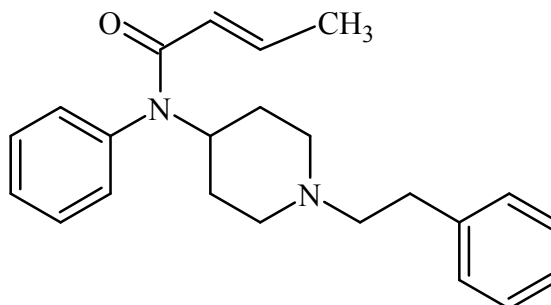




## Crotonyl fentanyl

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>	(E)-N-(1-phenethylpiperidin-4-yl)-N-phenylbut-2-enamide
<b>CAS#:</b>	760930-59-4 (base)
<b>Synonyms:</b>	(2E)-N-phenyl-N-[1-(2-phenylethyl)piperidin-4-yl]but-2-enamide
<b>Source:</b>	DEA Reference Material Collection
<b>Appearance:</b>	yellow powder
<b>UV<sub>max</sub>(nm):</b>	NA

### 2. CHEMICAL AND PHYSICAL DATA

#### 2.1 CHEMICAL DATA

Form	Chemical Formula	Molecular Weight	Melting Point (°C)
Base	C <sub>23</sub> H <sub>28</sub> N <sub>2</sub> O	348.48	NA



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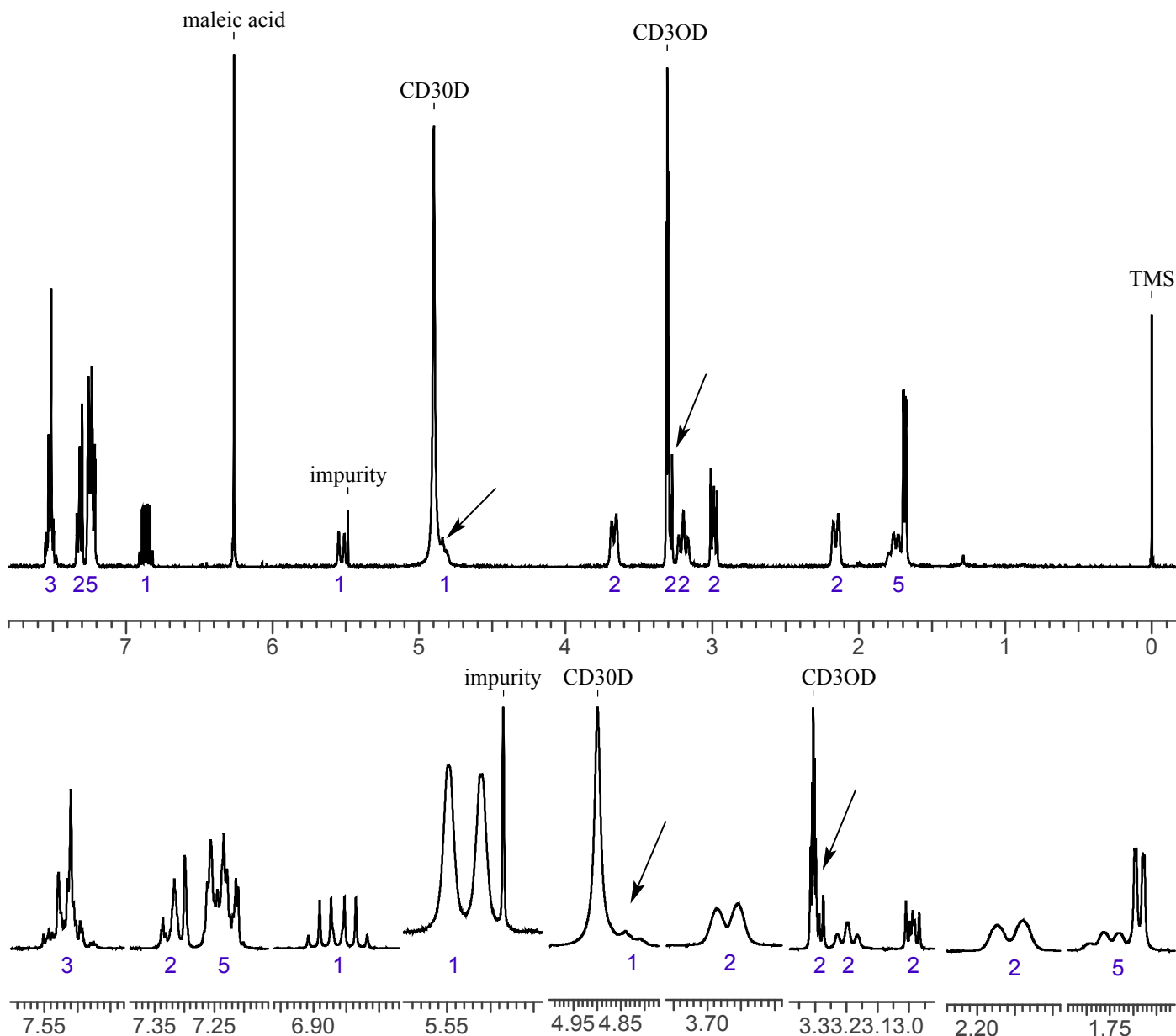
## 3. QUALITATIVE DATA

