

“Evaluation of Phenylephrine Extraction Conditions” (15 minutes)

Eric C. Person, Alan Gandler, Shaylene Scott, Nathan Sunderson, and Leonid Vydro  
Fresno State Chemistry/Forensic Science – 2555 E. San Ramon Ave. SB70, Fresno, CA  
93740-8034 (559) 278-2170, [eperson@csufresno.edu](mailto:eperson@csufresno.edu)

Abstract:

This presentation will summarize recent work on developing convenient extraction conditions that will allow the consistent extraction of phenylephrine from case samples. The extraction of phenylephrine is complicated by the presence of a second acid/base group in the molecule. With pKas of 8.9 and 10.1 for the phenol and secondary amine respectively, there is no pH where a significant portion of phenylephrine is present as a neutral species. This work explored possible additions to the aqueous layer as well alternate solvents to facilitate the extraction of a charged phenylephrine species. The use of water-insoluble alkyl alcohols (e.g. n-butyl alcohol) allow for the extraction of phenylephrine under many conditions.