Electronic Supplementary Information

for

Coupling the Liquid Sampling – Atmospheric Pressure Glow Discharge, a Combined Atomic and Molecular (CAM) Ionization Source, to a Reduced-Format Mass Spectrometer for the Analysis of Diverse Species

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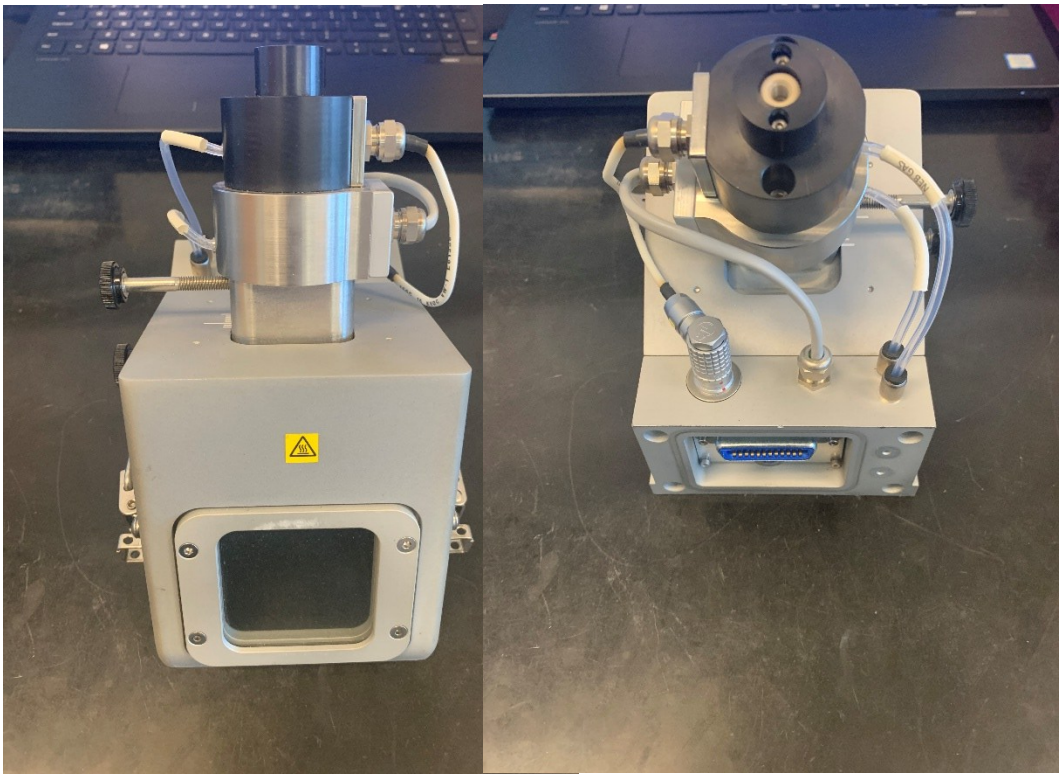