### 3.1 NUCLEAR MAGNETIC RESONANCE

**Sample Preparation:** Dilute analyte to ~8mg/mL in CD<sub>3</sub>OD containing TMS 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

<sup>1</sup>HNMR: Crotonyl fentanyl; lot# 0511357-12





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## 3.2 GAS CHROMATOGRAPHY/MASS SPECTROMETRY

**Sample Preparation:** Dilute analyte ~4 mg/mL into methanol.

**Instrument:** Agilent gas chromatograph operated in split mode with MS detector  
**Column:** HP-5; 30m x 0.25 mm x 0.25  $\mu$ m  
**Carrier Gas:** Helium at 1.5 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 280°C at 12 °C/min

3) Hold final temperature for 9.0 min

**Injection Parameters:** Split Ratio = 25:1, 1  $\mu$ L injected

**MS Parameters:** Mass scan range: 30-550 amu

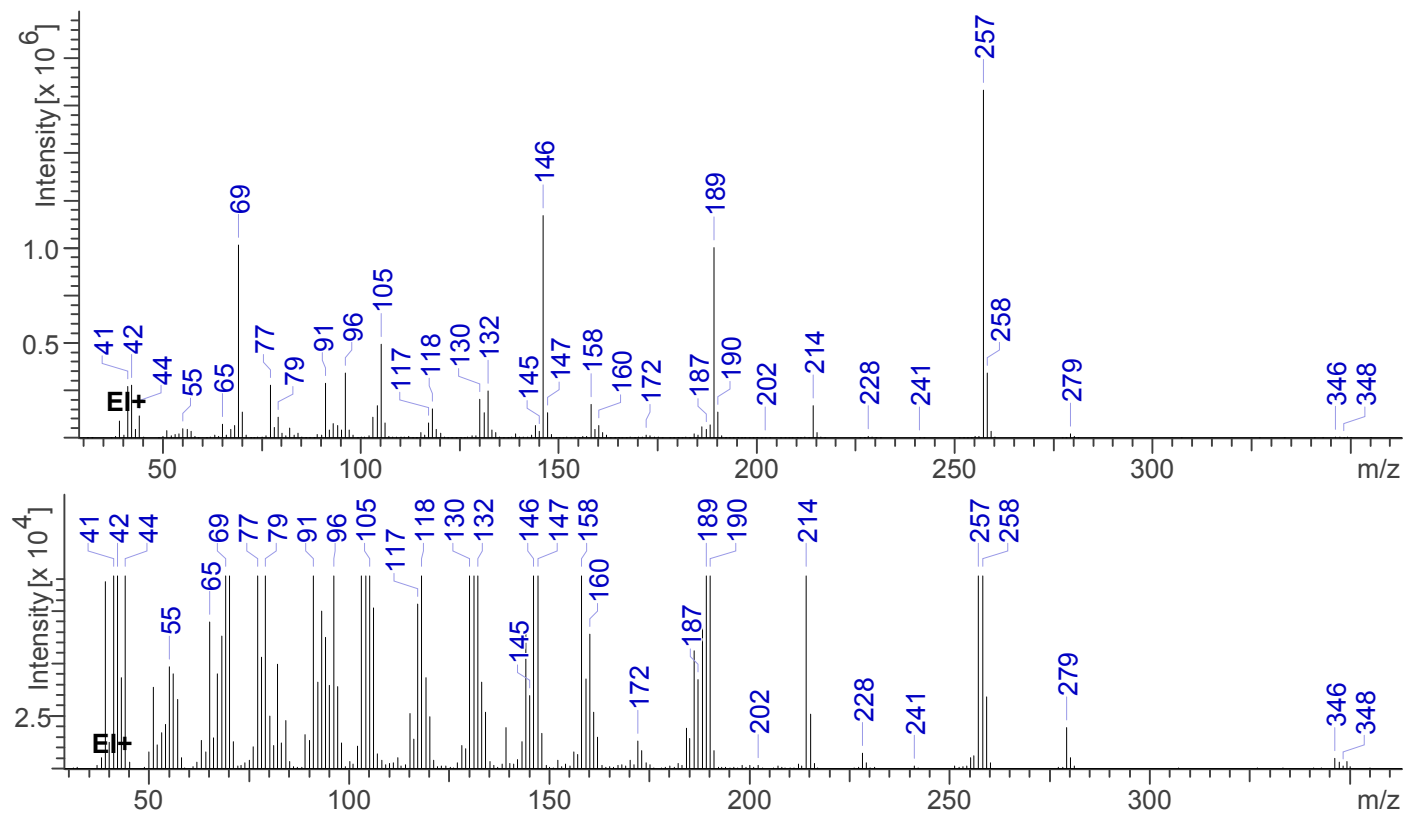
Threshold: 250

Tune file: stune.u

Acquisition mode: scan

**Retention Time:** 18.046 min

EI Mass Spectrum: Crotonyl fentanyl; lot# 0511357-12







## Crotonyl fentanyl

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### **4. ADDITIONAL RESOURCES**

*no available literature as of 11/08/17*