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English version

## Nutritionally correct low-cost food for people at risk of poverty - General, specific requirements and labelling of CHANCE food

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EUROPEAN COMMITTEE FOR STANDARDIZATION  
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## Foreword

This CEN Workshop Agreement has been drafted and approved by a Workshop of representatives of interested parties on 2014-06-08, the constitution of which was supported by CEN following the public call for participation made on 2013-03-06.

A list of the individuals and organizations which supported the technical consensus represented by the CEN Workshop Agreement is available to purchasers from the CEN-CENELEC Management Centre. These organizations were drawn from the following economic sectors: universities and research institutes on food technology, nutrition, biotechnology for health and well-being, medicine, food science laboratories, small and medium food enterprises, international humanitarian organisation.

The formal process followed by the Workshop in the development of the CEN Workshop Agreement has been endorsed by the National Members of CEN but neither the National Members of CEN nor the CEN-CENELEC Management Centre can be held accountable for the technical content of the CEN Workshop Agreement or possible conflict with standards or legislation. This CEN Workshop Agreement can in no way be held as being an official standard developed by CEN and its members.

The final review/endorsement round for this CWA was started on 2014-06-12 and was successfully closed on 2014-08-10. The final text of this CWA was submitted to CEN for publication on 2014-09-11.

Below is the list of the organizations which officially took part to the development of this CWA:

- Institute for medical research, Centre of research excellence in nutrition  
University of Belgrade – Serbia
- Q&T group, Dept. of Food Science, Faculty of Science  
University of Copenhagen - Denmark
- Nutrition and Consumer Behaviour / Biotechnology for Health and Well-being  
VTT Technical Research Centre of Finland - Finland
- Ministry of Health – France
- Proteus Gold Ltd. – Hungary
- Bio-NMR Laboratory  
Alma Mater Studiorum - Università di Bologna - Italy
- Dipartimento di Scienze e Tecnologie Agro - Alimentari  
Alma Mater Studiorum - Università di Bologna - Italy
- Dipartimento di Scienze Chirurgiche  
Alma Mater Studiorum - Università di Bologna - Italy
- Faculty of Medicine  
Vilnius University - Lithuania

- Institute for Food Technology of Novi Sad – Serbia
- SASMA/Serbian association of small and medium enterprises – Serbia
- Red Cross Spain - Spain

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Comments or suggestions from the users of the CEN Workshop Agreement are welcome and should be addressed to the CEN-CENELEC Management Centre.

## **Introduction**

Since an increasing of concerns about population having a poor quality food intake, in particular related to the low income part of population, the European Commission promulgated a research activity in the frame of the 7<sup>th</sup> Framework Programme in order to find out healthy food products of added value for population at risk of poverty.

The EU Call was explicated as follows:

Health-value-added food products for population groups at risk of poverty (KBBE-2010-2-3-03, Call: FP7-KBBE-2010-4)

Objective: development of food products accessible to targeted social groups, especially low income population groups. The products will be adapted to the preferences, acceptance and needs of persons of lower socioeconomic status. In particular, attention will be paid to lower production costs, high accessibility, convenience, sensory quality, nutritional quality, shelf-life, and safety. Besides food technology, research will include input from social science, consumer science and nutrition.

Expected impact: Affordable and accessible health-value-added food for targeted social groups in different European countries, especially low-income populations, produced by an optimized utilization of resources. Effective exploitation by research institutions and food industry, including SMEs, of the products developed. This area of research and development has received little attention by now. The results will support the application of the European nutrition and social policy.

Answering the EU call, the CHANCE project was presented and it was selected as best project in the topic of the call itself.

The CHANCE consortium concentrate its technical and scientific efforts in developing the activities related to the identification of population groups at risk of poverty (ROP), conversion of nutritional criticality data into targets for new foods, followed by nutrimentabonomics to assess the metabolic consequences of critical diets for individuals at ROP and in integrating the outcomes of such developed strategy in the development of methodologies, processing scale and optimization for food production and packaging, all dedicated to the design and assessment of CHANCE food, beverages and meals. In turn, the obtained outcomes drive the activity of technology transfer and test of production at the industrial level. RTD partners give a “transversal” contribute to all technological tasks working on specific aspects of the ingredient selection, formulation and evaluation of the final product, either food or meal. The SMEs’ involved in CHANCE are organized on the basis of both vertical (food products) and horizontal (whole RTE – ready-to-eat meal) work division. The overall impact of CHANCE is also realized through communication, dissemination and exploitation activities.

