

## 300 MHz NMR Lab VT Protocols and Procedures Policy: Version 2019-6-21

This policy is intended to ensure that all users of the University of Lethbridge 300 MHz NMR facility are aware of some basic rules, when operating the console in VT mode, which will help to ensure the longevity of this facility, and reduce the occurrence of costly repairs.

### Booking

1. All scheduled VT experiments fall within the general rules for booking the facility. These rules must be followed at all times.
2. All users **MUST** book enough time to allow for the system to stabilize back to 22 °C before the next scheduled time slot begins.
3. The description in the online booking system and log book **MUST** clearly indicate that you are doing VT work.

### General Usage Rules

1. All of the policies outlined in the 300 MHz protocols and procedures document must be followed at all times.
2. All users who will be filling the LN2 dewar must comply with the cryogen safety manual. This manual is available on the magnetic resonance website here:  
<http://www.uleth.ca/artsci/magnetic-resonance/sites/magnetic-resonance/files/cryogen%20safety.pdf>
3. The temperature range of the NMR probe is -150 °C to +150 °C. **DO NOT EXCEED THE UPPER OR LOWER LIMITS OF THIS RANGE!!!**
4. For high temperature VT work **YOU MUST** know the boiling point of your solvent and **DO NOT** exceed this temperature.
5. The PEEK spinner **MUST** be used for all VT experiments.
6. The valve for gas flow through the shim supply **MUST** be opened fully when operating in either the high, low, and ultra-low temperature ranges. These temperature ranges are clearly defined in the VT manual. Failure to open this valve in those ranges **WILL** result in damage to the shim sleeve.
7. When your experiments are completed the edte settings **MUST** be set back to the default values given in the VT manual.

8. The steps outlined in the VT manual **MUST** be carefully followed at all times. If you are unsure of what you are doing **STOP, DO NOTHING**, and ask an appropriately trained user or trainer for help. (Users who detect other users incapable of performing standard operating procedures must report this to the NMR facility manager immediately.)
9. The pressure of the regulators on the wall of the lab and inside the console **MUST** be checked before any VT use of the instrument. The wall regulator should read 90 psi and the console regulator should read no less than 5 bar.
10. Under no circumstances should a user adjust either of the two regulators mentioned above. If you notice that either regulator reads less than the values specified above YOU MUST stop all VT work and contact the facility manager immediately.

Any individual who violates any of the aforementioned rules is subject to:

1<sup>st</sup> Violation: A verbal warning from the manager to the individual

2<sup>nd</sup> Violation: A written warning detailing the offence will be sent to the individual and their Supervisor.

3<sup>rd</sup> Violation: The individual will be suspended from the facility until an appropriate reprimand is agreed upon by both the chair and manager and this reprimand is carried out.

4<sup>th</sup> Violation: The individual will be permanently suspended from the facility.

Thank-you for your cooperation!

Any questions or concerns may be directed to the NMR facility manager.

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### **Confirmation of Compliance**

The *policy* referred to below is intended to ensure that all VT users of the University of Lethbridge 300 MHz NMR facility are aware of some basic rules which will help to ensure the longevity of this facility, and reduce the occurrence of costly repairs. The version of the NMR policy to which compliance is indicated is specified above (*Policy is subject to revision at any time and will be reviewed at the least once per year.*)

### **Agreement to Comply with the 300 MHz NMR Policies**

This certifies that I have read, understood and am willing to comply with the 300 MHz NMR Policies in their entirety. I also understand that it is my responsibility to ensure all individuals under my supervision comply with these policies.

Name (Printed): \_\_\_\_\_

UofL ID #: \_\_\_\_\_

Signature: \_\_\_\_\_

Date: \_\_\_\_\_