# 5F-Cumyl-PINACA

1-(5-fluoropentyl)-N-(1-methyl-1-phenylethyl)-1H-indazole-3-carboxamide

Formula: C<sub>22</sub>H<sub>26</sub>FN<sub>3</sub>O Formula weight: 367,47

Chemical Abstracts No.: 1400742-16-6

Smiles code: O=C(NC(C)(C)C1=CC=CC=C1)C2=NN(CCCCCF)C3=C2C=CC=C3

InChi key: XSHGVIPHMOTDCS-UHFFFAOYSA-N Other names: 5F-Cumyl-PINACA, Cumyl-5F-PINACA

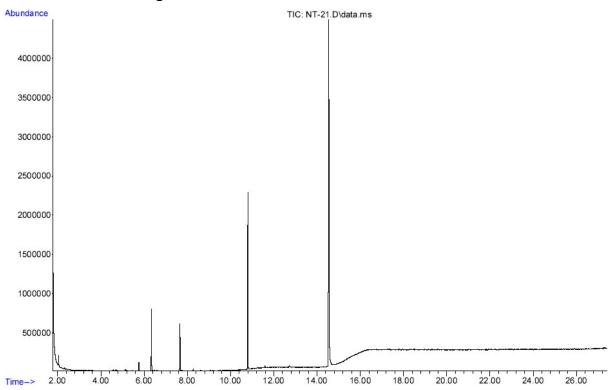
The components of the seized e-cigarette liquid were separated by column chromatography. The active component was analyzed by GC-MS and NMR methods.

#### GC-MS

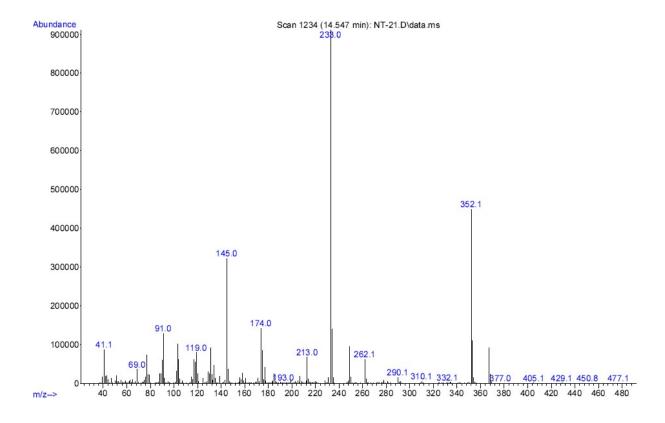
An Agilent 6890N Network GC system set up with Agilent HP-5MS (length: 30 m, diameter: 0.25 mm, film: 0.25 mm) coupled to an Agilent 5973 Network Mass Selective Detector (scan range m/z 35 - m/z 500) was used. Samples were subjected to electron ionization (EI) mode. GC-MS conditions: HP-5MS column was temperature programmed from 100 °C (which was held for 2 minutes) to 280 °C at 20 °C/min, 280 °C was held for 3 minutes, then to 315 °C at 25 °C/min, the temperature was stated at 315 °C for 12 minutes. The carrier gas was helium. Tribenzyl-amine was applied as an internal standard (locked to 10.8 minutes). Data handling was carried out with GC/MSD ChemStation software.

09-04-2020

### **GC-MS** chromatogram



### Mass spectrum at 14.55 min retention time



Agilent 6890N Network GC system set up with Agilent HP-5MS

09-04-2020 2/10

### **NMR**

The NMR spectra were recorded on a Bruker Avance Neo 400 NMR operating at 9.4 Tesla magnetic field, equipped with Prodigy BBO-H&F-D-05 Z-gradient probe. The spectra were recorded at 25°C in DMSO- $d_6$  solution. The spectrometer was controlled, and the data were processed using TopSpin 4.0 software package. Chemical shifts ( $\delta$ ) are given in parts per million unit, referenced to tetramethylsilane ( $\delta_{TMS}$  = 0.00 ppm). The determination of the structure was based on  $^1$ H, zqs-clip-COSY, zqs-easy-ROESY, as well as  $^{13}$ C, multiplicity edited HSQC, HMBC as well as double-edited HSQC-zqs-clip-COSY spectra.