Figure S1: a) front view and b) back view of the standard Advion ESI source

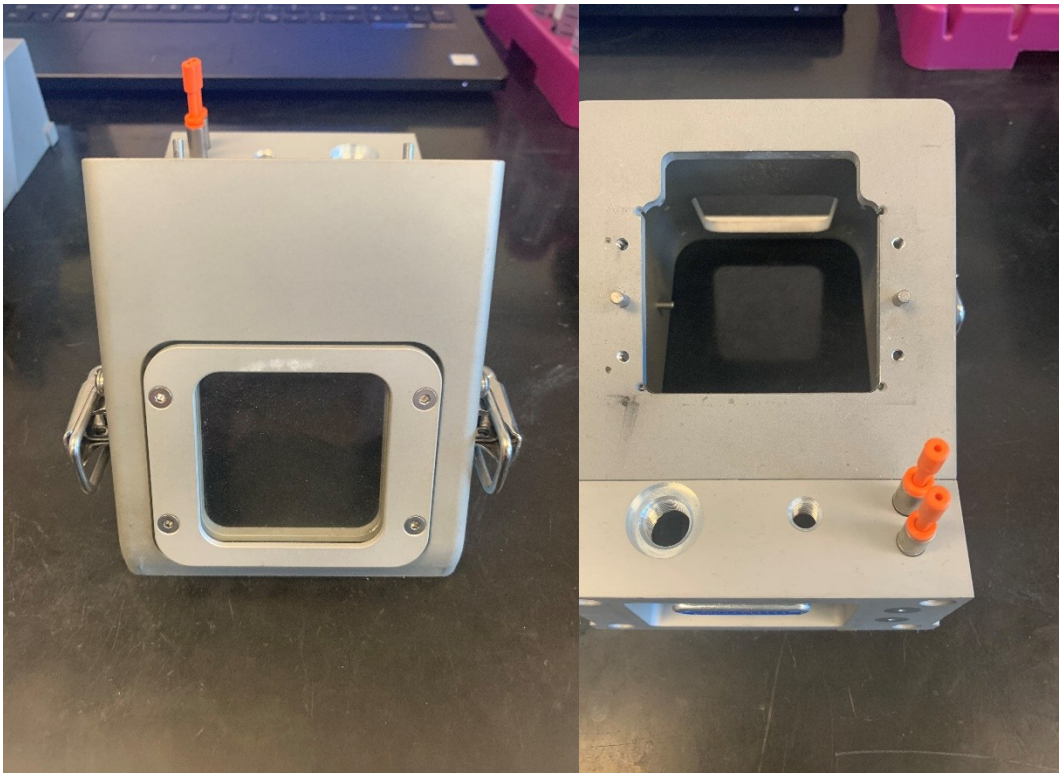

Figure S2: a) front view and b) back view of the standard Advion ESI source with modifications made to house the LS-APGD. Simply, the hole that the ESI probe sits in has been widened.

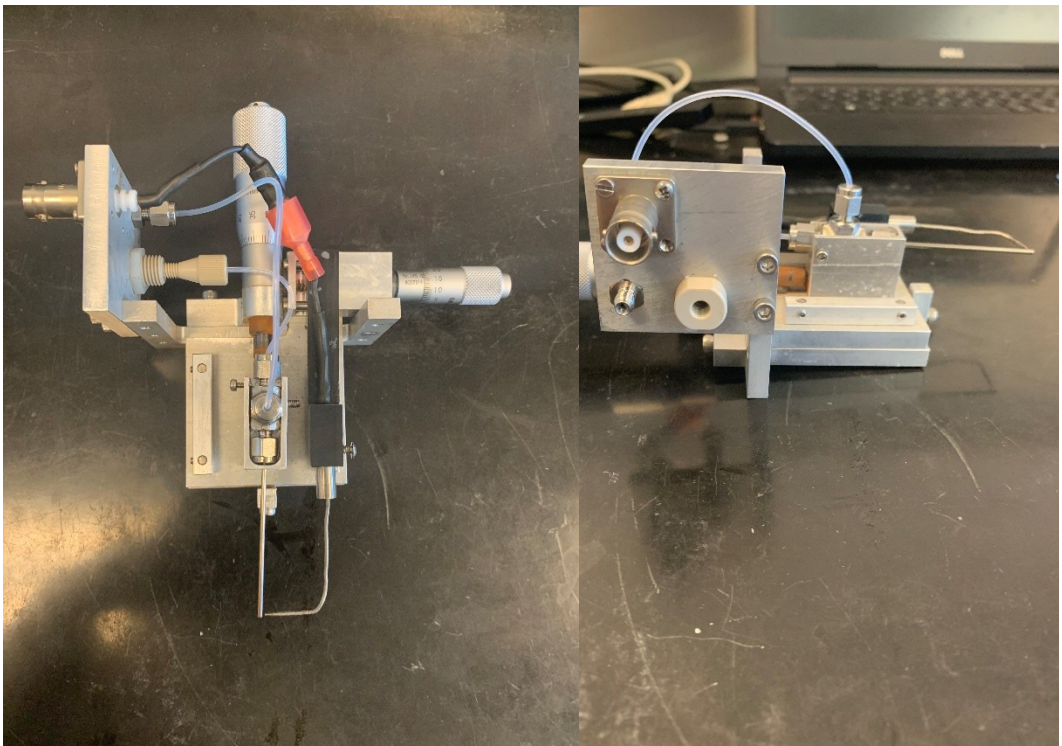

Figure S3: a) Top down view of the LS-APGD chip designed to fit into the modified Advion ESI housing. The electrodes were placed on a moving stage with a micrometer (Thorlabs, Newton, NJ) to adjust the distance from the sampling cone. The counter electrode has an additonal micrometer to control the interelectrode displacement. B) side view of the LS-APGD chip sowing the connection for power, liquid, and gas from the control box

