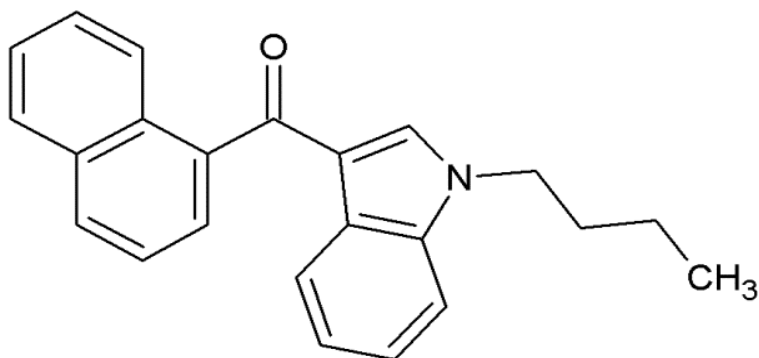




JWH-073



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



1. GENERAL INFORMATION

IUPAC Name:	1-Butyl-3-(1-naphthoyl)indole
CAS #:	208987-48-8
Synonyms:	Not Determined
Source:	DEA Reference Material Collection
Appearance:	White powder
UV_{max}:	Not Determined

2. CHEMICAL AND PHYSICAL DATA

2.1 CHEMICAL DATA

Form	Chemical Formula	Molecular Weight	Melting Point (°C)
Base	C ₂₃ H ₂₁ NO	327	99.8



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3. QUALITATIVE DATA

3.1 NUCLEAR MAGNETIC RESONANCE

Method NMR CDCl₃

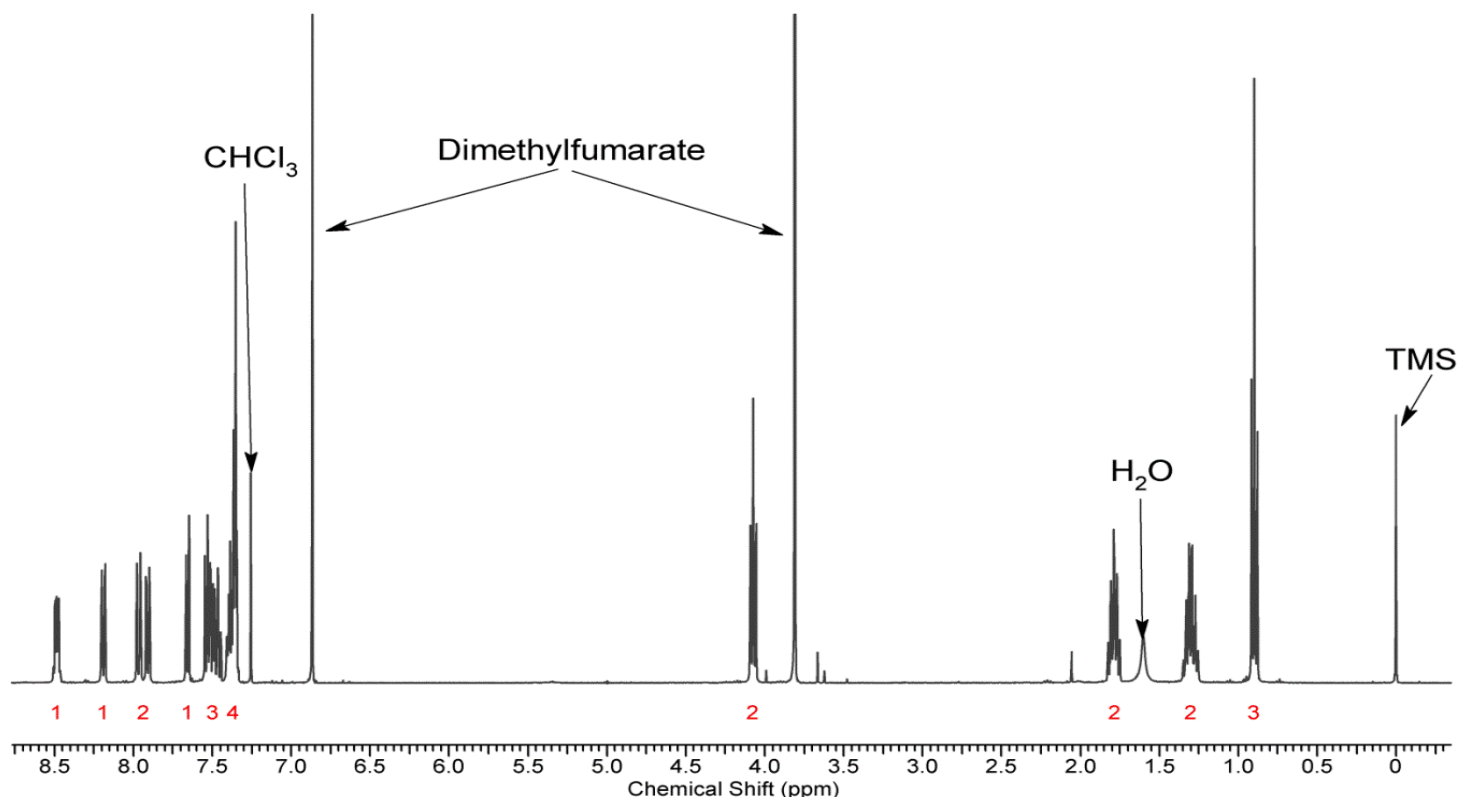
Sample Preparation: Sample diluted to ~10 mg/mL in deuteriochloroform (CDCl₃) containing TMS for 0 ppm reference and dimethylfumarate as quantitative ISTD