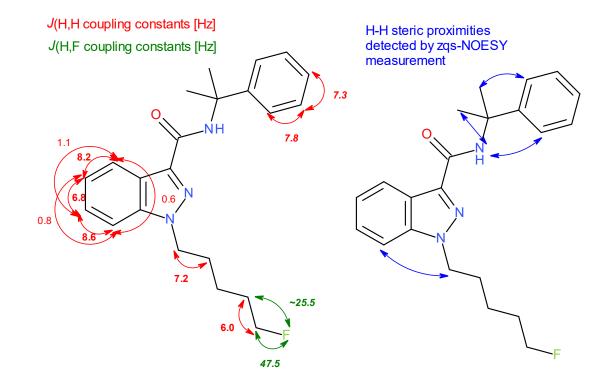
#### **5F-Cumyl-PINACA**

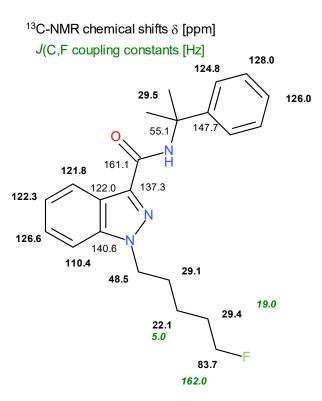
1-(5-fluoropentyl)-N-(1-methyl-1-phenylethyl)-1H-indazole-3-carboxamide CC(C)(NC(=0)c1nn(CCCCCF)c2cccc12)c3ccccc3 XSHGVIPHMOTDCS-UHFFFAOYSA-N

<sup>1</sup>H-NMR chemical shifts δ [ppm]

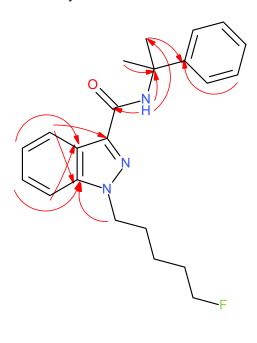
CAS No.: 1400742-16-6 Formula Weight: 367,45974 Exact Mass: 367,205990682 Molecular Formula: C<sub>22</sub>H<sub>26</sub>FN<sub>3</sub>O

09-04-2020



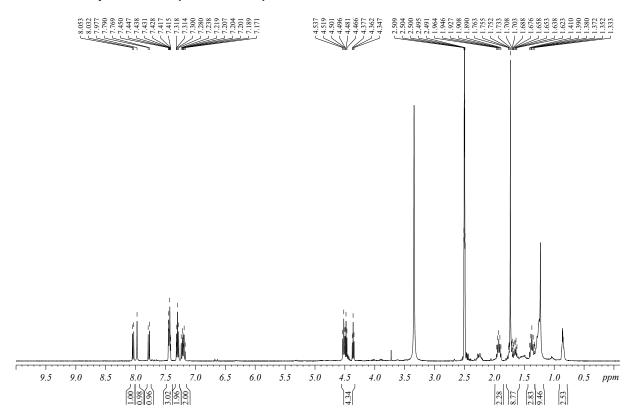


Characterictic heteronuclear long-range coupling detected by HMBC method H

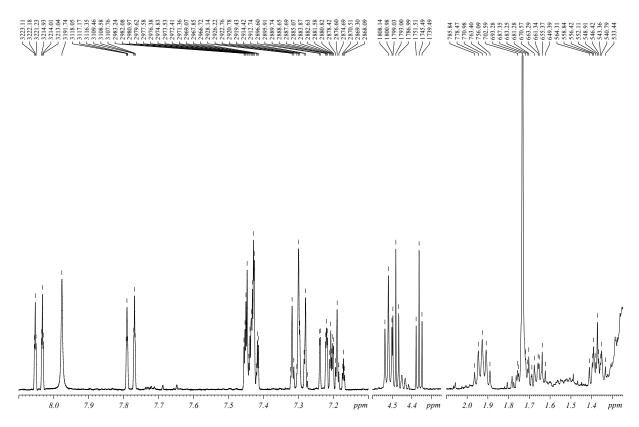


09-04-2020 4/10

# <sup>1</sup>H NMR spectrum (overview)

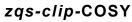


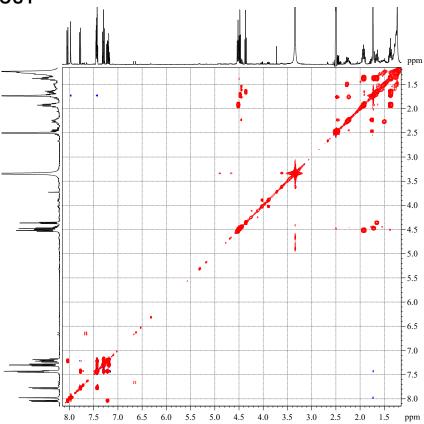
# <sup>1</sup>H NMR spectrum (characteristic sections)



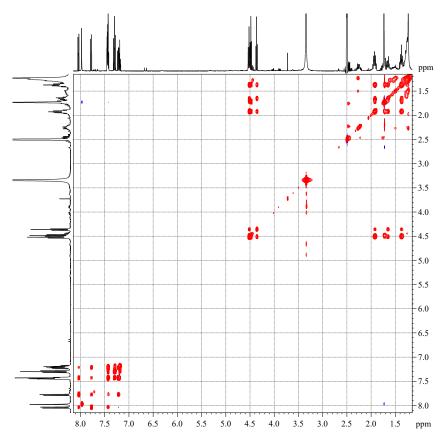
Bruker AVANCE NEO 400, CryoProbe Prodigy; solvent: DMSO- $d_6$ 

