

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

Name of Procedure:

Extractions and Separations
Extraction of Anabolic Steroids from Vegetable Oils

Suggested Uses:

This procedure is used to isolate anabolic steroids from various vegetable oil preparations.

Apparatus Needed to Perform Procedure Including Preparation of Reagent:

Fume hood
Eye protections
Laboratory coat
Gloves
Methanol
Heptane
Hexane
Reagent bottles
Disposable syringe with needle
Beakers
Pipets, glass, disposable
Rubber bulbs
Heat source
Nitrogen gas source
Centrifuge, Hamilton Bell, Vanguard V6000
Centrifuge tubes, 15ml polypropylene

Application of Procedure on Evidence:

1. Withdraw 1 milliliter of oil using a syringe and transfer the oil to a centrifuge tube.
2. Add 2 milliliters of heptane or hexane and mix well.
3. Add 1 milliliter of methanol and mix well.
4. Centrifuge for 2-3 minutes to separate the layers.
5. Transfer the methanol layer to a small beaker and evaporate methanol using a steam bath or warm heating device and nitrogen.

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Safety Concerns:

Methanol, hexane and heptane are flammable.

Literature References:

Chiong, D. M., Consuegra-Rodrigues, E., Almirall, J. R., "The Analysis and Identification of Steroids", **Journal of Forensic Science**, Vol, 37, No. 37, March, 1992, pp. 488-502.

Clark, C. C., "The GLC Quantitation of Some Anabolic Steroids in Vegetable Oil Preparations", **MICROGRAM**, Vol. XXV, No. 10, October 1992, pp. 255-268.