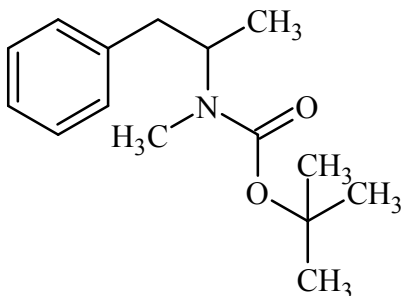




t-boc Methamphetamine

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



1. GENERAL INFORMATION

IUPAC Name: *tert*-butyl methyl(1-phenylpropan-2-yl)carbamate

CAS#: N/A

Synonyms: N-*tert*-butoxycarbonyl-methamphetamine

Source: DEA Reference Material Collection

Appearance: Clear liquid

UV_{max}(nm): Not Determined

2. CHEMICAL AND PHYSICAL DATA

2.1 CHEMICAL DATA

Form	Chemical Formula	Molecular Weight	Melting Point (°C)
Base	C ₁₅ H ₂₃ NO ₂	249.35	Not Determined



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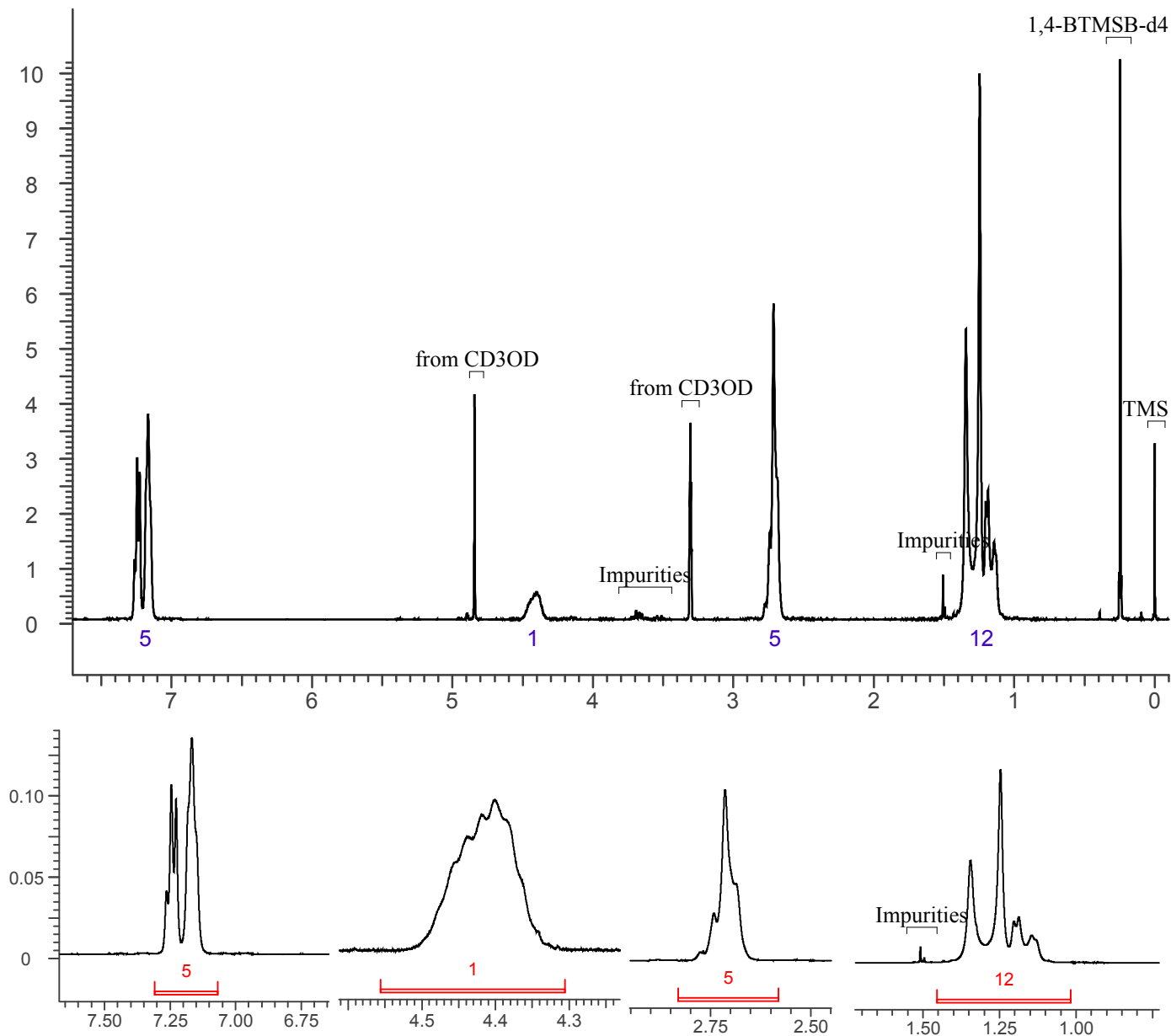


3. QUALITATIVE DATA

3.1 NUCLEAR MAGNETIC RESONANCE

Sample Preparation: Dilute analyte to ~19 mg/mL in CD₃OD containing TMS for 0 ppm reference and 1,4-BTMSB-d₄ as quantitative internal standard.

