

## 1. GENERAL INFORMATION

<b>IUPAC Name:</b>	2-(Diethylamino)-1-phenylpropan-1-one
<b>CFR:</b>	Schedule IV
<b>CAS #:</b>	Base: 90-84-6; HCl: 134-80-5
<b>Synonyms:</b>	Diethylpropion; Amfepramone
<b>Source:</b>	DEA Reference Material Collection
<b>Appearance:</b>	Off-white powder (HCl)
<b>Kovat's Index:</b>	Pending
<b>UV<sub>max</sub>:</b>	253.2 nm

## 2. CHEMICAL AND PHYSICAL DATA

### 2.1 CHEMICAL DATA

Form	Chemical Formula	Molecular Weight	Melting Point (°C)
Base	C <sub>13</sub> H <sub>19</sub> NO	205	Not Determined
HCl	C <sub>13</sub> H <sub>19</sub> NO.HCl	242	172.0

### 3. ADDITIONAL RESOURCES

[Forendex](#)

[Wikipedia](#)

### 4. QUALITATIVE DATA

#### 4.1 NUCLEAR MAGNETIC RESONANCE

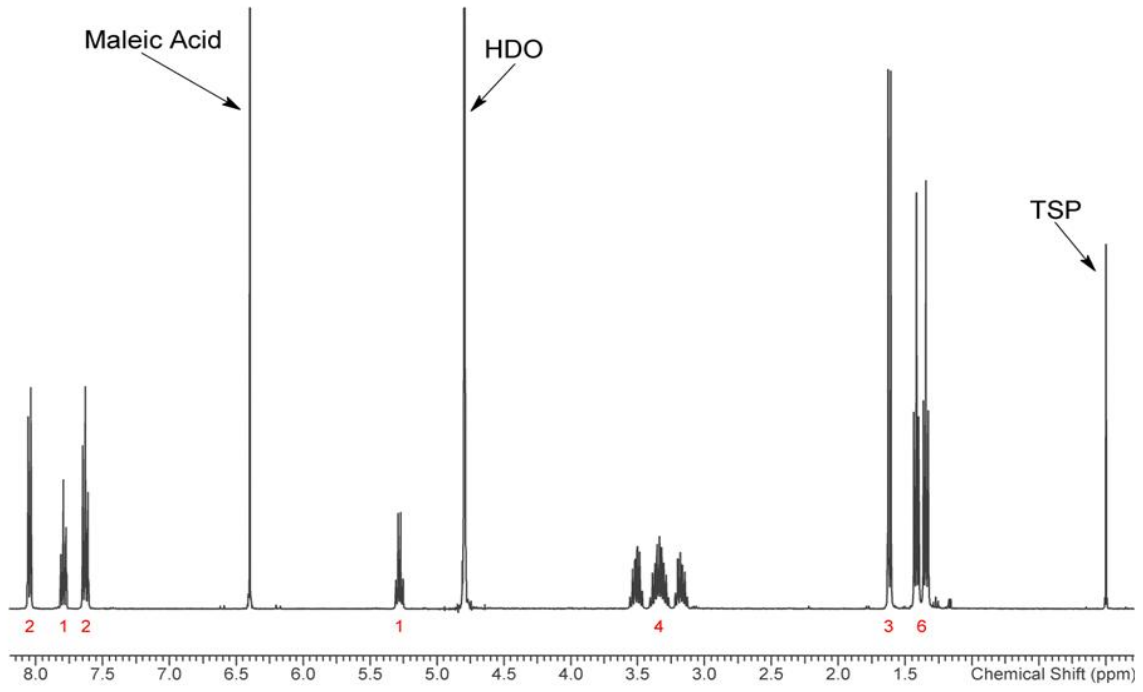
##### *Method NMR D<sub>2</sub>O*

*Sample Preparation:* Dilute analyte to ~10 mg/mL in D<sub>2</sub>O containing TSP for 0 ppm reference and maleic acid as quantitative ISTD.

