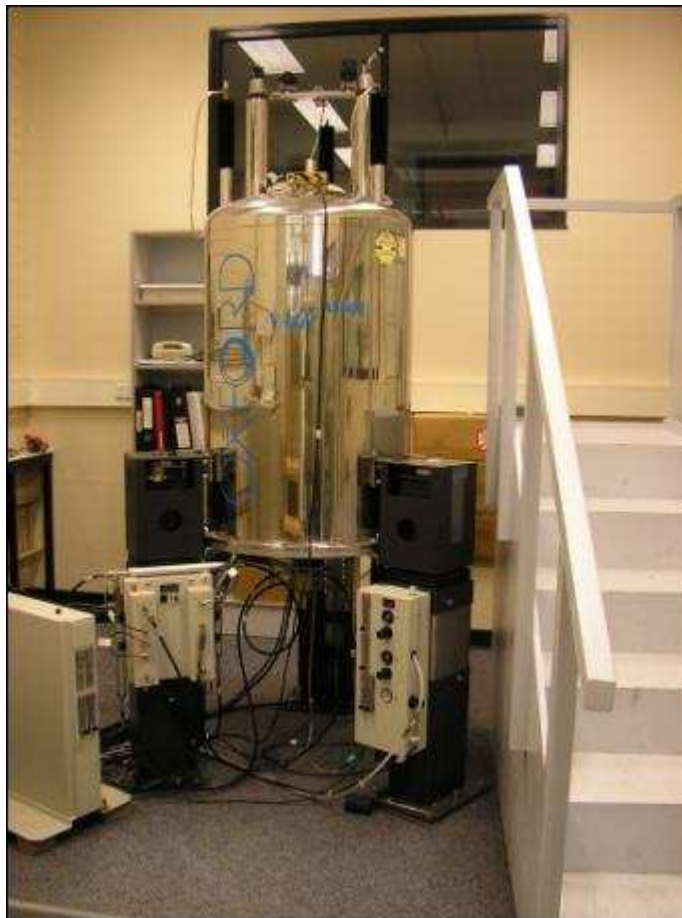


NMR Instrumentation

Inova 500-MHz NMR Spectrometer

- Main features:
- Oxford super conductor 500 MHz magnet;
- A triple-channel spectrometer with a triple-axis pulsed-field gradient module and a waveform generator;
- A 34-channel shim module;
- An FTS variable temperature preconditioner and stabiliser with 0.05° precision from -40° to +60°;
- VNMR 6.1c software on SUN Solaris 9 operating system.



Three probes are available for this spectrometer:

- 5mm $^1\text{H} / ^{13}\text{C} / ^{15}\text{N}$ triple-nucleus triple-gradient probe;
- 8mm DOTY broadband diffusion probe;
- 4mm $^1\text{H} / ^{13}\text{C}$ indirect-detection z-gradient nano probe, which uses ~40 micro-litre of sample.

Mercury VX 300-MHz NMR Spectrometer

Main features:

- Oxford super conductor 300 MHz magnet;
- A two-channel broadband system with a Performa I pulsed field gradient (PFG) module.
- A 14-channel shim module;
- A variable temperature controller with 0.1°C precision between -80°C to +150°C;
- SMS 50 auto-sample changer;
- VNMR 6.1c software on SUN Solaris 9 operating system.



Two probes are available for this spectrometer:

- auto-switchable 4-nuclear ($^1\text{H}/^{19}\text{F}/^{31}\text{P}/^{13}\text{C}$) 5mm z-gradient probe;
- $^1\text{H}/^{19}\text{F}/^{31}\text{P}/^{13}\text{C}$ 5mm PFG, 4-nuclear probe.

VNMRS PS54 500-MHz NMR Spectrometer

Main features:

- Varian super conductor 500 MHz, 54-mm bore, shielded magnet;
- A 28-channel shim module for high performance non-spin line shape;
- DirectDrive architecture with optimal RF control and implementation;
- Dual-channel High/Low Band module;
- Performa IV DirectDrive PFG module;
- A variable temperature unit with 0.1°C precision between -4°C to +60°C for liquid samples;
- Protune Accessory – Dual Drive Module;
- Vnmrj 2.1B software on Linux operating system.



Three probes are available for this spectrometer:

- $^1\text{H} \{^{15}\text{N} - ^{31}\text{P}\}$ 5mm PFG, AutoX Indirect Detect probe, 500 MHz NB;
- $^{15}\text{N} - ^{31}\text{P} \{^1\text{H}\}$ 4-mm Broadband NANO probe, VT, 500 NB;
- $^1\text{H} - ^{19}\text{F} / ^{15}\text{N} - ^{31}\text{P}$ 5mm PFG AutoX DB Probe.