

Quality Assurance and Quality Control Plan, Small Molecule Crystallography Lab

The quality of the final reports are based on periodic inspections of final report files during the reports final assembly and at the time of publication, and the validation of the derived data based on a run of the checkcif program. Annually a summary report of all sample analysis projects is submitted to the faculty of the Department of Chemistry and Biochemistry at the University of Oklahoma.

The quality control of the instrument is based on intensity checks that follow periodic realignments of the instrument as well as annual preventive maintenance of various components of the instrument. Alignment checks are to be performed according the manufacturer's instructions at least annually and any time this instrument is suspected of being out of alignment. The intensity checks include overall $\langle I \rangle$ measurements of the standard ylid crystal, as well as the results of the refinement of the structure.

Preventive Maintenance:

1. Check/clean all screens and filters in the water cooling system for the generator and tube.
2. Replace the cooling water in the Haskris and in the Neslab water coolers.
3. Clean/lube the gears of the omega and 2-theta drives.
4. Empty, drain, dry the 60 liter supply Dewar for the LT device.
5. Clean/replace worn components in the AD41 air dryer unit.
6. Check all voltages in the D8 controller using the D8tools software.

Prepared by Douglas R. Powell September, 2009