

EDUCATIONAL STANDARD – TRADITIONAL, INNOVATIVE AND SUSTAINABLE PRODUCTS

I. GENERAL

This standard defines the content criteria of the database for traditional, innovative and sustainable products, developed within the E-Food project. The standard aims to develop educational content, guaranteeing an opportunity for its users to familiarize themselves with different types of food products, the technologies for their production and the possibilities for their innovation.

In the sense of this **document DATA BASE FOR TRADITIONAL, INNOVATIVE AND SUSTAINABLE PRODUCTS (DBTISP)** are educational materials used by the partners in the project, and in the future also by the students in the partner universities, aiming to acquaint its users with different types of food products and technologies for their production, innovation methods and ensuring sustainability.

DBTISP consists of two related units – a table describing the main elements of the products (name, country and region of origin, type of product and the main processes for its production, its certification) and a description of the product presented in the form of a structure defined by this standard.

The main functions of **DBTISP** are:

- Acquainting database users with the main characteristics and technological approaches for the production of a given type of food product through brief descriptions;
- Analyzing and understanding the possibilities for innovation of the respective product, as well as the development of innovative products based on the knowledge gained for different types of food products;
- Practical application of the acquired knowledge, skills and acquired professional competences;
- Analyzing, conceptualizing and realizing the educational goals and the learning content presented in the database;
- Conceptualizing and implementing integrative links between study subjects in one or more professional fields or between study disciplines or modules in the learning process at partner universities;

The following criteria should be applied when developing a **DBTISP**:

- ✚ **A clearly defined target group** that will use the educational content presented in the database;
- ✚ **Clearly and accurately formulated purpose** for applying the database;
- ✚ **Information provision**, guaranteeing the fulfillment of the goals and tasks of the project, and at a later stage the possibility of using the database in the education of students;

-  **Sufficiency of the information and application of appropriate forms for its presentation;**
-  **Appropriate visual presentation and illustration and completeness of content.**

II. MAIN STEPS FOR DEVELOPMENT OF DBTISP

1. DRAFT PREPARATION	
Step 1	
1. Preparation	Defining the goals and objectives of the database. Development of the database structure.
Step 2	
1. Draft	The authors plan to prepare a draft. If several authors prepare individual elements of the database, the structuring process is led by the project coordinator.
2. Formatting	The relevant database structures are prepared and the necessary content adjustments are made.
3. Editing	This operation aims to achieve clarity, good organization, connectivity of the text in the database.
4. Audit	An internal or external auditor/reviewer reviews the prepared structure and content of the database.
5. Inclusion of the auditor's opinion	When correcting the database, its structure and content, the reviewer's notes are taken into account. The project coordinator makes the appropriate adjustments.
Step 3	
1. Preparation of final version and structure	A vision of the structure of the description of the materials in the database is drawn up. An example is being developed.
2. Selection of photos, illustrations, tables, graphs, charts and more	Selection of illustrations, tables, graphs, charts, reference and supplementary material to be used in the development of the particular product.
3. Initial layout	Review the original text of the material and place the graphic elements
4. Team review of design and initial layout	The team responsible for preparing the materials reviews and comments on all aspects of the design and evaluates how the text fits.
5. Check and audit	Compliance checks are made and changes are made if necessary.
6. Finalizing specifications	Finalization of the material and preparation for publication on the learning platform.
2. ФИНАЛИЗИРАНЕ И ПУБЛИКУВАНЕ НА МАТЕРИАЛИТЕ НА ПЛАТФОРМАТА	
Step 1	
1. Text finalizing	The content of the material is being finalized.
2. Improvements to the design and layout of the final text	Finalizing design and text.

Educational standards


3. Final review by the team	The teams perform a final review before publication.
4. Final checks	Minor and non-essential changes may be made. Completing the files.
Step 2	
1. Internal audit	An internal audit is performed by a partner team member.
2. External audit	Selected materials are subject to an external audit by a specialist from practice or a professor from a university outside the partner countries.
3. Publish to the platform	The finished materials, which have been internally and externally audited, are published on the training platform.
Step 3	
1. Approbation and use of materials	Implementation of the prepared materials in order to identify errors, incorrect elements of the texts and graphic elements, inconvenience of navigation, etc. During the period of use, ongoing fixes and replacement of compromised files are allowed.
2. Adding changes to the file	Correction of the content of the teaching materials and aids based on the results of the approval (examination).


