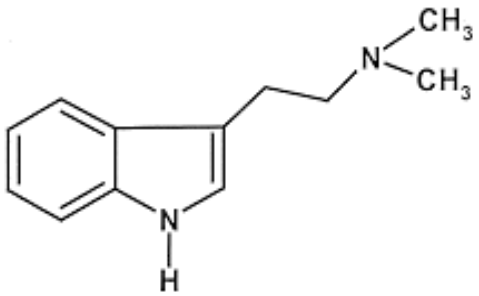
N,N-DIMETHYLTRYPTAMINE

Latest Revision: June 30, 2000



1. SYNONYMS

CFR: Dimethyltryptamine

CAS #: Base: 61-50-7

Other Names: 3-(2-dimethylaminoethyl)indole

2. CHEMICAL AND PHYSICAL DATA

2.1. CHEMICAL DATA

Form	Chemical Formula	Molecular Weight	Melting Point (°C)
Base	$C_{12}H_{16}N_2$	188.3	44-47

2.2. SOLUBILITY

Form	A	C	E	H	M	W
Base	***	S	***	***	S	***

A = acetone, C = chloroform, E = ether, H = hexane, M = methanol and W = water, VS = very soluble, FS = freely soluble, S = soluble, PS = sparingly soluble, SS = slightly soluble, VSS = very slightly soluble and I = insoluble

Note: Dimethyltryptamine is soluble in dilute mineral acids and organic acids.

3. SCREENING TECHNIQUES

3.1. COLOR TESTS

REAGENT	COLOR PRODUCED
Van Urk's	Blue/violet

3.2. THIN LAYER CHROMATOGRAPHY

Visualization

Van Urk's reagent

COMPOUND	Relative R_f System TLC 18
dimethyltryptamine	1.0
diethyltryptamine	1.9

3.3. GAS CHROMATOGRAPHY

Method DMT-GCS1

Instrument: Gas chromatograph operated in split mode with FID

Column: 5% phenyl/95% methyl silicone 12 m x 0.2 mm x 0.33 µm film thickness

Carrier gas: Helium at 1.0 mL/min

Temperatures: Injector: 270°C
Detector: 280°C
Oven program:
1) 175°C initial temperature for 1.0 min
2) Ramp to 275°C at 15°C/min
3) Hold final temperature for 3.0 min

Injection Parameters: Split Ratio = 60:1, 1 µL injected

Samples are to be dissolved in 4:1 chloroform: methanol and filtered.

COMPOUND	RRT	COMPOUND	RRT
amphetamine	0.22	ketamine	1.18

methamphetamine	0.24	diphenhydramine	1.21
aspirin Breakdown 1	0.24	lidocaine	1.23
aspirin Breakdown 2	0.27	theophylline	1.41
nicotinamide	0.32	aspirin breakdown 5	1.43
ephedrine	0.37	chlorpheniramine	1.51
phenylpropanolamine	0.37	procaine	1.56
pseudoephedrine	0.37	cocaine	1.95
aspirin breakdown 3	0.44	triprolidine	2.07
3,4-MDMA	0.54	tetracosane	2.24
aspirin Breakdown 4	0.56	codeine	2.34
benzocaine	0.59	morphine	2.42
guaifenesin	0.74	hydrocodone	2.47
acetaminophen	0.76	hydromorphone	2.49
dimethyltryptamine	**1.00 (2.62 min)**	oxycodone	2.62
caffeine	1.00	heroin	2.84

4. SEPARATION TECHNIQUES

Generally, this compound is found in tablet form. Because the tableting material is usually chloroform insoluble, the sample can be washed with chloroform to yield dimethyltryptamine. Interference from precursor material, intermediates and by-products may require a simple liquid-liquid extraction. Suspend the sample in 1 M sodium bicarbonate solution and extract the free base with chloroform. The organic layer can then be evaporated for analysis.

5. QUANTITATIVE PROCEDURES

5.1. GAS CHROMATOGRAPHY

Method DMT-GCQ1

Internal Standard Stock Solution:
0.40 mg/mL dibutylphthalate in chloroform.

Standard Solution Preparation:
Accurately weigh and prepare a standard solution of dimethyltryptamine base at approximately 1.0 mg/mL using above internal standard stock solution. Wash with dilute sodium carbonate solution and filter through

cotton.

Sample Preparation:
Accurately weigh an amount of sample into a volumetric flask and dilute with internal standard stock solution. If necessary, dilute the sample so the final concentration approximates the standard concentration or falls within the linear range. Wash with dilute sodium carbonate solution and filter through cotton.