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: JWH-073 Lot # 0409793-37 CDCl₃, 400MHz



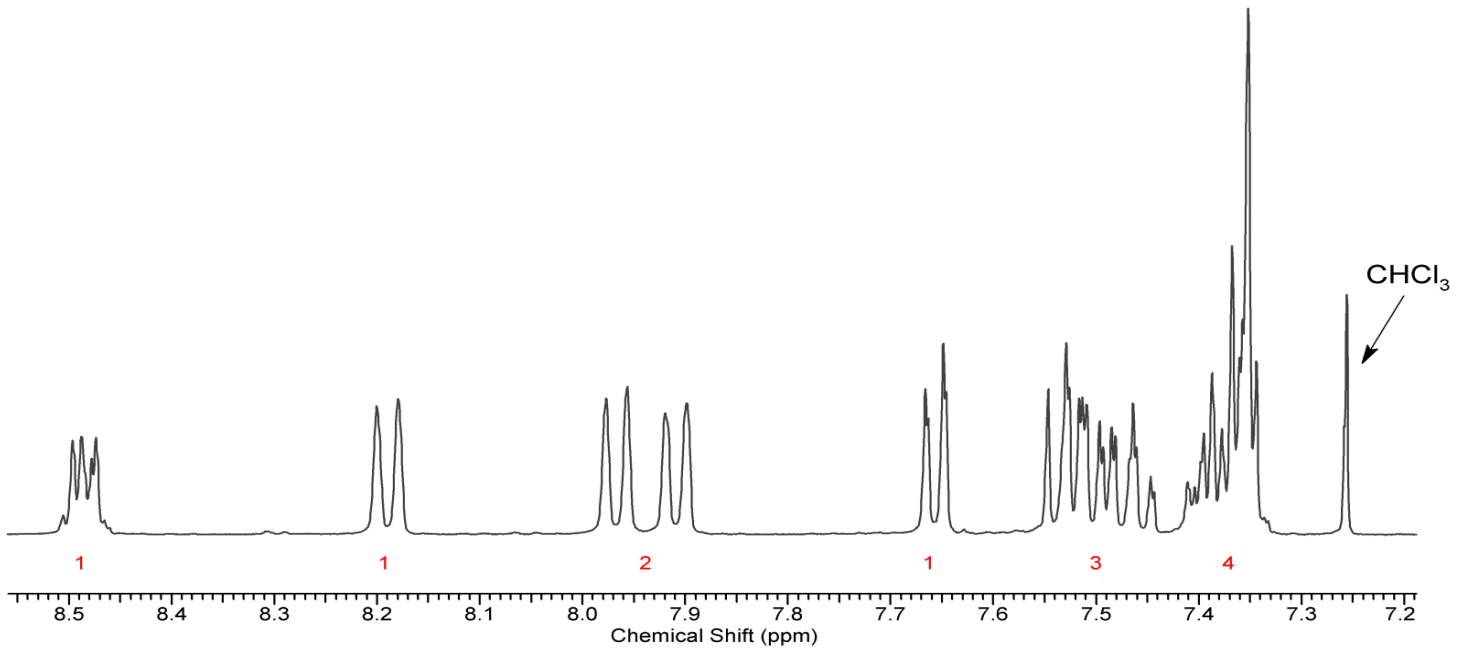
¹H NMR: JWH-073 Lot # 0409793-37 CDCl₃, 400MHz



