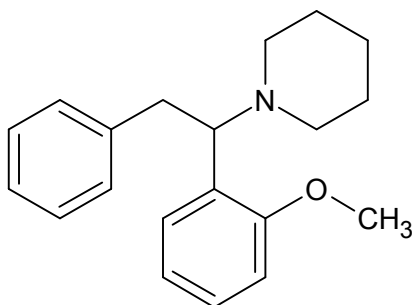




## Methoxphenidine

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



### 1. GENERAL INFORMATION

**IUPAC Name:** 1-[1-(2-methoxyphenyl)-2-phenylethyl]piperidine

**CAS#:** 127529-46-8(base)

**Synonyms:** 2-MeO-Diphenidine, MXP, Methoxydiphenidine

**Source:** DEA Reference Material Collection

**Appearance:** White Powder

**UV<sub>max</sub>(nm):** Not Determined

### 2. CHEMICAL AND PHYSICAL DATA

#### 2.1 CHEMICAL DATA

Form	Chemical Formula	Molecular Weight	Melting Point (°C)
Base	C <sub>20</sub> H <sub>25</sub> NO	295	Not Determined
HCl	C <sub>20</sub> H <sub>25</sub> NO HCl	331	Not Determined



# Methoxphenidine

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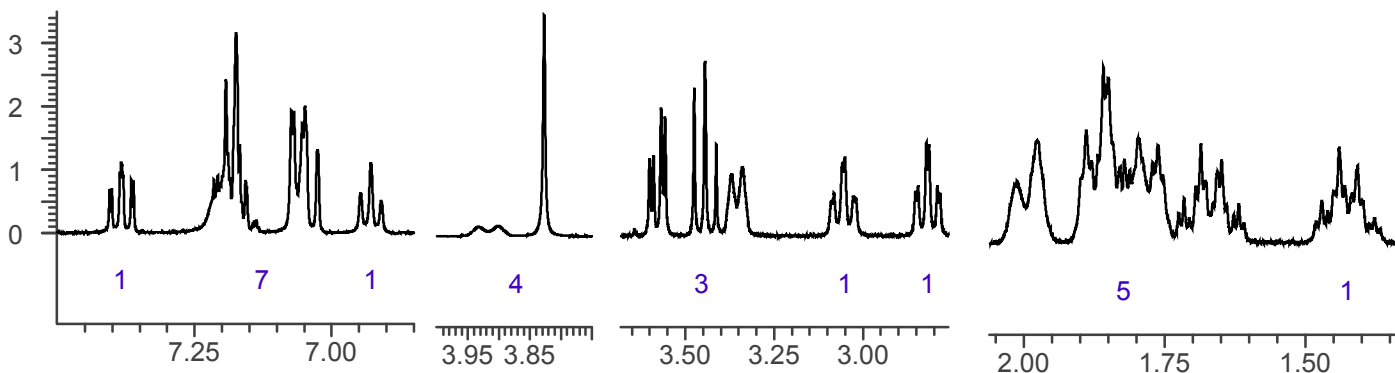
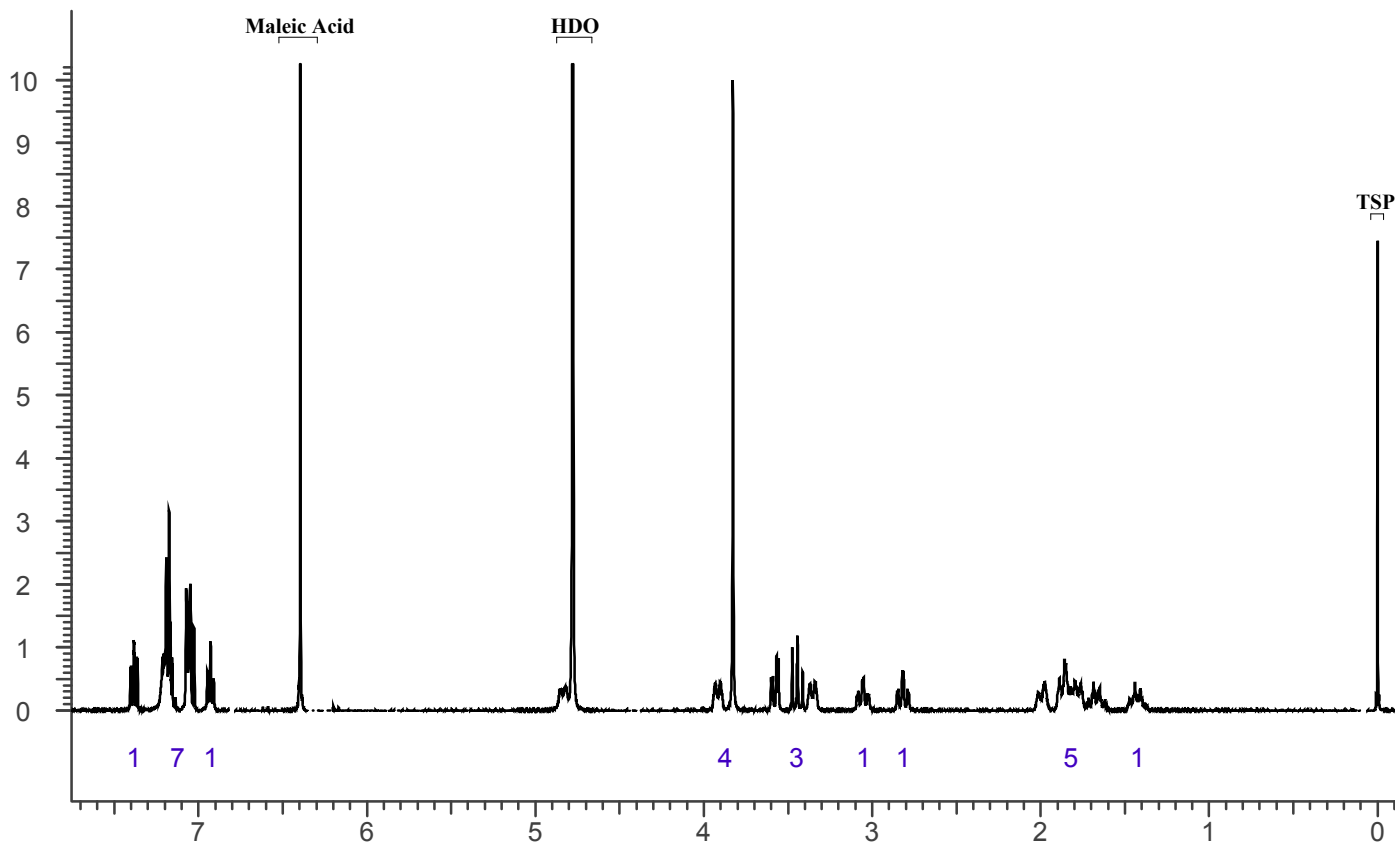


