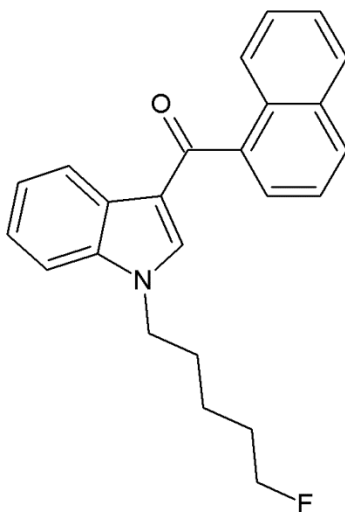




AM2201

The Drug Enforcement Administration's Special Testing and Research Laboratory generated this monograph using structurally confirmed reference material.



1. GENERAL INFORMATION

IUPAC Name:	[1-(5-fluoropentyl)-1H-indol-3-yl](naphthalen-1-yl)methanone
CAS #:	335161-24-5
Synonyms:	1-(5-fluoropentyl)-3-(1-naphthoyl)indole
Source:	DEA Reference Material Collection
Appearance:	White powder
UV_{max}:	218.1, 314.0

2. CHEMICAL AND PHYSICAL DATA

2.1 CHEMICAL DATA

Form	Chemical Formula	Molecular Weight	Melting Point (°C)
Base	C ₂₄ H ₂₂ FNO	359	93.7



