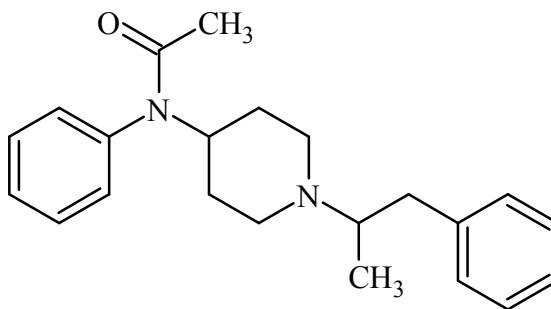




alpha-methyl acetyl fentanyl

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



1. GENERAL INFORMATION

IUPAC Name:	<i>N</i> -phenyl- <i>N</i> -[1-(1-phenylpropan-2-yl)piperidin-4-yl]acetamide
CAS#:	NA
Synonyms:	acetyl- α -methyl fentanyl
Source:	DEA Reference Material Collection
Appearance:	white powder
UV_{max}(nm):	NA

2. CHEMICAL AND PHYSICAL DATA

2.1 CHEMICAL DATA

Form	Chemical Formula	Molecular Weight	Melting Point (°C)
Base	C ₂₂ H ₂₈ N ₂ O	336.47	Not Determined
HCl	C ₂₂ H ₂₈ N ₂ O HCl	372.93	Not Determined



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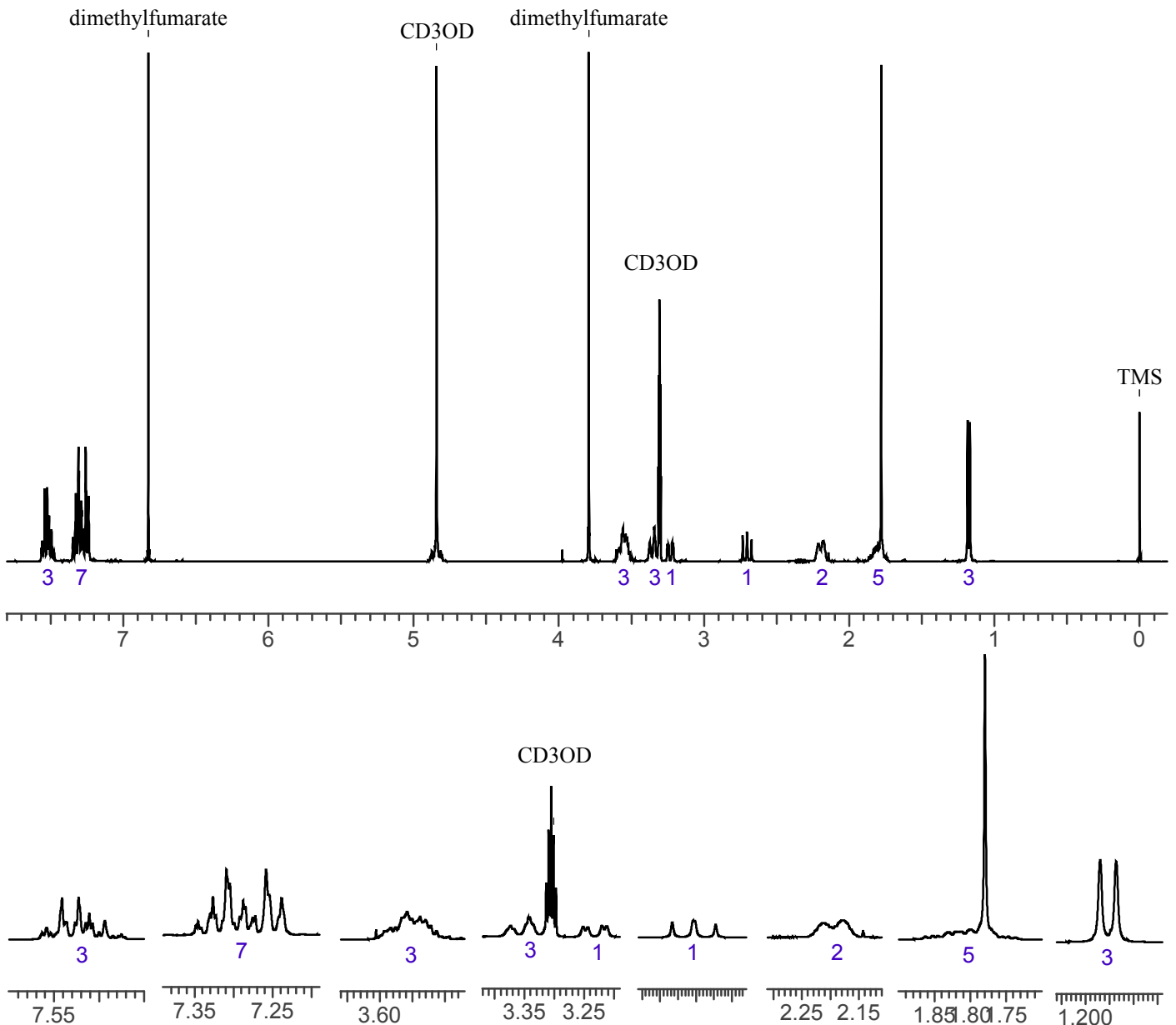
3. QUALITATIVE DATA

3.1 NUCLEAR MAGNETIC RESONANCE

Sample Preparation: Dilute analyte to ~12mg/mL in CD₃OD containing TMS for 0 ppm reference and dimethylfumarate as quantitative internal standard.

