

**QUESTIONS TO FINAL MODULE CONTROL**  
**on PHARMACEUTICAL BROMATOLOGY**

**INTRODUCTION TO THE BROMATOLOGY**

1. Give the definition of Bromatology.
2. How to classify foods?
3. What is food safety?
4. What is the state sanitary-hygienic examination and in which cases it is carried out?
5. How are guaranteed confirmation of conformity of the foods a certain level of quality?
6. Give the definition of the Codex Alimentarius.
7. Describe medical and biological requirements for the quality of food.
8. Describe the basic ingredients of food.

**CHARACTERISTICS AND ANALYSIS OF BREAD AND BAKERY PRODUCTS.**  
**CEREALS**

1. What are the characteristics of the chemical composition of flour and bakery products, describe their nutritional value? Give examples.
2. How to classify the indicators of bakery quality? Give examples.
3. Describe the primary and secondary raw materials for making bread. Give examples.
4. What types of classifications for flour do you know?
5. What chemical process is the basis of alcoholic fermentation using yeast? Give an equation for the reaction.
6. What are the chemical leavening agents are used for baking unleavened bread? What chemical processes underlie the action of chemical baking powder? Give an equation for the reaction.
7. What function does sodium pyrophosphate have got as part of baking powder? Give an equation for the reaction.
8. What are the characteristics of the chemical composition of bread due to its energy value?
9. What features of the chemical composition of grain products due to its biological value?
10. How can we use bread products for nutritional therapy? Give examples.
11. What are the organoleptic and physico-chemical quality of bread products are used to control? Give examples.
12. What method is used to determine the moisture content in the grain products?
13. What method is used to determine the acidity in bread products?
14. Describe the relationship porosity of bread, his freshness and easier to digest by the body?
15. What methods for the determination of fat in bakery products are used? Give examples.

16. What methods of falsification of bread products do you know? Give examples of falsification of bread and specify the observations.
17. What is the falsification assortment of breads. Give examples.
18. What type of falsification of grain products exist? Give examples.
19. What are the characteristics of quantitative information and the falsification of bread? Give examples.
20. Describe the interaction of bread products and drugs? Give examples.
21. Why is not recommended to combine the sulfonamides and antibiotics with bread products?
22. Why is not recommended intake of bread products for the treatment of iron supplementation, cardiac glycosides?
23. Why is it recommended limitation of bread products in the treatment by acetylsalicylic acid, steroid hormones, antidepressants?
24. What caused the recommendations on the use of grain products while taking laxatives?
25. Give the definition of croup. Describe their classification.
26. Describe the chemical composition of different grains.
27. What is the glycemic index, its meaning?
28. What is the nutritional and energy value of cereals ?
29. Describe the main types of falsification of cereals and methods for their determination.
30. What are the organoleptic characteristics of quality cereals do you know?
31. What are the recommendations for the rational combination of cereals and medicines you can give?

## **CHARACTERISTICS AND ANALYSIS OF MEAT AND MEAT PRODUCTS**

1. What are the characteristics of the chemical composition of meat determine its nutritional value? Give examples.
2. Which chemical compounds cause the red color of meat and meat products?
3. How to classify sausages? Give examples.
4. What factors affect the risk of epidemic safety and sanitary goodness sausage products? Give examples.
5. Why is a toxic substance - sodium nitrite - added into the sausage? What chemical processes accompanying the interaction of sodium nitrite and myoglobin?
6. What methods of falsification of meat and meat products exist? Give examples of falsification of meat and enter observations.
7. How can they check the freshness of meat by the test "pit"? Give an example.

