



About Us

YSciCore is the Core Analytical Facility of the Faculty of Science at York University, Toronto. Our mission is to support the scientific excellence of research programs. Each project is executed by domain experts, providing critical support from the earliest stages of grant writing and project design, through the experimental platform to data analysis. Liaise with YSciCore Facilities to access our state of the art Nuclear Magnetic Resonance platform, Mass Spectrometry and Advanced Light, and Ion and Electron Microscopy. From proteomics to Focus Ion Beam Milling, from Spinning Disk Fast Z stacking to EDX Elemental Mapping with EBDS domain orientation, from biomolecular NMR to accurate mass quantification - we ensure that findings are representative for the population.

Contact Us

Nuclear Magnetic Resonance Spectroscopy

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Mass Spectrometry

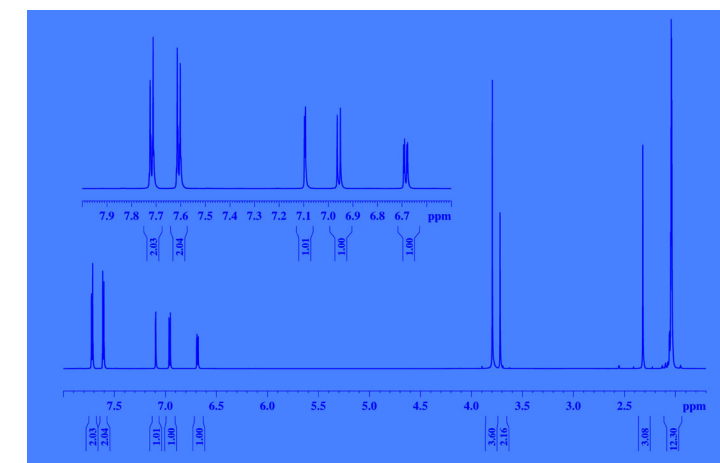
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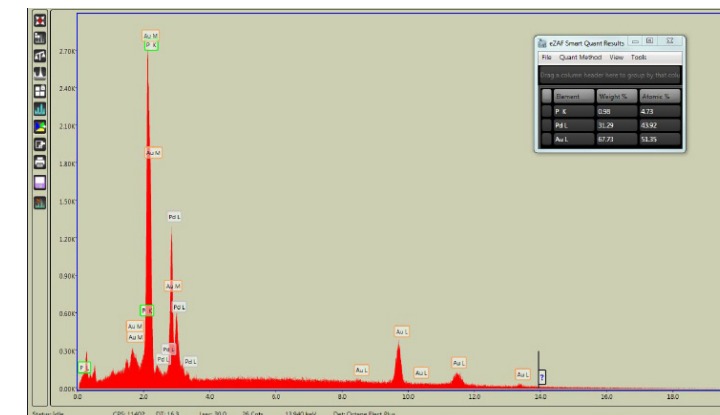
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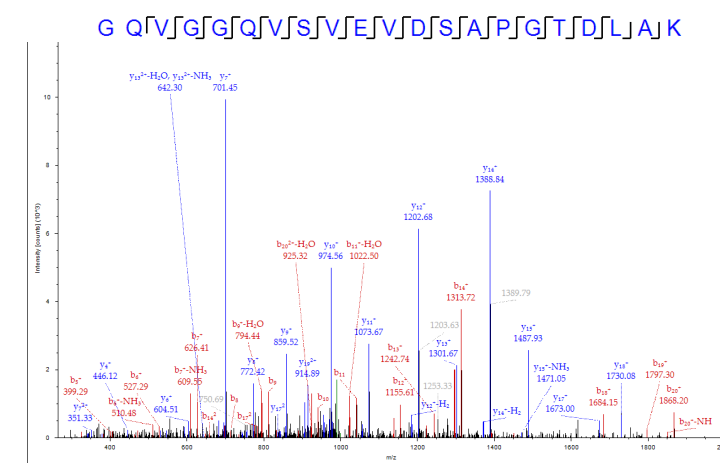
Nuclear Magnetic Resonance Spectroscopy



Microscopy and Elemental Analysis



Mass Spectrometry



YSciCore



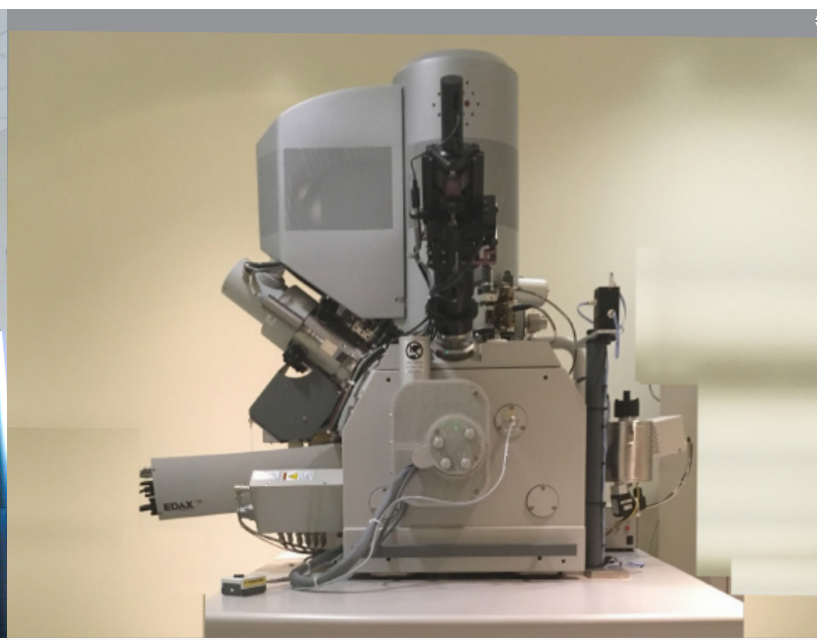
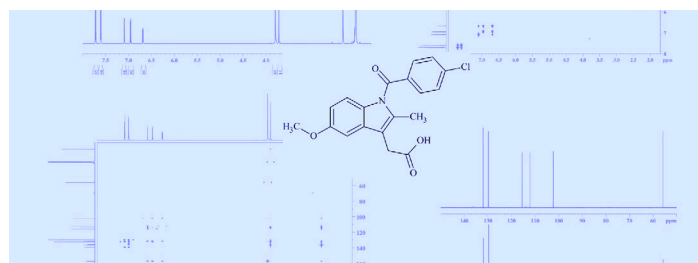


