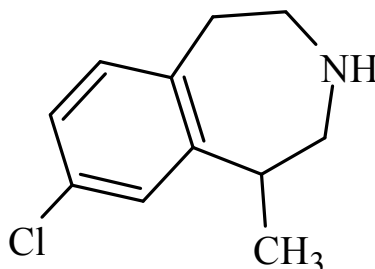




Lorcaserin

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



1. GENERAL INFORMATION

IUPAC Name: 8-chloro-1-methyl-2,3,4,5-tetrahydro-1H-3-benzazepine

CAS#: 616202-92-7 (Base), 846589-98-8 (HCl)

Synonyms: APD356, Belviq, Lorqess

Source: DEA Reference Material Collection

Appearance: White powder (HCl)

UV_{max}(nm): Not Determined

2. CHEMICAL AND PHYSICAL DATA

2.1 CHEMICAL DATA

Form	Chemical Formula	Molecular Weight	Melting Point (°C)
Base	C ₁₁ H ₁₄ ClN	195	Not Determined
HCl	C ₁₁ H ₁₄ ClN HCl	232	217.4-228.6



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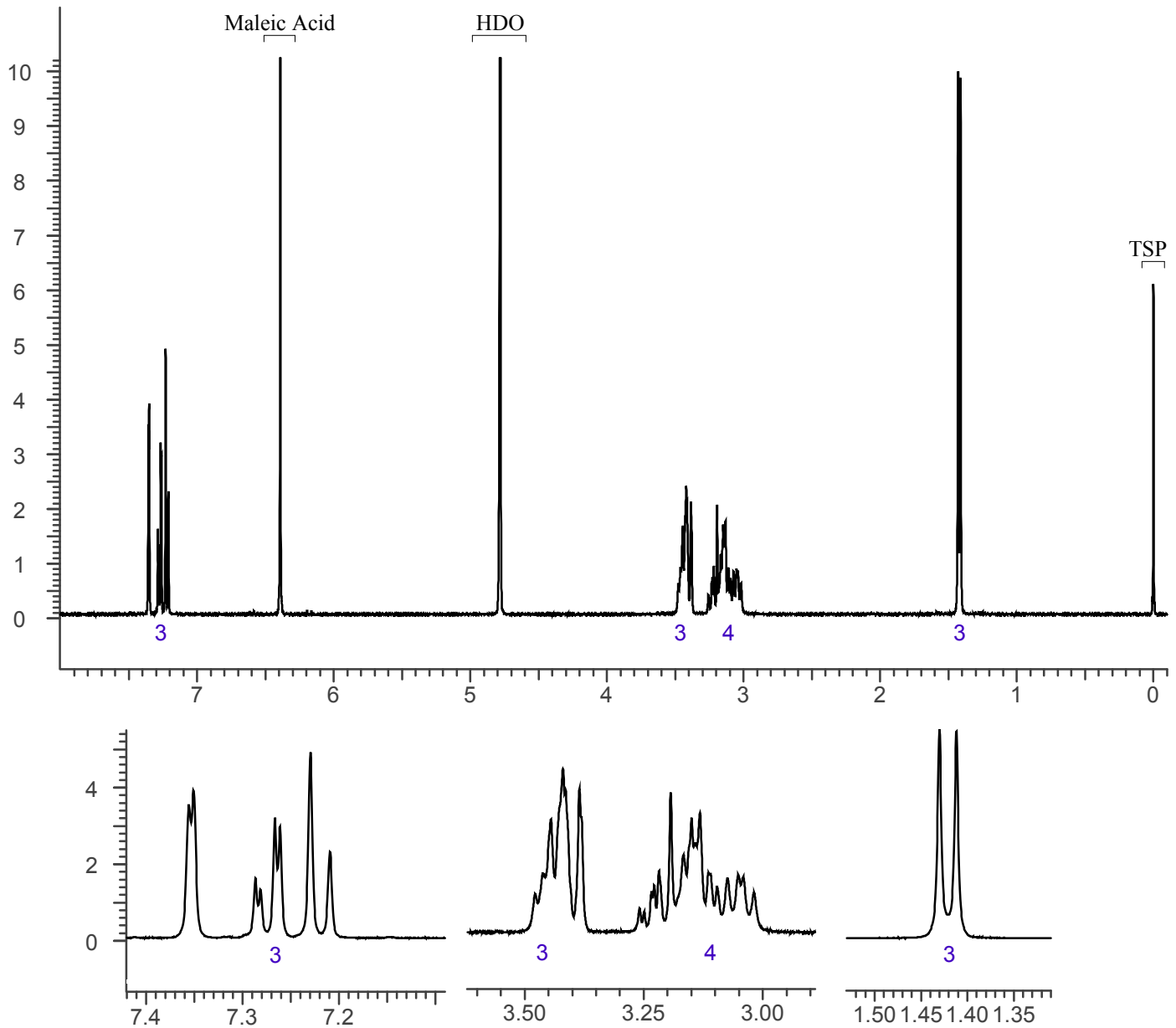
3. QUALITATIVE DATA

