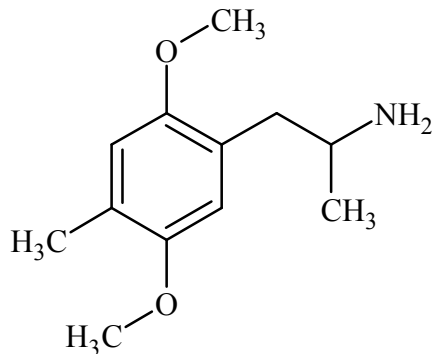




## 2,5-Dimethoxy-4-methylamphetamine

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



### 1. GENERAL INFORMATION

**IUPAC Name:** 1-(2,5-dimethoxy-4-methylphenyl)propan-2-amine

**CAS#:** 15588-95-1 (base), 15589-00-1 (HCl)

**Synonyms:** DOM, STP, 4-methyl-2,5-dimethoxyamphetamine, 4-methyl-2,5-dimethoxy- $\alpha$ -methylphenethylamine

**Source:** DEA Reference Material Collection

**Appearance:** Off-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>12</sub> H <sub>19</sub> NO <sub>2</sub>	209	Not Determined
HCl	C <sub>12</sub> H <sub>19</sub> NO <sub>2</sub> · HCl	245	187.6



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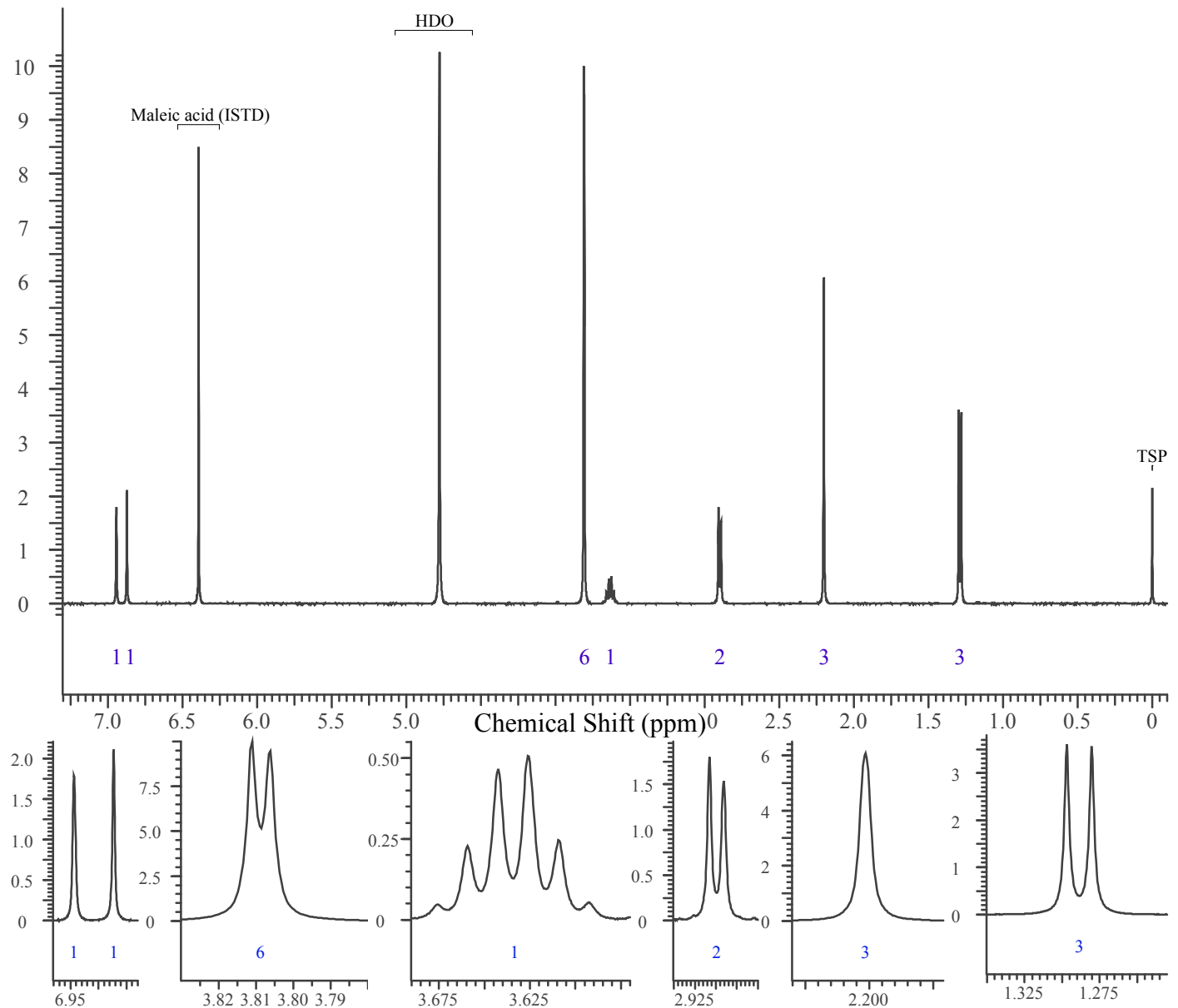
### 3. QUALITATIVE DATA