The list of CHANCE EU project Work Packages is reported here below:

- WP 1: Identification of population groups at risk of poverty
- WP 2: Conversion of nutritional criticality data into targets for new foods
- WP 3. Nutrimentabonomics to assess the metabolic consequences of critical diets for individuals at ROP
- WP 4: Development of methodologies for food production and packaging
- WP 5: Processing scale up and technology optimization
- WP 6: Technology transfer and test of production

- WP 7: Communication, Dissemination and Exploitation
- WP 8: Coordination and Management

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## 1 Scope

This document specifies the general, specific requirements and labelling criteria of CHANCE food. It provides specific (as described below) requirements relevant to raw and functional ingredients, food design and formulation, production process, packaging design and analytical approach for fruit, vegetables and animal origin based CHANCE food and ready-to-eat CHANCE pizza.

Moreover, it provides general labelling requirements for CHANCE food.

NOTE Together with the labelling requirements indicated in this document, CHANCE food satisfies also all relevant EU and National labelling regulations.

## 2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

### Chemical and microbiological methods for meat products

EN 12821 *Foodstuffs - Determination of vitamin D by high performance liquid chromatography - Measurement of cholecalciferol (D3) or ergocalciferol (D2)*

EN 12822 *Foodstuffs - Determination of vitamin E by high performance liquid chromatography - Measurement of  $\alpha$ -,  $\beta$ -,  $\gamma$ - and  $\delta$ -tocopherol*

EN 12823-1 *Foodstuffs - Determination of vitamin A by high performance liquid chromatography - Part 1: Measurement of all-E-retinol and 13-Z-retinol*

EN ISO 6579, *Microbiology of food and animal feeding stuffs - Horizontal method for the detection of Salmonella spp (ISO 6579:2002)*

EN ISO 6888-1, *Microbiology of food and animal feeding stuffs - Horizontal method for the enumeration of coagulase-positive staphylococci (Staphylococcus aureus and other species) - Part 1: Technique using Baird-Parker agar medium (ISO 6888-1:1999)*

EN ISO 7937, *Microbiology of food and animal feeding stuffs - Horizontal method for the enumeration of Clostridium perfringens - Colony-count technique (ISO 7937:2004)*

ISO 936, *Meat and meat products — Determination of total ash*

ISO 937, *Meat and meat products — Determination of nitrogen content (Reference method)*

ISO 1442, *Meat and meat products — Determination of moisture content (Reference method)*

ISO 1443, *Meat and meat products — Determination of total fat content*

ISO 1841-1, *Meat and meat products — Determination of chloride content — Part 1: Volhard method*

ISO 3496, *Meat and meat products — Determination of hydroxyproline content*

ISO 13730, *Meat and meat products — Determination of total phosphorus content — Spectrometric method*



ISO 16649-2, *Microbiology of food and animal feeding stuffs — Horizontal method for the enumeration of beta-glucuronidase-positive Escherichia coli — Part 2: Colony-count technique at 44 degrees C using 5-bromo-4-chloro-3-indolyl beta-D-glucuronide*

### **Sensory analyses**

EN ISO 5492, *Sensory analysis - Vocabulary (ISO 5492)*

EN ISO 8586, *Sensory analysis - General guidelines for the selection, training and monitoring of selected assessors and expert sensory assessors (ISO 8586)*

EN ISO 13299, *Sensory analysis - Methodology - General guidance for establishing a sensory profile (ISO 13299)*

ISO 3972, *Sensory analysis — Methodology — Method of investigating sensitivity of taste*

ISO 4121, *Sensory analysis — Guidelines for the use of quantitative response scales*

ISO 5496, *Sensory analysis — Methodology — Initiation and training of assessors in the detection and recognition of odours*

ISO 6658, *Sensory analysis — Methodology — General guidance*

ISO 11036, *Sensory analysis — Methodology — Texture profile*

ISO 11132, *Sensory analysis — Methodology — Guidelines for monitoring the performance of a quantitative sensory panel*

## **3 Terms and definitions**

For the purposes of this document, the following terms and definitions apply.

### **3.1 CHANCE food**

affordable, health, value added food with a good nutrient profile, designed to overcome nutritional criticalities, improving general accepted food at lower cost

### **3.2 CHANCE Ham**

cooked ham with the addition of pork liver

### **3.3 CHANCE Ketchup**

ketchup made from CHANCE tomato paste with sweetness and specific taste and aroma

### **3.4 CHANCE Pizza-cheese**

pasta filata cheese with properties (melting, texture) similar to traditional mozzarella, made from casein powder

### **3.5 CHANCE Pizza**

pizza based pasta made with germinated soy and bioprocessed brans based ingredient and having a topping with the addition of CHANCE Pizza-cheese, CHANCE Ham and CHANCE Ketchup or CHANCE Tomato paste

### **3.6 CHANCE Tomato paste**

tomato paste made from tomato by-products (peels and seeds) but with flat taste and no sweetness

### **3.7 nutrient profile**

nutrient composition of a food