## SPECIFICATIONS

**X-ray Diffraction System, Bruker SMART APEX II 3kW sealed tube system (part no. 882-022700) or equal.**

System consists of Bruker SMART APEX II CCD area detector (typical quantum gain of 170 electrons per x-ray photon or better, 62mm x 62mm active pixel area, 4096 x 4096 CCD which ca be read with 4 x 4 binning, 2 x 2 binning, or un binned, signal-to-noise for single x-ray photon (Mo K$\alpha$) greater than 10:1, ), associated frame buffer computer (including LCD monitor), 3kW sealed tube goniometer with 3-axis stage, graphite monochrometer, x-ray generator (model K780), enclosure, x-ray tube (2kW, Mo anode, fine focus), data collection software, SHELXTL software, rotary shutter, color video camera (for crystal alignment), and sulfonium ylid crystal mounted on goniometer head. System price must include installation and training. System must be compatible with existing computer and software systems, including SAINT (data reduction software), and SHELXTL (structure solution and refinement software) to facilitate rapid transition from installed systems. Trade-in of existing SMART 1000 CCD area detector may be used to reduce total system cost.