The 5th Student Conference:
„Life Sciences – Food Processing”
30th of June 2020

Section: Conference cover following topics:

- ***Food Engineering***
- ***Food Control***
- ***Consumer and Environmental Protection***

Nicoleta Hadaruga is inviting you to a scheduled Zoom meeting.

Topic: Nicoleta Hadaruga's Zoom MeetingINVITATION: The 5th Student Conference: „Life Sciences – Food Processing” will be held on 30th of June 2020, from 16:00 to 18:00.
Time: Jun 30, 2020 04:00 PM Bucharest

Join Zoom Meeting
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Meeting ID: 863 9254 8810
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30 June 2020

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Conf. Dr. Ing. Ioan David
Conf. Dr. Ing. Florina Adriana Radu

General Programme

26-29 June 2020 Registration online

Tuesday, June 30, 2020

16^{00} – 16^{10}	**Opening of the Conference**
16^{10} – 16^{20}	Oral Communication OC_1
16^{20} – 16^{30}	Oral Communication OC_2
16^{30} – 16^{45}	Oral Communication OC_3
16^{45} – 17^{00}	Oral Communication OC_4
17^{00} – 17^{15}	Oral Communication OC_5
17^{15} – 17^{30}	Oral Communication OC_6
17^{30} – 18^{00}	**Posters**

„Banat's University of Agricultural Sciences and Veterinary Medicine "King Michael I of Romania" from Timişoara

Programme

26-29 June 2020 **Registration online**

Tuesday, June 30, 2020

16^{00} – 16^{10} Opening of the Conference

Prof. dr. Adrian Riviş
Dean of the Faculty of Food Engineering, Banat's University of Agricultural Sciences and Veterinary Medicine "King Michael I of Romania" from Timişoara

Prof. dr. Nicoleta Gabriela Hădărugă
Vicedean of the of the Faculty of Food Engineering, Banat's University of Agricultural Sciences and Veterinary Medicine "King Michael I of Romania" from Timişoara

Oral Communication

16^{10} – 16^{20} OC1: Labor market analysis in the west development region of Romania

Ciprian Rujescu, Hădărugă Nicoleta, Vîjiac Iuxel, Simona Constantinescu, Dora Orboi
Faculty of Management and Rural Tourism, Banat's University of Agricultural Sciences and Veterinary Medicine "King Michael I of Romania" from Timişoara and „Active measures to increase the participation in the tertiary entrepreneurial education of students from disadvantaged regions Antre_S", Contract code: POCU/379/6/21/124388 (SA.2.1. Methodological design and carrying out practical studies of labor market analysis in the Western Development Region of Romania for the identification and analysis of the sectors with entrepreneurial competitive potential in the University Center – Timisoara)"

16^{20} – 16^{30} OC2: Opportunity study to assess the need for entrepreneurial programs in west development region of Romania

Ciprian Rujescu, Constantinescu Simona, Orboi Dora
Faculty of Management and Rural Tourism, Banat's University of Agricultural Sciences and Veterinary Medicine "King Michael I of Romania" from Timişoara and „Active measures to increase the participation in the tertiary entrepreneurial education of students from disadvantaged regions Antre_S", Contract code: POCU/379/6/21/124388 (SA.3.1. Designing and conducting an opportunity study in 27 ISCED-04 / high schools in 3 regions and local analyzes to assess the real need for entrepreneurial programs and promote level 6 qualifications)"

16^{30} – 16^{45} OC_3: Innovative functional foods - pasta

Simelda E. Zippenfening, Jelena Milutinovic, Marius Ioan Cugerean, Nelida Vesa, Bianca Bădoiu, Aura Raicea, Adrian Riviş, Nicoleta G. Hădărugă
Faculty of Food Engineering, Banat's University of Agricultural Sciences and Veterinary Medicine "King Michael I of Romania" from Timişoara

16^{45} – 17^{00} OC_4: Danube catfish (*Silurus Glanis*) - Romania: Fatty acid profile

Adrian Alexandru Dragomir, **Cristina Liliana Mitroi,** Nelida Vesa, Bianca Bădoiu, Aura Raicea, Adrian Riviş, Nicoleta G. Hădărugă
Faculty of Food Engineering, Banat's University of Agricultural Sciences and Veterinary Medicine "King Michael I of Romania" from Timişoara

$17^{00} – 17^{15}$ OC_5: Fatty acid profile of vegetable raw materials (Hazelnuts - *Corylus avellana* L.).
Giulia Mădălina Golea, Cristina Liliana Mitroi, Cosmina Andrea Chirila, Nelida Vesa, Bianca Bădoiu, Aura Raicea, Adrian Riviş, Nicoleta G. Hădărugă
Faculty of Food Engineering, Banat's University of Agricultural Sciences and Veterinary Medicine "King Michael I of Romania" from Timişoara

$17^{15} – 17^{30}$ OC_6: Innovative meat products: "*Snail hamburger*"
Marius Ioan Cugerean, Laura Rădulescu, Simelda Elena Zippenfening, Cristina Liliana Mitroi, Raymond Nandy Szakal, Cosmina Andrea Chirilă, Adrian Riviş, Nicoleta G. Hădărugă
Faculty of Food Engineering, Banat's University of Agricultural Sciences and Veterinary Medicine "King Michael I of Romania" from Timişoara

Section: Food Engineering

Posters

P1 Sensory analysis of bread with addition of grounded rosemary
Oana Elena Moldovan, Laura Rădulescu, Corina Iuliana Megyesi
Faculty of Food Engineering, Banat's University of Agricultural Sciences and Veterinary Medicine „King Michael I of Romania" from Timisoara, Romania

P2 Sausages "*Cîrnați cu Ambâț*". Traditionality. Technology
Manuela Decă, Bogdan P. Rădoi
Faculty of Food Engineering, Banat's University of Agricultural Sciences and Veterinary Medicine „King Michael I of Romania" from Timisoara, Romania

P3 Integration of a vegetable protein by-product in the bakery-pastry technology
Mădălina Roșu, Bogdan P. Rădoi,
Faculty of Food Engineering, Banat's University of Agricultural Sciences and Veterinary Medicine „King Michael I of Romania" from Timisoara, Romania

P4 Obtaining and characterizing a Merlot aromatized wine - Vermouth type
Gabriela Pupaza, Diana Moigradean, Mariana-Atena Poiana
Faculty of Food Engineering, Banat's University of Agricultural Sciences and Veterinary Medicine „King Michael I of Romania" from Timisoara, Romania

P5 Comparative study of an assortment of pressed cheese
Roxana Mihaela Dumitrescu, Mărioara Drugă, Antoanela Cozma
Faculty of Food Engineering, Banat's University of Agricultural Sciences and Veterinary Medicine „King Michael I of Romania" from Timisoara, Romania

P$_6$ Comparative analysis of some meat products in membrane
Tabita Oana Iacob, Mărioara Drugă, Camelia Moldovan
Faculty of Food Engineering, Banat's University of Agricultural Sciences and Veterinary Medicine „King Michael I of Romania" from Timisoara, Romania

P$_7$ Valorisation of by-products from apple and pear processing - Apple and pear jelly
Larisa Pădurean, Monica Negrea, Calin Jianu
Faculty of Food Engineering, Banat's University of Agricultural Sciences and Veterinary Medicine „King Michael I of Romania" from Timisoara, Romania

P$_8$ Study on obtaining and characterizing cooked meat specialties
Cadrin Svetozar Rusalin Nicolescu, Ileana Cocan, Monica Negrea
Faculty of Food Engineering, Banat's University of Agricultural Sciences and Veterinary Medicine „King Michael I of Romania" from Timisoara, Romania

P$_9$ Study on obtaining and characterizing Cabanos sausages
Constantin-Ilie Puiu, Ileana Cocan, Daniela Stoin, Monica Negrea
Faculty of Food Engineering, Banat's University of Agricultural Sciences and Veterinary Medicine „King Michael I of Romania" from Timisoara, Romania

P$_{10}$ Study on the production and characterization of sheep meat products by baking
Alexandra Ioana Rus, Ileana Cocan, Monica Negrea
Faculty of Food Engineering, Banat's University of Agricultural Sciences and Veterinary Medicine „King Michael I of Romania" from Timisoara, Romania

P$_{11}$ Sensory analysis of cookies with candied fruit addition
Constantin Sitariu, Laura Rădulescu, Corina Iuliana Megyesi
Faculty of Food Engineering, Banat's University of Agricultural Sciences and Veterinary Medicine „King Michael I of Romania" from Timisoara, Romania

P12 Sensory characteristics of gluten-free cake prepared with brown millet flour and teff flour

Ioana Carmen Coroama, Daniela Stoin, Ileana Cocan, Monica Negrea

Faculty of Food Engineering, Banat's University of Agricultural Sciences and Veterinary Medicine „King Michael I of Romania" from Timisoara, Romania

P13 Sensory evaluation of gluten-free muffins based on teff flour, rice flour and blueberry fruits

Elena Roxana Mezdrea, Daniela Stoin, Ileana Cocan

Faculty of Food Engineering, Banat's University of Agricultural Sciences and Veterinary Medicine „King Michael I of Romania" from Timisoara, Romania

P14 Technical-economic study on the opportunity to place on the market a new assortment of vegetable pate. *Cauliflower* pate with walnuts

Petrică Goșa, Ioan David, Gabriel Bujancă

Faculty of Food Engineering, Banat's University of Agricultural Sciences and Veterinary Medicine „King Michael I of Romania" from Timisoara, Romania

P15 Tomato processing. Obtaining tomato paste

Avram Raul, Sincu Camelia, Dobricean Daniela, Bobic Anamaria, Prisăcariu Diana, Măncescu Denisa, Radu Georgiana, Gentea Ancuța, Mărăcine Natașa, Heghedűş-Mîndru Gabriel, Heghedűş-Mîndru Ramona

Faculty of Food Engineering, Banat's University of Agricultural Sciences and Veterinary Medicine „King Michael I of Romania" from Timisoara, Romania

P16 Meat processing. Getting pork parizer.
Camelia Sincu, Raul Avram, Daniela Dobricean, Anamaria Georgiana Bobic, Diana Prisăcariu, Denisa Măncescu, Georgiana Radu, Ancuţa Gentea, Natașa Mărăcine, Gabriel Heghedűş-Mîndru , Ramona Heghedűş-Mîndru
Faculty of Food Engineering, Banat's University of Agricultural Sciences and Veterinary Medicine „King Michael I of Romania" from Timisoara, Romania

P17 Processing vegetables for the manufacture of preserved vegetables
Daniela Dobricean, Raul Avram, Camelia Sincu, Anamaria Georgiana Bobic, Diana Prisăcariu, Denisa Măncescu, Georgiana Radu, Ancuţa Gentea, Natașa Mărăcine, Gabriel Heghedűş-Mîndru, Ramona Heghedűş-Mîndru
Faculty of Food Engineering, Banat's University of Agricultural Sciences and Veterinary Medicine „King Michael I of Romania" from Timisoara, Romania

P18 Obtaining and characterization of the red wine from the Oltenia region
Iasmina-Ximena Iliopol, Mariana-Atena Poiana, Diana Moigradean
Faculty of Food Engineering, Banat's University of Agricultural Sciences and Veterinary Medicine „King Michael I of Romania" from Timisoara, Romania

P19 Study of the biotechnological manufacturing process of tortilla dough
Sanda Dragomir, Ioan David, Gabriel Bujancă
Faculty of Food Engineering, Banat's University of Agricultural Sciences and Veterinary Medicine „King Michael I of Romania" from Timisoara, Romania

P20 Obtaining and characterization of flavored olive oil
Marcela Loredana Rusu, Mariana Atena Poiana, Diana Moigradean
Faculty of Food Engineering, Banat's University of Agricultural Sciences and Veterinary Medicine „King Michael I of Romania" from Timisoara, Romania

P21 Development and sensory characterization of an innovative prototype of hot pepper jam
Marina Daiana Neicuși, Georgeta-Sofia Pintilie, Anca Sorina Matei, Georgiana I.R. Ciortan, Nicolae Vladescu, Mariana Poiană
Faculty of Food Engineering, Banat's University of Agricultural Sciences and Veterinary Medicine „King Michael I of Romania" from Timisoara, Romania

P22 Characterizing some assortments of juices with pulp: tomato juice
Rafael Claudiu Blănaru, Cazacu Mihaela
Faculty of Food Engineering, Banat's University of Agricultural Sciences and Veterinary Medicine „King Michael I of Romania" from Timisoara, Romania

P23 Characterizing some assortments of cheeses: fresh cheese
Ovidiu – Marinel Truică, Cazacu Mihaela
Faculty of Food Engineering, Banat's University of Agricultural Sciences and Veterinary Medicine „King Michael I of Romania" from Timisoara, Romania

P24 Obtaining and Promoting on the Market, a Roll Type Product from Duck Meat
Isabela Firuț, Viorica – Mirela Popa, Dana - Corina Mișcă
Faculty of Food Engineering, Banat's University of Agricultural Sciences and Veterinary Medicine „King Michael I of Romania" from Timisoara, Romania

P25 Obtaining a vitaminized bakery product, improved with the help of malt
Maria Gianina - Ocneanu, Viorica Mirela Popa, Dana Corina Mișcă
Faculty of Food Engineering, Banat's University of Agricultural Sciences and Veterinary Medicine „King Michael I of Romania" from Timisoara, Romania

P$_{26}$ Characterization of some Chardonnay white wines coming from Recas vineyard
Aurelian Popescu, Diana Moigradean, Mariana-Atena Poiana
Faculty of Food Engineering, Banat's University of Agricultural Sciences and Veterinary Medicine „King Michael I of Romania" from Timisoara, Romania

P$_{27}$ Study of the microbiological stability of the homemade pig head cheese
Cătălin Bocșan, Ioan David, Gabriel Bujancă
Faculty of Food Engineering, Banat's University of Agricultural Sciences and Veterinary Medicine „King Michael I of Romania" from Timisoara, Romania

P$_{28}$ Impact of Individual Quick Freezing (IQF) and frozen storage period on quality of some vegetables
Darius Budeic, Diana Moigradean, Mariana-Atena Poiana
Faculty of Food Engineering, Banat's University of Agricultural Sciences and Veterinary Medicine „King Michael I of Romania" from Timisoara, Romania

P$_{29}$ Design and development of an assortment of chicken and turkey sausages
Denis Ionuț Duțu, Viorica Mirela Popa
Faculty of Food Engineering, Banat's University of Agricultural Sciences and Veterinary Medicine „King Michael I of Romania" from Timisoara, Romania

P$_{30}$ The influence of enzymatic preparations in the biotechnological processing of wheat flour
Edward Weiss, Ioan David, Gabriel Bujancă
Faculty of Food Engineering, Banat's University of Agricultural Sciences and Veterinary Medicine „King Michael I of Romania" from Timisoara, Romania

P31 The influence of storage conditions on the oxidative stability of pumpkin seed oil
Laurentiu Draghici, Diana Moigradean, Mariana-Atena Poiana
Faculty of Food Engineering, Banat's University of Agricultural Sciences and Veterinary Medicine „King Michael I of Romania" from Timisoara, Romania

P32 Evaluation of the antioxidant characteristics of kiwi fruits and seeds
Béla Attila Müller, Liana Maria Alda, Despina Maria Bordean
Faculty of Food Engineering, Banat's University of Agricultural Sciences and Veterinary Medicine „King Michael I of Romania" from Timisoara, Romania

P33 Considerations on artificial cold in the preservation of meat products. Case study – traditional sausages
Robert Neagu, Bogdan P. Rădoi
Faculty of Food Engineering, Banat's University of Agricultural Sciences and Veterinary Medicine „King Michael I of Romania" from Timisoara, Romania

P34 Study on making a guinea hen / pearl hen meat pate with bacon.
Nichita Darius, Ioan David, Gabriel Bujancă
Faculty of Food Engineering, Banat's University of Agricultural Sciences and Veterinary Medicine „King Michael I of Romania" from Timisoara, Romania

P35 Food safety management on the technological flow of obtaining a sweet-spicy vegetable sauce
Adam Adrian Mircea Paici, Viorica Mirela Popa
Faculty of Food Engineering, Banat's University of Agricultural Sciences and Veterinary Medicine „King Michael I of Romania" from Timisoara, Romania

P36 Study case on beta-alanine and citrulline malate consumption in amateur athletes
Flavius-Adrian Popa, Ariana – Bianca Velciov
Faculty of Food Engineering, Banat's University of Agricultural Sciences and Veterinary Medicine „King Michael I of Romania" from Timisoara, Romania

P37 Development and characterization of a red beetroot paste type appetizer

Andreea Mihaela Samfirescu, Camelia Moldovan, Delia-Gabriela Dumbravă

Faculty of Food Engineering, Banat's University of Agricultural Sciences and Veterinary Medicine „King Michael I of Romania" from Timisoara, Romania

P38 Obtaining a functional food product with therapeutic effects

George-Ciprian Mocan, Corina Dana Miscă

Faculty of Food Engineering, Banat's University of Agricultural Sciences and Veterinary Medicine „King Michael I of Romania" from Timisoara, Romania

P39 Obtaining an innovative product - Pearls of Happiness - for vegetarians and vegans

Denisa Ramona Negomireanu, Corina Dana Miscă

Faculty of Food Engineering, Banat's University of Agricultural Sciences and Veterinary Medicine „King Michael I of Romania" from Timisoara, Romania

Section: Food Control

P1 Strawberry syrup: description of the technological process and calculation of the material balance
Alberto Giuliano Munteanu, Corina Iuliana Megyesi, Laura Rădulescu
Faculty of Food Engineering, Banat's University of Agricultural Sciences and Veterinary Medicine „King Michael I of Romania" from Timisoara, Romania

P2 Plum compote: description of the technological process and calculation of the material balance
George Marian Șerban, Corina Iuliana Megyesi, Laura Rădulescu
Faculty of Food Engineering, Banat's University of Agricultural Sciences and Veterinary Medicine „King Michael I of Romania" from Timisoara, Romania

P3 Artificial cold as a method of preservation of meat products. Case study
Christine Dragomir, Bogdan P. Rădoi
Faculty of Food Engineering, Banat's University of Agricultural Sciences and Veterinary Medicine „King Michael I of Romania" from Timisoara, Romania

P4 Rear pig leg called „*Jambon de comuna Blandiana*" Traditionality. Technology
Andreea Ispas, Bogdan P. Rădoi
Faculty of Food Engineering, Banat's University of Agricultural Sciences and Veterinary Medicine „King Michael I of Romania" from Timisoara, Romania

P5 Puff pastry filled with homemade chocolate "*Ciocopinguin*"
Alexandra Șandor, Bogdan P. Rădoi
Faculty of Food Engineering, Banat's University of Agricultural Sciences and Veterinary Medicine „King Michael I of Romania" from Timisoara, Romania

P$_6$ Fat alternatives useful in the manufacture of puff pastry. Case Study
Ramona Bănescu, Lelia Serpe, Monica Ruxanda, C. Fora, A. Riviș, A. Rinovetz
Faculty of Food Engineering, Banat's University of Agricultural Sciences and Veterinary Medicine „King Michael I of Romania" from Timisoara, Romania

P$_7$ Freezing. Influencing factor in the formulation of doughs. Case Study
Liana Paula Mone, Lelia Serpe, Monica Ruxanda, Cerasela Petolescu, A. Riviș, A. Rinovetz
Faculty of Food Engineering, Banat's University of Agricultural Sciences and Veterinary Medicine „King Michael I of Romania" from Timisoara, Romania

P$_8$ Study regarding the technique for preparing the macarons with raspberries and rose syrup
Mădălina Daina Pop, Mihaela Cazacu
Faculty of Food Engineering, Banat's University of Agricultural Sciences and Veterinary Medicine „King Michael I of Romania" from Timisoara, Romania

P$_9$ Studies on obtaining products with low glycemic index and their impact on consumers
Daniela Petrina Matei, Monica Negrea, Ersilia Alexa, Ileana Cocan
Faculty of Food Engineering, Banat's University of Agricultural Sciences and Veterinary Medicine „King Michael I of Romania" from Timisoara, Romania