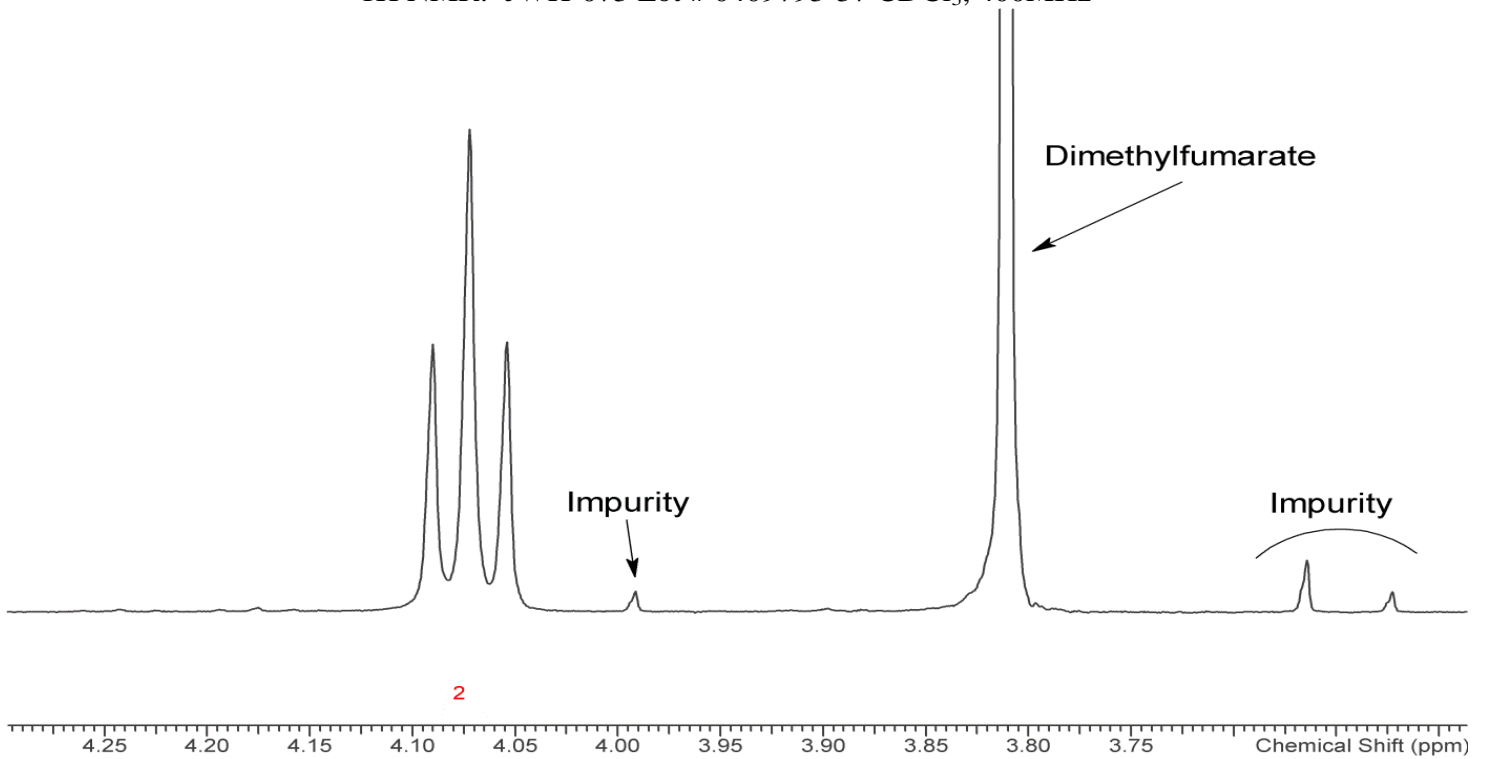
JWH-073



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1H NMR: JWH-073 Lot # 0409793-37 CDCl₃, 400MHz