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3. QUALITATIVE DATA

3.1 NUCLEAR MAGNETIC RESONANCE

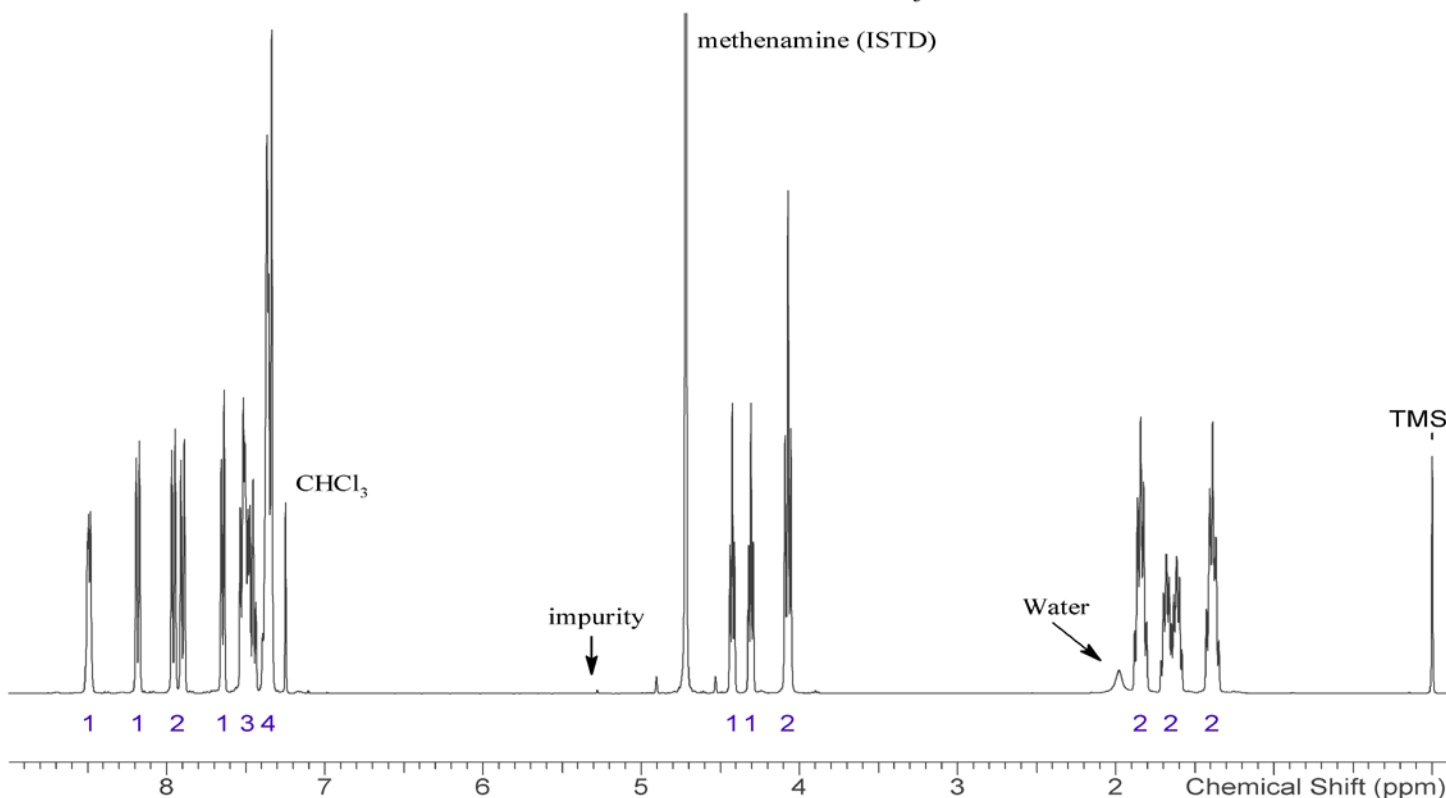
Method NMR $CDCl_3$

Sample Preparation: Dilute analyte to ~10 mg/mL in deuteriochloroform ($CDCl_3$) containing TMS for 0 ppm reference and methenamine as quantitative internal standard.

Instrument: Varian Mercury 400 MHz NMR spectrometer with proton detection probe

Parameters: Spectral width: at least containing -3 ppm through 13 ppm
Pulse angle: 90°
Delay between pulses: 45 seconds
Number of scans (NT): 8
Number of steady state scans: 0
Oversampling: 4 or more
Shimming: automatic gradient shimming of Z1-4 shims
Phasing, Drift Correction: automatic or manual