Instrument:	Gas chromatograph operated in split mode with FID
Column:	5% phenyl/95% methyl silicone 15 m x 0.32 mm x 0.25 µm film thickness
Carrier gas:	Helium at 1.1 mL/min
Temperatures:	Injector: 275°C Detector: 280°C Oven: 220°C
Injection Parameters:	Split Ratio = 50:1, 1 µL injected
Typical Retention Time:	Dimethyltryptamine: 1.85 min Dibutylphthalate: 2.33 min
Linear Range:	0.05 - 2.00 mg/mL
Repeatability:	RSD less than 1.0%
Correlation Coefficient:	0.999
Accuracy:	Error less than 5%

COMPOUND	RRT
indole	0.65
dimethyltryptamine	**1.00 (1.85 min)**
dibutylphthalate	1.23
diethyltryptamine	1.26
dipentylphthalate	1.81
harmaline	2.05
harmine	2.25

6. QUALITATIVE DATA

See spectra on the following pages for FT-IR, Mass Spectrometry, and Nuclear Magnetic Resonance.

7. REFERENCES

Budavari, S., *The Merck Index, 12th Edition*, Merck and Co., Inc., 1996.

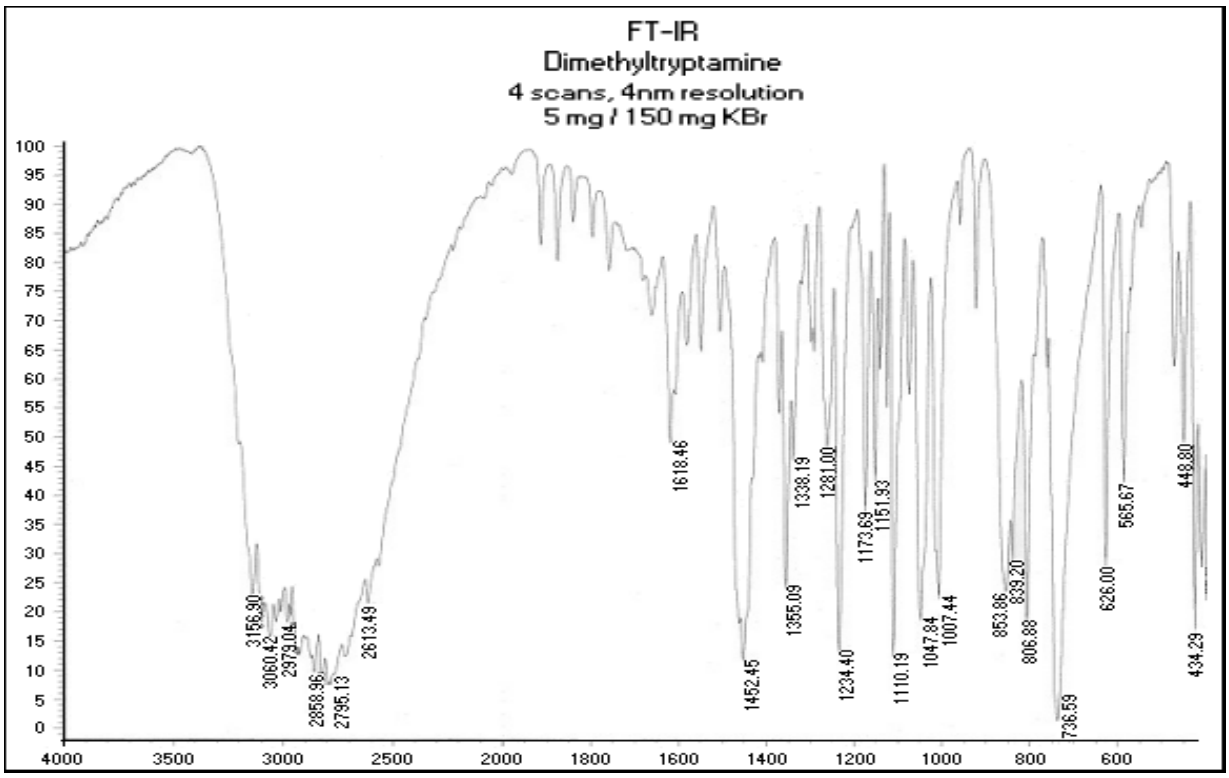
Clarke, E.G.C., *Isolation and Identification of Drugs, 2nd Edition*, The Pharmaceutical Press, 1986.

Speeter, M.E. and Anthony, W.C., *J. Am. Chem. Soc.*, 76, 1954, 6208-6210.