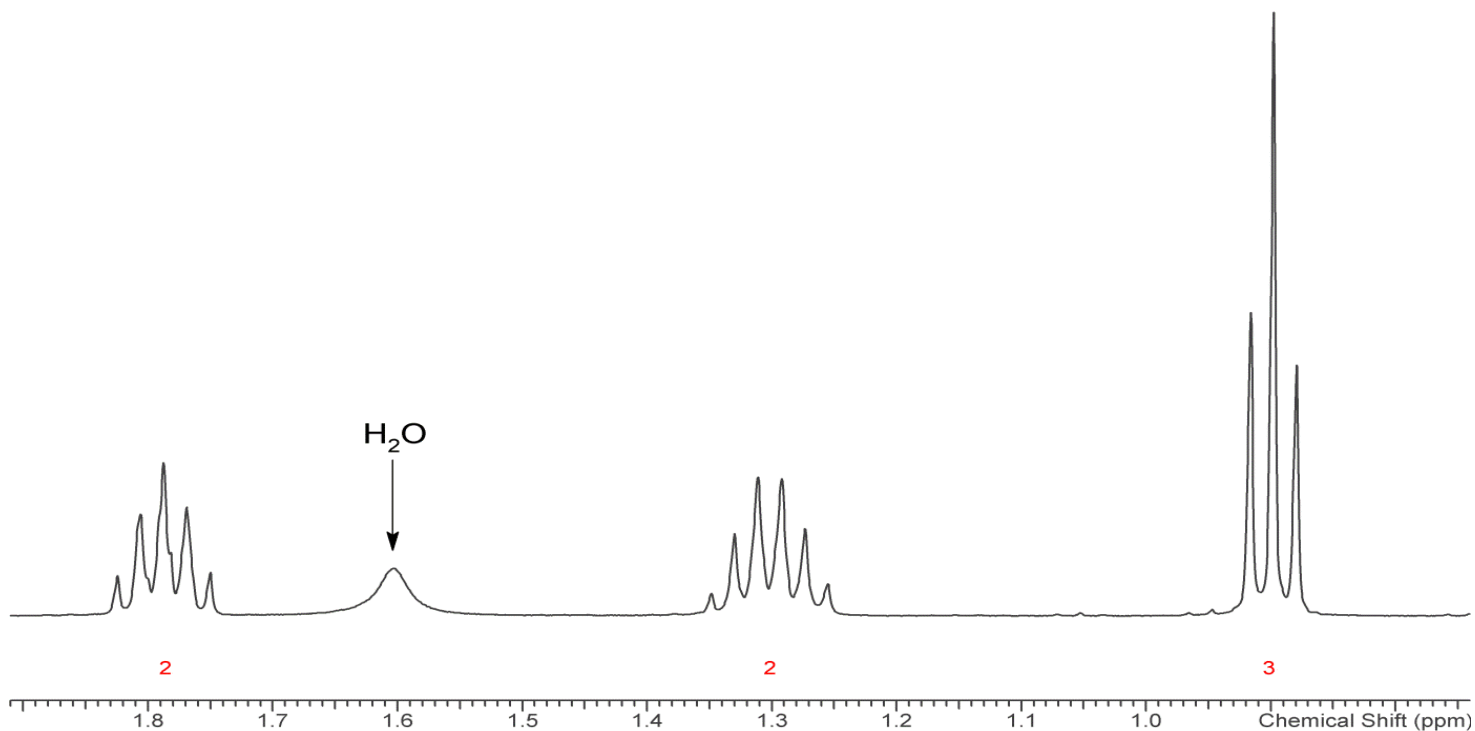


1H NMR: JWH-073 Lot # 0409793-37 CDCl₃, 400MHz



JWH-073

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3.2 GAS CHROMATOGRAPHY/MASS SPECTROMETRY

Sample Preparation: Dilute to ~4 mg/mL in CHCl₃.