8. What methods of falsification of sausage products do you know? Give examples and provide follow-up.
9. How to determine foreign additives in sausage products (dyes)?
10. What are the organoleptic characteristics of quality meat and meat products are used to control? Give examples and provide surveillance for fresh food products with questionable freshness and stale products.
11. What methods are used to determine the protein in meat and meat products? What types of falsification caused disturbances in the protein content in meat products? Give examples.
12. What methods are used to determine the fat in meat and meat products? What types of falsification caused disturbances in fat content in meat products? Give examples.
13. How to determine the water content in the meat? What types of falsification caused disturbances in the water content in meat products? Give examples.
14. How to determine the amount of sodium chloride in meat and meat products by argentometry (Mohr method)? Give the reaction equations and formulas.
15. How to determine the amount of sodium chloride in meat and meat products by argentometry (Folgarda method)? Give the reaction equations and formulas.
16. How to qualitatively and quantitatively determine the presence and starch content of sausages? Give the reaction equations and formulas.
17. A method of quantitative determination of tin in canned meat is based on measuring the intensity of the staining solution. What chemical processes cause the appearance of a colored compound? Give the chemical equation and the formula for calculating the tin content.
18. What methods are used to determine the phosphates in sausage products? What types of violations are due to the falsification of the content of phosphates in sausage products? Give examples.
19. Give a comparative assessment of methods for determining the pH of the meat. As for meat pH values can be estimated its freshness?
20. How correctly combine drugs and protein-containing foods? Give examples.
21. What are the features of the interaction of meat products and drugs are there? Give examples.
22. Why is it necessary to eliminate from the diet of meat products while taking tetracyclines and chlorpromazine?
23. Why is not recommended intake of meat products while taking oxacillin, ampicillin, isoniazid?
24. Why is it recommended limiting the admission of meat products in the treatment of  $\beta$ -blockers?

## CHARACTERISTICS AND ANALYSIS OF FISH AND FISH PRODUCTS

1. Which chemical compounds of the fish cause its nutritional value? Give examples.
2. What groups are divided into proteins of fish? What are the features of the chemical structure of proteins fish meat?
3. What are the properties of fish oil causes its nutritional value?
4. What are the chemical properties and the physiological functions of fatty acids of omega-3 group?
5. What methods of falsification of fish do you know? Give examples of falsification of fish and select observations.
6. What methods of falsification Sliced there? Give examples of falsification of sliced and select fish.
7. What methods of falsification of canned fish are there? Give examples of falsification of canned fish.
8. What are the organoleptic characteristics of quality fish and fish products are used to control? Give examples and provide surveillance for the fish fresh, frozen, salted, smoked, dried and 1 as canned goods and Balyk.
9. What methods are used to determine the nitrogen volatile bases in fish and fish products? Give the chemical equation and the formula for calculating.
10. On spoilage of fish and fishery products released hydrogen sulfide. How to determine the quality of fish products in the hydrogen sulfide? Give the chemical equation and specify the observation.
11. What reactions are used for the qualitative determination of ammonia in fish and fish products? What processes are responsible for damage to fish with the release of ammonia? Give the chemical equation and specify the observation.
12. What methods are used to determine the amino nitrogen in fish and fish products? Give examples.
13. What chemical reactions form the basis for determining the amino nitrogen by Formalin titration? Give the chemical equation and the formula for calculating.
14. How to determine the amount of sodium chloride in fish products by argentometry (Mohr method)? Give the reaction equations and formulas.
15. How to determine the amount of sodium chloride in fish products by argentometry (Folgard's method)? Give the reaction equations and formulas.
16. What methods are used to determine the mass of the fat in fish and fish products? Give examples.

17. What are the methods for determining the freshness of shrimp, mussels, clams are there? Give examples and provide follow-up.
18. How correctly combine drugs and protein containing foods(fish)? Give examples.
19. What are the features of the interaction of fish products and drugs are there? Give examples.
20. Why in the diet of the patient receiving the drug levodopa, should limit consumption of fish?
21. Why do not recommend taking fish tiramin-containing products when receiving drugs from the group of MAO inhibitors, stimulants and vasoconstrictors?
22. Why is it recommended limiting the admission of fish histamin-containing products for the treatment of isoniazid?
23. Why in the diet of patients receiving drugs acetylsalicylic acid, should limit consumption of fish?
24. Why is it recommended intake of fish products in the treatment of paracetamol, anabolic drugs?

