

**The 3rd Student Conference:
„Life Sciences – Food Processing”**



BOOK OF ABSTRACT

Organized by



Scientific Programme: 25-26 June 2018

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Faculty of Food Engineering, Banat's University of Agricultural Sciences and Veterinary Medicine

“King Michael I of Romania” from Timișoara

Association of Specialists from the Food Industry of Romania (A.S.I.A.R.) – Timisoara branch

Association for Multidisciplinary Research from the Western Zone of Romania (ACM-V)

Student League – „AGROWEST”

General Programme

The 3rd Student Conference: „Life Sciences – Food Processing”

June 25, 2018

- 16⁰⁰ – 16¹⁵ Registration at the Faculty of Food Engineering**
- 16¹⁵ – 16³⁰ Opening of the Conference**
- 16³⁰ – 17⁰⁰ Posters**
- 17⁰⁰ – 17³⁰ Coffee break**

June 26, 2018

- 16³⁰ – 17⁰⁰ Posters**
- 17⁰⁰ – 17³⁰ Coffee break**

*„Ionel Jianu” Amphitheatre - Faculty of Food Engineering
Banat’s University of Agricultural Sciences and Veterinary Medicine
“King Michael I of Romania” from Timișoara*

Scientific Programme

25 June 2018

The 3rd Student Conference: „Life Sciences – Food Processing”

*„Ionel Jianu” Amphitheatre - Faculty of Food Engineering
Banat’s University of Agricultural Sciences and Veterinary Medicine
“King Michael I of Romania” from Timișoara*

16⁰⁰ – 16¹⁵ Registration at the Faculty of Food Engineering

16¹⁵ – 16³⁰ Opening of the Conference

Prof. Dr. Eng. Adrian RIVIȘ, *Dean of the Faculty of Food Engineering, Banat’s University of Agricultural Sciences and Veterinary Medicine “King Michael I of Romania” from Timișoara*

16³⁰ – 17⁰⁰ Posters

Section I: Food Technology

Section II: Food control

17⁰⁰ – 17³⁰ Concluding Remarks and Coffee break

25 June 2018

16³⁰ – 17⁰⁰ Posters

Section III: Food science

17⁰⁰ – 17³⁰ Concluding Remarks and Coffee break

POSTERS

Student Conference: „Life Sciences – Food Processing”

Section I: Food Technology

- P₁** Elaboration of the documentation for hunting sausages in sheep membrane – Traditional food product. Case study
Florina-Mădălina Calotă, Bogdan Rădoi - *Faculty of Food Engineering, Banat's University of Agricultural Sciences and Veterinary Medicine „King Michael I of Romania” from Timisoara, Romania*
- P₂** Artificial cold in preservation of meat products. Case study: ”Traditional Sausages”
Ludwig Cristian Heinrich, Bogdan Rădoi - *Faculty of Food Engineering, Banat's University of Agricultural Sciences and Veterinary Medicine „King Michael I of Romania” from Timisoara, Romania*
- P₃** Studiul tehnologic al procesării unui produs prin concentrare cu ajutorul zahărului. jeleu mixt de căpșuni și mere cu lavandă și spirulina
Eva Lavinia Iordache, Călin Jianu - *Faculty of Food Engineering, Banat's University of Agricultural Sciences and Veterinary Medicine „King Michael I of Romania” from Timisoara, Romania*
- P₄** Merceological appreciation of fresh cow's milk cheese
Bogdan Cuc, Ducu-Sandu Ștef, Gabriel Hegheduș-Mîndru - *Faculty of Food Engineering, Banat's University of Agricultural Sciences and Veterinary Medicine „King Michael I of Romania” from Timisoara, Romania*
- P₅** The evaluation of some bread quality characteristics
Cristian Kovacs, Ducu-Sandu Ștef, Ersilia-Călina Alexa - *Faculty of Food Engineering, Banat's University of Agricultural Sciences and Veterinary Medicine „King Michael I of Romania” from Timisoara, Romania*
- P₆** Study regarding sensory analysis of some aperitif products
Liliana Mirela Andrei, Ileana Cocan, Ersilia Alexa - *Faculty of Food Engineering, Banat's University of Agricultural Sciences and Veterinary Medicine „King Michael I of Romania” from Timisoara, Romania*
- P₇** Study regarding obtaining and characterization of some smoked and dried meat specialties
Anne-Marie de Parma Ciciu, Ileana Cocan, Ersilia Alexa - *Faculty of Food Engineering, Banat's University of Agricultural Sciences and Veterinary Medicine „King Michael I of Romania” from Timisoara, Romania*

- P₈** Valorisation of by-products from fruit processing of canning industry (Quince jelly with walnuts)
Georgiana Maxim, 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*
- P₉** Nutritional and functional properties of *Anethum graveolens*
Emilia Zoican, Ersilia Alexa, Monica Negrea – *Faculty of Food Engineering, Banat's University of Agricultural Sciences and Veterinary Medicine „King Michael I of Romania” from Timisoara, Romania*
- P₁₀** Obtaining and characterization of traditional rustic bread
Denis Cristian Ardelean, 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*
- P₁₁** The influence of lipid fraction in the technology of pastry production
Maria Laitin, 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*
- P₁₂** Nutritional and functional properties of *Foeniculum Vulgare*
Lavinia Bănică, Ersilia Alexa, Monica Negrea - *Faculty of Food Engineering, Banat's University of Agricultural Sciences and Veterinary Medicine „King Michael I of Romania” from Timisoara, Romania*
- P₁₃** Functional properties of *Coriandrum sativum*
Felicia Teodorescu, 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*
- P₁₄** Obtaining and characterization of ”Biblical” bread
Anca Pop, Ersilia Alexa, Monica Negrea - *Faculty of Food Engineering, Banat's University of Agricultural Sciences and Veterinary Medicine „King Michael I of Romania” from Timisoara, Romania*
- P₁₅** Methods for the Determination of Cereal Starch
Ionuț Adelin Bobiți, Adrian Căpriță - *Faculty of Food Engineering, Banat's University of Agricultural Sciences and Veterinary Medicine „King Michael I of Romania” from Timisoara, Romania*
- P₁₆** Benefits of Red Beetroot in Health
Alexandru Petresc, Adrian Căpriță - *Faculty of Food Engineering, Banat's University of Agricultural Sciences and Veterinary Medicine „King Michael I of Romania” from Timisoara, Romania*
- P₁₇** Milk Properties Influenced by Storage Conditions
Diana Ruscuța, Adrian Căpriță - *Faculty of Food Engineering, Banat's University of Agricultural Sciences and Veterinary Medicine „King Michael I of Romania” from Timisoara, Romania*

- P₁₈** Alternatives to Chemical and Microbiological Methods in Food Analysis
Anamaria Stoica, Adrian Căpriță - *Faculty of Food Engineering, Banat's University of Agricultural Sciences and Veterinary Medicine „King Michael I of Romania” from Timisoara, Romania*
- P₁₉** Technical and economical study of the production of a cooked meat product. The Transylvanian Caltaboș
Cristian Dobârtă, Mihaela Cazacu, Gabriel Bujancă - *Faculty of Food Engineering, Banat's University of Agricultural Sciences and Veterinary Medicine „King Michael I of Romania” from Timisoara, Romania*
- P₂₀** Preliminary studies for the introduction of the traditional assortment into industrial processing. Cheese Sausages.
Cătălin Bocșan, Gabriel Bujancă - *Faculty of Food Engineering, Banat's University of Agricultural Sciences and Veterinary Medicine „King Michael I of Romania” from Timisoara, Romania*
- P₂₁** The effect of storage microflora on cereals
Denis Achim, Gabriel Bujancă, Ducu Ștef - *Faculty of Food Engineering, Banat's University of Agricultural Sciences and Veterinary Medicine „King Michael I of Romania” from Timisoara, Romania*
- P₂₂** Technological elements in the processing and capitalization of chickpeas. Chickpeas Pate
Darius Nichita, Gabriel Bujancă - *Faculty of Food Engineering, Banat's University of Agricultural Sciences and Veterinary Medicine „King Michael I of Romania” from Timisoara, Romania*
- P₂₃** Economic technical study of the natural storage of some vegetal raw materials. Parsley
Georgiana Zaharia, Gabriel Bujancă, Ducu Ștef - *Faculty of Food Engineering, Banat's University of Agricultural Sciences and Veterinary Medicine „King Michael I of Romania” from Timisoara, Romania*
- P₂₄** Obtaining of some dietary chocolate specialties with raspberries
Alexandra Roman, 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*
- P₂₅** Obtaining and characterization of some pumpkin juice assortments
Cristina – Daiana 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*

Section II: Food control

- P₂₆** Obtaining and characterization of some vegetable spreads
Alina Alexandra Mistor, 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*
- P₂₇** Physico-chemical characterization of an assortment of jam
Loredana Ghigulescu, Mărioara Drugă, Delia Dumbravă - *Faculty of Food Engineering, Banat's University of Agricultural Sciences and Veterinary Medicine „King Michael I of Romania” from Timisoara, Romania*
- P₂₈** The quality of banatean salami produced and sold by the X unit in Timisoara
Anton Trif, Mărioara Drugă - *Faculty of Food Engineering, Banat's University of Agricultural Sciences and Veterinary Medicine „King Michael I of Romania” from Timisoara, Romania*
- P₂₉** The quality of the butter sold in a supermarket in Timisoara
Bianca Laura Mihăiță, Mărioara Drugă - *Faculty of Food Engineering, Banat's University of Agricultural Sciences and Veterinary Medicine „King Michael I of Romania” from Timisoara, Romania*
- P₃₀** Study on the quality of some salami assortments
Gabriela Ianoși, Liana Maria Alda, Ioan Gogoasă - *Faculty of Food Engineering, Banat's University of Agricultural Sciences and Veterinary Medicine „King Michael I of Romania” from Timisoara, Romania*
- P₃₁** Comparative assessment of mineral content and antioxidant properties of cauliflower and broccoli
Amalia-Ioana Popa, Liana Maria Alda, Ioan Gogoasă - *Faculty of Food Engineering, Banat's University of Agricultural Sciences and Veterinary Medicine „King Michael I of Romania” from Timisoara, Romania*
- P₃₂** Evaluation of mineral content and antioxidant properties of some vegetables
Bianca Străin, Liana Maria Alda, Ioan Gogoasă - *Faculty of Food Engineering, Banat's University of Agricultural Sciences and Veterinary Medicine „King Michael I of Romania” from Timisoara, Romania*
- P₃₃** Evaluation of antioxidant activity of high nutritional seeds
Béla Attila Müller, 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** Obtaining functional products based on millet (*Panicum miliaceum* L.)
Adina Madalina Hategan, 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*
- P₃₅** Cherries as sources of essential micro elements
Marioara Sandru Barbulescu, Ioan Gogoasa, Liana Maria Alda - *Faculty of Food Engineering, Banat's University of Agricultural Sciences and Veterinary Medicine „King Michael I of Romania” from Timisoara, Romania*

- P₃₆** Determination of some trace elements from pork meat and bakfat used for the preparation of traditional pork sausages
Eduard Weiss, Ioan Gogoasa, Maria Liana Alda - *Faculty of Food Engineering, Banat's University of Agricultural Sciences and Veterinary Medicine „King Michael I of Romania” from Timisoara, Romania*
- P₃₇** Evaluation of mineral composition of green leaves for large consumption
Diana Georgiana Sălășan, Despina-Maria Bordean - *Faculty of Food Engineering, Banat's University of Agricultural Sciences and Veterinary Medicine „King Michael I of Romania” from Timisoara, Romania*
- P₃₈** Study on the synergistic activity of functional mixtures with cardioprotective and antistress role
Alexandra - Ștefania Drug, 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*
- P₃₉** Valuing the nutritional potential of flax and sorghum seeds
Eugenia Marinela Ene, 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*
- P₄₀** The influence of thermal processing on the polyphenol content of some products of plant origin
Patricia – Cristina Tarkanyi, Despina-Maria Bordean - *Faculty of Food Engineering, Banat's University of Agricultural Sciences and Veterinary Medicine „King Michael I of Romania” from Timisoara, Romania*
- P₄₁** Bioactivity study of *Levisticum Officinale* seeds and evaluation of their use for obtaining an optimized nutritional product
Cristiana Magdalena Tomescu, Dana Bogdanescu, Despina-Maria Bordean - *Faculty of Food Engineering, Banat's University of Agricultural Sciences and Veterinary Medicine „King Michael I of Romania” from Timisoara, Romania*
- P₄₂** The determination of some essential elements from cow's cheese
Ana Maria Ivana, Mihai Adamescu, Ioan Gogoasa, Maria Liana Alda - *Faculty of Food Engineering, Banat's University of Agricultural Sciences and Veterinary Medicine „King Michael I of Romania” from Timisoara, Romania*
- P₄₃** The use of white grape pomace to obtain value-added bread formulas
Diana Bălțatu, 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*
- P₄₄** Comparisons of the qualitative characteristics of some meat products
Aneluța Ramona Curuți, Alina Veronica Grecu, Ileana Cocan, Ramona Cristina Heghedüş Mîndru, Gabriel Heghedüş Mîndru - *Faculty of Food Engineering, Banat's University of Agricultural Sciences and Veterinary Medicine „King Michael I of Romania” from Timisoara, Romania*

- P₄₅** The use of red grape pomace to obtain fortified pasta formulas
Ionela Ciurica, 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*
- P₄₆** Comparisons of the qualitative characteristics of dairy products
Alina Veronica Grecu, Aneluța Ramona Curuți, Ducu Sandu Ștef, Ramona Cristina Hegheduș Mîndru, Gabriel Hegheduș Mîndru - *Faculty of Food Engineering, Banat's University of Agricultural Sciences and Veterinary Medicine „King Michael I of Romania” from Timisoara, Romania*
- P₄₇** Evaluation of some physico - chemical characteristics of the process of obtaining pasteurized consumer milk
Amalia Marinela Oprea, Alina Veronica Grecu, Aneluța Ramona Curuți, Diana Veronica Dogaru, Ramona Cristina Hegheduș Mîndru, Gabriel Hegheduș Mîndru - *Faculty of Food Engineering, Banat's University of Agricultural Sciences and Veterinary Medicine „King Michael I of Romania” from Timisoara, Romania*
- P₄₈** Comparisons of some quality indicators in the technological process of obtaining meat products
Cătălin Florin Pîrvucică, Aneluța Ramona Curuți, Alina Veronica Grecu, Mihaela Cazacu, Ramona Cristina Hegheduș Mîndru, Gabriel Hegheduș Mîndru - *Faculty of Food Engineering, Banat's University of Agricultural Sciences and Veterinary Medicine „King Michael I of Romania” from Timisoara, Romania*
- P₄₉** Qualitative evaluation of some wines produced in the western part of Romania
Adrian Rîcu, Aneluța Ramona Curuți, Alina Veronica Grecu, Teodor Ioan Trașcă, Ramona Cristina Hegheduș Mîndru, Gabriel Hegheduș Mîndru - *Faculty of Food Engineering, Banat's University of Agricultural Sciences and Veterinary Medicine „King Michael I of Romania” from Timisoara, Romania*
- P₅₀** Research on the possibilities of valuation of non-conventional flours in the technology of obtaining functional products
Cosmina Florina Coconete, Daniela Stoin, Antoanela Cozma - *Faculty of Food Engineering, Banat's University of Agricultural Sciences and Veterinary Medicine „King Michael I of Romania” from Timisoara, Romania*
- P₅₁** Effect of millet flour on nutritional parameters of gluten free cakes
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*
- P₅₂** Technological and nutritional aspects of functional gluten free products obtained from alternative flours
Roxana Marinescu, Daniela Stoin - *Faculty of Food Engineering, Banat's University of Agricultural Sciences and Veterinary Medicine „King Michael I of Romania” from Timisoara, Romania*

Section III: Food science

- P₅₃** Study on nutritional characteristics of quinoa flour products
Magdalena Tabita Hodut, Daniela Stoin, Negrea Monica - *Faculty of Food Engineering, Banat's University of Agricultural Sciences and Veterinary Medicine „King Michael I of Romania” from Timisoara, Romania*
- P₅₄** Effect of almond flour and blueberries addition on quality characteristics of gluten-free muffins
Nicoleta Andrada Fruja, 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*
- P₅₅** Study of the quality of a pastry product (straw filled with sour cherries)
Mariana-Simona Toma, 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*
- P₅₆** Evaluation of the physico-chemical characteristics of fruit syrup assortments
Razvan Laurentiu Draghici, 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*
- P₅₇** Evaluation of physico-chemical characteristics for some green plant juices assortments
Oana - Roxana Țuțunel, Antoanela Cozma, Dacian Lalescu - *Faculty of Food Engineering, Banat's University of Agricultural Sciences and Veterinary Medicine „King Michael I of Romania” from Timisoara, Romania*
- P₅₈** Studies on the physicochemical characterization of oils used in the food industry
Darius Budeic, Antoanela Cozma, Daniela Stoin - *Faculty of Food Engineering, Banat's University of Agricultural Sciences and Veterinary Medicine „King Michael I of Romania” from Timisoara, Romania*
- P₅₉** Evaluation of the lipid profile of various dry beans from Banat region
Florina Cristina Calinovici, **Nicoleta Gabriela Hădărugă** - *Faculty of Food Engineering, Banat's University of Agricultural Sciences and Veterinary Medicine „King Michael I of Romania” from Timisoara, Romania*
- P₆₀** Evaluation of the quality of green peas
Bianca Elena Ghilduș, Laura Rădulescu, Adrian Riviș, Nicoleta Gabriela Hădărugă - *Faculty of Food Engineering, Banat's University of Agricultural Sciences and Veterinary Medicine „King Michael I of Romania” from Timisoara, Romania*
- P₆₁** Evaluation of lipid profile for maize varieties grown in Banat
Ana Maria Ilie, Nicoleta Gabriela Hădărugă - Gabriela Dumbravă - *Faculty of Food Engineering, Banat's University of Agricultural Sciences and Veterinary Medicine „King Michael I of Romania” from Timisoara, Romania*

