1. GENERAL INFORMATION

**IUPAC Name:** 2-(ethylamino)-1-(4-ethylphenyl)propan-1-one

**CFR:** Not Scheduled (6/2013)

**CAS#:** Not Available

**Synonyms:** 4-EEC, 4-ethyl-N-ethylcathinone

**Source:** DEA Reference Material Collection

**Appearance:** White powder (HCl)

**Kovat's Index:** Pending

**UV<sub>max</sub> (nm):** 262.8

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&lt;sub&gt;13&lt;/sub&gt;H&lt;sub&gt;19&lt;/sub&gt;NO</td>
<td>205</td>
<td>Not Determined</td>
</tr>
<tr>
<td>HCl</td>
<td>C&lt;sub&gt;13&lt;/sub&gt;H&lt;sub&gt;19&lt;/sub&gt;NO · HCl</td>
<td>241</td>
<td>196-203</td>
</tr>
</tbody>
</table>

3. ADDITIONAL RESOURCES

*Forendex*
4. **QUALITATIVE DATA**

4.1 **NUCLEAR MAGNETIC RESONANCE**

**Method NMR D\textsubscript{2}O**

*Sample Preparation:* Dilute analyte to ~10 mg/mL in D\textsubscript{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 -3 ppm through 13 ppm
- Pulse angle: 90°
- Delay between pulses: 45 seconds

\textsuperscript{1}H NMR: 4-Ethylethcathinone HCl; Lot NE9211QB; D\textsubscript{2}O; 400 MHz
4.2 Gas Chromatography/Mass Spectrometry

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

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 9.0 min

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

MS Parameters: Mass scan range: 30-550 amu

Threshold: 100

Tune file: stune.u

Acquisition mode: scan

Retention Time: 8.630 min

EI Mass Spectrum: 4-Ethylethcathinone HCl; Lot NE9211QB
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): 4-Ethylethcathinone HCl; Lot NE9211QB