Instrument: 400 MHz NMR spectrometer
Parameters: Spectral width: at least containing -3 ppm through 13 ppm
Pulse angle: 90°
Delay between pulses: 45 seconds

¹HNMR: alpha-methyl acetyl fentanyl HCl; lot# 0496094-9; CD₃OD; 400MHz





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3.2 GAS CHROMATOGRAPHY/MASS SPECTROMETRY

Sample Preparation: Dilute analyte ~5 mg/mL into methanol.

Instrument: Agilent gas chromatograph operated in split mode with MS detector

Column: HP-5; 30m x 0.25 mm x 0.25 m

Carrier Gas: Helium at 1.5 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 280°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: 30-550 amu

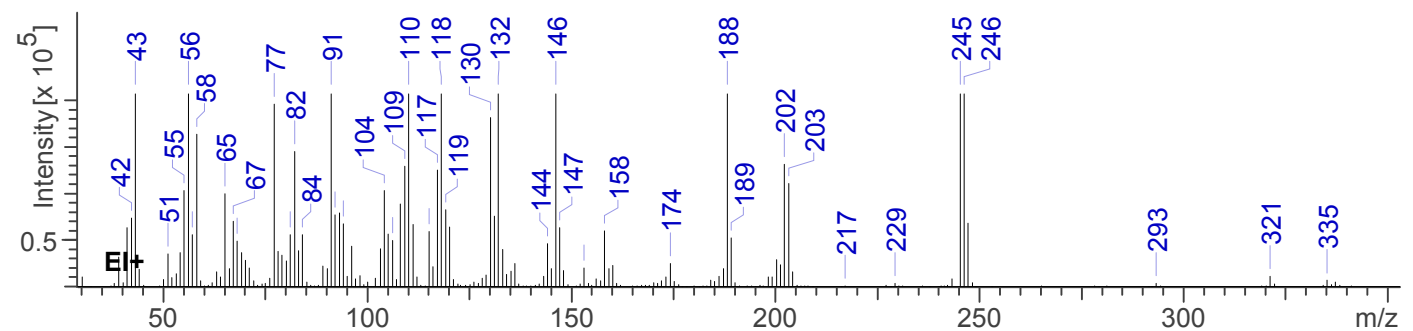
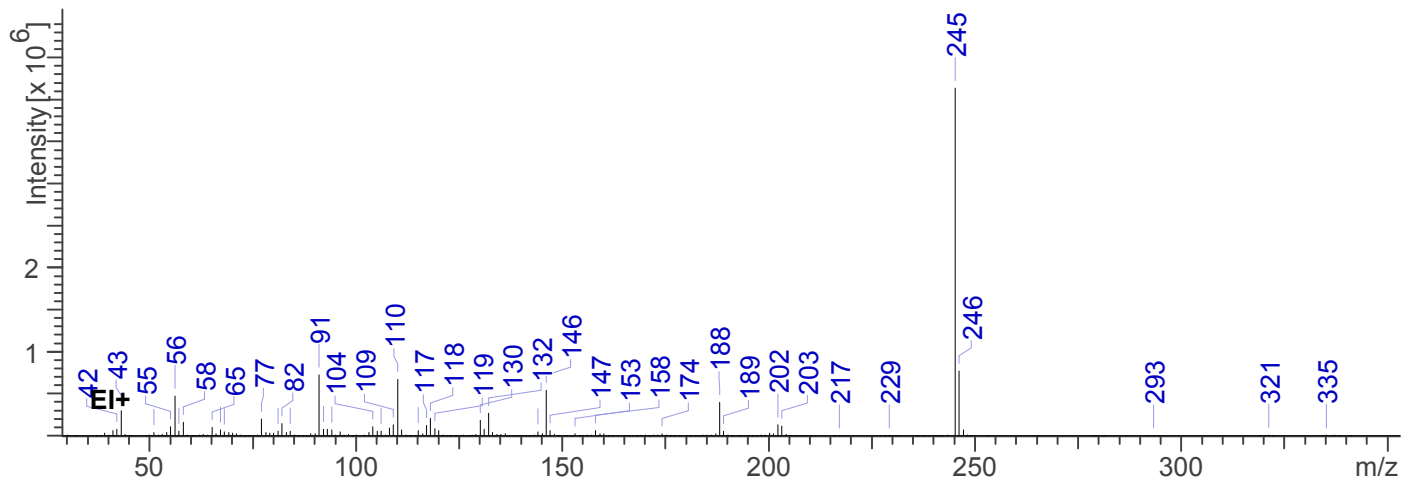
Threshold: 250