- P₆₂** Lipid profile of oils separated from various species of sunflower grown in Banat region
Călina Maria Soare, Laura Rădulescu, Adrian Riviş, Nicoleta Gabriela Hădărugă - *Faculty of Food Engineering, Banat's University of Agricultural Sciences and Veterinary Medicine „King Michael I of Romania” from Timisoara, Romania*
- P₆₃** Evaluation of the lipid profile of green lentil
Camelia Volintiru, Laura Rădulescu, Adrian Riviş, Anamaria F. Beucă, Anca G. Nistor, Andreea M. Mureşan, Nicoleta Gabriela Hădărugă - *Faculty of Food Engineering, Banat's University of Agricultural Sciences and Veterinary Medicine „King Michael I of Romania” from Timisoara, Romania*
- P₆₄** Obtaining and characterization a natural alcohol beverages. Fruata
George Curescu, Alexandru Rinovetz - *Faculty of Food Engineering, Banat's University of Agricultural Sciences and Veterinary Medicine „King Michael I of Romania” from Timisoara, Romania*
- P₆₅** Blanching. Case study
Georgiana Ianăşi, Alexandru Rinovetz - *Faculty of Food Engineering, Banat's University of Agricultural Sciences and Veterinary Medicine „King Michael I of Romania” from Timisoara, Romania*
- P₆₆** Characterization a food supplement
Laura-Magdalena Juravle, Alexandru Rinovetz - *Faculty of Food Engineering, Banat's University of Agricultural Sciences and Veterinary Medicine „King Michael I of Romania” from Timisoara, Romania*
- P₆₇** Evaluation of quality characteristics and nutritive properties of a cremogenate from purple potato
Claudia-Izabela Oprinescu, Camelia Moldovan, Delia Dumbravă - *Faculty of Food Engineering, Banat's University of Agricultural Sciences and Veterinary Medicine „King Michael I of Romania” from Timisoara, Romania*
- P₆₈** The evaluation of the fatty acid profile of the lipid fraction obtained from whole barley flour (*Hordenum vulgare* L.)
Andrei Vlad, Rodica G. Dumitrelea, Adriana C. Floca, Denisa Nicoară Martinconi, Nicoleta Gabriela Hădărugă - *Faculty of Food Engineering, Banat's University of Agricultural Sciences and Veterinary Medicine „King Michael I of Romania” from Timisoara, Romania*
- P₆₉** Physical chemical and sensory analyses of an innovative food products based on snail meat
Marius Ioan Cugorean, Adrian Riviş, Nicoleta Gabriela Hădărugă - *Faculty of Food Engineering, Banat's University of Agricultural Sciences and Veterinary Medicine „King Michael I of Romania” from Timisoara, Romania*
- P₇₀** Evaluation of the lipid profile of various wheat species grown in the Banat region
Andreea Dan, Laura Rădulescu, Adrian Riviş, Nicoleta Gabriela Hădărugă - *Faculty of Food Engineering, Banat's University of Agricultural Sciences and Veterinary Medicine „King Michael I of Romania” from Timisoara, Romania*

- P₇₁** Sensory analysis of bread made with grounded walnut seeds.
Sorina Rușețeanu, Laura Rădulescu, Adrian Riviș, Nicoleta Gabriela Hădărugă - *Faculty of Food Engineering, Banat's University of Agricultural Sciences and Veterinary Medicine „King Michael I of Romania” from Timisoara, Romania*
- P₇₂** Development of some mixtures of raw vegan vegetables and assessing their antioxidant activity
Andreea Armulescu, 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*
- P₇₃** Development of a spreadable carob cream with a sweetener from *Stevia rebaudiana* and evaluation of its antioxidant properties
Andreea Golban, 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*
- P₇₄** Studies on the quality of fruit-based pasta
Anamaria Guran, Tamara Vlăduțescu, Adrian Riviș, Rodica G. Dumitrelea, Adriana C. Floca, Denisa Nicoară Martinconi, Nicoleta Gabriela Hădărugă - *Faculty of Food Engineering, Banat's University of Agricultural Sciences and Veterinary Medicine „King Michael I of Romania” from Timisoara, Romania*
- P₇₅** Studies on the antioxidant activity of fruit-based pasta
Tamara Vlăduțescu, Anamaria Guran, Adrian Riviș, Anamaria F. Beucă, Anca G. Nistor, Andreea M. Mureșan, Nicoleta Gabriela Hădărugă - *Faculty of Food Engineering, Banat's University of Agricultural Sciences and Veterinary Medicine „King Michael I of Romania” from Timisoara, Romania*
- P₇₆** Development of some sorts of rhubarb (*Rheum rhabarbarum*) jam and analysis of their antioxidant activity
Andreea 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*
- P₇₇** Development of some assortments of seafood pate
Alice –Emanuela Iosin, 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*
- P₇₈** Nutritional characterization and quality assessment of a pumpkin nectar with antioxidant properties
Ancuța Hapău, Camelia Moldovan, Delia Dumbravă - *Faculty of Food Engineering, Banat's University of Agricultural Sciences and Veterinary Medicine „King Michael I of Romania” from Timisoara, Romania*
- P₇₉** “Rainbow” variety of improved cheese with grape seed powder in pepper crust
Iasmina Dimcea, Corina Dana Mișca - *Faculty of Food Engineering, Banat's University of Agricultural Sciences and Veterinary Medicine „King Michael I of Romania” from Timisoara, Romania*

- P₈₀** “Crispy jam”
Ramona-Denisa Țițu, Corina Dana Mișcă - *Faculty of Food Engineering, Banat's University of Agricultural Sciences and Veterinary Medicine „King Michael I of Romania” from Timisoara, Romania*
- P₈₁** Variation in the content of bioactive principles in tomato juice
Elena Mirela Catrinoiu, Ariana-Bianca Velciov, Antoanela-Lena Cozma - *Faculty of Food Engineering, Banat's University of Agricultural Sciences and Veterinary Medicine „King Michael I of Romania” from Timisoara, Romania*
- P₈₂** The evaluation of the physico-chemical and nutritional composition for some sorts of smoothie
Marius Alexandru Pintea, Cazacu Mihaela, Velciov Ariana-Bianca - *Faculty of Food Engineering, Banat's University of Agricultural Sciences and Veterinary Medicine „King Michael I of Romania” from Timisoara, Romania*
- P₈₃** Appreciation of the nutritional value of some specific athlete’s products
Flavius Popa, Ariana-Bianca Velciov, Georgeta-Sofia Pintilie - *Faculty of Food Engineering, Banat's University of Agricultural Sciences and Veterinary Medicine „King Michael I of Romania” from Timisoara, Romania*
- P₈₄** Biochemical and nutritional evaluation of some dairy products
Andreea-Daniela Breben, Ariana- Bianca Velciov, Georgeta- Sofia Pintilie - *Faculty of Food Engineering, Banat's University of Agricultural Sciences and Veterinary Medicine „King Michael I of Romania” from Timisoara, Romania*
- P₈₅** Nutritional profile evaluation for some sorts of cheese
Lucian Radu, Ariana-Bianca Velciov, Dacian – Virgil Lalescu - *Faculty of Food Engineering, Banat's University of Agricultural Sciences and Veterinary Medicine „King Michael I of Romania” from Timisoara, Romania*
- P₈₆** Biological and nutritional assesment of some sugary-products
Daniela – Florentina Bojan, Ariana – Bianca Velciov, Georgeta – Sofia Pintilie - *Faculty of Food Engineering, Banat's University of Agricultural Sciences and Veterinary Medicine „King Michael I of Romania” from Timisoara, Romania*
- P₈₇** Improve the physico-chemical characteristics of honey by adding different dried fruits
Raluca – Maria Cherciu, Georgeta-Sofia 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*
- P₈₈** Antibiotic effect of *Aristolochia clematitis* plants on *Staphylococcus*
Otilia Damian, Corina Dana Mișcă - *Faculty of Food Engineering, Banat's University of Agricultural Sciences and Veterinary Medicine „King Michael I of Romania” from Timisoara, Romania*
- P₈₉** Comparative study of various flour types
Ionuț Pamfiloiu, Ioan David - *Faculty of Food Engineering, Banat's University of Agricultural Sciences and Veterinary Medicine „King Michael I of Romania” from Timisoara, Romania*

- P₉₀** Using the alveographic method in determining rheological parameters of flours
Rodrigo Răzvan Glava, Ioan David - *Faculty of Food Engineering, Banat's University of Agricultural Sciences and Veterinary Medicine „King Michael I of Romania” from Timisoara, Romania*
- P₉₁** Hemicellulase, as a catalytic factor in the manufacturing process of bread
Ștefan Dugalici, Ioan David - *Faculty of Food Engineering, Banat's University of Agricultural Sciences and Veterinary Medicine „King Michael I of Romania” from Timisoara, Romania*
- P₉₂** Enzymes, catalytic indicators used to improve flour obtained from *Triticum aestivum*
Ștefan Costea, Ioan David - *Faculty of Food Engineering, Banat's University of Agricultural Sciences and Veterinary Medicine „King Michael I of Romania” from Timisoara, Romania*
- P₉₃** Designing and developing a technology for obtaining a sherbet product. food safety management on the technological flow
Oxana – Mihaela Guțu, Viorica – Mirela Popa - *Faculty of Food Engineering, Banat's University of Agricultural Sciences and Veterinary Medicine „King Michael I of Romania” from Timisoara, Romania*
- P₉₄** Designing and obtaining an assortment of aperitif paste from vegetables. Technological and economic forecasting on technological flow
Mircea Adrian Adam 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*
- P₉₅** Developing a quality monitoring system for a chicken liver filling product
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*
- P₉₆** Quality characteristics and nutritional value of some varieties of grain bars obtained from seeds, pseudo-cereal and coffee. “*Healthy Life*”- the beginning of a new life style
Andrei-Marius Țuțuc, 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*
- P₉₇** Biochemical and sensory characterization of some herbal syrups
Alexandra Raluca Cătuțoiu, Georgeta-Sofia Pintilie, Antoanela Cozma - *Faculty of Food Engineering, Banat's University of Agricultural Sciences and Veterinary Medicine „King Michael I of Romania” from Timisoara, Romania*
- P₉₈** Biochemical and sensory characterization of some meat products “*Pastă tartinabilă tradițională*” – a traditional food product
Robert Neagu, Georgeta-Sofia Pintilie, Dacian-Virgil Lalescu - *Faculty of Food Engineering, Banat's University of Agricultural Sciences and Veterinary Medicine „King Michael I of Romania” from Timisoara, Romania*

- P₉₉** Considerations about the preservation methods for lemons
Raufdhzon Kuganov, Ersilia Alexa, Mariana Atena Poiană, Teodor – Ioan Trașcă
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- P₁₀₀** Obtaining and Characterization of Mascarpone Mousse from Goat Milk
Țelita Szilagyi, Florina Radu - *Faculty of Food Engineering, Banat's University of Agricultural Sciences and Veterinary Medicine „King Michael I of Romania” from Timisoara, Romania*
- P₁₀₁** Separation and testing of sage extracts secondary metabolites in ensuring pork sausages preservation
Mirela Crăciunescu, Florina Radu - *Faculty of Food Engineering, Banat's University of Agricultural Sciences and Veterinary Medicine „King Michael I of Romania” from Timisoara, Romania*
- P₁₀₂** Experiments on the production of goat's milk products
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POSTERS

*The 3rd Student Conference:
„Life Sciences – Food Processing”*

Section I: Food Technology

Elaboration of the documentation for hunting sausages in sheep membrane – Traditional food product. Case study

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In the present paper "Elaboration of the documentation for Hunting sausages in sheep membrane – Traditional food product. Case study" contains a bibliographic study on national and European legislation in the field of traditional food products. The own contributions consist in elaboration of the traditional technology to produce "Hunting sausages in sheep membrane", describing traditional raw materials and technological phases. The last part of personal contributions includes the elaboration of task book for "*Hunting sausages in sheep membrane*" as a traditional product.

Keywords: hunting sausages, traditional, food, product

Artificial cold in preservation of meat products. Case study: “Traditional Sausages”

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In the present paper we analyzed the technological production process for traditional sausages. Traditional sausages are food products made from spices and pork minced meat, a mixture introduced into sheep or pig intestines, collagen, cellulose or plastic wrap. Techniques for preserving traditional sausages include maturation, drying and smoking. The technological process of manufacturing traditional sausages consists in following steps: reception, storage, transshipment, boning, leaching, maturing, chopping and kneading of raw materials, sausage filling and shaping, drying and storing. Methods of quality control analysis have been carried out to determine the moisture content of protein substances, lipids and NaCl content for three types of traditional sausages from three different manufactures.

Keywords: traditional sausages, artificial cold, preservation, meat products

P3

The technological study of processing a product through concentration using sugar. Mixt jelly of strawberries and apples with lavender and spirulina

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The objectives of this paper consisted in establishing the manufacturing recipe and technological parameters specific to the processing of mixed jelly of strawberries and apples with lavender and spirulina together with the assessment of the main technical and economic issues in order to justify the applicability in real technology of the new assortment proposed. Starting from the classic recipe of apple and strawberry jelly, which we have associated and introducing new ingredients, lavender and spirulina, through repeated experimental attempts, the optimal recipe for processing has been established along the specific technological parameters of processing the product (foreign bodies, edible part, technological loses, processing yields, etc.). The experimental results were based for assessing partial and global balance sheets together with the main economic calculation elements. The assessments made recommended the generalization of the paper theme to other representatives of the range of vegetal materials carries of food and/or sensorial utilities less or not mediatized and consecrated.

Keywords: strawberries, apples, mixt jelly, ecological product.

Merceological appreciation of fresh cow's milk cheese

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The aim of the research was to make fresh cheese from cow's milk (M) in house conditions and to analyze the sensory and nutritional quality of fresh cow's milk cheese. For comparison, two similar products (C1 and C2) were purchased from the supermarket.

The organoleptic examination of the samples aimed at assessing the appearance on the section, consistency, color, taste and smell. For each feature, a score of 0 to 5 was awarded by 7 tasters. For the estimation of the nutritional value of the samples the water content, the fat, the total protein, the mineral substances and the carbohydrates were determined.

The best sample in terms of sensorial was M. It achieved a total average score of 31.4 (out of 35 possible), and an individual average score of 4.48 (out of 5 possible). Except for the taste, which was a point below C1, it occupied the first position for all the other sensory features appreciated by the tasters. The two variants of fresh cheese bought from the supermarket were close, C1 having 28.8 points (out of 35 possible) and C2 - 28.6 points.

The water content was high, ranging from 69.37% to C2 and 73.69% at M. Also, the sample C1 showed a relatively high-water content (72.42%). The highest dry matter content was obtained for C2 (30.63%) and the lowest for M (26.31%), the difference between them being 4.32 percentage points.

Sample M recorded a slightly lower protein content (15.3%) compared to sample C1 (15.93%) and C2 (16.9%). The differences between the three samples are lower compared to those recorded for the dry matter.

For fatty substances M and C1 have close values (6.44 and 6.83%), and sample C2 has a higher content, namely 8.85%; a higher percentage of fat could increase the nutritional value of fresh cheeses, knowing that fat-soluble vitamins are fat-related. Mineral substances range from 0.92 to 1.16%, the differences between samples being relatively small. Carbohydrates also fall within a narrow range of variation, respectively between 3.65% M sample and 3.72% sample C2.

Conclusions: Sensory evaluation showed small differences for purchased samples in the supermarket; the most appreciated by the tasters, was the home-grown test. Laboratory determinations have highlighted: large differences between samples for dry matter content; relatively large differences in fat and protein content. Mineral substances and carbohydrates have been registered in restricted variation intervals.

Keywords: Iron, bread, quality

The evaluation of some bread quality characteristics

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The purpose of the researches consisted, on the one hand, of obtaining black bread variants - one obtained from common ingredients (M) and 3 with addition of ferrous sulphate and rosehip flour, and on the other hand measuring some quality characteristics of the variants obtained.

During the organoleptic examination the following characteristics were assessed: appearance and shape, appearance on the section, consistency, taste and smell. For each feature, a score of 0 to 5 was awarded by the tasters. Other determinations were: water content, fat, protein, mineral substances, carbohydrates.

The sensory appreciation of the four types of bread by the tasters sets relatively high quality differences from this point of view. Nutritional value data indicate large differences between the analyzed samples; except for protein content that ranges within restricted limits, all the other characteristics analyzed showed large differences between samples.

Keywords: healthy, iron, sensorial.

Study regarding sensory analysis of some aperitif products

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The main objective of the work was to increase the range of food products and the nutritional value of appetizer products by adding fennel in their composition. The product obtained was characterized sensorial and physico – chemically, by determining the proximate composition (moisture, dry substance, fat, carbohydrates, proteins, as well as energy value calculation).

The results obtained were compared with the results for two similar products purchased on the market.

The experimental results revealed that in the fennel product there was an increased intake of proteins and minerals. In contrast, the lipid, water, sugar, carbohydrate and energy content recorded lower values for the fennel product than for the products purchased on the market.

The product obtained corresponds in terms of nutritional properties to the conditions of admissibility regulated by the legislation in force. The sensory analysis performed for the three salt samples shows that the addition of the fennel in the salt leads to the improvement of the sensory characteristics of the product.

Key words: pastry, fennel, crackers, sensory analysis

Study regarding obtaining and characterization of some smoked and dried meat specialties

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The meat industry has lately become more and more focused on producing alimentary products which are high in nutritional value and low in food additives.

Sheep pastrami comes from the category of smoked and dried products, with a high level of added condiments, conserved through the processes of curing (salting), smoking and drying. Sheep present a lower chance of being fed with processed animal protein and sheep meat has the lowest risk of rezidual antibiotics contamination. It is also rich in proteins, iron and zinc along B vitamins.

The analized product - the sheep pastrami - was produced in the ”Laboratory of meat technology and meat products” using the technological process for smoked and dried meat products. The product was analized afterwards from a sensory and physico-chemical point of view in the laboratory of physico-chemical analysis at the interdisciplinary research platform of U.S.A.M.V.B. TIMISOARA. The sensory analysis focused on the aspect, consistency and taste. The physico-chemical analysis focused on the water content, mineral substances, fat level, NaCl, macro and micro-elements and determining the oxidation of the animal fats.

Keywords: sheep meat, pastrami, smoked and dried meat products

Valorisation of by-products from fruit processing of canning industry (Quince jelly with walnuts)

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

The main objective was recovery of waste from quince processing (peels, seeds tabs and the house), the development of a product sugar-preserved, with walnuts and flavored with vanilla.

Jellies are products obtained from fruit by-products mixed with sugar, with or without addition of citric acid, bearing the fruits of the used.

In the obtaining technology were used quince waste as a raw material and to improve the nutritional qualities of the finished product were introduced wallnuts recognized for their outstanding quality. A product with a gelled consistency was obtained due to the high amount of pectin from quince shells, pleasant taste and aroma with quince and vanilla aroma

The quince jelly with wallnuts was obtained in the Laboratory of Principles and Preservation Methods of Foods Products from the Faculty of Food Processing Technology and the analyzes were performed in the same laboratory: sensory examination (SR 1754-94), vitamin C (STAS 75588-87), and water content (SR ISO17025/2005; ISO 1442/1997), mineral substances (SR ISO 936:2009), total sugar content (SR 91/2007), were performed in Interdisciplinary Research Platform of BUASVM from Timisoara.

The sensory (organoleptic) evaluation of the quince jelly samples obtained has shown good acceptability, the product obtained a score of 8.20 on the basis of nutritional and organoleptic qualities.