3.1 NUCLEAR MAGNETIC RESONANCE

Sample Preparation: Dilute analyte to ~7 mg/mL in D₂O containing TSP for 0 ppm reference and maleic acid as quantitative internal standard.

Instrument: 400 MHz NMR spectrometer
Parameters: Spectral width: at least containing -2.9 ppm through 13 ppm
Pulse angle: 90°
Delay between pulses: 45 seconds

¹H NMR: Lorcaserin HCl, Lot # 0459056-10, D₂O, 400MHz





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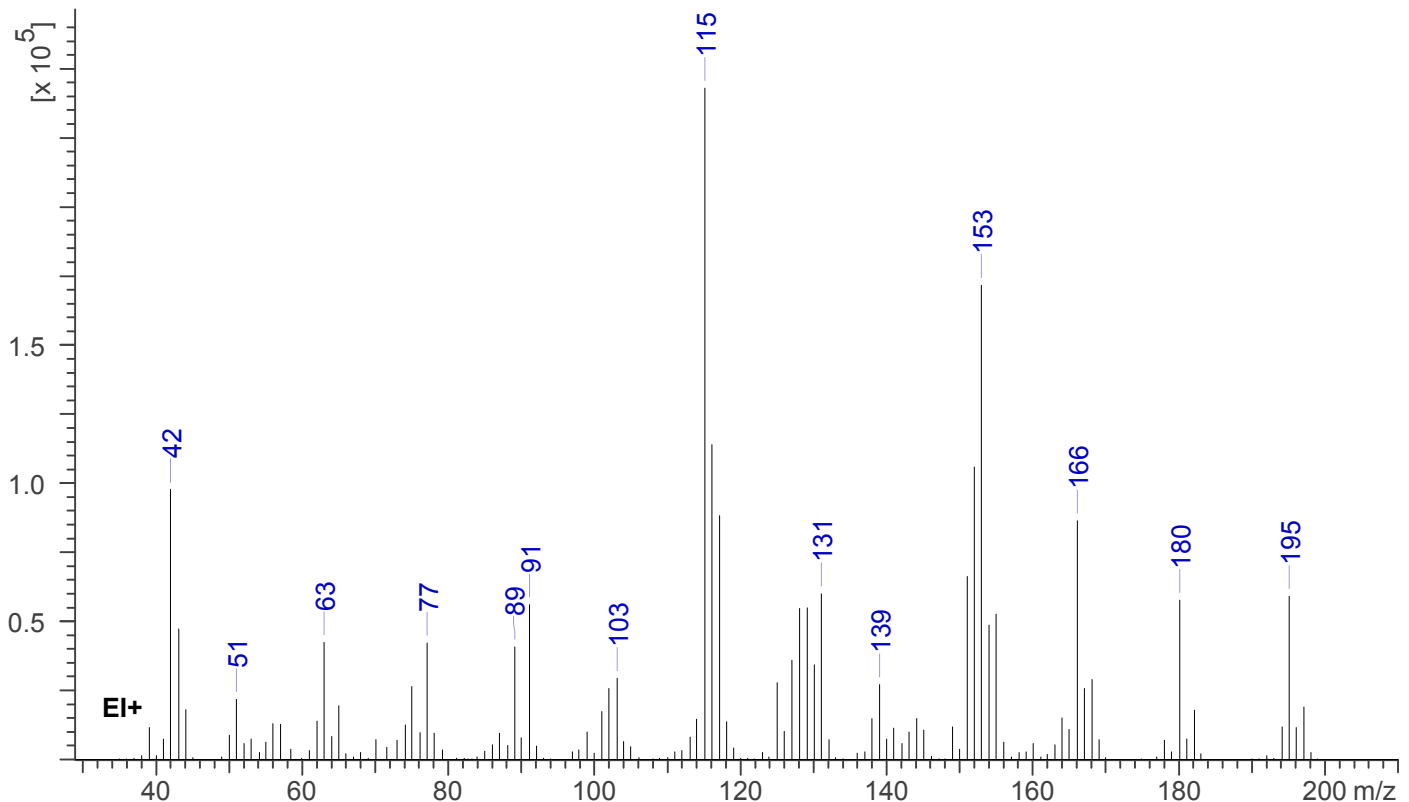
3.2 GAS CHROMATOGRAPHY/MASS SPECTROMETRY