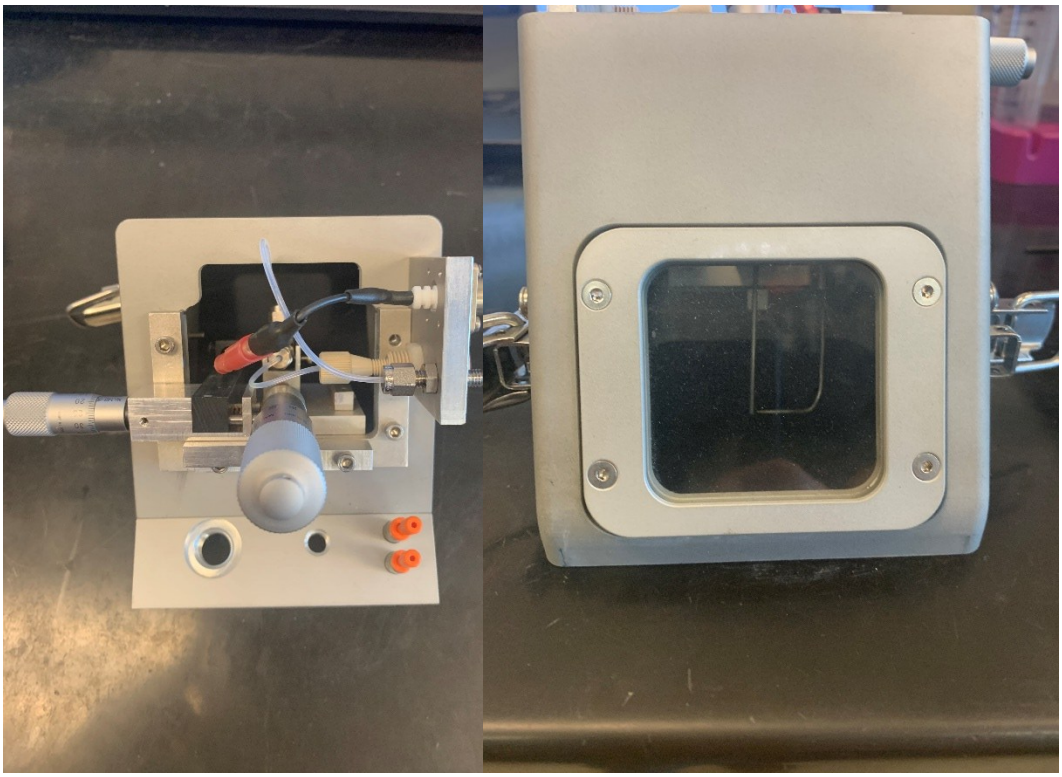

Figure S4: a) top view of the LS-APGD fit into the modified Advion ESI housing. The chip simply slides into the housing and is held into place with a screw on either side. B) front view through the window of the source housing showing the electrodes seated in the housing