The water content of the samples studied was 15.75%, which is within the limits set by the legislation. The mineral substances content and Vitamin C, determined for samples studied were values of 0.32% and 13.12% respectively, certifying that the obtained product has special nutritional qualities.

The total sugar content determined in the quince jelly samples was 88.75%. According to STAS 5953-85, the total sugar content was set to a maximum of 60%, but studies from national and international literature show intervals of total sugar content in products with a gelled consistency ranging from 66 to 89.12%.

Keywords: quince jelly, by-products, walnuts, by-products

Nutritional and functional properties of *Anethum graveolens*

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Anethum graveolens (dill) belongs to the Umbelifere or Apiaceae family and is used as a seasoning plant throughout its development. Contains up to 5% essential oil consisting of carvone, felandren, limonene, apiol and terpene hydrocarbons.

The leaves and seeds are used with very good results on certain foods (meatballs, rulade), in various sauces, to improve the taste of the raw salads or the leaves with seeds are used for the preparation of pickles. In phytotherapy, it is still used in ancient Egypt to treat headaches and circulatory disorders.

The contributions of this paper relate to: i) Proximal characterization of dill (*Anethum graveolens*) seeds; ii) Obtaining and characterization using high performance liquid chromatography coupled with mass spectrometry (LC-MS) of the polyphenolic extract; iii) Obtaining a functional food product using dill as raw material.

Experimental results have shown that: i) dill is a spice plant with protein, lipid and high mineral content; ii) the content of macroelements of the dill varies in the order K> Ca> Mg> Na and the microelements varies in order: Fe> Mn> Zn> Cu> Ni; ii) the seed extract contains total polyphenols in an important amount that highlights the antioxidant potential of this spice plant; iii) with regard to the individual polyphenols identified by LC-MS, significant quantities were reported related to epicatechin, and rutin plant included in the category of functional foods with, preservative, antioxidant and antifungal potential that can be successfully used in the food industry.

In conclusion, it can be said that dill is a rich source of protein, macro and microelements, antioxidant compounds with an important nutritional role that can be used successfully in the functional food industry in order to increase the nutritional and sensory value of products.

Key words: dill, macro and microelements, polyphenols

Obtaining and characterization of traditional rustic bread

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The purpose of this paper is to meet certain requirements, both from a qualitative and organoleptic point of view, traditional rustic bread being intended for people with diabetes due to the fact that these kinds of products do not increase the amount of cholesterol in the body during metabolism.

The choice of the theme has taken into account that the enriched bread offer on the market and the need to obtain high quality bread, "enriched" with various additions influence of bread quality.

In this paper, correlative research was done on the finished product – traditional rustic bread - both from the technology point of view and the quality of the finished product.

„*Rustic bread*” meets the requirements of the consumers, especially those with diabetes because this product does not increase the amount of cholesterol in the body during metabolism.

„*Rustic bread*” is a product prepared according to an old recipe adapted to our days, in which we combined tradition with inspiration, following the autochthonous process, with the fermented sourdough, which gives the products a noble flavour and an enticing aroma.

The innovative character of "*Rustic Bread*" comes from the combination of raw materials used, but also because from the preparation of rustic bread granulated aromatic yeast was used in order to obtain a unique fruity aroma. This type of yeast has been used because it ferments slower than conventional yeast.

The finished product is superior both nutritionally and sensorial point of view.

Keywords: rustic traditional bread, granulated aromatic yeast, fat content

The influence of lipid fraction in the technology of pastry production

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The present paper has proposed to diversify the range of pastry products, which corresponds nutritionally and sensitively to the requirements of consumers.

French dough or pastry is part of the pastry dough category used in the preparation of several assortments of confectionery and pastry products (snacks and desserts) of which mention: patisserie, crackers, cookies, pies, strudel, baklava, croissants, rolls, etc.

The present paper proposes to study the technology of pastry obtaining, using two types of fat. A literature study on french dough was carried out, the technological process has been described and the main working parameters have been established. The product obtained has also been nutritionally characterized.

Considering the importance of the control over the technological process in order to avoid the physical, chemical and biological contamination, the HACCP plan was developed, establishing risk factors and critical control points.

The experimental results obtained have shown that the product obtained corresponds from the point of view to the nutritional properties of admissibility conditions regulated by the legislation in force.

Although the lard pastry has an increased intake of lipids and high energy value, the structure of the fatty acids in the fat composition reflects the absence of trans acids as well as a high content of saturated fatty acids compared to margarine what it what it recommends this matrix in food nutrition

Keywords: french dough, pastry, fatty acids, fat content

Nutritional and functional properties of *Foeniculum Vulgare*

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Foeniculum Vulgare (fennel) can be characterized as a perennial herbaceous plant, belongs to Umbelifere family, found in Southern Europe and around the Mediterranean Sea. Fennel can be a very special presence in human diet due they heigh content of vitamins (C, A, B1), mineral salts (Ca, Na, K), trace elements (Zinc), amino acids and essential oils.

This paper aims: i) to characterize the fennel seeds in terms of the proximal composition and the macro and microelements content, ii) to determine the antioxidant potential in term of total and individual polyphenols, iii) to obtain and characterize a desert-type product having fennel seeds as raw material.

The results show that fennel seeds are a vegetable matrix with a high protein content, high intake of macroelements, especially K and microelements (Mn and Zn). The functional role of fennel seeds was demonstrated by the content of individual polyphenols, with the significant contribution of epicatechin and kaempherol. Nutritional value of fennel seeds has been proven by addition in a functional dessert food, in order to enhance the taste, as well as the intake of antioxidant polyphenolic compounds.

Keywords: fennel, functional food, polyphenolic compounds.

Functional properties of *Coriandrum sativum*

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Coriandrum sativum (coriander) is a species of herbaceous plant belonging to the Umbelifere family, cultivated in Europe, India and North Africa, due to the medicinal and culinary properties of plant, seeds and fruits. Its green leaves contain proteins, vitamins and minerals (such as calcium, phosphorus and iron), fibers and carbohydrates and are used in salads, while seeds containing volatile oils and typical flavor and are added to food as preservatives. The biological activity of coriander is supported by phytonutrients, flavonoid compounds and minerals from seed composition.

This paper aims to highlight the importance of using coriander in the food industry in terms of nutritional, antioxidant and antibacterial properties.

The possibility of using coriander oil in the food industry as an antibacterial agent against gram negative bacteria or gram positive is of importance in order to ensure microbiological control in the milk or meat industry. Also, the ability of coriander volatile oil to stop or slow the oxidative degradation of vegetable oils is of practical importance in the extractive industry.

The main contributions of this paper refer to the characterization of the coriander seeds from the point of view of the proximal composition, the obtaining of the essential oil and their characterization by gas chromatography (GC-MS), the testing in vitro antibacterial activity of coriander oil on *Escherichia coli* and *Staphylococcus aureus*, as well as testing the possibility of increasing the oxidative stability of sunflower oil by addition of coriander oil.

The experimental results revealed the antimicrobial and protective effect of coriander oil on oxidative degradation which recommends it as a natural preservative in the food industry.

Keywords: coriander, *Escherichia coli*, *Staphylococcus aureus*

Obtaining and characterization of ”Biblical” bread

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Bread with flour grape addition is considered a functional food product due of its bioactive principles with antioxidant effect that contributes to better health maintenance. This food-medicine product has its origins since ancient times. The bread is present in over 330 biblical verses, being considered the symbol of life. Even the ingredients to make this bread are described in the Bible.

Using Scriptures as inspiration, we created Biblical bread with grape seed flour. This bread contains natural ingredients such as white wheat flour 650, grape seed flour, yeast, water, salt and has functional properties such as antioxidant activity and high amino acid content, being recommended in the diet of people interested in a healthy nutrition.

Have been performed a comparative study between biblical bread obtained and classical bread from hypermarkets. The ash, protein and fat content of biblical bread with addition of grape seed flour was superior to classical white bread, the supplemental nutritional input is due to the addition of grape seed flour, rich in nutrients. Regarding the amino acid content of the studied samples, arginine recorded the highest values, followed by the alanine and glycine.

Based on these results, it is recommended for the production of bread the use of grape flour with much higher nutritional, physiochemical and sensory properties compared to the classical white bread.

Following the correlation of the results obtained as a result of the sensory, nutritional and physic-chemical analyzes, it can be concluded that the ingredients, the recipe, the technology and the results obtained from this study has a great importance and can be applied successfully in the food industry.

Keywords: biblical bread, grape seed flour, nutrients, aminoacids

Methods for the Determination of Cereal Starch

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Starch is the most important digestible carbohydrate found in food and feed. It is also the most important herbal deposit of carbohydrates, being present in large quantities in roots, tubers, grains and vegetables. Starch is the main source of carbohydrates for human nutrition and animal feed.

Starch also has many uses in different fields. The richest sources of starch are cereals. In this experimental study, samples of wheat, barley, rice and maize were analyzed for starch determination, using polarimetric and enzymatic methods. The polarimetric method for determining the cereal starch content is simpler and more economical than the enzymatic method and allows even small starch contents to be determined.

Keywords: starch, betalain, wheat, barley, rice, maize, polarimetric and enzymatic methods

Benefits of Red Beetroot in Health

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Red beetroot (*Beta vulgaris rubra*), due to its biological activity, has potential applications as a health promoting and disease preventing functional food. Beetroot may be used in treatments of some diseases associated with oxidative stress and inflammation. Some of its constituents (mainly the betalain pigments) demonstrate powerful antioxidant, anti-inflammatory, and chemo-preventive properties, *in vitro* and *in vivo* studies. Being a source of nitrate, beetroot increases nitric oxide availability and may prevent and treat diseases associated with diminished NO bioavailability, mainly hypertension and endothelial dysfunction. Some human studies showed the following beetroots effects: reduce blood pressure, attenuate inflammation, avert oxidative stress, preserve endothelial function and restore cerebrovascular haemodynamics. Other studies showed beetroot role in enhancing athletic performances.

Keywords: beetroot, betalain, antioxidant, anti-inflammatory

Milk Properties Influenced by Storage Conditions

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Some physicochemical properties of cow milk (raw and pasteurized) influenced by storage conditions (temperature and period of storage) were investigated. Milk samples were stored for 48 hours at 4°C, 10°C and 20°C. The effects of storage conditions on pH, lactic acid (LA) content and electrical conductivity (EC) were determined. Increasing of temperature and of the storage period determined an increase in EC and LA content, and a decrease in pH. LA content increasing in raw milk was greater than in pasteurized milk, due to a higher bacterial activity. pH was lowered more in raw milk than in pasteurized milk. LA content and EC were high positive correlated both in raw and pasteurized milk. Evaluation of deadline for milk consumption is possible by control of samples stability.

Keywords: cow milk, pH, lactic acid content, electrical conductivity

Physico-chemical properties of some meat products with low fat content

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Data are presented on the development and use of new, simpler, faster, more accurate and inexpensive methods for analyzing food, supplementing or replacing the current methods in use, classical chemical or biochemical methods, which are generally laborious, expensive and most often inconclusive to determine the bioavailability of nutrients in food. Methods based on biophysical determinations and methods based on biochemical luminescence are considered. Establishing correlations between the values of biophysical and biochemical parameters offers the possibility of replacing biochemical with biophysical determinations. Establishing of correlations between the values of the microbiological characteristics obtained by classical methods, and those obtained by methods based on biochemical luminescence is also possible

Keywords: food analysis, biophysical methods, biochemical luminescence, microbiological characteristics

Technical and economical study of the production of a cooked meat product. The Transylvanian Caltaboş

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Nutrition is the most important environmental factor that influences the body (Pavlov). About food is said to be a "necessity that gives birth to all the others" or "the pleasure of all ages, of all conditions, of all countries and all the days, which can be associated with all the pleasures and we remain at the last to console ourselves from the loss of others " It also confirms that: "you do not live from what you eat, but from what you digest."

In this paper, the technical and economical study of the production of a cooked meat preparation was carried out. The Transylvanian Caltaboş; several organoleptic and physico-chemical samples were evaluated from the product obtained.

Sodium chloride and nitrates are within the limits of the standard. In meat preparations, NaCl has the role of increasing water retention capacity as well as the property of improving the taste of the product, and the nitrates give red color and contribute to consistency.

To increase the nutritional value, it is necessary to lower the water and NaCl content by rigorous control of the raw materials. Instead, increasing water content leads to increased economic efficiency.

Keywords: Polish sausages, chicken meat, physico-chemical analyzes

Preliminary studies for the introduction of the traditional assortment into industrial processing. Cheese Sausages

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The paper with the title "Preliminary studies for the introduction of the traditional assortment into industrial processing. Cheese Sausages."; presents both the theoretical aspects of the problem and an experimental part.

In this paper is presented the methodology of obtaining pork sausages, detailed raw materials and auxiliary materials. Also, a wide sensory / organoleptic and physico-chemical characterization of the sample of the studied pork sausages.

Within our laboratory researches we tried to achieve two important objectives, namely: the realization of the product under laboratory conditions; Analyzing the quality of the product obtained compared to another similar product in the industrial system; The paper presents both the working methods and the results of the quality assessment of the product. The evaluation of the quality characteristics was made in comparison with the Professional Standard SP-C 401-95, which replaced the Romanian Standard 1468-92.

After the organoleptic examination the product was appreciated as:

- *Appearance* - specific colour for cheese sausages, non-sticky pairs, non-edible artificial membrane;
- *Section appearance* - compact, fine, red-browish colour, non-agglomerated spice;
- *Taste and scent* - pleasant, boiled and smoked;
- *Consistency* – semi-elastic.

Keywords: cheese sausages, pig meat, veal meat, physico-chemical analyzes

The effect of storage microflora on cereals

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Grain is the raw material for the bakery and pastry industry, it is an important global economic resource and provides the food base for populations in low-income economic areas.

In order to obtain safe and safe finished products, the raw material must be of high quality, uncontaminated with microorganisms and uninfected with parasites.

In the case of cereals, depending on the physico-chemical characteristics of each type of cereal, there is a good chance that the developed microflora will be very diversified, both in significant numbers and in the fucnion of species. Variability depends on a large number of factors, for example: environmental factors, cereal development, composition, crop treatments.

In the realization of this study we started from an objective observation that namely, despite the evolution of the technology and not only, the society is very fragmented d.p.d.v. economic disparities at the social level are enormous, and most of the world's population is facing a lack of food.

Cereals are largely responsible for the nutritional support of the world's population, and therefore great importance should be given to the conservation techniques of these products.

Cereals represent, for some countries, the main national income, and for a vast majority of the population of the earth globe, they are still the basis of the diet, without taking into account their use in animal feed. At the same time, cereals constitute the most important mass of slightly altered foodstuffs when stored in inappropriate conditions.

Keywords: storage microflora, cereals, microorganisms

Technological elements in the processing and capitalization of chickpeas. Chickpeas Pate

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One of the scientific disciplines with a wide applicability is the control of food of animal origin, especially of meat and vegetable products. It is known that the inspection of these products has been carried out since ancient times, the necessity of finding that these foods can cause illness both in humans and animals.

The meat and vegetable products industry in our country has seen a special development, especially in the last years, during which time new units with modern machinery have been put into operation, where new and improved technologies are applied, which ensures the production of products superior quality.

According to the data obtained, the best sample was the laboratory test.

The protein, dietary fiber, and energy value of the sample are higher in the laboratory, indicating that the product is more nutritious and energy-rich than commercially available.

Carbohydrates but also the lower amount of NaCl in the laboratory test than the commercial sample suggests that our product is superior in quality terms.

The total fat content of the product in the laboratory gave a value equal to that of the commercially purchased product.

Keywords: chickpeas, pate, raw materials, protein, energy value

Economic technical study of the natural storage of some vegetal raw materials. Parsley

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Parsley is one of the world's largest sources of vitamin K, and this vitamin, on its own, produces many health benefits. This means that half a spoonful of parsley can be strong enough to provide a positive change for health.

In addition to vitamins and nutrients, parsley also contains a huge amount of nutrients. These include antioxidants and other phytonutrients that can improve health. They are present in notable quantities in just half a teaspoon of fresh parsley.

In the first part of the paper we conducted specialized studies on the use of parsley in everyday food, the chemical composition and its therapeutic effects.

Laboratory tests were carried out to identify the process of drying the plant material (parsley) during storage.

The shelf life and storage conditions, both in mechanically ventilated warehouses, as well as in cold storage, depend on their storage resistance, chemical composition, and structural-textural strength characteristics. After harvesting these products, metabolic processes continue using their own enzymes as it is, which involves directing microclimate factors such as temperature, relative humidity, light. Optimal storage analyzes are: temperature (-1 ° ... + 1 °), relative humidity (75-80), storage space (6-7 months).

Keywords: parsley, storage, thermo-gravimetric analysis, dry plant

Obtaining of some dietary chocolate specialties with raspberries

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Chocolate is certainly an important ingredient for consumers all over the world; this being produced from the combination of cocoa beans and cocoa butter. Although it good taste, in very large quantities it has a negative effect on human consumption due to the presence of sugar in ingredients. Replacement the sugar sweetener with stevia (*Stevia rebaudiana*) is justified by its properties; it has a glycemic index of zero making it a sweetener for those who suffer from various diseases like diabetes. Our objective was to produce of some dietary chocolate specialties with different percentages of raspberries: 10%, 20% and 30% (w/w). A control sample without raspberries was prepared. Raspberries are one of nature's super fruits, full of goodness for heart health; the high polyphenols content reduces the risk of cardiovascular disease and reducing blood pressure. The innovative character of these products consists in the organic ingredients quality (cocoa, cocoa butter, stevia powder and raspberries) used in the recipe. The chocolate samples were evaluated in terms of sensory properties and nutritional value. Antioxidant properties like antioxidant capacity by FRAP assay and total phenolics by Folin-Ciocalteu method were analyzed. Our data showed that, in all chocolate samples, the increasing the percentage of raspberries causes a decrease in the antioxidant capacity associated with a lower content of total phenols

Keywords: chocolate, raspberries, antioxidant properties

Obtaining and characterization of some pumpkin juice assortments

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Pumpkin (*Cucurbita moschata*) is highly nutritious and antioxidant-rich vegetable widely grown all over the world. The autumn star, pumpkin is a vegetable that grows for seeds, fruits and flowers. It has a rich content of phenolic compounds and vitamin A and a very low-calorie level. Peppermint has a strong sweetish and fresh cooling taste and improves the pumpkin juices taste. The purpose of the study was to obtain and characterize of some fresh pumpkin juices with addition of water, walnuts, honey, cinnamon and fresh peppermint leaves. So, were prepared four juice assortments: juice of pumpkin with water 50:50 (w/v) – control sample; juice of pumpkin with water, walnuts and honey; juice of pumpkin with water, honey and peppermint leaves; juice of pumpkin with water, walnuts, honey, peppermint leaves and cinnamon. Total soluble content, vitamin C by titration with a 2,6-dichlorophenolindophenol sodium, antioxidant capacity by FRAP assay and total phenolic content by Folin-Ciocalteu method were analyzed. Vitamin C content ranged from 0.09 to 0.15 mg/mL, with 0.13 mg/mL in individual pumpkin juice; the juice assortment without walnuts has the lower vitamin C content. Among the investigated juices, the pumpkin juice assortment with all ingredients have the higher amount total polyphenol content (4.19 mM GAE/mL) and the total antioxidant capacity (2.53 mM Fe²⁺/mL). We observed that the fresh pumpkin juice assortments are a real source of bioactive compounds.