1H NMR: AM2201 Lot SF0006; $CDCl_3$; 400 MHz



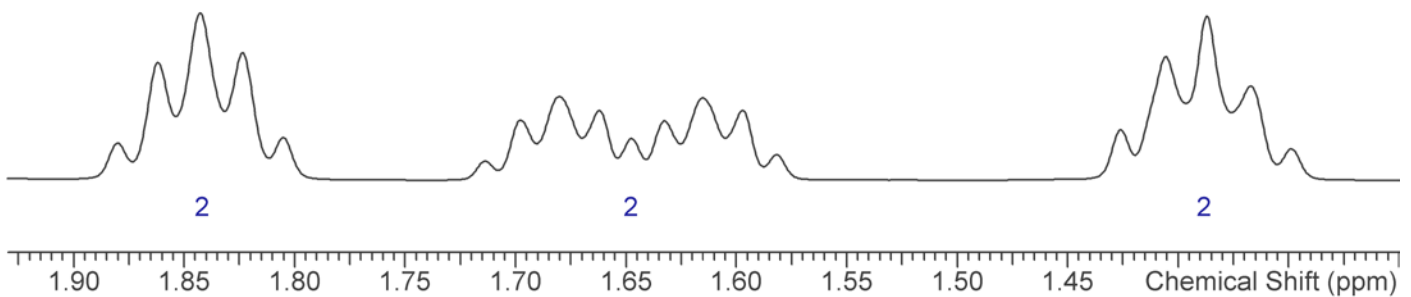
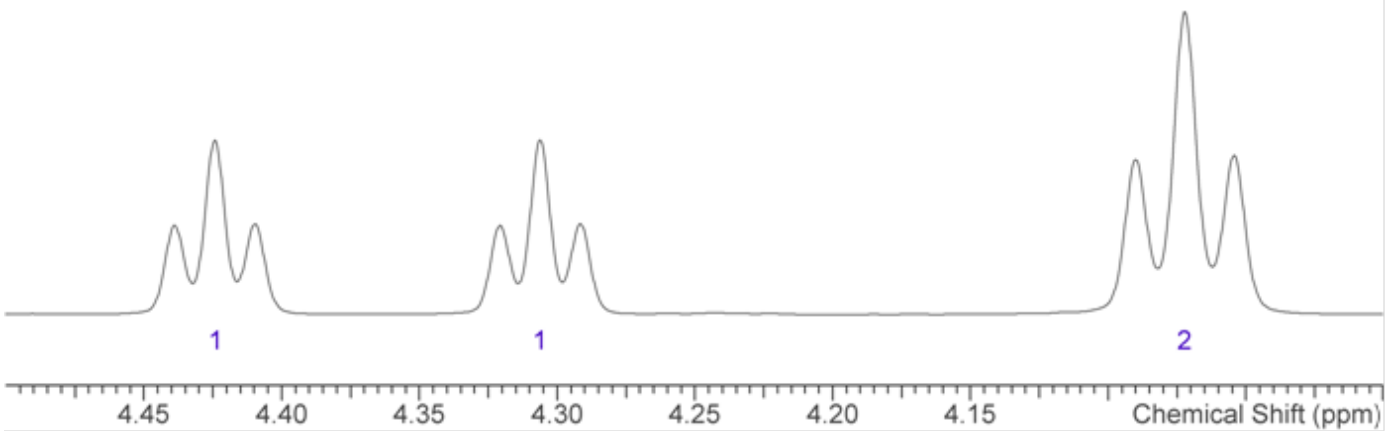
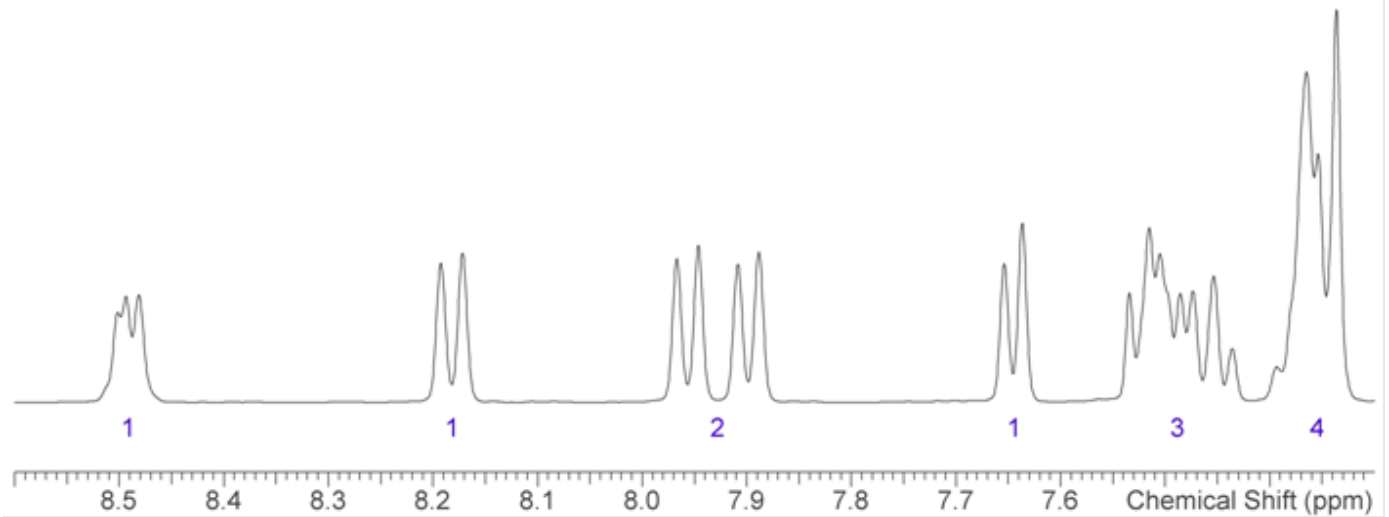


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^1H NMR: AM2201 Lot SF0006; CDCl_3 ; 400 MHz





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3.2 GAS CHROMATOGRAPHY/MASS SPECTROMETRY

Sample Preparation: Dilute analyte to ~1 mg/mL in MeOH.