8. ADDITIONAL RESOURCES

Forendex

Wikipedia


FT-IR
Dimethyltryptamine
4 scans, 4nm resolution
5 mg / 150 mg KBr
3156.30
3060.42
2979.04
2858.96
2795.13
2613.49
1618.46
1452.45
1355.09
1338.19
1281.00
1234.40
1173.63
1151.93
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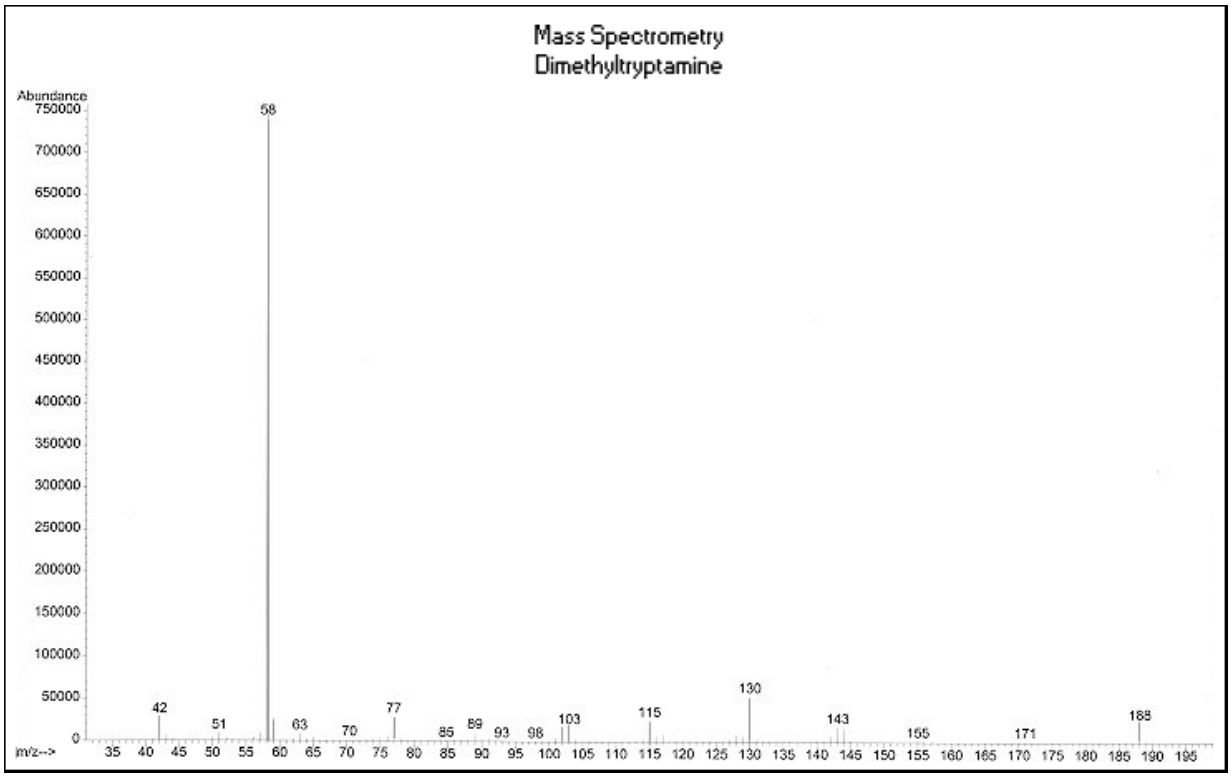
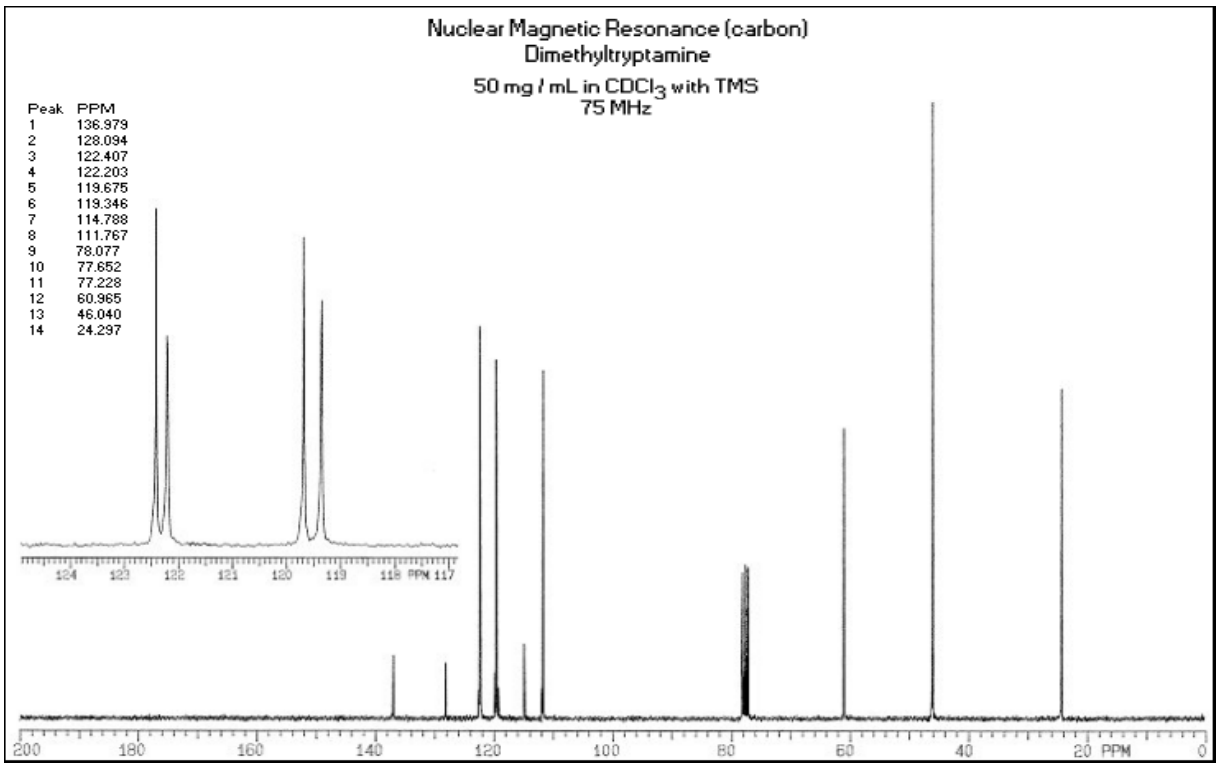
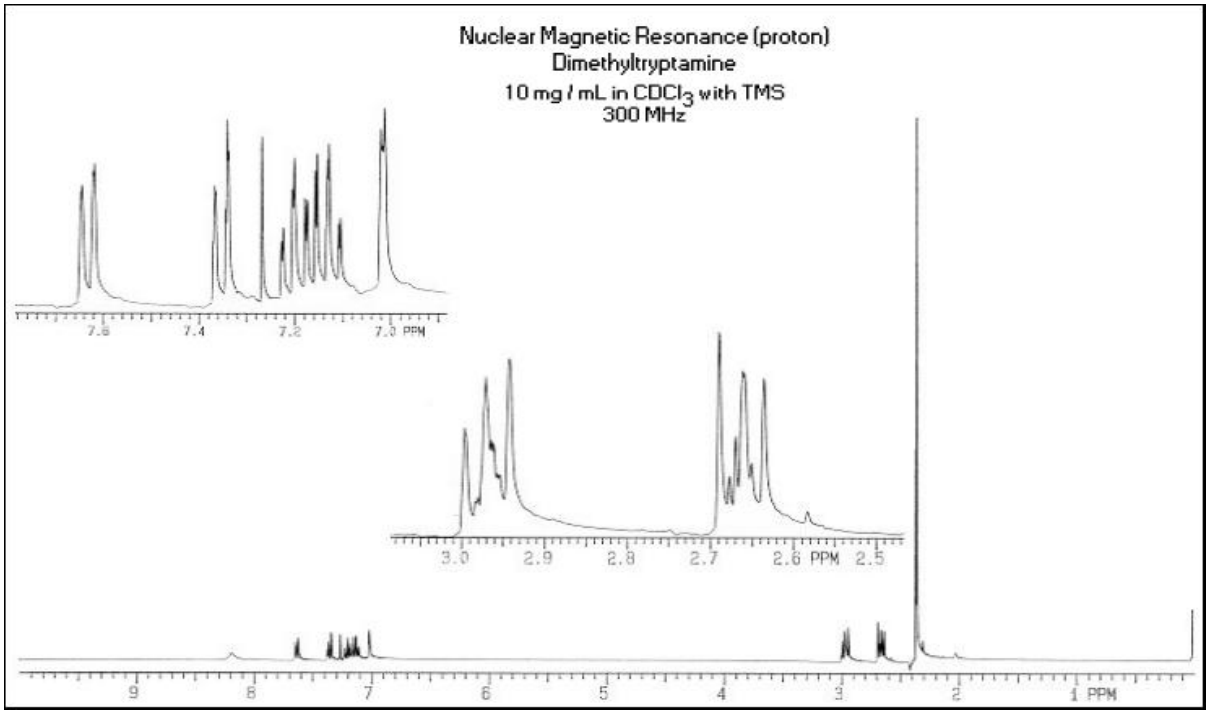

Mass Spectrometry
Dimethyltryptamine
Abundance
m/z-->





***No Data Available