Keywords: pumpkin juice, walnuts, honey, peppermint, antioxidant properties

POSTERS

*The 2nd Student Conference:
„Life Sciences – Food Processing”*

Section II: Food Control

Obtaining and characterization of some vegetable spreads

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The purpose of this paper was to obtain and characterize from organoleptic and physico-chemical point of view some spreading pasta, having as main ingredients broccoli and avocado. We made two variants of this spread, one in which the broccoli was boiled and the other one in which the broccoli was fried in sunflower oil. From organoleptic point of view, appearance, consistency, color, smell and taste were determined. From physicochemical point of view, acidity, moisture, dry substance, salt, polyphenols and antioxidant capacity were determined.

Conclusions and recommendation: 1. The spread made from broccoli and avocado is an aperitif product, being a tasty, slightly spicy and salty-savory product, highly appreciated by consumers. 2. The products obtained have an innovative character given by the unique combination of broccoli and avocados, which is used as an unctuous binder and the addition of inactive yeast flakes, which gives the product added taste and flavor of cheese as well as vitamins, especially those in complex B, and nutrients. 3. By the thermal treatments to which they were subjected, the boiled variant is the one that has better antioxidant capacity and total polyphenols in a smaller amount. 4. As for the other parameters, the fried variant is better appreciated from the taste point of view, it is more consistent with lower moisture and a higher dry matter, less acidic and slightly salty.

Keywords: vegetable spreads, quality

Physico-chemical characterization of an assortment of jam

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The purpose of this paper was to get two versions of aronia jam with lemon and cinnamon: one using white sugar and the second, using brown sugar and determine their protective quality. Specific yields and consumption were calculated and ascorbic acid, total polyphenols, and antioxidant activity were determined as compared to the starting material. Conclusions: 1. there is a better yield obtained in the flavor of aronia with brown sugar, to which the specific consumption was lower. 2. From the point of view of vitamin C, there is a sharp decrease in the two kinds of sweetness compared to the raw material. This decrease is due to the fact that vitamin C is sensitive to thermal treatment and oxygen. The flavor of brown sugar has been shown a higher content than in white sugar jam. 3. A slight increase of polyphenols in brown sugar aronia jam compared to the other variant is observed. 4. Raw material has the highest antioxidant activity. The best antioxidant activity was in aronia jam with brown sugar, which proves that brown sugar has a protective role in antioxidant activities.

Keywords: aronia jam, physico-chemical characterization

The quality of banatean salami produced and sold by the X unit in Timisoara

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The purpose of this paper was to calculate a balance sheet of materials for the "Salam Banatean" assortment and to determine the organoleptic, physico-chemical and microbiological quality indicators of banatean salami produced and marketed by the X unit in Timisoara.

In order to determine the organoleptic, physico-chemical and microbiological quality of banatean salami produced and marketed by unit X in Timisoara, three production lots were examined. Samples were taken, transported and kept under the legal conditions.

The organoleptic examination followed: shape, appearance, aspect in section, consistency, taste and smell. The physicochemical examination aimed to determine the water, fat, protein, sodium chloride, hydrolysable nitrogen and nitrite. The microbiological examination aimed to determine coliforms and salmonella. **CONCLUSIONS:** The X unit in Timisoara produces and sells Banat salami which, with only a few exceptions, corresponds to the organoleptic, physicochemical and microbiological conditions of legal admissibility.

Keywords: quality, banatean salami

The quality of the butter sold in a supermarket in Timisoara

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The goal of this work was to determine the organoleptic, physicochemical and microbiological quality of extra butter (82% fat) marketed in a supermarket in Timisoara.

For this purpose, three packs of extra butter, with 82% fat, produced by the same company, were purchased consecutively every week. The samples were transported, stored and examined according to legally admitted norms.

From the organoleptic point of view, it was determined the color, the appearance on the section, the consistency, the smell and the taste. From the physico - chemical point of view, the determination of water, unfatty dry substance, fat, acidity, and Kreis reaction were sought for the appreciation of butter rancidity.

From the microbiological point of view, coliform bacteria and germs of the genus Salmonella were determined. Conclusions: The sales unit sells butter which corresponds, with a very small deviation, from the organoleptic, physico-chemical and microbiological point of view and which can be classified as extra quality.

Keywords: butter, quality

Study on the quality of some salami assortments

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Besides proteins and fats, meat is an important source of other nutrients. These include minerals (iron, zinc, selenium) and most vitamins: B1, B2, niacin, B6 and B12. The purpose of this paper was to investigate the quality of 52 assortment of salami in the supermarkets from Timișoara with the objective of assessing the quality of salami based on nutritional information on their labels as well as assessing consumer behavior in relation to this meat product following a questionnaire survey. These results show that all assortments of salami taken into the study contain sodium nitrite. Based on the results obtained, we found that 36.53 % of the products did not mention the amount of meat on the label. Following our study, we found that 21.15% of the monitored salami varieties contain sodium monoglutamate. The products monitored by us contain salt in percentages between 2 and 5.5%. The fat content of the samples varies between 11 % and 46.5 % and the protein content between 11.93 % and 27.6 %. Carminic acid, used as a colorant, is found in 63.46% of the monitored products. In the synthesis, from the results of the questionnaire, we can formulate some conclusions regarding the behavior of the salami consumer. So, 60% of interviewees buy price-based salami. Only 24% of people are interested in a less well known local product, preferring a product of a strong media company. Most people (76%) prefer to buy salami from producers who have certified and implemented a quality management system

Keywords: salami assortments, consumer behavior, nutritional information

Comparative assessment of mineral content and antioxidant properties of cauliflower and broccoli

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Vegetables are an important source of minerals, nutrients and antioxidants. The main objective of the paper was to make a comparative study of the essential minerals content: Ca, Fe, Mg, Mn, Cu and Zn and the antioxidant properties of some vegetables (cauliflower and broccoli). For determinations of minerals, we used the flame atomic absorption spectrophotometry method. CUPRAC method was used for determinations of total antioxidant properties of cauliflower and broccoli. Another objective of the paper was to evaluate the mineral contribution as well as the percentage coverage of the daily requirement of Ca, Fe, Mg, Mn, Cu and Zn, consuming a moderate amount of vegetables. According to our results, cauliflower has a total antioxidant capacity of 38.70 $\mu\text{moli Trolox/g}$, higher than that recorded by broccoli, of 36.90 $\mu\text{moli Trolox/g}$. The results show that broccoli contains appreciable amounts of calcium (1900 mg/kg fresh weight). Magnesium content of the samples recorded mean values of 600 mg/kg (cauliflower) and 920 mg/kg (broccoli). The lowest iron content (23 mg/kg) was registered by cauliflower. The determined manganese content was between 8.3 mg/kg in cauliflower and 14.9 mg/kg in broccoli. The maximum value recorded by potassium was 2700 ppm in cauliflower. The values for zinc and copper are within the legal limits imposed on vegetables. In conclusion, 100 grams of cauliflower provides a significant portion of the daily needs of minerals, especially manganese, iron, magnesium and zinc. Consumption of 100 grams of broccoli provides between 64-82% of the daily manganese requirement and significant intakes in covering the daily requirement of magnesium, iron and copper.

Keywords: Brassica oleracea, minerals, antioxidant properties

Evaluation of mineral content and antioxidant properties of some vegetables

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The main objective of the study was to determine the content of essential minerals: Ca, Mg, Fe, Mn, Zn, Cu, Na and K and the total antioxidant capacity of some vegetables: white cabbage and red cabbage. We used the flame atomic absorption spectrophotometry for minerals determinations and CUPRAC method for determinations of vegetables total antioxidant properties. Another objective was to evaluate the mineral contribution and the daily coverage of Ca, Mg, Fe, Mn, Zn, Cu, Na and K by consuming a quantity of 100 g of vegetables in order to ensure the daily requirement of minerals. The obtained results show that red cabbage has a total antioxidant capacity higher than white cabbage, probably due to the large amounts of anthocyanins in its composition. The highest calcium content recorded white cabbage, and red cabbage registered the highest content of manganese. The magnesium, iron, potassium and sodium content was similar in the two types of cabbage. The red cabbage recorded a higher content of zinc and the white cabbage a higher concentration of copper. The consumption of 100 grams of raw white cabbage provides a significant portion of the daily amount of minerals, especially Mn, Fe, Ca, Mg and Zn. Consumption of 100 g of red cabbage provides between 66 % and 85 % of the daily manganese requirement.

Keywords: *Brassica oleracea*, minerals, antioxidant properties

Evaluation of antioxidant activity of high nutritional seeds

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The objective of this study is to evaluate the antioxidant activity of highly nutritious seeds (linseed, sesame, buckwheat) and to obtain a new food formula based on yoghurt and seeds.

Flax seeds are rich in Omega 3 and a rich source of phytoestrogens and valuable antioxidants. Sesame (*Sesamum Indicum*) seeds rich in minerals (Fe, Zn, Mg and Ca), and protein. Buckwheat (*Fagopyrum esculentum*) seeds contains high quality protein, fiber and is glutenfree

The study of these seeds reveals the content of polyphenol (TPC), buckwheat 6,846 $\mu\text{mol} / \text{mL}$ and black sesame 6,265 $\mu\text{mol} / \text{mL}$, in total antioxidant capacity (TAC), buckwheat 3216,695 mg / L TE and black sesame 2936,34 mg / L TE are also the highest. The results support the idea of enriching yoghurt with seeds because, compared to simple yoghurt (the control sample), yogurt with seeds has an enrichment in antioxidants 7 times more than the value recorded for yogurt with buckwheat seeds. The highest TPC is in flaxseed yoghurt (1953,003 $\mu\text{mol} / \text{mL}$), which also suggests a doubling of the polyphenol content compared to seedless yogurt.

As a result of the mathematical model used in the analysis, it is observed that all analyzed seeds are suitable for consumption after its introduction into yoghurt. Buckwheat yogurt has the highest TAC, but the lowest amount of TPC. Yogurt with flakes has the highest TPC and the lowest TAC. It is therefore recommended to mix these two seeds in yogurt. As a result of the sensory analysis of the products, it was found that flax seed yoghurt was the most appreciated by consumers, followed by yoghurt with black sesame seeds.

Keywords: flaxseed, sesame seed, buckweath, antioxidant capacity, total polyphenol content

Obtaining functional products based on millet (*Panicum miliaceum*)

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The aim of this research study is to evaluate mineral content, the total antioxidant capacity (TAC), total polyphenol (TPC) content from different millet assortments in order to use them to obtain products with an optimized nutritional potential.

The millet is also called the desert camel due to its increased resistance under drought conditions. The best health benefits of millet include its ability to reduce the risk of chronic diseases such as obesity, cancer, CVD and diabetes. The gluten-free meal is an excellent option for people suffering from celiac disease and gluten-sensitivity often irritated by the content gluten from wheat and other cereals. Millet has an antioxidant, antimicrobial capacity, mildew provides cardiovascular protection, reduces tumors, and reduces colon and breast cancer. The miracle food is called gastric bandage and is a good probiotic and prebiotic.

The analyses reveal a potential functional food product with high nutritional values that can provide important health benefits.

The variations of TAC and TPC can be observed as a result of different processing procedures of millet seeds (boiling in water or/and milk) followed by cooling (4-8 °C or freezing at -20 °C). The highest TAC and TPC values are shown by millet boiled in milk followed by storing the product in the refrigerator at 4-8 °C.

Keywords: gluten-free cereal, total antioxidant capacity, total polyphenol content.

Cherries as sources of essential micro elements

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The paper presents preliminary results in determining essential micro elements content in fresh cherries from unpolluted hill sides of Caras Severin County – Romania and is estimating the supply of minerals of these fruits.

Results of micro element analysis through flame atomic absorption spectrometry show that walnut kernel contains important amounts of total Fe (6.26 ± 1.02 mg/kg), Mn (0.95 ± 0.21 mg/kg), Zn (1.24 ± 0.38 mg/kg) and Cu ($1.07 \pm 0.46 \pm$ mg/kg).

Mineral supply of cherries estimated based on mean concentrations in micro elements and on the necessary daily intake, shows that consuming 250 g of fresh cherries, a day, covers a significant part of the daily necessary micro elements: 29.72% (men and women) Cu, 19.56 % (men) and 8.69% (women) Fe, 13.19% (women) and 10.33% (men) Mn and 3.88% (women) and 2.82% (men) Zn.

Given the results of our study, we can say that fresh cherries can be taken into account as supplementary source of Cu, Fe and Mn.

Key words: micro element, fresh cherries, mineral intake

Determination of some trace elements from pork meat and bakfat used for the preparation of traditional pork sausages

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The mineral content of traditional pork sausages is the result of the sum of the contributions from all the ingredients, i.e., lean meat, fatty tissues, common salt, dry paprika etc., and additives included in their formulations. Because lean meat and fat are the main ingredients of a sausages and therefore the mineral composition of a sausage is closely related to the meat and fat content.

In this study are presented the preliminary results obtained for the determination of some trace elements that are essential from lean pork and bakfat, the main ingredient for preparing traditional pork sausages. The total concentrations of Fe, Zn, Cu and Mn in samples of lean pork producers and backfat from private manufacturers from agri-food markets in Timisoara-Romania were determined by the atomic absorption flame spectrometry (FAAS). The preliminary results reveals that the distribution of trace elements in meat and fat analyzed samples is uneven, the limits of their concentration are between 3.29 -12.38 mg / kg Fe, 3.58 -21.81 mg / kg Zn, 0.41 - 3.29 mg / kg Cu, and 0.18 - 0.41 mg / kg Mn.

Compared to bakfat, the lean meat presents the highest content of microelements.

Key words: pork meat, backfat, traditional pork sausage, traces elements, FAAS

Evaluation of mineral composition of green leaves for large consumption

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The green vegetables are plants, from which the leaves are used for consumption, that are rich in: fiber, vitamins, enzymes, minerals, digestible and indigestible carbohydrates. The elements found in green vegetables are: calcium (Ca), potassium (K), iron (Fe) and sodium (Na).

This study is to analyze the mineral content of dill, lovage and fennel and to for creating innovative products with nutritional potential. The objectives was to analyse mineral content of dill, lovage and fennel leaves by atomic absorption; total antioxidant capacity (TAC) using CUPRAC method and total polyphenols content (TPC) by Folin Ciocalteu assay and to identify the content of polyphenols, and antioxidant activity. The new food formula is for obtaining aromatic cheese cream: “CREAM CHEESE WITH LOVAGE AND FENNEL”.by introducing lovage and fennel leaves in the milk before fermentation

Dill (*Anethum graveolans*) and lovage (*Levisticum officinale*) have similar dehydration process and humidity (91,76%, 91,14%), while in fennel (*Foeniculum vulgare*) the dehydration time is double, and humidity is approximately (90,68%). lovage has the highest total antioxidant capacity (2305,344 mg/L), dill (1670,112 mg/l) and fennel (277,409 mg/l). The total capacity for polyphenols is highest for fresh lovage (2,914 $\mu\text{moli/ml}$), dill (2,862 $\mu\text{moli/ml}$) and fennel (1,099 $\mu\text{moli/ml}$). Therefore, the addition of leaf or fennel increases the total antioxidant capacity and total polyphenols content. cheese creams enhances bioactive compounds. In other words, additional plant material helps in obtaining strong moisturized sweet cream that is beneficial, but the homogeneous cheese mixture is to be made of equal proportions of lovage and fennel, that is rich in mineral elements: Ca, Mg, Mn, Fe, Zn.

Key words: dill, lovage and fennel leaves, antioxidant activity, polyphenols, innovative product.

Study on the synergistic activity of functional mixtures with cardioprotective and antistress role

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The aim of this study is to highlight the nutritional potential of dill, lovage and orache seeds, owing to its synergistic effects can be used as food for cardiovascular diseases or as an alimentary food in relieving the effects of stress on the body. in certain situations

The main objectives addressed in this study were: Moisture evaluation of dill, lovage and orache seeds; evaluation of the total antioxidant capacity (TAC) of dill, lovage and orache seeds and identifying samples with the highest antioxidant activity; evaluation of the total polyphenol content (TPC) of the mentioned seeds and identification of the highest polyphenol form and to obtain the mix that can be used as a flavoring agent in different foods with possible cardioprotective and antistress effect. The analyzes were carried out within the analysis laboratory of agro-alimentary products within the Faculty of Food Processing Technology.

The grinding operation determines an increase in TAC and TPC for lovage and orache seeds, and a significant decrease due to the grinding for the dill seeds, therefore, in the various mixtures, lovage and orache seeds are recommended to be milled while dill to be used as whole seeds. There are major differences for TAC and TCP for grounded and ungrounded seeds. By mathematical modeling it is observed that two groups have been formed that explain how TAC and TCP vary as a result of the milling operation.

Key word: dill seeds, lovage seeds, orache seeds, milling operation, antioxidant activity

Valuing the nutritional potential of flax and sorghum seeds

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The purpose of the study was to formulate products of superior nutritional value valoryfing the nutritional potential of flax (*Linum usitatissimum*) and sorghum (*Sorghum bicolor*) seeds. These seeds may be used as raw material for the production of value-added products (flax or sorghum meal, dietary supplements with a high content of lignans); ingredients in the food industry (bakery products, pasta and cereals for breakfast); functional foods (providing protection against certain types of cancer, heart disease, hyperglycemia, stroke and thrombosis).

The highest amount of total polyphenol content was obtained for the brown sorghum seeds with the value of 8.56 [$\mu\text{moli/mL}$] and in the dark brown flax variety 1.426 [$\mu\text{moli / mL}$]. The highest TAC (total antioxidant capacity) was determinated for brown sorghum seeds (4.897 mg/mL) and for golden flax variety (1.22 mg/mL).

By introducing the extract of sorghum and flax seeds in apple juice, the antioxidant activity increased two to three times.

Due to the nutrients that these seeds contain, they can be incorporated into food, but we need to keep in mind the amount we consume because they are very high caloric foods.

