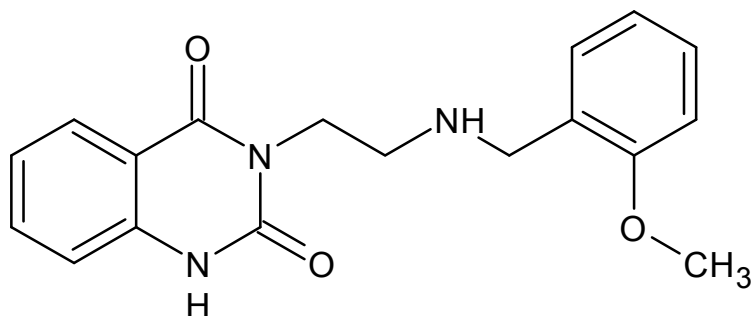




RH-34

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



1. GENERAL INFORMATION

IUPAC Name: 3-{2-[(2-methoxybenzyl)amino]ethyl}quinazoline-2,4(1*H*,3*H*)-dione

CAS#: 1028307-48-3

Synonyms: N/A

Source: DEAReferenceMaterialCollection

Appearance: White powder (HCl)

UV_{max}(nm): 226.1, 278.8, 311.5

2. CHEMICAL AND PHYSICAL DATA

2.1 CHEMICAL DATA

Form	Chemical Formula	Molecular Weight	Melting Point (°C)
Base	C ₁₈ H ₁₉ N ₃ O ₃	325	Not Determined
HCl	C ₁₈ H ₁₉ N ₃ O ₃ · HCl	361	166.1



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3. QUALITATIVE DATA

3.1 NUCLEAR MAGNETIC RESONANCE

Sample Preparation: Dilute analyte to ~5 mg/mL in CD₃OD containing TMS for 0 ppm reference and dimethylsulfone as quantitative internal standard.