P$_{10}$ Study on obtaining a product preserved with stevia-based sweetener - Grape compote
Iulia Alexandra Mihart, Monica Negrea, Calin Jianu
Faculty of Food Engineering, Banat's University of Agricultural Sciences and Veterinary Medicine „King Michael I of Romania" from Timisoara, Romania

P_{11} Capitalization of additions of biologically-active principles in order to obtain pastry products
Adelina-Mihaela Avrămuș, Ariana – BiancaVelciov
Faculty of Food Engineering, Banat's University of Agricultural Sciences and Veterinary Medicine „King Michael I of Romania" from Timisoara, Romania

P_{12} Mineral profile of cultivated blackberry fruits (*Rubus fruticosus* L.)
Andreea – Ionela Birtea, Sofie Georgeta Pintilie, Ariana – Bianca Velciov
Faculty of Food Engineering, Banat's University of Agricultural Sciences and Veterinary Medicine „King Michael I of Romania" from Timisoara, Romania

P_{13} Sensory and nutritional appreciation of a hot pepper specialty used in pastry
Mădălina Maria Bîtcan, Antoanela Cozma, Ariana Bianca Velciov,
Faculty of Food Engineering, Banat's University of Agricultural Sciences and Veterinary Medicine „King Michael I of Romania" from Timisoara, Romania

P_{14} Sensory characteristics of bread prepared with wheat flour, malt flour and sweet potato flour
Carmen Diana Olaru, Daniela Stoin, Calin Jianu, Monica Negrea
Faculty of Food Engineering, Banat's University of Agricultural Sciences and Veterinary Medicine „King Michael I of Romania" from Timisoara, Romania

P_{15} Bee honey: description of the technological process, preparation of the HACCP plan
Ionela Anişoara Ponoran, Corina Iuliana Megyesi, Ariana-Bianca Velciov
Faculty of Food Engineering, Banat's University of Agricultural Sciences and Veterinary Medicine „King Michael I of Romania" from Timisoara, Romania

P16 Evaluation of the influence of thermal processing on the antioxidant activity of red beets and black radishes
Gabriel Calin Ghilici, Liana Maria Alda, Despina Maria Bordean
Faculty of Food Engineering, Banat's University of Agricultural Sciences and Veterinary Medicine „King Michael I of Romania" from Timisoara, Romania

P17 Influence of thermal processing on the antioxidant characteristics of some cruciferous vegetables
Dragos Susman, Liana Maria Alda, Despina Maria Bordean
Faculty of Food Engineering, Banat's University of Agricultural Sciences and Veterinary Medicine „King Michael I of Romania" from Timisoara, Romania

P18 The merceological evaluation of vegetal oils
A. Dumitrescu, Ramona Hegheduș-Mîndru, Gabriel Bujancă, Ducu Sandu Ștef
Faculty of Food Engineering, Banat's University of Agricultural Sciences and Veterinary Medicine „King Michael I of Romania" from Timisoara, Romania

P19 The study of some quality charactheristics of juices from fruits and vegetable
R. Păun, Ramona Hegheduș-Mîndru, Gabriel Bujancă, Ducu Sandu Ștef
Faculty of Food Engineering, Banat's University of Agricultural Sciences and Veterinary Medicine „King Michael I of Romania" from Timisoara, Romania

P20 Commercial quality and food safety in the cheese industry
M. Stănilescu, Gabriel Hegheduș-Mîndru, Mihaela Cazacu, Ducu Sandu Ștef
Faculty of Food Engineering, Banat's University of Agricultural Sciences and Veterinary Medicine „King Michael I of Romania" from Timisoara, Romania

P_{21} Enzymes, as biotechnological activators in the manufacturing technology of the french dough
Cristina Elena Oneț, Ioan David, Gabriel Bujancă
Faculty of Food Engineering, Banat's University of Agricultural Sciences and Veterinary Medicine „King Michael I of Romania" from Timisoara, Romania

P_{22} The study of food safety in scalded cheese manufacturing
I. Vujaică, Gabriel Hegheduș-Mîndru, Mihaela Cazacu, Ducu Sandu Ștef
Faculty of Food Engineering, Banat's University of Agricultural Sciences and Veterinary Medicine „King Michael I of Romania" from Timisoara, Romania

P_{23} Utilization of tomato juice in addition to obtaining products of animal origin
Alexandra Oana Duică, Antoanela Cozma, Ariana Velciov
Faculty of Food Engineering, Banat's University of Agricultural Sciences and Veterinary Medicine „King Michael I of Romania" from Timisoara, Romania

P_{24} Study on the use of plum flour as a natural antioxidant in the meat industry
Liliana-Mirela Andrei, Ileana Cocan, Daniela Stoin
Faculty of Food Engineering, Banat's University of Agricultural Sciences and Veterinary Medicine „King Michael I of Romania" from Timisoara, Romania

P_{25} Research based on the quality characteristics of the traditional produce "*Hunter's sausages incased in sheep membrane*"
Mădălina Calotă, Bogdan P, Rădoi
Faculty of Food Engineering, Banat's University of Agricultural Sciences and Veterinary Medicine „King Michael I of Romania" from Timisoara, Romania

P26 Development and sensory characterization of an innovative prototype of dry sausage
Georgiana Iustina Raluca Ciortan, Georgeta Sofia Pintilie, Marina Daiana Neicuși, Nicolae Vladescu, Anca Sorina Matei, Ersilia Alexa
Faculty of Food Engineering, Banat's University of Agricultural Sciences and Veterinary Medicine „King Michael I of Romania" from Timisoara, Romania

P27 Qualitative assessment of dietary foods
Alexandra-Ștefania Drug, Mihaela Cazacu, Ariana-Bianca Velciov
Faculty of Food Engineering, Banat's University of Agricultural Sciences and Veterinary Medicine „King Michael I of Romania" from Timisoara, Romania

P28 Effect of grape seeds flour and cranberries fruits addition on quality characteristics of gluten-free biscuits
Nicoleta Andrada Fruja, Daniela Stoin, Calin Jianu
Faculty of Food Engineering, Banat's University of Agricultural Sciences and Veterinary Medicine „King Michael I of Romania" from Timisoara, Romania

P29 Berries, value-added products
Marina Furtună, Ileana Cocan, Daniela Stoin
Faculty of Food Engineering, Banat's University of Agricultural Sciences and Veterinary Medicine „King Michael I of Romania" from Timisoara, Romania

P30 Sensory evaluation of gluten free biscuits
Dorothea Gurbina, Daniela Stoin, Ileana Cocan
Faculty of Food Engineering, Banat's University of Agricultural Sciences and Veterinary Medicine „King Michael I of Romania" from Timisoara, Romania

P31 Development of a pumpkin-based dessert
Ancuța Hapău, Camelia Moldovan, Delia-Gabriela Dumbravă
Faculty of Food Engineering, Banat's University of Agricultural Sciences and Veterinary Medicine „King Michael I of Romania" from Timisoara, Romania

P32 Valorisation of stinging nettle (*Urtica dioica*) as functional food ingredient
Maria Franciac, Diana Moigradean, Mariana-Atena Poiana
Faculty of Food Engineering, Banat's University of Agricultural Sciences and Veterinary Medicine „King Michael I of Romania" from Timisoara, Romania

P33 Evaluation of the antioxidant characteristics of blueberries from different areas of the country
Patricia Tarkanyi, Liana Maria Alda, Despina Maria Bordean
Faculty of Food Engineering, Banat's University of Agricultural Sciences and Veterinary Medicine „King Michael I of Romania" from Timisoara, Romania

P34 Studies on the Biofunctional Properties of Mascarpone Goat's Milk Cheese
Telita Szilagyi, Florina Radu
Faculty of Food Engineering, Banat's University of Agricultural Sciences and Veterinary Medicine „King Michael I of Romania" from Timisoara, Romania

P35 Evaluation of microbial contamination in various phases during the process of obtaining pig baloney
Georgiana Zaharia, Ducu Ștef, Ioan David, Gabriel Bujancă
Faculty of Food Engineering, Banat's University of Agricultural Sciences and Veterinary Medicine „King Michael I of Romania" from Timisoara, Romania

P36 *Daucus carota* L (orange, purple and yellow) - bioactive compounds with antioxidant activity
Cecilia Ulici, Claudia Izabela Oprinescu, Nicoleta G. Hădărugă, Riviș Adrian
Faculty of Food Engineering, Banat's University of Agricultural Sciences and Veterinary Medicine „King Michael I of Romania" from Timisoara, Romania

P37 Pralines with “urdă” and nuts (hazelnuts, almonds, pistachios) – an innovative product
Ildiko David, Nicoleta G. Hădărugă, Cristina Liliana Mitroi, Adrian Riviș
Faculty of Food Engineering, Banat's University of Agricultural Sciences and Veterinary Medicine „King Michael I of Romania” from Timisoara, Romania

P38 Walnut vegetable cheese - innovative functional product
Adelina Pop, Cristina Liliana Mitroi, Adrian Riviș, Nicoleta G. Hădărugă
Faculty of Food Engineering, Banat's University of Agricultural Sciences and Veterinary Medicine „King Michael I of Romania” from Timisoara, Romania

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Ion Arnăut, Cristina Liliana Mitroi, Nicoleta G. Hădărugă, Riviș Adrian
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Faculty of Food Engineering, Banat's University of Agricultural Sciences and Veterinary Medicine „King Michael I of Romania" from Timisoara, Romania

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Raluca Loredana Gruescu, Liana Maria Alda, Despina Maria Bordean
Faculty of Food Engineering, Banat's University of Agricultural Sciences and Veterinary Medicine „King Michael I of Romania" from Timisoara, Romania

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Aurel Melu Andrei Suru, Ducu Ștef, Ioan David, Gabriel Bujancă
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P7 Study of the technological process to obtain tomato jam
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Diana Prisăcariu, Anamaria Georgiana Bobic, Daniela Dobricean, Raul Avram, Camelia Sincu, Denisa Măncescu, Georgiana Radu, Ancuţa Gentea, Natașa Mărăcine, Ramona Heghedűș-Mîndru, Gabriel Heghedűș-Mîndru
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P13 Obtaining and characterizing of an gluten-free cookies assortment
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P17 Study regarding obtaining and characterizing of home sausages
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P19 Sensory evaluation for some apple juices assortments
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P21 Evaluation of the quality characteristics and nutritional properties of dessert with grapemarc flour
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P23 Innovative almond products - *Prunus dulcis* L.
Anca Maria Morega, Andreea Dan, Calina Soare, Elena Florea, Cristina Liliana Mitroi, Adrian Riviș, Nicoleta G. Hădărugă
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P24 The study technological and HACCP analysis with the sugar concentration of a mix of vegetables and fruits
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P25 Tehnological study of the conservation of cucumbers and red beet with the help of sugar
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P26 Development of some innovative shrimp cream assortments
Delia-Gabriela Dumbravă, Diana Veronica Dogaru
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P27 Obtaining gluten-low bakery biscuits – „*Pasta Biscuits*"
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P28 Obtaining a functional food product - with therapeutic effects
Diana Elena Todirică, Corina Dana Miscă
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P29 Obtaining some assortments of fish pate. Determination of quality and nutritive values
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P30 Food nanotechnology
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OC1

Labor market analysis in the west development region of Romania

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In order to analyse the labour market in the West Development Region of Romania, this study was conducted which contains, among others, informations on the regional situation of human resources (data on the evolution of the number of graduates of the education system, labour resource dynamics, vacancies and of the number of employees). Aspects of the evolution of unemployment through specific indicators are also addressed.

The insertion on the labour market of the graduates from the Timișoara University Centre was also analysed and in this sense a practical field study was carried out, which involved testing the opinion of the graduates from the Timișoara universities on this fact. It was also taken into account the determination of their opinion regarding the efficiency of the education system in their professional training, respectively the estimation of the labour market requirements through the opinion of the graduates. In addition, various opinions from the economic and institutional domain, regarding the directions mentioned above were determined.

The results thus obtained, together with similar ones at the level of the North-East and South-East Development Regions of Romania, respectively, are the basis for the achievement of a cumulative volume.

Acknowledgement: „Active measures to increase the participation in the tertiary entrepreneurial education of students from disadvantaged regions Antre_S", Contract code: POCU/379/6/21/124388 (SA 2.1) Sources of statistical data: ANOFM - National Agency for Employment, INS - National Institute of Statistics, MRDPA - Ministry of Regional Development and Public Administration; UNESCO - United Nations Educational Scientific and Cultural Organization, OECD - Organization for Economic Co-operation and Development, EUROSTAT - European Statistical Office, ANOSR - National Alliance of Student Organizations in Romania.

We also thank all the people who participated in this study by communicating some very useful information.

OC2

Opportunity study to assess the need for entrepreneurial programs in west development region of Romania

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In order to assess the need for entrepreneurial programs, a practical study was conducted which involved determining the opinion of students in high school terminal classes / ISCED 4 in the West Development Region of Romania. Thus, starting from the statistical data obtained by applying questionnaires to students, the conclusions were then substantiated by supplementing with information obtained from discussions with mixed groups (students, teachers) and opinions of people working in the economic or institutional domain. One of the important points of the study is the areas of entrepreneurial interest for the responding students: tourism industry, with hotels and restaurants (24%), health and social assistance (13%), trade (8.8%), agriculture, forestry and fishing (6.3%), information and communication technology (6.3%).

Among the factors that students consider to be the most difficult in the situation of starting a new business, the "insufficient experience" was the most frequently indicated (48%). About 37% of students indicated a high interest in future entrepreneurial activities (scores 4 and 5, on a scale of 1 to 5) while about 27% indicated a low interest in entrepreneurial careers (scores 1 and 2).

Regarding the question about the importance for their future of completing courses / study programs for the purpose of entrepreneurship education and training, most of them indicated a maximum appreciation (approximately 48%) thus showing a high interest to improve and understand at the same time the usefulness that these programs have as a foundation in future activities of this type.

The opinion of some people working in the economic or institutional domain was also analysed, regarding the percentage of students who should follow after completing their studies, in a certain form, an entrepreneurial career, this

for the harmonious development of the society. The result was statistically estimated at about 36%. Currently, the share of young entrepreneurs in the total number of young people, at regional level, without specifying the level of their studies, is lower. More than half of the people interviewed indicated a maximum score in terms of the importance, for young people determined to pursue an entrepreneurial career, to follow educational programs of qualification or entrepreneurial training.

Acknowledgement: „Active measures to increase the participation in the tertiary entrepreneurial education of students from disadvantaged regions Antre_S", Contract code: POCU/379/6/21/124388 (SA 3.1)

Statistical data sources: INS - National Institute of Statistics, ONRC - National Trade Register Office.

We thank all the people who provided very useful information and opinions to this study (students, teachers, administration, economic and institutional environment, etc.).

OC3

Innovative functional foods – pasta

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Pasta products are staple food that are traditionally consumed in soups or pasta combined with cheese, sauces and sweet specialties for dessert. They are prepared from wheat flour and water, without or with other additives having higher nutritional values such as eggs, vegetable and fruit flour or with filling mixtures (e.g., cheese, meat, mushrooms, vegetables, fish or seafood). There are many pasta specialties on the market: **long type** (*spaghetti*, thin and wide noodles – *vermicelli* and *tagliatelle*, having rectangular cross section – *Lasagne*), **short type** (letters, rings, tubes, spirals, shells, or penne) and with **fresh filling mixtures** having various shapes (vegetable filling, ricotta cheese filling, different meat filling including fish meat – *ravioli*) or with reduced size, fresh/dried, having meat, cheese, mushrooms or vegetable-based fillings that are traditionally designed for meaty soups or precooked products (*tortellini*).

Keywords: Innovative functional foods, pasta

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OC4

Danube catfish (*Silurus Glanis* L.) - Romania: Fatty acid profile

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This study refers to fish species in the Iron Gates I - Calaraşi sector. The fish species approached in this study was the Danube catfish harvested from the area of Dubova village, Mehedinţi county. The Danube river cross nine countries – Germany, Austria, Slovakia, Hungary, Croatia, Serbia and Montenegro, Bulgaria, Romania and Ukraine and hosts a wide variety of fish species, both freshwater species as well as salt water fishes that migrates especially during the prohibition period to lay their eggs.

In our country, there are approximately 133 fish species along the entire river, but only about 30 species are exploited. Consumption of fish is increasing, especially in the countries of the European Union, where there has been a consumption per capita of about 20 kg / year. In order to obtain fish oil, Danube catfish fishing have been performed (Dubova, Mehedinţi county), according to EU directives. The fish oil was separated by the heating-pressing method, using only fresh catfish fillets. The crude extract was then cooled and filtered. The residue was pressed and remaining oil was separated from the aqueous phase by centrifugation. Fish oil fractions were combined and dried over anhydrous sodium sulfate.

The fatty acid profile in Danube catfish oil, determined by GC-MS analysis after derivatization to the corresponding methyl esters, showed saturated SFA (23.3%), monounsaturated MUFA (45%) & polyunsaturated PUFA (15.2%) fatty acids (as methyl esters).

Keywords: Danube catfish, *Silurus Glanis* L., Fatty acids

Acknowledgements: This work was supported by proving the equipment's of the Faculty of Food Engineering Timişoara – "*Food Science*"- Research Center

OC5

Fatty acid profile of vegetable raw materials (Hazelnuts - *Corylus avellana* L.)

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Among walnut species, hazelnuts are more widely appreciated. In addition to being consumed as fruit, they are mainly used as ingredients in confectionery, as raw materials for the pastry and chocolate industry and also add in some of the growing varieties of sweet food and salty foods such as baked goods, cereals and desserts. Peanuts have about 60% fat (fresh product), oleic acid being the main fatty acid. In addition to a generous fatty acid profile, hazelnuts are rich in phytosterols, which are known for their ability to lower blood cholesterol, but have also been reported to have anti-cancer and immune-modulating properties.

The main fatty acids from hazelnuts were oleic (79.4%), linoleic (13.0%) and palmitic acid (5.4%), as methyl esters, according to GC-MS analysis of the derivatized samples.

Keywords:. *Corylus avellana*, L., Hazelnuts, Fatty acids

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OC6

Innovative meat products: "*Snail hamburger*"

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Product innovation covers a wide range of activities: improving the product, creating completely new products or expanding the range of products offered. Innovation should not be confused with invention. The "snail burger" is a new and innovative product that uses snail as its main ingredient. Fresh or frozen, in the form of semi-finished or canned food, today no one can dispute the particularly refined taste of snails, a gastronomic product not absent from Western European restaurants, but especially French and Italian, Asian or American. Snail meat is very similar to fish meat, low in fat (lipids: 0.5-0.8%) and low in calories (60-80 kcal / 100 g), but has a high content of valuable biological proteins (11-17%).

Keywords:. Snail hamburger, innovative, meat products

Acknowledgements: This work was supported by proving the equipment's of the Faculty of Food Engineering Timişoara – "*Food Science*"- Research Center

Section: Food Engineering

P1

Sensory analysis of bread with addition of grounded rosemary

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Bread is one of the most important basic foods of man, being indispensable in the daily diet, due to its nutritional properties and the content of heat generating substances. This important food is one of the long-standing concerns of people.

By bread, nowadays, we mean the product made by baking a biologically fermented dough. It is clear from the definition that bread is a product whose manufacture involves a long-term evolution of the use of cereals as food.

This study performs a sensory analysis of some bakery products from the Timișoara market, type "A – white bread purchased from the domestic market" and an artisanal product "R – Rosemary bread". The scale method with a score of "5-1" was used, where "5" represents the maximum acceptability from the consumer for the evaluated characteristic, and "1" represents unacceptability. The sensory characteristics that were taken into account were the following:

1. Shape, appearance, volume
2. Shell appearance
3. Core aspect
4. Consistency and chewing behavior of the core
5. Smell
6. Taste

It can be concluded that the sensory analysis of the bread samples allowed the evaluation of the consumer's acceptability for such products, the best scores being recorded for "R – bread with rosemary" type products.