Instrument: 400 MHz NMR spectrometer
Parameters: Spectral width: at least containing -3.0 ppm through 13.0 ppm
Pulse angle: 90°
Delay between pulses: 45 seconds
¹HNMR: t-boc Methamphetamine; Lot ST533-1; CD₃OD; 400MHz





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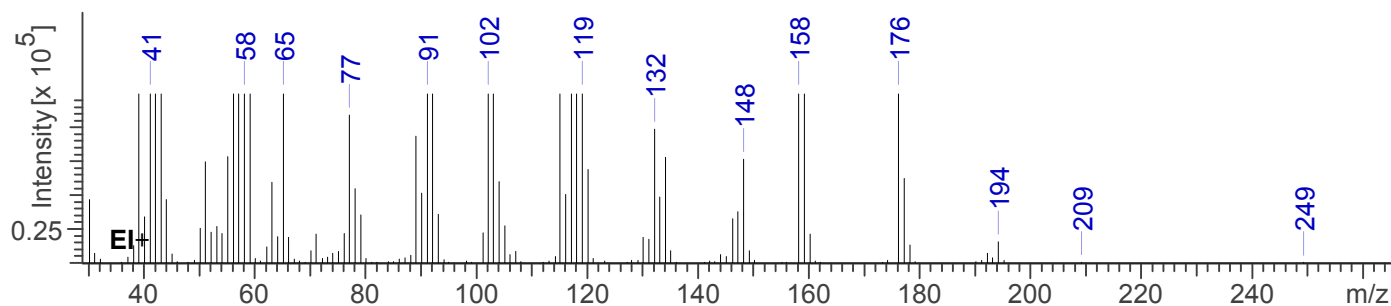
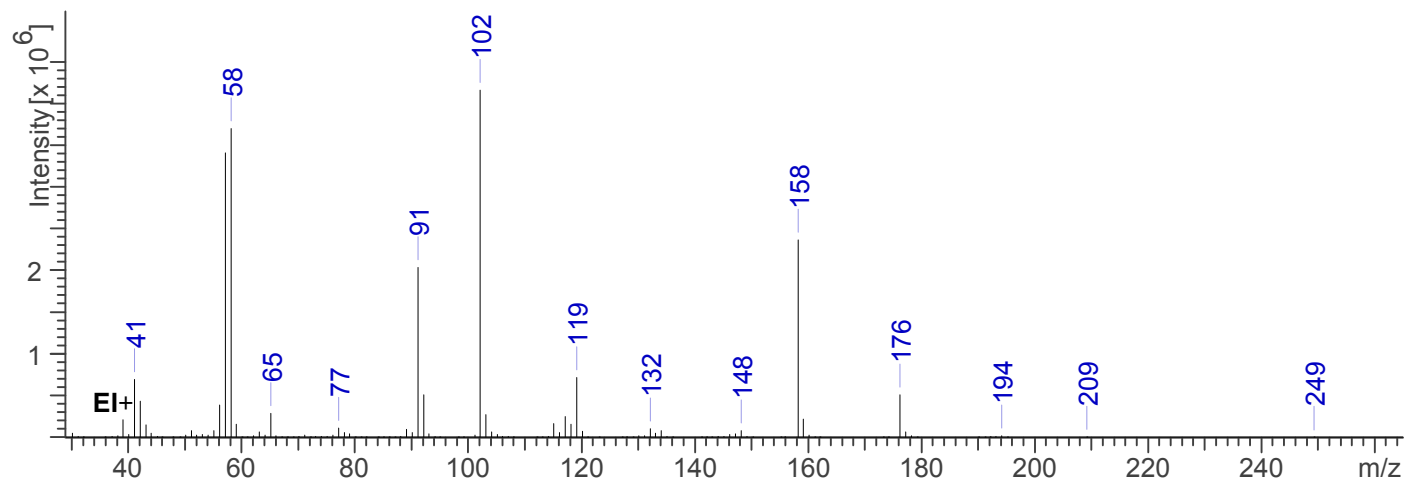


3.2 GAS CHROMATOGRAPHY/MASS SPECTROMETRY

Sample Preparation: Dilute analyte ~7 mg/mL in methanol.

