

Figure 1: AuNP and Amino Acid Solutions at Different Theoretical pH Values

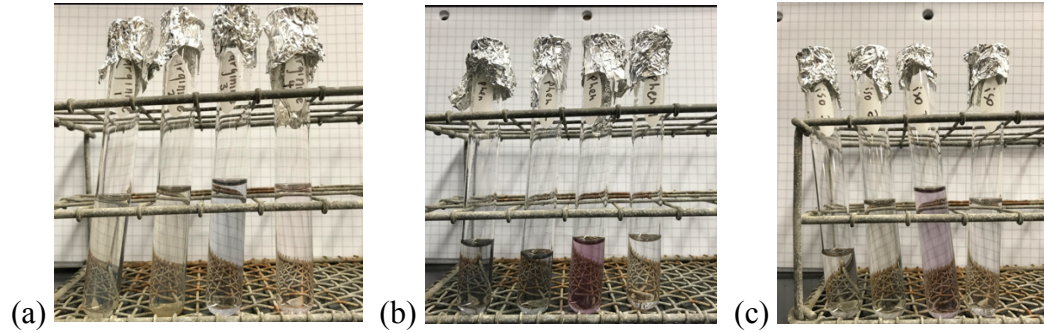


Figure 1 shows the different solutions with the theoretical pH values from table 1. (a) is the four samples that contain arginine. The third tube has a slightly gray hue. The rest of the tubes are completely clear. (b) is the four samples that contain phenylalanine. The third tube has a dark pink hue. The rest of the tubes are completely clear. (c) is the four samples that contain isoleucine. The third tube is a light purple hue. The rest of the tubes are completely clear.

Figure 2: UV/Vis of AuNP and Amino Acid Solutions at Different Theoretical pH Values

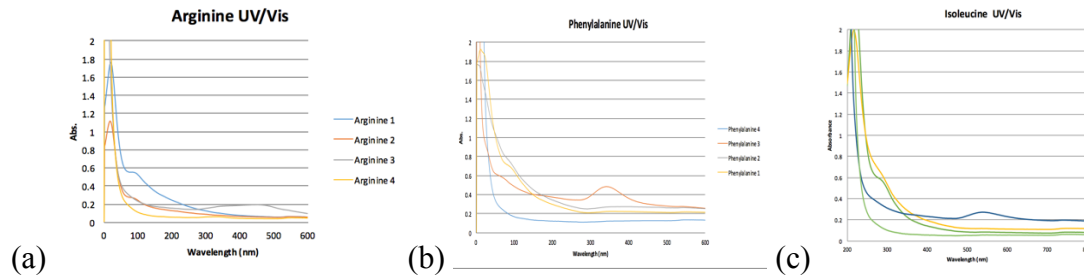


Figure 2 shows the UV/Vis data obtained from the samples with theoretical pH values in a graphical layout. (a) is the UV/Vis data for the four samples containing arginine. There is a slight peak for the line showing sample 3. The peak occurs at 0.2 absorbance and across the wavelength range of 400-500 nm. There were no peaks for any of the other three samples. (b) is the UV/Vis data for the four samples containing phenylalanine. There is a peak for the line showing sample 3. The peak occurs at 0.425 absorbance and at the wavelength 350 nm. There were no peaks for any of the other three samples. (c) is the UV/Vis data for the four samples containing isoleucine. There is a peak for the line showing sample 3. The peak occurs at 0.3 absorbance and at the wavelength 550 nm. There were no peaks for any of the other three samples.