Keywords: bread, sensory analysis, rosemary, core, smell, taste, shape, volume.

P2

Sausages "*Cîrnați cu Ambâț*". Traditionality. Technology

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The sausages product „Cârnați cu ambâț'' are a traditional product certified in 2014, very well known in Oltenia region, their area of origin, Mihăești commune, Stupărei village, Vâlcea county. The project describes the origin of the product, the recipe, the raw and auxiliary materials, the technological production processes, all these stages taking place in the described area.

Keywords: Sausages, "*Cîrnați cu Ambâț*", Traditionality, Technology

P3

Integration of a vegetable protein by-product in the bakery-pastry technology

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Coconut snail is a type of product obtained from frozen dough being a pastry originating in France, this is a new product in our country, which is demonstrated by describing the production technology through which it is made and the raw materials used. The project describes a comparison of the technological flow through which the frozen dough coconut snail and the fresh dough coconut snail are made, thus presenting the similarities and differences between the two technologies.

Keywords: vegetable protein, bakery-pastry, technology

P4

Obtaining and characterizing a Merlot aromatized wine - Vermouth type

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The purpose of this study is to obtain an aromatized wine from Merlot grapes. Vermouth aromatized wines are alcoholic beverages of the class of special wines, wine preparations, food sugar and extracts from medicinal and aromatic plants. When preparing them, plant macerate and sugar syrup are previously prepared. Sugar syrup is prepared cold in 1:1 wine or in hot water. On the basis of the total and partial material balance equations, the materials needed to obtain the 1000 L of aromatized wine were calculated. Finally, the composition of the mixture was checked and the acidity was corrected by addition of citric acid. The basic wine used to obtain aromatized wine is dry, having an alcoholic degree of 11% (v/v) and a total acidity value of 3.8g/L H_2SO_4. Also, the wine does not show undesirable physico-chemical and microbiological changes. Materials required to prepare 1000 L of aromatized red wine are represented by dry Merlot wine, ethanol 96% (v/v), plant macerate with an alcoholic degree of 45% (v/v), sugar syrup in water with 800 g/sugar and citric acid in the following quantities: 675 L Merlot wine, 80 L ethanol 96% (v/v), 225 L sugar syrup, 20 L herbs macerate and 1.329 kg hydrated citric acid. According to the standards, the aromatized wine obtained from Merlot grapes has the following parameters: alcoholic degree 16 % (v/v); sugar 180 g/L; total acidity 3.5 g/L H_2SO_4. The herbs macerate was added in a percentage of 2% (v/v) reported to the vermouth and has an alcoholic degree of 45% (v/v). The obtained assortment belongs to the class of special wines, aromatized, dessert type.

Keywords: *Merlo*t red wine, aromatized wines, Vermouth, herbs macerate.

P5

Comparative study of an assortment of pressed cheese

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The purpose of this paper was to calculate a balance of materials for the Penteleu cheese assortment and to conduct a comparative study for this type of cheese.

In order to carry out this study, we purchased three types of Penteleu cheese made from cow's milk, from different companies (G, C and FC), which we analyzed from the organoleptic point of view and the informational content and nutritional characteristics. on the packaging.

CONCLUSIONS: 1. The organoleptic characteristics of the three brands of Penteleu cheese fall within the conditions of admissibility corresponding to this type of cheese. 2. The mandatory labeling rules are met, and the information necessary to identify the product can be found. 3. The lowest nutritional quality is the cheese produced by company C, the other two brands being relatively close in value. 4. From the energetic point of view, the highest value has the cheese produced by company G., and the lowest the one produced by company C, but for all three brands the values indicated on the packaging do not correspond to those calculated, being almost 10 units larger at all brands. This could be an inconvenience for the consumer who wants to know the caloric intake of the food consumed.

Keywords: comparative study, Penteleu cheese

P6

Comparative analysis of some meat products in membrane

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The purpose of this paper was to calculate the balance of materials to obtain a certain amount of "summer salami" assortment and conduct a comparative study for this type of salami. In order to carry out this study, we purchased three types of summer salami, from different companies (P., C., C-T) which we analyzed from the organoleptic point of view and the informational content and nutritional characteristics presented on the package.

Conclusions: 1. Mandatory labeling rules are met and the information needed to identify the product can be found. 2. The organoleptic characteristics of the three types of summer salami fall within the conditions of admissibility for this type of salami. 3. The most valuable qualitative summer salami from a nutritional point of view, but also energetically is the salami produced by company P. 4. From an energetic point of view, for none of the products the declared energy value does not coincide with the one calculated by us, the difference being even significant in the case of the C-T mark.

Keywords: comparative analysis, salami

P7

Valorisation of by-products from apple and pear processing - Apple and pear jelly

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In order to reduce fruit waste and to maximize the fruits used in the canning industry, an alternative is the production of jellies from by-products resulting from fruit processing.

The main objective of this project was recovery of waste from apple and pear processing (peels, seeds, and seed house), the development of a product sugar-preserved, apple and pear jelly.

In the first part of the project, a study of the literature was carried out on the nutritional properties of apples and pears and general characteristics of the preservation with sugar.

In the second part of the project, was developed the technology for obtaining the product – apple and pear Jelly - from apple and pear waste.

A product with a gelled consistency, pleasant taste and smell, with vanilla aroma was obtained. A quantity of 515,450 g of jelly was obtained from 397,423 g apples and pears waste, 300 g of sugar, 500 g of water and vanilla.

A case study was also carried out on the nutritional properties of some fruit skins (apples, pears and quinces), which showed that these products are particularly valuable, because the waste from which they are made is rich in active principles and can be capitalized on in a way that protects the environment as well.

Following the technological calculations, through the balance of materials and the case study on the nutritional value of these products, it can be appreciated that the recipe developed in this project can be used successfully in the canning industry.

Keywords: jelly, by-products, apple, pear, valorisation, sugar preservation.

P8

Study on obtaining and characterizing cooked meat specialties

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In the broadest sense, meat is the edible postmortem component from live animals. For the purposes of this definition, these animals include domestic cattle, pigs, sheep, goats and poultry, as well as wild animals such as deer, rabbits and fish. It is reasonable for the definition of meat to include organs such as heart and liver (often defined as variety meats), but the focus of this study is on meat defined as those tissues exclusively originating from an animal's carcass, a proportion amounting to about one-half to three-fourths of the animal's live weight.

Considering its complexity, an animal's body consists of relatively few kinds of chemical substances. About 55–60% is water. This, and the 3–4% or so of minerals, make up the inorganic component. The remaining 35–40% consists of organic substances. Three major categories of organic compound are of importance to us: proteins, fats and carbohydrates.

The main purpose of the diploma project was to obtain a pork roll, which was analyzed from an organoleptic point of view and for which the nutritional value was calculated based on data from the literature.

The objectives set out in the second part of the project were: establishing the recipe for making pork roll; obtaining pork roll; organoleptic characterization of pork roll; calculation of energy value of pork roll. The resulting values were compared with the values regulated by Order no. 210 of 30 August 2006 on the physicochemical properties of meat products for the approval of the Rules on the marketing of meat products.

Keywords: meat, meat specialties, chemical composition of meat

P9

Study on obtaining and characterizing Cabanos sausages

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Meat is the edible part of the animal body, slaughtered for human consumption with high nutritional value due to the high content of proteins, lipids, vitamins and minerals. It is considered a complex food product used both for direct consumption and for obtaining different kind of preparations. According to the Romanian tradition, sausages occupy a leading place on the tables during the holidays, especially during the winter holidays. Sausages originate in the Mediterranean area, their minced meat preparation being one of the oldest customs in human history.

The Cabanos sausages are long and thin sausages prepared from beef and pork, have a smoke aroma and a special taste, and, depending on the degree of freshness, they can be strong and very dry or soft. They are consumed by all Romanians at home, at events or holidays.

In this study were analysed 5 cabanos sausage products, purchased from the market from different producers. Cabanos sausages belong to the meat products category, obtained from double smoked minced meat. Cabanos sausages are part of the category of cooked and double-smoked meat products, obtained from meat.

The study followed the comparative analysis from the organoleptic point of view and of the composition of the products, the results being compared with the maximum and minimum values regulated by Order no. 210 of 30 August 2006 on the physicochemical properties of meat products for the approval of the Rules on the marketing of meat products.

Keywords: meat, sausages, chemical composition of meat

P10

Study on the production and characterization of sheep meat products by baking

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Recently, in the food industry, has been a need to capitalize on useful substances resulting from secondary materials due to the crisis of energy and material resources, and in this context the food crisis occupies the first place. The by-products resulting from the industrial processing of meat can be used in obtaining animal feed but also for various technical purposes (textile industry, chemical industry, pharmaceutical industry, etc.). One of the most common products obtained from slaughterhouse by-products is „drob". The „drob"-type products are processed from slaughterhouse by-products (pig's head, liver, kidneys, rinds, heart, lungs, spleen, ears, blood and others), boiled and chopped with a knife and sieve with a diameter sieve mesh between 3 - 8 mm; to the resulting mince add the soup obtained from boiling the pork head, bacon, onion, garlic, barley and spices. Thus, "drobul", depending on the ingredients used in its preparation, but also on the fact that it represents an old recipe frequently prepared in Romanian households, can certainly be included in the category of traditional Romanian products highly appreciated for its special taste. It can be stored in the refrigerator until the next consumption, or it can be stored in the freezer if it is to be stored for a longer period of time.
The main purpose of this diploma project was to obtain a low-fat product with low energy value by replacing raw materials with by-products resulting from the cutting of lamb. The product obtained was characterized organoleptically in terms of appearance, consistency and taste. In addition to the organoleptic examination, the energy value was calculated, as well as the reference consumption of the product obtained taking into account the data reported in the literature and the ingredients used.

***Keywords**:* sheep meat, meat products, backing

P11

Sensory analysis of cookies with candied fruit addition

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Bakery products currently obtained on an industrial scale have a great diversity. Along with other food products, they provide the human body a significant part of the substances it needs for vital activity, maintaining health and preserving work capacity.

Most of fruits are known as functional foods, because they contain one or more substances with a beneficial function (e.g. eliminating the risk of a certain disease or improving a function of the body).

Sensory analysis of cookies involves an examination done with the sense organs (sight, touch, smell, taste) following a control of the analyst's real ability to appreciate and the accuracy of his reasoning, then followed by an appreciation of sensory impressions and a statistical processing of the data obtained.

From the presented data it can be observed how the cookies with candied fruits addition are superior to the sensory analysis compared to the simple ones, and among the three assortments, the cookies with cranberries were the most appreciated.

As conclusive data we can appreciate that the added candied fruits, due to the multiple qualities but especially for the fact that they are fruits with high antioxidant content, have contributed to increasing the nutritional value of simple cookies; thus, their consumption has a beneficial effect on consumers.

Keywords: candied fruits, cookies, bakery products.

P12

Sensory characteristics of gluten-free cake prepared with brown millet flour and teff flour

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The aim of this study was to capitalize on the knowledge of the applicability of brown millet flour and teff flour for the development and sensory evaluation of a product with added nutritional value for both people with gluten intolerance and consumers who want a healthy diet.

Due to today's unhealthy diet, the number of people with gluten intolerance is constantly increasing. A gluten-free diet is essential for the management of any signs and symptoms of celiac disease and for any others medical conditions associated with gluten. Four assortments of gluten-free cake have been obtained, using different proportions of flour (brown millet flour:teff flour – 100%:0%, 80%:20%, 60%:40%, 40%:60%). The partial substitution of brown millet flour with teff flour led to obtaining a new food product, with sensory characteristics clearly superior to gluten-free pastry products obtained from usual gluten-free flours. Thus, the cake sample with 60% brown millet flour and 40% teff flour was the most appreciated by the assessors, having a uniform yellow-brown color, the shape and appearance being specific to the assortment, without deformations, the taste, smell and aroma being very pleasant. The results obtained after performing the sensory analysis, indicate that the recipe established following this study can be successfully applied on an industrial scale.

Keywords: gluten-free cakes, teff flour, brown millet flour, sensory evaluation

P13

Sensory evaluation of gluten-free muffins based on teff flour, rice flour and blueberry fruits

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The main purpose of this study was the sensory evaluation of an assortment of gluten-free muffins from which can benefit especially people with gluten intolerance, but also those who want to adopt a healthy lifestyle. People who have gluten intolerance should remove wheat, rye, barley, and replace them with food made from ingredients that reduce the symptoms of this condition. Teff is a valuable ingredient of gluten-free products because it increases their nutritional quality. In this study, there were performed 4 samples of gluten-free muffins with different amounts of teff flour (TF) related to the amount of rice flour (RF), namely: 0% TF: 100% RF, 25% TF: 75 % RF, 50% TF: 50% RF and 75% TF: 25% RF, respectively. The use of up to 50% TF led to obtaining muffins positively appreciated by the evaluators: the shape of the muffins was well contoured and undeformed, the color of the crust was uniform, the taste, smell and aroma were pleasant, specific to the assortment. The incorporation of a higher proportion of TF (75%) led to the obtaining products with inadequate sensory characteristics, crumbly, deformed, dark colored. Following the sensory evaluation of this range of muffins, we can recommend the use of flour mixture 50% TF: 50% RF.

Keywords: gluten-free muffins, teff flour, rice flour, blueberry fruits, sensory evaluation

P14

Technical-economic study on the opportunity to place on the market a new assortment of vegetable pate. *Cauliflower* pate with walnuts

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One of the widely applied scientific disciplines is the control of plant products. It is known that the inspection of these products has been done since ancient times, the need arising from the finding that these foods can cause disease in both humans and animals.

The production of plant products in our country experienced a great development, especially in recent years, during which went into operation new facilities equipped with modern equipment, where applicable new technologies and improved, which ensures the development of products superior quality.

According to the data obtained, we are trying to highlight that this product would be very good on the market.

Crude protein, dietary fiber and energy value of the sample that can be made with the recipe we proposed are higher, which indicates that the product would be more nutritious and richer in terms of energy than what is available on the market so far.

Carbohydrates but also the lower amount of NaCl in the sample we have in the study, which indicates that the product would be superior in terms of quality.

Total fat content of the product would be equal to the products on the market.

***Keywords**:* nuts, cauliflower, pate, raw materials, protein, energy value

P15

Tomato processing. Obtaining tomato paste

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Tomatoes are one of the most important vegetables used in fresh food, having the largest use in the canned vegetable industry (tomato juice, tomato paste and canned vegetables in broth). Pasteurization is the most important technological operation in the technological process in terms of product preservation. From a bacteriological point of view, pasteurization can be defined as the heat treatment that is applied up to temperatures of 100ºC on products that have been packaged and closed, in order to ensure long-term preservation. The objectives of this paper were to establish the manufacturing recipe and specific technological parameters for obtaining tomato paste with the evaluation of the main techniques and economic problems to justify the applicability of the technology. The optimal processing recipe was established along the specific technological parameters for processing the tomato paste product. A mathematical program was designed and implemented for the calculation of the material balance in terms of losses on technological flow, efficiency and specific consumption for the finished product. The specific consumption was 4.27 kg and manufacturing efficiency of 23.14 %.

Keywords: tomato paste, technological flow, manufacturing efficiency, mathematical program.

P16

Meat processing. Getting pork parizer

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One of the most important problems in the contemporary world was and remained the food problem. The primary objective of food processors is to produce products of high quality and health. Concerns about the study of human nutrition were addressed relatively later on in terms of scientific concerns. The meat industry has been built on the skeletons of old slaughterhouses in rural areas and areas with a tradition of animal slaughter and meat processing. In the diet are included boiled salamis, high quality sausages and are excluded smoked and semi-smoked salamis, as they have a negative effect on digestive organs, excretory and metabolic organs. Meat with its high protein content is an important source in terms of nitrogenous substances with a high biological value. The biological value of meat is particularly influenced by the high content of essential amino acids. In this paper, the technological flow of the pork parizer was monitored based on the manufacturing process. A mathematical program was designed and implemented for calculating the material balance in terms of losses on technological flow, efficiency and specific consumption for the finished product. The specific consumption was 1.11 kg and manufacturing efficiency of 89.87 %.

Keywords: pork parizer, technological flow, mathematical program

P17

Processing vegetables for the manufacture of preserved vegetables

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Vegetables are an important source of nutrients, which leads to the proper functioning of the human body. They provide the body with carbohydrates; minerals; vitamins, in a large pro-vitamins and vitamin C; organic acids; lipids; protein, in tiny amounts; essential oils; tannins; dyes, pigments, etc. The nutritional value of vegetables is affected by the chemical composition shall be determined by the fact that the veggies are food, non-energy, but they are considered to be an important source of water, vitamins and minerals, and fiber. In the present paper was to monitor the technological process of processing of vegetables, in order to obtain the **"**zacusca with eggplant". A mathematical program was designed and implemented for the calculation of the material balance in terms of losses on technological flow, efficiency and specific consumption for the finished product. The specific consumption was: for eggplant (0.68 kg eggplant/kg of "zacusca"), for peppers (0.68 kg peppers / kg of "zacusca") and for onions (0.68 kg onions / kg of "zacusca"). The finished product yield **"**zacusca with eggplant" are 60,08 %.

Keywords: vegetables, "*zacusca with eggplant*", mathematical program, technological flow, specific consumption

P18

Obtaining and characterization of the red wine from the Oltenia region

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The purpose of this study was to obtain and characterize the red wine made from the Black Maiden (romanian: Feteasca Neagra) grape variety, produced by the Samburesti Wineries.

From this variety of Romanian-Moldovan grape were obtained wines with high alcohol content

between 12-14% vol. alc., a deep-red color with ruby shades and a black currant flavor which becomes smoother and richer with aging. It is considered to make some of the top red Romanian wines. The red wine was made from Black Maiden grapes and the fermentation process occurred together with the grape skins, which gave the wine its rich color.

The wine samples were analyzed by having in view *organoleptic properties and physico-chemical* parameters. The organoleptic properties of the wine samples were examined with the four senses (aspect, taste, smell and sight), while the physico-chemical parameters such as the total acidity, sugar content, total dry extract and alcoholic strength were examined with the help of physical instruments and chemical solutions. For instance, the procedure for determining the alcoholic degree of the wine was done by distilling the wine sample using the oenological distiller D.E.2000 Dujardin-Salleron (France). Antioxidant properties like antioxidant capacity and total polyphenol content were analyzed. *Monomeric anthocyanins* are the main contributor of colour in red wines. The wine's acidity plays an important role and it is one of the most important aspects to consider because it contributes to the wine's crisp and refreshing taste.

***Keywords**:* Black Maiden, red wine, organoleptic properties, physico-chemical parameter

P19

Study of the biotechnological manufacturing process of tortilla dough

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This study presents the influence of hemicellulase in tortilla dough obtained from wheat flour. By analyzing and comparing different international research studies we highlighted the advantages of using hemicellulase and positive effects on the rheological properties of the dough: extensibility and elasticity of the dough; resistance of the dough to deformation; water absorption capacity; tolerance and stability of the dough as well as on the baking properties of the dough: increase in the volume of bread; core bleaching action, improving the structure, texture and porosity of the core. Tortillas are smooth, circular, light-colored loaves of wheat flour or corn flour. The addition of hemicellulase in dough influences the hemicellulose content by reducing the negative effect it has over the gluten chain. It also improves the quality of the finished product, the dough's stability, the elasticity of the gluten chain, increases the warranty period and improves freshness. A higher dose of hemicellulase leads to very soft and sticky dough, worsening the structure of the core. The absence of hemicellulase even if it does not influence so much the elasticity of the bread, it influences negatively the volume and porosity of the core.

Keywords: bread, hemicellulase, dough stability, bleaching action

P20

Obtaining and characterization of flavored olive oil

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In this paper, we describe the method to obtain virgin olive oil flavored with rosemary and the characterization of this product in terms of sensorial characteristics.

