



NUCLEAR MAGNETIC RESONANCE FACILITY

Monash University Malaysia's Nuclear Magnetic Resonance Facility (NMR) provides access to one of the most informative non-destructive analytical techniques, NMR spectroscopy. The full range of solution NMR experiments are offered, including routine 1D- and 2D-NMR experiments for proton, carbon-13, fluorine-19, phosphorus-31, and other multinuclear experiments.

We provide NMR analysis services, as well as consultancy and training for both internal and external customers.

We offer a wide selection of deuterated solvents to meet your experimental needs, along with expert advice on experiment selection and data interpretation.

In addition to routine NMR experiments, we provide support in identifying unknown materials, determining chemical structures and product properties, quantifying components in mixtures, and analysing conformational and molecular dynamics.

EXPERTISE

- Advanced NMR expertise and state-of-the-art support for industrial and academic research.
- Analysis of small molecules, natural products, and polymers.
- Identification of known and unknown materials and determination of chemical structures.
- Assessment of purity profiles and compositions of ingredients in pharmaceutical products.
- Analysis of conformational dynamics and other molecular properties.
- Analysis of intra- and intermolecular interactions.

KEY INSTRUMENTATION

- High-resolution NMR Avance NEO 300 spectrometer (Bruker) with a tunable probe

WORKING WITH US

- Fee for service
- Consultancies
- Collaborative research
- Training and teaching

Specialist Services

A wide range of high-frequency 1D- and 2D-experiments on various NMR active nuclei, NMR spectra analysis and interpretation, and sample preparation support are offered. Expert advice on experiment selection and signal assignments is also available.

Specialist Service #1: NMR Analysis

Outsource your facility's NMR analysis and focus on strategic projects; we guarantee rapid turnaround for your routine NMR sample analysis.

You can request the following:

- Preparing samples according to your instructions
- Providing NMR tubes and solvents
- Customising experiments to meet your needs
- Entertaining urgent requests and long-term contracts
- Data acquisition, processing and plotting of the spectrum with integrals, peak lists and expanded plots as needed
- Creating documents containing spectral plots in PDF or other formats
- Multiplet analysis with coupling constant calculation
- Providing raw data files
- Returning or disposing samples as requested
- Spectral interpretation

Specialist Service #2: Training For Internal And External Customers

- Workshops and individual (small group) training tailored to the customers' needs.

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