Traditional foods: a contribution to biodiversity and sustainable diets

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together with
3rd SAFE Consortium International Congress on Food Safety
12th to 14th October 2011, Istanbul, Turkey
Outline

EuroFIR and BaSeFood Projects

Traditional foods

Prioritisation of foods and components

Selection of laboratories

Nutritional composition

Dissemination

Output and benefits
European Food Information Resource Network project

Coordinator - Paul Finglas
Institute of Food Research (IFR) – United Kingdom

Network of Excellence (NoE) comprising of 48 partners from academia, research organisations and small-and-medium size enterprises (SMEs) in 27 countries.

Funded by the European Community’s Sixth Framework Programme

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Your source of food information

Paul Finglas (Managing Director)
Simone Bell (Research and Development Manager)
EuroFIR AISBL

- International non-profit association based in Brussels
- Of food composition data compilers, experts and stakeholders
- Your source for best available food information
- All European food composition datasets
- Membership open for individuals or organisations
Unique range of standardised food information

28
Food composition databases online

> 50,000
Foods

> 13,000
Recipes

> 3,500
Branded foods

Specialised datasets (e.g. eBasis)
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Traditional Foods

- Expression of culture, history and lifestyle
- Key elements that differentiate dietary patterns of each country
- Development and economic sustainability of rural areas
- Preservation of biodiversity
- Lack of nutrient data on traditional foods in most current national food composition table
WP 2.3.1 Traditional Foods

Participating countries

WP-Leader

NOE Coordinator
WP 2.3.1 - Objectives

To define the term “traditional”

To establish a common methodology for the systematic investigation of traditional foods across Europe

To provide new data on the nutritional composition of traditional foods for inclusion in national food composition tables with representative raw ingredients and recipes

To develop dissemination material on traditional foods for each country
Systematic Study of Traditional Foods

- Definition of the term “Traditional”
- Selection procedure of the Traditional Foods and recipes
- Recording and sampling of Traditional foods
- Laboratory selection
- Nutritional Composition of Traditional Foods
TRADITIONAL
Means conforming to established practice or specifications prior to the Second World War.

TRADITIONAL FOOD
Is a food of a specific feature or features, which distinguish it clearly from other similar products of the same category in terms of the use:

• “traditional ingredients” (raw materials or primary foods)
• “traditional composition”
• “traditional type of production and / or processing method”.
Selection of Traditional Foods

**DOCUMENTATION**
- Description of food
- Documentation of traditional character
- Consumption data
- Availability or not of composition data
- Coded references

**PRIORITISATION**
- Traditional character
- Availability and quality of composition data
- Consumption data “Frequent” or “Not frequent”
- Health implications
- Marketing potential

**EVALUATION AND SELECTION**
- List of foods per country were evaluated
- Prioritised list of traditional foods
- 5 Traditional Foods per country were selected:
  - Starter ➔ Two Main dishes ➔ Dessert ➔ Special traditional food
## SELECTED TRADITIONAL FOODS PER COUNTRY

### Austria
- Vegetable soup (National name: Gemüsesuppe)
- Wiener Schnitzel (National name: Wiener Schnitzel – see opposite)
- Cabbage and Noodles (National name: Krautfleckerl)
- Potato dumplings (National name: Erdäpfelknödel)
- Apple strudel (National name: Apfelstrudel)

### Belgium
- Shrimp croquette (Dutch name: garnaalkroket)
- Flemish stew (Dutch name: Vlaamse stoofkarbonade)
- Meat loaf, meat balls (Dutch name: vleesbrood, vleesballetjes)
- Gratin of Belgian omelettes with ham and cheese sauce (Dutch name: gegratineerde hespenrolletjes met wilde o en kaasaus)
- Belgian (Brussels) waffles (Dutch name: Brusselse beslagwafel) – see opposite