Like distinguished wines, olive oil is evaluated according to taste and level of acidity before bottling. The aroma, color and nutritional value of each type of oil are influenced by soil quality, climate, variety and age of olives, methods of production.

Virgin oil, produced by the use of mechanical means, without any chemical treatment, retains entirely the flavor, aroma and nutritional properties of the olives from which it was extracted. Rosemary (*Rosmarinus officinalis*) is a shrub with strongly aromatic leaves. The rosemary herb was used as a natural medicine for over a million years. The leaves like needle are used to flavor various foods.

Worldwide, the demand for flavored olive oil increasing from year to year. Recently, the researchers show in their studies, how many benefits can have for the human body the consumption of flavored olive oil; it is considered a universal cure for all ages.

***Keywords**:* virgin olive oil, rosemary, sensorial characteristics

P21

Development and sensory characterization of an innovative prototype of hot pepper jam

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The purpose of this study was to develop a new recipe to obtain a special sweetness / jam made from hot peppers, to develop the manufacturing process, technological stages and nutritional analysis of the final product. We obtained hot peppers jam sweetness starting from a classic recipe (of fruit jam), it was added ginger and anise. The aim of this paper was to obtain innovative assortment of hot pepper jam and to determine its protective quality.

Jam/sweetness is a non-gelled product obtained by boiling the fruit in a sugar syrup. The product is packed in an airtight container and pasteurized.

Hot pepper (*Capsicum annuum*) is a popular species of the genus *Capsicum* that is part of the Solanaceae family. Hot peppers (chili peppers) can be found in different sizes and shapes, and the intensity of their hot can vary from weak to intense. The medicinal properties of peppers are limited. The variety of hot pepper is an exception due to the irritating substance capsaicin, with multiple therapeutic indications. Hot pepper is a stimulant and antiseptic that contains a large amount of vitamin C and beta-carotene. It also contains vitamins K, potassium, dietary fiber, thiamine, riboflavin, niacin, folic acid, iron, magnesium and phosphorus.

Our product (hot pepper jam) is rich in vitamins and minerals and it does not contain artificial preservatives or flavor enhancers. To establish the quality of this product comparisons between it and a product from the market have been made.

Keywords: hot pepper, jam, ginger, anise, organic product.

P22

Characterizing some assortments of juices with pulp: tomato juice

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Tomato fruits (tomatoes) of red, yellow or purple color, originating in South America, cultivated on the European continent for hundreds of years, can be eaten raw, cooked or preserved, being highly appreciated for their taste, but also for their nutritional benefits.

If in the 19th century, they were present exclusively in the diet, in the current period the therapeutic effect of tomatoes is more and more highlighted.

Recently, the interest of the medical world in the positive effects of tomato consumption is mainly due to their high content of lycopene, an antioxidant that helps the body fight against destructive action of free radicals, which attack healthy cells and eventually produce various forms of cancer. Consumption of tomatoes is extremely beneficial during the summer, during which time they protect the skin from the aggressions of ultraviolet rays.

One of the most popular options for eating tomatoes is tomato juice, known as an energy drink, tasty and with many health benefits.

Starting from the versatile nature of these fruits, their accessibility, the variety of recipes in which they can be used, tomatoes can be superior foods in terms of taste and nutritional properties that fall into the area of interest of food technology of interest.

***Keywords**:* diet**,** lycopene, tomato juice

P23

Characterizing some assortments of cheeses: fresh cheese

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Cheeses are a concentrated source of nutrients derived from the milk used in their manufacture. They are represented by milk casein, minerals, almost all lipids and fat-soluble vitamins in milk from which they come and various amounts of water-soluble constituents, represented by lactose, whey protein, vitamins and other minor components of milk.

The oldest variety of cheese seems to be fresh cow's cheese, which was accidentally obtained by "spoiling the milk". Starting from this, people began to capitalize on milk not only as such and especially as a raw material for obtaining dairy products. Although pepsin or curd were not yet known, "coagulated" cheeses were still obtained by using a plant with whey-releasing properties and protein precipitation (casein, caseinates, etc.), obtaining products that precede today's curd and cheese.

In essence, cheese is a nutritious and multilateral food that can play an important role in a proper, balanced diet. Especially in the unfermented state, the components of the cheeses are almost identical in terms of quality, with those of the basic raw material.

Cheeses are also very popular due to their positive and healthy image, appreciated by consumers as having beneficial effects on health.

***Keywords**:* fresh cheese**,** nutrients, health benefits

P24

Obtaining and Promoting on the Market, a Roll Type Product from Duck Meat

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Duck meat is a good source of high quality protein, phosphorus, iron, zinc, vitamin B-6 and thiamine and lower amounts of vitamin B-12, folic acid and magnesium. Duck meat is relatively rich in fat and cholesterol. If eaten skinless, it has an even lower caloric value than other types of meat.

To obtain a duck roll product, the meat must be cleaned and washed well, the wings are cut and the bones are removed from the chest and chops. Everything is done manually. Cut the edges so that they have a rectangular shape, beat with a hammer, of the slices and season with salt and pepper. The meat remains are coarsely ground and a very small part of the fat is ground separately and the vegetables are diced in a mincer.

To prepare the rolled product, mix the minced meat, ground fat, vegetables, salt, spices and orange juice for flavor. Next, mix everything with a kitchen mixer until the mixture becomes sticky.

Spread the mixture on the meat rectangle, roll and tie with string, so does not decompose when baked. Season the roll, put it in a greased pan, pour wine, and bake at the normal temperature for about 80 minutes.

Keywords: duck meat, roll type product

P25

Obtaining a vitaminized bakery product, improved with the help of malt

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The muffins are pastry products, of individual dimensions, in a shape similar to that of a cupcake. The muffins are available in a variety of delicious sweet or savory assortments with various flavors, such as blueberry, chocolate, lemon or banana flavors. The muffins can have solid ingredients mixed into the dough, such as berries, chocolate chips or nuts. They are obtained using existing loosening methods:

- biochemical loosening with baking yeast;
- chemical loosening with the help of substances: sodium bicarbonate and ammonium bicarbonate.

Vitaminized muffins with the help of malt are an alternative worth considering by pastry chefs and confectioners who want to diversify their range. Due to its low gluten content, its dough made with yeast and malt flour is softer and more fragile. The final product is visibly improved with an appetizing and crunchy peel, over which the final egg glaze shines. The advantage of improving malt muffins is first of all, that it adds nutritional value, because it is rich in vitamins and essential amino acids. Second, it increases the shelf life of the products by its ability to attract moisture. Helps fermentation by strengthening gluten and feeding yeast. Last but not least, it adds a strong flavor and a special color to the product.

Keywords: malt, vitaminized bakery product

P26

Characterization of some Chardonnay white wines coming from Recas vineyard

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The aim of this study consists in the sensory analysis of slightly white wines obtained from Chardonay grapes in the conditions of the Recas winery. The white grapes of the Chardonay variety, the biological potential it possesses together with the rigorous management of the wine-making process, ensure the premises for obtaining high quality white wines. It is important to emphasize that this grape variety, through its organoleptic and physico-chemical characteristics, has flexibility in the vinification process, being possible to obtain several varieties of wines. The wines presented a color from straw yellow, light to golden yellow, bright, corresponding entirely to the type and age of the wine. The appearance of the wines was clear, crystalline, without sediment. without unpleasant foreign nuances, harmonious, characteristic of a type of vinaromat, well defined. The analyzed wines have a good air resistance, do not disturb, retain the brightness and color characteristics of the original wine. Also, in the case of testing the resistance to cold, there were no deposits, disturbances or other visible defects, they retain their organoleptic qualities unalterably. Regarding the hot behavior, it was observed that the wines do not show deposits, disturbances, remain clear, do not show no predisposition to scrapping. We note the alcoholic strength over 12.5% vol. . Due to the values of physico-chemical parameters and organoleptic characteristics we can say that these varieties of wines are balanced in terms of physico-chemical characteristics and highly appreciated from a sensory point of view.

Keywords: white wines, Chardonnay grapes, sensory analysis, physical-chemical characteristics

P27

Study of the microbiological stability of the homemade pig head cheese

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The paper on the study of the microbiological stability of the homemade pig head cheese; presents in detail many theoretical aspects of the problem.

The paper presents the methodology for obtaining the homemade pig head cheese, being detailed the raw and auxiliary materials, the technological process of obtaining, as well as a part of technological calculation. Also, a wide sensory, physico-chemical and microbiological characterization of the types of pig head cheese from the researched studies is performed.

Following the research from different pig head cheese, the following can be found:

Moisture, fat, carbohydrates, carbohydrates but also the amount of NaCl lower in the homemade drum sample compared to the commercial sample on the market, which indicates that the product is superior in terms of quality.

According to the data obtained, the recorded values of the amount of ash and total nitrogen, the homemade pig head cheese sample would have higher values than the one currently on the market.

The protein and energy value of the homemade pig head cheese sample are higher which indicates that the homemade pig head cheese product is more nutritious and richer in energy than the one found in the market.

***Keywords**:* pig head cheese, protein, energy value, carbohydrates

P28

Impact of Individual Quick Freezing (IQF) and frozen storage period on quality of some vegetables

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The purpose of this study is to investigate the impact of Individual Quick Freezing (IQF) technique on the sensory and physico-chemical characteristics (humidity, ash, reducing sugar, total protein, dry matter) of some vegetables as : broccoli, peppers , potatoes and carrots. Also, the impact of the frozen storage time up to 8 months on the sensory properties of frozen products has been investigated. The obtained results reveal that after freezing the investigated vegetal material didn't register significant changes. In frozen products, there is a decrease in water content compared to fresh products, due to the removal of part of the water existing on the surface of the products. We are also aware of a reduction of sugar, protein and ash, due to the solubilization of some of the soluble compounds in scalded water. Regarding the behavior of packaged frozen products, during storage for a period of 8 months at -18°C and relative humidity up to 60%, it was concluded that immediately after freezing the appearance, color, taste and the smell are not depreciated compared to the fresh product; after 4-6 months of storage, insignificant deviations of the frozen vegetables were registered. After 8 months in storage, were found slight changes in the firmness of the vegetables, slight deviations from the original shape due to loss of elasticity. The color was maintained to a high extent, no spots or whitish spots appeared. After 8 months of storage, some frozen vegetables showed a slight tinge of frostbite. Even after 8 months, no strange , moldy, sour, fermented shades appeared, instead the intensity of the aroma was slightly blurred.

Keywords: Individual Quick Freezing (IQF), sensorial properties, vegetables, frozen storage period.

P29

Design and development of an assortment of chicken and turkey sausages

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The aim of this work is to produce chicken and turkey sausages, therefore, increasing the value of poultry meat. The physicochemical and sensorial qualities were evaluated. Poultry sausage compared to poultry meat has better physico - chemical characteristics (an acidic pH of about 5.1, a low water content of 67.33 ± 0.76% to 60.00 ± 0.87 % and a relatively high water retention capacity from 28.85 ± 1.46% to 69.24 ± 0.52%) for better preservation. By writing this paper I wanted to provide some basic information needed to make an assortment of chicken and turkey sausages. It is addressed especially to people who enjoy tasty sausages that can be made at home. This information was collected from various sources, but much of the content was their own contributions, which were carefully prepared and organoleptically tested.

The assortment of sausages obtained has refined organoleptic characteristics, highlighted by a unique taste and aroma. We obtained a pleasant product, with selected sensory qualities, with a balanced energy value, intended for all categories of consumers.

Keywords: chicken meat, turkey meat, sausages

P30

The influence of enzymatic preparations in the biotechnological processing of wheat flour

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This study presents the influence of amylase on wheat flour used in the bakery industry. It has been investigated some of the factors that may have an impact on the aging process of bread, the influence of amylases on starch crystallization and bread texture and the influence of amylases on bread volume. This study concludes that α-amylase may be more stable during bread making than previously thought. It seems that there is an increase in the level of low molecular weight sugars in the finished, baked product, which has a major effect on the quality characteristics of the bread. Some of the reactions improved by amylases bring characteristic changes in the baked product such as gas formation and retention, gluten coagulation and starch gelatinization, partial dehydration by evaporation of water, development of flavor, color changes due to browning caused by Maillard reactions between gluten, protein with sugars, as well as other chemical color changes, crust formation, burning of the crust due to Maillard reactions and caramelization of sugars. It is recommended to use amylase enzyme preparation in the baking industry because exogenous amylases have a higher resistance to during oven baking compared to endogenous amylase, so the process of aging and hardening of bread will be slower.

Keywords: bread, amylase, texture, volume, rheological characteristics

P31

The influence of storage conditions on the oxidative stability of pumpkin seed oil

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The aim of this study was to obtain crude oil by extraction with the help of the Soxhlet extractor from pumpkin seeds and the presentation of scientific literature on the impact of storage conditions on the oxidative stability of pumpkin oil. According to the results, pumpkin seed oil was more stable when stored at 10°C in the dark. On the other hand, even the stabilized oils deteriorated after 120 days of storage at 25°C. The peroxide value increased to a higher level in the pumpkin oil samples stored at 25°C. Changes in the value of the acidity value and fatty acid composition were minor, but the tocopherol content decreased significantly during storage. It is generally recommended to use synthetic antioxidants for long-term preservation of pumpkin seed oil. The factor that most promotes the process of oxidative degradation of fatty acids in pumpkin oil during storage is represented by daylight. Hence the recommendation is to not keep the oil directly exposed to sunlight. In the case of oil stored in the dark, throughout the 60 days, both in the case of ambient temperature and for a temperature of 10°C, the peroxide value did not register alarming values, not exceeding the upper threshold of 20 milliequivalents O_2/kg. These results may be associated with the presence of antioxidant bioactive compounds present in pumpkin oil which provide antioxidant protection and improve the stability of pumpkin oil against oxidative degradation processes that are promoted by its storage in inappropriate conditions.

Keywords: pumpkin oil, storage conditions, peroxide value, oxidative stability.

P32

Evaluation of the antioxidant characteristics of kiwi fruits and seeds

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Actinidia deliciosa – kiwifruit, is a sub-family of the genus *Actinidia*, known also as Chinese gooseberry and consists of approximatively 55–60 species. The genus *Actinidia* is a dioecious plant and is widely distributed on the Asian continent. It is also native to China and most of the species are cultured in the southwest of China. Out of all species, only kiwi (*Actinidia deliciosa*) is intensely cultivated all over the world. In addition, the fruit of *Actinidia deliciosa* is recommended for its nutritional and medicinal values.

It contains several phytoconstituents belonging to category of triterpenoids, flavonoids, phenylpropanoids, quinones and steroids. The roots of *Actinidia deliciosa* has been used as a traditional drug in China for a long time and are reported in Chinese folk remedy for various diseases, such as hepatitis, pyorrhea, gingivitis, edema, rheumatoid arthritis, and also various forms of cancer. Kiwi fruit has been used as mild laxative and a rich source of Vitamins.

The fruits, stems and roots are diuretic, febrifuge and sedative. Actinidia deliciosa has thereby recently acquired interest due to its attractive potential application in indigenous drugs. Therefore, *Actinidia* delights in acquiring a recent interest that has given their potential and attractiveness in indigenous medicines.

The aim of the present study was to analyse the total antioxidant activity and polyphenol concentration of kiwi seeds and fruits, fresh and frozen. All analyzes were performed in the Food analysis laboratory of Faculty of Food Engineering. All analysis proved that freezing the kiwi fruits shows a low impact on the antioxidant activity.

***Keywords*:** kiwi, frozen fruits, antioxidants

P33

Considerations on artificial cold in the preservation of meat products. Case study – traditional sausages

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Artificial cold widely used in the food industry and is used in conservation action by freezing and refrigeration method, description of the operation of refrigeration plants and properties of refrigerants. The project presents the description of traditional pig sausages, the raw materials used and the technological process used in preparation and preservation.

Keywords: artificial cold, preservation, meat products

P34

Study on making a guinea hen / pearl hen meat pate with bacon.

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In this study we wanted to introduce on the market a lesser known type of pate and we want to present the technology of its production, namely guinea hen/pearl meat pate with bacon.

A literature study was conducted which shows the nutritional importance of guinea hen/pearl hen meat pate with bacon in human nutrition.

The study of literature shows the miraculous properties of guinea hen/pearl hen meat consumption in the human body.

From the technological point of view, the manufacturing stages of canned pâté from guinea hen/pearl hen meat with bacon can be seen.

Research has been done in specialized studies on the influence of biogel on some rheological characteristics of an assortment of meat pâté and from here we could realize that this method can be applied to guinea hen/pearl hen meat pate with bacon.

Keywords: hen/pearl meat, bacon, pate, raw materials, protein, energy value

P35

Food safety management on the technological flow of obtaining a sweet-spicy vegetable sauce

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The sauces have been used in the food industry since ancient times to bring a special flavor and taste to meat dishes, and the fact that this paper presents the combination of a sweet and a spicy taste makes the sauce different from what it is find it today.

The vegetables used in this sauce were only root vegetables, except hot peppers, these being: carrot, parsnip, celery, and parsley, they are known as the most used vegetables in everyday life in the kitchen. Carrot is synonymous with eye and vision health. Due to the high content of beta-carotene (which the body converts into vitamin A), its consumption prevents and even improves nictalopia, eye disease. The high level of potassium in parsnips recommends it for a good heart function: vasodilating effect, reduces blood pressure and heart stress. Because it also contains folic acid, it reduces the level of the homocysteine cellular toxin in the blood, which reduces the risk of heart and circulatory system diseases.

Celery has detoxifying, anti-inflammatory, antidepressant and antibiotic effects, available both for the consumption of the root and the leaves of the plant. Celery can cure and prevent dozens of diseases. Parsley is rich in protein, vitamin C, beta-carotene, active essential oils, flavonoids, iron, calcium, phosphorus, manganese, sulfur, inositol and vitamin K.Hot peppers have a specific taste due to a special ingredient called capsaicin. The amount of capsaicin determines how fast the pepper is. The larger the quantity, the faster the pepper. Because this combination of vegetables proved to be extremely healthy for the body, it can be stated that in this paper it was discussed to obtain a root vegetable sauce, a combination with a spicy taste, having a different taste from today's sauces.

Keywords: vegetables, sweet ans sour sauce, food safety management

P36

Study case on beta-alanine and citrulline malate consumption in amateur athletes

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In the last years, the industry of food supplements grew at a stady place and according to the studies of Nutrition Bussines Journal, it is expected that it will show even higher growth in the coming years. Studies made continue to show new supplements that have the potential to make you run faster, lift more and to perform better, which is why consumers interest is growing, as the demand of information too.

In this particular study, we are trying to find out if there are any phisycal or mental improvements of some amateur athletes after consuming amino acids, beta-alanine and citruline malate. Seven people took part in this study. Five of them received different doses of amino acids and two were given a placebo. The study lasts 30 days in which it will be monitored the strenght, endurance, recovery and side effects.

The results of this study demonstrate once again the importance of sports activity for the maintenance of a healthy mind in a healthy body.

***Keywords**:* supplements industry, beta-alanin, citruline malate, placebo, force, recovery

P37

Development and characterization of a red beetroot paste type appetizer

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This work aimed to obtain an innovative food product: red beetroot appetizer, in the form of paste, as well as to determine its approximate composition and energy value. In addition to red beetroot, the product contains garlic, lemon juice, salt, black pepper, and instead of oil, were used nuts. In order to be able to be preserved for a longer period of time, the product was sterilized at 135ºC for 2 hours, in hermetically sealed 50 ml jars. This appetizer based on red beetroot, a vegetable rich in polyphenols, health valuable natural dyes and other important bioactive principles, had a fairly low energy value (192.84 kcal/100g) and can be consumed in low calorie diets. The product is rich in unsaturated fats (15.41 g/100g), has a relatively high content of dietary fiber (4.40 g/100g), but a lower content of protein (3.23 g/100g) and sugars (5.77 mg/100g).

***Keywords**:* red beetroot, appetizer, proximate composition, energy value.

P38

Obtaining a functional food product with therapeutic effects

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Functional products or nutraceuticals are foods that, beyond the nutritional basis they have, bring health benefits. The paper is based on the analysis of a bread product obtained from gluten-free flours, using natural sourdough as a leavening agent.