Sample Preparation: Dilute analyte ~4 mg/mL base extracted into CHCl_3 .

Instrument: Agilent gas chromatograph operated in split mode with MS detector
Column: DB-1 MS (or equivalent); 30m x 0.25 mm x 0.25 μm
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 16.0 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: 7.752 min

EI Mass Spectrum: Lorcaserin HCl Lot # 0459056-10





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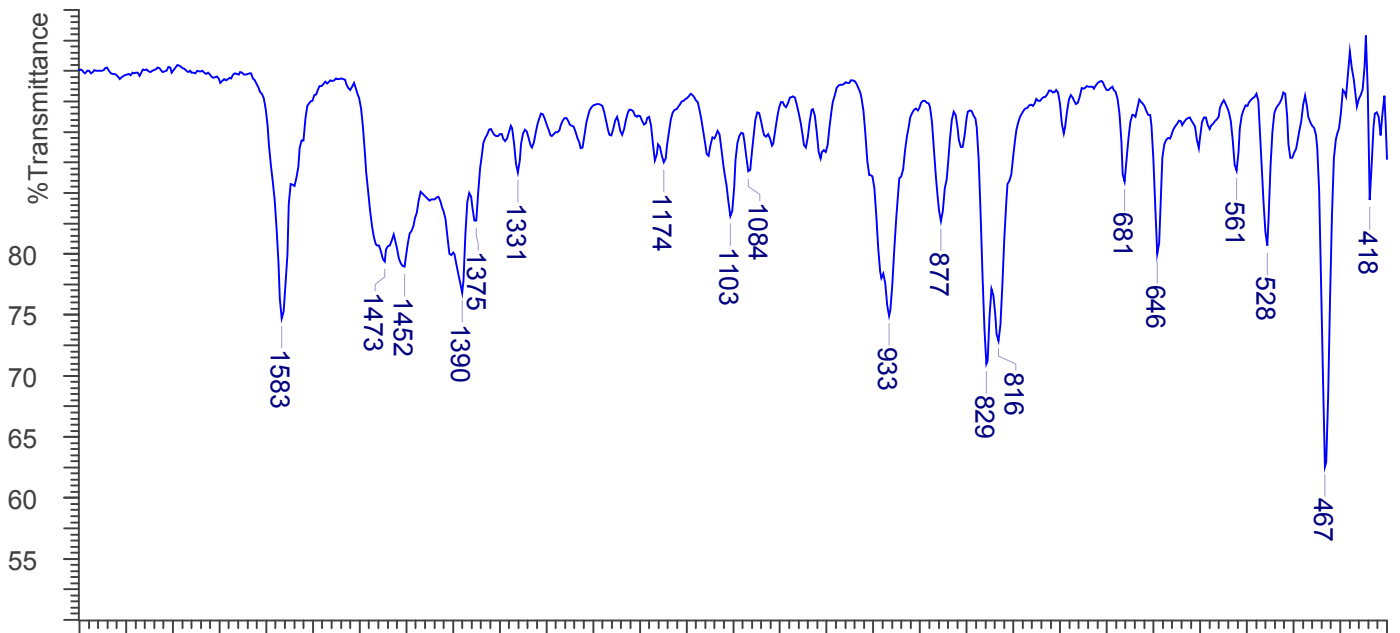
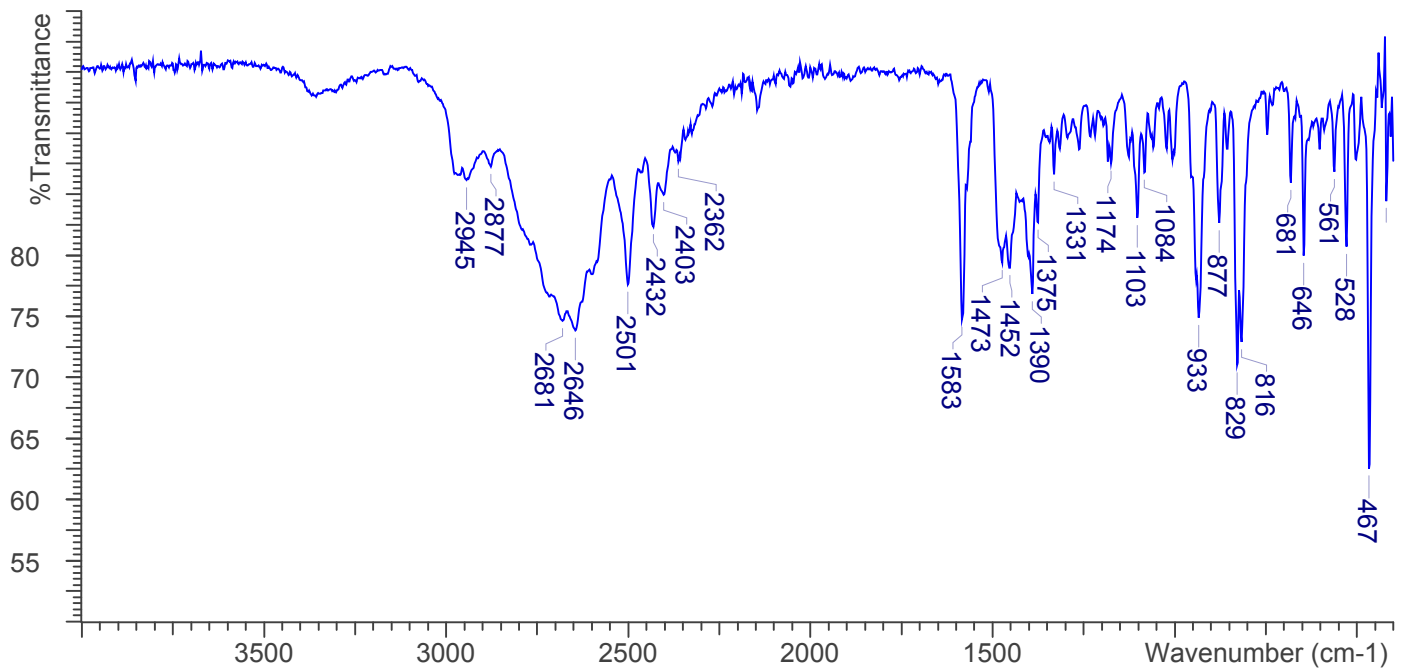


3.3 INFRARED SPECTROSCOPY (FTIR)

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: 8
Aperture: 150

FTIR ATR (Diamond, 1 Bounce): Lorcaserin HCl Lot# 0459056-10





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4. ADDITIONAL RESOURCES

[Wikipedia](#)

[Forendex](#)