

Food Engineering BSc

Baking and Pasta technologies and quality

Final exam
Academic year 2022-2023

Fundamentals of food technologies

1. Describe the most important cereals and industrial plants, their composition, area of use!
2. Describe the specifics and applications of aqueous and solvent extraction in food technology!
3. Describe the operational features and technological role of roasting! define changes in products (using many examples)!
4. Summarize the characteristics of food technologies based on emulsion preparation!
5. Peculiarities of the production of gel-like foods
6. Peculiarities and application of pressing technologies in the food industry
7. The process and place of dough preparation and baking in food technologies
8. Grinding based food technologies
9. Centrifugal field separation technologies in the food industry
10. Technologies for the production of food powder mixtures
11. The consistence-forming effect of fats based on the analysis of the melting profile
12. Formulation and application of food foams in food technology
13. Operation and role of crystallization in the food industry
14. Fundamentals of grain and oily seed' storage technologies
15. Distillation-based separation technologies in the food industry

Baking and pasta technologies

1. Physical, macro- and microbiological conditions of storage of cereals
2. Unit operations and machines for preparation for grinding (milling)
3. Factors influencing the grinding work in milling
4. Classification of grinds
5. Operations and technologies of compound feed production
6. Raw materials (all ingredients) of the baking and pasta industry, quality characteristics, correlation with the quality characteristics of the final product
7. Characterization, microbiological parameters, significance and effect of sourdough on bread quality
8. Dough preparation equipments, kneading parameters, the role of dough resting, effect of possible omission
9. Problems of dough proofing, their technical solution, the effect of possible additives
10. The process of baking, thermal penetration, the effect of the physical characteristics of the baking space on the finished product
11. Qualification of finished bakery products, protection of quality. Cooling and freezing in bakeries.
12. Preparatory operations for dry pasta production, dough preparation, compaction, shaping. Biochemical processes during operations
13. Theory and practice of pasta drying. Biochemical processes during the operation
14. Raw materials and production technology of fresh pasta/noodle production. Comparison of fresh and dry pasta production technology.
15. Manufacture of gluten free pastas: types, raw materials and production challenges.
16. The most important quality characteristics of dry pasta. Manufacturing defects. Packaging, storage, quality change