Due to the soudough, this product proves to have a better developed aroma and texture than in the case of ordinary breads, and the shelf life of the bread is considerably extended. Since the raw materials used are only of plant origin, this product can be dedicated to all people, regardless of diet, lifestyle or beliefs. Gluten-free flours used in the development of the product make this bread to be consumed by people with celiac disease. At the same time, the mixture of flours used, the integration of Chlorella powder in the dough also of hemp, chia and flax seeds enrich the product considerably as a source of protein. In terms of fiber content, bamboo fibers and psyllium bran are what transform this product into a high-fiber food.

Moreover, the shelf life extension, the production process with no special conditions and using natural sourdough as leavening agent, the packaging of the bread in an antimicrobial package and no special bake terms for storage and consumption are arguments for a sustainable food product.

Keywords: functional product, bread, celiac disease, gluten-free flours, Chlorella powder

P39

Obtaining an innovative product - Pearls of Happiness - for vegetarians and vegans

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The goal of this work is to obtain an innovative product using vegetable raw material which, through a specific technology, leads to the production of a product assimilated with salmon roe (*Salmonidae* Family).

It has physico-chemical and microbiological properties that comply with the legislation in force and from a taste point of view it is highly appreciated by consumers.

The product was evaluated by the students and teachers of our faculty and in terms of appearance and taste took a rating of 95%, 10 for both taste, smell and appearance, and in proportion of 5%, 9 for taste and 10 for smell and appearance.

The paper presents the technological scheme of obtaining, and from a microbiological point of view the sanitation of the product has been verified by determining the microbial load by evaluating the parameters of UFC (unit forming colony) and the total number of yeasts and molds.

In conclusion, following the results obtained we affirm that our product – Pearls of Happiness – is a safe and salubrious product for consumers.

Keywords: Pearls of Happiness, *Salmonidae* Family, vegetarians, vegans

Section: Food Control

P1

Strawberry syrup: description of the technological process and calculation of the material balance

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Fruits, being a valuable source of mineral salts and vitamins, are often used in food, either raw or processed, in various forms: syrups, juices, nectars or even compotes. Fruits are also important because of their vitamin intake. They are the main source of vitamin A, vitamin C, vitamin P and R, covering 20-30% of the need for B vitamins. These nutrients will be transmitted in the finished product – the syrup.

Syrup is a valuable product in terms of energy. This culinary product is used to obtain soft drinks, by adding water.

Strawberries occupy an important place in the fruit processing industry due to the multiple qualities presented. With a low content of calories and carbohydrates, strawberries offer an important number of nutritional benefits to the body, being the ideal fruit for a snack or when used as a component of breakfast, especially in fresh form.

Among the benefits of strawberries on the body we can mention:

- boosting immunity;
- maintaining visual acuity;
- reducing the risk of cancer by neutralizing the harmful effects of free radicals;
- prevents wrinkles;
- reduces the risk of cardiovascular diseases;
- anti-inflammatory effect, due to the polyphenols and antioxidants in the composition.

Keywords: syrup, strawberries, fruits, vitamins.

P2

Plum compote: description of the technological process and calculation of the material balance

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Due to their rich content of nutrients, which are necessary for the body, fruits and vegetables are especially important. Fruits have a varied chemical composition, generally based on water that can reach up to 90%, and they contain: sugars, proteins, fats, organic acids, various mineral salts, pectic substances and tannins, vitamins and enzymes in varying amounts.

Fruit compotes are products with a high content of carbohydrates, organic acids, vitamins, as well as nitrogenous substances. They have berries or fruits in sugar syrup. They can be used as a dessert.

Plums have a low caloric intake, being extremely rich in valuable nutrients. Also, plums do not increase blood glucose levels, so it is an ideal snack, especially for people who are on a diet.

Plums, through their consumption, offer a number of benefits to the body:

- important source of vitamin C, vitamin K, fiber, Cu and K;
- improve the functioning of the immune system;
- reduce the risk of myocardial infarction and reduce blood pressure.

The technological process used to make plum compote, supports the maintenance of all biologically active elements, but also the color, smell, taste, characteristic of these fruits.

Keywords: fruit compotes, plum, vitamins.

P3

Artificial cold as a method of preservation of meat products. Case study

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Artificial cold as a method of preservation of meat products in which the process of preserving pig sausages is presented by the method of freezing and refrigeration. The project describes the product description, product characterization, manufacturing technology and the raw materials used for the mixture. Finally, I describe the HACCP system and critical control points.

Keywords: Artificial cold, preservation, meat products

P4

Rear pig leg called „*Jambon de comuna Blandiana*" Traditionality. Technology

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Traditional ham is part of the category of old dishes of Blandiana village in Alba county. This project presents the methods and procedure to produce traditional ham, demonstrating authenticity, tradition and originality. It also raises awareness of the importance of traditional, organic products, guiding them to be among the top preferences of consumers.

Keywords: traditionality, technology, Jambon de comuna Blandiana

P5

Puff pastry filled with homemade chocolate "*Ciocopinguin*"

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Chocolate puff pastry occupies a significant place in the bakery industry and has its origins in France. The diploma project describes the new product obtained from frozen dough and homemade chocolate. It includes a small history of puff pastry and chocolate, describes the technological operations of making puff pastry and the technological operations of obtaining homemade chocolate, the transformations and changes that take place in the technology of preparation of frozen pastry products, the raw materials used to obtain homemade chocolate are described, and in order to determine the quality of the finished product, a survey carried out among consumers appears in the project, in order to evaluate the organoleptic characteristics of the product.

Keywords: Puff pastry, chocolate, "*Ciocopinguin*"

P6

Fat alternatives useful in the manufacture of puff pastry. Case Study

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The paper presents a comparative synthesis of the use of *natural vegetable lipid alternatives* (*substitutes / substitutes / equivalents*), to *vegetable hydrogenated fats* (margarines), in which *trans isomers* are present, with negative effects on health. Lipid alternatives can be *formulated / reformulated* by "*natural*" physical interserification and separation techniques, characterized qualitatively, compared to *cocoa butter* and integrated as a raw material in ***puff pastry***. It is known that *puff pastry* is a dough with special properties, conditioned by the nature of the raw materials and the method of preparation, consumed as such or in combination with various fillings (sweet / salty dishes). Consistency and texture are the result of the way the components interact, but especially the *interaction of lipids* with the base formed by the dough, which in turn "comes" with a lipid baggage. The triglyceride structure imprints different textures, consistencies and behaviors at further processing. The paper presents different variants of obtaining (***Scotch*** or ***Blitz*** *French, English*) puff pastry, of the *succession of the operations of packaging-rotation-rest, dough-fat*, determinants in the formation of layers, height and increase in volume at baking. Currently, the most accessed lipid formulations are fats with different proportions of saturated (solid lipids (***stearin***)) / unsaturated (liquids (***olein***)) (*palm oil as such and / or formulated / reformulated*), absent of *trans* isomers. The acceptance of lipid substitutes can be attributed to the rapid evolution in the development of techniques for modifying / formulating natural fats and oils, capitalized by new *technological / nutritional skills*, transmitted to the resulting lipid fractions (***solids / liquids (stearins / oleins***)). By interpreting

techniques for obtaining puff pastry, quality indicators, compared (raw material, *hydrogenated fats / lipid formulations (margarine / transesterified palm olein*), intermediate product (*dough*), finished product (***puff pastry***), will be able to be directed / optimize operating parameters.

Keywords: puff pastry, margarine, formulation-fractionation techniques, fats, lipid substitute / substitutes / equivalents, packing-turning.

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P7

Freezing. Influencing factor in the formulation of doughs. Case Study

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The reduced availability of labor and high production costs, induce disruptions on the production *route - demand* for products. The alternative is given by the concept of "*Bake Off Technologies*" (BOT), which allows the transfer of industrial operations to the sales chain with a minimum of equipment, which does not require specialized personnel. The synthetic study on the interaction mechanisms of the structural components from the matrix of a simple food biopolymer (***wheat flour dough***), tries to understand the behavioral manifestations, reciprocal, at low temperatures. The decisive element of these manifestations is ***water***. The study includes the role of water, activity, binding mode and phase transitions (glass transition water temperature (***Tg***), which influences the choice of raw materials and operating parameters when freezing. The idea of "***freshness***" ("***freshly baked***") and sensory qualities specific to the assortment, requires the evolution of this production segment. Studies have been carried out attesting the *reformulation of the dough recipe* by adapting the ingredients (***qualitative / quantitative***), to the stress imposed by low temperature (-40°C) (flour, water, yeast, lipids, sweeteners, salt, ascorbic acid, arabinoxylans (pentosans), enzymes, surface elements (sodium stearoyl lactylate (SSL) and diacetyl-tartaric acid ester of monoglycerides (DATEM), leavening agents). Qualitative assessment by advanced techniques (**DSC** (Differential Scanning Calorimetry), **DTA** (Differential Thermal Analysis))], of the manifestations of the dough before and after freezing allows the prediction of the subsequent behavior in the manufacturing process. the

elaboration of new ideas that frame the diploma project in the area of engineering preoccupations.

Keywords: freezing, water, water activity, glass transition, frozen dough, raw materials, predictive methods.

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P8

Study regarding the technique for preparing the macarons with raspberries and rose syrup

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In recent years, the windows of cake shops around the world have been assaulted by small and colorful cookies that we know as macarons. Similar to almonds, the most famous french dessert surprises with its color, variety of flavors, perfect taste and a delicate sensation of "melts in your mouth".

Macarons have a long history behind them - but one without flavors and colors. Almond flour cookies, the key ingredient, appeared in Europe many centuries ago - maybe even since the turn of the 8th century, when the arabs brought almonds to the continent.

The aim of the study is to highlight the organoleptic characteristics generating pleasant gustatory, olfactory and visual sensations due to raspberries and rose syrup, and high nutritional and energy value, thanks to the eggs on the counter, from the composition of the cream, associated with vegetable proteins from almond flour, easily assimilated lipids from butter, rich in fat-soluble vitamins.

At moderate consumption, the advantage of these sweet products is that they are easier to digest and can be assimilated faster, being recommended especially in heavy activities, especially in the diet of athletes and children.

Keywords: macarons, raspberries, rose, vitamins, organoleptic characteristics

P9

Studies on obtaining products with low glycemic index and their impact on consumers

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The current orientation towards a healthy, calorie-free diet requires the identification of new plant materials with high nutritional properties. In this sense, the use of konjac flour in the bread manufacturing is a new idea in order to diversify the range of dietary products.

In the first part of the project, a literature study was carried out on the origin, nutritional value and use of konjac flour in bakery products.

The original contribution refers to the establishment of the recipe, technological scheme elaboration, technological stages and the obtaining of two breads with konjac flour and with whole wheat flour (control).

In the second part, the nutritional value of the hypoglycemic breads obtained based on the ingredients from the manufacturing recipe was determined. The carbohydrate content of the hypoglycemic bread obtained was 41.24 g / 100 g (wholemeal) and 36.08 g / 100 g (konjac).

Also, a study was conducted regarding the impact of products obtained on consumers, using sensory evaluation (9-point hedonic scale), for the following characteristics: appearance, aroma, texture, taste and general acceptability.

Following the sensory assessment, 8 of the 10 people who participated in the study, on the criterion: *General acceptability*, gave bread with konjac flour, maximum score (9 points) and the other 2 gave 8 points on this criterion, with an average of 8,8 points falling on the scoring scale very close to maximum of 9 points : like extremely.

The product obtained is extremely valuable, with superior sensory characteristics highlighting the potential nutritional and nutraceutical importance of konjac flour.

Keywords: konjac, bread, low glycemic index, fiber, sensory evaluation

P10

Study on obtaining a product preserved with stevia-based sweetener - Grape compote

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Consumption of sweeteners has steadily increased in recent decades. A large proportion of sugar is consumed from processed foods, therefore the WHO has recommended limiting sugar consumption to less than 10% of total energy needs.

In this regard, it is extremely important to obtain functional compotes, able to lower blood sugar levels and strengthen the immune system. Such a product was obtained in this study - Grape compote with stevia sweetener. In the first part of the project, a literature study was conducted on the need to use natural sweeteners, instead of refined sugar that has high calories and no nutritional value.

In the second part was established the manufacturing recipe and the technological stages of obtaining the studied compote. The nutritional values of the studied grape compote were determined using the nutrient index calculator and for a content of 801 g of compote, the following values resulted: 531.36 calories, 172.45 carbohydrates and 4.88 fiber.

The sensory evaluation of the grape compote with stevia was made using the scale with 100 points. Compared to grape and stevia compote, sugar-sweetened grape compote purchased from a supermarket was also evaluated. Following the evaluation of the 2 products, the grape compote with stevia obtained a score of 96.16 points compared to the compote purchased from the store that obtained 85.32 points, falling into the first class of quality.

Based on the sensory evaluation and nutritional value, the compote obtained within the project, is a valuable product, suitable for consumption by people with metabolic diseases.

Keywords: grapes, compote, stevia-based sweetener, sensory evaluation.

P11

Capitalization of additions of biologically-active principles in order to obtain pastry products

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Today's consumers are paying much more attention to food safety, quality and health issues.

Because food is a necessity, but also a pleasure, I chose to make a pastry, with superior taste and appearance and nutritional properties that fall within the area of interest of food engineering.

Pastry products by their symmetry, appearance and color that arouse pleasant taste, olfactory, visual sensations, provide also nutrients in a more easily digestible form than in the food itself, the raw material covering most of the energy on which the body loses through muscle effort.

The purpose of this study was to highlight the positive role that this pastry has, being rich in bio-active principles due to the added natural ingredients but which, at the same time, provide energy to the body.

In this case, in order to make a product as natural as possible, I decided not to use commercial fat because it is subjected to the hydrogenation process, which creates artificial trans fats and causes negative effects, but 100% natural raw pork lard. We used this fat because it contains a good source of fat, is rich in vitamin D, and the intake of cholesterol through good quality fats regulates the production of hormones, and brings balance to the thyroid.

Keywords: *bioactive compounds, natural lard, puff pastry.*

P12

Mineral profile of cultivated blackberry fruits (*Rubus fruticosus* L.)

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The paper presents the results obtained in determining the mineral profile of local blackberry fruits, commercialized in agri-food markets from Timisoara city (Romania).

The total concentrations of Na, K, Ca, Mg, Fe, Mn, Zn, Cu, Pb and Cd were determined by atomic absorption spectrometry in air-acetylene (FAAS).

The obtained results show that the freshly analyzed blackberries contain increased amounts of macroelement: Na (16.4 - 27.6 mg/kg), K (1340 - 1780 mg/kg), Ca (223-261 mg/kg), Mg (178 - 237 mg/kg), and significant amounts of trace elements: Fe (7.51 - 7.94 mg/kg), Mn (6.05 - 6.48 mg/kg), Zn (5.12 - 5.84 mg/kg), and Cu (1.35 - 1.78 mg/kg)) essential for the normal activity of the human body.

In addition, very small amounts of toxic mineral elements have been identified: Pb (<0.05 mg/kg) and Cd (<0.02 mg/kg), below the toxicity limits provided by legislation (0.1 and 0.05 mg/kg, respectively).

Therefore, the blackberries samples used in the experiment could be considered as an additional source of essential elements.

***Keyword*:** mineral elements, source of essential element, toxic elements, FAAS.

P13

Sensory and nutritional appreciation of a hot pepper specialty used in pastry

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Diet influences our lifestyle, health condition, and endurance to cope with stress and physical exertion. An important role in food industry in general and particularly in pastry is played by the technology of obtaining the puff pastry due to the high energy and nutritional values it represents, offering the feeling of satiety.

We chose hot pepper jam as a puff pastry filling, which combines the sweet and spicy taste, offering a delicate aroma to consumers. One of the special properties of hot peppers is due to the benefits it has on the diet, the content of bioactive principles such as vitamins, proteins, mineral compounds, carotenoids, capsaicin - component that gives the red color and spiciness of the pepper.

For this purpose, we made the sensory analysis of jams, by comparing our homemade hot pepper jam with other existing products from Romanian supermarkets.

This case study focused on the nutritional value of a food product obtained from a puff pastry with homemade filling. The results underline once again the importance of obtaining these products based on traditional recipes prepared at home without other food additives.

Keywords: puff pastry, chili pepper, hot pepper filling

P14

Sensory characteristics of bread prepared with wheat flour, malt flour and sweet potato flour

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The aim of this study was to optimize some mixtures of flours with high nutritional value by partial substitution of wheat flour 550 (WF) with malt flour (MF) and sweet potato flour (SPF) and to evaluate the impact of using these mixtures on the sensory characteristics of classic white bread (crust color, crumb appearance, flavor, texture and overall acceptability). WF was replaced with 10% MF: 10% SPF, 20% MF: 20% SPF and 30% MF: 30% SPF, respectively. Bread samples based on MF and SPF were obtained by direct method and subsequently evaluated from a sensory point of view. Following the interpretation of the results of bread samples sensory analysis, it was concluded that consumers' preference is directed towards the prototype bread assortment with addition of 20% MF: 20% SPF, its general acceptance score being the highest (8.55). The results presented in this paper are part of a complex study, which aims to develop bread assortments, specially designed to meet the requirements of a large market segment of consumers with products as varied, tasty, and with as high as possible nutritional value.

Keywords: bread, malt flour, sweet potato flour, sensory evaluation

P15

Bee honey: description of the technological process, preparation of the HACCP plan

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In recent years, there has been a growing interest from consumers, the food industry and researchers in obtaining food, their quality - energy and nutrition and how they can help maintain human health.

The classic concept of "proper nutrition", ie a diet that provides nutrients (carbohydrates, proteins, fats, vitamins and minerals) in sufficient quantities to meet specific organic needs, tends to be replaced by the concept of "optimal nutrition", which includes, in addition to the above, the potential of food to promote health, improve homeostasis and reduce the risk of developing certain diseases. Here comes the concept of functional foods, also known as nutraceuticals, innovative foods, therapeutic foods, superfoods or medicinal foods.

Among the foods that have the characteristic of functionality, can be included the products originating from the hive: honey, royal jelly, propolis.

The principal purpose of this study was to present the technological process of bee honey obtaining, aspects regarding the balance of materials but also the implementation of the HACCP system in the honey processing process.

Keywords: honey, HACCP system, optimal nutrition

P16

Evaluation of the influence of thermal processing on the antioxidant activity of red beets and black radishes

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Both red beets (*Beta vulgaris*) and black radishes (*Raphanus sativus*) have nutritional characteristics that make them real natural remedies for health. The aim of the present study was to evaluate the antioxidant activity of beetroot and black radish (fresh and heat processed). From the obtained results we can say that the two vegetables behave differently under the action of heat treatment, in terms of the evolution of total antioxidant capacity (CAT) and total polyphenol content (CTP). The comparative analysis of this two parameters shows that in all types of samples there is a direct correlation between these parameters. In conclusion, thermal processing has different effects on CAT and CTP in beetroot and black radish. In the case of beets, these two parameters are higher for cooked or ripe products, while for black radish the thermal processing causes a decrease in their value.

***Keywords**:* antioxidants, CUPRAC method, Folin Ciocalteau method

P17

Influence of thermal processing on the antioxidant characteristics of some cruciferous vegetables

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Vegetables of the Brassicaceae family, such as cabbage, are known for their high glucosinolate content. Glucosinolates and their derived forms, namely isothiocyanate, have a special attraction in the pharmaceutical and food industry due to their antimicrobial, neuroprotective and anticarcinogenic properties. Fresh red cabbage has a content of lutein and zeaxanthin 10 times higher than white cabbage. Red cabbage has a higher content of potassium and especially beta carotene and white cabbage has a vitamin K content almost double that of red cabbage. The purpose of this study was the determination of CAT (total antioxidant capacity) and CTP (total polyphenol content) of fresh white and red cabbage as well as cabbage processed by boiling and baking. The total polyphenol content for white and red cabbage recorded different values, much higher for red cabbage, regardless of the processing method, than for white cabbage. From the research results we can conclude that the process of baking cabbage favorably influences the total content of polyphenols and antioxidant characteristics.