III. DATABASE STRUCTURE FOR TRADITIONAL, INNOVATIVE AND SUSTAINABLE PRODUCTS

NAME	<i>The name of the product is given in English and in the language of the country where the product originates.</i>	3 cm/4 cm photo of the product
SHORT DESCRIPTION OF THE PRODUCT	<i>A brief description of the product is made, indicating the data from the database - country of origin, region, type of product (dairy, meat, vegetable, etc.), the main processes for its production, availability of certification, and others.</i> Volume: maximum up to 500 characters (with spaces); recommended – up to 350 characters (with spaces)	
CULTURAL HERITAGE AND HISTORY OF PRODUCTION	<i>Information is provided on the cultural heritage and production traditions of the described product, including information on product certification.</i> Volume: maximum up to 400 characters (with spaces); recommended – up to 250 characters (with spaces)	
RAW MATERIALS AND INGREDIENTS	<i>A list of the main and additional raw materials for the production of the relevant product is presented, including their quantities. The list should allow students to reproduce the production of the specific product and present.</i>	
TECHNOLOGY AND TECHNIQUE FOR PRODUCTION	<i>A detailed description of the technology and production techniques used is made. The description should be brief but informative and allow students at a future stage to be able to present opportunities for product innovation, changes in technology regimes, and more.</i> <i>When preparing the description of the production method, it is allowed to include diagrams, photos, clips (in the form of external links) to assist students in studying the specific product and the possibilities for its production. It is recommended that the number of diagrams and photos not exceed 4 for the specific type of product. Diagrams/photographs should be embedded in the text appropriately.</i> Volume: maximum - up to 3500 characters (with spaces); recommended – up to 2000 characters (with spaces).	
SAFETY CONCERNS	<i>Basic safety aspects of the respective product are presented.</i> Volume: maximum up to 500 characters (with spaces); recommended – up to 350 characters (with spaces)	
NUTRITIONAL VALUE	Volume: maximum up to 500 characters (with spaces); recommended – up to 350 characters (with spaces)	
POSSIBILITIES FOR INNOVATIONS	Volume: maximum up to 500 characters (with spaces); recommended – up to 350 characters (with spaces)	
OTHER ASPECTS	Volume: maximum up to 500 characters (with spaces); recommended – up to 350 characters (with spaces)	
REFERENCES	For each product, up to 10 references are presented, formatted according to the requirements:	

- Journal Articles:
 - ✓ Author 1, A.B.; Author 2, C.D. Title of the article. *Abbreviated Journal Name* **Year**, *Volume*, page range.
- Books and Book Chapters:
 - ✓ Author 1, A.; Author 2, B. Book Title, 3rd ed.; Publisher: Publisher Location, Country, Year; pp. 154–196.
 - ✓ Author 1, A.; Author 2, B. Title of the chapter. In Book Title, 2nd ed.; Editor 1, A., Editor 2, B., Eds.; Publisher: Publisher Location, Country, Year; Volume 3, pp. 154–196.
- Unpublished materials intended for publication:
 - ✓ Author 1, A.B.; Author 2, C. Title of Unpublished Work (optional). Correspondence Affiliation, City, State, Country. year, *status (manuscript in preparation; to be submitted)*.
 - ✓ Author 1, A.B.; Author 2, C. Title of Unpublished Work. *Abbreviated Journal Name* year, *phrase indicating stage of publication (submitted; accepted; in press)*.
- Websites:.,
 - ✓ Title of Site. Available online: URL (accessed on Day Month Year). Unlike published works, websites may change over time or disappear, so we encourage you create an archive of the cited website using a service such as [WebCite](#). Archived websites should be cited using the link provided as follows:
 - ✓ Title of Site. URL (archived on Day Month Year).

IV. SAMPLE DATABASE MATERIAL LAYOUT FOR TRADITIONAL, INNOVATIVE AND SUSTAINABLE PRODUCTS

<p>NAME</p>	<p>“KAYSEROVAN VRAT TRAKYJA” КАЙЗЕРОВАН ВРАТ „ТРАКИЯ“</p>	
<p>SHORT DESCRIPTION OF THE PRODUCT</p>	<p>Kayserovan vrat Trakiya is a traditional Bulgarian meet product. ‘Kayserovan vrat Trakiya’ is a raw-cured delicacy of uncut meat. It is prepared from fresh boneless pork collar. It is pressed repeatedly during curing and coated with the Kaiser mixture (kayserova smes) of natural herbs and white wine. It is suitable for direct consumption by all consumer groups</p>	
<p>CULTURAL HERITAGE AND HISTORY OF PRODUCTION</p>	<p>The name Kayserovan vrat Trakiya was first introduced in 1980 in a standardisation document for its production — Industry standard 18-71996-80, drawn up by two Bulgarian researchers — Dzhevizov and Kiseva. The product rapidly became popular, and has now been traditionally produced in Bulgaria under the above name for over 30 years. The name is also specific in itself because it includes the main ingredients of the product described under point “Raw materials and ingredients”.</p>	
<p>RAW MATERIALS AND INGREDIENTS</p>	<p>For the production of Kayserovan vrat Trakiya, the following raw materials, ingredients and additives are required:</p> <ul style="list-style-type: none"> ✓ meat: pork collar: 100 kg; ✓ salting mixture for 100 kg of pork collar: 3,35 kg of cooking salt; 40 g, of ascorbic acid (E300) as an antioxidant; 100 g of potassium nitrate (E252) or 85 g of sodium nitrate (E251); 500 g of refined granulated sugar; ✓ Kaiser mixture for 100 kg of pork collar: <ul style="list-style-type: none"> — 4 kg of red peppers, — 3 kg of fenugreek, — 2 kg of garlic, — 12 litres of white wine, 	

