1. GENERAL INFORMATION

**IUPAC Name:** 2-(ethylamino)-1-phenylpropan-1-one

**CFR:** Not Scheduled (8/2013)

**CAS#:** 51553-17-4 (HCl)

**Synonyms:** N-Ethylcathinone

**Source:** DEA Reference Material Collection

**Appearance:** White powder (HCl)

**Kovat's Index:** Pending

**UV$_{max}$ (nm):** 251.1

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 ($^\circ$C)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Base</td>
<td>$C_{11}H_{15}NO$</td>
<td>177</td>
<td>Not Determined</td>
</tr>
<tr>
<td>HCl</td>
<td>$C_{11}H_{15}NO \cdot HCl$</td>
<td>213</td>
<td>192.0</td>
</tr>
</tbody>
</table>

3. ADDITIONAL RESOURCES

[Forendex](http://forendex.southernforensic.org/index.php/detail/index/1139)

[Wikipedia](http://en.wikipedia.org/wiki/Ethylcathinone)
4. QUALITATIVE DATA

4.1 NUCLEAR MAGNETIC RESONANCE

Method NMR D₂O

Sample Preparation: Dilute analyte to ~5 mg/mL in D₂O containing TSP for zero ppm reference and maleic acid 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

¹H NMR: Ethcathinone HCl: Lot TAD2006; D₂O; 400 MHz
4.2 Gas Chromatography/Mass Spectrometry

Sample Preparation: Dilute analyte ~ 1 mg/mL base extracted into chloroform.

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

Column: DB-1 MS (or equivalent); 30 m 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 9.0 min

Injection Parameters: Split Ratio = 20:1, 1 µL injected

MS Parameters: Mass scan range: 30-550 amu
Threshold: 90
Tune file: stune.u
Acquisition mode: scan

Retention Time: 6.783 min

El Mass Spectrum: Ethcathinone HCl; Lot TAD2006
4.3 INFRARED SPECTROSCOPY (FTIR)

Instrument: FTIR with diamond ATR attachment (3 bounce)
Scan Parameters: Number of scans: 32
Number of background scans: 32
Resolution: 4 cm\(^{-1}\)
Sample gain: 8
Aperture: 150

FTIR ATR (Diamond, 3 Bounce): Ethcathinone HCl; Lot TAD2006