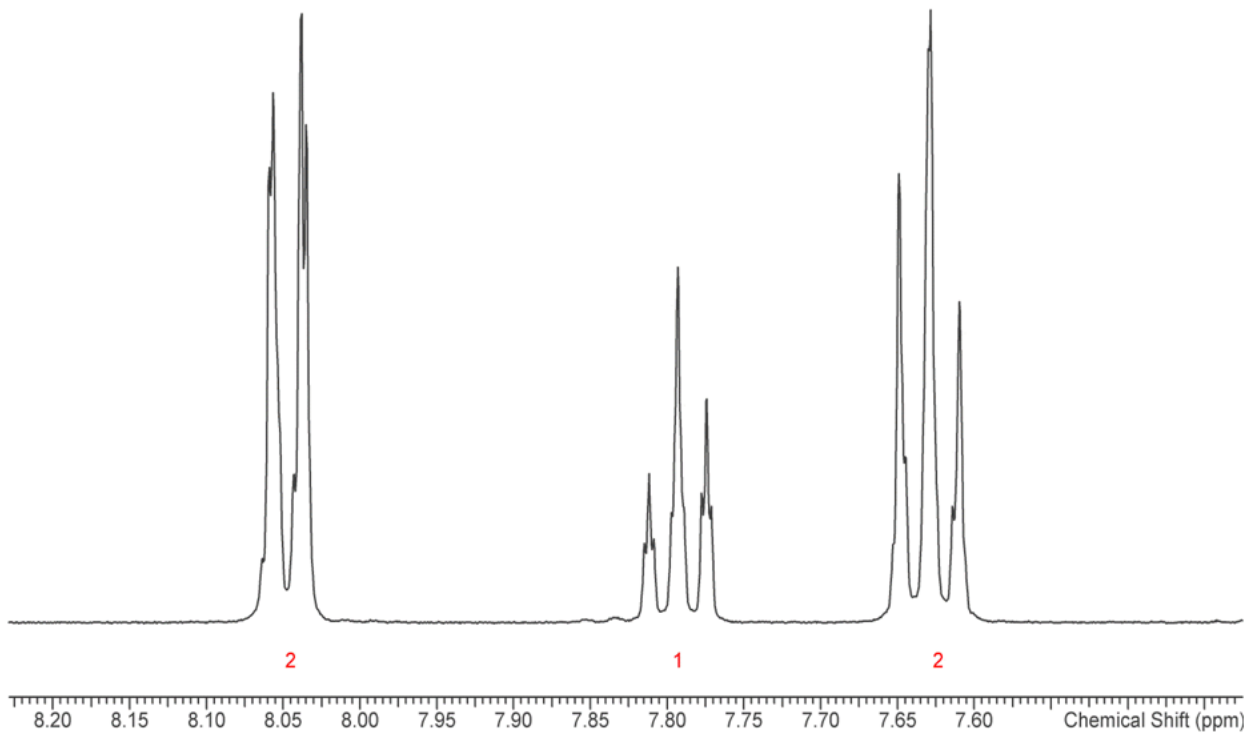
***Instrument:*** Varian Mercury 400 MHz NMR spectrometer with proton detection probe

***Parameters:*** Spectral width: at least containing -3 ppm through 13 ppm  
Pulse angle: 90°  
Delay between pulses: 45 seconds  
Number of scans (NT): 8  
Number of steady state scans: 0  
Oversampling: 4 or more  
Shimming: automatic gradient shimming of Z1-4 shims  
Phasing, Drift Correction: automatic or manual