Instrument: Gas chromatograph operated in split mode with MS detector

Column: DB-1 MS or equivalent; 30m x 0.25mm x 0.25 μ m

Carrier Gas: Helium at 1 mL/min

Temperatures:
Injector: 280°C
MSD transfer line: 280°C
MS Source: 230°C
MS Quad: 150°C

Oven program:

- 1) 100°C initial temperature for 1.0 min
- 2) Ramp to 300°C at 12°C/min
- 3) Hold final temperature for 9.0 min

Injection Parameters: Split Ratio = 25:1, 1 μ L injected

MS Parameters: Mass scan range: 30-550 amu

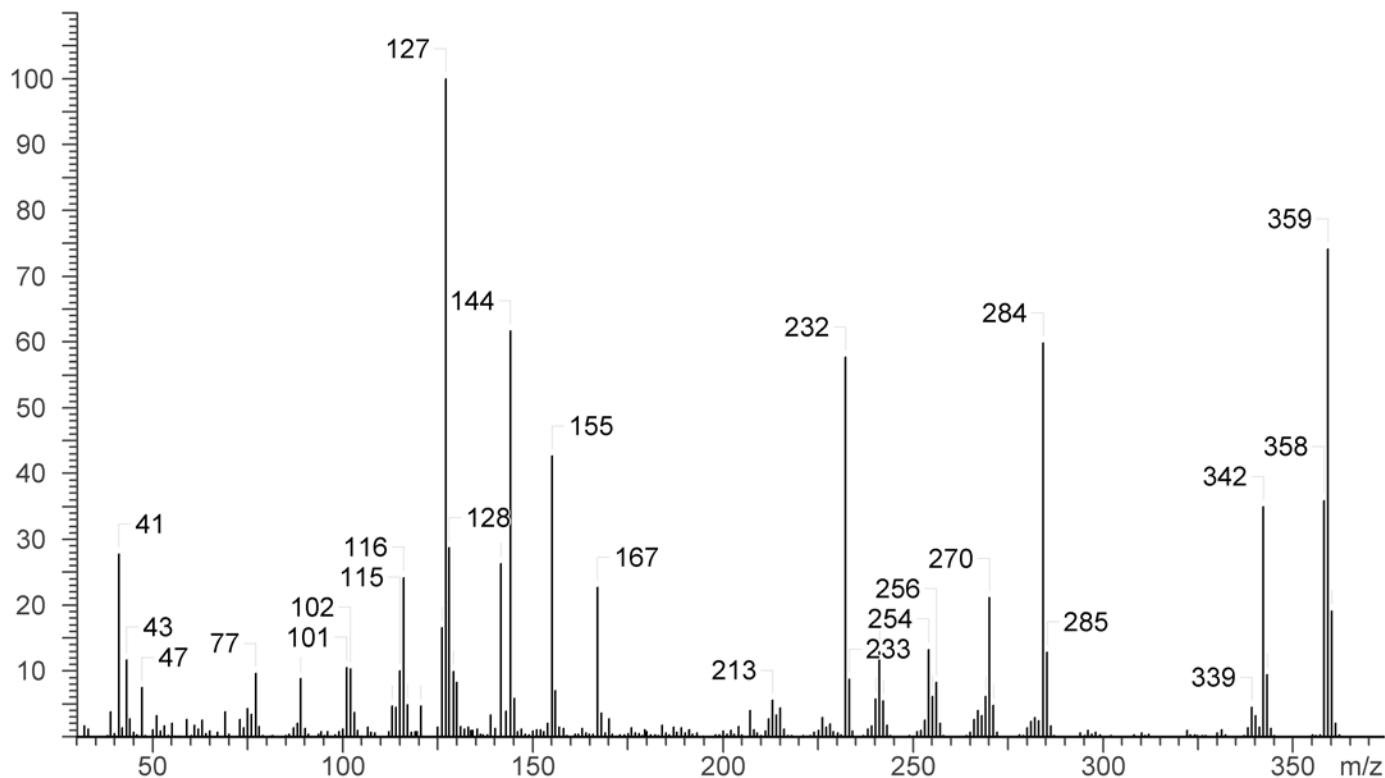
Threshold: 100

Tune file: stune.u

Acquisition mode: scan

Retention Time: 21.093 minutes

EI Mass Spectrum: AM2201 Lot SF0006





AM2201

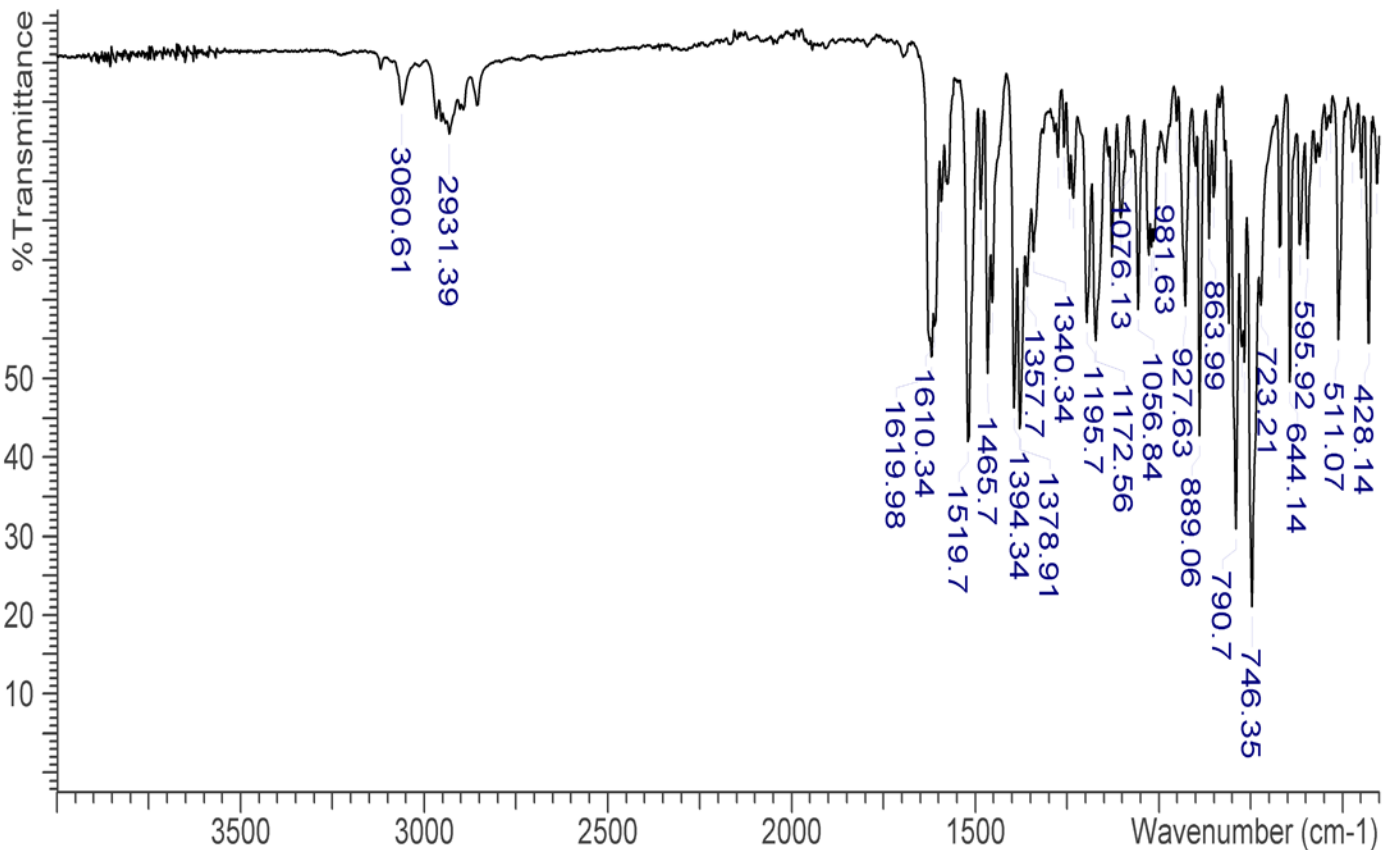


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3.3 INFRARED SPECTROSCOPY (FTIR)

Instrument: FTIR with diamond ATR attachment (3 bounce)
Scan Parameters: Number of scans: 32
Number of background scans: 32
Resolution: 4cm^{-1}
Sample gain: 8
Aperture: 150

