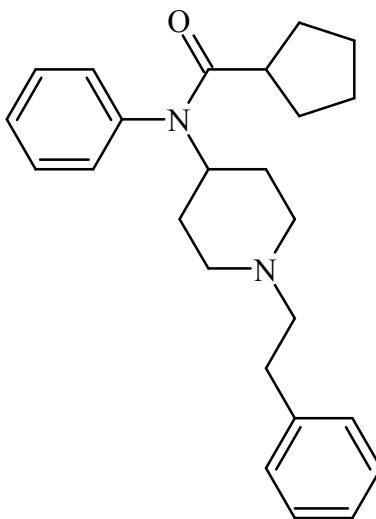




## Cyclopentanoyl Fentanyl

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



### 1. GENERAL INFORMATION

<b>IUPAC Name:</b>	N-phenyl-N-[1-(2-phenylethyl)piperidin-4-yl]cyclopentanecarboxamide
<b>CAS#:</b>	N/A
<b>Synonyms:</b>	N/A
<b>Source:</b>	DEA Reference Material Collection
<b>Appearance:</b>	Off-White powder
<b>UV<sub>max</sub>(nm):</b>	Not Determined

### 2. CHEMICAL AND PHYSICAL DATA

#### 2.1 CHEMICAL DATA

Form	Chemical Formula	Molecular Weight	Melting Point (°C)
Base	C <sub>25</sub> H <sub>32</sub> N <sub>2</sub> O	376.53	Not Determined
HCl	C <sub>25</sub> H <sub>32</sub> N <sub>2</sub> O HCl	413.00	Not Determined



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## 3. QUALITATIVE DATA

### 3.1 NUCLEAR MAGNETIC RESONANCE

*Sample Preparation:* Dilute analyte to ~10 mg/mL in CD<sub>3</sub>OD containing TMS for 0 ppm reference and dimethylfumarate as quantitative internal standard.

