MARLEY SNIDER#, and MARK FLOOD, Forensic Science Program, Fairmont State University, Fairmont, WV, 26554**. Extraction of various hair dyes using thin layer chromatography.**

In a forensic case, hair can be an important component in determining a victim, or a suspect involved in a crime. Hair is often one of the most abundant sources of evidence found at a crime scene. Unfortunately, hair without an attached follicle is often useless when it comes to DNA identification. Without a focus in DNA identification, there are other techniques that can be used to compare strands of hair. This experiment utilized thin layer chromatography (TLC) to distinguish between different colors of hair dye. Treated and untreated hairs were placed in test tubes of propan-1-ol. The solvent used to run the TLC plates was composed of a 20:80:1.5 mL ratio of ethyl methyl ketone, chloroform, and ammonia. Extractions from the treated hairs were spotted onto a thin layer chromatography plate. Under visible light, after one washing, the dyes separated on the TLC plates. The process was repeated again after washing the hair multiple times. The technique used confirmed that hair dye could be extracted from hair at a crime scene, as long as the treatment was fresh. The known separated dyes could be compared to similar hairs found at a crime scene.