The photoelectric effect was an important gateway into our modern understanding of photons’ wave-particle duality. We set out to verify Planck’s constant and determine the work function of our bulb’s cathode. Using various filters and a swept potential, we were able to measure the current of various wavelengths of light from a mercury lamp over a range of voltages. From this current data, we were able to find the stopping potential, and by running a curve fit over all of the wavelengths and their required energies, we calculated Planck’s constant using the slope and the work function using the intercept. We found Planck’s constant within 6% of the expected value and our cathode’s work function to be within the range of that of silver; oxidized silver was the coating used on the cathode. We thus concluded that the coating on the cathode was the primary factor in determining the work function, rather than the base potassium which had a much smaller work function.