Tune file: stune.u

Acquisition mode: scan

Retention Time: 17.005min

EI Mass Spectrum: alpha-methyl acetyl fentanyl HCl; lot# 0496094-9





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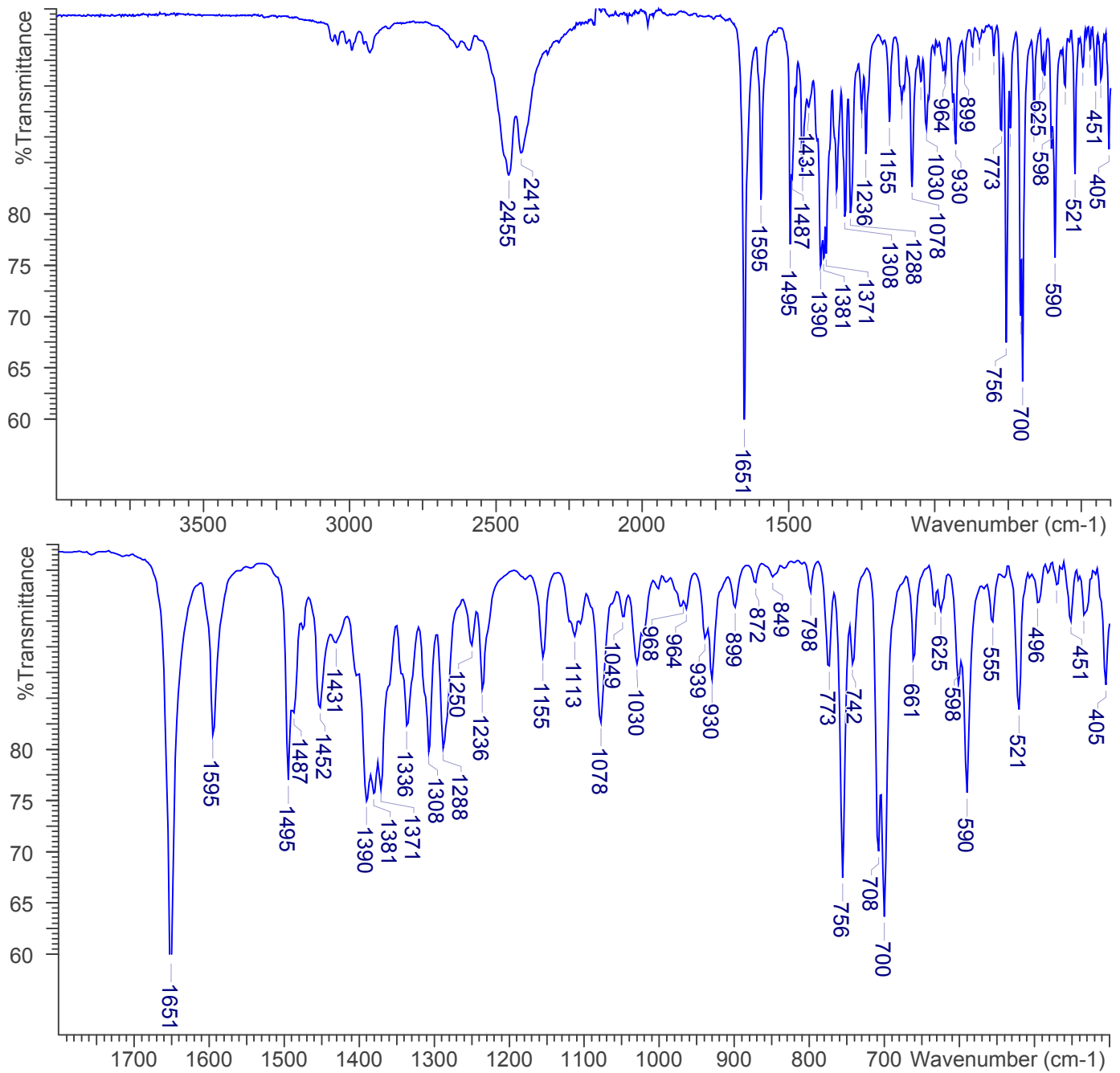


3.3 INFRARED SPECTROSCOPY (FTIR)

Instrument: Scan FTIR (Smart Golden Gate ATR Accessory)

Parameters:
Number of scans: 32
Number of background scans: 32
Resolution: 4 cm⁻¹
Sample gain: 8
Aperture: 150

FTIR ATR (Diamond 1 Bounce): alpha-methyl acetyl fentanyl HCl; lot# 0496094-9





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4. ADDITIONAL RESOURCES

No available literature as of 11/15/17