

## External Client NMR Service Pricing

Prices are in Canadian dollars. Effective June 1, 2020 to March 31, 2022

Staff Service Requested	Academic	Commercial/ Gov.	Comments and Notes <i>(see page 2)</i>
Full <sup>1</sup> H NMR Acquisition (per sample)	75	120	1, 2, 3
Data only <sup>1</sup> H NMR (per sample)	40	60	4 - Please read note carefully
Additional NMR Time (per hour)	60	85	5
<b>Additional Charges</b>			
<b>Variable Temperature Titration (VT):</b> <i>(solvent-dependent)</i>			
Each VT point above room temp (RT)	30	40	Max. 100°C
First VT point below RT	60	80	Min. -80°C
Each additional VT point below RT	30	40	Min. -80°C
<b>Multi-Nuclear/Dimensional:</b>			
Homo/Hetero-nuclear 2D	20	30	6
Broad Band detect - <sup>13</sup> C-APT, <sup>31</sup> P, <sup>19</sup> F	20	30	
1D and 2D-NOE Techniques	30	40	7
Sample disposal	30	40	8
Media Archiving (e.g. CD or DVD)	30	40	9
<b>NMR Training, Access, and Operations</b>			
External Client NMR Training <i>(per person)</i>	130	170	10
Trained External Client Spectrometer Access <i>(per hour)</i>	60	85	11
NMR Staff Services <i>(per hour)</i>	130	170	12

## Comments and Notes

1. A **completed "NMR Service Request Form" and Purchase Order (PO) or UofA Indent** must be submitted with each sample.
  - a. **Included with charges:** an NMR tube and cap, standard (see *below*) NMR solvent, routine sample preparation, optimization of spectrometer lock, and shimming, parameters, acquisition of proton  $^1\text{H}$ -1D spectrum with up to 1 hour of spectrometer time, plotting of spectrum, and a "reasonable" number of spectral expansions with peak picking/integrations.
  - b. **NOT included:** Spectral interpretation, literature searches, *etc.* (Staff Service rates apply), archiving data, disposal of the sample (if not picked up by customer), and faxing.
  - c. **FAX:** \$5 for 1 to 5 pages, \$1 for each additional page.
2. **Standard Solvents:**  $\text{CDCl}_3$ , Acetic Acid- $\text{D}_4$ , Acetone- $\text{D}_6$ , Acetonitrile- $\text{D}_3$ , Benzene- $\text{D}_6$ , Toluene- $\text{D}_8$ , Methanol- $\text{D}_4$  (*i.e.*  $\text{CD}_3\text{OD}$ ),  $\text{D}_2\text{O}$  (99.9% or 10% in  $\text{H}_2\text{O}$ ), and  $\text{DMSO-}\text{D}_6$ .
  - a. **Nonstandard Solvents** Available with extra charges: "max"  $\text{D}_2\text{O}$  (99.99%),  $\text{CD}_2\text{Cl}_2$ ,  $\text{CD}_3\text{OH}$ , Cyclohexane- $\text{D}_{12}$ , Dioxane- $\text{D}_8$ , THF- $\text{D}_8$ .
  - b. For solvents not listed here please inquire ahead of time for availability and costs.
3. An additional \$40 (\$30 academic) is charged for materials that require extensive sample preparation time due to solubility problems, *e.g.* very high viscosity, grinding, extensive heating, *etc.*
4. **NMR Sample Data only** – Users requesting NMR data only service will be asked to provide the sample dissolved in the appropriate solvent already in the NMR tube with cap. Sample(s) should be "ready to go" at time of submission. **No spectral processing, plotting, analysis, or interpretation will be provided. NMR digital data will be provided "as-is"** (*i.e.* User will need to have a USB thumb drive and access to appropriate software for processing and display).
  - a. Any subsequent request for plotting, integration, peak picking, or interpretation of the data will be charged at full operator fess of \$130/hr.
5. Any additional spectrometer time needed for multi-dimensional and/or sensitivity requirements.
6. Charge is for each 2D experiment: *e.g.* COSY, TOCSY, HSQC, HMQC, HMBC.
7. For Selective-1D NOE experiments, the charge is per irradiation or selective excitation point.
8. Charged if samples are not picked up together with spectra.
9. Price per CD/DVD irrespective of data size. Without explicitly requesting archiving of the data, there is no guaranteed time for the data to remain available.
10. NMR Staff and Supervisor decide if individuals are qualified and safe to use the facility. Retraining may be required. Extensive (re)training will have additional charges.
11. Trained client operates a spectrometer without assistance by the NMR Service Staff other than a short introduction. This option is only available if the proposed operator has passed training and certification.
12. The hourly rate is charged for assistance, interpretation, projects, and samples that require much more operator time than normal. Hourly service charges apply to: spectral interpretation, literature searches, and if developmental work on a spectrometer is required (*e.g.* a new special technique).