Nuclear Magnetic Resonance (NMR) Spectroscopy

Solution NMR has many applications from chemical identification to assessing chemical purity to monitoring chemical interactions. There is a wide range of techniques for observing biomolecular interactions and processes.

Capabilities

- ^1H , ^2H , ^{13}C , ^{15}N , ^{19}F , ^{29}Si , ^{31}P etc. analyses
- ^1H / ^{13}C / ^{15}N / ^2H triple resonance, multinuclear acquisitions
- Variable temperature data acquisition
- HR-MAS (gel-phase) data acquisition
- Flow analysis for reaction monitoring

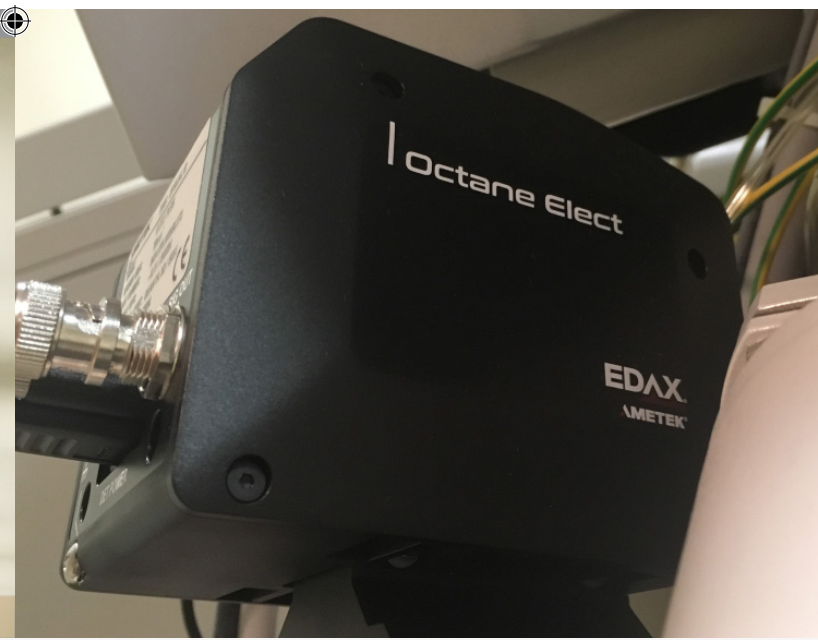
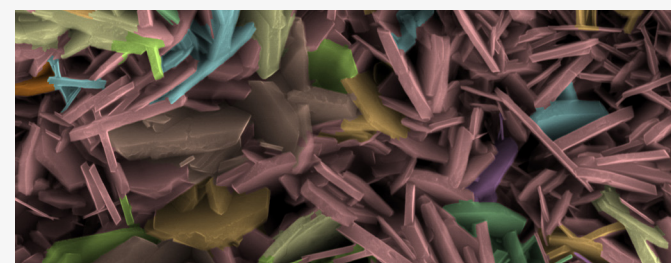


Advanced Light and Electron Microscopy

Capture details that cannot be seen by the unaided eye with the most advanced microscopes on the market. Science and Industry use microscopy to study materials attempting to find connections between the structure, properties and behaviour.

Capabilities

- Characterization of biomaterials and engineered structures with 3D imaging
- Live cell imaging
- High resolution optical sectioning
- Ion milling
- Failure analysis
- Nanofabrication

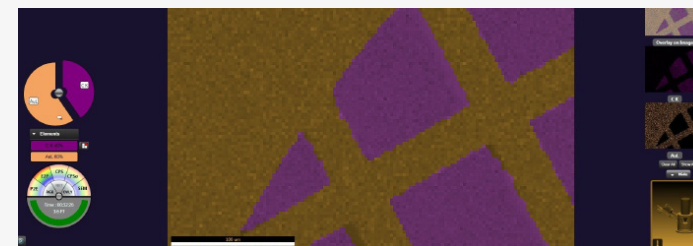


Elemental Analysis

Elemental analysis is an analytical technique used where elemental and structural information is required. Reverse engineer material composition or create a phase map with the help of energy dispersive spectroscopy and electron backscatter diffraction.

Capabilities

- Elemental mapping
- Particles analysis
- Phase identification and mapping
- Grain growth, boundaries and size
- Failure analysis
- Orientation mapping



High Resolution Mass Spectrometry

Mass Spectrometers measure the mass of objects, particularly atoms and molecules. They enable scientists to decipher the innermost workings of the cell, identify diagnostic blood markers in disease, and develop immunotherapies to combat pathogens.

Capabilities

- Identification and characterization of workflows in proteomics, lipidomics and metabolomics