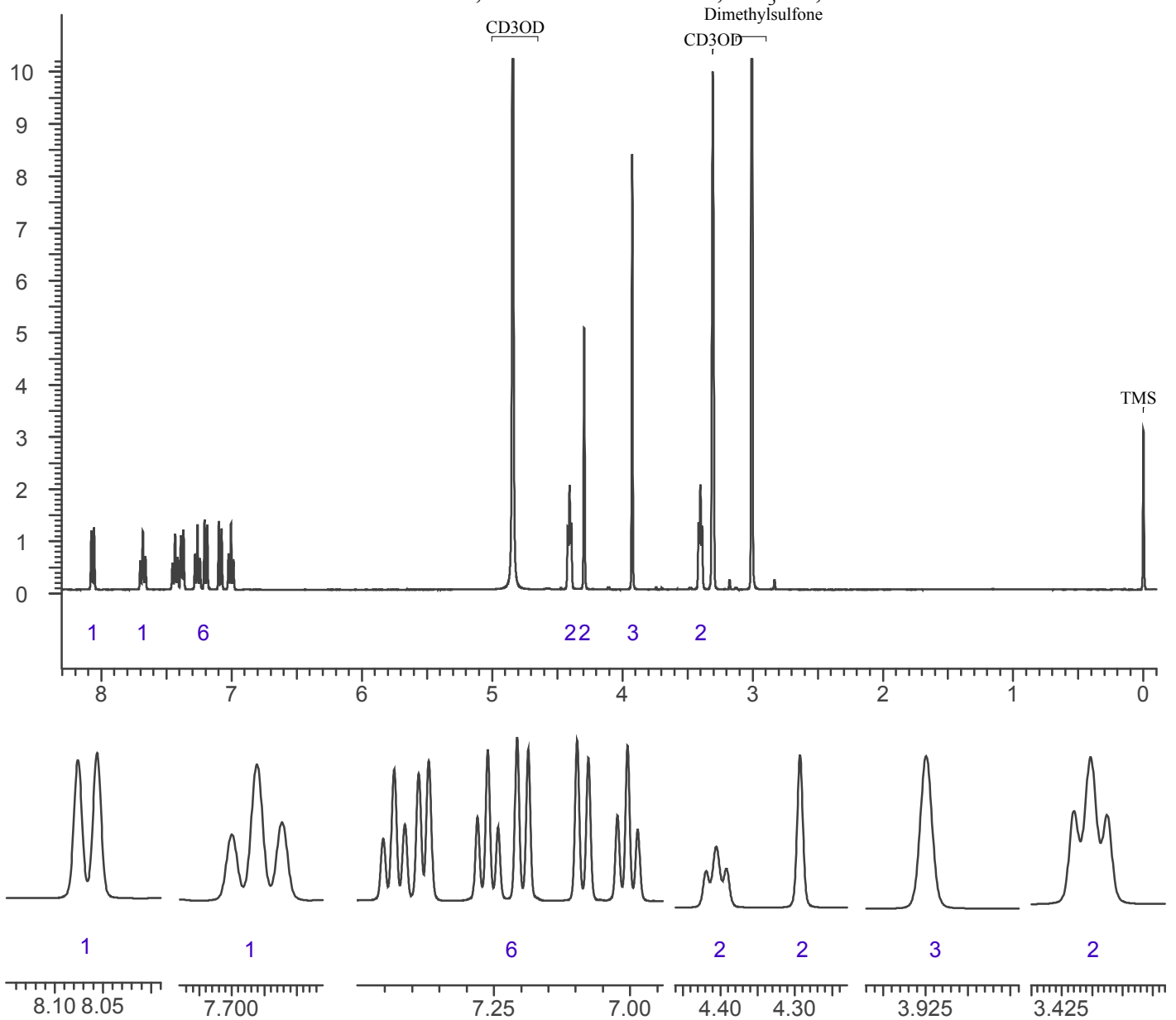
Instrument: 400 MHz NMR spectrometer

Parameters: Spectral width: at least containing -3 ppm through 13 ppm

Pulse angle: 90°

Delay between pulses: 45 seconds

¹H NMR: RH-34 HCl, Lot # RM-131001-02, CD₃OD, 400MHz





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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 μ 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 9.0 min

