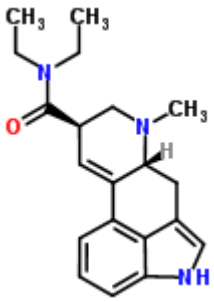
1. LYSERGIC ACID DIETHYLAMIDE (LSD)

A. Structure, Empirical Formula, Molecular Weight



Lysergic Acid Diethylamide (LSD)
$C_{20}H_{25}N_3O$
MW 323.4

B. Synonyms: 9,10-didehydro-N,N-diethyl-6-methyl-ergoline-8β-carboxamide, lysergide, LSD, acid, d-lysergic acid diethylamide

C. Trade Names: NA

D. Drug Action: Hallucinogen

E. Common pharmaceutical/street forms: No medicinal use in the U.S.A. Most commonly distributed on perforated blotter paper, usually with highly colored designs. It is also found in liquid form, on sugar cubes, candy, “microdots”, or gelatin tabs.

F. Solubility: Methanol, ethanol, water

G. Extraction:

(1) Dry extraction from blotter paper: Cut at least one-half of one piece of blotter paper into very small pieces and place in a minimal amount of C15 methanol.

(2) Dry extraction from candy or sugar cube

(a) Dissolve candy or sugar in C15 methanol.

(b) Filter to remove any insoluble material if necessary.

(3) Dry extraction from gelatin tabs

(a) Soak 2 or 3 gelatin tabs in 2-3 milliliters of 0.1 N HCl for 30-60 minutes, vortexing frequently, or until the tabs become soft and get a “furry” look.

(b) Decant the acid solution to a clean test tube and basify with conc. NH_4OH.

(c) Extract twice with dichloromethane (methylene chloride) or $CHCl_3$ to dissolve the LSD into the organic layer. Centrifuge if an emulsion forms.

(d) Evaporate the extract solution and take up the residue in methanol for Van Urk’s test and spotting TLC plates. Take up the residue in C15 methanol for GC/MS analysis.

H. Chemical indicator tests:

(1) Van Urk’s: Purple

I. Ultraviolet longwave: Fluorescent

J. TLC:

(1) Mobile Phase:

(a) System 1: Acetone:methanol (80:20)

(b) System 2: Acetone:methanol:conc. ammonium hydroxide (50:50:1.5)

Note: System 2 must be prepared fresh just prior to use. Prepare the acetone/methanol mixture. Add the concentrated ammonium hydroxide and mix thoroughly.

(2) Locator: Acidified iodoplatinate, Dragendorff reagent, Marquis reagent, Van Urk’s reagent

K. GC/MS: Analyze using “Drugs3” program.

Note: GC/MS analysis should be compared to current LSD and LAMPA standards.

L. Comments: LSD will not give a positive Van Urk’s test if it is in the form of gelatin tabs. Any LSD present in the gelatin tabs must first be extracted in order to use this color test.

M. Report as: Lysergic acid diethylamide (LSD), a dangerous drug.

Example:

Lysergic acid diethylamide (LSD) a dangerous drug in a usable condition. 12 units as received.

N. References:

(1) Heagy, J., Moriwaki, W., Chan, K., LSD Extraction from 'Blotter' Paper, Microgram, Vol. XXVIII, No. 3, March 1995, pp. 85-88.