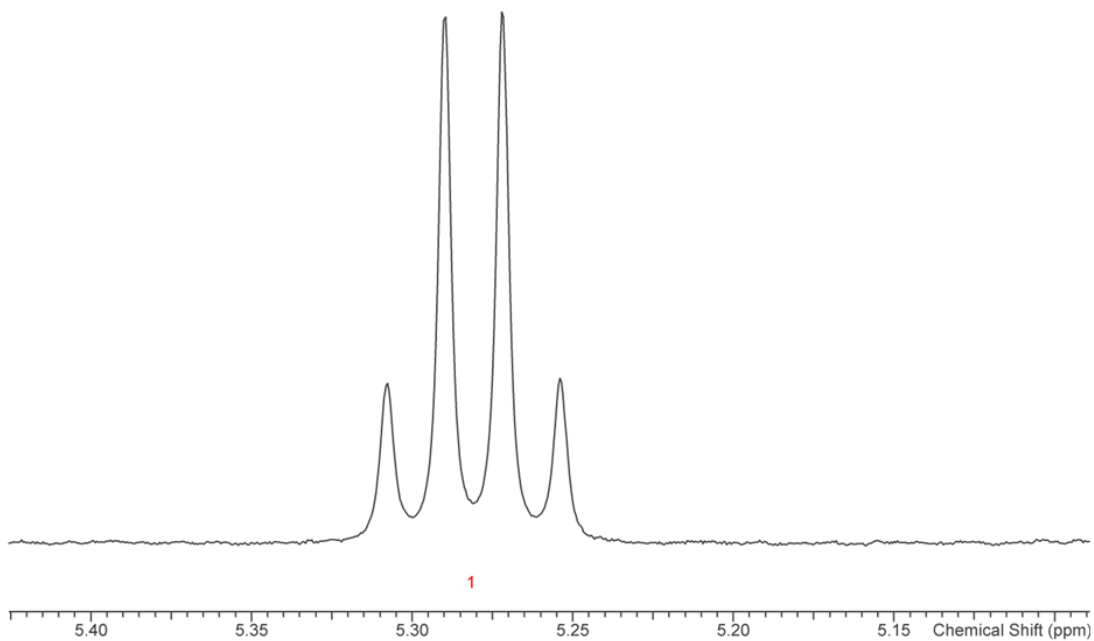
1H NMR: Diethylcathinone HCl Lot # TADMAR94 D<sub>2</sub>O, 400MHz



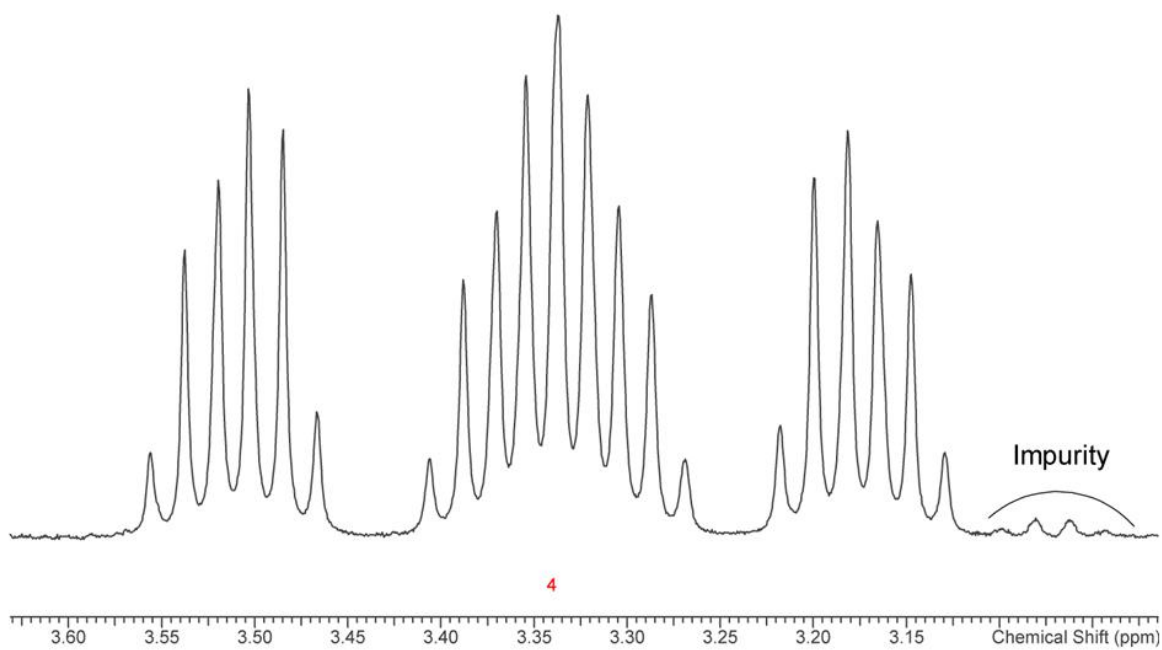
1H NMR: Diethylcathinone HCl Lot # TADMAR94; D<sub>2</sub>O; 400 MHz



