

Drug Chemistry Section
Drug Chemistry Procedure Manual
Effective date: September 1, 1996

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

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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.