### **CHARACTERISTICS AND ANALYSIS OF MILK AND DAIRY PRODUCTS**

1. What is the milk and which milk features provide particular liquid consistency?
2. What features in the chemical composition of milk due to its unique properties and nutritional value? Give examples.
3. What groups are divided milk proteins? What are the features of the chemical structure of casein?
4. How to distinguish between casein and whey proteins on the physical and chemical properties?
5. What are the properties of milk fat, causing its nutritional value?
6. What are the chemical properties and physiological role of lactose?
7. Describe the main stages of the production of milk.
8. What is the purpose of heat treatment of milk? What is the difference among thermization, pasteurization and sterilization of milk?
9. What are the side effects of long-term sterilization of dairy products?
10. What methods of falsification of milk and milk products are available? Give examples of identification of food additives in milk.
11. How to determine the presence of foreign additives in milk (soda, boric or salicylic acid, starch, and flour)?
12. How to determine the foreign additives in sour cream?
13. What reagent is used for starch identification in the cheese?
14. What types of acidity in milk? In what units is measured titratable acidity?
15. What reactions can prove the existence of phosphatase in milk? Specify the observation and the ability to assess the effectiveness of pasteurization.
16. How to evaluate the effectiveness of pasteurization in the determination of peroxidase?

17. How to identify and define its ash content in milk? Give the reaction equations and formulas.
18. How to detect ammonia in milk? Give the chemical equation and specify the observations.
19. How to determine the sugar content in dairy products by iodometric method? Give the reaction equations and formulas.
20. How to determine the amount of sodium chloride in milk by argentometry (Mohr method)? Give the reaction equations and formulas.
21. How to determine the amount of sodium chloride in milk by argentometry method (Folgard's method)? Give the reaction equations and formulas.
22. What are the recommendations for the use of drugs and dairy products do you know? Give examples.
23. Why are antibiotics (tetracyclines, penicillins, cephalosporins) is not recommended to drink with milk?
24. Why does caffeine is not recommended to drink with milk?
25. Why are dairy products limit the absorption of iron supplements, bismuth?
26. Why is calcium preparations, glucocorticoids (prednisone, dexamethasone), non-steroidal anti-inflammatory drugs (phenylbutazone, indomethacin) it is advisable to drink milk?

## **CHARACTERISTICS AND ANALYSIS OF DRINKING AND MINERAL WATER**

1. Why water is one of the main components of human life?
2. What are the main functions of water in the human body?
3. What is the physiological need of the human body in the water?
4. Describe the state of the human body with insufficient intake of water.
5. Explain why the water molecule has a complex structure.
6. What are the physical properties are characteristic for pure water?
7. Specify the special properties of water, known as "water anomalies", and the reason for their existence.
8. What are the chemical properties characterize water as a reaction active substance? Give chemistry reactions.
9. What are the ways of the division of natural waters in the group exist? Give examples.
10. What stage includes preparation of tap water? Give examples.
11. Specify the organoleptic properties of drinking water.
12. What causes the water hardness? Is drinking water hardness dangerous to human health?
13. Describe the general, permanent, temporary, and uncarbonate carbonate hardness.