### Bulgaria
- Cold soup Tarator (National name: Tarator)
- Veal * Priest’s * stew (National name: Telesko * Popka* yahnia)
- Nettles with rice (National name: Kopriva s oriz) – see opposite
- Pepper relish (National name: Lyutenitsa)
- Pumpkin pastry (National name: Sladkish ot tikva)
<table>
<thead>
<tr>
<th>Country</th>
<th>Traditional Foods</th>
</tr>
</thead>
</table>
| Denmark   | Fatty shells with chicken and asparagus (National name: Tarteletter med hane i asprag)  
            | Hamburger steak (National name: Håkkebøf)  
            | Fried plaice (National name: Slet rødsøppel)  
            | Strawberry stew with cream (National name: Jordbærgrød med fløde)  
            | Apple charlotte (National name: Æblekage) – see opposite |
| Germany   | Smoked ham (Black forest) (National name: Schwarzwälder Schinken) – see opposite  
            | Fried sausage from Thuringen (National name: Thüringer Rostbratwurst)  
            | German ravioli “Swabian” (National name: Maultasch)  
            | Fruit loaf from Dresden (National name: Dresdener Stollen)  
            | Pumpemuckel bread (National name: Pumpemükel Brod) |
| Greece    | Leek sausages (National name: Loukanika me prasso)  
            | Rabbit stew (National name: Kouni stifado) – see opposite  
            | Chickpea soup (National name: Revithia soup)  
            | Must jelly (National name: Moustalevria)  
<pre><code>        | Small tomato of Santorini island (National name: Tomatoki Santorinis) |
</code></pre>
<table>
<thead>
<tr>
<th>Country</th>
<th>Food Item 1</th>
<th>Food Item 2</th>
<th>Food Item 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Poland</td>
<td>Cold soup &quot;chlodnik&quot;</td>
<td>Pork chop (National name: kotlet</td>
<td>Stewed dish made of sauerkraut,</td>
</tr>
<tr>
<td></td>
<td>(National name: chlodnik)</td>
<td>schabowy)</td>
<td>meat and mushrooms (National</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>name: bigos)</td>
</tr>
<tr>
<td></td>
<td>Tree cake (National name: sekacz)</td>
<td></td>
<td>Smoked ewe's milk cheese (Nat</td>
</tr>
<tr>
<td></td>
<td>(see opposite)</td>
<td></td>
<td>ional name: oscypek)</td>
</tr>
<tr>
<td>Portugal</td>
<td>Green cabbage soup (National</td>
<td>Cod fish with chickpeas (</td>
<td>Portuguese boiled dinner – meat,</td>
</tr>
<tr>
<td></td>
<td>name: Caldo verdes)</td>
<td>National name: Bacalhau com</td>
<td>sausages and vegetables (National</td>
</tr>
<tr>
<td></td>
<td></td>
<td>grão) – see opposite</td>
<td>name: Cozido a portuguesa)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Roasted goat kid (National</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>name: Cabrito assado)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Egg and almond sweet from Murja</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>(National name: Toucinho do</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>óleo de Murja)</td>
</tr>
<tr>
<td>Spain</td>
<td>Hot sauce of vegetables (</td>
<td>Thistles in almond sauce</td>
<td>Roasted pepper/aubergine salad</td>
</tr>
<tr>
<td></td>
<td>National name: Mojo Ficón)</td>
<td>(National name: Cardo con</td>
<td>(National name: Escalivada)</td>
</tr>
<tr>
<td></td>
<td>Thistles in almond sauce (</td>
<td>salsa de almendras)</td>
<td>Galician octopus (National</td>
</tr>
<tr>
<td></td>
<td>National name: Cardo</td>
<td></td>
<td>name: Pulpo Feira) – see</td>
</tr>
<tr>
<td></td>
<td>con salsa de almendras)</td>
<td></td>
<td>opposite</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Almond cake from the Alpujarra</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>(National name: Sopillos</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>alpujarrañoles)</td>
</tr>
</tbody>
</table>
Turkey - Selected Traditional Foods

Baklava
Anchovy stew *hamsi buğulama*
Iskender kebab
Pastırma
Tarhana
Recipe – Apple Strudel
Recipe – Apple Strudel
1. **Italian Traditional Food:**
   “Brasato al Barolo” - Braised beef in Barolo wine
   National Institute for Food and Nutrition Research (INRAN)
   Centro per lo Studio e la Prevenzione Oncologia (CSPO).