<p>TECHNOLOGY AND TECHNIQUE FOR PRODUCTION</p>	<p>— twine/hemp yarn.</p>
	<div style="display: flex; align-items: flex-start;"> <div style="flex: 1;">  </div> <div style="flex: 2; padding-left: 10px;"> <p>For the production of Kayserovan vrat Trakiya, fresh fully-matured pork neck with a pH value of 5,6 to 6,2 is used. The meat is carefully boned, leaving the muscle groups intact. The forward boundary runs between the occipital bone and the first cervical vertebra, the rear one between the fifth and sixth thoracic vertebrae and down from the fifth intercostal space. The lower limit horizontally cuts through the first five ribs. The boned meat is cleaned of blood and is shaped and trimmed. The shaped pork collars are arranged in suitable clean containers for salting. The mixture of cooking salt, ascorbic acid, potassium or sodium nitrate and refined crystal sugar is rubbed in by hand or mechanically. The salted collars are tightly arranged in plastic or stainless-steel containers for maturation in a cold store with an air temperature of between 0 °C and 4 °C. After 3 to 4 days, the arrangement of the pieces is reversed (the top and bottom pieces are swapped) and they are left for at least another 10 days under the same conditions until they are fully and evenly salted. A looped string is attached to each salted collar and they are hung on wooden and/or metal frames (rods) arranged on stainless-steel sausage trolleys. The pieces are not allowed to come into contact with one another. They are left hanging on the trolley to drain for up to 24 hours at an air temperature not exceeding 12 °C. They are then placed in natural or air-conditioned drying chambers with temperature and humidity regulation. Drying takes place at an air temperature of 12-17 °C and a relative humidity of 70-85 %. During drying and curing they are pressed several times. Pressing lasts between 12 and 24 hours. Initial pressing takes place when the pieces of Kayserovan vrat Trakiya are moderately dry to the touch and a slight crust can be felt. Before they are pressed, they must be sorted according to thickness. Drying continues until the meat has obtained a dense elasticity and water content no longer exceeds 40 % of overall mass. After final pressing, the pieces are coated with the Kaiser mixture, comprising spices, water and white wine according to the recipe, which is well smoothed in to give a 2-3 mm thick layer. They are then hung to dry until the mixture has dried completely to form a crust. The fenugreek is carefully ground in advance and soaked in lukewarm water for 24 hours.</p> </div> </div>

	<p>The carefully selected and sorted fresh pork collar and the Kaiser mixture give Kayserovan vrat Trakiya its inimitable flavour and aroma. No starter cultures or pH regulators are used in the production of Kayserovan vrat Trakiya, which distinguishes it from products manufactured using innovative technologies. The characteristic shape is obtained by repeated pressing during the drying process. Kayserovan vrat Trakiya belongs to the group of raw-cured and pressed uncut pork delicacies. It is one of a wide range of meat products that have been produced for decades in Bulgaria. Its production in Bulgaria boasts a tradition of over 30 years.</p>
<p>SAFETY CONCERNS</p>	<p>During and after the Kayserovan vrat Trakiya production process the following is checked:</p> <ul style="list-style-type: none"> — <i>compliance of the meat ingredients used with the requirements specified for raw materials,</i> — <i>observance of the proportions of meat ingredients and salting mixture specified in the recipe when the salting mixture is being dosed and mixed with the meat ingredients, and observance of the quantities of ingredients and additives specified in the recipe,</i> — <i>proper application of the production techniques for salting the shaped pieces of meat;</i> — <i>temperature and humidity during draining and drying, including, by means of a visual inspection of the product,</i> — <i>observance of the proportions of meat ingredients and Kaiser mixture specified in the recipe when the Kaiser mixture is being dosed and mixed with the meat ingredients, and observance of the quantities of ingredients and spices specified in the recipe;</i> — <i>proper consistency, aroma and taste of the cut surface, by means of a sensory analysis of the finished product;</i>
<p>NUTRITIONAL VALUE</p>	<p>Energy: 325 kJ/ 317 kcal; Fats: 18 g of which saturated fatty acids: 9.1 g Carbohydrates: 2.3 g from which sugars: 0.8 g Proteins: 37 g Salt: 3.4 g</p>
<p>POSSIBILITIES FOR INNOVATIONS</p>	<p><i>Use of alternative spices in the kaisering process;</i> <i>Use of accelerated product maturation technologies;</i> <i>Using other types of meat to produce a new type of product;</i></p>

OTHER ASPECTS	Historical data on the technology and recipe for the production of Kayserovan vrat Trakiya are contained in the standardisation document on product requirements ON 18-71996-80 — ‘Plovdiv’ biltong/jerky, ‘Rodopa’ biltong/jerky, ‘Kayserovan svinski vrat Trakiya’, National Agro-Industrial Union (NAPS), Sofia, 1980.
REFERENCES	1. Publication of an application pursuant to Article 50(2)(b) of Regulation (EU) No 1151/2012 of the European Parliament and of the Council on quality schemes for agricultural products and foodstuffs. Available online: https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=uriserv%3AOJ.C .2014.075.01.0016.01.ENG&toc=OJ%3AC%3A2014%3A075%3AFULL (accessed on 12.07.2023).