a training program (including materials, methodology, implementation considering work duties, validation tools, etc).

# Develop training material

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- ❑ **Each country will develop every module in English and all the modules will be exchanged among all the countries of the project.**
- ❑ **In the next two months all the training material will be translated in the language of each country in order a innovative training material to be complete.**



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## Vocational programme in Greece

**A vocational programme will be developed for three days in the School of bakery and pastry, OAED Galatsiou in May 2013.**

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The training material includes:

- 1) Presentations of the teachers**
- 2) Practical exercise of the trainees in pilot plant,**
- 3) Presentation of the training video for each module,**
- 4) Questions for the evaluation of the assessment of trainees.**

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## The training material of Qbake

- ▣ Includes module duration of 3-4 hours and
- ▣ Evaluation of trainees on each module

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## Model of evaluation

- ❑ **Written evaluation with topics and questions of multiple choice  
(10 questions of multiple choice and 5 short questions)**
- ❑ **presentations, trainers, and in total of Evaluation of the training material and the trainees.**

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## Proposed vocational programme

### **1<sup>st</sup> day (7 hours).**

Sourdough in production of bread. 3 hours

Additives and improvers. 3 hours

Bakery fats and fats substitutes. 1 hour

# Proposed vocational programme

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## **2<sup>nd</sup> day (7 hours)**

Sourdough in the production of the bread.

1 hour.

Fats in bakery. 2,5 hours

Preservatives, packaging, water activity.

3,5 hours.

## **Project for the trainees in the form of presentation**

# Proposed vocational programme

## **3 rd DAY (7h).**

Review. 1 hour.

discussion. Questions-answers . 1 hour

Presentation of the trainees 5 minutes for every presentation.

Written evaluation. 1 hour

Evaluation of the vocational programme. 1 hour

# Participation of trainees

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At least 10 trainees, maximum 16 trainees for every country.

- ▣ The expenses will be covered by the project.

- ▣ **AIM:** The training will be expanded in other trainees in the future.

The course can be slightly adapted to country's requirements



# Trainers of Qbake

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## **Greece:**

- Theofanis Georgopoulos  
TEI Larissa, department of Food Technology
- Nikolaos Valet  
Chipita, department of R&D

## **Rumania**

Alina Culetu and Gabriela Mohan  
Researchers at IBA centre

## **UK**

Andrew Hughes and Paul Caterall (Researchers and trainers at Campden BRI)

## **Spain**

Researchers and trainers from CETECE (Technological Centre for Cereals))

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- ▣ **The selected trainers from each country participated in training workshop that took place in Campden, UK, from 18<sup>th</sup> to 20th December 2012.**

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- 1. the trainers validated the training material and the structure of the vocational programme together with all the other trainers from the other countries in Campden.**
- 2. the trainers studied the modules and suggested training techniques, raw materials, machinery, methods**

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**3. trainers took part in the development of the training video for the application of the programme in the future**

**4. trainers suggested method for the evaluation of the trainees.**

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- ▣ **The trainers after the validation of the training material, they will provide the material in Greek language before the organisation of the vocational programme for the staff in bakery and staff sector in Greece, May 2013.**

## **GREECE (EFET). Use of fats in bakery and pastry (influence of the addition of fats, types of fats, fat substitutes)**

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- ❑ **Lipids and fats in bakery and pastry (types, sources, composition, oxidation, nutritional value, trans lipids)**
- ❑ **Specifications, quality control when we receive of fats in bakery**
- ❑ **Applications and functionality in bakery products (puff pastry, biscuits, cake), creams, chocolate.**
- ❑ **fat substitutes (hydrocolloids, proteins, emulsifiers)**

## 2) Spain (AINIA). Sourdough in the production of bread

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- ❑ **Terminology of sourdough-types-methods of production.**
- ❑ **Microbiological, rheological and biochemical changes during the production of sourdough**
- ❑ **Influence of sourdough on the final product**
- ❑ **Sensory characteristics of the bread with sourdough**
- ❑ **Nutritional value-shelf life**

### **3) RUMANIA (IBA). Preservatives, preservation of bakery wares, packaging, water activity**

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- ❑ **Categories of preservatives in bakery**
- ❑ **Prolong the shelf life of bakery wares (retarding of staling, microbial spoilage)**
- ❑ **Packaging methods (e.g. modified atmosphere)**
- ❑ **Water activity (influence on shelf life, measurement methods)**