Key words: seeds, antioxidant activity, high caloric food

The influence of thermal processing on the polyphenol content of some products of plant origin

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One of the richest sources of antioxidants in the human diet is potato tubers. Depending on the variety, potatoes are an excellent source of vitamins (C, K , B1, B3, B6) and also a good source of minerals like: calcium, iron, magnesium, phosphorus or potassium. The purpose of this study was to analyze the total polyphenol content of some potatoes varieties and to investigate the influence of thermal processing on antioxidant activity and polyphenol content, as part of the nutritional potential of potatoes analysis and to propose a new food formula, based on the antioxidant and polyphenols content data. Yellow, purple and sweet potatoes were chosen this study was carried out because potatoes are one of the most complex foods.

The methods used for analysis were: determination of moisture, total antioxidant capacity and total polyphenols content , in both: raw and cooked (boiled and baked) potatoes. The results show that through heat treatment potatoes, unlike other vegetables, the total antioxidant capacity and the content of polyphenols increases, in potatoes, consumption after thermal processing. is recommended.

The main objective addressed in this study was the development of a new food formula (named MOVCART) based on the investigated chemical properties (TPC and TAC).

MOVCART is an innovative food product based on purple potatoes purée which is a cold appetizers with brilliant natural blue color, spreadable texture, a flavor of pistachios, olives and mascarpone and has a much higher antioxidant capacity 3311,215 $\mu\text{moli TE}/100\text{ g}$, polyphenol content 40,71 mg GAE/100 g than a sweet potato paste.

Key words: potato, polyphenols, antioxidants, thermal processing.

Bioactivity study of *Levisticum Officinale* seeds and evaluation of their use for obtaining an optimized nutritional product

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Any food is essentially functional, having certain functions on the body, such as organoleptic, nutritional etc. The definition was shaped for the type of food that is considered meaningful beyond its nutritional action, with components that have a positive physiological action. The product in question can be defined as functional if it contains anything other than the classic nutrients, and that element has a positive effect on the consumer.

The purpose of this study is to analyze the lovage seeds (*Levisticum officinale*) from the nutritional point of view and to investigate their use for the production of functional products with optimized nutritional potential.

The highest TAC (total antioxidant capacity) value of 0.796 mg / mL was observed in sample the sample of milk where 1 g lovage seeds / 60 mL milk were added for obtaining buttermilk and the lowest in the control sample 0.067 mg / mL (milk without lovage seeds), demonstrating that the addition of lovage seeds, regardless of the model of processing, brings a substantial benefit from the point of view of enrichment with bioactive antioxidant substances. With the increase in the amount of lovage seed added, the number of bioactive compounds increases in the new food formula.

The highest TPC (total polyphenol content -1,241 μmol / mL) was observed in same sample and the lowest in the control sample was 0.984 μmol / mL, which confirms the results obtained and demonstrates that in terms of TAC and TPC content, the sample presented buttermilk sample presented before has the optimal content.

Key words: Lovage, CUPRAC Method, polyphenols

The determination of some essential elements from cow's cheese

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This paper presents the preliminary results obtained in determining the concentration of essential minerals from cows' cheese samples from Timisoara markets.

The total concentration of K, Ca, Mg, Zn, Fe and Cu in the samples of salted cottage cheese, of semi-hard consistency, was determined by atomic absorption spectrometry in the air-acetylene flame (FAAS). Mineralization of the cheese samples was carried out by calcinations method, followed by the ash solubility in nitric acid 0.5 n. Varian 220 FS spectrometer was used to determine the absorbance of the mineral elements in the prepared solutions.

The preliminary results show that the distribution of the mineral elements in the studied cow's cheese samples is uneven, depending on the nature of the element and the origin of the cheese.

Concentration limits of the analyzed elements: Ca (4,310-5,050 mg /kg), K (1,050 - 1,370 mg/kg), Mg (385 - 455 mg/kg), Zn (16.30-24.00 mg /kg) , Fe (7.02 -9.81 mg / kg) and Cu (0.54 - 1.13 mg / kg) show that the analyzed cow cheese contains high amounts of macro-elements, especially Ca and notable microelements, especially Zn and Fe.

The mineral profile of the analyzed assortments of cow cheese shows the following decreasing trend: Ca> K> Mg> Zn> Fe> Cu.

Key words: cow cheese, essential elements, FAAS

The use of white grape pomace to obtain value-added bread formulas

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In order to design new food products with an increased level of bioactive compounds, in addition to the sustainability of the adopted technologies, it is of the great importance to exploit the potential of some underused by-products with proven properties in this respect. The grape pomace represents a valuable source of bioactive compounds, especially polyphenols, which recommends its use in various food applications. The purpose of this study was to obtain fortified bread formulas with improved antioxidant properties by including in the manufacturing recipe of this sustainable winery by-product, available in large quantities. The purpose of this work was to use the white grape pomace in the form of powder obtained from both whole grape marc as well as grape pomace skins, for bread obtaining, by replacing the wheat flour in the proportion of 10, 20 and 30%. The grape pomace resulted in the winemaking of Riesling Italian grape variety was collected from western Romania (Recas winery) and conditioned by convective drying at 60°C for 24 hours. The obtained results emphasized that the including of grape pomace in the bread making recipe led to increasing the total polyphenolic content and antioxidant capacity. The improving of antioxidant properties is closely related to the percent of grape pomace used as replacement for wheat flour in the bread recipe. The addition of products derived from grape pomace in the bread manufacturing recipe represents a very convenient way to improve the content of bioactive compounds, helping to designing of innovative value-added bread formulas..

Key words: white grape pomace, total polyphenolic content, total antioxidant capacity, fortified bread formulas

Comparisons of the qualitative characteristics of some meat products

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Ensuring food has always been an indispensable element of people's lives. The quality of the raw material in choosing a healthy diet is decisive. Not only protein or vitamins are harmful to the food but also calories. All this ensures the functioning of the biological processes in the optimal parameters within the nutrition. In the present paper five organoleptic and physico-chemical samples were evaluated as follows: chicken sausages; turkey sausages; pork sausages; beef and pork and beef sausages. The performed physico-chemical analyzes aimed to evaluate the following quality indicators: the water content expressed in %; ash content expressed in %; content of protein substance expressed in %; fat content expressed as % and salt content %. The sensory and physicochemical analyzes performed confirm that the five samples of sausages evaluated do not pose a health risk to their consumption and all the results obtained comply with the prescribed standards in the Standards and Legislation in force concerning meat and meat products.

Keywords: sausages, sensory analyzes, physicochemical analyzes

The use of red grape pomace to obtain fortified pasta formulas

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The current studies have shown that the grape pomace can be considered as a functional ingredient in various food products. In this line, the aim of this work was to obtain fortified pasta formulas, with improved antioxidant properties, by including in its recipe of red grape pomace, generated as main by-product in the Burgund winemaking. For this purpose, the grape pomace was used in the form of powder obtained from both whole Burgund grape pomace as well as grape pomace skins for pasta obtaining, by replacing the wheat flour in the proportion of 3, 6 and 9%. The fresh grape pomace was collected from western Romania (Recas winery) and conditioned by convective drying at moderate temperature of 60°C for 24 hours. Our data showed that the incorporation of red grape pomace in the pasta recipe led to important increases of the total polyphenolic content depending on the percentage used for wheat flour replacement. Our study reveals that the including of grape pomace in the pasta formulation led to obtaining of products with improved total antioxidant capacity. The obtained data are useful to producers to develop pasta formulas with improved antioxidant properties by valorizing the potential of grape pomace as mains winery by-product. This research demonstrates once again that the winemaking waste represent a valuable source of bioactive compounds with high antioxidant activity. Moreover, our results recommend the use of whole grape pomace and its fractions, skins and seeds, as functional ingredients for developing of high value-added fortified products.

Keywords: red grape pomace, total polyphenolic content, total antioxidant capacity, fortified pasta formulas

Comparisons of the qualitative characteristics of dairy products

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Milk is one of the oldest foods, being considered a main food in human food. Sheep milk is extremely popular because of its extraordinary taste. Sheep milk fat is digested very well. This type of milk is considered very healthy because it has a high content of orotic acid. It is known that sheep's milk is important for liver metabolism and for covering magnesium needs. In the present paper, five types of cheese were evaluated organoleptically and physico-chemically, the matured sheep cheese: cheese in own production; sheep cheese supermarket 1; sheep cheese supermarket 2; sheep cheese agri-food market 1 and sheep cheese supermarket 2. The physico - chemical analyzes carried out aimed at assessing the following quality indicators: determination of the water content expressed in %; determination of total mineral substances expressed in %; determination of the dry matter expressed in %, determination of the fatty substances expressed in %, determination of the degree of acidity (°T) and determination of the protein substances expressed in %. All analyzes performed in terms of quality, organoleptic and physico - chemical indicators comply with the Standards and legislation in force on dairy products, slight inconsistencies being recorded in some of the samples of matured sheep cheese analyzed but without risks to consumer health.

Keywords: sheep cheese, organoleptic analyzes, physico-chemical analyzes, quality indicators

Evaluation of some physico - chemical characteristics of the process of obtaining pasteurized consumer milk

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Milk is considered one of the most important foods for human and animal nutrition, and it is also a very important raw material for the food industry. In this paper, organoleptic and physico-chemical analyzes were carried out for 12 samples of raw cows' milk used for obtaining pasteurized consumer milk. For the evaluation of the 12 samples of cow's milk, the following analyzes were performed: density analysis (g/L); analysis of fat content (%); analysis of total dry substance content (%); analysis of lactose content (%); acidity analysis (°T) and protein content analysis (%). The results of the organoleptic and physico - chemical analyzes carried out confirm that the raw cow's milk can be used in the process of obtaining the pasteurized consumer milk, complies with the rules and legislation in force and does not pose a risk to the health of the consumers.

Keywords: milk, organoleptic analyzes, physico-chemical analyzes

Comparisons of some quality indicators in the technological process of obtaining meat products

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Salami are typically dried fermented preparations, made especially from pork and fat, with the addition of salt, curing agents (nitrates and/or nitrites), spices, sugars and possibly starter cultures. In the present paper five organoleptic and physico-chemical samples were evaluated as follows: Summer salami, Italian salami, Highter salami, Salami with ham and Peasant salami. The performed physico-chemical analyzes aimed to evaluate the following quality indicators: water content expressed in %; fat content expressed in %; easily hydrolyzable nitrogen expressed in %; NaCl content expressed in %; protein content expressed in % and the rancid index (Kreis). In the case of the water content assessment, about 7% of the Salami with ham, Italian salami and Summer salami were exceeded compared to the limit set by the legislation in vigor - maximum 50%. With regard to fat content, the Highter salami sample exceeded approximately 5% over the limit set by the legislation in force - a maximum of 37%. With regard the salt content, the Highter salami sample exceeded by approximately 0.22% the limit set by the legislation in vigor - maximum 3%. Other analyzes have led to results that comply with current legislation and rules on meat and meat preparations.

Key words: salami, organoleptic analyzes, physico-chemical analyzes, quality indicators

Qualitative evaluation of some wines produced in the western part of Romania

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One of the ancient preoccupations of our ancestors was the cultivation of the vine. The Geto-Dacians, the ancient inhabitants of the Danube, the Black Sea, and the Carpathian lands, valued the wine very much, and the vine was one of their most important riches. Over the centuries, the vine has been of great interest and great concern to all peoples. Its cultivation has not been interrupted even during neither the migration period closer to our days. In this paper, organoleptic and physico-chemical analyzes were carried out for eight samples of red wine as follows: Cabernet Sauvignon dry - C1 (wine cellar 1); Merlot demidry - C1 (wine cell 1); Pinot Noir demidry - C1 (wine cell 1); Fetească Neagră dry - C1 (wine cellar 1); Cabernet Sauvignon dry – C2 (wine cellar 2); Merlot demidry – C2 (wine cell 2); Pinot Noir demidry – C2 (wine cell 2); Fetească Neagră dry – C2 (wine cellar 2); Wine samples were physically and chemically evaluated for the following indicators: the alcoholic strength expressed as a percentage (%); total acidity; (g/L tartaric acid); volatile acidity (g/L acetic acid); free sulfur dioxide (mg/L); total sulfur dioxide (mg/L) and reducing sugars (g/L). Following the physico-chemical analyzes and comparisons, the eight red wine samples showed values of the quality indicators within the limits set by the current standards. Mild overruns were recorded in the case of reducing sugars content in two of the analyzed samples.

Keywords: wine, organoleptic analyzes, physico-chemical analyzes, quality indicators

Research on the possibilities of valuation of non-conventional flours in the technology of obtaining functional products

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Recent studies showed that more and more people have been found intolerant to gluten from the cereals, making it impossible to consume bakery products. Therefore, the food industry is oriented to produce products for people suffering from celiac disease, gluten-free diet being the basis for celiac disease treatment. This diet excludes the protein gluten which causes small intestines inflammation, protein that can be found in grains such as wheat, barley, rye and triticosecale.

The results presented in this study, are part of more complex research, which has the aim of developing new gluten free products, by using some unconventional flours, products intended for people with celiac disease, in particular.

The purpose of this study was to investigate nutritional parameters in order to support the use of unconventional flours to obtain high gluten-free bakery products, namely gluten-free cakes with different contents of oats and flax flour (rice/flax/oats flour ratios: 100/0/0; 80/10/10; 60/20/20; 40/30/30).

The determinations made on the products obtained are mainly related to moisture content, minerals, proteins, lipids, fibbers and carbohydrates, as well as sensory analysis, which results showed that the optimal proportion was found in the case of flax flour and oats in the proportion of 60/20/20.

Gluten-free cakes are low in calories and lipids, being a rich source of minerals, vitamins, and nutrients, are a source of dietary fibre helping to decrease the blood cholesterol by limiting excess cholesterol absorption in the intestines.

Key words: gluten – free products; flax flour; oats flour; physical-chemical parameters

Effect of millet flour on nutritional parameters of gluten free cakes

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Gluten-free diets have become extremely popular in the last decade among people with gluten sensitivities as well as people simply trying to fuel their bodies with the healthiest ingredients.

A gluten-free diet is a diet that excludes the protein gluten and is essential for managing signs and symptoms of celiac disease and other medical conditions associated with gluten. Gluten is found in grains such as wheat, barley, rye. The claimed benefits of the diet are improved health, weight loss and increased energy.

Cakes are popular bakery product which contains basically wheat flour, sugar, egg, dairy products, emulsifiers, leavening and flavouring agents. The use of millet flour instead of wheat flour in bakery products as cakes may help to boost their nutritive profile without affecting quality or taste, according to new research. Millet flour is rich in nutrients that body needs, such as magnesium, calcium, manganese, tryptophan, phosphorus, fibre, B vitamins, and antioxidants. In this study, have been analyzed gluten free cakes with different proportions of millet and rice flours (millet/rice flour ratios: 0/100; 25/75; 50/50; 75/25), which were evaluated on the basis of physical-chemical properties: moisture content (%), protein content (%), lipids (%), sodium chloride (%), carbohydrates (g) and mineral substances (%).

The cakes were obtained in the Laboratory of Baking and Milling Technology from Faculty of Food Processing Technology. The physical-chemical properties of cakes with millet and rice flours, were as follow: moisture content ranged from 17.85% in P3 sample (75:25) to 21.28% in control sample, protein content between 12.68 g in control sample to 20.14 g in P3 sample (75:25), lipids percentage between 18.15% in P3 sample (75:25) to 30.68% in control sample, sodium chloride percentage between 0.14% in control sample to 0.18% in P3 sample (75:25), carbohydrates between 34.47 g in control sample to 42.2 g in P3 sample (75:25) and mineral substances percentage range between 0.89% in control sample to 1.86% in P3 sample (75:25).

Results showed that protein and mineral substances content increased once with increasing millet flour in the cake samples studied, being recommended to the producers of bakery products the P3 sample (75:25 millet/rice flour ratio) for high nutritional values and low fat for a good industrial processing.

Keywords: nutritional parameters, millet flour, rice flour, gluten free cakes

Technological and nutritional aspects of functional gluten free products obtained from alternative flours

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Gluten-free products are becoming more and more required not only by people suffering from celiac disease but also by those who want to adopt a healthy lifestyle.

Gluten is found in many of the classic food products and it's hard to keep away from it. For this reason, through this dissertation paper “Current state of knowledge regarding the obtaining and characterization of millet flour and flax seeds flour” a new recipe of gluten bread was studied to see how it affects the millet flour and the flax seeds flour the final product.

Four samples with different doses of millet flour and flax flour, respectively 20%, 40%, 60%, were compared with the quantity of rice flour. A sample was also obtained without the addition of millet flour and flour of the so-called control sample. All of these samples were characterized from physico-chemical and sensory point of view. The main determinations made in this study were: moisture, acidity, mineral substances, protein content, and lipid content of bread, fibre content, carbohydrate, volume, and the ratio of height to diameter (H/D) of the bread.

The results obtained from these determinations revealed the positive influence of the gluten free flour studied (millet flour and flax flour) on the nutritional and technological characteristics of the bread samples studied, especially for the samples with the 40% addition of millet flour and flax flour.

Keywords: millet flour, flax flour, gluten free bread, celiac disease

POSTERS

*The 3rd Student Conference:
„Life Sciences – Food Processing”*

Section III: Food Sciences

Study on nutritional characteristics of quinoa flour products

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The objective of this study is to highlight the superior nutritional characteristics of quinoa flour. The results are applicable in the nutrition field because it addresses a wide range of consumers (people with gluten intolerance, persons who want to adopt a healthy lifestyle, etc.).

Four assortments of gluten-free products, with different proportions of the flours in the composition were analyzed (quinoa flour/rice flour ratio was as follows: 100/0, 80/20, 60/40, 40/60). The taste smell and appearance, moisture content (%), protein (%), ash (%), carbohydrate (g), lipid (%) were analyzed.

The results of the analysis were as follows: the humidity value was between 25.67% for the control sample (100: 0) and 30.82 for the P3 sample (40:60). The highest protein and lipid content were registered for the P3 sample (14.06 g lipids - 21.64 g protein) and the lowest values were registered in the control sample (10.22 g lipids-15.82 g protein). The highest value of carbohydrate content was registered to the control sample (46.27 g) and the lowest value to the P3 (40:60) sample (30.2 g).

In conclusion, the products with a higher content of quinoa flour have an increased nutritional value. This increase was proportional to the percentage of quinoa flour added to the dough. The quinoa fibre, protein, minerals and vitamins content is of great importance for the proper functioning of the body and to prevent digestive tract diseases, cardiovascular, renal and hepatic diseases.

Keywords: quinoa flour, nutritional characteristics, gluten-free products

Effect of almond flour and blueberries addition on quality characteristics of gluten-free muffins

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The purpose of this study was to obtain gluten-free muffins with almond flour (AF) and blueberries, with high nutrition value for people with gluten intolerance by using gluten-free flours. In addition to the two mentioned ingredients, rice flour (RF), almond oil, maple syrup, eggs, baking powder and starch were also used.