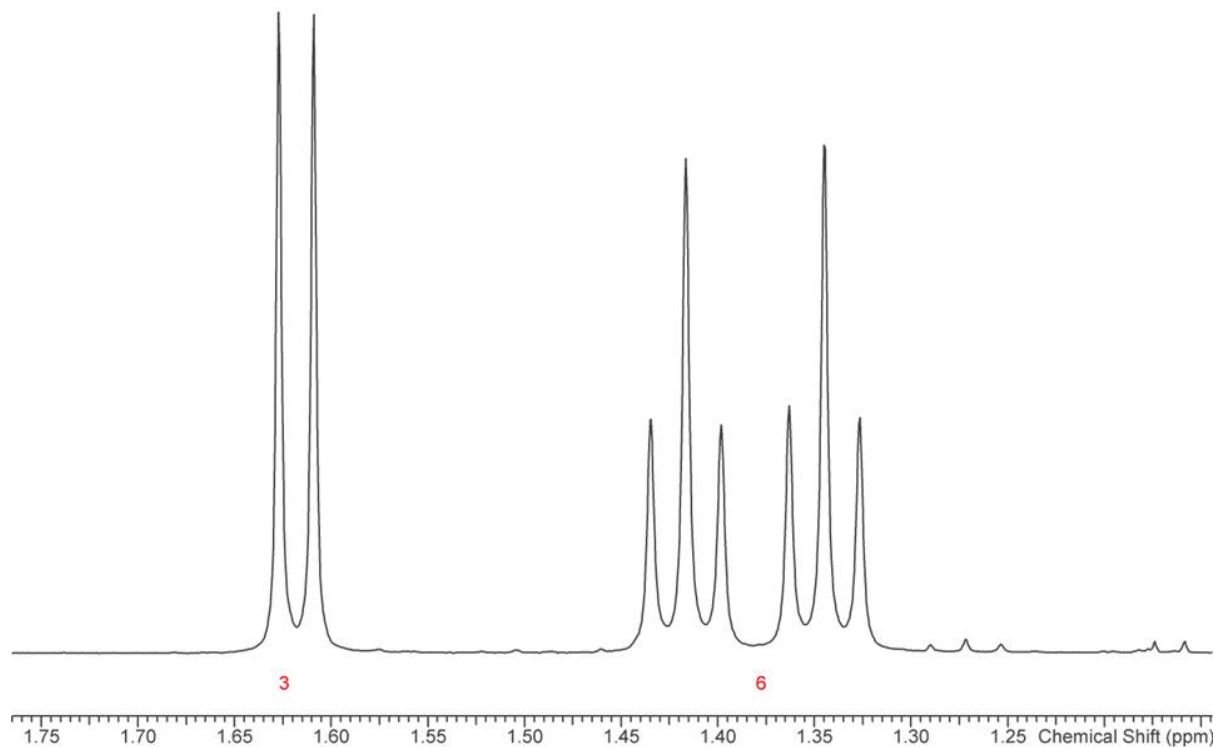
1H NMR: Diethylcathinone HCl Lot # TADMAR94; D<sub>2</sub>O; 400 MHz



1H NMR: Diethylcathinone HCl Lot # TADMAR94; D<sub>2</sub>O; 400 MHz



<sup>1</sup>H NMR: Diethylcathinone HCl Lot # TADMAR94; D<sub>2</sub>O; 400 MHz



## 4.2 GAS CHROMATOGRAPHY/MASS SPECTROMETRY

*Sample Preparation:* Dilute analyte to ~1 mg/mL in CHCl<sub>3</sub>.