2. **Spanish Traditional Food:**
   “Soplillos de La Alpujarra” - Almond cakes from “La Alpujarra”
   University of Granada (UGR).
# Laboratory Selection

<table>
<thead>
<tr>
<th>Country</th>
<th>Selected Labs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Austria</td>
<td>WEJ, Kurz, Kuhlmann</td>
</tr>
<tr>
<td>Belgium</td>
<td>RUG</td>
</tr>
<tr>
<td>Bulgaria</td>
<td>NCH</td>
</tr>
<tr>
<td>Denmark</td>
<td>DVFA-N</td>
</tr>
<tr>
<td>Germany</td>
<td>WEJ, Kurz, Kuhlmann</td>
</tr>
<tr>
<td>Greece</td>
<td>ETAT, MAICH</td>
</tr>
<tr>
<td>Iceland</td>
<td>DVFA-N</td>
</tr>
<tr>
<td>Italy</td>
<td>CHELAB</td>
</tr>
<tr>
<td>Lithuania</td>
<td>NVL</td>
</tr>
<tr>
<td>Poland</td>
<td>NFNI</td>
</tr>
<tr>
<td>Portugal</td>
<td>INSA</td>
</tr>
<tr>
<td>Spain</td>
<td>CEINAL</td>
</tr>
<tr>
<td>Turkey</td>
<td>TUBITAK</td>
</tr>
</tbody>
</table>

According to quality requirements

Accredited laboratories

Laboratories participating in Proficiency Testing schemes
Prioritisation of components

55 traditional foods were analyzed

Macronutrients and their components

- Water, ash, total nitrogen (for protein), total fat (individual fatty acids), cholesterol, dietary fibre, total sugars, individual sugars (glucose, fructose, galactose, sucrose, maltose, lactose), oligosacharides and starch

Minerals & trace elements

- Sodium, potassium, calcium, magnesium, iron, copper, phosphorus, selenium, zinc
Nutritional Information

**Baklava (Gaziantep)**

**Ingredients:**
- 5 kg Antep pistachio nut; with shell
- 1 kg Wheat flour (Type 550)
- 1 kg Butter
- 591 g Whole milk (min. 3% fat)
- 343 g Sugar
- 150 g Eggs
- 100 g Starch
- 59 g Semolina
- 10 g Table salt
- 157 g Tap water

It’s one of the most produced and consumed Turkish traditional desserts. The main ingredient is pistachio nut.

![Nutritional Information Diagram](image)

```
1785 kJ (427 kcal) per 100 g edible portion
```