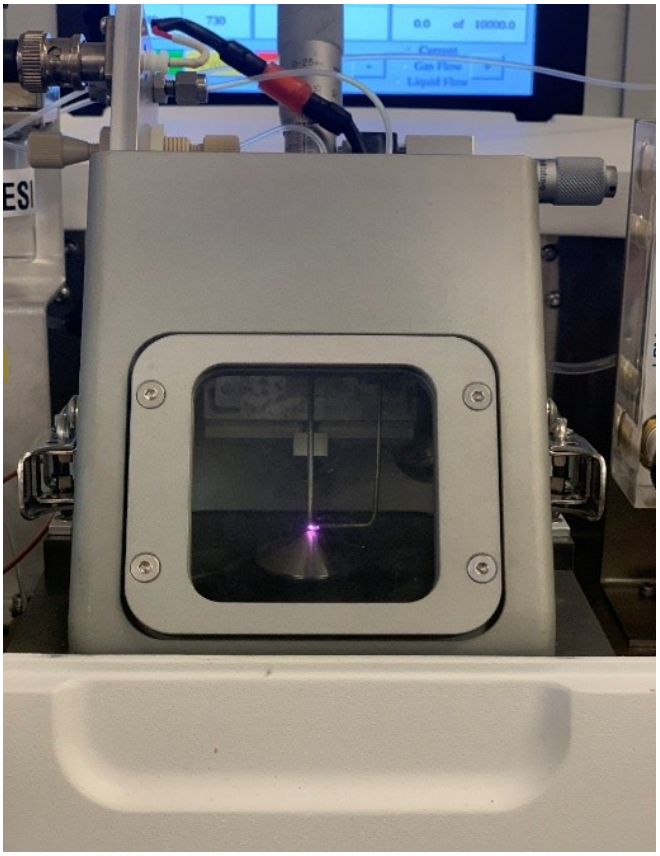

Figure S5: Picture of the LS-APGD fit into the modified ESI housing and interfaced with then interfaced with the CMS.

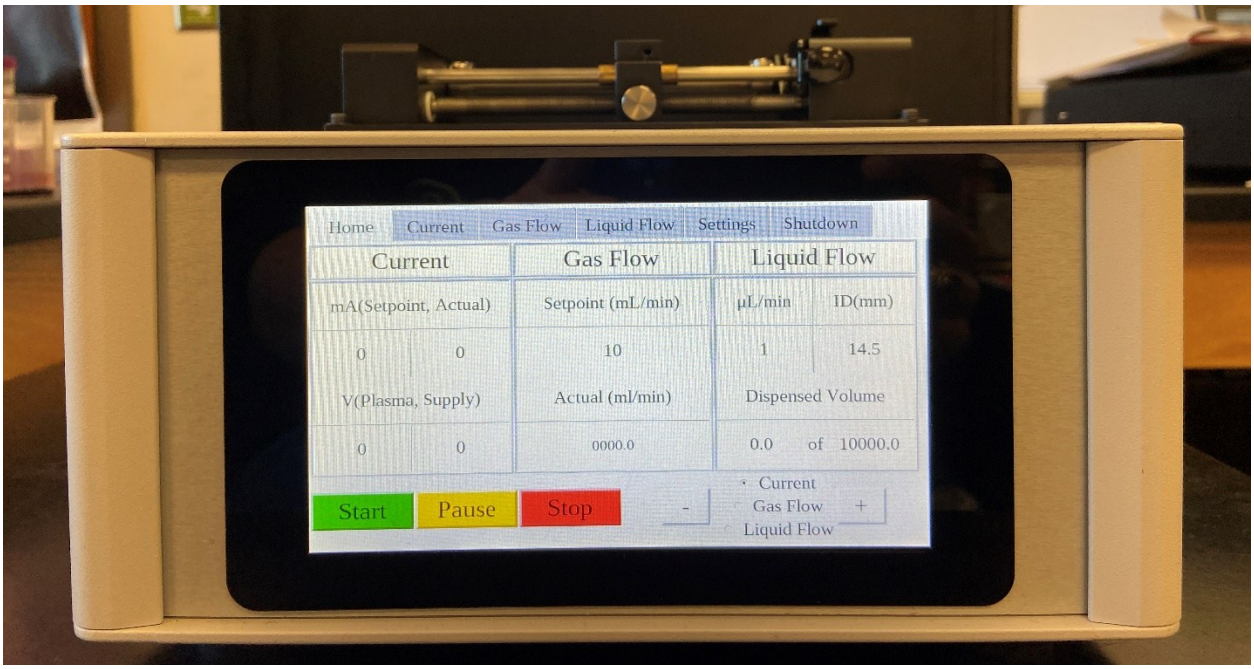

Figure S6: Control box utilized by the LS-APGD. This box controls the discharge current, gas flow, liquid flow, and the auto ignition system. All parameters are controlled through a touch screen interface.