

10/17/2016

The purpose of this experiment is to determine the ideal running conditions of the EPR in order to perform next week's experiment in a timely manner to fit all of the runs within available time. The purpose of next week's experiment is to determine the EPR spectrum's dependency on the angle of the Co-60 irradiated sugar crystal. These spectra will be compared to the powder spectrum shown in this data set.

Freq = 9.42079 GHz

Power = 1.02 mW

CF = 336.0 mT

SwWid = +/- 10 mT

SwTime = 8 min

Mod Wid = 0.1 mT

Amp = 1

Time C = 0.3 s

Data Points = 2048

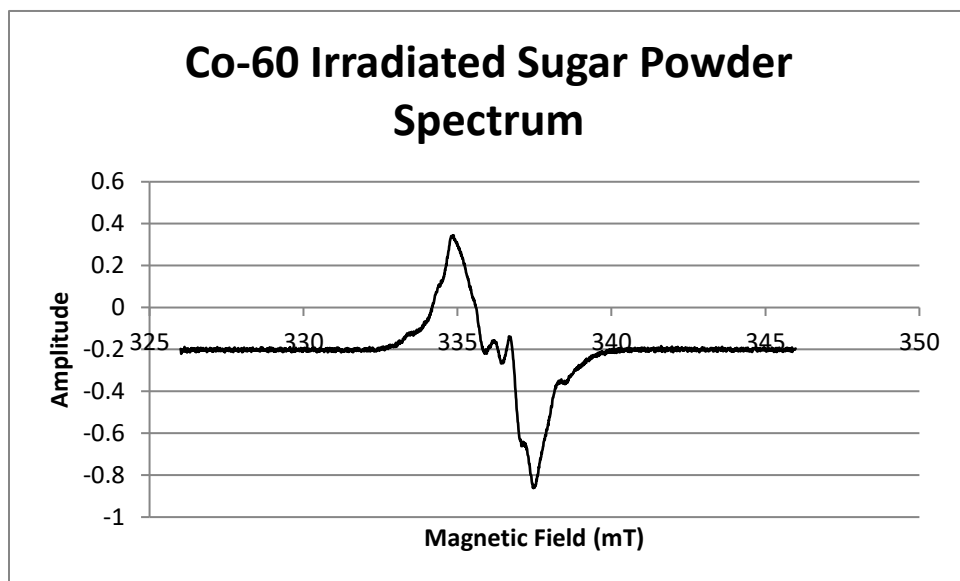


Figure 1. Co-60 irradiated sugar crystals were ground with mortar and pestle and analyzed by EPR with the conditions listed above.

Freq = 9.41639 GHz

Power = 1.04 mW

CF = 336.0 mT

SwWid = +/- 10 mT

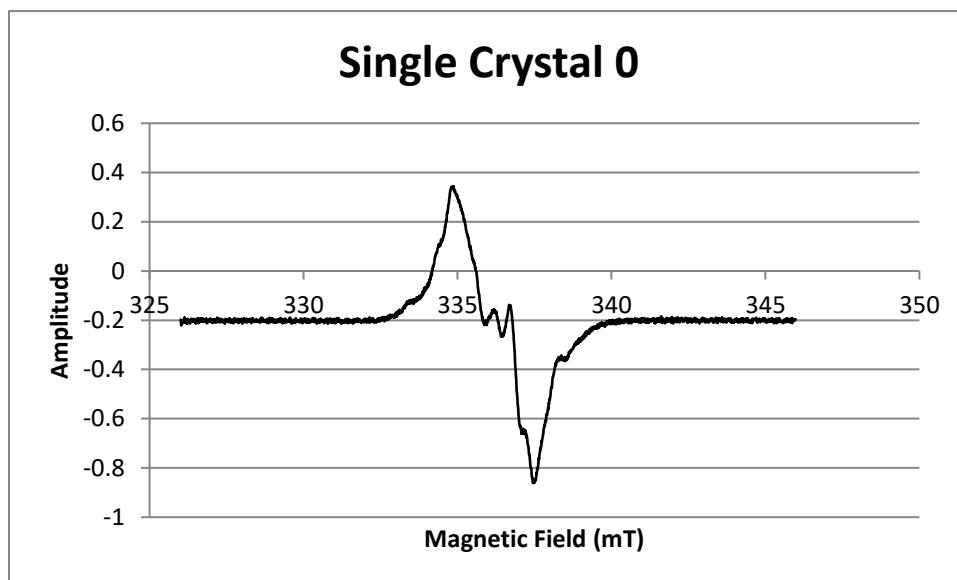
SwTime = 8 min

Mod Wid = 0.1 mT

Amp = 1

Time C = 0.3 s

Data Points = 2048



Operating conditions are the same as listed for the 0° rotation above.

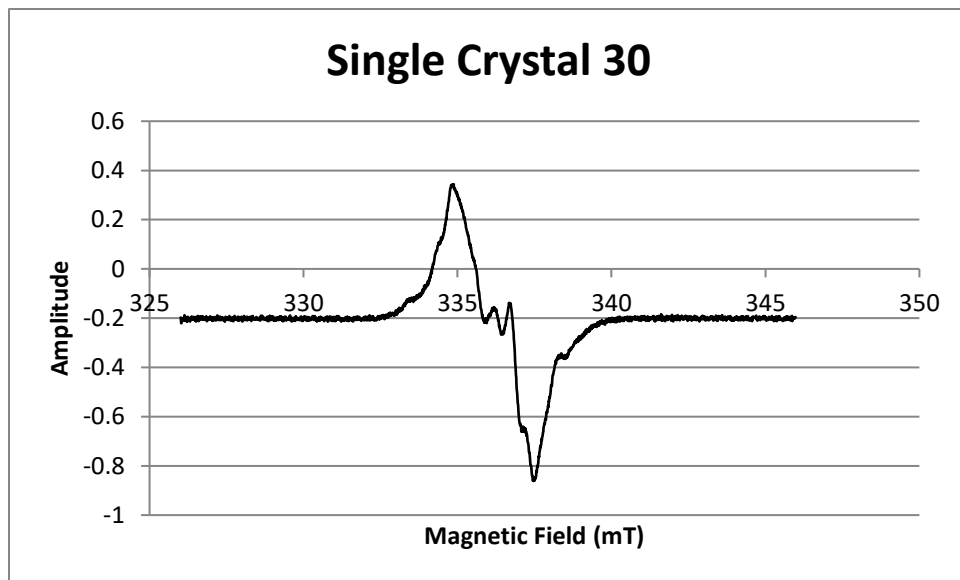


Figure 2. A single crystal of Co-60 irradiated sugar was taped to the outside of an EPR tube and analyzed at 0° and 30° rotation with the operating conditions as listed above.