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## **Ion Pairing – A Technique for Cocaine Metabolite Detection**

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Poster Presentation 16

**ION PAIRING - A TECHNIQUE FOR  
COCAINE METABOLITE DETECTION**

Debra J. Feger-Majewski and David N. Bailey\*,  
Department of Chemistry, IWU

An ion-pairing agent, Ammonium Tetrathiocyanato Diammine Chromate (III), commonly called Reinecke Salt, was used in an attempt to extract benzoylecgonine (BE) from an aqueous matrix. BE is one of the main metabolic products formed in the human body after cocaine use. This method involves the formation of ion pairs between BE and the inorganic complexing ion resulting in increased solubility of the ion pair in a non-aqueous solvent. This results in a greatly enhanced sensitivity for the detection of cocaine use. Ultraviolet-Visible spectrophotometry was used to detect optimal extraction conditions. Additional studies are being done to consider possible ionic strength effects and repeatability.