## 3. QUALITATIVE DATA

### 3.1 NUCLEAR MAGNETIC RESONANCE

*Sample Preparation:* Dilute analyte to ~5 mg/mL in D<sub>2</sub>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  
<sup>1</sup>HNMR: Methoxphenidine HCl, Lot 0459181-33 400MHz





# Methoxphenidine

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## 3.2 GAS CHROMATOGRAPHY/MASS SPECTROMETRY

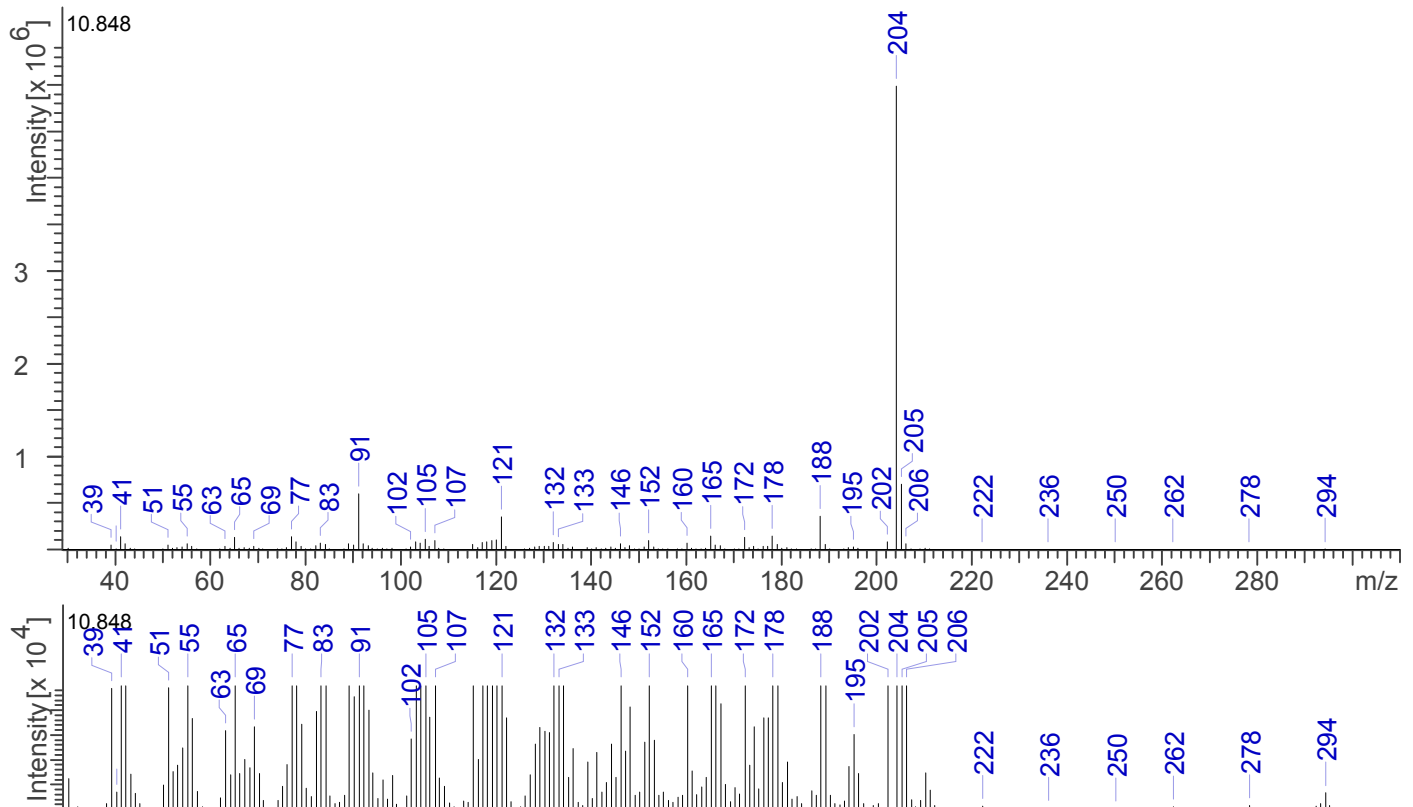
**Sample Preparation:** Dilute analyte ~4 mg/mL in Methanol.

**Instrument:** Agilent gas chromatograph operated in split mode with MS detector  
**Column:** DB-5 MS (or equivalent); 15m x 0.25 mm x 0.25  $\mu$ m  
**Carrier Gas:** Helium at 1 mL/min  
**Temperatures:** Injector: 280°C  
MSD transfer line: 280°C  
MS Source: 250°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: 100  
Tune file: stune.u  
Acquisition mode: scan

