Investigating decomposition with SP-VUV and AMS-VUV

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Chemical Compositions of Black Carbon Particle Cores and Coatings via Soot Particle Aerosol Mass Spectrometry with Photoionization and Electron Ionization

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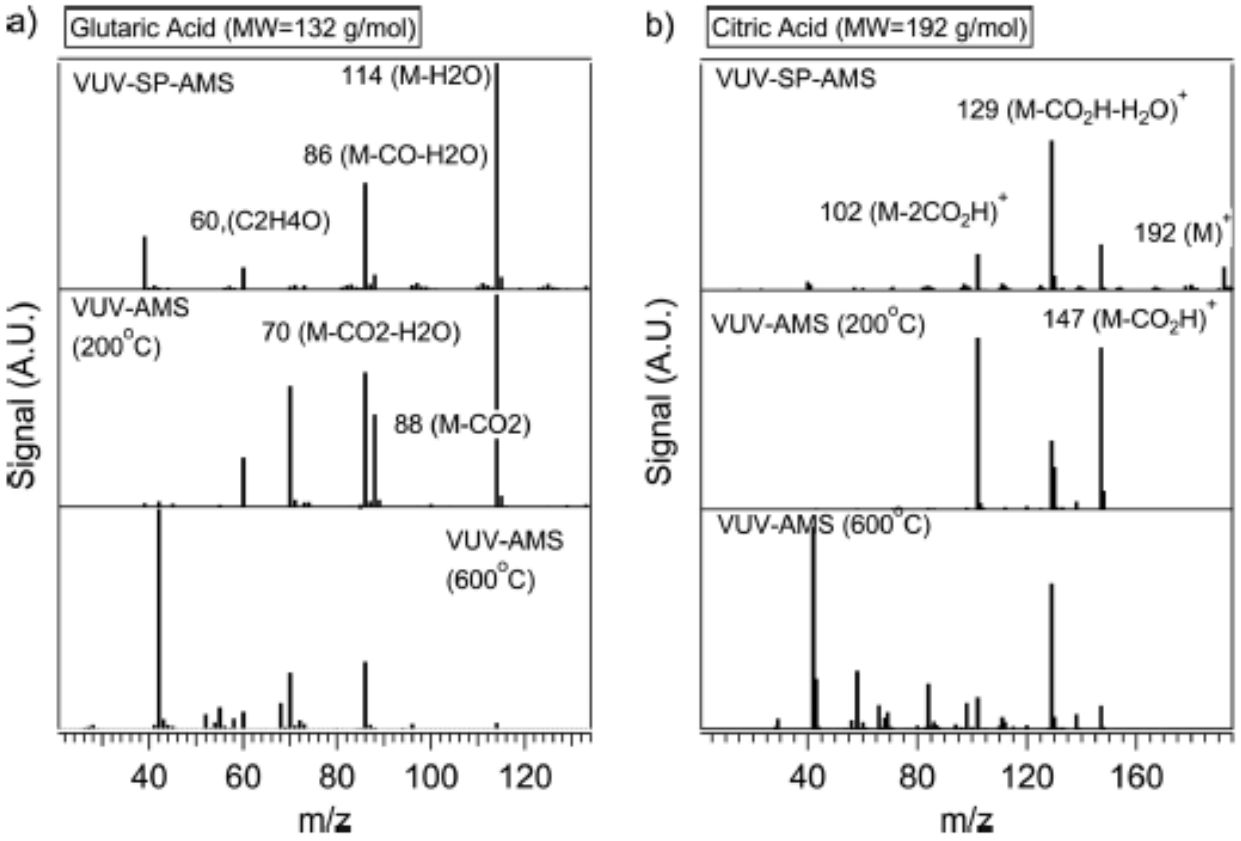

Figure 6. VUV-SP-AMS and VUV-AMS mass spectra of glutaric acid and citric acid coated on Regal Black particles. All spectra were obtained with the VUV light set at 10.5 eV. The VUV-SP AMS spectra were obtained with the SP module operating at the low voltage setting. VUV-AMS spectra were obtained with the thermal vaporizer operating at 200 and 600 °C.

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- Parent ions not observed for SP or 200 degC vaporization of Glutaric Acid
- Parent ions observed from SP vaporization of Citric Acid
- SP spectra contain more large MW fragments with molecular information. Could be exploited in experiments with black carbon or metal seed particles.