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| **Subject** | **Brined cheeses** | | | |
| **Type** | **Semester** | **ECTS** | **Code** |
| E | 5 | 4 | / |
| **Course Lecturer** | **Prof. Ass. Dr. Mergim MESTANI** | | | |
| **Course Assistant** |  | | | |
| **Course Tutor** |  | | | |
| **Aims and Objectives** | **Brined cheeses (Cheeses in brine)**, originating from the Eastern Mediterranean, Southeastern Europe, the Middle East, and Western Balkans, encompass over 1000 varieties globally. These cheeses, including Feta, Telemea, Bjalo salamureno sirene, Beyaz peynir, Halloumi, Domiati, Balkan brined cheeses and others, are preserved and ripened in brine until consumption. Typically produced on a small scale and consumed locally, they exhibit regional diversity. Feta, a notable exception, has gained international popularity, thanks to modern production techniques. Brined cheeses, made from various milks and often in blends, mature in different salt solutions and can be stored without refrigeration due to biochemical changes during maturation. Rindless and ranging from soft to semi-hard, they undergo coagulation with rennet and employ brine salting or dry salting in production. Acidification is achieved using starter cultures, such as thermophilic or mesophilic cultures, and native milk microflora. **The aim of this module** is to provide comprehensive knowledge and understanding of brined cheeses, specifically those originating from the Eastern Mediterranean, Southeastern Europe, the Middle East, and Western Balkans. The module aims to cover the diverse array of over 1000 global varieties, with a focus on their production, preservation, and unique characteristics. **The objectives** of the module are to define and categorize brined cheeses, explore global varieties including production techniques and biochemical changes, understand microflora and acidification, analyze factors influencing taste, and **highlight traditional local cheeses, with a specific focus on Sharri cheese and Rugova cheese.** | | | |
| **Learning outcomes** | **Upon completion of this module, students will be able to:**   * define and categorize the diversity of brined cheeses globally, including varieties such as Feta, Telemea, Bjalo salamureno sirene, Beyaz peynir, Halloumi, Domiati, and many others; * e xplain and apply basic techniques of brined cheese production (considering the use of different types of milk, curdling processes with rennet, maturation processes, and salting techniques); * u nderstand the role of microflora in the acidification of brined cheeses, as well as the impact of starter cultures and indigenous microflora on the production of these cheeses; * analyze and discuss factors influencing the taste of brined cheeses, including the culture, salt distribution methods, and production techniques; * recognize and highlight the unique characteristics of traditional local brined cheeses, with a specific focus on Sharri cheese and Rugova cheese; * compare the production techniques of traditional local cheeses with those of modern technologies; | | | |
| **Content** | **Weekly plan** | | | **Week** |
| Constituents and Properties of Milk from Different Species | | | 1 |
| Brined cheese/introduction | | | 2 |
| * The importance of salt in the manufacturing and ripening of cheese (salting techniques) | | | 3 |
| Microbiology of Cheese | | | 4 |
| Feta Cheese (including Industrial Feta Cheeses) | | | 5 |
| Brined Cheeses from the Middle East (focus Halloumi Cheese) | | | 6 |
| Presentation of seminars (individual or group) | | | 7 |
| Brined Cheeses from the Middle East (focus Nabulsi and Damiati Cheese) | | | 8 |
| Traditional Turkish Brined cheeses | | | 9 |
| Balkan varieties of cheeses in brine 1 | | | 10        11    12 |
| Balkan varieties of cheeses in brine 2 | | | 11 |
| Sharri cheese (traditional local cheese) | | | 12 |
| Rugova cheese (traditional local cheese) | | | 13 |
| Presentation of assignments and projects (group) | | | 14 |
| **F**inal exam | | | 15 |
| **Literature/References** | * Anifantakis, E.M., 1991. Traditional feta cheese. Feta and related cheeses, pp.49-69. * Ajazi, F.C., Kurteshi, K., Ehrmann, M.A., Gecaj, R., Ismajli, M., Berisha, B. and Vehapi, I., 2018. MICROBIOLOGICAL STUDY OF TRADITIONAL CHEESE PRODUCED IN RUGOVA REGION OF KOSOVO. Bulgarian Journal of Agricultural Science, 24(2). * Bintsis, T., Alichanidis, E., Uzunsoy, İ., Özer, B., Papademas, P., Radulovic, Z. and Miocinovic, J., 2017. White‐Brined Cheeses. Global Cheesemaking Technology: Cheese Quality and Characteristics, pp.349-367. * El-Bakry, M., 2012. Salt in Cheese: A Review. Current Research in Dairy Sciences, 4(1), pp.1-5. * Hamad, M.N.F., 2015. Comparative study between traditional Domiati cheese and recombined Feta cheese. Indian J. Dairy Sci, 68(5), pp.442-452. * Hayaloglu, A.A., Ozer, B.H. and Fox, P.F., 2008. Cheeses of Turkey: 2. Varieties ripened under brine. Dairy Science and Technology, 88(2), pp.225-244. * Mergim Mestani1, Xhavit Ramadani1, Tahire Maloku Gjergji2, Hajrip Mehmeti 1, Arsim Ademi 3 and Ibrahim Mehmeti1,3\*. (2017). The effect of saline concentration and storage temperature in the quality of Sharri cheese. Journal of Food, Agriculture & Environment, vol.15 (1): 12-17. 2017. * Mestani, M., Ramadani, X., Gjergji, T.M., Dizdarevic, T. and Mehmeti, I., 2017. Influence of brine concentration and ripening temperature on quality of sharri cheese. * Tamime, A.Y. ed., 2008. Brined cheeses. John Wiley & Sons. * Toufeili, I. and Özer, B., 2006. Brined cheeses from the Middle East and Turkey. Brined Cheeses, pp.188-210. | | | |
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