Various doses of the two types of flour were used to obtain the samples: P0 - 100% RF muffins; P1 - 75% RF, 25% AF; P2 - 50% RF, 50% AF; P3 - 25% RF, 75% AF.

The results obtained from this study show an increase proportional to the amount of added almond flour of protein, mineral substances, lipids and energetic value, but also a significant decrease in the carbohydrate content: protein value increased from 14.28% P0 to 22.23% for P3, mineral substances from 2.28% for P0 increased to 3.62% for P3.

The energy value was 337 Kcal for P0 and 382 Kcal for P3. Carbohydrate values registered were 33.39% for P0 and 28.38% for P3. Centralizing the results obtained in terms of sensory analysis, the muffin sample with 75% almond flour was most appreciated by the evaluators.

Summarizing the results in terms of sensory and chemical evaluation, we succeeded in optimizing the technological process of the recipe, observing the positive impact of almonds flour in the technological process and nutritional characteristics of the studied samples, especially in case of sample with 75% AF.

Keywords: Almond flour, blueberries, gluten-free muffins, nutritional value

Study of the quality of a pastry product (straw filled with sour cherries)

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The paper aims to characterize pastry products from leavened dough. Dried pastry products have special properties in terms of taste and nutritional value. Nutritional value is an important element of the daily ration of food and is the subject of extensive research in the field of nutrition. The materials used to make the sour cherry stalk are very important in obtaining good characteristics such as appearance, taste and flavor.

The bars analyzed show large differences in water content. Sample P1 (blank) contains 31.09% water, and sample M2 (trade) has 36.4% water, between the two samples being a difference of 5.31 percentage points.

The difference for carbohydrates is equally high, P1 having 56.28% carbohydrates and M2 51.75% carbohydrates. The addition recorded at sample P1 causes the calorific value of this sample to be greater by about 20 kcal.

The mineral substances are 1.65 at the P1 and 1.08% at the M2 sample, the difference between them being quite high.

The amounts of fat produced in the two samples are extremely narrow, ie 0.81% at P1 and 0.94% at M2.

Keywords: Cherry, pastry, flavor

Evaluation of the physico-chemical characteristics of fruit syrup assortments

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Fruit and plant syrups rich in vitamins and minerals used both for preventive and therapeutic purposes as a natural remedy should not be missed out of a daily nutrition. Syrup is used for therapeutic purposes as a natural remedy or foodproduct, as a sweetener for various desserts and cocktails. Their therapeutic qualities are due to the rich content of bioactive substances (vitamins, flavonoids, tannins, mucilage's, essential oils) and minerals present in the fruits and plants used to obtain them.

The purpose of this paper was to analyze and compare some physico-chemical characteristics: pH, electrical conductivity, dynamic viscosity, refractive index, superficial tension and density, for pasteurized fruit syrups on the market and for fresh home-made fruit syrups. From their analysis, for the natural syrups prepared homemade and the commercial ones considered (elder, ginger, sea buckthorn) it was observed that their values differ from one category to another, but they are comparable to those from the literature.

Parameters of commercial syrup samples differ slightly from those prepared in the house, due to factors related to the production company (addition of additives, sugars, salt etc.) If syrups contain a greater amount of sugar and pulp, they will have higher viscosity. Therefore, the correlation between the viscosity and the refractive index is normal, of direct dependence. Syrups made from fruits and plants, prepared in house, macerated or boiled, are aromatic and very healthy drinks. The high sugar content of the syrups alters both the refractive index and also the density pointing a normal correlation between them. They are a healthy alternative to commercial juices, which abound in colorants, preservatives, artificial flavors, and various sweeteners that quickly pass into the blood, increasing the blood sugar level and urging the pancreas to produce a large amount of insulin.

Syrups obtained from fruits and medicinal plants show particular interest both in natural, alternative therapy and also in allopathic being viewed in double quality, that of medication-food.

Keywords: plant syrup assortments, physical-chemical characteristics

Evaluation of physico-chemical characteristics for some green plant juices assortments

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Due to their nutritional and biological potential, natural juices from green fruits and vegetables are foods with multiple implications for the body's balance both physically, mentally and emotionally. Consumed moderately, as part of a balanced diet, green herbal juices offer properties that promote good health, reducing the risk of illness. With high vitamin, mineral, fiber and antioxidant content, green juices from vegetables and fruits are increasingly appreciated and recommended.

The green juice made from apple (*Malus domestica*) cucumber (*Cucumis Sativus*) spinach (*Spinacia oleracea*) and parsley (*Petroselinum crispum*) has an antioxidant, detoxifying and alkalizing role, contributes to improving the health of the body.

The purpose of this study was to analyze and compare some physico-chemical characteristics: pH, electrical conductivity, dynamic viscosity, refractive index, surface tension and density, in the case of juice samples obtained from apples, spinach, cucumber, parsley and lime each taken separately and in the mixture.

The physicochemical characteristics were determined from fresh and clearly juice prepared using a fruit and vegetable press robot. The pH was measured using a pH meter mark OP-211/2 connected with combined electrode OP-0808P according to the AOAC methods, the total soluble solids using a refractometer Abbe. Electrical conductance was determined by conductometer OK 112 and viscosity using Ostwald-type viscometer. From their analysis, for the natural juices considered (apples, spinach, cucumbers, parsley, and mixed) it can be noticed that their values differ from one category to another, but results are comparable to the data from the literature.

Due to its beneficial nutritional and antioxidant qualities, it is recommended to consume daily, succulent, freshly squeezed and immediately consumed over the pasteurized. Vegetable and green fruit juices acting as a functional food, is a simple affordable and effective alternative to cellular regeneration, health human body improvement.

Keywords: fresh green juices, physical-chemical characteristics

Studies on the physicochemical characterization of oils used in the food industry

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Vegetable oils are a class of natural products commonly used both in the food and the cosmetics industry. In the present paper there were analyzed from the point of view of physicochemical and nutritional characteristics three types of vegetable food oils : pumpkin oil (*Cucurbita maxima* L.), almond oil (*Prunus Dulcis* L.) and sesame oil (*Sesamum indicum* L.).

They are used and appreciated due to nutritional principles in the preparation of dishes and culinary products in sauces, salads, dressings especially in the cold kitchen as they also highlight the characteristics of the other components. The three assortments of analyzed oil in this study (pumpkin, sesame and sweet almond oil) were purchased from herbal stores.

The aim of this paper was to analyze and compare some physico-chemical characteristics: viscosity, refractive index, surface tension, relative density, acidity (% oleic acid) for the three vegetable oils used in the food industry. From the physico-chemical analyzed parameters it was observed that the values differ from one category of oil to another. The physical and chemical characteristics of cold pressed unrefined pumpkin seed oil depend on the free fatty acid content. Due to the generous chemical composition of oleic and linoleic acids, the physicochemical and nutritional properties of pumpkin oil differ from those of sesame and almond oils. After analyzing the data by correlating the experimental one with the literature values, it is recommended that all three unrefined oils to be used cold, unheated for their own consumption or in gastronomy.

Keywords: vegetable oils, physical-chemical characteristics

Evaluation of the lipid profile of various dry beans from Banat region

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A study of the fatty acid profile of samples of white beans (*Phaseolus vulgaris* L.) in the western area of Romania, using the multiple extraction method, with hot petroleum ether, and using the derivatization of the glycerides to the methyl esters of the fatty acids, which can be separated by capillary gas chromatography and subsequently identifying by mass spectrometry.

The lipid fraction was obtained in moderate yields of nearly 1%. All three major classes of essential fatty acids, saturated, monounsaturated and polyunsaturated fatty acids, have been identified, the latter at the highest concentrations (as methyl esters). The highest concentration was observed for linoleic acid (omega-6 acid), followed by oleic acid (omega-9 acid), both of which represent almost two-thirds of the total fatty acids in bean oil. At about half of their concentration, palmitic acid was also identified. All other identified acids showed much lower concentrations, but some degradation compounds were also found which probably occur in milling, extraction, concentration or even derivatization processes. However, the concentrations of these degradation compounds, the majority of aldehydes, are below 0.05%.

It is noteworthy the presence of a fairly high content (3.7%) of α -linolenic acid, a valuable omega-3 acid for human health, which suggests the possibility of using the bean lipid fraction in various dietary supplements of omega-3 fatty acid glycerides.

Keywords: lipid profile, dry beans, Banat region

P60

Evaluation of the quality of green peas

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In this paper we tried to determine the quality of purée obtained from green peas grown in Banat region. The following characteristics were determined: total solids, density, pH, total acidity, and vitamin C content.

As a result of analyzes carried out on samples obtained from green peas grown in Banat or for products purchased from the market, several conclusions can be drawn, namely:

- The pH and titratable acidity are close, the first size ranging from 4 to 5 units;
- Titratable acidity (expressed as mg of citric acid or malic acid / 100 g of sample) for peas (purée): 404.03 ± 9.32 mg/100 g (as citric acid) and 287.73 ± 14.31 mg/100 g (as malic acid)
- From analysis for ash and HCl insoluble matter for pea purée we obtained the following values: $0.60\% \pm 0.03$ (ash) and $0.12\% \pm 0.03$ (HCl-insoluble matter);
- Vitamin C for green peas (purée) by HPLC method: 58.33 ± 7.02 mg/100 g;
- Total sugar for green peas (purée): $3.79\% \pm 0.69$
- The main characteristics of pea purée are generally close for the two types of samples.

Key words: green peas, quality, total solids, density, pH, total acidity, vitamin C

Evaluation of lipid profile for maize varieties grown in Banat

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Maize (*Zea mays* L.) is a very valuable plant that is grown because of fairly high production and multiple uses (human, animal and industrial food). Corn grains contain protein (10%), unlabeled substances (7%), fat (4%), water (13%), cellulose (2%), and ash (1%) and are generally used as fodder for feeding animals of all categories.

The purpose of this research was the separation of the lipid fraction from native maize flour (western area of Romania) and the determination of the fatty acid profile by GC-MS.

The following conclusions can be drawn:

- The maize flour studied has a relatively high content of lipids;
- The analysis of the fatty acid profile indicated the presence of significant concentrations of mono- and polyunsaturated fatty acids;
- Saturated fatty acids were present in greater numbers but at much lower relative concentrations;
- The concentrations of oleic and linoleic acids were close (nearly 83% of the total separated and identified compounds);
- Relative concentration of fatty acids (as methyl esters) decreased in order MUFA (42.7%) > PUFA (40.7%) > SFA (16.1%);
- Some aldehyde degradation compounds have been identified, but at concentrations below 1%.

Key words: lipid profile, maize varieties, Banat

Lipid profile of oils separated from various species of sunflower grown in Banat region

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The nutritional function of sunflower oil is enhanced by the presence of vitamins A, D, E, phosphatides and vitamins B4, B8, and K. The oil also contains sterols (about 0.04%) and tocopherols (antioxidant fraction of vegetable oil, about 0.07%).

The goal of the study was to evaluate the lipid profile of oils separated from various species of sunflower that are growing in Banat region. Sunflower oil is obtained from sunflower seeds. Seeds are processed according to the extraction scheme (Soxhlet extractor using petroleum ether) to obtain crude oil. Sunflower oil samples were derivatized to the corresponding methyl esters of the fatty acids using trifluoride-methanol method and subjected to GC-MS analysis.

The studies of the fatty acid profile of the sunflower seed samples provide the following main conclusions:

The main fatty acids identified in the sunflower seed oil samples were mainly the unsaturated (linolenic, linoleic and oleic acids), but also some of the saturated ones (palmitic, stearic and arachidic acids);

The proportion of unsaturated fatty acids was much higher compared to saturated ones;

Of the unsaturated fatty acids, the polyunsaturated ones were identified in a higher proportion as compared to the monounsaturated ones;

The lipid extracts from the two samples of sunflower seeds were mainly saturated, monounsaturated and polyunsaturated acids, the most concentrated being linoleic acid (>50%), while oleic acid was identified at a concentration of 8.5%; the palmitic and stearic saturated acids were in concentrations of 5% and 4.5%, respectively.

Key words: Lipid profile, oils, sunflower, Banat region

Evaluation of the lipid profile of green lentil

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The main goal of the present research was to evaluate the fatty acid profile of lipids separated from autochthonous species of green lentil, using multiple extraction by petroleum ether, derivatization to the fatty acid methyl esters and analysis by gas chromatography-mass spectrometry.

The following main conclusions can be drawn from the studies carried out on the analysis of the fatty acid profile of green lentils by GC-MS:

- the main fatty acids of green lentil were mono- and polyunsaturated (linoleic acid and oleic acid), followed by saturated acids (palmitic acid);
- a number of fatty acid degradation compounds have also been identified, resulting in the green lentil lipid extraction process, the main ones being aldehydes and keto acids (in the form of acetals), but also omega-formylated and dicarboxylic acids, as well as some fitosterols in relative concentrations up to 5%.
- GC-MS analysis allows for an efficient evaluation of the green lentil fatty acid profile (after derivatization to methyl esters) with acceptable reproducibility.

Key words: green lentil, lipid profile, fatty acid methyl esters

P64

Obtaining and characterization a natural alcohol beverages. Fruata

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Statistically, brandy (pălinca), is consumed as such in proportion of 40% of our total beverage consumption. In some areas (Ardeal) it is used to mix it with honey, the statement being “gastric dressing”. Starting from this statement, the existing natural resources (forest fruits, honey) have been tried in a small area (Târnova, Caraş-Severin Country) and the tradition (brandy) capitalized as a single product, having as result Frutata. The product has been characterized physico-chemical (alcohol 25,9%, dry matter 34,747 mg/L, polyphenols 0,414 µmoliGAE/L, alcohol 27%) and organoleptic (aspect, flavor, fullness). The product (Frutata), has the appearance of a tonic, poorly alcoholic, digestive beneficial character and can be classified in the group of digestive drinks as an original product.

Keywords: natural alcohol, beverages, Fruata

P65

Blanching. Case study

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It is known that obtaining a food - finite or intermediary product - is based on the study and the passing some stages/phases of production for which it is necessary to understand phenomena and interactions in the food matrix. The present study brings attention a process that is based on thermal transfer, at first view simple - the blanching operation - part of the technologies of processing by refrigeration, freezing and drying of vegetable raw materials. These overlap the conditions from the thermal agent-product interface, the values of some material properties and the kinetics of the heat transfer phenomenon, depending on the particularities of the material. Proper management of the blanching operation finally determines the quality of the product through: enzymatic inactivation, maintaining/stabilizing color, texture, and reducing microbiological load. All these have responded to the reconstitution of the frozen and/or dried product for further technological processing or gastronomic processing.

Keywords: Blanching, food matrix, reducing microbiological load

P66

Characterization a food supplement

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Evaluation of structural and functional changes associated with everyday's stress has generated the appearance of *food-drug (nutraceuticals/foods supplements)*, with target functions, to compensate for the *prophylaxis/therapy of synthetic drugs*. The present study brings within discussion obtaining under *rustic* conditions, of the *fir tree syrup* from *Obcinele Bucovinei*, as a *food supplement* (considered *nutraceutic*), administered in the case of respiratory diseases. Following the study of literature, supported by field studies, was developed a flow chart diagram of operations, including the *fortification* (by the *incorporation of some spices*), of fir-tree syrup. The determination of some quality indicators (vitamin C, Brix^o, water, polyphenols), on the resulting products, highlights the increasing antioxidant and antimicrobial activity with increased health benefits.

Keywords: nutraceuticals/foods supplements, fortification

P67

Evaluation of quality characteristics and nutritive properties of a cremogenate from purple potato

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The aim of the research was to create an innovative, functional product with nutritional and health attributes – a cremogenate from purple potato - subsequently characterized sensory and physico-chemical. The recipe includes the ingredients: purple potato, coconut milk, coconut cream and honey. The format mix provides appreciable amounts of carbohydrates, proteins, mineral salts and vitamins. The final sensory evaluation (aspect (4,75), color (4,6), consistency (4,1), smell (3,4) and taste (4,05), average values) explains the high degree of appreciation. The physicochemical attributes are directly influenced by the processing mode (thermal treatments), which is worth reducing the antioxidant activity after boiling (from 771,534 to 463,11 mM Trolox / g dry substance), explained by the diffusion of antioxidant substances in the boiling water. It can be argued that the cremogenate from purple potato offers a viable alternative to confectionery products, having the advantage of color, consistency, and especially the absence of allergens (gluten, lactose) present in classic creamy stuffing products.

Key words: purple potato, nutritive properties, cremogenate

The evaluation of the fatty acid profile of the lipid fraction obtained from whole barley flour (*Hordenum vulgare* L.)

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The purpose of the research was the evaluation of lipid fraction separated from whole barley flour (*Hordenum vulgare* L.) from the west side of Romania, using multiple solid-liquid extraction method and gas chromatography-mass spectrometry (GC-MS) of the derivatized glycerides from the lipid fraction to the fatty acid methyl esters.

Studies on the fatty acid composition (as methyl esters) of the lipid fraction of whole barley flour, growing in the west side of Romania, provide some important observations related to the fatty acid profile:

- The lipid fraction from the whole barley flour was obtained by multiple hot extraction with an overall yield of approximately 1%;
- Polyunsaturated fatty acids (as methyl esters) were the most concentrated in the derivatized lipid fraction, especially omega-6 fatty acids, such as linoleic acid, which was identified at a relative concentration of 48.2%;
- Saturated and monounsaturated fatty acids were identified at relatively close concentrations of 27.9% and 21.5%, respectively;
- The main saturated fatty acid in the lipid fraction of whole barley flour was palmitic acid, but myristic, stearic, arachidic and behenic acids were also quantified at much lower concentrations;
- Oleic acid (as methyl ester) was the most concentrated monounsaturated fatty acid in the lipid fraction (19.8%); elaidic acid (the trans isomer of oleic acid), which probably results during the separation process, was also identified;
- Some compounds resulted by degradation of fatty acids (their glycerides) were identified in very low relative concentrations in the lipid fraction of the whole barley flour; they belong to aldehyde and carboxylic acid classes.

Key words: fatty acid profile, lipid fraction, barley flour, *Hordenum vulgare* L

P69

Physical chemical and sensory analyses of an innovative food products based on snail meat

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Snail meat have characteristics resembling with the fish meat, being poor in lipids (0.5-1.5%), calories (60-80 kcal/100 g), but having higher content of valuable proteins (12-17%), minerals (1.5%), and nitrogen (2.5%). They provide a fine taste, being used in many Western European, Asian and American restaurants. The scope of the study was to evaluate the sensory characteristics of an innovative food product based on snail meat, named “Snail meat-based Hamburger”. The sensory analysis of the new product was performed by scale method and the classification of these food products, in comparison with classical ones, was performed by PCA method (principal component analysis multivariate statistical method). The following conclusion were drawn:

- The variance of the sensory analysis data obtained for “Snail meat-based Hamburger” was better explained by the appearance, taste and consistency, especially for the first principal component from PCA analysis;
- On the other hand, succulence of the product had no relevance for the explained variance of the data;
- Two groups of subjects were clearly separated by PCA, a medium acceptability being observed for female “F” group;
- The most important characteristics for the acceptability of the products named “Snail meat-based Hamburger” were appearance and taste, as an overall evaluation;
- The study demonstrated that PCA analysis is a powerful and useful tool for evaluating the acceptability of new food products, such as “Snail meat-based Hamburger”.

