**5F-BZO-POXIZID**

Sample Type: Seized Material

Latest Revision: **October 19, 2021**

Date Received: **September 14, 2021**

Date of Report: **October 19, 2021**

1. GENERAL INFORMATION

IUPAC Name: N-[(Z)-[1-(5-fluoropentyl)-2-oxo-indolin-3-ylidene]amino]benzamide

InChI String: InChI=1S/C20H20FN3O2/c21-13-7-2-8-14-24-17-12-6-5-11-16(17)18(20(24)26)22-23-19(25)15-9-3-1-4-10-15/h1,3-6,9-12H,2,7-8,13-14H2,(H,23,25)/b22-18-

CFR: Not Scheduled (10/2021)

CAS#: Not Available

Synonyms: 5F-MDA-19, 5-fluoropentyl MDA 19

Source: Pinellas County Forensic Lab

Appearance: Plant-Like Material

**Important Note:** All identifications were made based on evaluation of analytical data (GC-MS and LC-QTOF-MS) in comparison to analysis of acquired reference material.

**Prepared By:** Alex J. Krotulski, PhD; Reta Newman, MA; Michael Gilbert, BS; Melissa F. Fogarty, MSFS, D-ABFT-FT; and Barry K. Logan, PhD, F-ABFT
2. CHEMICAL AND PHYSICAL DATA

2.1 CHEMICAL DATA

<table>
<thead>
<tr>
<th>Form</th>
<th>Chemical Formula</th>
<th>Molecular Weight</th>
<th>Molecular Ion [M⁺]</th>
<th>Exact Mass [M+H]⁺</th>
</tr>
</thead>
<tbody>
<tr>
<td>Base</td>
<td>C₂₀H₂₀FN₃O₂</td>
<td>353.4</td>
<td>353</td>
<td>354.1612</td>
</tr>
</tbody>
</table>

3. BRIEF DESCRIPTION

5F-BZO-POXIZID is classified as a synthetic cannabinoid. Synthetic cannabinoids have been reported to cause psychoactive effects similar to delta-9-tetrahydrocannabinol (THC). Synthetic cannabinoids have caused adverse events, including deaths, as described in the literature. Closely related analogue BZO-HEXOXIZID (MDA 19) was synthesized and studied in the late 2000’s by scientists at the University of Texas M. D. Anderson Cancer Center.¹,²,³ BZO-HEXOXIZID is reported to be a potent and selective cannabinoid receptor 2 (CB₂) agonist. Several closely related analogues make up this new generation of synthetic cannabinoids, some of which have been studied and reported.³,⁴ Scientists at Cayman Chemical and the CFSRE developed a new naming convention for this subclass, calling these new drugs the “OXIZIDs”.⁵ OXIZID represents the core/linker region of this new synthetic cannabinoid structure. The OXIZID subclass recently emerged among the recreation drug supply internationally, seemingly as replacements after a synthetic cannabinoid class-wide ban implemented by China in July 2021 which included most traditional indole and indazole structural scaffolds. To date, multiple OXIZID analogues have been identified worldwide, most of which are unstudied with pharmacological and human effects undetermined. Currently, no analogues of the OXIZID subclass are scheduled substances in the United States.
4. ADDITIONAL RESOURCES


https://www.caymanchem.com/product/34586/5-fluoro-bzo-poxizid
5. QUALITATIVE DATA

5.1 GAS CHROMATOGRAPHY MASS SPECTROMETRY (GC-MS)

Testing Performed At: The Center for Forensic Science Research and Education at the Fredric Rieders Family Foundation (Willow Grove, PA)

Sample Preparation: Dilution in methanol

Instrument: Agilent 5975 Series GC/MSD System

Column: Agilent J&W DB-1 (12 m x 200 µm x 0.33 µm)

Carrier Gas: Helium (Flow: 1.46 mL/min)

Temperatures:
- Injection Port: 265 °C
- Transfer Line: 300 °C
- MS Source: 230 °C
- MS Quad: 150 °C
- Oven Program: 50 °C for 0 min, 30 °C/min to 340 °C for 2.3 min

Injection Parameters:
- Injection Type: Splitless
- Injection Volume: 1 µL

MS Parameters:
- Mass Scan Range: 40-550 m/z
- Threshold: 250

Retention Time: 8.69 min

Standard Comparison: Reference material for 5F-BZO-POXIZID (Batch: 0626956-2) was purchased from Cayman Chemical (Ann Arbor, MI, USA). Analysis of this standard resulted in positive identification of the analyte in the exhibit as 5F-BZO-POXIZID based on retention time (8.67 min) and mass spectral data. (https://www.caymanchem.com/product/34586/5-fluoro-bzo-poixizid)
Chromatogram: **5F-BZO-POXIZID**

Additional peaks in chromatogram: internal standard (3.09 min), internal standard (5.72 min) and ADB-BINACA (7.48 min)

EI (70 eV) Mass Spectrum: **5F-BZO-POXIZID**
5.2 LIQUID CHROMATOGRAPHY QUADRUPOLE TIME OF FLIGHT MASS SPECTROMETRY (LC-QTOF)

Testing Performed At: The Center for Forensic Science Research and Education at the Fredric Rieders Family Foundation (Willow Grove, PA)

Sample Preparation: 1:100 dilution of GC-MS sample in mobile phase

Instrument: Sciex TripleTOF® 5600+, Shimadzu Nexera XR UHPLC

Column: Phenomenex® Kinetex C18 (50 mm x 3.0 mm, 2.6 µm)

Mobile Phase:
- A: Ammonium formate (10 mM, pH 3.0)
- B: Methanol/acetonitrile (50:50)

Flow rate: 0.4 mL/min

Gradient:
- Initial: 95A:5B; 5A:95B over 13 min; 95A:5B at 15.5 min

Temperatures:
- Autosampler: 15 °C
- Column Oven: 30 °C
- Source Heater: 600 °C

Injection Parameters:
- Injection Volume: 10 µL

QTOF Parameters:
- TOF MS Scan Range: 100-510 Da
- Precursor Isolation: SWATH® acquisition (27 windows)
- Fragmentation: Collision Energy Spread (35±15 eV)
- MS/MS Scan Range: 50-510 Da

Retention Time: 9.34 min

Standard Comparison:
- Reference material for 5F-BZO-POXIZID (Batch: 0626956-2) was purchased from Cayman Chemical (Ann Arbor, MI, USA). Analysis of this standard resulted in positive identification of the analyte in the exhibit as 5F-BZO-POXIZID based on retention time (9.34 min) and mass spectral data. (https://www.caymanchem.com/product/34586/5-fluoro-bzo-poxizid)
Chromatogram: 5F-BZO-POXIZID

Additional peaks in chromatogram: internal standard (4.98 min), internal standard (7.32 min), and ADB-BINACA (8.90 min)

TOF MS Spectra: 5F-BZO-POXIZID
6. FUNDING

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