***Instrument:*** Gas chromatograph operated in split mode with MS detector

***Column:*** DB-1 MS 30m x .25mm x .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: 34-550 amu

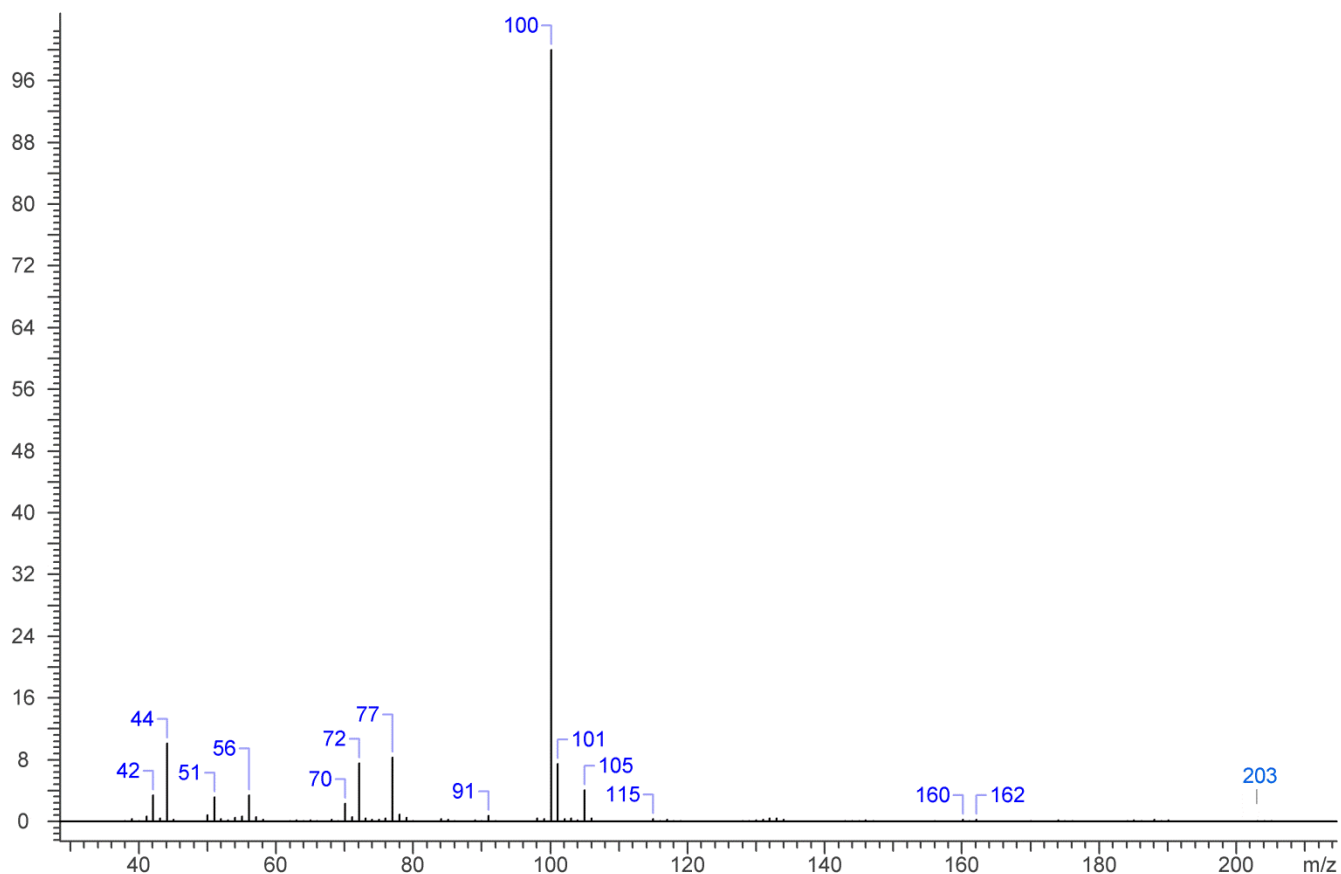
Threshold: 100

Tune file: stune.u

Acquisition mode: scan

***Retention Time:*** 7.802 min

### EI Mass Spectrum: Diethylcathinone HCl Lot # TADMAR94



### 4.3 