PURDUE UNIVERSITY

INTERDEPARTMENTAL NMR FACILITY

JOHN S. HARWOOD
DIRECTOR

HUAPING MO
ASSOCIATE DIRECTOR

To: All Bruker ARX-400 Users

From: John Harwood (jharwood@purdue.edu)

Date: October 14th, 2009

Subject: ARX-400 ^{1}H Sensitivity

A while ago it became apparent to me that the ^{1}H sensitivity on our Bruker ARX-400 spectrometer was down. I was able to work on this issue yesterday and I am pleased to report that the issue has been fixed, and that the sensitivity is now ca. 15% better than the best results obtained when the spectrometer was originally installed.

It transpired that the ^{1}H preamplifier unit was the problem. We were fortunate to have in our possession a spare low-noise unit that Professor Raftery had previously obtained as surplus equipment. This new unit solved the problem.

Thanks go to Professor Raftery for obtaining these useful parts!

A couple of minor changes had to be made to the standard parameter sets after the repair to optimize spectrometer performance. Due to the increase in ^{1}H signal intensity and the possibility of receiver overload, I recommend that all users load the standard ^{1}H parameter set for your solvent. Be sure to use the RGA command to optimize the receiver gain setting prior to acquiring data.

If you have any questions or comments, please feel free to contact me.

cc: P. Kissinger
NMR Advisory Committee
NMR Support Staff