***Keywords**:* cabbage, Cuprac method, Folin Ciocalteau method

P18

The merceological evaluation of vegetal oils

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The role of n-3 long-chain fatty acids in human health has been known more and more during recent decades. Many clinical and epidemiologic studies have shown positive roles of n-3 fatty acids in cardiovascular diseases; cancer; in infant development; and recently, in various mental illnesses, including depression, attention-deficit hyperactivity disorder, and dementia. The findings from last researches led health professionals to encourage the general population to consume more n-3 fatty acids. Beside the marketed food products such as milk, eggs, cheeses, and spreads enriched with n-3 fatty acids, the vegetal oils occupe a very important position for human health. Our studies were about safety and commercial quality of these products. Twenty four types of oils obtained from nine kind of seeds were registered. The hazard analysis critical control point system is compulsory in EU member states for safety assurance based on hazard analysis while prerequisite hygiene programs (Good Hygiene Practices, Good Manufacturing Practices) are necessary to support the system. In each stage of the oil processing, all potential hazards (microbiological, physical, and chemical) were identified. Also their importance was evaluated and the preventive measures for their control were described. The Critical Control Points were identified and for each identified CCP critical limits for preventing measures and monitoring systems were established.

***Keywords*:** health, vegetal, safety

P19

The study of some quality charactheristics of juices from fruits and vegetable

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In last decades, clinical trials and epidemiological studies have established an inverse correlation between the intake of fruits and vegetables and the occurrence of chronic diseases. This protective effect of fruits and vegetables ws attributed to the antioxidant properties, which balance the body system to protect tissues and fluids from damage by reactive species or free radicals. It is known that whole fruit has a better biological activity than the sum of their components. Moreover there are a lot of factors which could improve/diminute the biological activity of fruits and vegetable. In our opinion the combinations between fruits or fruits and vegetables can result in higher good efects in human health. Therefore we tried to studied different combinations. A new designed beverages, based on pomegranate and lemon juices, provided interesting results. Also each stage of tecnological process can lead in good or bad characteristics of final product. We tried to observe the evolution of different antioxidants as result of fruit (vegetable) processing.

Keywords: health, antioxidants, juices

P20

Commercial quality and food safety in the cheese industry

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The commercial quality expresses the level of psychosensorial characteristics, the variety of the assortment range, the size of the guarantee/validity term. It also includes the service activity, the way of presentation and packaging, the volume of maintenance and operation expenses, etc. We set ourselves the achievement of two objectives: conducting a market study of the product; the study of a HACCP system as a way to ensure the food safety of cheeses. A number of 24 products were identified, belonging to different manufacturers. For each of them, the type of product, manufacturer's identification data, data on the raw and auxiliary materials used, nutritional data, shelf life and price were noticed. A hazard analysis was conducted to identify hazards that may occur in the product cycle, Critical Control Points (CCPs) were determined to control the identified hazards. CCP signs were then posted on the factory floor. Critical limits were established at each CCP, corrective actions to be taken when monitoring indicates deviation or loss of control were established.

Keywords: dairy products, safety, commercial

P21

Enzymes, as biotechnological activators in the manufacturing technology of the french dough

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This study presents the action of xylanase enzymes in the manufacturing technology of the french dough. Xylanases have a great potential for use in the bakery industry. There is strong evidence in the literature that the applicability of xylanases in dough processing increases the volume of the dough, reduces the stickiness and aging of the finished product during storage, and increases the shelf life. The enzyme can replace the addition of various emulsifiers and other chemical additives used in the bakery industry. However, for best results, enzymes should be used at optimal levels, as overdose has adverse effects on the final product. Moreover, it is a good strategy to use xylanase in combination with other enzymes, as the synergistic effects of xylanase with other enzymes provide better results.The addition of xylanase to the flour brings improvements to the rheological properties and implicitly improvements on the quality of the finished dough products. Xylanase improves the workability and stability of the dough, the elasticity of the gluten network, the longer life of the finished product and the structure of the crust and core.

Keywords: bread, xylanase, shelf life, dough stability

P22

The study of food safety in scalded cheese manufacturing

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The implementation of various quality management systems has emerged as a necessity to combat the increased incidences of collective food poisoning since the early twentieth century, due to the consumption of unpasteurized milk and dairy products. In order to control these collective food poisoning infections, it is recommended to apply strict hygiene measures, which must be applied throughout the milk chain, from the farmer to the consumer. These quality management systems also include the relationship with suppliers (farmers and wholesalers of raw materials), transport agencies, retailers. We set ourselves the achievement of two objectives: conducting a market study of the product; the study of a HACCP system as a way to ensure the food safety of the scalded cheeses. A number of 12 products were identified, belonging to five different manufacturers. For each of them, the type of product, manufacturer's identification data, data on the raw and auxiliary materials used, nutritional data, shelf life and price were noticed. Food safety is ensured mainly through a preventive approach, such as the implementation of good hygiene practices, good production practices and the application of procedures based on the principles of hazard analysis and control of critical points. In our study many steps were followed: preparation of the technological flow chart and description of the process; Performing hazard analysis (risk identification); Determination of critical control points (CCP). Also, critical limits were established at each CCP, corrective actions to be taken when monitoring indicates deviation or loss of control were established.

Keywords: food safety in scalded cheese manufacturing

P23

Utilization of tomato juice in addition to obtaining products of animal origin

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The aim of this paper was to carry out a study on the nutritional and sensorial values for some varieties of Bolognese sauces commercialized in Timisoara supermarkets, compared with two tomato sauces: sauces with meat (mixture of beef and pork) and sauces with vegetables, prepared according to the own recipe. Bolognese sauce (Ragu) is a culinary dish dating back to the 18th century, originating in northern Italy, in the Bologna city, as it is also called. In Bologna, the sauce requires a thin beef fillet, combined with pancetta, butter, onion and carrot.

The following parameters were highlighted: energy value, total fat content, carbohydrates, proteins, dietary fiber. Also, the sensory analysis of the two varieties of sauces experimentally obtained, was performed. Nutritional values of commercialized sauces, used in this study were taken from the labels mentioned by the companies producing of these assortments. The nutritional values of the experimentally obtained sauces were calculated using the nutritional values of each ingredient that is part of them, taken from the Frida fooddata.dk database.

Bolognese sauce is recommended to be consumed by people of all ages, due to its beneficial properties also giving many nutrients. It is a product widely used in all countries due to its nutritional, stimulating properties. In human nutrition, is required because it has a high relative nutritional value, and a pleasant taste and aroma.

Keywords: varieties of Bolognese sauces, nutritional values

P24

Study on the use of plum flour as a natural antioxidant in the meat industry

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Antioxidants are added to fresh and processed meat and meat products to prevent lipid oxidation, retard development of off-flavors, and improve color stability. In the food industry, they can be divided intro natural and synthetic antioxidants.

Dried plums (prunes) have been marketed for consumption to consumers directly from the package as a convenient snack and have been reported to have broad health benefits. Only recently have fractionated, dried plum ingredients been investigated for their functionality in food and feed products. Dried plum puree, dried plum powder, dried plum fiber, dried plum concentrate, and fresh plum concentrate have been investigated to date.

Was evaluated as antioxidants inmeat formulations, fat replacers in baked goods, antimicrobials in food systems and phosphate replacers in chicken marinades. Overall, dried plum products have been shown to be effective at reducing lipid oxidation and show promise as antimicrobials.

The research carried out in this paper, consisted in making of for types of pate, one exclusively from animal raw materials, and three samples in which the meat was replaced with plum flour in different proportions.

The obtained products were characterized organoleptically. In addition a sensory analysis was performed. The organoleptic examination of the samples was carried out by assessing the experimental appearance and section, consistency, odor, color and taste. As a result of the sensory analysis of the four pate samples, it turned out that plum flour, in moderate proportions, improves the characteristics of the product in which it is added.

Keywords: antioxidants, dried plums, antimicrobial, dietary fiber

P25

Research based on the quality characteristics of the traditional produce "*Hunter's sausages incased in sheep membrane*"

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Hunter's sausages, incased in sheep membrane, is a frequently met alimentary produce on the tables of the people from the Gorj County. The project presents, the origin of the produce, it's recipe, it's quality, characteristics, it's experimental determinations and finally the steps that contribute to the authorization of the produce as a Protected Designation of Origin.

Keywords: antioxidants, dried plums, antimicrobial, dietary fiber

P26

Development and sensory characterization of an innovative prototype of dry sausage

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Cheeses are versatile dairy products important in human nutrition, being appreciated since ancient times. Due to the caloric contribution, cheeses are appreciated by consumers and introduced in the daily diet, constituting a complex of nutritional principles.

Fresh cheese occupies a special place on the Romanian market, due to the production techniques that allow the supplementation of valuable nutrients, with biological value and high digestibility.

Fresh cheese is recommended to be consumed daily, being a source of protein and with a significant content of mineral salts, which contributes to ensuring the health of the human body.Since ancient times, the cheese has been the most appreciated as a nutritious food.

The principal purpose of this study was to present the technological process of fresh cheese obtaining, and also the implementation of the HACCP system in the fresh cheese processing process and also to highlight the positive role of these dietary foods made only from fresh and natural ingredients can improve the healt and quality of consumer's life.

Key words: fresh cheese, natural ingredients, dietary foods

P27

Qualitative assessment of dietary foods

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The purpose of this study was to obtain gluten-free biscuits with grape seeds flour (GSF), almond flour (AF) and cranberries fruits, with high nutrition value for people with gluten intolerance by using gluten-free flours. In addition to the three mentioned ingredients, coconut oil, rose petal syrup, eggs, baking powder and starch, were also used. Various doses of the two types of flour were used to perform the samples: **P1** - 100% AF:0% GSF; **P2** - 75% AF: 25% GSF; **P3** - 50% AF:50% GSF; **P4** - 25% AF:75% GSF. Centralizing the results obtained in terms of sensory analysis, the 75% grape seeds flour biscuits sample was most appreciated by the assessors. After summarizing the score within the sensory analysis, the most appreciated biscuits are samples P3, which contain 50% AF and 50% GSF, this assortment being proposed for production to industrial scale.

Keywords: grape seeds flour, cranberries fruits, gluten-free biscuits, sensory evaluation

P28

Effect of grape seeds flour and cranberries fruits addition on quality characteristics of gluten-free biscuits

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Berries are a diverse group of fruits with an attractive color, delicate texture and unique aroma. This group represents a variety of soft, small red, blue or purple fruits, including strawberries, blackberries, raspberries, blueberries, currants and strawberries. Berries are universally recognized as having a basic chemical composition that emphasizes their sweet taste, fruity aroma and health-beneficial properties.

The genus Rubus, which belongs to the family Rosaceae, is composed of thousands of blackberries and raspberries species grown worldwide.

The chemical composition of berries can be highly variable depending on the crop, the growing location, the stage of maturation and the conditions of harvesting and storage due to their generally non-climatic nature in terms of production and response to ethylene.

Rubus L. (Rosaceae) berries have received special attention worldwide, especially for their nutritional and bioactive value. Raspberries and blackberries in this genus contain nutrients and bioactive compounds such as vitamins, minerals, proteins, sugars and polyphenols. This paper summarizes data from the literature on physicochemical characteristics, nutritional composition, biologically active compounds and biological activities of raspberries (*Rubus idaeus L., R. ellipticus Smith, R. niveus Thunb., R. coreanus Miquel* and *R. occidentalis L.*) and blackberries (*R. ulmifolius Schott, R. fruticosus L., R. adenotrichus Schltdl., R. glaucus Benth).* The chemical composition, as well as the antioxidant, anti-inflammatory, chemopreventive and antimicrobial activities, but also the positive effects on blood lipids have highlighted the many beneficial properties of these fruits, important sources of biologically active compounds with beneficial effects on human health.

Keywords: berries, Rubus, antioxidant, antimicrobian

P29

Berries, value-added products

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A gluten-free diet helps manage symptoms of celiac disease and other medical conditions associated with gluten. The claimed benefits of the diet are improved health, weight loss and increased energy. Five formulations containing different gluten free flours were used in this study to produce biscuit samples which were then analyzed for sensory properties by 10 panelists using hedonic scale of 9 points (where 1 = extremely dislike and 9 = extremely like). First gluten free flour was buckwheat flour. All five biscuit formulations were assigned overall acceptability scores above 5 points. The most liked biscuit was sample DK made with carob syrup as sweetener. Second gluten free flour was rice flour. All biscuits were made also with sweet chickpeas and date powder. The two most preferred products were those with the 20 per cent substitution of date powder and no substitution. Third gluten free flour was maize flour. The sensory evaluation was carried out as per 9 point Hedonic scale and the most liked biscuit was T3 made with 30% maize flour. Fourth gluten free flour was brown rice flour. All biscuits were made also with rice flour and corn flour. The maximum organoleptic score was found in biscuit containing 2:1 proportion of brown rice flour and white rice flour. Fifth gluten free flour was cassava flour. Ten parallel samples were taken for each group, and the average values of the measured data were recorded. Shape, taste and mouth feel were scored with 30 points, color and texture with 20 points.

Keywords: biscuit, buckwheat flour, rice flour, maize flour, brown rice flour, cassava flour, sensory evaluation

P30

Sensory evaluation of gluten free biscuits

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A gluten-free diet helps manage symptoms of celiac disease and other medical conditions associated with gluten. The claimed benefits of the diet are improved health, weight loss and increased energy. Five formulations containing different gluten free flours were used in this study to produce biscuit samples which were then analyzed for sensory properties by 10 panelists using hedonic scale of 9 points (where 1 = extremely dislike and 9 = extremely like). First gluten free flour was buckwheat flour. All five biscuit formulations were assigned overall acceptability scores above 5 points. The most liked biscuit was sample DK made with carob syrup as sweetener. Second gluten free flour was rice flour. All biscuits were made also with sweet chickpeas and date powder. The two most preferred products were those with the 20 per cent substitution of date powder and no substitution. Third gluten free flour was maize flour. The sensory evaluation was carried out as per 9 point Hedonic scale and the most liked biscuit was T3 made with 30% maize flour. Fourth gluten free flour was brown rice flour. All biscuits were made also with rice flour and corn flour. The maximum organoleptic score was found in biscuit containing 2:1 proportion of brown rice flour and white rice flour. Fifth gluten free flour was cassava flour. Ten parallel samples were taken for each group, and the average values of the measured data were recorded. Shape, taste and mouth feel were scored with 30 points, color and texture with 20 points.

Keywords: biscuit, buckwheat flour, rice flour, maize flour, brown rice flour, cassava flour, sensory evaluation

P31

Development of a pumpkin-based dessert

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The purpose of this work was to obtain an innovative vegan dessert based on pumpkin pulp (*Curcubita maxima*), without added sugar, and to determine its approximate composition and energy value. In addition to cooked pumpkin pulp, the recipe also used boiled millet, raisins, almonds, honey and cinnamon powder for flavoring. The product obtained had a low energy value of only 118 kcal/100g, a very low total lipid content (2.53 g/100g) and only 0.30 g/100g saturated fats, thus being recommended for a diet that requires few calories and few fats. Of the total carbohydrates (22.17 g/100g), only 8.21 g are sugars, which for a dessert food product is very little, so the product can be recommended as a dessert and for people with restrictions on sugar consumption. The product is rich in water (70.72 g/100g) and has a protein content of 3.27 g/100g.

Keywords: pumpkin, vegan dessert, proximate composition, energy value.

P32

Valorisation of stinging nettle (*Urtica dioica*) as functional food ingredient

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The purpose of this survey is to perform a systematic analysis of information from the literature regarding the possibilities of capitalizing on stinging nettle powder (Urtica dioica) as a functional ingredient for obtaining flour products. Nettle leaves are a potential source of macro and micro-nutrients. Studies conducted so far show that nettle retains a significant proportion of minerals, vitamins and essential nutrients after pre-treatment before storage as a frozen product. The existing results on this topic show that the addition of nettle powder to wheat flour has improved the protein, fibers and mineral content of bread. The general acceptability of nettle powder-enriched bread was achieved by sensory analysis, revealing good organoleptic attributes for samples of up to 4% addition of nettle powder. Thus, supplementation with 4% nettle powder could be adopted in the manufacture of wheat bread without adversely affecting its quality. The addition of nettle powder in wheat flour used in the recipe for obtaining pasta led to a significant increase in the content of crude protein, ash, dietary fiber, calcium, iron and zinc. At the same time, it determined the reduction of the content of fats, carbohydrates and raw energy. Moreover, the addition of nettle powder to wheat flour significantly reduced the sensory acceptability of noodles. Generally, by supplementing wheat flour with up to 15% nettle powder can be prepared nutritious and acceptable noodles in terms of sensory properties. Therefore, nettle powder is a valuable ingredient for the conception and development of value-added foods.

Keywords: stinging nettle, bread, pasta, sensory properties, functional ingredient.

P33

Evaluation of the antioxidant characteristics of blueberries from different areas of the country

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Berries are an integral part of the human diet, both as fresh berries and as various products, such as jams, juices, wines and berry extracts, which can act as functional foods.

Blueberries are one of the most nutritious and cultivated foods in the world. The bioactive components of blueberries include anthocyanins, polyphenols and antioxidant properties. In their composition, blueberries have higher concentrations of phenolic compounds than other fruits. Berries, especially blueberries, are one of the richest sources of anthocyanins of all fruits and are found in the highest concentrations in the skin of berries. They are a rich source of natural antioxidants, flavonoids, phenolic acids, anthocyanins, stilbenes and tannins, as well as nutritional compounds such as sugars, essential oils, carotenoids, vitamins and minerals.

Blueberries are popularly used in the human diet, either in fresh or processed forms. In addition, there has been a growing trend in the use of blueberry extracts as ingredients in functional foods and dietary supplements.

Regular consumption of darker berries, such as blackberries, blueberries, strawberries, raspberries and chokeberry, can provide a high intake of antioxidants, as well as anthocyanins.

The purpose of the study was to evaluate the antioxidant capacity of different assortments of blueberries originated from Romania. The results show that the highest content of antioxidants was provided by the blueberries cultivated in the hill and mountain area (almost 2 times higher antioxidant capacity and polyphenol content).

***Keywords*:** blueberries, antioxidants, anthocyanins

P34

Studies on the Biofunctional Properties of Mascarpone Goat's Milk Cheese

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Mascarpone cheese is a type of soft cheese with a high fat content and a slightly aromatic smell. It is generally made using whole cow's milk as a raw material. These characteristics make this type of cheese an ingredient frequently used in many food preparations specific to Italian gastronomy (creams, Tiramisu, cakes, sauces, ice cream, etc.). For this reason, our research study aimed to obtain mascarpone cheese from goat's milk and to compare through a case study the sensory, physico-chemical properties (humidity, pH, acidity, protein content, fat and vitamins) and microbiological of this cheese assortment with the one obtained from cow's milk.

Despite the fact that cheese has a lot of calories, it is very useful. Its saturation with different types of vitamins, for example, A, B, C, K, PP is simply amazing. It also contains calcium, phosphorus and potassium, which allows the strengthening of nerve cells, the body's immune system and streamlining the activity of the heart.

The minerals contained in mascarpone cheese obtained from goat's milk, improve growth, ensure the supply of muscle tissue and strengthen the skeleton. It can be concluded that this variety of cheese is not inferior to other high quality dairy products. Mascarpone goat's cheese is touted as being better for people with lactose intolerance than soft cheeses made from cow's milk.

***Keywords*:** Biofunctional, Mascarpone, Milk Cheese

P35

Evaluation of microbial contamination in various phases during the process of obtaining pig baloney

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The purpose of the dissertation thesis was to check the evolution of the microbiological parameters from the raw material to the finished product - the pork parizer. Determinations have also been made to evaluate the variation in microbial load over three days of storage of the finished product.