Instrument: Agilent gas chromatograph operated in split mode with MS detector
Column: HP-5 MS (or equivalent); 30m x 0.25 mm x 0.25 μ 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 μ L injected
MS Parameters: Mass scan range: 30-550 amu
Threshold: 250
Tune file: stune.u
Acquisition mode: scan
Retention Time: 8.160 min

EI Mass Spectrum: t-boc Methamphetamine; Lot ST533-1





t-boc Methamphetamine

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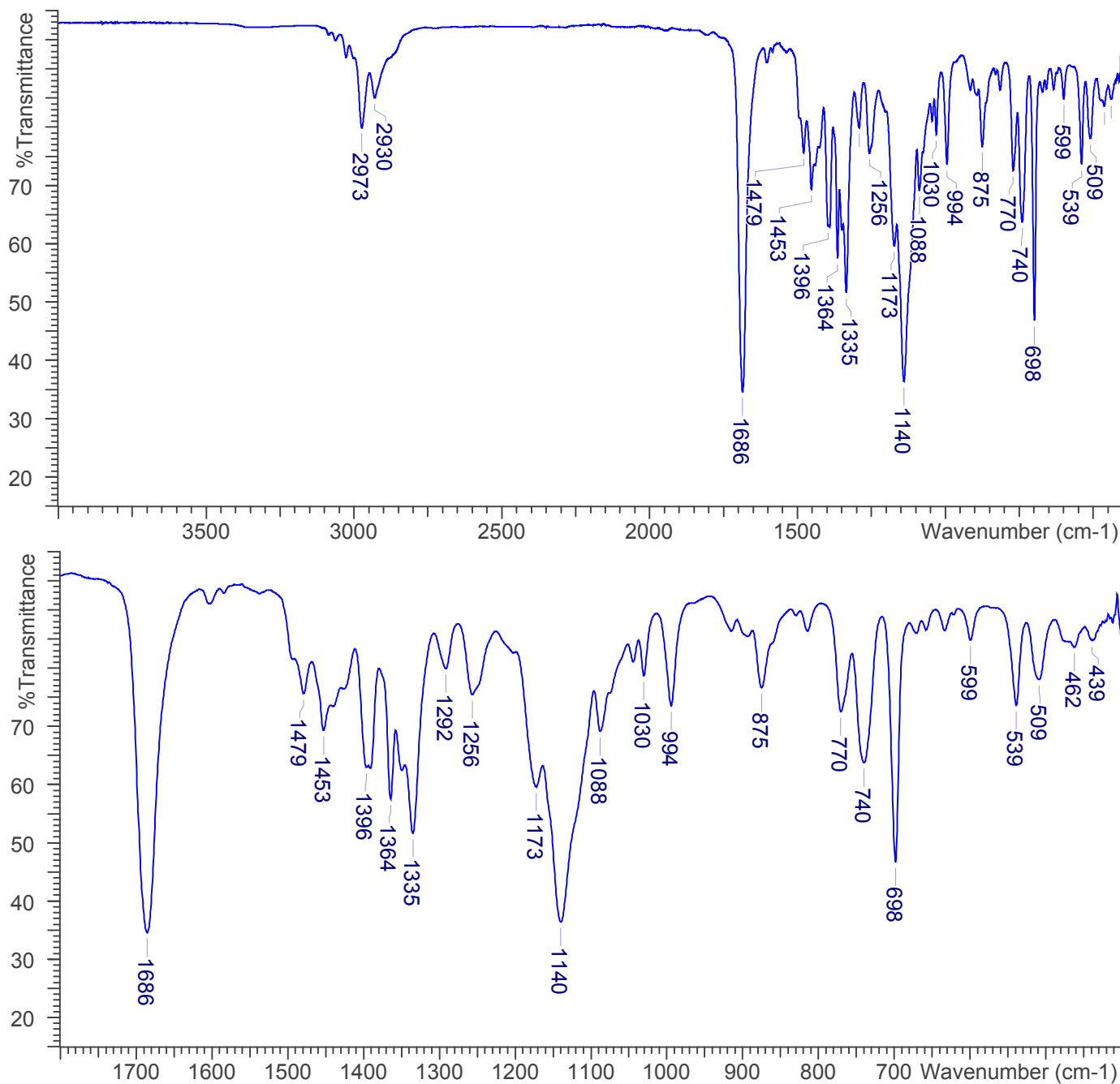


3.3 INFRARED SPECTROSCOPY (FTIR)

Instrument: FTIR with diamond ATR attachment (1 bounce)

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

FTIR ATR (Diamond, 1 Bounce): t-boc methamphetamine; lot ST533-1





t-boc Methamphetamine

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4. ADDITIONAL RESOURCES

Collins, M., et al. Identification and characterization of N- *tert*-butoxycarbonyl-MDMA: a new MDMA precursor. *Drug Test. Analysis* 2017, 9, 399-404.