Instrument: Gas chromatograph operated in split mode with MS detector

Column: DB-1 MS; 30m x 0.25mm x 0.25µm

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 µL injected

MS Parameters:
Mass scan range: 34-550 amu
Threshold: 100
Tune file: stune.u
Acquisition mode: scan

Retention Time: 20.016 minutes

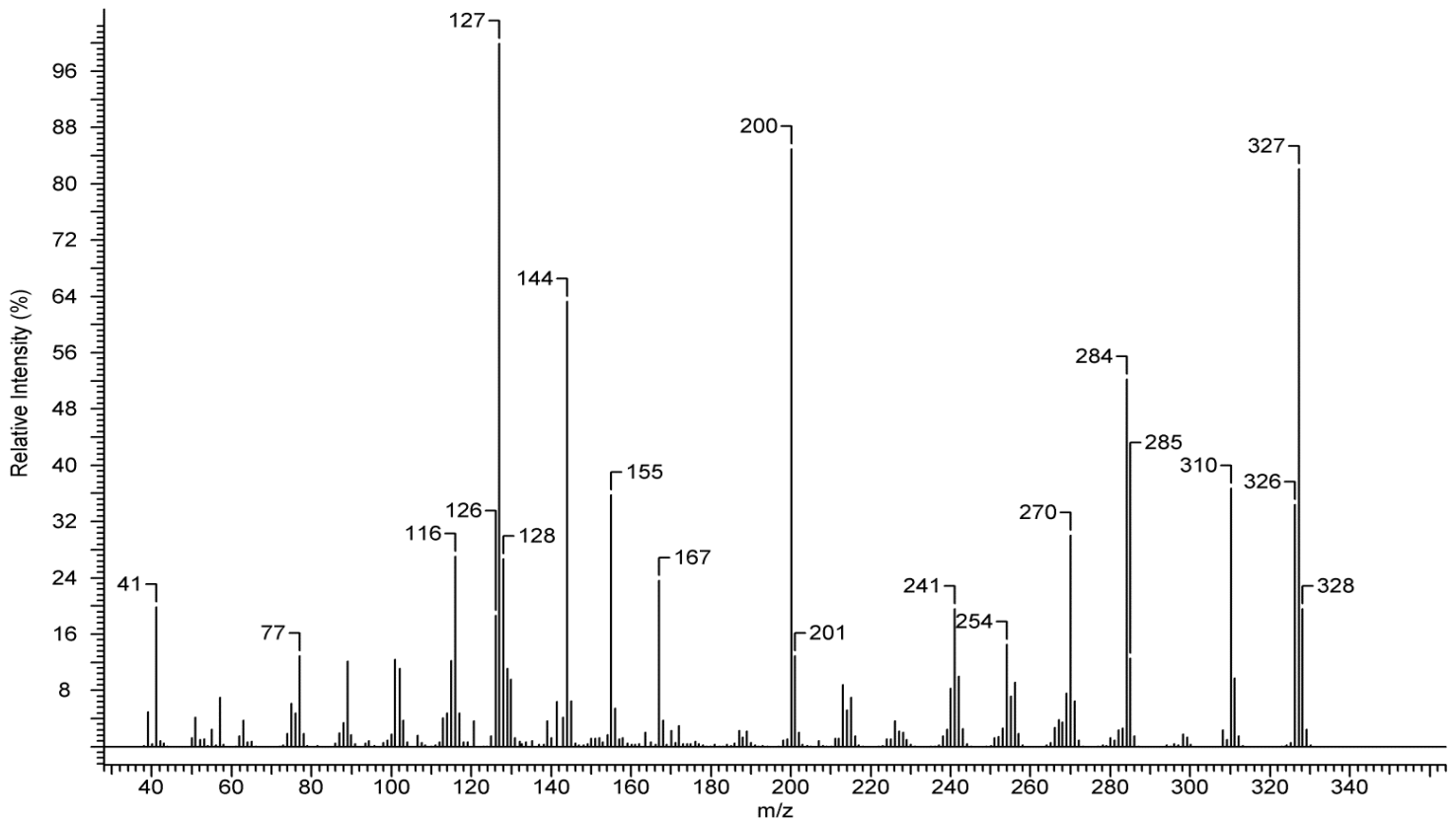
EI Mass Spectrum: JWH-073, Lot # ALB187-7