Key words: crenwurst, pig meat, physico-chemical analyzes

Evaluation of the lipid profile of various wheat species grown in the Banat region

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The purpose of the research was to evaluate the fatty acid profile of the lipid fraction from the wheat species grown in the Banat region. The lipid fraction was obtained by Soxhlet method, using petroleum ether as solvent. The raw oil, resulted after removing the solvent and drying over anhydrous sodium sulphate, was subjected to derivatization to the fatty acid methyl esters (FAMES), using BF₃-methanol solution. The lipid profile (as FAMES) was evaluated by GC-MS method.

The following conclusion can be drawn:

- gas chromatography-mass spectrometry allows efficient evaluation of the FAME profile from wheat flour with good reproducibility;
- identification of FAMES in the lipid fraction was done by means of retention indices or Kovats indices (RI or KI), using the C₈-C₂₀ alkane standard mixture;
- the main fatty acids that were identified in the derivatized lipid fraction from wheat flour, based on MS spectra and RI, were: caprylic, lauric, myristic, pentadecanoic, palmitoleic, palmitic, margaric, linoleic, oleic, stearic, 11-eicosenoic, arachidic, behenic, and lignoceric acids (as methyl esters);
- the most abundant classes of fatty acids were mono- and polyunsaturated ones (especially linoleic and oleic acids, as methyl esters), followed by saturated fatty acids (represented by palmitic acid).

Key words: lipid profile, wheat species, Banat region

Sensory analysis of bread made with grounded walnut seeds

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Bread production and consumption are known from ancient time. Various raw materials can be used (wheat, rye, barley, oat, maize, rice or millet). Bread is one of the most important foodstuffs. Various other materials can be used in order to enhances the overall quality of a bread.

The goal of the study was to obtain and evaluate by sensory analysis an innovative walnut seed-based bread products. The sensory analysis data were processed by multivariate statistical principal component analysis technique (PCA). The following observations were drawn among these studies on sensory analysis of walnut seed-based bread products, using the scale method:

- Sensory analysis of bread samples allows evaluating the consumer acceptability for such products, by comparing with other similar bread samples from the market, the best results being obtained for samples named “N-bread with walnuts”;
- Multivariate statistical analysis PCA allows establishing similarities between bread samples (home-made and marketed products);
- The most important parameters for the walnut seed-based bread’s acceptability were the smell/taste and shape/appearance.

Key words: Sensory analysis, walnut seeds, bread, PCA

Development of some mixtures of raw vegan vegetables and assessing their antioxidant activity

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The purpose of this paper was to obtain an innovative raw-vegan food in two assortment variants (Z1 and Z2) and to assess the protective qualities of these products. In this respect, was followed the determination of vitamin C content (iodometric method), total polyphenols (Folin-Ciocalteu assay), carotenoids (spectrophotometric method), as well as antioxidant activity (CUPRAC assay) for finished products and raw materials. It was found that of the two assortment of raw-vegan food, the variant containing hot pepper (Z2) has a higher concentration of vitamin C (102.63 mg/100g). The total polyphenols content of the two finished product variants was very close (2.33 mg gallic acid/g, respectively 2.16 mg gallic acid/g). Assortment Z1 was slightly richer in carotenoid compounds (62.65 µg/g) than Z2 (50.32 µg/g), due to its carrot content. The two types of raw vegan products exhibit antioxidant activities with close values, Z2 variant having a slightly higher antioxidant activity (8.94 mg Trolox/g) than variant Z1 (8.47 mg Trolox/g).

Key words: vegetables, vitamin C, antioxidant activity, polyphenols.

Development of a spreadable carob cream with a sweetener from *Stevia rebaudiana* and evaluation of its antioxidant properties

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The present paper aimed to obtaining an innovative product: spreadable carob cream with a sweetener from *Stevia rebaudiana* (in two variants of the recipe: C1 and C2) and to determine its antioxidant properties. In this respect, the objectives were to determine the content of vitamin C, total polyphenols and the antioxidant activity of finished products and raw and auxiliary materials, as well as the determination of nutritional and energy values of finished products. The cream version C1, with a higher coconut milk content, is richer in vitamin C (6.75 mg/100g) than variant C2 (5.15 mg/100g). *Stevia rebaudiana* powder contains the highest content of ascorbic acid (15.73 mg/100g), followed by coconut milk powder (3.42 mg/100g), the lowest content being found in carob powder (0.25 mg/100g). Of the two variants of cream, version C2 (with a higher carob content) had a higher total polyphenol content (8.23 mg gallic acid/g) than variant C1 (6.52 mg gallic/g). Among the raw materials the best values were recorded at *Stevia rebaudiana* with 16.94 mg gallic acid/g and carob powder with 16.59 mg gallic acid/g. Variant C2 (richer in polyphenols) showed a higher antioxidant activity (62.37 mg Trolox/g) than variant C1 (49.88 mg Trolox/g). Cream version C2 with more carob powder and less coconut powder than C1 is calorie-less (372.48 kcal/100g vs. 421.95 kcal/100g of cream variety C1), being richer in protein and poorer in fat than C1 version.

Key words: carob powder, *Stevia rebaudiana*, antioxidant activity, polyphenols.

Studies on the quality of fruit-based pasta

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The quality of pasta is a complex term and can be evaluated by many characteristics. Consumers are influenced by culinary traditions from a specific country or even a specific region. Other characteristics that must be taken into account are the appearance of the raw pasta, the pack and brand, as well as the boiling behavior and the facility of preparation.

Pasta are less consumed in Romania, in comparison with other countries (such as Western Europe), even it has a continuous increase during the last years. Our pasta market is less structured. Consequently, the label and brand are less important for consumer's acceptability.

The influence of the raw materials and technologies used for obtaining pasta products on their quality is not well known, yet. The same problem appears for the raw material acquisition and verifying, the monitoring of production and control on the production process. Among sensory analysis, predictive methods on the quality of wheat as raw material and quality evaluation methods for the final pasta products (e.g., the "sticky"-related parameter) must be developed.

The goal of the study was to evaluate the overall quality of fruit-based pasta by means of sensory, boiling behavior and moisture content analyses. Three types of cereal flour (wheat, rice and oat) and five fruit types (seabuckthorn, blueberry, blackberry, raspberry and strawberry) have been used for obtaining the new pasta products. The sensory properties were well appreciated, especially for the appearance and taste. On the other hand, boiling test reveals good features such as less modified appearance and shape, as well as good consistency. Generally, the moisture content of dry pasta are slightly higher for control samples (without fruits), in comparison with fruit-based pasta products, but not statistically significant differences exist (a range of 1-2.7%).

Key words: quality, fruit-based, pasta

Studies on the antioxidant activity of fruit-based pasta

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Pasta products are widely used in various foodstuffs such as soups or mixed with cheese, dressings and as desserts. They have low antioxidant activity, even the nutritive value is high. Consequently, various other raw materials can be used for obtaining pasta (e.g., eggs, vegetable flour, or cheese, meat, mushrooms, vegetables, fish or seafood fillings).

Fruits are less used for obtaining pasta and the goal of the study was to obtain innovative pasta products with various fruits (wheat-, rice- and barley-pasta with fresh seabuckthorn, blueberry, blackberry, raspberry and strawberry) and evaluation of the antioxidant activity of the pasta by DPPH· (2,2-diphenyl-1-picryl-hydrazyl) method.

The DPPH· absorbance in the presence of ethnaolic extract from the innovative fruit-based pasta products had an inverse logarithmic behavior in the spectrophotometric monitoring at 517 nm. The highest values for the antioxidant activity (radical scavenging activity, RSA, expressed as the difference to 100% of the percent ratio between absorbances at t , and the absorbance at the start of the DPPH· - antioxidant compounds reactions) were obtained for seabuckthorn-based pasta, of about 95% (residual relative absorbance of 5%), followed by the other fruit-based pasta, with antioxidant activity (RSA) of 92-95%. On the other hand, the control pasta had only 84% antioxidant activity value. Moreover, the antioxidant capacity of fruit-based pasta was evaluated by determination of the mean DPPH· reaction rates on specific time ranges (0-60 s and >60 s). These reaction rates were two to four times lower on the second interval, in comparison with the first one, where the rates were 0.006-0.22 $\mu\text{M/s}$ (micromoles/L/s). All these findings reveal the valuable antioxidant capacities of the innovative fruit-based pasta, in comparison with the classical products.

Key words: antioxidant activity, fruit-based, pasta

P76

Development of some sorts of rhubarb (*Rheum rhabarbarum*) jam and analysis of their antioxidant activity

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The purpose of this paper is to get an innovative rhubarb product: rhubarb with strawberry jam, in two recipe variants: one with white sugar from sugar beet (R1) and the other with raw cane sugar (R2) and to analyze their antioxidant qualities. In this respect, the following objectives were pursued: preparation of the two variants of rhubarb with strawberry jam and determination of the ascorbic acid content, polyphenol content and antioxidant activity, both for the finished products and raw materials. Also, the nutritional and energy value of finished products was determined. In the jam variant with brown sugar (R2) was found a higher ascorbic acid concentration (24.53 mg/100g) than in the jam variant with white sugar (R1): 16.75 mg/100g. Of the two assortments of finished products, jam with brown sugar (R2) had a slightly higher total polyphenol content (5.88 mg gallic acid/g) than jam with white sugar (5.14 mg gallic acid /g). Of the two finished products, the jam with brown sugar (R2) showed the best antioxidant activity (20.93 mg Trolox/g). Jam with raw cane sugar has a slightly lower energy value (189.05 kcal/100g) than that of the jam with white sugar (195.05 kcal/100g).

Keywords: rhubarb, strawberry, jam, antioxidant activity, polyphenols

Development of some assortments of seafood pate

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The aim of this paper was to obtain of some assortments of seafood pate, using mussels and calamari as raw materials and to determine the nutritional and antioxidant properties of the products obtained. The following objectives were pursued: obtaining of three kinds of seafood pate using mussels and calamari: first assortment, with cow's butter as fat (SP1), second with sunflower oil (SP2) and third, with coconut oil (SP3) and determination of total polyphenol content and antioxidant activity for finished products and raw materials. Of the three seafood patches, SP2 with sunflower oil had the highest concentration of these compounds (4.52 mg gallic acid/g), followed by SP3 with coconut butter (2.14 mg gallic acid/g). The strongest antioxidant activity, of the three pate products, was recorded for SP2- (16.03 mg Trolox/g) with sunflower seed oil, which also had the highest polyphenol content, followed by the pate with coconut oil (15.25 mg Trolox/g). Assortment of pate with cow butter is the poorest in kcal (197 kcal/100g), has the highest protein content (8.53 g/100g) but the lowest lipid content (17.19 g/100g). The highest calorific value was found for the pate with sunflower oil (289 kcal/100g).

Keywords: seafood, pate, antioxidant activity, polyphenols

P78

Nutritional characterization and quality assessment of a pumpkin nectar with antioxidant properties

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The purpose of this work was to obtain a natural, innovative product with superior nutritional qualities - nectar from pumpkin with honey and lemon juice. The objectives of this work were the nectar sensory evaluation, determination of vitamin C, carotenoids, polyphenols and antioxidant activity of nectar and raw and auxiliary materials and calculate the nutritional value and energetic nectar.

In terms of sensory was a good acceptance of all types of nectar obtained all the average values of evaluation issues sensory gathered high scores, best appreciated as the light examination physicochemical were able to establish that variants Nectars of baked potatoes recorded higher scores than those obtained from the raw pumpkin. Also, the pumpkin heat treatment reduces the vitamin C content, polyphenols, carotenes and antioxidant activity.

Keywords: Nutritional, quality evaluation, pumpkin nectar, antioxidant properties

„Rainbow” variety of improved cheese with grape seed powder in pepper crust

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“Rainbow” is an innovative product resulting from the addition to the cheese, obtained by traditional methods, of a grape seed powder, covered by spicy crust;

The crust is made from four kinds of pepper (black, green, white and red), hand - milled - this mix of colorful pepper giving the name of the product. Added spices are recognized for antioxidant, anti-inflammatory and antibacterial effects. Is easy to implement technology. Production systems is conventional and natural

The product is very tasty, being preferred by 80% of the tasters, to the detriment of two other types of cheese with the same composition, but with different crust.

The innovative character:

- is the addition of grape seed powder to a traditional cheese, the powder being from red and pink grapes, which have an increased content of resveratrol.
- resveratrol is an antioxidant, offers cardiovascular protection, a blood flow regulator, a platelet antiaggregator, an anti-inflammatory, an insulin regulator, a protector against neurodegenerative pathology, a stimulant of adiponectin secretion
- which facilitates energy consumption by lowering plasma levels of cholesterol, triglycerides and carbohydrates.

Original elements

- by the addition of resveratrol and spicy crust to traditional cheese, this becomes a food recommended to people suffering from diabetes and obesity.

In the next table we present the microbiological parameters of “Rainbow” cheese stored at 2-40C.

Coliform bacteria	Absent	STAS ISO 4831 - 92
Escherichia coli / gr	Absent	SR ISO 7251:1996
Salmonella / 25 gr	Absent	SR ISO 6579:2003
Coagulase positive staphylococci / gr	Absent	SR ISO 6 388-92
Sulphite-reducing bacteria /gr	Absent	SR EN 13401:1997
Bacillus cereus / gr	Absent	SR ISO 7932:1997
Yeast and molds / gr	3	SR ISO 7954:2000

Keywords: cheese, grape seed powder, coliforms, innovative product

P80

„Crispy jam”

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The sweetness obtained by us through the traditional method is a rich source of vitamins and minerals necessary for life. These powerful nutrients make the sweetness of elderberry an healthy snack, with excellent therapeutic properties, especially by the fact that the fruits of elderberry bring 60% Vitamin C, 12% vitamin A, 11% vitamin B6 , 5% thiamine, and 4% riboflavin, from the daily vitamin needs.

These edible berries, i.e. the fruit of the elderberry, have a remarkable mineral content. Fresh consumption has 9% iron, 8% potassium, 4% calcium and phosphorus. The elderberry beans ensure the proper functioning of all systems of living organisms.

The sweetness of the fruit of elderberry stimulates the immune system through the high concentration of Vitamin C, flavonoids and antocians. Due to the high content of antioxidants, the sweetness of impact can work miracles in the prevention of development of the neoplastic cells.

The sweetness of the fruit of elderberry is an innovative product that captures the consumer by color, appearance, texture, and smell and taste.

From the microbiological point of view, we can say that the product obtained by us is clean and safe for the consumer, coliforms and fungi being absent.

Keywords: jam, sweetness, antioxidants, coliforms, innovative product.

Variation in the content of bioactive principles in tomato juice

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Tomatoes are actually considered a fruit and not a vegetable, with all sorts of health benefits for the body. Tomato vegetables are used in food mainly fresh, but also have a significant share in the canning industry, from which different preserved products are obtained.

Tomato fruits are a source of vitamin C, having beneficial properties for health. Current indications lead us to the conclusion that tomato fruits are potential candidates for the study of bioactivity, as well as for functionally developed fruits.

The benefits of tomato consumption are due to the pigment that gives it the tempting color: lycopene. Tomato fruits are fleshy fruits, usually consumed in fresh and processed forms. Tomatoes are the second most important vegetables in the world after potatoes.

This study aimed to evaluate differences in nutritional and bioactive values of tomato genotypes harvested from native populations in Romania from areas with tradition in cultivation of tomatoes in Dolj and Timis counties.

The obtained data indicate that tomatoes are a valuable natural product, rich in nutrients, that can be used in all types of consumers diet. After this study we can also conclude that tomatoes are strong candidates for studies based on functional fruits development.

Keywords: tomato fruit, chemical properties, vitamin C

The evaluation of the physico-chemical and nutritional composition for some sorts of smoothie

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For nutritional reasons, it is necessary to increase the amount of fresh food from our daily diet. Consuming fresh fruit and vegetables offers a healthy diet that can prevent some chronic diseases like cardiovascular and coronary heart disease, diabetes type B, various types of cancer and prevent the development of kidney stones and help weight loss. An easy way to obtain fruit benefits is the use of smoothie as a solution for increasing consumption of fresh fruits and vegetables. Smoothies are a convenient and excellent alternative for increasing daily fruits and vegetables to get their health benefits.

The purpose of the study was to obtain and reveal some physico-chemical and nutritional properties of some fresh foods: green apple, baby spinach, pineapple and mint leaves and the juice that we obtain from them.

The study presents important application not only for food industry, but also for other areas, because it addresses to special categories of consumers such as vegetarians and people with lactose intolerance and fasting period.

Keywords: smoothies, fresh food, fruits, diet

Appreciation of the nutritional value of some specific athlete's products

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Over the past century, there has been quite a bit of progress in our understanding of how and why various food ingredients and dietary supplements may aid health and physical performance. Perhaps of greatest relevance to athletes, and a direct result of the information gathered from a variety of historical scientific studies, was the introduction of sport-specific food products such scenery gels, chews, bars and sport drinks designed to address to a wide variety of performance-limiting factors, including muscle cramping, glycogen depletion, muscle growth, and recovery. The recent explosion of sport nutrition programs offered at universities has generated a plethora of new studies that have evaluated how currently used and newly discovered ingredients can combat these factors through proper dosing and timing of intake.

The aim of this study was to evaluate the physic-chemical and nutritional properties of some functional products with high nutritional values and rich in protein. The product used for analyses is called Supreme Bite, a complete supplement product obtained from oat meal, honey, peanut butter, seeds, almond, nuts, coconut, whey protein, caffeine and maca powder. Analyses were performed on representative samples using standardized analytical methods for each ingredient. The purpose of this paper was to find out the nutritional value of a functional product made out of special ingredients and to show how this product can improve consumer's performance and life quality.

Keywords: high nutritional value, Supreme Bite, life quality, performance.

Biochemical and nutritional evaluation of some dairy products

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Animal husbandry has been and will be the main occupation of people living in rural areas given the fact that milk-based products are customary to every meal. Cheddar is a type of cheese obtained from a scalded paste, semi-hard, made out of cow milk, rich in nutrients represented by lipids, proteins and traces of carbohydrates, and also biominerals: phosphorous, calcium and vitamin B.