<table>
<thead>
<tr>
<th>Nutrient</th>
<th>g / 100 g of edible portion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sugars</td>
<td>30.2</td>
</tr>
<tr>
<td>Water</td>
<td>51.4</td>
</tr>
<tr>
<td>Ash</td>
<td>0.7</td>
</tr>
<tr>
<td>Protein</td>
<td>4.9</td>
</tr>
<tr>
<td>Carbohydrates</td>
<td>18.6</td>
</tr>
<tr>
<td>Total Fat</td>
<td>2.0</td>
</tr>
<tr>
<td>Total dietary fiber</td>
<td>22.4</td>
</tr>
<tr>
<td>MUFA</td>
<td>11.2</td>
</tr>
<tr>
<td>SFA</td>
<td>8.6</td>
</tr>
<tr>
<td>PUFA</td>
<td>2.0</td>
</tr>
</tbody>
</table>
```
Dissemination

This work was completed on behalf of the European Food Information Resource (EuroFIR) Consortium and funded under the EU 6th Framework Food Quality and Safety thematic priority. Contract FOOD – CT – 2005-51944.
Traditional foods recipe cards

Apple strudel: (Apfelstrudel)

The Austrian cuisine is internationally famous for catering to the sweet tooth. Very similar to Bohemian cooking, sweet meals (“Mahlspiele”) are often served as main courses. It is a mix of culinary styles originating from the many ethnicities of the former multinational Austrian Empire.

The quantities are given for 10 portions. Preparation time is about 3 hours 10 minutes.

Ingredients

Strudel pastry jacket:
380 g Wheat flour (type: 480)
10 g Salt
6 g Vegetable oil
175 ml Tap water (soft and lukewarm)
10 g Wheat flour (type: 480) to besprinkle the worktop
3 g Vegetable oil to spread the pastry jacket

Breadcrumbs mix:
65 g Butter
32 g Margarine
90 g Sugar
60 g Breadcrumbs

Raisins mix:
34 g Raisine
12 g Rum

Apple mix:
1850 g Tartish apples,
140 g Sugar,
12 g Cinnamon

In addition:
10 g Butter to butter the baking-tin,
60 g Butter to butter the pastry jacket

Preparation

First the strudel pastry jacket is prepared by mixing the respective ingredients and kneading them into dough. The surface is sprinkled with the vegetable oil and left untouched for about 1 hour.

For the breadcrumb mix, butter and margarine are liquefied in a pan until churned; sugar and breadcrumbs are added and roasted until golden brown. The apples are peeled, raspered, and mixed with sugar and cinnamon.

Then the pastry is rolled out on a dish cloth which was besprinkled with wheat flour. Vegetable oil is applied to the surface of the dough. The dough is stretched very thinly, laid out again on the dish towel. One third of the pastry jacket is filled with the breadcrumb mix, the raisins soaked in rum), and lastly with the apple mix, and then rolled up with help of the towel.

The liquefied butter is repeatedly applied to the surface of the pastry jacket.

Finally the strudel is baked on a tray in the oven at 180 degrees Celsius until golden brown (approx. 1 hour).

Nutritional value per 100 g of edible portion

<table>
<thead>
<tr>
<th>Nutrient</th>
<th>Amount (g)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Energy (kcal / kJ)</td>
<td>190 / 800</td>
</tr>
<tr>
<td>Protein (g) (N x 6.25)</td>
<td>2.2</td>
</tr>
<tr>
<td>Total Fat (g)</td>
<td>5.9</td>
</tr>
<tr>
<td>of which saturated fatty acids (g)</td>
<td>2.9</td>
</tr>
<tr>
<td>Carbohydrates (g)</td>
<td>32.0</td>
</tr>
<tr>
<td>of which sugars (g)</td>
<td>25.3</td>
</tr>
<tr>
<td>Dietary fibre (g)</td>
<td>2.4</td>
</tr>
<tr>
<td>Sodium (mg)</td>
<td>123</td>
</tr>
</tbody>
</table>

For more information on Austrian traditional foods, contact the University of Vienna at http://www.univie.ac.at/

The work was completed within the EuroFIR project funded by the European Commission.

Thanks to Gertrud Rohrer from the local household for inviting us for recipe recording and to Katharina Fritz for her assistance in reproducing the recipe.
EuroFIR Network of Excellence
Coordinator – Paul Finglas

A story of success....

BaSeFood
Coordinator – L. Filippo D'Antuono
Sustainable exploitation of bioactive components from the Black Sea Area traditional foods (FP7-KBBE-227118)
Coordinator - L. Filippo D’Antuono
BaSeFood Project
2009-2012

To identify and characterise bioactive compounds in traditional food products that can be beneficial for human health and are typical for the diet of EU neighbouring regions.

EXPECTED IMPACT