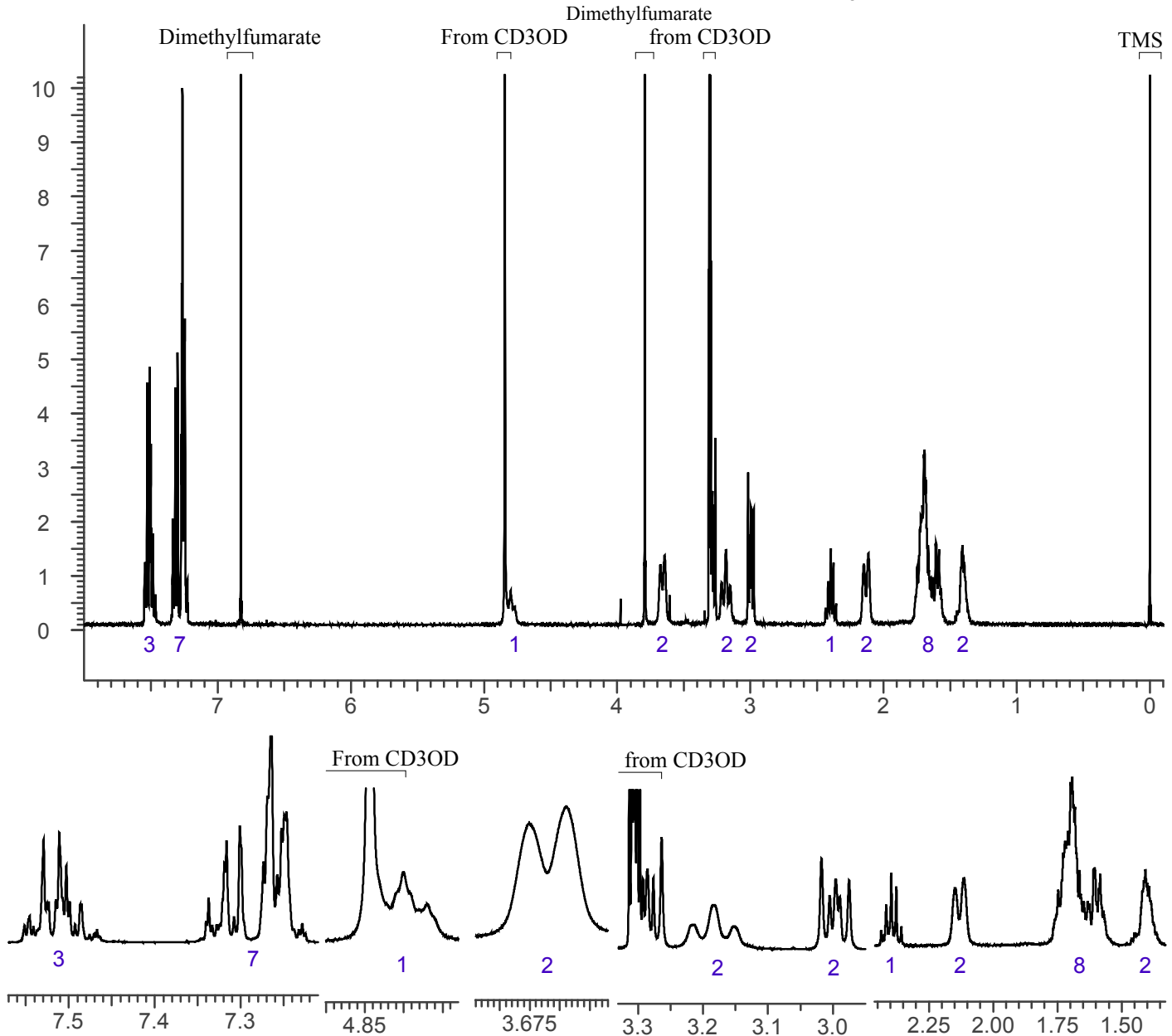
*Instrument:* 400 MHz NMR spectrometer

*Parameters:* Spectral width: at least containing -3.0 ppm through 13.0 ppm

Pulse angle: 90°

Delay between pulses: 45 seconds

<sup>1</sup>HNMR: Cyclopentanoyl fentanyl HCl; Lot ALB-297-8-2; CD<sub>3</sub>OD; 400MHz







