Name of Procedure:

Extractions and Separations
Separation of Methamphetamine Hydrochloride and Dimethyl Sulfone

Suggested Uses:

This procedure is used to separate methamphetamine and dimethyl sulfone in order to identify methamphetamine hydrochloride.

Apparatus Needed to Perform Procedure Including Preparation of Reagent:

Fume hood
Eye protection
Gloves
Laboratory coat
Ethyl Ether
Acetone
Chloroform
Methanol
Small beaker
Filter paper
Steam bath or other heat source

Application of Procedure on Evidence:

1. Place 10-20 milligrams of methamphetamine/dimethyl sulfone sample in a piece of filter paper over a small beaker.

2. Wash mixture with ethyl ether and discard used solvent.

3. Wash mixture with acetone and discard used solvent (unless infrared of dimethyl sulfone is desired.)

4. Wash mixture with chloroform and evaporate solvent over heat source, yielding the methamphetamine hydrochloride.

Safety Concerns:

Ethyl ether and acetone are extremely flammable solvents. Chloroform should be used in a well ventilated area or under a fume hood.

Other:

Methamphetamine can be further purified using methanol and ethyl ether.

Literature References:

Moriwaki, W. and Lee, M., "Analytical Note Dimethyl Sulfone in Methamphetamine Exhibits", **MICROGRAM**, Vol. XXIX, No. 3, March 1996, pp. 58-60.

NOTE: This article states that the methamphetamine is present in the acetone layer. Actually it is present in the chloroform layer.