JWH-073



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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

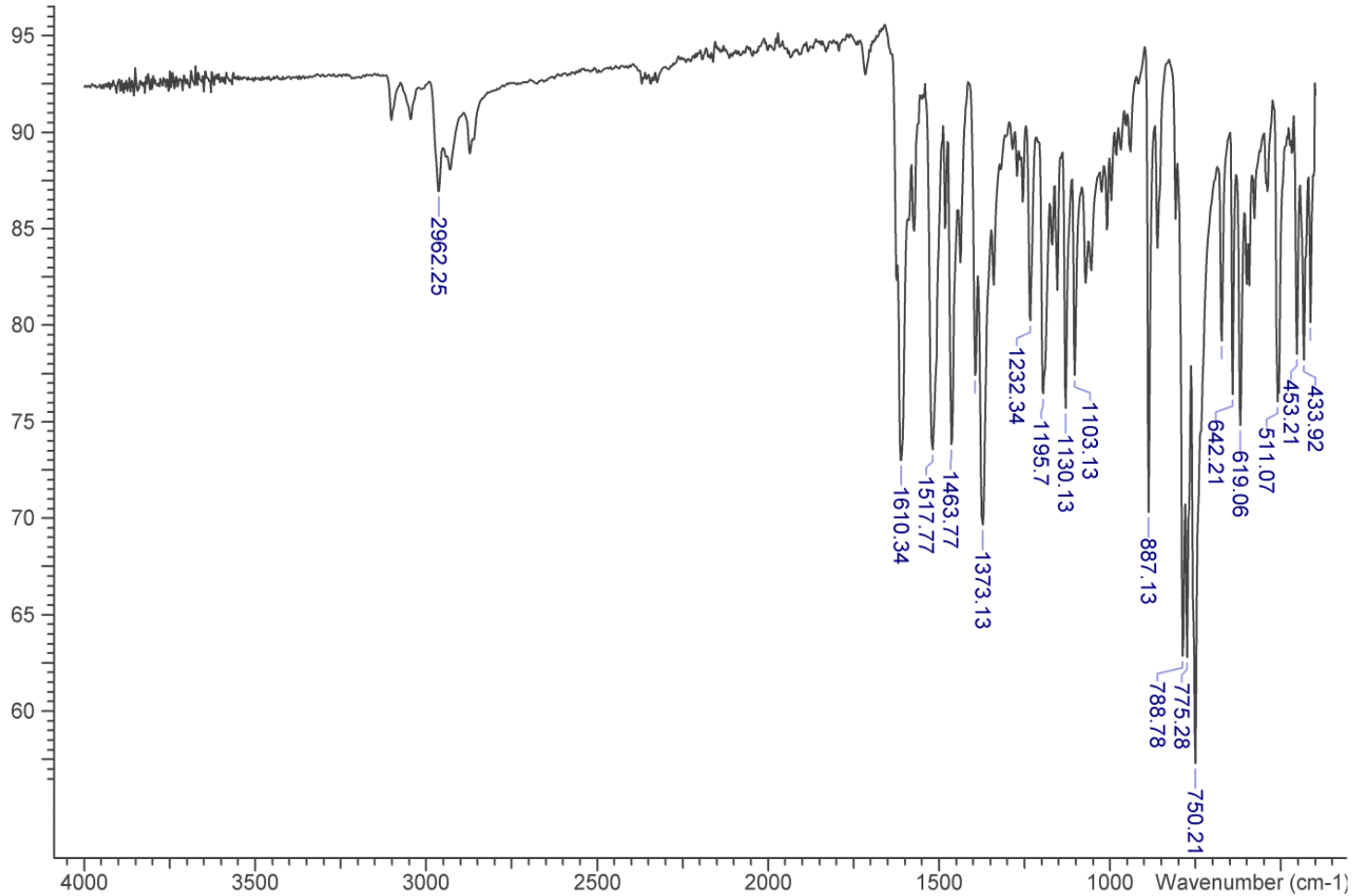


JWH-073

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FTIR (Diamond ATR, 3 Bounce): JWH-073 Lot # 0409793-37