# Cyclopentanoyl Fentanyl

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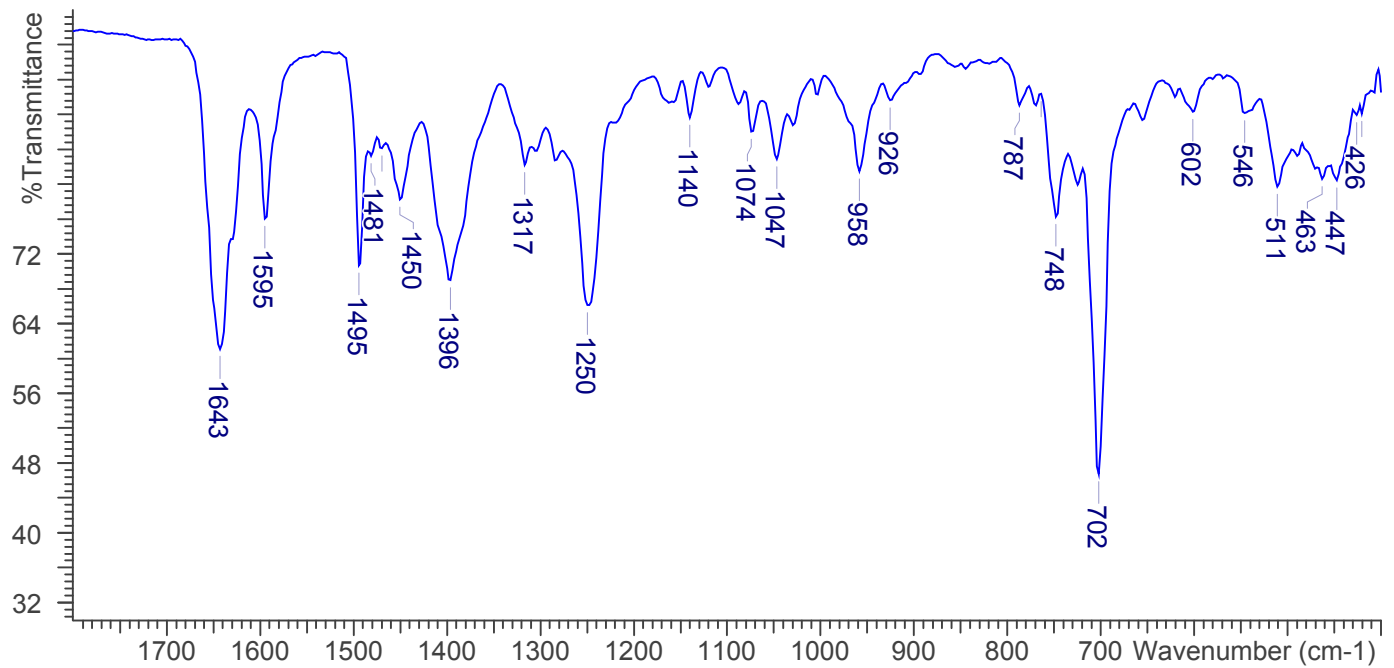
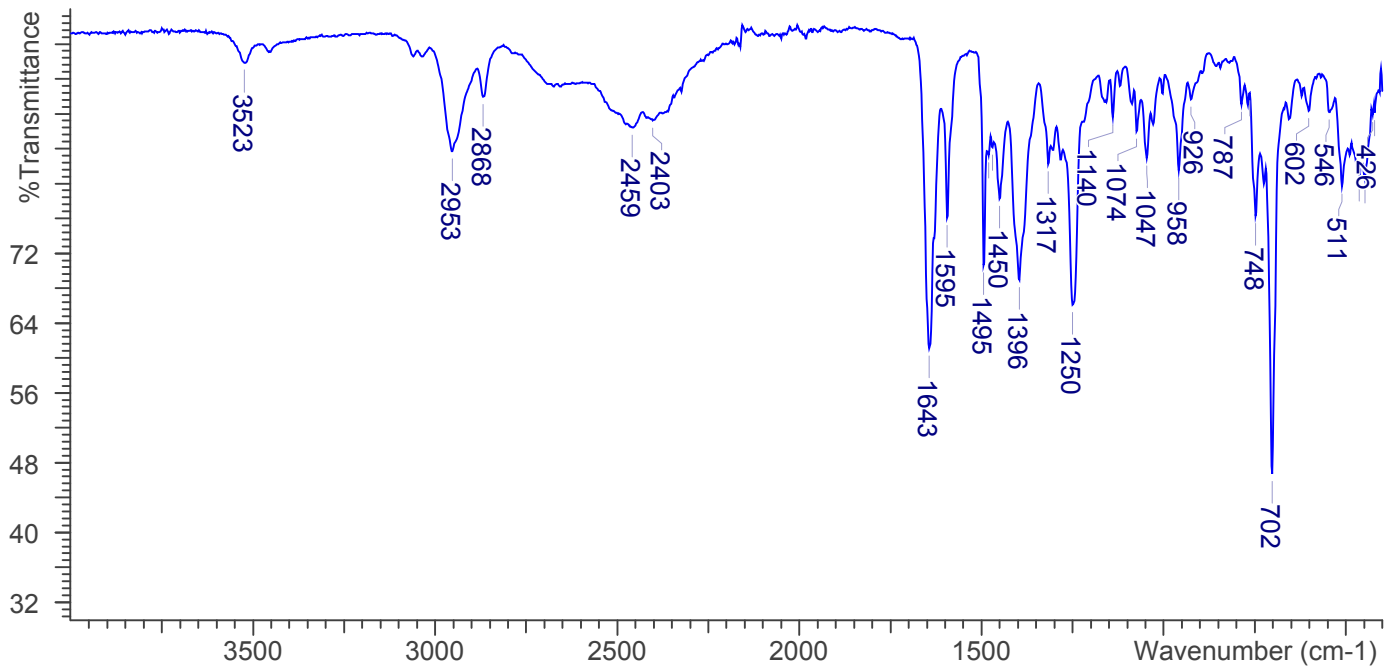


## 3.3 INFRARED SPECTROSCOPY (FTIR)

**Instrument:** FTIR with Golden Gate diamond ATR attachment (3 bounce)

**Scan Parameters:**  
Number of scans: 16  
Number of background scans: 16  
Resolution: 4 cm<sup>-1</sup>  
Sample gain: 8  
Aperture: 150

FTIR (Golden Gate with ATR, 3 Bounce): Cyclopentanoyl Fentanyl HCl; Lot ALB-297-8-2





## Cyclopentanoyl Fentanyl

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### **4. ADDITIONAL RESOURCES**

*No Literature as of 08/2017*