Questions for mid-term evaluation
Panel: advanced analytical methods

1. Define and write what do the division constants K and P measure? What is the thermodynamic reason for the degree of transfer of a substance from phase a to phase b in a two-phase system?
2. List and characterize the main intermolecular interactions?
3. Describe the difference between chemical sensors and biosensors taking into account the structure of a receptor part and characteristic analytical parameters.
4. List and describe the types of sorbents used in the extraction with solid phase extraction process.
5. Discuss the most known ionization methods (so-called ion sources) used in the LC-MS system.
6. Discuss the advantages of the method of concentration and isolation of analytes - QuEChERS.
7. List and briefly characterize at least 10 evaluation criteria of the analytical methods that you consider important for expressing its overall potential. Classify them into 3 groups: red (analytical efficiency), green (compliance with the principles of green chemistry) and blue (economic and practical efficiency).
8. Explain what the term "accuracy" of the analytical method means and what is its measure. What are the ways to estimate of “accuracy”?