To increase knowledge of nutrients, food components and/or bioactive compounds effects on human health, substantiating health and nutritional claims.

Enhance the cooperation between scientific disciplines and stakeholders (nutrition, practitioners, local food companies, etc.).

Assist EU food industry to increase its innovation potential and competitiveness, in particular regarding traditional foods and SMEs.
WP1
Surveying, recording and describing traditional foods

WP2
Bioactive components, nutritional and microbiological characterization of traditional foods

WP3
Health-promoting properties, absorption and bioactivity of target components

WP4
Technological-chain effects on bioactives in traditional foods

WP5
Chain development and consumer issues in health-promoting traditional foods

WP6
Dissemination

WP7
Management
Black Sea Area Countries (BSAC)

Bulgaria  Georgia  Romania  Russian Federation  Turkey  Ukraine

WP1 - Prioritisation of Traditional Foods

- Cereal or cereal based foods
- Fruit or fruit based foods
- Vegetable or vegetable based foods
- Herbs, spices and aromatic plants
- Low or non-alcoholic fermented products
- Oilseeds or oilseed products
Prioritisation of components and bioactive compounds

- Inclusion relevant data in national food composition databases
- Most relevant components to be analysed for each food
- Their importance in relation to the increased risk of diet-related chronic diseases

<table>
<thead>
<tr>
<th>Proximates</th>
<th>Moisture, ash, total nitrogen (for protein), total fat (individual fatty acids, cholesterol), dietary fibre, total sugars and starch</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vitamins</td>
<td>Vitamin A (all-trans-retinol), vitamin C, vitamin E (α-tocopherol), vitamin B2 (riboflavin) and total folate</td>
</tr>
<tr>
<td>Minerals &amp; trace elements</td>
<td>Sodium, iron, zinc and selenium</td>
</tr>
<tr>
<td>Bioactive compounds</td>
<td>Phenolics, glucosinolates and carotenoids</td>
</tr>
</tbody>
</table>

Inclusion relevant data in national food composition databases
- Most relevant components to be analysed for each food
- Their importance in relation to the increased risk of diet-related chronic diseases

- Inclusion relevant data in national food composition databases
- Most relevant components to be analysed for each food
- Their importance in relation to the increased risk of diet-related chronic diseases

Moisture, ash, total nitrogen (for protein), total fat (individual fatty acids, cholesterol), dietary fibre, total sugars and starch

Vitamin A (all-trans-retinol), vitamin C, vitamin E (α-tocopherol), vitamin B2 (riboflavin) and total folate

Sodium, iron, zinc and selenium

Phenolics, glucosinolates and carotenoids
Selection of laboratories

According to quality requirements

Components

Accredited laboratories

INSA, IFR

Bioactive compounds

Labs that have expertise in quantifying these compounds

IFR, UNIBO

Labs participating in Proficiency Testing schemes

INSA, IFR
Nutritional composition of 33 Traditional Foods
<table>
<thead>
<tr>
<th>Traditional Food (English name)</th>
<th>Traditional Food (National language)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Baked layers of pastry stuffed with pumpkin</td>
<td>Tikvenik</td>
</tr>
<tr>
<td>Tsiteli Doli Bread</td>
<td>Makhobeliani dolis puri</td>
</tr>
<tr>
<td>Cornmeal mush</td>
<td>Mămăligă</td>
</tr>
<tr>
<td>Buckwheat porridge crumby</td>
<td>Каша гречневая рассыпчатая</td>
</tr>
<tr>
<td>Bulgur pilaf</td>
<td>Bulgur pilavı</td>
</tr>
<tr>
<td>Sour rye bread</td>
<td>Хліб житній</td>
</tr>
</tbody>
</table>

Tsiteli doli bread
A light blue tinged bread of oblong or oval shape, containing a small amount of floured makhobeli

- Moisture: 1%
- Ash: 9%
- Total Protein: 35%
- Total Fat: 43%
- Starch: 2%
- Total sugars: 2%
- Total dietary fibre: 8%
### Vegetable or vegetable based foods

<table>
<thead>
<tr>
<th>Traditional Food (English name)</th>
<th>Traditional Food (National language)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rodopian dried beans</td>
<td>Rodopski fasul</td>
</tr>
<tr>
<td>Nettles with walnut sauce</td>
<td>Chinchris mkhali nigvzit</td>
</tr>
<tr>
<td>Nettle sour soup</td>
<td>Ciorbă de urzici</td>
</tr>
<tr>
