

X-ray Diffraction Laboratory
Dept. of Chemistry, TAMU
ph: (979)845 -9125 fax : (979)845-8184

Name Joseph Reibenspies Date: 1/2/07
P.I. Reibenspies
Department/Address Chemistry University/Company Texas A & M
City/State/ZIP College Station Account/P.O. 000-000-000
Phone 979.845.9125 Fax
e-mail goodxray@gmail.com

Original Sample Number VITC
Instrument : Bruker D-8 Bragg
Is the information proprietary? Yes No

Instrument conditions

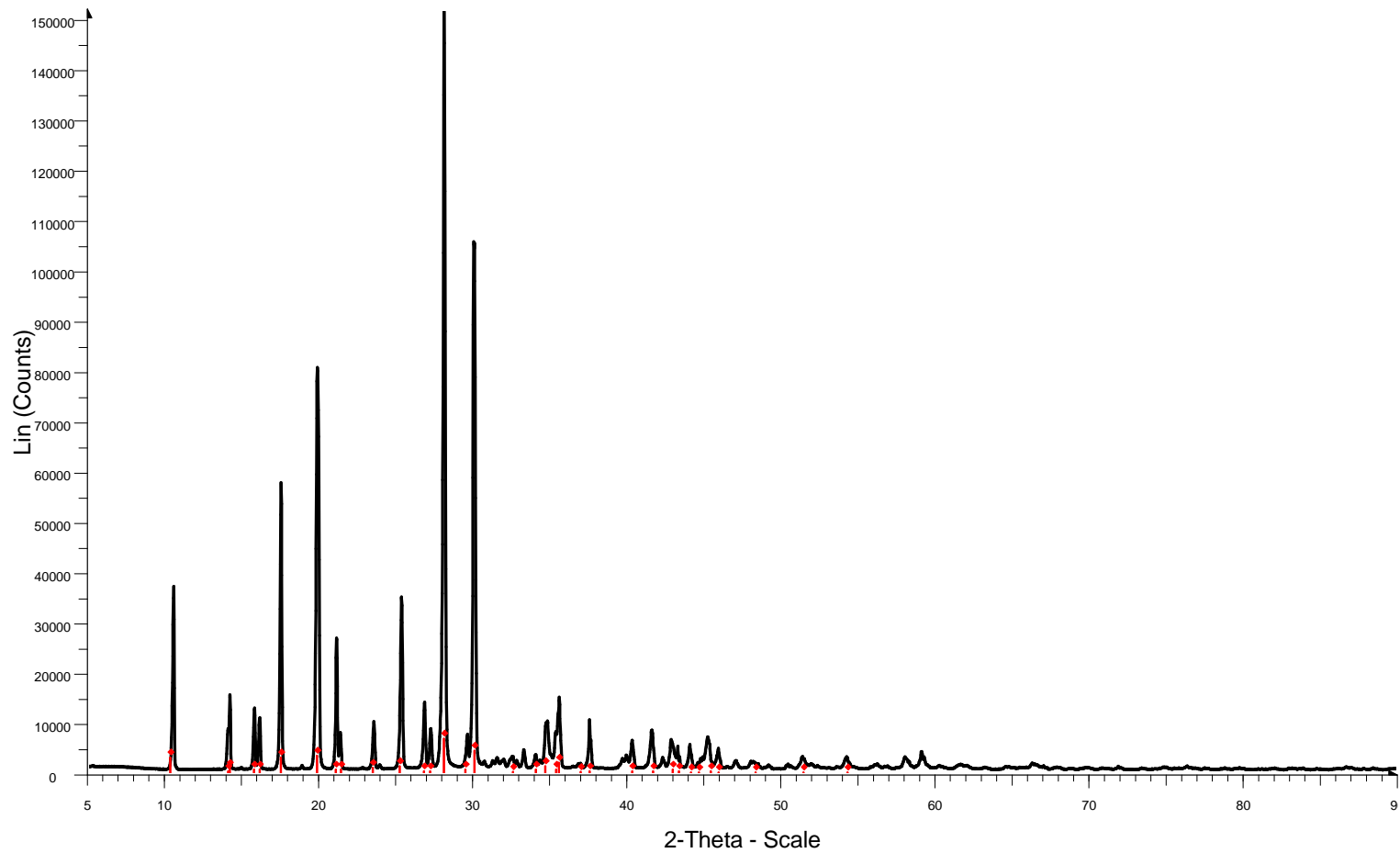
Source : Sealed Tube
kV and mA settings : 40kV 40mA
Radiation : Copper
K α_1 / K α_2 / K_{average}/ K β : 1.540598 1.5444180 1.541871 1.392249
Monochromator : Filter
Data Scan Type : Step Scan
Data Scan Mode : theta-2theta
Data Collection Speed : 50 sec/step
Data Collection Step : .02 °
Data Collection Range : 5-90 °
Data Collection RS Slit : 0.2mm
Data Collection Temp : 22 C
Mount : Flat Plate
Operator :

Comments :

Experimental

Bruker D8 Advance Technical Specification

The sample was placed in the sample holder of a two circle goniometer, enclosed in a radiation safety enclosure. The X-ray source was a 2.2kW Cu X-ray tube, maintained at an operating current of 40 kV and 40 mA. The X-ray optics was the standard Bragg-Brentano para-focusing mode with the X-ray diverging from a DS slit (1mm) at the tube to strike the sample and then converging through an anti-scatter SS slit (1mm) to a RS receiving slit (.2mm) at the monochromator. The two-circle 250mm diameter goniometer was computer controlled with independent stepper motors and optical encoders for the θ and 2θ circles with the smallest angular step size of $0.0001^\circ 2\theta$. The detector was a NaI scintillation detector with a maximum count rate of $2 \times 10^6 \text{ s}^{-1}$. A graphite monochromator was placed before the detector to eliminate K_β radiation and fluorescence. The angular resolution was determined by insertion of a receiving slit (RS) that is placed in front of the monochromator, as are a set of Soller slits to lower horizontal beam divergence. The software suit for data collection and evaluation is windows based. Data collection is automated JOB program by employing a DQL file. Data is analysed by the program EVA.



d:\USERS\jhr\aalong.RAW - File: aalongBB.RAW - Type: 2Th/Th locked - Start: 5.000 ° - End: 90.000 ° - Step: 0.020 ° - Step time: 50. s - Temp.: 25 °C (Ro om) - Time Started: 0 s - 2-Theta: 5.000 ° - Theta: Operations: Import

◆ 00-022-1536 (I) - Ascorbic acid vitamin C - C₆H₈O₆ - Y: 4.53 % - d x by: 1. - WL: 1.5406 - 0 - I/c PDF 1.1 -