ADDISON TENNEY & MARK FLOOD. Forensic Science program, Fairmont State University, Fairmont, WV 26554. The effect of ultraviolet radiation on latent fingerprint

Fingerprints are unique to every individual, which makes it a great way to scientifically place a person at the scene of the crime. Ultraviolet (UV) rays often begin to degrade biological molecules in different ways. Oils left behind in latent fingerprints can potentially be impacted by exposure to UV light. To test this, porcelain plates with two sets of latent fingerprints (female and male) were put under three different UV lights, UV-A, UV-B, and UV-C, as well as one in an enclosed space (no UV light exposure) as the control. The latent fingerprints were left under the UV lights for varying lengths of time. Then, small particle reagent, which interacts with laten fingerprint oils, was used to develop latent fingerprints. Preliminary results indicate that latent fingerprints under the ultraviolet lights have no changes between having the print under the light for one day, one week, and two weeks. The minutiae quantity and quality were not impacted by exposure to different wavelengths of UV light for the timeframe analyzed. Based on the preliminary results, UV light exposure does not appear to significantly degrade latent prints in the short term (less than 2 weeks). Data is continuing to be analyzed for longer exposure periods as well. This research was made possible by WV Higher Education Policy Commission, STaR Division