The underlying attribute of cheddar is that it constitutes an excellent source of nutrients with a great biological value which has the advantages to be concentrated into a small volume and to be easily digested, thus being an important source of proteins and lipids compared to the main ingredient, namely milk.

The main focus of this study was to appreciate the physicochemical and nutritional characteristics of a traditional product and to gather information regarding the benefits that it brings.

Fruit-cheddar was chosen due to its consumption during events and a novelty is represented by the wild-berries like blueberries that have a great antioxidant capacity, apricots that ensure a good bowel movement, working against digestive disorders and plums that are known for their effects on the cognitive system and the implications in reduction of the risk for breast cancer.

Keywords: cheddar, traditionally recipe, fruits, novelty food

Nutritional profile evaluation for some sorts of cheese

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For a balanced life, milk and dairy products occupy an important place in the gastronomic culture of each country and are highly appreciate for their nutritional values. Cheese, as the most consumed milk – derived product, is a delicious, nutritious and very versatile dairy food produced throughout the world from ancient time. There are a very large number of cheese types, with different composition, due to many variations in production process, and that's why it is difficult to generalize about their composition.

The aim of this study was to evaluate some nutritional characteristics (water content in case of different varieties of cheese, lipid and protidic content). The lipidic content was determinated by Soxhlet extraction method, Kjeldahl method was using to determine protidic content. Moisture content and total dry mater was determinated by drying at the oven.

The data were statistically processed using Statistica 10. The results look for the existence for statistically significant differences between different nutritional characteristics of the cheese types analyzed.

Keywords: cheese, nutritional characteristics, statistical modeling

Biological and nutritional assesment of some sugary-products

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The products obtained especially from glucose, starch, sugar or honeys are named sugary-products or sweets. They are consumer’s favorites especially because of their effects on the nervous system as well as their psycho-sensorial characteristics based on their flavor, color and taste.

With a moderate use, the advantage of sugar-products is that they are more easily digested, easily assimilated, them being used in straining activities, especially in athlete’s diets.

Regarding macarons, we can say that they are a marshmallow with a sweet taste originating from France, obtained from egg yolk, powdered sugar, sugar, almond flour and food coloring. The filling can be extremely different, the main one being Ganache, or different types of fruit jam. Regarding its shape, it resembles a sandwich, and the name derives from the italian „maccherone” meaning marshmallow.

For our study, we obtained „Matcha macarons” made of: almond flour, powdered sugar, egg yolk, and the cream is made using mascarpone cheese, powdered sugar and green tea powder for flavor.

This work aimed to evaluate differences in nutritional and bioactive values of different types of macarons in comparison with our product, Matcha macarons”.

The obtained data indicate that our sweet product is a valuable natural product, rich in nutrients, with a real beneficial effect on the consumer that can be considered a good subject for studies based on functional food development.

Keywords: macarons, sweets, green tea powder, functional food

Comparative study of some bee products

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Honey and dried fruit are extremely valuable food for human nutrition. By the content of the nutritional principles of each component, the products obtained by blending them can also contribute to the high biological value of these food products.

The experimental part of the paper aimed to evaluate some physico-chemical characteristics of samples obtained from honey and dried fruits.

The contributions of this paper have revealed certain physico-chemical characteristics of samples obtained from 2 types of honey: acacia and linden flowers, with added sea buckthorn and dried plums. At these samples the content of ascorbic acid and the acidity of the samples, as well as the dryness content, the moisture content and the total mineral substances in the studied samples were emphasized.

The experimental results were influenced both by the quality of bee honey and by the nutritional content of dried fruit.

The study is of relevance to the food industry because it addresses consumers of fortified foods specially characterized by a special nutritional value.

Once the promotion of such products is done properly, if the manufacturer puts the quality of his product at the consumer's disposal, then the manufacturing technology can also develop as a result of significant economic benefits.

Keywords: honey, dried fruits, fortified foods

Antibiotic effect of *Aristolochia clematitis* plants on *Staphylococcus*

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To be able to highlight the antibacterial effects of *Aristolochia clematitis* we obtained several types of extracts to be able to select which extraction method is best for our purpose.

After obtaining the extracts, the bacterial suspensions were made, the testing was done by diffusometric method and the comparison was performed using standards antibiotic microcompound for each of the tested microorganisms.

The results were recorded and compared between them in order to select the group of microorganisms on which our extracts are efficient.

The obtained extracts used various solvents: hexane, hexane with chloroform, chloroform, methanol, water.

The microbial strains used are: *Staphylococcus aureus*, *Klebsiella pneumoniae*, *Salmonella typhmurium*, *E.coli* și *Streptococcus pyogenes*

Following analyzes we can state that the aqueous and alcoholic extracts obtained from *Aristolochia clematitis* are efficient on germs belonging to the species *Staphylococcus aureus* and germs belonging to the species *Streptococcus pyogenes*.

The aqueous and alcoholic extracts obtained from *Aristolochia clematitis* are inefficient on germs belonging to Enterobacteriaceae Family - *E.coli*, *Salmonella typhmurium* and *Klebsiella pneumoniae*.

Keywords: *Staphylococcus*, *E. coli*, *Salmonella*, *Aristolochia clematitis*, antibiotic effect.

Comparative study of various flour types

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This study presents the action of the action of transglutaminase in various types of wheat flour, namely white flour and black flour. The determination of moisture was done by using Sartorius MA 30 analyzer and the determination of alveogramme by using alveographic method performed with the Alveograph Chopin. The moisture of the different samples has not changed after addition of the enzyme preparation based on transglutaminase. The alveographic test shows that the best characteristics regarding the dough resistance to deformation, the elasticity index, the configuration ratio of the alveographic curve, as well as for the total quantity of absorbed energy in the dough during stretch in comparison to the other samples is sample F1 (white flour dough with transglutaminase) suggesting that the addition of transglutaminase contributes to the strengthening of the gluten network resulting in an increase in bread volume. Moreover the extensibility and elasticity characteristics are improved which leads to good handling in the manufacturing process. If flour has a proper gluten content then transglutaminase improves the rheological characteristics of flour and the finished product is presented with a larger volume and structure and better core porosity.

Keywords: bread, transglutaminase, alveograph method, moisture

Using the alveographic method in determining rheological parameters of flours

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This study presents the action of glucose oxidase enzyme in different dosages on rye flour used for bread making. The alveographic method are used for the determination of the rheological characteristics of the rye dough. Addition of glucose oxidase enzymes in rye products increases the stability of the rye dough, improves processing properties and a greater water absorption. Glucose oxidase is an enzyme that catalyzes the oxidation of glucose into gluconic acid and hydrogen peroxide. Glucose oxidase improves the loaf volume of bread and fermentation processes. The rheological properties of rye doughs containing glucose oxidase and dough without an oxidant were compared. Doughs made with glucose oxidase had higher extensibility properties and improved the water absorption of the rye flour. Using higher dosage of glucose oxidase decreases the viscosity and the content of sulfhydryl groups of the soluble fraction in water extracted from rye flour resulting in a drying effect in doughs. Using the correct dosage of glucose oxidase in rye flour improves dough tolerance and increases fermentation stability, also improves the core texture of the bread.

.Keywords: rye dough, glucose oxidase, alveographic method

P91

Hemicellulase, as a catalytic factor in the manufacturing process of bread

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This study presents the action of an exogenous enzyme: hemicellulase in different dosages, in the bread dough. The determination of moisture was done by using Sartorius MA 30 analyzer, the determination of the falling number was done by using Perten Instruments FN 1310 analyzer and the determination of alveogramme by using alveographic method performed with the Alveograph Chopin. Samples have not changed humidity after addition of different dosages of enzyme preparation based on hemicellulase. The most intense enzymatic activity is sample HEM3–cu 7g/100kg hemicellulase followed the rest of the samples. The smaller the falling number is the more intense the enzymatic activity becomes. Alveographic test shows the quality characteristics of the flour. Sample HEM2–cu 4g/100kg hemicellulase presents the best characteristics regarding the dough resistance to deformation, the elasticity index, the configuration ratio of the alveographic curve, as well as for the total quantity of absorbed energy in the dough during stretch in comparison to the other samples. Addition of 4g/100kg 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, alveograph method, moisture

Enzymes, catalytic indicators used to improve flour obtained from *Triticum aestivum*

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This study presents the action of beta-amylase in different types of wheat flour obtained from *Triticum aestivum*, namely white flour, whole flour and black flour. The determination of the falling number was done by using Perten Instruments FN 1310 analyzer and the determination of alveogramme by using alveographic method performed with the Alveograph Chopin. The most intense enzymatic activity is sample S_FA-white flour with beta-amylase followed by the rest of the samples. The smaller the falling number is the more intense the enzymatic activity becomes. The alveographic method shows the quality characteristics of the flour. Sample S_FA-white flour with beta-amylase presents the best characteristics regarding the dough resistance to deformation, the elasticity index, the configuration ratio of the alveographic curve, as well as for the total quantity of absorbed energy in the dough during stretch in comparison to the other samples. The positive or negative effect of beta-amylase on flour depends on the type of flour. The increase in the flour extraction rate influences the fat content of the flour. The addition of beta-amylase has a positive change on the rheological characteristics of the flour. As a result, the enzyme controls the falling number adjustment, stimulates the growth in the oven, improves the browning process, and prolongs the shelf life of the finished product, indicating increased volume and improved structure, and better core porosity.

Keywords: beta-amylase, alveograph method, falling number

Designing and developing a technology for obtaining a sherbet product. food safety management on the technological flow

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Sherbet is characterized by a balanced nutritional composition, an important source of lipids and vitamins and contains calcium, iron, vitamin B1 and E.

The "sherbet" type product was made in two variants, namely: pomegranate and lime.

The raw materials used (sugar, water, glucose, fruit syrup, starch) were boiled, beaten, homogenized. Sherbet is a pure fondant that has the consistency of a homogeneous, flavorful, colored paste. Simple, fruity flavors, as well as coffee, cocoa or milk, can be made. Sherbet is a fondant product with a viscous pink (made of pomegranate) and green (made of lime) texture with a sweet and sour taste, and the smell is specific to the fruit from which it is obtained.

A food safety management was drafted on the technological flow of sherbet production by drawing up a HACCP quality monitoring plan, by identifying the flow of risk and analyzing the critical control points.

Keywords: sherbet, pomegranate, lime, safety management, HACCP

Designing and obtaining an assortment of aperitif paste from vegetables. Technological and economic forecasting on technological flow

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They were designed and obtained under laboratory conditions and then organoleptically evaluated the aperitif products from vegetables in three variants, namely: aperitif product from carrot, aperitif product from carrot and sweet potato and aperitif product from carrot and potato.

Ingredients added to the technological stream: garlic, onion, and spices have optimized the quality, nutrition and therapeutics the product so developed. The three assortments of aperitif paste from vegetables (carrot, carrot and potato, carrot and sweet potato) are characterized by selective special organoleptic properties due to the vegetable ingredients added to their composition, creating special flavors and flavors, defining these ingredients. After processing, the vegetable aperitif paste assortments were packed in hermetically sealed glass bottles, sterilized and then stored at a refrigeration temperature of 2-4°C. A plant product with pleasant sensory qualities has been developed, with a balanced nutritional value for all categories of consumers..

A technical-economic assessment has been carried out on the technological flow of the aperitif paste in carrot

Keywords: aperitif paste, carrot, potato, technical-economic assessment

P95

Developing a quality monitoring system for a chicken liver filling product

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The study for the paper literature includes data and informative materials on the compositional and technological structure, as well as the nutrition of chicken liver properties, respectively the importance and value of meat consumption in human nutrition. The chicken liver filling was made in the laboratory and then visually evaluated the organoleptic chicken liver filling product in two variants, both of which have the same composition, but are different in the way of production: by boiling and by baking.

Both chicken liver fillings are defined by the refined, special organoleptic characteristics due to the selective ingredients added to their composition, with a particular flavor and aroma specific to these ingredients. An agreeable product with selected sensory qualities has been achieved with a balanced energy value for all consumer categories.

For monitoring the quality, a specific HACCP plan was developed for the production of chicken liver filling.

Keywords: chicken liver, HACCP, filling product

Quality characteristics and nutritional value of some varieties of grain bars obtained from seeds, pseudo-cereal and coffee. “*Healthy Life*”- the beginning of a new life style

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This paper describes the innovative product - "*Healthy Life*" bar and the antioxidant characteristics. This product contain: honey, psyllium, sesame seeds, buckwheat, coffee which have some benefits for human body. There were prepared two types of bars - by raw buckwheat, and buckwheat baked. On the whole, the two types of "*Healthy Life*" bars were well received by the assessors, the baked buckwheat version being slightly better appreciated than the raw buckwheat. From a physicochemical point of view, a higher content of polyphenols (1.4-5.4 $\mu\text{mol/ml}$) was found to be better antioxidant activity (3701 mM Trolox/g) in the case of raw buckwheat bars compared to baked buckwheat bars (1511 mM Trolox/g). The antioxidant activity and the content of polyphenols correlated directly with each other, but indirectly with the heat treatment of the buckwheat.

Keywords: pseudo-cereal and coffee, healthy Life, nutritional value

Biochemical and sensory characterization of some herbal syrups

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The present paper aims at highlighting the interconnections between the food and pharmaceutical industries and between them and those of natural medicine, and to highlight the high quality food products and the important therapeutic benefits.

The aim of this study was to analyze the chemical-physical aspect of syrups derived from plants to give us enable knowledge about the contribution brought by eating nutritional intake of such preparations in the recommended daily diet.

From the experimental data it is concluded that the analyzed preparations, used in the alternative natural and gemotherapy, also have the beneficial effect given by their consumption and a nutritional effect.

Thus, it can be said that herbal products are of dual quality, that of medicine and food.

Keywords: herbal products, syrups, biochemical properties, sensorial characteristics

Biochemical and sensory characterization of some meat products. “Pastă tartinabilă tradițională” – a traditional food product

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This paper describes the nutritional and sensory characteristics of the traditional food product named "traditional spreads paste" (“Pastă tradițională tartinabilă”). This pasta were made from following ingredients: red onions, dehydrated plums, dehydrated cranberries and pork (as graves). These ingredients bring many benefits to the human body by them consumption.

It is known pork is an important source of protein, which can be added to the B vitamins (B6, B12), and minerals (iron, magnesium, potassium, phosphorus, zinc).

Dried plums have a huge range of phenols and flavonoids, which offer countless health benefits to the consumer. Red beet contains a wide range of vitamins, minerals and active substances important in the production of red blood cells in the bone marrow. Red onion is very rich in vitamin B, vitamin C, minerals (such as calcium, phosphorus, zinc, iron) that gives the consumer a huge range of health benefits.

The nutritional value of this traditional paste is very high, to this contribute the ingredients: pork, red onion, red beet, dried plums and dried cranberries.

The study fulfills all the necessary aspects to create a Protected Designation of Origin (PDO) and the elements that define the product.

Keywords: traditional spreads pasta, meat, sensorial characteristics

Considerations about the preservation methods for lemons

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The aim of this study was to identify the main preservation methods used to preserve lemons after harvesting and to compare untreated organic lemons stored at low temperatures with lemons treated with fungicides.

Keywords: lemon, preservation, organic, fungicides

P100

Obtaining and Characterization of Mascarpone Mousse from Goat Milk

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The researches underlying this paper focused on the development of a mousse dessert based on goat dairy products (mascarpone cheese and cream). The production of a goat mascarpone mousse is beneficial for dessert food producers because: it does not require a skilled workforce; duration of the process and the use of utilities, water, energy are low; dessert may be an alternative to ice cream or various cakes, due to the high content of volatile fatty acids with antioxidant character, nutritional quality and special sensory traits. For these reasons, our research study had as a secondary objective the production of mascarpone cheese from goat's milk and its use as a basis for the manufacture of a mousse-type dessert with a lower energy value than currently available on the market. The experimental data led to establish the technological flow of mascarpone cheese using goat's cream and lemon juice for curdling; determination of sensory, physico-chemical (humidity, pH, acidity, protein, fat content) and microbiological properties; calculation of cheese yield, partial and global balance sheet and specific consumption of raw materials and ingredients of the mascarpone mousse recipe.

Keywords: goat milk, mascarpone cheese, mousse, dessert

Separation and testing of sage extracts secondary metabolites in ensuring pork sausages preservation

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Due to the increased interest in the use of active principles with antimicrobial activity in medicinal herbs, the object of this study is the use of sage essential oil in making recipes for the manufacture of pork sausages and the role of some terpenoids compounds on the preservation of the quality parameters of these pork products. The bacteriostatic / bactericidal property of these secondary metabolites can be potentiated by the synergistic action of other organic and / or inorganic substances in the plant, which is why an intense concern among researchers in the field is the way this medicinal plant can be used in the food industry (pure active principle separated from the plant, total standardized extracts, or simply the plant after minimal processing). On the other hand, the sage extracts can play a double role, namely both antimicrobial agents and antioxidants. This property is a real advantage for meat processors by allowing them to save on manufacturing costs. At the same time, the antioxidant character of essential oil seed oil products provides meat processors with the flexibility to develop new products with increased nutritional value and health benefits and an attractive overall quality profile. This dissertation thesis is structured in two parts. The first part includes an analysis of the current state and possibilities of increasing the preservation of some pork products (sausages, salami) by the addition of sage under various forms (liquid extracts, coal, ash, powders and even whole parts of fresh plants) in the composition of their manufacturing prescriptions and the establishment of parameters for assessing the quality of products in the defining sense for the safety of these foods intended for direct human consumption. Part two comprises in the establishing of an optimal process for the separation and standardization of alcoholic extracts from sage; evaluation of the methods for determining the characteristics of the sage essential oil respectively the microbiological quality parameters of the meat products with the addition of volatile oil.

Keywords: sage, pork sausages, antimicrobial activity, secondary metabolites

Experiments on the production of goat's milk products

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The purpose of this paper is to increase the number of goat milk and goat's milk products consumers.

Starting from a goat's milk product - we have obtained goat cheese, which together with some spices such as dill and cumin, but also with Kapia pepper is an aperitif product with a lot of benefits for our health.

One reason why the degree of acceptability of goat dairy products is lower compared to dairy cow's milk is due to the more pronounced smell and specific taste. That's why I tried integrating it into a product with a higher degree of acceptability

Goat milk contains significantly lower amounts of lactose than the other types of milk, so that it is the ideal cheese for lactose intolerant people.

Goat milk has a wide range of health benefits, with fewer negative side effects than cow's milk consumption. Among these we can remember:

- natural anti-inflammatory
- low fat
- high calcium and potassium content
- stimulates the immune system
- ideal for bones
- hope to treat cancer

In addition to all these benefits of goat's milk that is also supplied in cheese, the dill, cumin and kapia pepper are also added.

Keywords: milk products, cheese, lactose, intolerant people