#### 3.1 NUCLEAR MAGNETIC RESONANCE

**Sample Preparation:** Dilute analyte to ~10 mg/mL in deuterium oxide (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>H NMR: 2,5-dimethoxy-4-methylamphetamine HCl; Lot A261B; D<sub>2</sub>O; 400 MHz





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### 3.2 Gas Chromatography/Mass Spectrometry

**Sample Preparation:** Dilute analyte ~ 4 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 0.25  $\mu$ m

**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 7.0 min

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

**MS Parameters:** Mass scan range: 34-550 amu

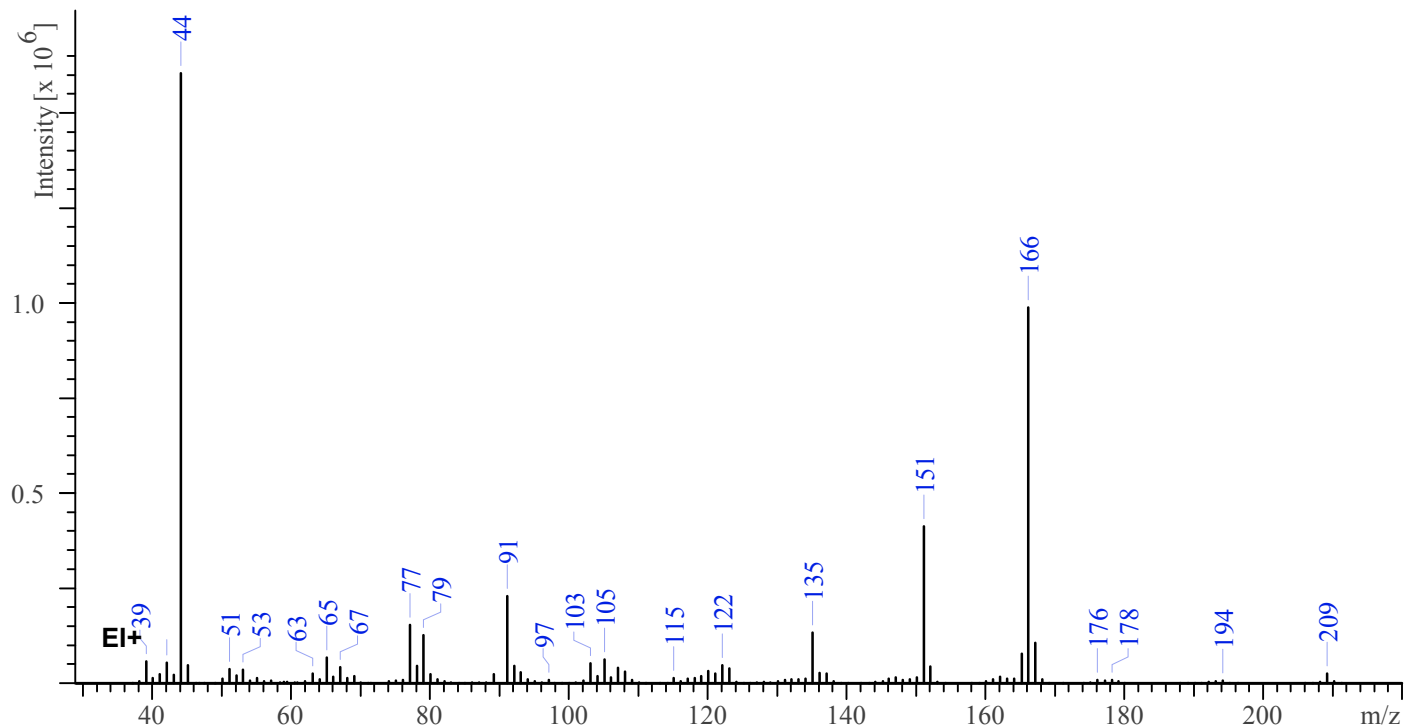
Threshold: 100

Tune file: stune.u

Acquisition mode: scan

**Retention Time:** 8.360 min

EI Mass Spectrum: 2,5-dimethoxy-4-methylamphetamine HCl; Lot A261B





## 2,5-Dimethoxy-4-methylamphetamine

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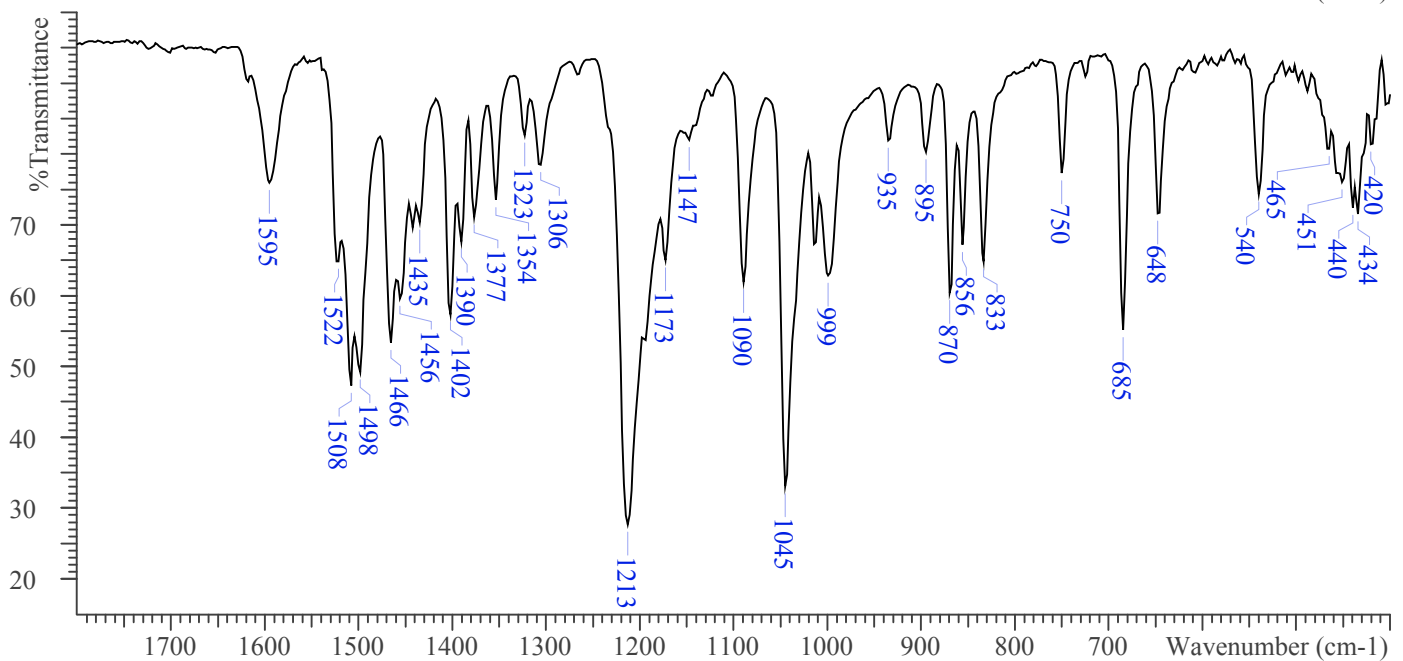
