

DRUG CHEMISTRY SECTION TECHNICAL PROCEDURE MANUAL		
Procedure D-13	Extraction and Separations Separation of Cocaine Hydrochloride and Lidocaine Hydrochloride	
Effective Date:	November 20, 2006	Page 1 of 2

**Name of Procedure:**

Extractions and Separation  
Separation of Cocaine Hydrochloride and Lidocaine Hydrochloride

**Suggested Uses:**

This procedure is used to separate mixtures of cocaine hydrochloride and lidocaine hydrochloride in order to isolate cocaine for infrared analysis. Various sugars and other water soluble diluents do not interfere with the separation.

**Apparatus Needed to Perform Procedure Including Preparation of Reagent:**

Fume hood  
Gloves  
Eye protection  
Laboratory coat  
Acetone  
Ethyl ether  
Sodium Sulfate, anhydrous  
Sodium Bicarbonate  
pH Test paper  
Reagent bottles  
Spatulas, small  
Glass stirring rods  
Filter paper  
Small beakers

**Application of Procedure on Evidence:**

1. Place 10-200 milligrams of powder on filter paper over a beaker and wash sample with 5-15 milliliters of acetone. If no diluents are present in the sample, remove cocaine hydrochloride from the filter paper for further analysis.
2. For samples diluted with sugars or other related material, place the filter paper over another beaker and wash the residue through with 5 milliliters of water.
3. Add sodium bicarbonate to the filtrate until the solution is basic and extract with 5-10

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milliliters of ethyl ether. Evaporate ether to give cocaine base.

**Safety Concerns:**

Acetone and ethyl ether are extremely flammable.

**Literature References:**

Shriner, R. L., Fuson, R. C., Curtin, D. Y., **The Systematic Identification of Organic Compounds**, 5th Ed., Wiley and Sons, New York, 1964, pp. 67-85.