Injection Parameters: Split Ratio = 20:1, 1 μ L injected

MS Parameters: Mass scan range: 30-550 amu

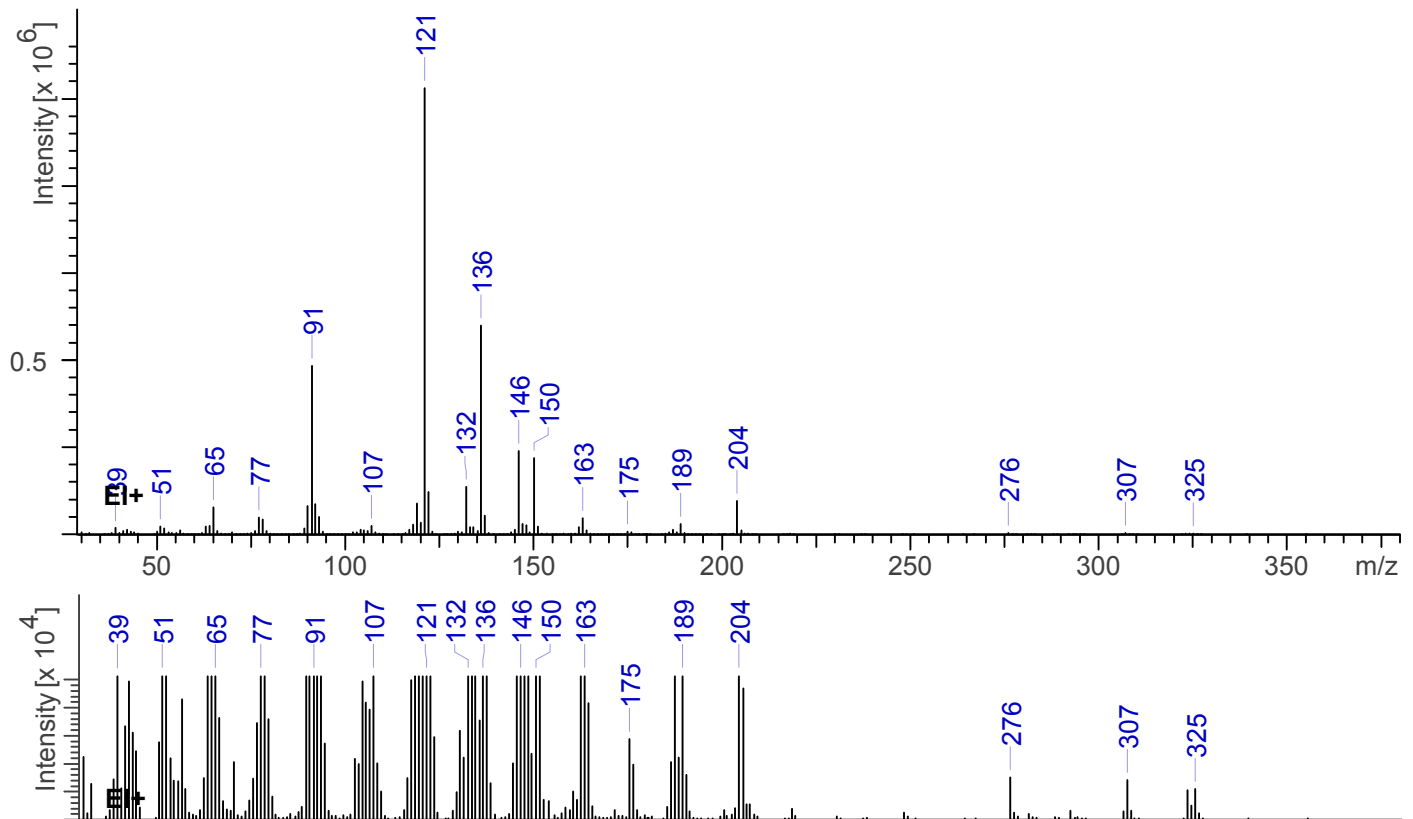
Threshold: 100

Tune file: stune.u

Acquisition mode: scan

Retention Time: 18.057 min

EI Mass Spectrum, RH-34 HCl, Lot # RM-131001-02





RH-34

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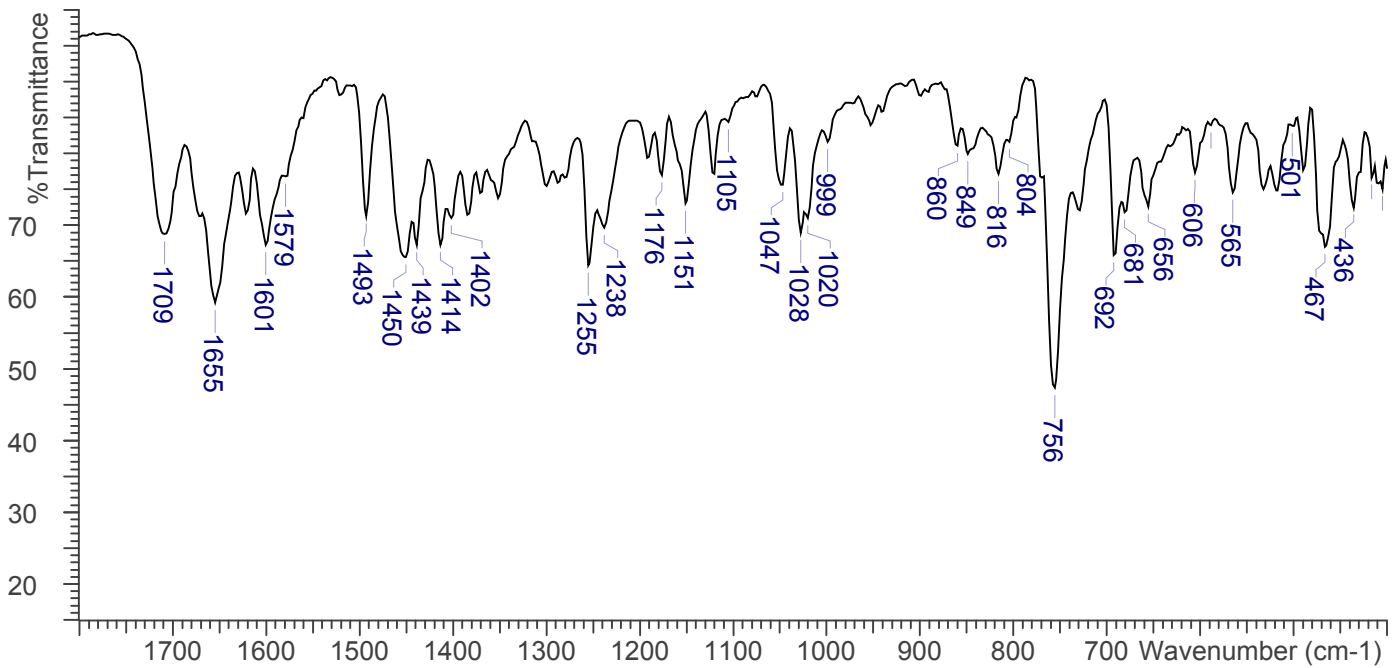
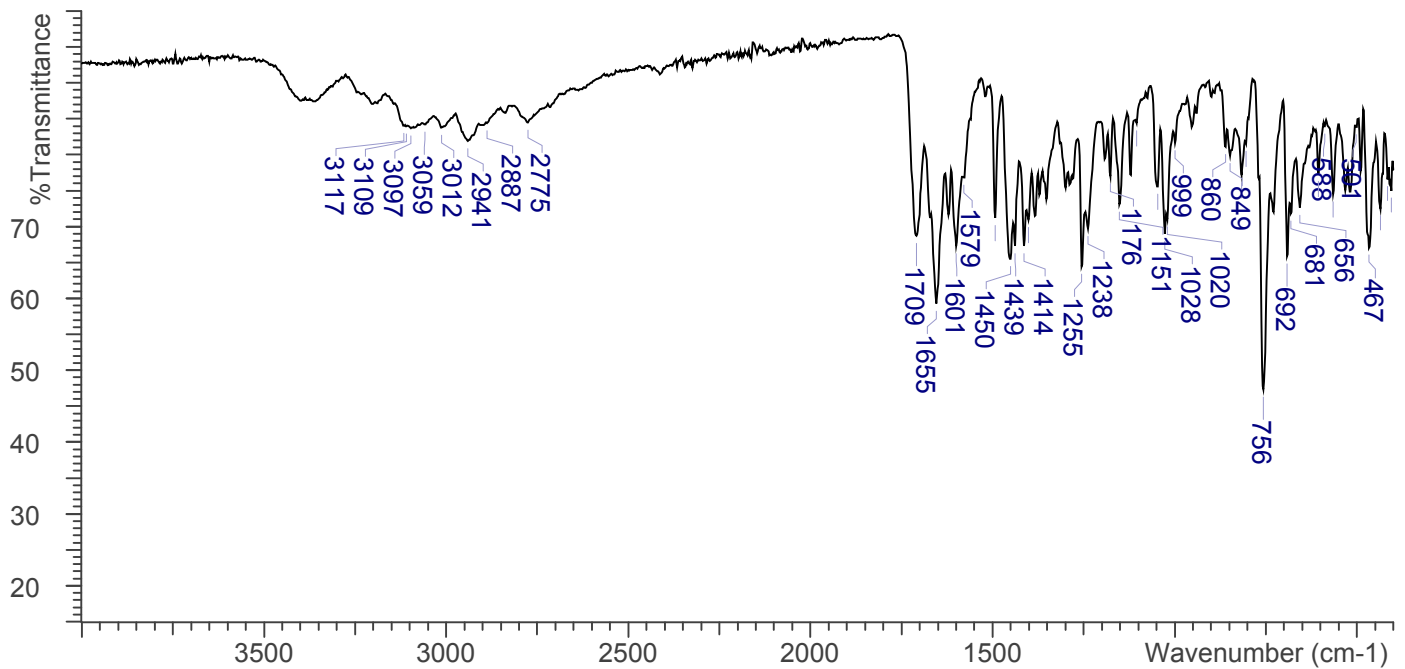


3.3 INFRARED SPECTROSCOPY (FTIR)

Instrument: FTIR with diamond ATR attachment (3 bounce)

Scan Parameters:
Number of scans: 32
Number of background scans: 32
Resolution: 4 cm⁻¹
Sample gain: 8
Aperture: 150

FTIR ATR (Diamond, 3 Bounce) RH-34 HCl, Lot # RM-131001-02





RH-34

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4. ADDITIONAL RESOURCES

<http://en.wikipedia.org/wiki/RH-34>