FTIR ATR (Diamond, 3 bounce): AM2201 Lot SF0006



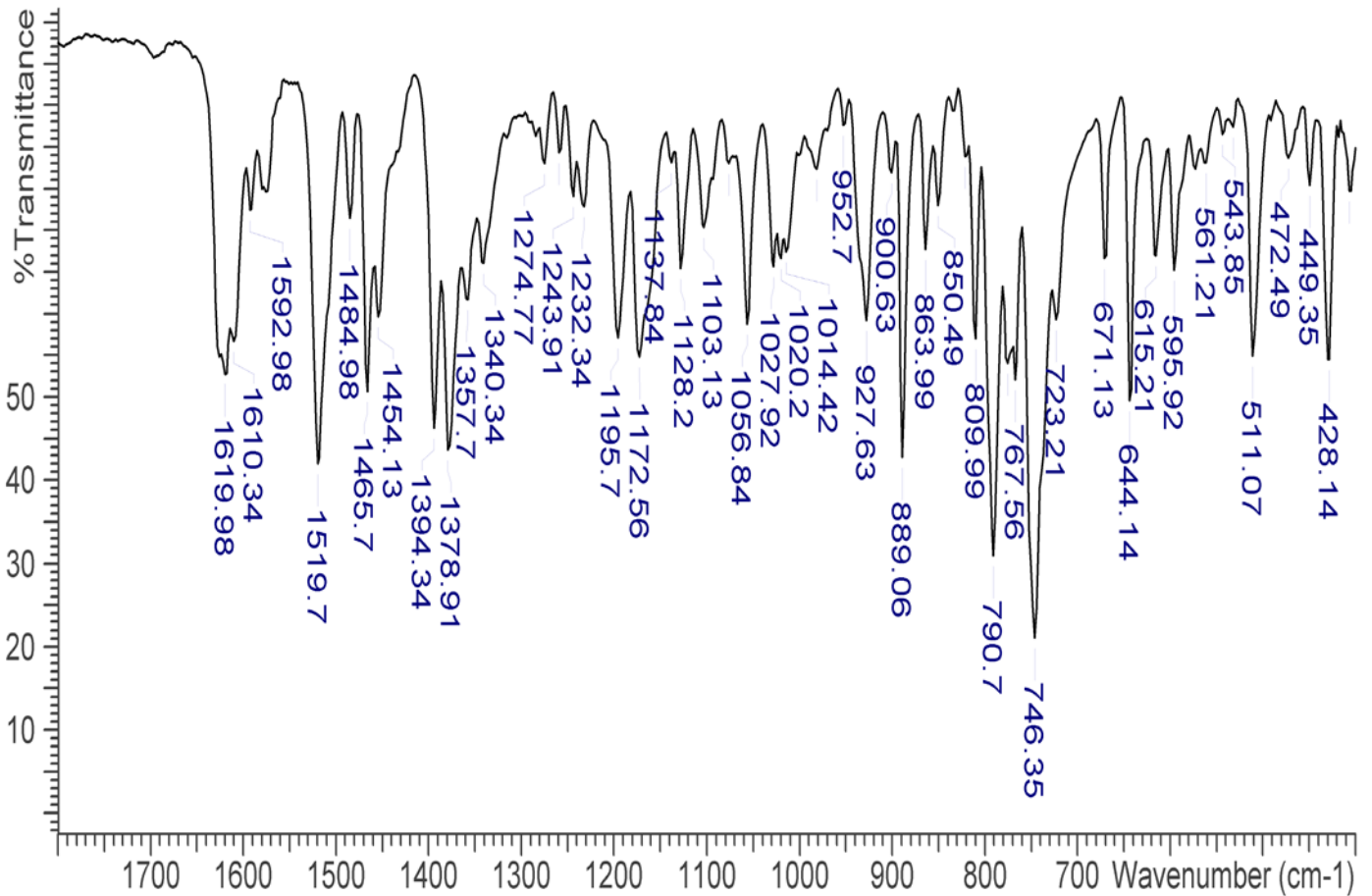


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FTIR ATR (Diamond, 3 bounce): AM2201 Lot SF0006



4. ADDITIONAL RESOURCES

[Forendex](#)

[Wikipedia](#)