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

<table>
<thead>
<tr>
<th>Form</th>
<th>Chemical Formula</th>
<th>Molecular Weight</th>
<th>Melting Point (°C)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Base</td>
<td>C$<em>{11}$H$</em>{14}$ClN</td>
<td>195</td>
<td>Not Determined</td>
</tr>
<tr>
<td>HCl</td>
<td>C$<em>{11}$H$</em>{14}$ClN HCl</td>
<td>232</td>
<td>217.4-228.6</td>
</tr>
</tbody>
</table>
3. QUALITATIVE DATA

3.1 NUCLEAR MAGNETIC RESONANCE

Sample Preparation: Dilute analyte to ~7 mg/mL in D$_2$O 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

$^1$H NMR: Lorcaserin HCl, Lot # 0459056-10, D$_2$O, 400MHz
3.2 GAS CHROMATOGRAPHY/MASS SPECTROMETRY

Sample Preparation: Dilute analyte ~4 mg/mL base extracted into CHCl₃.

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

4. ADDITIONAL RESOURCES

Wikipedia

Forendex