1. GENERAL INFORMATION

**IUPAC Name:** 1-(4-fluorophenyl)-N-methylpropan-2-amine

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

**CAS#:** 351-03-1 (base), 52063-62-4 (HCl)

**Synonyms:** 4-FMA, 4-fluoro-N-α-dimethylbenzeneethanamine

**Source:** DEA Reference Material Collection

**Appearance:** White powder (HCl)

**Kovat’s Index:** Pending

**$UV_{\text{max}} (\text{nm})$:** 264.0

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$<em>{10}$H$</em>{14}$FN</td>
<td>167</td>
<td>Not Determined</td>
</tr>
<tr>
<td>HCl</td>
<td>C$<em>{10}$H$</em>{14}$FN · HCl</td>
<td>203</td>
<td>114.1</td>
</tr>
</tbody>
</table>
```

3. ADDITIONAL RESOURCES

*Forendex*

*Wikipedia*
4. QUALITATIVE DATA

4.1 NUCLEAR MAGNETIC RESONANCE

Method NMR D₂O

Sample Preparation: Dilute analyte to ~10 mg/mL in D₂O containing TSP for 0 ppm reference and maleic acid as quantitative internal standard.

Instrument:

Parameters:
- Spectral width: at least containing -3 ppm through 13 ppm
- Pulse angle: 90°
- Delay between pulses: 45 seconds

¹H NMR: 4-Fluoromethamphetamine HCl; Lot N17-P15F; 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); 30m x 0.25 mm x 0.25µm
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: 4.492 min

EI Mass Spectrum: 4-Fluoromethamphetamine HCl; Lot N17-P15F
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-Fluoromethamphetamine HCl; Lot N17-P15F