1. GENERAL INFORMATION

**IUPAC Name:** 1-naphthalenyl(1-pentyl-1H-indazol-3-yl)methanone

**CAS#:** 1364933-55-0

**Synonyms:** JWH-018 indazole, (naphthalenyl-1-yl)(1-pentyl-1H-indazol-3-yl)-methanone

**Source:** DEA Reference Material Collection

**Appearance:** White powder

**UV$_{max}$(nm):** Not determined

2. CHEMICAL AND PHYSICAL DATA

2.1 CHEMICAL DATA

<table>
<thead>
<tr>
<th>Form</th>
<th>Chemical Formula</th>
<th>Molecular Weight</th>
<th>Melting Point (°C)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Base</td>
<td>C$<em>{23}$H$</em>{22}$N$_2$O</td>
<td>342.4</td>
<td>Not Determined</td>
</tr>
</tbody>
</table>
3. QUALITATIVE DATA

3.1 NUCLEAR MAGNETIC RESONANCE

Sample Preparation: Dilute analyte to ~4 mg/mL in CDCl$_3$ containing TMS for 0 ppm reference and dimethylfumarate 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

$^1$HNMR: THJ-018; Lot# 0453581-30; CDCl$_3$; 400MHz
3.2 GAS CHROMATOGRAPHY/MASS SPECTROMETRY

**Sample Preparation:** Dilute analyte ~4 mg/mL in CHCl$_3$

**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 µm

**Carrier Gas:** Helium at 1.5 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 µL injected

**MS Parameters:**
- Mass scan range: 30-550 amu
- Threshold: 150
- Tune file: stune.u
- Acquisition mode: scan

**Retention Time:**
16.19 min

EI Mass Spectrum: THJ-018; Lot# 0453581-30
THJ-018

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

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 cm\(^{-1}\)
- Sample gain: 1
- Aperture: 150

FTIR ATR (Diamond 1 Bounce): THJ-018; Lot# 0453581-30
4. ADDITIONAL RESOURCES

Wikipedia