New 600-MHz Solution State NMR Spectrometer

B600 Overview

Bruker 600 MHz: B600
Prodigy CryoProbe
LN_2 - Based

Automated Sample Entry Like the CB500

Cost = $1.3 M

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Unique Capabilities:

- About 2-3-fold higher sensitivity than a non-CryoProbe 600.
- C-13 acquisition with standard proton decoupling.
- C-13 acquisition with F-19 decoupling.
- C-13 acquisition with deuterium decoupling.
- C-13 acquisition with simultaneous decoupling of proton and deuterium.

Use:

- Some walk-up
- Some specialty use

Options:

- Alternate Probe ±150˚ C
- In-the-Tube Mixing

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B600 Overview

Bruker 600 MHz: B600
Prodigy CryoProbe
LN_2–based electronics cooling

90 NMR Experiments

Special Decoupling Capabilities

B600 Bruker NEO NMR Spectrometer

(Located in A149 CLSL)
A multi-nuclear, 600-MHz, 5-mm, solutions NMR spectrometer limited to existing, authorized NMR users.
Prospective users need to be checked out as standard NMR users before submitting samples to the B600.
In addition, users need to establish an account on the B600 with the NMR Staff,
and be trained on automation by the Staff or a trained member of their group.

Available probes:
The BBO Prodigy Probe typically in the magnet is a 5-mm broadband probe, operating at room temperature.
This probe enables us to do heteronuclei (e.g., ^{13}C)-^{19}F correlation-type experiments, but it does not allow us to perform ^{1}H-^{19}F correlation experiments.
In addition, a standby, room temperature, broadband probe is otherwise available.

General Capabilities:
This Bruker 600 MHz spectrometer is equipped with a Prodigy probe and, in the future, a SampleXpress autosampler.
Sample loading, tuning, locking, shimming and data acquisition are all automated.
Users select NMR experiments and parameters from menus.

Unique Capabilities:

- About 2-3-fold higher sensitivity than a non-CryoProbe 600.
- ^{13}C acquisition with standard ^{1}H decoupling.
- ^{13}C acquisition with ^{19}F decoupling.
- ^{13}C acquisition with ^{2}H decoupling.
- ^{13}C acquisition with simultaneous ^{1}H and ^{2}H decoupling.

General Resources:

- Manual Sample Entry Procedure
- Prodigy Probe Experiment List