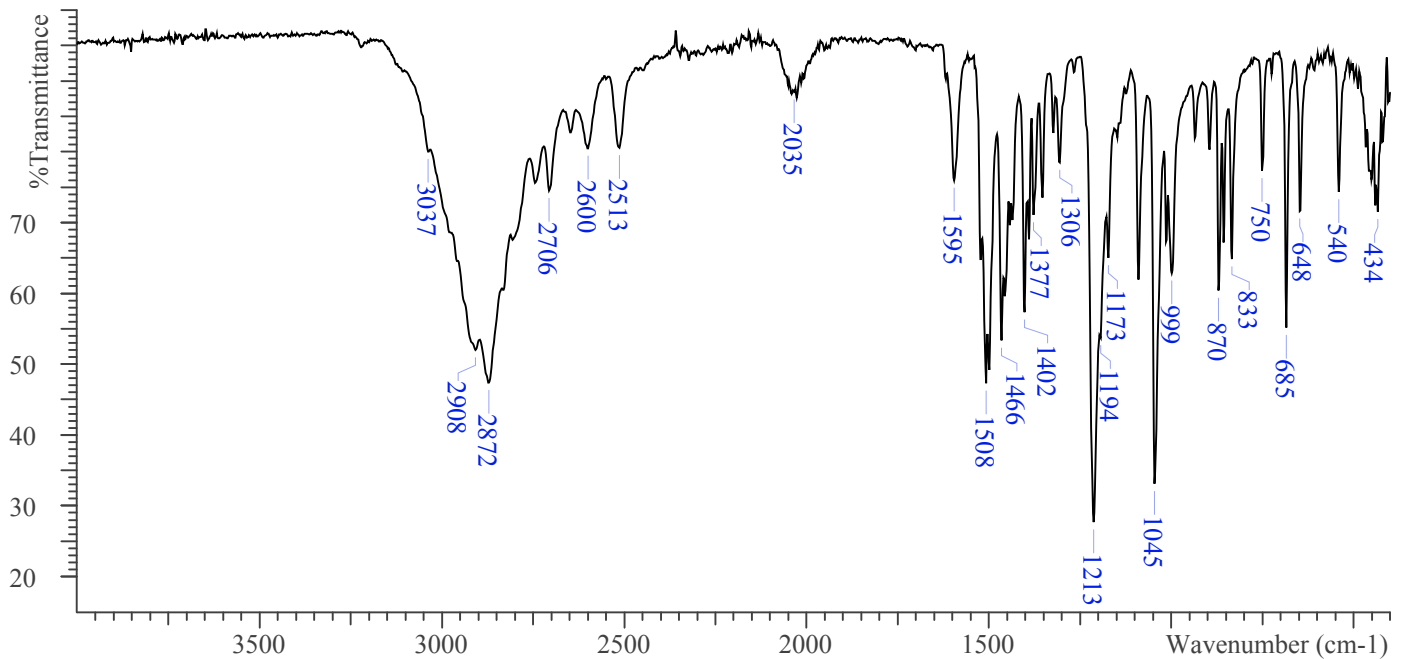


### 3.3 INFRARED SPECTROSCOPY (FTIR)

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

**Scan Parameters:**  
Number of scans: 32  
Number of background scans: 32  
Resolution: 4 cm<sup>-1</sup>  
Sample gain: 8  
Aperture: 150

FTIR ATR (Diamond, 3 Bounce): 2,5-dimethoxy-4-methylamphetamine HCl; Lot A261B





## 2,5-Dimethoxy-4-methylamphetamine

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### 4. ADDITIONAL RESOURCES

[Forendex](#)

[Wikipedia](#)