The microbiological examination provides the necessary information on the quality of fresh meat or meat preparations analyzed bacteriologically, bacterioscopically and by cultures obtained from the slaughtering of the animals.

The microbiological load of the parizer allows it to be fried within the first two days in the fresh sausage category.

From the point of view of bacterial counts, all samples analyzed by us fall within the microbiological limits set by the standards.

Mycological load for meat and meat products, parizer, is not normalized by the standards in force, but we consider it to be a worthwhile parameter due to the mycotoxin potential that these germs can synthesize.

Keywords: homemade preparations, baloney, microbiological exam, raw materials

P36

Daucus carota L (orange, purple and yellow) - bioactive compounds with antioxidant activity

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Carrots, scientifically called *Daucus carota*, are part of the family of root vegetables along with parsley, parsnip, dill, cumin, etc. and are consumed worldwide, due to its sweet taste and important nutritional properties.

There are over 100 species of carrots globally, ranging from deep orange to purple, yellow or white. Most often, the carrot root is eaten, but its leaves are also edible.

Carrots contain 88% water, 7% sugar, 1% protein, 1% fiber, 1% ash and 0.2% fat. Carrot fibers are mostly made of cellulose. Other substances provided by these healthy vegetables are glucose, xylose and fructose. The taste is due to glutamic acid and other amino acids, lactic acid, glycolic acid, phenolic acid and succinic acid.

In addition to these compounds, carrots also contain significant amounts of compounds with antioxidant activity such as α- and β-carotene, lutein, γ-tocopherol (vitamin E), ascorbic acid (vitamin C), phenolic acids and polyphenols (e.g., chlorogenic acid, cyanidin derivatives, pelargonidine, peonidine with synaptic or ferulic acids).

Keywords: *Daucus carota* L., bioactive compounds, antioxidant activity

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P37

Pralines with "*urdă*" and nuts (hazelnuts, almonds, pistachios) – an innovative product

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"Urda" is a dairy product that is obtained from boiling the whey collected after the preparation of the curd; "urda" is a cheese product. Sheep's milk is most commonly used in the preparation of curd whey, this assortment of sweet cheese.

"Urda" has a fairly soft and crumbly texture, with a high protein content and a low fat content.

In this study we tried to make new specialties such as "nutritious pralines" based on "urda" and improved with compounds and bioactive products that can successfully replace a meal.

The "*nutritious pralines*" specialties include "urda", honey and flax seeds, pumpkin seeds, hazelnuts, pistachios and almonds.

These products are considered "organic" because all ingredients used are labeled as "organic" products. An attempt was made to obtain several assortments: with almond kernels, flax seeds, pumpkin seeds, hazelnuts, pistachios grated and not glazed with chocolate. Unglazed ones are also indicated for people with diabetes, as they do not contain sugar.

Keywords: Pralines,"urdă", nuts (hazelnuts, almonds, pistachios)

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P38

Walnut vegetable cheese - innovative functional product

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In recent years, interest in vegan cheese has grown significantly. Whether the consumer is vegan or not, vegan cheese is as sought after as that of animal milk. Vegan cheese can be made with soy protein, oat milk or even rice milk. In this study we proposed to obtain walnut cheese (*Jugland Regia* L.) The processing was done cold by very fine grinding of the walnut kernel and then fermented, by adding bacterial cultures (lactic cultures). A cheese with the texture, taste and even smell similar to milk cheese was obtained.

Keywords: Walnut, vegetable cheese, *Jugland Regia* L.

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P39

Sausages – a culinary foray into the world

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Sausages are meat products usually made from ground meat, often pork, beef or poultry, along with salt, spices and other flavors. Other ingredients, such as grains or bread crumbs, may be included as fillers or extenders. Some sausage assortments include other flavoring ingredients.

The word "sausages" can refer to minced meat of sausages, which can be in the form of pies or stuffed in a skin. When called "sausages", the product is usually cylindrical and embedded in a skin (intestine).

Keywords: Sausages, meat product, culinary foray

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P40

Nutritional quality of pomegranate (*Punica granatum*)

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Pomegranate (*Punica granatum*) has its origin in the name Pomum (apple) and granatus (with seeds); it is also called apple with seeds. Its cultivation has spread from Central Asia (Iran) to almost all parts of the Globe. Various varieties are cultivated, both for food and ornamental purposes. It is a tree that grows up to 10 m tall, whose fruits are consumed between September-February or March-May for the two hemispheres. It was considered to be one of the first fruit trees cultivated since 4000-3000 BC, being mentioned in the Bible and the Qur'an. Pomegranate cultivation has its origins in the Neolithic era in the Transcaucasian-Caspian region and in northern Turkey. However, the largest pomegranate producers remain the Mediterranean countries.

The antioxidant activity of pomegranate is given by various chemical compounds, especially those with phenolic groups in the structure. This is especially the case for bioactive compounds in pomegranate fruit juice and peel, such as flavonoids and flavonoid glycosides, anthocyanidins and derivatives possessing saccharide residues, anthocyanins, but also ascorbic acid and tocopherols, gallic acid derivatives and corresponding tannins, coumaric and caffeic acids, as well as chlorogenic acid.

Keywords: pomegranate, antioxidant activity, flavonoids, anthocyanins

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P41

Kneading. Case Study

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Bread (one of the oldest foods), by its nature, a simple preparation, is a staple food, obtained by baking dough, mainly from flour and water, and it is present in the diet of most of the world's population. In addition to the study of raw materials and ingredients as influencing factors (richly represented in the literature), it is necessary to *study/characterize the operations unit that precede the baking process*, with influences on the quality of the finished product. The literature in the field significantly treats dough ***kneading*** as a major influencing factor [(*mixing*) (the term kneading is characteristic of high viscosity materials (pasta)].The operation, in turn, influenced by a number of parameters: **1**. nature and indicators of the raw material (degree of flour extraction, assortments of flours, recipes (mixing ratio)) and auxiliaries; **2**. dough parameters (initial temperature, viscosity, density, humidity, rheological behavior, etc.); **3**. operating parameters (time, temperature distribution in the mixing mass, angular velocity, mobile mixing element (geometric configuration), flow mode in relation to the kneading variant accessed, etc.); **4**. the order in which the ingredients are added; **5**. biochemical and colloidal processes, which condition the rheological behavior. All these factors "*collaborate*" during the production process in defining the sensory qualities of the finished product. The main purpose of the kneading operation is to obtain a homogeneous mixture with visco-elastic structure and properties. During kneading, a quantity of air is retained in the dough, influencing the rheological properties of the dough and the subsequent formation of the core structure. It is important to mention the "*intervention*" *of frictional forces*, with heat release and which induce increases

in dough temperature. Conditioned by them, good hydration of the dough components, mainly of the protein, must be ensured. In order to control and maintain the dough temperature at optimal values, the water temperature must be constantly monitored. The statement contributes to the inclusion of this phase of permanent monitoring as a *critical control point* in the *HACCP* plan (Hazard Analysis and Critical Control Points), risk analysis (*hazard*), in the technological flow.

Keywords: kneading, dough, influencing factors, rheological properties, HACCP plan.

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Consumer and environmental protection

P1

Appetizer cakes - obtaining and evaluating the protective quality

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The present paper aimed to obtain two types of innovative appetizer cake, with vegetables and with no added fat and to analyze their content in total polyphenols (using the Folin- Cicâlteu method) compared to raw materials. To obtain the appetizer cakes, we used as a common composition: white wheat flour, eggs, yogurt, cheese, salt, pepper; in the first assortment (AC1) we added carrots, green olives and red beet, and in the second (AC2) we added broccoli, black olives and mushrooms. Of the raw materials used, the highest content of total polyphenols was found in broccoli (10.82±0.42 mg gallic acid/g) and the lowest in carrots 1.03±0.08 mg gallic acid/g). Appetizer check with the addition of broccoli, black olives and mushrooms had the highest content of total polyphenols (6.21±0.14 mg gallic acid/g).

***Keywords**:* appetizer cake, polyphenols, carrots, red beet, broccoli

P2

Studies on the Antioxidant Capacity of "*Cheesecake*" Cake with Coconut Milk

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The studies are the result of the theoretical and experimental analyses on the physico-chemical, sensory evaluation and antioxidant activity (based on FRAP assay) of Cheesecake with coconut milk for the purpose to pursue healthier lifestyles on consumers.

Coconut milk is a liquid that results after the pulp of the coconut fruit is scraped. There are many people who choose to give up their animal products either for their own health or for their own figure or in principle. Studies show that coconut milk has many properties that help to lose weight, improve immune function, can reduce the risk of heart disease and can improve skin and hair health. Coconut milk contains lauric acid, medium chain triglyceride lipids, vitamins (B1, B3, B5, B6, C and E) and high concentrations of omega 3, 6 and 9 fat acids. Since cheesecake recipes contain milk or other dairy ingredients, a number of consumers are not able to consume it because of beliefs, lactose intolerance, vegetarianism. Due to its high fat content, it is enough to reduce or substitute the amount of butter, sour cream or cow's milk in the cake recipe with coconut milk, which in turn acquires a much more exotic flavor.Therefore, in this study two formulations of the cheesecake-flavor desserts were developed using varying percentages of butter (6%-10%), water (38%-54%) and coconut milk (25%-50%). Results showed that the antioxidant capacity of the desserts increase with the percentage of coconut milk from 352.25 to 471.44 mg TE/100 g.

There were significant differences found among the two formulations and overall liking, flavor and texture were the attributes responsible for the differences.

***Keywords**:* Antioxidant Capacity, Cheesecake, Cake, Coconut Milk

P3

Characterization of some coconut products based on the antioxidant activity

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Coconut, *Cocos nucifera* L., is mainly grown for its nutritional and medicinal values, but also to provide a large number of products.

The purpose of the present study was to create a scientific review regarding coconut used in various forms, in different types of food recipes and as functional food. The coconut oil was recognized as containing high levels of saturated fat, comprising medium-chain fatty acids, which are easily absorbed and metabolized by the liver, and can be converted to ketones. These are considered an important alternative energy source for the brain, and may be beneficial to people developing memory impairment (Alzheimer and other neurodegenerative disorders). The supplementation with coconut can be used as a therapeutic option in the prevention and management of AD. Coconut is classified as a highly nutritious 'functional food' being rich in vitamins, dietary fibers and minerals. In addition, phenolic compounds and hormones (cytokines) found in coconut may assist in preventing the aggregation of amyloid-β peptide, potentially inhibiting a key step in the pathogenesis of Alzheimer's disease. Coconut might cause severe allergic reactions in people who are allergic to coconut oil, coconut pollen, coconut powder or pieces, or other representatives of the *Arecaceae* plant family.

Different fractions of coconut cake (globulin, prolamine and glutelin-1 protein fractions) show high radical-scavenging activity and ion chelating ability, and can protect DNA from oxidative damage, which proves that these can be used as a natural antioxidant or to prolong shelf life of different products.

Key words: coconut, antioxidants, functional food

P4

Leveraging the nutritional potential of rice

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Rice is high in calories, it is generally low cost which makes it accessible and a vital basis of many diets. It is rich in fiber, vitamins B1 and B6, magnesium. phosphorus, selenium, manganese and unlike most grains, rice is eaten as a whole grain. Therefore, physical properties such as size, shape, uniformity and overall appearance are very important.

The aim of the present study was to create a scientific review regarding rice used in various forms, in different type of food recipes and the influence on consumers health.

The molecules with antioxidant capacity contained in rice include flavonoids, phenolic acids, anthocyanins and proanthocyanidins, phytic acid, γ-oryzanol and tocopherols, which might explain the low incidence of some chronic diseases in rice-consuming regions of the world but is not explaining the high incidence of type 2 diabetes mellitus and insuline resistance. The white rice is usually blamed for the increase in the risk of diabetes , GI has been associated with increased risk of metabolic syndrome and diabetes in many studies.

The use of rice helps in providing energy, due to the rich content of carbohydrats, helps to prevent obesity (low levels of cholesterol and sodium), improves metabolism, controlling blood pressure. Some sortiments of rice contain nutrients which stimulate the activity of neurotransmitters, helping to prevent neurodegenerative diseases.

***Keywords*:** rice, antioxidants, neurodegenerative diseases

P5

Characterization of assortments of distilled alcoholic beverages from the mountainous Banat region. Plum moonshine.

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The purpose of the thesis is to give the product we are taking in the study (Banat region plum moonshine) an even better appreciation and be more appreciated because of the great organoleptic properties it possesses, but it's also a very nutritious product, highly competitive worldwide with other similar products like it such as whiskey or American moonshine.

We presented different types of raw materials used to make the Romanian moonshine, we described other products well known and consumed in our country like liqueur, palinka, cognac, whiskey, gin, maraschino.

In the personal contribution chapter, we determined the ethanol concentration and content of heavy metals on different types of Romanian moonshine.

We determined the ethanol concentration of the moonshine by measuring its density using the densimeter, pycnometer, ethanol meter.

The content of heavy metals was done using spectrometry of atomically absorption

Keywords: moonshine, antioxidants, polyphenols, chromatographic analysis, cell culture

P6

Berries as mineralizing and dietary foods. Blueberries.

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The thesis we are taking in the study addresses the issue of characterizing fruit and leaves of Vaccinium myrtillus, known as blueberries, in terms of the mineral profile of wild blueberries and also crop grown blueberries.

In the study we have gathered lots of data regarding how the determination of the dry matter content was done, determination of mineral content, determination of macro and microelement total contant, determination of mineral intake.

The dry matter content and concentration of total minerals in fresh blueberries reflext that all 3 samples that were studied contain very close numbers one to another between 15,86% and 18,53%.

The determination of mineral content show that the blueberries that were analized contain important and bveneficial quantities of minerals, the concentration limits vary between 0,23% and 0,26%

The determination of macro and microelement total contant reflect that the sample taken into studdy contain a higher amount of potassium, calcium, and magnesium, high quantities of sodium, iron and manganese, zinc, copper and chrome, unevenly distributed depending where they were harvested and the matter of the analized elements.

***Keywords**:* blueberries, spectrophotometric analyzes, mineral content, antioxidant capacity

P7

Study of the technological process to obtain tomato jam

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Jam is the product made from whole fruits or parts of fruit, placed in a concentrated sugar syrup and belongs to the category of ungelled products. Fruits intended for the preparation of jam must be fresh, meet certain quality conditions such as: strong texture, attractive color, unaltered or attacked by pests. Of all the processed tomato products, it was found that the highest lycopene content is found in jams. Although it has many phases in common, the technology of jams differs significantly from that of jams. Thus, while the jam is mainly aimed at soaking the fruits with sugar, the jam has the need to form a gel, which depends on balancing three basic factors: sugar (soluble extract), pectin and *pH*. It is therefore necessary to present the way in which they intervene in the technological process - aspects valid for all gelled products - in order to obtain the best qualitative results but also competitive from an economic point of view. The specific consumption was 1.07 kg and manufacturing efficiency of 92,84 %.

Keywords: tomato jam, mathematical program, technological flow, specific consumption

P8

Studies on the use of dehydrated fruits in the technological process of obtaining confectionery products

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Dehydrated fruits are fresh fruits from which a very large part of the water has been removed either naturally by solar drying or by the use of specialized dryers or dehydrators. Nowadays, the consumption of dehydrated fruits is much more widespread. Almost half of these fruits sold are raisins, followed by dates, plums, figs, apricots, peaches, apples and pears. These are called 'conventional' or 'traditional' dried fruit: fruit that has been dried in the sun or in heated wind tunnel dryers. The specific nutrient content of the various dried fruits reflects their fresh counterpart and method of processing. Drying removes water from food so that the growth of microorganisms is blocked. The objectives of this paper were to establish the manufacturing recipe and specific technological parameters for obtaining dehydrated fruits in terms of their consumption in confectionery with the evaluation of the main techniques and economic problems to justify the applicability of the technology. A mathematical program was designed and implemented for the calculation of the material balance in terms of losses on technological flow, efficiency and specific consumption for the finished product. The specific consumption was 4.22 kg and manufacturing efficiency of 23.66 %.

Keywords: dehydrated fruits, confectionery products, mathematical program, technological flow, specific consumption

P9

Evaluation of the antioxidant characteristics of energy drinks

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Energy drinks are beverages that contain various combinations of carbohydrates, vitamins, minerals and at least one of these substances: caffeine or taurine. Energy drinks can pose a health risk to vulnerable groups, including children, adolescents, pregnant women and those with medical conditions such as diabetes and cardiovascular diseases. The aim of this study was to evaluate the differences between several energy drinks types based on total polyphenol content (TPC) and total antioxidant capacity (TAC). From the comparative analysis of CAT and CTP, we observe that these parameters are not influenced by the energy value of these drinks. Probably the energy value is mainly due to the high sugar contents of these products. The lowest value of the total antioxidant capacity corresponds to the highest value of the carbohydrate content. Because all products have close caffeine contents as values, we cannot conclude to what extent the caffeine content influences the total antioxidant capacity. In conclusion, energy drinks are not a rich source of polyphenols and are not distinguished by their high capacity for antioxidants.

***Keywords**:* antioxidants, FRAP method, Folin Ciocalteau method

P10

Valorization of kale cabbage (*Brassica oleracea* var. *sabellica*) in pastry technology

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Kale cabbage (*Brassica oleracea var. Sabellica*) is an ancestral member of the Brassicaceae family, known for its nutritional properties, especially for the high content of B-complex vitamins and for the presence of sulfur compounds, with a protective effect on the liver, gastrointestinal tract and potential anticancer.

In Romania, kale it is cultivated to a small extent and used in culinary preparations. Considering the high nutritional value of this green vegetable and starting from the idea of obtaining an innovative product, the paper aims to capitalize the possibility to use kale in pastry and to obtaining a pastry product. The composition of the filling made on the basis of kale, gives the product a double value: innovative food, but also a functional product rich in the active principle, being intended for people interested in a healthy diet.

The product obtained was analyzed from a sensory point of view, and its nutritional value, calculated based on the manufacturing recipe and the values were compared with other pastry products with filling based on white cabbage or spinach.

The obtained results highlight the carbohydrate intake (15.84%), fiber (1.88%) and the low energy value of kale cabbage puff pastry (147.92kcal / 100g) compared to spinach or white cabbage pastry, which recommends the use of this vegetable in the flour industry.

Keywords: Kale cabbage, *Brassica oleracea* var. *Sabellica*, pastry, technology

P11

Valorization of plum flour in floury foods technology

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Plums (*Prunus domestica*) have been cultivated since ancient times due to their high nutritional value, sensory properties and the health benefits of eating these fruits, either fresh or dried.

Considering the high plum production in Romania, as well as the importance of diversifying the vegetable matrix in the structure of flour foods, the purpose of this paper is to obtain a confectionery product using plum flour as raw material and comparing the nutritional value of the obtained product with other of similar confectionery products.

In this sense, plum flour was obtained using minimal processing techniques by drying and grinding, which was later added to the manufacturing recipe of a functional product type dessert and analyzed from an organoleptic and nutritional point of view.

The nutritional indices and the energy value, calculated on the basis of the manufacturing recipes of the obtained product, were compared with other products from the specialized literature, having as main ingredient plum flour. Based on the results obtained, the protein intake (6.5%), lipid (5.2%), fiber (2.8%), carbohydrates (44.2%) and the low energy value (242 kcal/100g) provided by the functional product enriched with plum flour were highlighted. The high intake of fiber, associated with the beneficial effects on the body, recommends the use of plum flour as a functional food in the diet of people with digestive diseases.

.***Keywords:*** plum flour, floury, foods technology

P12

Valorization of barley malt roots in floury foods technology

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Barley malt roots, also called malt germs or malt crops, are a by-product of the brewing industry. The chemical composition of malt roots oscillates depending on the diversity of barley used, the process of malting or drying, noting the high content of fiber, protein, and chemical compounds with high antioxidant activity. The use of malt root extract or flour as a natural antioxidant is of major importance in the food industry, on the one hand due to its lack of harm compared to other antioxidants, and on the other hand, due to its very high protein and vitamins content.

