

**Questions for the concluding class on the topic:  
"Medicinal plants and raw materials containing iridoids, saponins and cardiac glycosides".**

1. Glycosides. Concept of glycosides, their structure, classification.
2. Physical and chemical properties of glycosides.  
Features of harvesting, drying and storage of raw materials containing glycosides.
4. Monoterpene bitters, their characteristics.
5. Medicinal plants and raw materials containing iridoids:
  - *Menyanthes trifoliata*;
  - *Centaureum pulchellum*;
  - *Centaureum erythraea*;
  - *Taraxacum officinale*.
6. Cardiac glycosides. Concept. Classification.
7. Physical and chemical properties of cardiac glycosides.
8. Methods of isolation of cardiac glycosides from raw materials.
9. Qualitative analysis of raw materials containing cardiac glycosides.
10. Quantification of cardiac glycosides in raw materials (chemical and biological methods).
11. Medicinal plants and raw materials containing cardiac glycosides:
  - species of *Digitalis* (*Digitalis purpurea*, *Digitalis grandiflora*, *Digitalis lanata*);
  - *Convallaria mayalis*;
  - *Strophanthus combe*.
12. General characteristics of saponins. Classification.
13. Physical and chemical properties of saponins.
14. Steroidal saponins, their characteristics.
15. Triterpene saponins. Classification. Physico-chemical properties.
16. Methods for isolation of saponins from raw material.
17. Qualitative analysis of raw material containing saponins.
18. Distribution of saponins in nature. Factors influencing the accumulation of saponins.
19. Medicinal plants and raw materials containing saponins:
  - species of *Glycyrrhiza*;
  - *Astragalus dasyanthus*,
  - *Tribulus terrestris*.

20. **Formulas:** cyclopentano-perhydrophenanthrene, general formulas for cardenolides and bufadienolides, K-strophanthidoside, sapogenin of normal and "iso" structure,  $\alpha$ - and  $\beta$  - amirin, lupeol, friedelin, glycyrrhizic acid.