



B13 Detection and Identification of Date Rape Drugs Gamma-Hydroxybutyrate (GHB), Flunitrazepam (Rohypnol), Lysergic Acid Diethylamide (LSD), Scopolamine, Diphenhydramine, and Ketamine by Refocused Solid Phase Microextraction High Performance Liquid Chromatography (SPME/HPLC), and Solid Phase Microextraction High Performance Liquid Chromatography Mass Spectrometry (SPME/HPLC/MS)

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The objective of this presentation is to determine if Solid Phase Microextraction (SPME) is an effective extraction technique for drugs used to commit sexual assault. SPME will be coupled to High Performance Liquid Chromatography (HPLC) with Ultraviolet detection. Confirmation of the drugs will be determined by HPLC/MS. Quantitation of the drugs will take place for direct SPME/HPLC/UV, Refocused SPME/HPLC/UV, and SPME/HPLC/MS techniques.

There is an ever-increasing need to provide a faster, cheaper, and safer means of identifying illicit drugs. Research in this area is constantly being devoted for improving detection limits and for the development of analytical devices that are portable and measure samples on-site. The wide acceptance of these faster methods could greatly reduce the drug backlog observed in many private, state, and federal crime labs. Drug detection methods incorporating Solid Phase Microextraction (SPME) offer a potential answer to this problem.

The aim for this project is to develop a rapid and sensitive method for the detection and identification of illicit, thermally labile drugs.

This research will be used to determine if Solid Phase Microextraction coupled with High Performance Liquid Chromatography (SPME/HPLC) by two six-port valves along with a unique refocusing unit is an efficient and effective method of detecting and quantifying thermally labile drugs.

The drugs to be analyzed are Gamma-Hydroxybutyrate (GHB), Flunitrazepam (Rohypnol), Lysergic Acid Diethylamide (LSD), Scopolamine, Diphenhydramine, and Ketamine.

Quantitation of these drugs will be performed by HPLC/UV, SPME/HPLC/UV, Refocused SPME/HPLC/UV, and HPLC/MS.

Drug Facilitated Sexual Assault (DFSA), SPME, HPLC