

Charter of good-use for the x-ray diffractometers of the Instrumentation pole

Foreword:

Some diffractometers at the Néel Institute are with a free-to-use status. That means a free access for **trained users** that took good lecture of the following « **rules** », and not an authorization do whatever you want on these instruments.

That charter concerns five instruments:

- Cubix XRD (lab F217) : diffractometer θ - θ , reflection, Copper anode
- Gonio4 (lab F217) : diffractometer θ - 2θ , reflection, Copper anode
- D5000R (lab F217) : diffractometer θ - 2θ , reflection, Cobalt anode
- D5000T (lab F217) : diffractometer θ - 2θ , transmission, Copper anode
- Texture Seiffert (lab F322) ; diffractometer θ - 2θ , reflection, Copper anode

Each of these instruments has specific features; please do consult the website or the supervisor to obtain further detail and/or information on the instrument best suited for your needs.

In any case, please consult and follow scrupulously protocols and advices as demonstrated in the following parts.

Before using a x-ray diffractometer:

- Follow training with the instrument supervisor. It will be focused on how instruments are working and have to be used, on risks related to x-ray radiation and sample preparation, on the attachment of specific devices, and on the good use of booking and common x-ray diffraction lab (F217).
- Book timeslots through the website (<https://reservations.neel.cnrs.fr/>) after having your inscription form (<http://neel.cnrs.fr/spip.php?article3472>) validated by the supervisor. Time limitations are implemented. A maximum of 12 hours per week and per person with no more than 4 hours in a same day. One to two nights per week and per person depending on demand. No limitations for week-ends.
- Prepare your sample with a sample holder fitted to the instrument and for your research. There are risks of erroneous results or chemical contamination if you do it wrongly. In doubt, please refer to the supervisor.
- **Clean** any **common** preparation tools you have utilised. These tools **must remain in the lab**. If you are noting an absence of lab supplies (gloves, paper, ethanol, tape), please do inform the supervisor.

While using a x-ray diffractometer:

- X-ray radiation is harmful and a hard work has been done in securing all instruments so you are not exposed to any irradiation risks. Therefore, do not attempt to alter or bypass safety elements. A general and expected attitude must be to respect all instruments.
- Respect your timeslot allocations even if a technical issue or a hindrance should occur. You can nonetheless try to find an arrangement either with the next user or with the supervisor.
- Whether you should witness or provoke the appearance of a technical problem, please refer as soon as possible to the supervisor. It will allow for a faster re-commissioning of the instrument for next users.

After using a x-ray diffractometer:

- **Clean** the used sample holder. **Recover** your sample, **take it away** or **bin it** using the appropriate container (see picture below). Do not stick around samples, put them **inside**.
- Recover your data. Keep a copy with you. A back up will be regularly performed, but only on folder supposed to contain data files (meaning not on Desktop or MyDocuments folders).



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