<td>Vegetable okroshka</td>
<td>Овошная окрошка</td>
</tr>
<tr>
<td>Kale soup</td>
<td>kara lahana corbasi</td>
</tr>
<tr>
<td>Transcarpathian green borsch</td>
<td>Zelenyj borshch Zakarpats'kyj</td>
</tr>
<tr>
<td>Ukrainian borsch</td>
<td>Борщ український пісний</td>
</tr>
</tbody>
</table>

**Vegetable okroshka**

A cold soup with shredded vegetables and bread kvass.

![Chart showing the nutritional composition of a cold soup](chart-image)
<table>
<thead>
<tr>
<th>Traditional Food (English name)</th>
<th>Traditional Food (National language)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rose jam</td>
<td><em>Dko ot rozi</em></td>
</tr>
<tr>
<td>Churchkhela</td>
<td><em>Churchkhela</em></td>
</tr>
<tr>
<td>Plums jam</td>
<td><em>Magiun de prune</em></td>
</tr>
<tr>
<td>Watermelon juice</td>
<td><em>Арбузный сок</em></td>
</tr>
<tr>
<td>Fruit of the evergreen cherry laurel</td>
<td><em>Karayemiş</em></td>
</tr>
<tr>
<td>Uzvar</td>
<td><em>Узвар</em></td>
</tr>
</tbody>
</table>
### Traditional Food (English name) vs. Traditional Food (National language)

<table>
<thead>
<tr>
<th>Oilseeds or oilseed products</th>
<th>Roasted sunflower seeds</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Halva</strong></td>
<td><strong>Roasted sunflower seeds</strong> <em>(Helianthus annuus L.)</em></td>
</tr>
<tr>
<td><strong>Flax oil</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Mustard oil</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Roasted sunflower seeds</strong></td>
<td></td>
</tr>
</tbody>
</table>

**Halva**

- Tahan Halva

**Flax oil**

- Selis zeti

**Mustard oil**

- Горчичное масло

**Roasted sunflower seeds**

- Smazhene nasinnya

**Nutritional Data**

- 21% Total Protein
- 57% Total sugars
- 3% Total dietary fibre
- 4% Total Fat
- 4% Starch
- 4% Ash
- 4% Moisture
<table>
<thead>
<tr>
<th>Traditional Food (English name)</th>
<th>Traditional Food (National language)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mursal tea</td>
<td>Mursalski chai</td>
</tr>
<tr>
<td>Wild plum sauce</td>
<td>Tkhemlis satsebeli</td>
</tr>
<tr>
<td>Herbal dish</td>
<td>Mâncărîcă de verdeață</td>
</tr>
<tr>
<td>Black tea</td>
<td>Çay</td>
</tr>
<tr>
<td>Pomazanka</td>
<td>Pomazanka</td>
</tr>
</tbody>
</table>

Herbal dish:
- Onions, green dill, green parsley, mint leaves, sweet basil leaves, sage leaves, tomato paste, peppers paste, sunflower oil, salt, black peppercorns, wheat flour.

Diagram: Pie chart showing the nutritional value with 88% of Starch.
## Low or non-alcoholic fermented products

### Traditional Food (English name) | Traditional Food (National language)
---|---
Millet ale | *Boza*
Elderberry soft drink | *Socata*
Kvass southern | *Квас южный*
Sautéed pickled green beans | *Fasulye turşusu kavurması*
Sauerkraut | *Капуста білокачанна квашена*

**Millet ale**

- **A thick, fermented cereal based beverage with a sourish or sweetish taste**

### Pie Chart

- **89%** Moisture
- **2%** Ash
- **8%** Total Protein
- **1%** Total Fat
- **1%** Starch
- **1%** Total sugars
- **1%** Total dietary fibre
BaSeFood - Dissemination

http://www.basefood-fp7.eu/

Newsletters
BaSeFood: sustainable exploitation of bioactive components from the Black Sea Area traditional foods

F. D’Antonio, A. Sanches-Silva, and H. S. Costa

Summary

The Sustainable exploitation of bioactive components from the Black Sea Area traditional foods (BaSeFood) is a 3-year collaborative research programme, funded by the 7th Framework Programme, launched on the 1st of April 2009. The project, which is coordinated by Dr. Filippo D’Antonio (University of Bologna), consists of a research consortium of 13 partners, namely Italy (two), the United Kingdom, Greece, Portugal, Serbia and six Black Sea area countries: Russian Federation, Ukraine (two), Romania, Bulgaria, Turkey and Georgia. BaSeFood will contribute scientifically by studying the bioactive compounds within traditional foods of the Black Sea area using rigorous analytical and biological assays. The vast array of characteristics of traditional foods will be considered, as well as any associated consumer-perceived benefits, related to health claims, so that they can be properly understood by the consumer and exploited by food processors to produce more healthy traditional foods.

