

LC-MS-Based Metabolomics

Background

Metabolomics is an important emerging technology in fields such as plant science, phytomedicine, drug development, herbal medicines, pharmacology, pathology, microbiology, and toxicology. In this short course, we will cover a fundamental of LC-MS, the use and capabilities of such instruments, and how a mass spectrometer works from ionization to different mass analyser types. We will also focus on the practices of metabolomics-based mass spectrometry in natural product research for untargeted metabolomics which cover the extraction, analysis, data processing, and identification of compounds in LC-MS. This workshop will be carried out online (via zoom).

Requirements

You will require your own laptop computer. Minimum requirements: 1024x768 screen resolution, 1.5GHz CPU, 2GB RAM, 10GB free disk space, recent versions of Windows.

Time Schedule

Time	Activities	Speaker
08.00-08.15	Registration and opening	
08.15-11.00	Session 1: Introduction to metabolomics and LC-MS	Mohamad Rafi
11.00-12.00	Session 2: Metabolomics sample preparation	Mohamad Rafi
12.01-13.00	Lunch Break	
13.01-15.00	Session 3: LC-MS data processing with MS-DIAL	Rudi Heryanto
15.01-15.30	Break ashar	
15.31-16.30	Session 4: Identification and molecules annotation with MS-DIAL	Rudi Heryanto
16.46-17.00	Closing	

Speaker and Committee:

1. Dr. Muhamad Rafi (Chemistry Department, Bogor Agricultural University)
2. Rudi Heryanto, M.Si (Chemistry Department, Bogor Agricultural University)
3. Pinus Jumaryatno, M.Phil., Ph.D
4. Apt. Annisa Fltria, M.Sc
5. Dr. apt. Asih Triastuti, M.Pharm