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EXTRACTION OF COCAINE METABOLITE USING REINECKE'S SALT

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Cocaine use and abuse is a major problem and there exists a need to develop a quick and efficient way of detecting cocaine use. This project attempted to accomplish this goal. The main metabolite of cocaine in urine, benzoylecgonine (BE), was extracted from the aqueous phase into an organic solvent using the ion-pairing agent Reinecke salt. The ionic strength of the BE samples was adjusted to 0.01 *M* using lithium nitrate, the pH was adjusted to 1.00 with nitric acid and the ion-pairing agent was added before extraction with dichloromethane. After extraction, the dichloromethane extracts were placed in a Ultraviolet-Visible spectrophotometer and the absorbance of the extracts was measured as a function of the concentration of the initial BE solution. A linear absorbance versus concentration curve was found for the 10-50 $\mu\text{g/mL}$ concentrations; however, at concentrations below 10 $\mu\text{g/mL}$ the results were very erratic and irreproducible. Future work might include adjusting conditions to obtain the greater sensitivity needed to make the technique useful at physiologically significant concentrations.