The aim of this paper is to identify the possibilities of capitalizing the malt roots as biologically active compounds in the flour industry. In this sense, biscuits with the addition of flour were obtained from malt roots in 3 different proportions (20%, 25%, 30%) and the nutritional and energy intake provided by the 3 assortments were determined. The nutritional values (proteins, lipids, carbohydrates) and the energy value of malt root biscuits were compared with the nutritional values and energy intake of 3 types of wheat flour biscuits.

The obtained results showed that the addition of malt root flour in the composition of biscuits leads to obtaining a valuable product from a functional point of view, with a low carbohydrate and lipid intake compared to the assortments of classic biscuits sold, recommending the use of these products. in a healthy diet. The product obtained does not contain wheat flour or other gluten matrix, so it is recommended in the celiac diet.

The sensory analysis showed that biscuits with 25% malt root flour ensure a good processability of the dough and provide optimal organoleptic and sensory properties, while a high nutritional intake, which recommends the use of this variant in obtaining dietary biscuits based on flour from malt roots.

.***Keywords:*** barley malt roots, floury foods technology

P13

Obtaining and characterizing of an gluten-free cookies assortment

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The purpose of this work was to obtain an assortment of vegan, gluten-free cookies, based on rice flour and to determine their proximate composition and energy value. To obtain this product, in addition to rice flour were also used: pumpkin seeds, sunflower seeds, raisins, brown sugar, coconut butter, inactive yeast flakes, vanilla essence and salt. The gluen-free vegan cookies obtained had a fairly high protein content (8.20 g/100g), a total lipid content of 18.93 g/100g, total carbohydrates of 62.98 g/100g, from which 13.56 g/100g sugars, 3.24 g/100g dietary fibers and the energy value was of 441.80 kcal/100g. This product is intended primarily for those suffering from celiac disease, but also for people who want to eat healthy, vegan, gluten-free cookies.

Keywords: gluten-free cokies, rice flour, proximate composition, energy value.

P14

Peas patė - obtaining and evaluating the protective quality

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The aim of this work was to obtain an innovative product that to meets several conditions: to be vegan, to be prepared from local raw materials, to be cheap and easy to obtain and at the same time to be nutritious, with a rich content of bioactive principles with protective effects on the human health. Thus, we chose peas as a raw material, a local legume very rich in high quality proteins but also in various other bioactive substances beneficial to health. In order for the nutritional intake to be even richer, and for the taste to satisfy the highest requirements of consumers, the product also contains other vegetables, namely: carrots and broccoli. The product obtained had an energy value of 271.16 kcal/100g and a high vegetable protein content (13.20 g/100g), while the amount of lipids contained is quite low (8.90 mg/100g) and the dietary fiber is high (13.20 mg/100g).

Keywords: peas patė, carrots, broccoli, proximate composition, energy value.

P15

The catalytic action of enzymes in the technological preparation process of bread dough

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This study shows the influence of oxidases, namely lipoxygenase on bread dough. Research in this field is numerous and demonstrates the positive effects of lipoxygenase on bakery products.

In order to highlight these positive effects, we analyzed and compared different international research studies which showed improvements of lipoxygenase on the rheological properties of the dough such as extensibility and elasticity of the dough, resistance to deformation, water absorption capacity. As well as the action of oxidases on fats and proteins and improvements in the baking properties of the dough like volume increase and better structure, texture and porosity of the core. Lipoxygenase catalyzes the oxidative reaction of polyunsaturated fatty acids into hydroperoxides. The cis configuration of the acids is subjected to the action of the enzyme, the trans configuration not being affected. The substrates of this enzyme can be both glycerides and methyl esters of polyunsaturated fatty acids. In baking, lipoxygenase by oxidation of polyunsaturated fatty acids has consequences on the bread flavor that changes due to the formation of volatile compounds obtained by cleaving hydroperoxides.

***Keywords**:* bread, lipoxygenase, rheological characteristics, hydroperoxides

P16

Obtaining and characterization of vegetable pate

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In the present paper were obtained one pate exclusive of vegetable raw materials. The vegetarian pates are filled with veggies; our pate contains tofu, dry tomatoes and olive. The vegetarians and vegans considered the tofu an excellent source of protein. The gelatin from tofu enables to stack the three colorful layers of vegetable found in the mixed vegetable pate. The gelatin was used only to enhance the texture and form of the finished product. The fresh tomatoes were dehydrated in a home-scale dehydrator for 24 h at a temperature of 55°C. The olive fruit content the wonderful olive oil with high quality parameters. The vegetable pate can fall under the category of safe products for consumption with good taste.

***Keywords**:* pate, tofu, tomatoes, olive

P17

Study regarding obtaining and characterizing of home sausages

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Meat is an important source of nutrients (proteins, minerals, vitamins, and fat). These nutrients are important for human health by benefeicial effects. Sausages are a meat products usually made from ground meat, often pork, beef or poultry, along with salt, spices and other flavors.

The objectives of this paper have been: establishing the line for producing the pork and beef meat sausages, their production; organoleptic and physico-chemical characterization.

Sausage making is a traditional food preservation technique. Sausages can be preserved by hardening, drying (often in association with fermentation or cultivation, which can contribute to preservation), smoking or freezing. Some cured or smoked sausages can be stored without refrigeration. Most fresh sausages should be refrigerated or frozen until cooked through.

The main physico-chemical features observed in the sample of pork and beef meat sausage were: the content of humidity (moisture, %), fat (%), dry content (%) and total mineral content (ash , %).

This work demonstrate that homemade sausage are a good food product, beneficial to the body, but also that it can be a healthier alternative to the need of people than other highly processed products in trade.

***Keywords**:* sausages, meat products, beef, pork

P18

Obtaining and characterizing of a natural alcoholic beverage

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This paper aims to highlight naturally obtained alcoholic products. The process of obtaining brandy ("rachiu") is a tradition, passed down from generation to generation.

The main goal is to create a high-quality product. Alcohol consumption is harmful to the human body but consumed in small quantities can also have benefits. The consuming of brandy can reduce the likelihood of myocardial infarction, is also antianemic remedy and effective in regulating liver disease. However, alcohol consumption also has disadvantages such as it can lead to strokes, seizures, and disorders.

Brandy is an alcoholic beverage obtained by fermenting fruits or cereals. The distillation process is based on the following stages: raw material, preparation of raw material, borhot, fermentation, distillation, clarification, storage, natural brandy, aging. Being present at the manufacturing process, we understood the importance of each stage and the seriousness needed to obtain a quality product.

This paper presents details of the technological process of obtaining banana brandy. Banana brandy is the product that will take a little out of the classic routine being a new product.I chose to make banana brandy because banana being a tropical fruit takes the product out of the ordinary. Banana is one from the most important tropical fruit in the world.

The process of obtaining classic brandy and the process of obtaining banana brandy are largely similar, with a small exception to that of bananas, the bananas must be peeled before being fermented. Due to the observance of each stage, the process was taken to the level of art, and thus we managed to obtain a high-quality product.

Key words: brandy, banana, alcoholic beverage

P19

Sensory evaluation for some apple juices assortments

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Due to the beneficial properties, bringing vital, organic elements and also easily assimilated, apple juices offer properties that promote good health, reducing the risk of disease. Fruit juices are used and appreciated both due to the sweet-sour taste and due to the high content of vitamin C. The food products quality is offered by the physical, chemical, organoleptic and technological properties of the products as well as due to the processing processes.

The aim of the paper was to conduct a comparative study for the natural apple juice using sensory analysis and to calculate a material balance. To carry out this study, we used a fresh, natural apple juice obtained with on electric fruit juicer and five varieties of pasteurized apple juice were purchased from the local market. The fresh juice and three of the apple juices assortments were analyzed in terms of sensory characteristics of appearance, color, taste and smell. The results obtained from the sensory analysis involving ten consumers, showed that the most appreciated juice, was fresh apple juice.

So, the sensory analysis can help producers to improve the properties of the product, becoming appreciated in many aspects, leading to an increase in his purchasing decision. Due to the beneficial nutritional and antioxidant qualities, it is recommended to consume daily, natural juice, freshly squeezed and consumed immediately in the disadvantage of the pasteurized one.

Keywords: apple juice assortments, sensory analysis, comparative study

P20

Sensory and microbiological analysis of a confectionery product enhanced with vitamin C

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The aim of this paper is based on the sensory and microbiological analysis of a jelly enriched with vitamin C.

The raw materials used to obtain this jelly are: sea buckthorn, grapefruit and kiwi. Jelly obtained from natural products is a source of vitamins, because sea buckthorn fruits contain vitamin C in a very large proportion, considerably stimulating the immune system.

Grapefruit is a citrus fruit, also rich in vitamin C, it is a source of antioxidants that help the body develop resistance to infectious agents. Kiwi is also a fruit rich in vitamins (especially vitamin C) and minerals (calcium, phosphorus). The high amount of vitamin C in kiwi, makes it a good ally against respiratory tract infections, has anti-inflammatory properties and strengthens the immune system.

Jelly is intended for children, due to the large amount of vitamin C contained in the fruit from which it is obtained and which have benefits against colds, sore throats and strengthening the immune system.

Following the sensory analysis, it was observed that sea buckthorn, grapefruit and kiwi jelly enriched with vitamin C was the most appreciated in terms of its sensory characteristics: appearance, color, consistency, taste, smell.

Keywords: confectionery product, sensory and microbiological analysis, vitamin C

P21

Evaluation of the quality characteristics and nutritional properties of dessert with grapemarc flour

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In this study we investingated the possibility of improving dessert with grapemarc flour, an ingredient highly studied and appreciated because it has antioxidant properties and a high concentration of polyphenols. The originality of my product consists in improving the classic muffins recipe with a concentration of 20% grapemarc flour, compared to wheat flour, which preserve as much of nutritional value of pomegranate in the finished product. We obtained three variants of the product, namely the simple version, improved with 20% grapemarc flour and a the third variant with 15%grapemarc flour and 5% blueberries, to further increase the antioxidant capacity of the finished product. Following the organoleptic analysis performed by the evaluators, both variants of the product were highly appreciated. After analyzing the simple version of product, it is observed that smell and taste were the most appreciated sensory indicators, while color was the most de-pointed. Regarding the blueberry version, it was observed that the most appreciate sensory indicator was the most pointed. In the case of muffins with grapemarc flour and blueberry, the porosity was affected. The calculation of the nutritional value of muffins with grapemarc flour shower that 100 g of product contains 11.13 g lipids, 6.15 g proteins, 40.54 g carbohydrates and has an energy value of 291.58 kcal.

Keywords: grapemarc flour, muffins, sensorial characteristics, nutritional value.

P22

Evaluation of the quality characteristics and nutritional properties of appetizer gaufres

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Under the general name of "gaufres" are known several types of food products (wafer sheets, sweet gaufres, appetizer gaufres, conical gaufres etc.), all based on the same method of production: pouring a dough into a mold and backing it. The dough is based on eggs, water, flour, fat, sugar and aeration agents. The aim of this study was to improve a common product, known and appreciated by consumers, and to obtain a new innovative product by adding ingredients that increase its nutritional properties. It was also desired to implement a HACCP system (Hazard Analysis Critical Control Points) on the technological flow. There were developed four product versions (simple gaufres, gaufres with bacon, gaufres with coffee, gaufres with bacon and coffee), and after calculating their nutritional and energy value it could be observed that the latest version had the highest results, which is why we chose to continue working on this version. After a careful analysis of the technological flow were identified 7 critical control points (CCP). For all the CCPs were established, depending on the possible risks, critical limits, monitoring procedures, corrective actions, monitoring frequency, verification and registration procedures.

Keywords: gaufres, HACCP, nutritional value, energy value, critical control points.

P23

Innovative almond products - *Prunus dulcis* L.

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Almond [*Prunus dulcis* (Mill.) D.A.Webb syn. *Prunus amygdalus* (L.) Batsch] is a species in the genus Prunus and subgenus Amygdalus (Rosaceae, subfamily Prunoideae). It is a species native to Central Asia and dispersed through cold environments in mountainous areas and in the western deserts of China and Iran. Almonds have a special importance throughout the world due to the high nutritional value of its fruits.

Almonds contain 4% water, 22% carbohydrates, 21% protein and 50% fat. In 100 grams (reference quantity) almonds provide 579 kcal. Almond is a dense nutritious food, providing a rich source (20% or more of the daily value, DV) of B vitamins, riboflavin and niacin, vitamin E and the essential minerals calcium, copper, iron, magnesium, manganese, phosphorus and zinc. They also contain substantial dietary fiber, monounsaturated fats – oleic acid and polyunsaturated fats – linoleic acid, especially as triglycerides. Typical of nuts and seeds, almonds are a source of phytosterols such as beta-sitosterol, stigmasterol, campesterol, sitostanol and campestanol. A puff pastry product was obtained with almond kernel cream, a very fine dessert that is prepared very quickly. Almond cream is fine, soft and very delicious with a special ingredient: almond kernel flour.

Keyword: Innovative, almond, *Prunus dulcis*, puff pastry

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P24

The study technological and HACCP analysis with the sugar concentration of a mix of vegetables and fruits

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The objectives of this diploma project were: obtaining eggplants and sea buckthorn jam along with the evaluation of the main technical and economic aspects justifying the applicability in real technology of the proposed new range. Starting from the classic jam recipe to which the new ingredients were introduced, eggplants, sea buckthorn, sugar, citric acid, rum and nutmeg by repeated experimental tests, the optimal processing recipe has been established along with the technological parameters specific to the analysed processing (foreign bodies, edible part, technological losses, processing efficiencies, etc.). The experimental results recorded were the basis for the evaluation: partial and global material balances together with the main elements of economic calculation. There is a growing demand for organic products on the market, the sweetness and the jam being found on the table of all Romanians. By bringing this sweetness to the market we contribute to meeting the needs of consumers, to the reduction of imported products, to job creation, area development and automatically to GDP growth.

Keyword: eggplants, sea buckthorn, jam, craft product, nutmeg

P25

Tehnological study of the conservation of cucumbers and red beet with the help of sugar

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The objectives of this diploma project were: obtaining beetroot and cucumber jam along with the evaluation of the main technical and economic aspects justifying the applicability in real technology of the proposed new range. Starting from the classic jam recipe to which the new ingredients were introduced, sugar, beets and cucumbers by repeated experimental tests, the optimal processing recipe has been established along with the technological parameters specific to the analyzed processing (foreign bodies, edible part, technological losses, processing efficiencies, etc.)The experimental results recorded were the basis for the evaluation: partial and global material balances together with the main elements of economic calculation. There is a growing demand for organic products on the market, the sweetness and the jam being found on the table of all Romanians. By bringing this sweetness to the market we contribute to meeting the needs of consumers, to the reduction of imported products, to job creation, area development and automatically to GDP growth.

***Keywords*:** cucumber, beet, jam, artisanal product

P26

Development of some innovative shrimp cream assortments

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The aim of this paper was, first of all, to obtain an innovative food product, ready for consumption, based on shrimp, namely: spreadable shrimp cream, in two variants: one with baked red peppers (CA) and the second with olives green (CM). Another aim of the paper was to determine the total polyphenols content and antioxidant activity of the two finished products, compared to the raw materials, as well as to calculate the proximate composition and energy value of the two shrimp creams. The determination of the total polyphenol content by the Folin-Ciocâlteu method for raw and auxiliary materials showed that the highest content of total polyphenols was in black pepper (*Piper nigrum*), followed by baked red peppers (*Capsicum annuum*) and green olives. Shrimp had a fairly high total polyphenols content, being higher than that of onions and garlic. The finished product variant with baked red pepper (CA) had the highest content of total polyphenols and the best antioxidant activity (by CUPRAC assay). Regarding the proximate composition and energy value, the two variants of shrimp creams obtained are very close, the product with baked red pepper providing slightly less kcal than the product with green olives.

Keywords: shrimp, polyphenols, antioxidant activity, Folin – Ciocâlteu method.

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Obtaining gluten-low bakery biscuits – „*Pasta Biscuits*”

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The motivation for choosing this theme was projected on those people who have gluten intolerance, and the goal was to make a product for them. When making the product, I intended to come up with something new, something unusual in the daily diet, this consisting in capitalizing on dried bean pods to obtain flour. Given that they are used only in the pharmaceutical industry, in the form of dried bean tea, which have an important role on the human body, especially on the excretory system, exerting a diuretic effect, we thought that they can be used as raw material for various food products. The innovative character and originality of the ,,***PASTA BISCUITS***" product is offered by the use of dry bean shell flour as raw material, and the biscuits obtained bring a low caloric intake, but by the very high hydration capacity they increase their substantial volume, ensuring a state of satiety for a long time, thus decreasing appetite, which leads to decreased food intake and possible weight loss - an individual desideratum today. The recipe belongs entirely to us, the products being made according to a specific technological scheme, and from a microbiological point of view, following specific analyzes to determine the fungal load, we discover that the product is healthy and safe. Sensory analysis reveals a very popular product among the consumer, gluten free, intended especially for a target group of patients, namely- those suffering from celiac disease.

Keywords: bean pod flour, biscuits, celiac disease, gluten free

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Obtaining a functional food product - with therapeutic effects

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This work generates the idea that it has materialized in obtaining a product of the highest quality, obtained from fruits, vegetables and additions of natural flavors, which has a high content of vitamins and antioxidants. The raw material used is rhubarb - Rheum rhabarbarum, to which ginger and cinnamon are added, with the role of natural flavor, but also natural preservative, due to the strong antiseptic effect, more precisely the antifungal effect and lemon juice - antioxidant and natural preservative, also . As a sweetener, we used fructose instead of sucrose, due to the fact that it is a monosaccharide whose metabolism can be obtained in the absence of insulin - so it can be consumed by diabetic patients, in increasing numbers among the active population and beyond. Fructose has been used instead of sucrose, due to the fact that it is a monosaccharide whose metabolism can be achieved in the absence of insulin - so it can be consumed by diabetic patients, in increasing numbers among the active population and not only .

The jam obtained is an innovative product obtained by traditional methods that combines exclusively natural ingredients with benefits on the health of the consumer. The product is obtained according to a technological scheme designed by us, according to our own recipe, after which the packaging, sterilization, cooling, labeling and storage are performed. The microbiological analysis aims to isolate and identify coliform bacteria as well as filamentous and yeast fungi - microbial contaminants, and the physico-chemical analysis aims to identify the presence of certain ingredients and the nutritional value of the product. The sensory analysis was performed on a group of 27 students, and the grade obtained was 9.77, on a scale from 1 to 10. In conclusion, rhubarb jam is a desirable, safe and wholesome product that could influence the consumer's purchase decision, due to the benefits it brings to the consumer.

Keywords: jam, Rheum rhabarbarum, ginger, innovative product.

P29

Obtaining some assortments of fish pate. Determination of quality and nutritive values

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The aim of this study was to obtain some kinds of rainbow trout pate with different vegetables (basil, oregano and dill), characterizing them by sensorial (appearance, color, consistency, taste smell) and physical-chemical point of view (humidity, acidity, fat content, protein content and salt content) and also by nutrition values. The nutritional profile of these variants of fish pate was (average): proteins - 13%, fats – 23,8%, carbohydrates – 1,3%, and energetical value was 234,36 kcal.

Keywords: fish pate, sensorial and physical-chemical parameters, nutritional value.

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Food nanotechnology

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The rapid development of nanotechnology is expected to transform many areas of food science and the food industry, with increasing investment and market share. In this paper the current applications of nanotechnology in food systems are briefly reviewed. The functionality and applicability of food-related nanotechnology are highlighted to provide a comprehensive view on the development and safety assessment of nanotechnology in the food industry. While food nanotechnology offers great potential benefits, there are concerns arising from its new physicochemical properties. Therefore, safety issues and regulatory policies on its manufacture, processing, packaging and consumption are briefly addressed. At the end of this paper, the perspectives of nanotechnology in active and intelligent packaging applications are highlighted.

Keywords: Food, nanotechnology, safety