

Users guide to the NMR Facility - January 2025

Abide by these core principles when using our instruments

- All work must be undertaken according to Department of Chemistry/University guidance.
- The NMR Facility specific risk assessment **MUST** be downloaded, signed and returned (as a PDF ideally) before you use **ANY** of our instruments.
- Open-access instruments are available on a walk-up basis. The doors to these rooms are only accessible via Mifare to those members of the department who have completed the open-access training programme. Please let the previous user complete their submission before entering the room or liaise with them if they are waiting for a sample to complete. You can use any of the standard open-access instruments if your first choice is busy.
- User-operated instruments must be **BOOKED** via the Clustermarket booking system. Please try to avoid more than two users at the instrument at once for space reasons.
- Please be responsible and do not book instruments if you have respiratory illnesses as per the Head of Department's request. If you need to do so then please consider a face mask.
- **YOU ARE RESPONSIBLE** for any equipment and substances that you bring into the NMR rooms.
- Appropriate risk assessments should be carried out if using hazardous materials or needles.
- Any potentially contaminated material should be **DISPOSED** of in the **BIN** provided, as should **SHARPS** such as needles. **NEVER** put these items in general waste bins as needlestick injuries have occurred previously which are not pleasant for the individuals involved. The DSO will investigate any such incidents and the NMR team will supply records of instrument bookings if required.

Submitting samples to an automated (open-access) system 07:00 to 24:00

There are six automated systems available, to users that have been previously trained to use them. New users should email nmr@ch.cam.ac.uk to request the training programme. We have produced video guides which will explain the majority of the process.

- You can submit and collect samples **at any time** throughout the day.
- Users should spend the minimum time possible in the rooms – no processing of data please!
- Allow the previous user time to complete their submission or collection before entering an open-access NMR room. You can wait in the corridor outside the door or liaise with the current occupant.
- Abide by the latest fair use rules in operation as shown on the screensaver or experiment guides by the submission PC.

Using a trained user-operated system 07:00-24:00

- The instruments available are Auchentoshan (400MHz) in B13B, Arran (700MHz) in B14 and Glengrant (500MHz) in B19, as well as Tobermory (400MHz) in B25 as required.
- Users can **book their slots using Clustermarket**. 15-minute minimum slots are available on Auchentoshan and Tobermory, 30 minutes on Arran and Glengrant. There is a maximum amount of time that can be booked which is 6 hours by any user, but please be aware of other users' needs in busy periods.
- The overnight slots can be booked as required but note there is no access to the department overnight.

Submitting samples to the NMR service in B28

- Download and complete a submission form – email as a PDF to nmr-submission@ch.cam.ac.uk.
- The labelled NMR tube should be left in the [cold room lobby \(CRL\)](#) at any time the department is open.
- Results will be [emailed](#) – please inform us if your data doesn't arrive when expected.
- If data has been checked by the researcher, [email nmr@ch.cam.ac.uk](mailto:nmr@ch.cam.ac.uk) for faster return. If no email is received the sample will be returned if the service judges the result to be sufficient.
- [NMR tubes](#) will then be returned to the CRL for [collection](#).
- [NMR interpretation](#) will be provided only where the problem is deemed sufficiently complex that extra work needs to be carried out in order to solve it. Most results will be returned either automatically by email or with brief comments.
- [Email or visit B28](#) to talk to us about particular issues and problems that you need us to solve using NMR as we may offer alternative experiments to assist interpretation.

NMR Consumables purchase

- Our [Merck Vending Machine](#) can be found in Room B25. This stocks around 20 of the most common lines at the best prices in the University.
- For [rarer or little used consumables](#) downloaded consumable request forms should be emailed as a PDF to nmr-consumables@ch.cam.ac.uk.
- [Consumables supplied by the NMR Facility](#) will be supplied to the cold room lobby (CRL) for collection or collected in person from B28. You will be emailed once they are delivered to the CRL.
- [Out of stock vended consumables](#) can be provided by visiting the NMR Service room B28 as we hold an emergency [buffer](#) of most items or alternative supplier stock.

Links

www.ch.cam.ac.uk/analytical/nmr

app.clustermarket.com

Training/Troubleshooting

Training in a traditional face-to-face setting is usually the preferred method. We do offer some sessions via Teams if there are multiple trainees. In case of instrument problems, email us on the nmr address, ring 36397 (internal) or come to see us in B28 or around the corridor. We will sometimes fix instruments remotely using our laptops to save having too many people in rooms at any time.

Further Notes

Andrew, Pete and Duncan will sometimes be working from home or from a remote location in the department.

There is generally always one of us in the NMR Facility between 8.30am and 6pm. If you cannot find us, then an email to nmr@ch.cam.ac.uk is the best way to get in touch as one of us is usually monitoring the inbox. With the appointment of Dr Pete Gierth in 2022 we are now able to offer a lot more services such as some interpretation help, video guides, reliability upgrades and improvements to automated and service experiments which we will communicate to you regularly.

Check twitter ([@camnrmrservice](https://twitter.com/camnrmrservice)) and our website for more news and information.