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## 4) UK (CAMPDEN)

**Additives and improvers: hydrocolloids, oxidants, emulsifiers, enzymes**

**Enzymes in baking: effect on texture, colour, staling**

**hydrocolloids: applications, functionality**

# Campden trainers Workshop

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**Improving agents module (video preparation):  
Influence of different improvers on the bread volume  
(ascorbic acid, emulsifiers, amylases)**



# Measurement of loaf volume

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# Campden trainers Workshop

**Fats module (video preparation): Evaluation of the production of cake with fats that are preserved in different temperature (temperature of refrigerator and room temperature)**



# Campden trainers Workshop

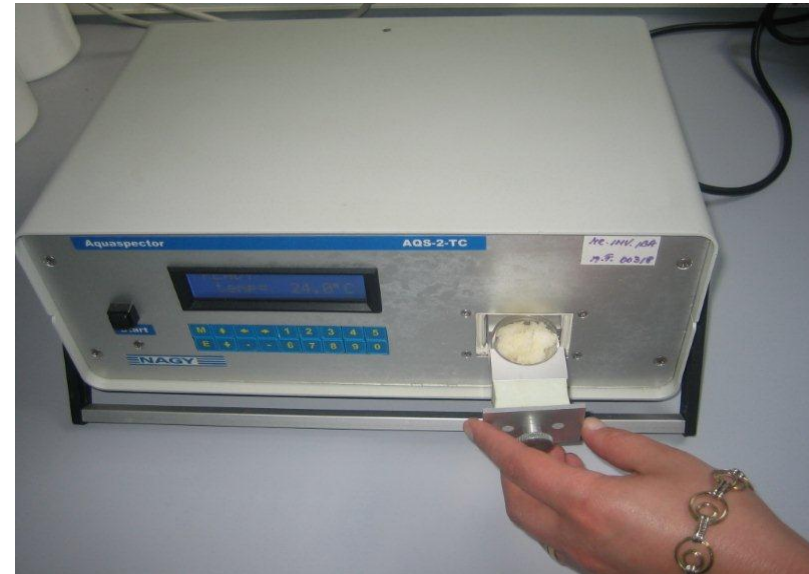
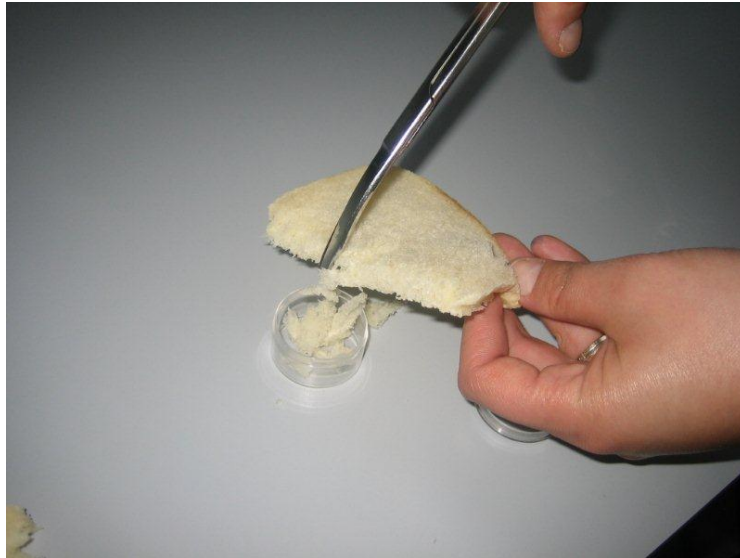
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**Sourdough module (video preparation) Production of bread using different types of sourdough**



# Campden trainers Workshop

## Shelf life module (video preparation) Measuring water activity.



# Information on internet

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- **A multilingual blog**

**<http://qbakeproject.wordpress.com/>**

**With the subject of baking technology providing recent knowledge about new developments in baking technology.**

- **The site of the project**

**([www.qbake.eu](http://www.qbake.eu)) provides general information about the project.**

**The organizations that take part in the project using their networks for the diffusion of the new events of the programme.**

# THANK YOU FOR YOUR ATTENTION

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