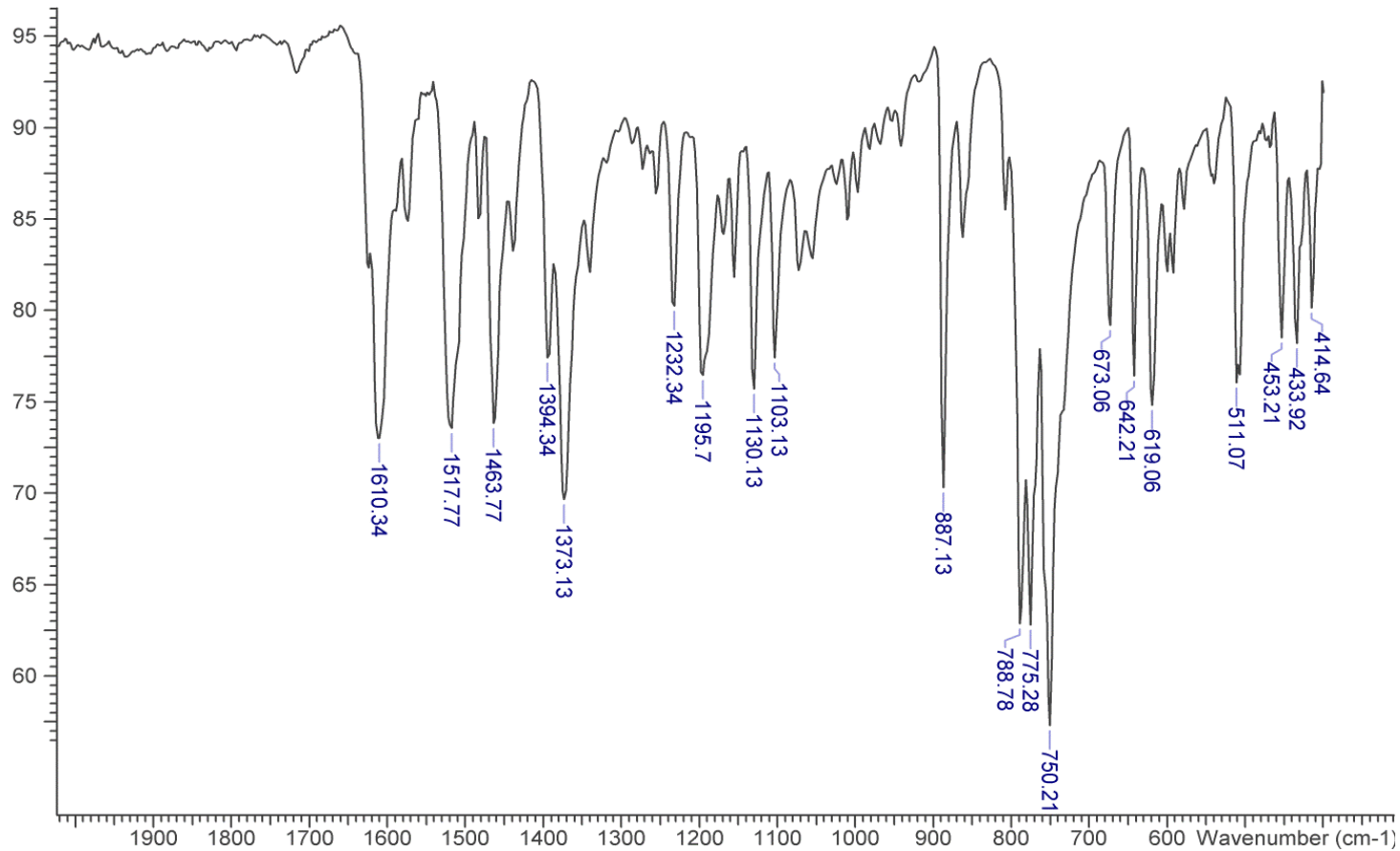


JWH-073



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FTIR (Diamond ATR, 3 Bounce): JWH-073 Lot # 0409793-37



4. ADDITIONAL RESOURCES

[Forendex](#)

[Wikipedia](#)