

THE DETECTION OF EXPLOSIVES EXTRACTED FROM DISPOSABLE GLOVES USING HIGH PERFORMANCE LIQUID CHROMATOGRAPHY, M. A. BREGE, E. B. Wickenheiser\*, Northern Michigan University, Department of Chemistry, Marquette, MI 49855, ewickenh@nmu.edu

Criminals are known to wear protective gloves when preparing unlawful explosive devices, in an effort to conceal fingerprint and DNA evidence. Dinitrotoluene (DNT), a chemical additive present in dynamite, smokeless powders and other explosive formulations, has a low but non-negligible vapor pressure. The absorption ability of DNT vapors by gloves in the proximity of a source of DNT vapor was investigated, in order to constitute the use of disposable gloves containing absorbed DNT being used as supporting evidence in cases involving explosives. High Performance Liquid Chromatography (HPLC) was used to analyze extracted solutions of glove samples exposed to DNT and the results were compared to glove blanks not exposed to DNT. These experiments revealed there to be a detectable amount of DNT in the exposed samples, and no detectable amount of DNT in the blanks. The length of time DNT remained detectable in the gloves after the DNT source was removed was also determined.