

Petnica School of Chromatography and Mass Spectrometry

Who can apply?

Bachelor, Master and PhD students as well as all the other who are interested and have no experience in chromatography and mass spectrometry and would like to get the ground knowledge in the field.

What does the School have to offer?

Theoretical aspect will cover advanced areas of gas and liquid chromatography, and mass spectrometry. Besides theory, two thirds of the time shall be dedicated to experimental work, involving work on the instruments. Participants will have the opportunity to familiarize themselves with the instruments, their structure and basic parts. They will also learn about possibilities of the software, learn how to setup the methods and analyze the results. Familiarization with results reading will be done through practical examples by reading mass spectra and analysis of dependence between mass spectra and the structure of compounds. Special accent will be put on analysis of real samples by means of mentioned techniques.

Which subjects will be covered?

Chromatography basics

Mass Spectrometry basics

Mass spectrometer within – ion sources, analyzers

Chromatography techniques and Mass Spectrometry in Forensics

Application of Chromatography and Mass Spectrometry in food analysis

Application of MS in chemical weapon discovery

Chemical derivatisation in Gass Chromatography

Lab: Setup of HPLC/MS method

Setup of GC/MS method

Sample preparation methods

Parabene analysis in cosmetics

Etheric oil analysis

Analysis of mycotoxins in food

Fatty acids analysis in soaps

Analysis of aromatic components in fruit

Analysis of benzodiazepine

Artificial sweeteners analysis

Reading of MS Spectra

Results presentation

** Department of Chemistry of Petnica Science Centre reserves the right of change of the list of topics. List presented should be used as a guideline only. Some of the topics can be modified or completely excluded from the program of the School, depending on available time, participants' interests and their capabilities.*

How will the School be structured?

Each day will consist of a lecture, practical and theoretical experiments. Lab experiments will be organized in small groups in order to achieve full involvement of every participant in the work. At the beginning of the School each participant will be provided with the material necessary for work during the school. At the end of the school, participants shall receive electronic versions of the materials and photos from the school as well as certificate of attendance in both Serbian and English language.

Maximal number of participants is 20. In case of large number of applications, there is a possibility of organization of additional school.