14. How to carry out a qualitative determination of chloride in drinking water? Give the chemical equation and give an assessment of the results of the analysis.
15. How to determine the chloride content in drinking water by mercurimetry? Give the reaction equations and formulas.
16. How to determine the chloride content in drinking water by argentometry (Mohr method)? Give the reaction equations and formulas.
17. How do to determine the sulfate content in drinking water by chelatometry? Give the reaction equations and formulas.
18. How do to determine the sulfate content in drinking water by the gravimetric method? Give the chemical equation and the formula for calculating.
19. Describe the turbidimetric method in the analysis of sulfate in drinking water.
20. What are the principles used for the classification of mineral water? Give examples of major groups of mineral waters.
21. What groups are divided drinking mineral water? Give examples.
22. What are the characteristics of application for the treatment of mineral water, depending on the pH of the medium?
23. What are the phase characteristic of the mechanism of action of mineral water?
24. How to rationally combine drugs and water? Give examples.
25. Why sulfanilamides drugs advisable to drink alkaline mineral waters?

## **CHARACTERISTICS AND ANALYSIS OF ALCOHOL**

1. Give the definition of alcohol drinks.
2. Bring the main types of alcoholic beverages.
3. Describe the process of beer production, the raw materials that it uses.
4. What are the indicators of quality and possible defects of beer.
5. Describe the type of wine, its production and chemical composition.
6. What are the defects of wine do you know?
7. List the types of alcohol, describe their composition.
8. Provide methods of falsification of alcoholic beverages.
9. Describe the main indicators of quality of alcoholic beverages.
10. Describe the possible interactions with alcohol and drugs.

## **CHARACTERISTICS AND ANALYSIS OF FRUITS, VEGETABLES, JUICES**

1. Give the definition of fruit. Give the classification of types of fruit.
2. What is the nutritional value of the fruit?
3. Give recommendations on the combination of use of various fruit with different acidity.
4. List the essential vitamins in the fruit. Which fruit do they contain?
5. Give the definition of flavonoids, their main function?
6. Describe the **anti-nutritional** substances found in fruits.
7. The main methods of falsification of fruits and dried fruits.
8. Describe the main types of fruit juices.
9. Give the main ways of falsification juice products.
10. Describe the organoleptic characteristics of fruit quality.
11. List the drugs which can not be combined with grapefruit juice
12. Give recommendations on improving fruit juices and pharmaceuticals.
13. Give the definition of vegetables, their classification.
14. Describe the chemical composition of vegetables.
15. What are the main vitamin-like substances contained in vegetables.
16. What is volatile compounds, in which vegetables are contained in the greatest number?
17. The anti-nutritional substances in vegetables, describe their basic properties.
18. The main methods of falsification of vegetables.
19. Give tips on how to eat vegetables and medicines.

### **CHARACTERISTICS AND ANALYSIS OF TEA, COFFEE, CHOCOLATE**

1. Give the definition of chocolate.
2. What raw materials and ingredients used in the manufacture of chocolate?
3. How is classified chocolate?
4. Describe the chemical composition of chocolate.
5. What energostimulative part of chocolate?
6. Describe the nutritive, biological and physiological value of chocolate?
7. What are the indicators of the quality of chocolate do you know?
8. Describe the main types of falsification of chocolate and methods of their determination.
9. What are the recommendations for the rational combination of chocolate and medications you can give?
10. Give the definition of tea, bring the main types of classification of tea.
11. What kinds of tea are divided according to the type of tea leaves?
12. What is fermentation? What kinds of tea varies depending on the degree of fermentation?
13. What are the tannins are part of the tea?



14. What are the main alkaloids of tea, describe their properties.
15. Give the basic methods of falsification of tea.
16. Describe the organoleptic characteristics of quality tea.
17. Give recommendations on combination tea and pharmaceuticals.
18. Give the definition of coffee. What are the main types of coffee do you know?
2. Give the classification of roasted coffee .
3. What is the instant coffee? What is the technology of its production? The main advantages and disadvantages of instant coffee.
4. Describe the carbohydrates that make up the coffee, what happens to them in the process of roasting of coffee beans?
5. What are the organic acids are part of the coffee?
6. Which alkaloids contained in coffee, describe their properties.
7. Describe the flavors that make up the roasted coffee.
8. What methods of caffeine analysis in coffee?
9. Describe the possible interactions between coffee and drugs.