Keywords: BaSeFood, bioactive compounds, food composition databases, health claims, phytochemicals, traditional foods

Introduction

Bioactive components are defined as “inherent non-nutrient constituents of foods with anticipated health-promoting/beneficial and/or toxic effects when ingested” [Key et al. 2007, p. 434]. The definition is rather dynamic and a list of components and associated properties is available in the literature (Goldberg 2001). Bioactive components are intrinsic, measurable characteristics of foods and food ingredients. These components have attracted the attention of scientists, opening an almost unlimited field of investigation and a stream of research-oriented suggestions. Bioactives, however, are typically not perceived by consumers, in lack few are aware of their precise nature and role (Grunt & Wilh 2007). Globally, the literature on the identification, characterisation and specific sources of plant bioactives is vast. State-of-the-art reviews are available that clearly summarise the nature, occurrence and potential function of major plant bioactive substances. Among these, some intermediate steps of European Union (EU)-funded projects can be cited (Sunder & Clifford 2000; Donny & Barrie 2007).

Historically, food bioactives have been determined by the availability of local resources, evolving with similar trends in different geographic areas. The rise of plant domestication started from easily available, energetic cereals, pulses and oilsseeds, followed, at a later stage, by...
**Dissemination**

**4th International Congress on Food and Nutrition and 3rd SAFE Consortium International Congress on Food Safety**

12th to 14th October 2011, Istanbul, Turkey
PROXIMATE COMPOSITION OF PLANT ORIGIN TRADITIONAL FOODS FROM BLACK SEA AREA COUNTRIES

T. O. Abubakar, K. E. Coster, A. Sanjose-Garriga, T. Femken, G. Nohr, M. Bastian, P. Ngus

DETERMINATION OF TOTAL FOLATE CONTENT IN TRADITIONAL FOODS FROM BLACK SEA AREA COUNTRIES


RIBOFLAVIN CONTENT IN SELECTED TRADITIONAL FOODS FROM BLACK SEA AREA COUNTRIES


BACKGROUND

Riboflavin is a B-vitamin that is an essential nutrient for many cellular processes, including protein synthesis, energy metabolism, and cellular growth. Deficiency in riboflavin can lead to various health issues, such as dermatitis, fatigue, and neurological disorders. The objective of this study was to analyze the riboflavin content in selected traditional foods from the Black Sea area, to assess their nutritional value and potential as a source of this essential nutrient.

MATERIALS AND METHODS

The riboflavin content in the selected foods was determined using high-performance liquid chromatography (HPLC). Samples were prepared according to standard protocols, and the analyses were performed in triplicate.

RESULTS

The results showed that the riboflavin content in the traditional foods varied significantly. Foods with higher riboflavin content were identified, and their nutritional value was assessed. The riboflavin content in the selected foods ranged from 0.05 to 0.3 mg/100g.

CONCLUSION

Our results indicate that the selected traditional foods from the Black Sea area have a high potential as a source of riboflavin. These foods can be recommended for inclusion in a balanced diet to meet the nutritional needs of the population. Further studies are needed to assess the bioavailability and health benefits of riboflavin in these foods.

REFERENCES


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**Output and benefits**

| Enhanced knowledge of traditional foods composition |
| Harmonized procedures to continue to update national food composition databases |
| Nutritional composition data for successful promotion of traditional foods |
| Development and economic sustainability of rural areas |
| To promote local biodiversity and sustainable diets by maintaining healthy dietary patterns |
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- National Nutrition Centre (NNC) – LT
- National Food and Nutrition Institute (NFNI) – PL
- National Institute of Health (INSA) - PT
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