**Retention Time:** 10.85 min

EI Mass Spectrum: Methoxphenidine HCl Lot 0459181-33





# Methoxphenidine

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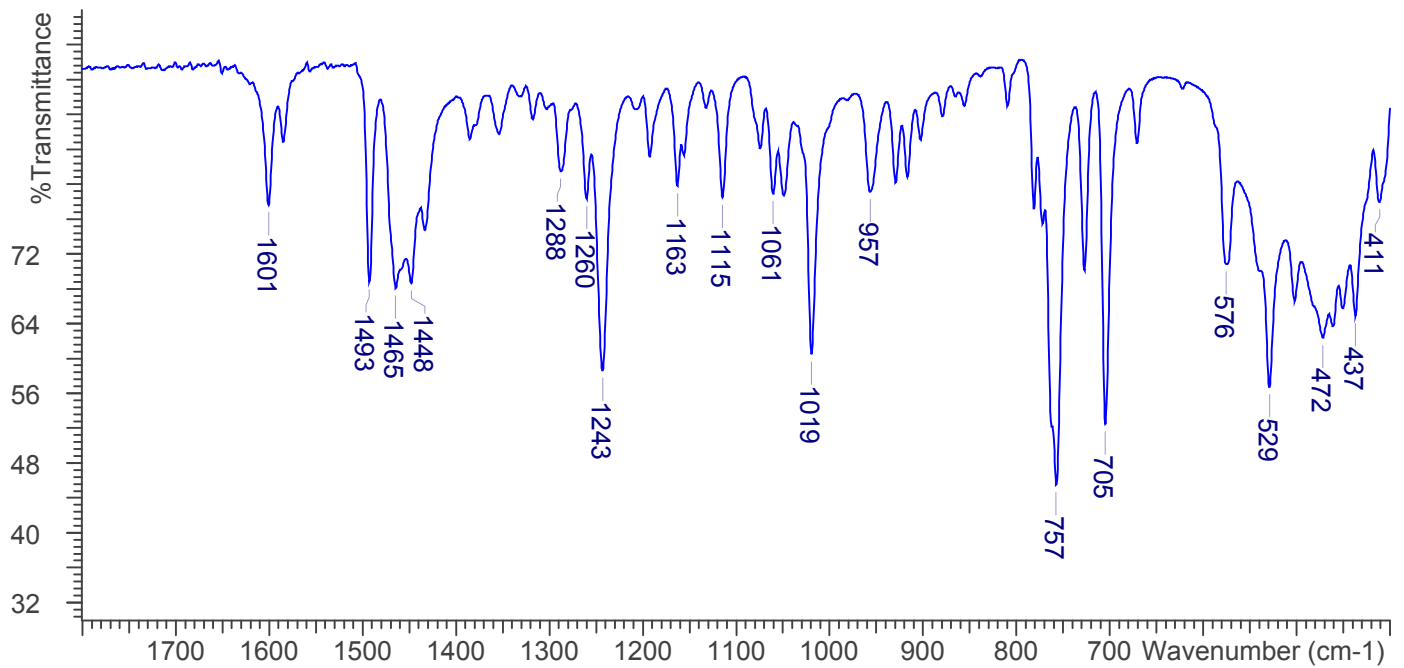
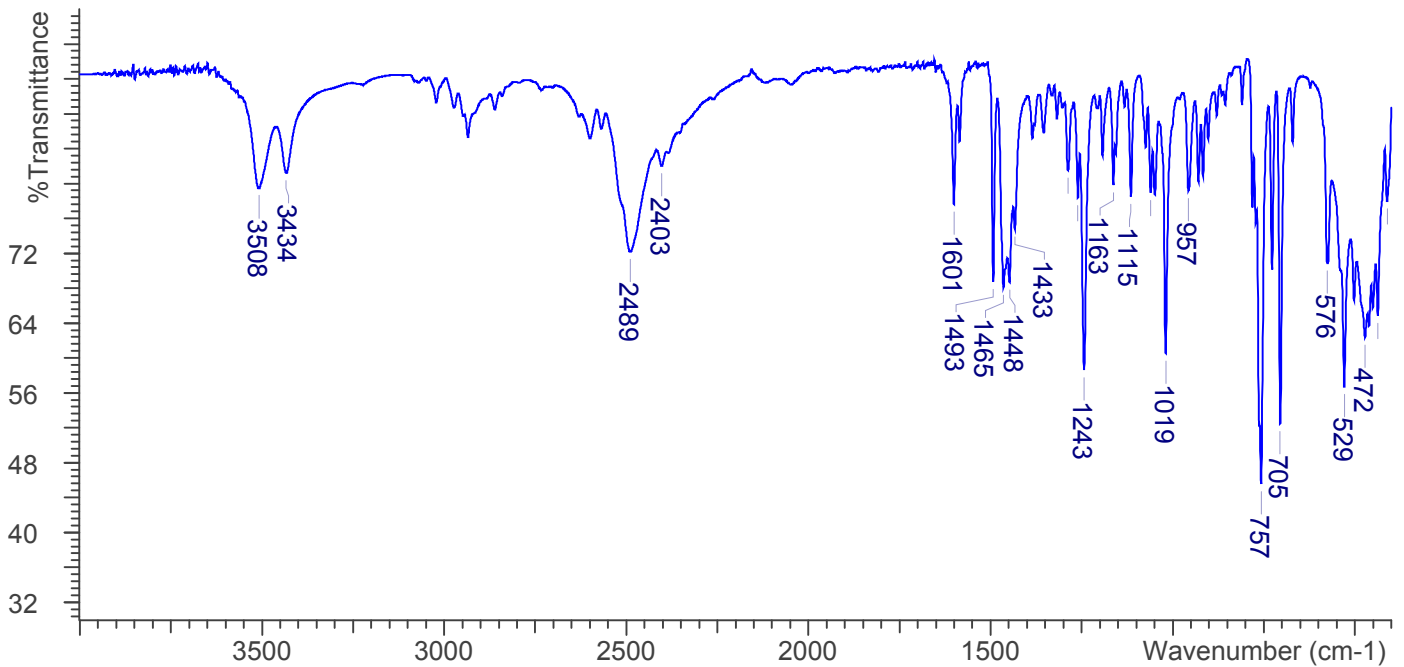


## 3.3 INFRARED SPECTROSCOPY (FTIR)

**Instrument:** FTIR with diamond ATR attachment (1 bounce)

**Scan Parameters:**  
Number of scans: 32  
Number of background scans: 32  
Resolution: 4  $\text{cm}^{-1}$   
Sample gain: 1  
Aperture: 150

FTIR ATR (Diamond, 1 Bounce): Methoxphenidine HCl Lot 0459181-33





## **Methoxphenidine**

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



### **4. ADDITIONAL RESOURCES**

[\*Wikipedia\*](#)