INFRARED SPECTROSCOPY (FTIR)

**Instrument:**

FTIR with ATR attachment

**Scan Parameters:**

Number of scans: 32

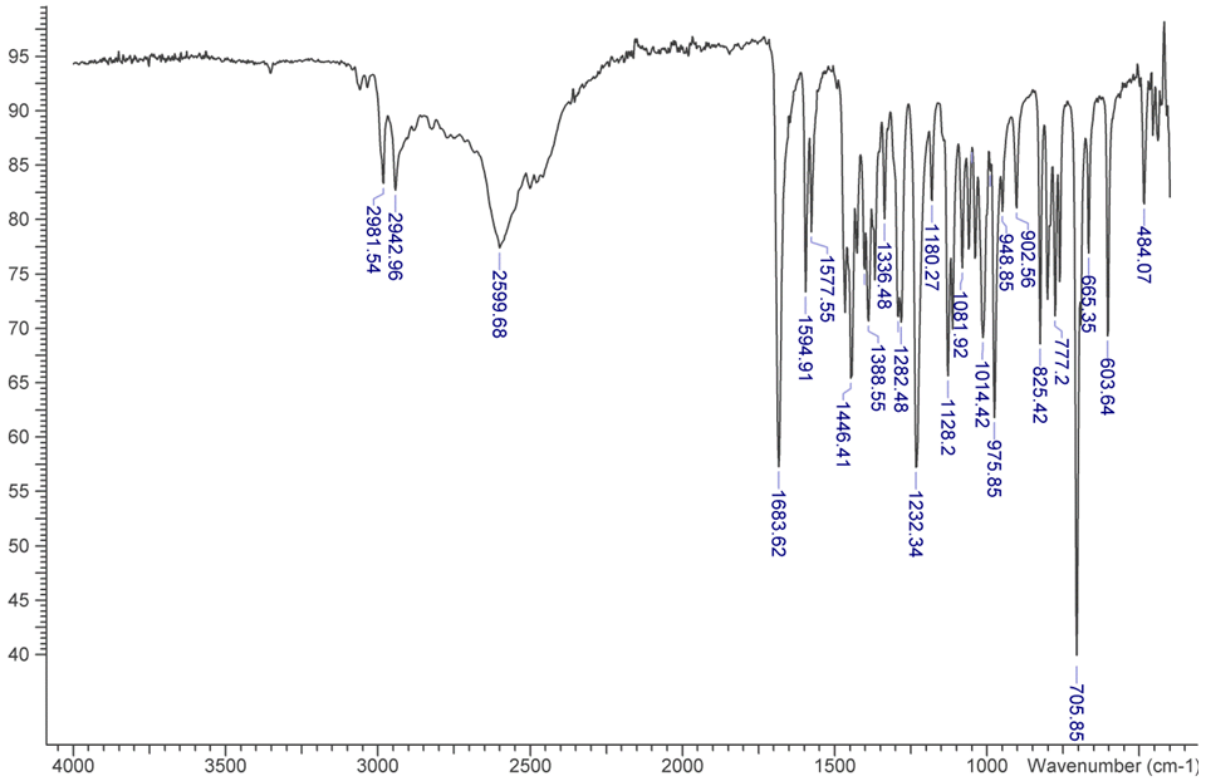
Number of background scans: 32

Resolution 4 cm<sup>-1</sup>

Sample gain: 8

Aperture: 150

FTIR (Diamond ATR, 3 Bounce): Diethylcathinone HCl Lot # TADMAR94



FTIR (Diamond, 3 Bounce): Diethylcathinone HCl Lot # TADMAR94

