


**To:** All Bruker 500 Users  
**From:** John Harwood (jharwood@purdue.edu)   
**Date:** January 23, 2006  
**Subject:** Bruker 500-1 (WTHR 367) Cryoprobe Available – User Refresher Training Required

I wanted to inform everyone that the cryoprobe on our Bruker DRX500-1 NMR spectrometer (WTHR 367) has been repaired. In addition, the annual cryoprotform service has been completed, and the probe is now re-installed and is ready for use. I am particularly pleased to be able to announce that this probe seems to be performing particularly well – the  $^1\text{H}$  sensitivity figure I obtained of ca. 3600:1 is 15% better than the probe's specification and over 40% better than the probe had obtained prior to its failure. In addition, even though this probe is not designed for  $^{13}\text{C}$  observation, I have found that it provides a  $^{13}\text{C}$  sensitivity figure of ca. 210:1, which is only a few percent below the specification for the conventional BBO probe that we have available on our Bruker DRX500-2 in RHPH. This  $^{13}\text{C}$  result is a pleasant surprise, and it will hopefully result in this probe being of even greater value to our NMR Facility.

The cryoprobe on the DRX500-1 will be available to users starting Wednesday, January 25th. However, because there have been changes in the cryoprobe installation, all Bruker 500 users who wish to use this spectrometer with the cryoprobe installed must attend a ca. 30-minute cryoprobe introduction/refresher training session prior to operating the spectrometer. We will conduct several of these training sessions during the next couple of weeks, beginning on Tuesday, January 24th. If you wish to attend, please email Donna Bertram ([dbertram@purdue.edu](mailto:dbertram@purdue.edu)) with your availability. We would prefer to schedule these sessions on a group-wise basis, so, if possible, we will try to schedule multiple members of a given research group for one training session. Please note that there will be no probe changes on the DRX500-1 as long as the cryoprobe is functional, so if you want to use this spectrometer you must use it with the cryoprobe. Note also that only  $^1\text{H}$ - and  $^{13}\text{C}$ -observe experiments will be supported with the cryoprobe.

**Please note that if you do not attend a cryoprobe introduction/refresher session during the next couple of weeks, your user account on the Bruker DRX500-1 (WTHR 367) will be deactivated.** Your account can be later re-instated after you attend a training session, but the scheduling of such ad hoc training sessions will be at the Facility's convenience.

Please don't hesitate to contact me with any questions or comments.

cc: F. Lytle  
D. Raftery  
NMR Support Staff  
NMR Advisory Committee