09-04-2020 5/10



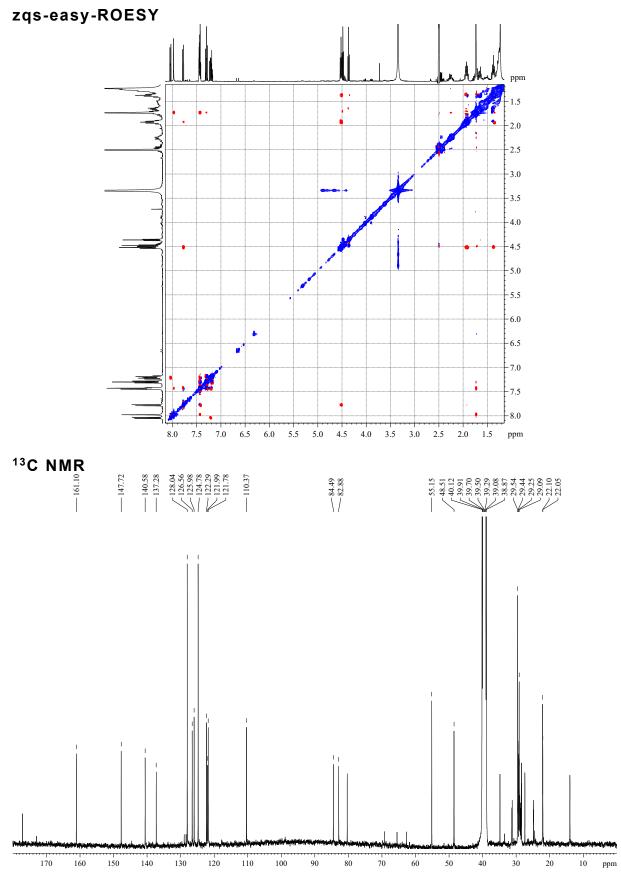


# zqs-TOCSY



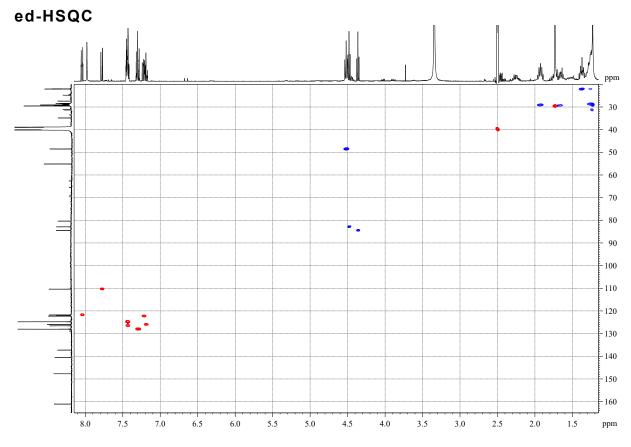
Bruker AVANCE NEO 400, CryoProbe Prodigy; solvent: DMSO-d $_6$ 

09-04-2020 6/10

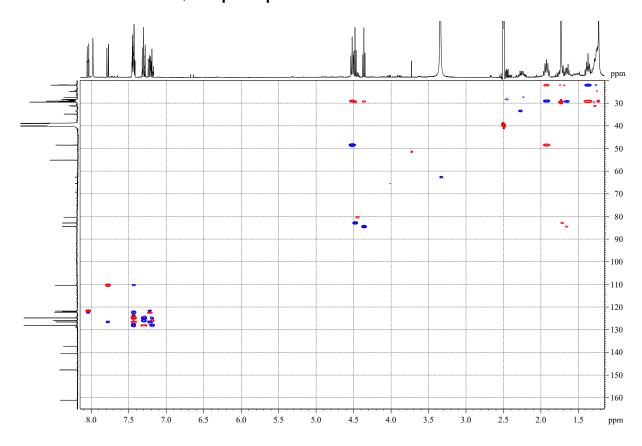


Bruker AVANCE NEO 400, CryoProbe Prodigy; solvent: DMSO-d<sub>6</sub>

09-04-2020 7/10

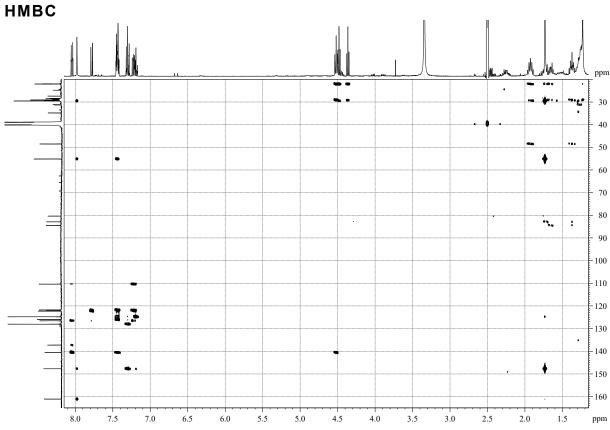


# double edited-HSQC-zqs-clip-COSY



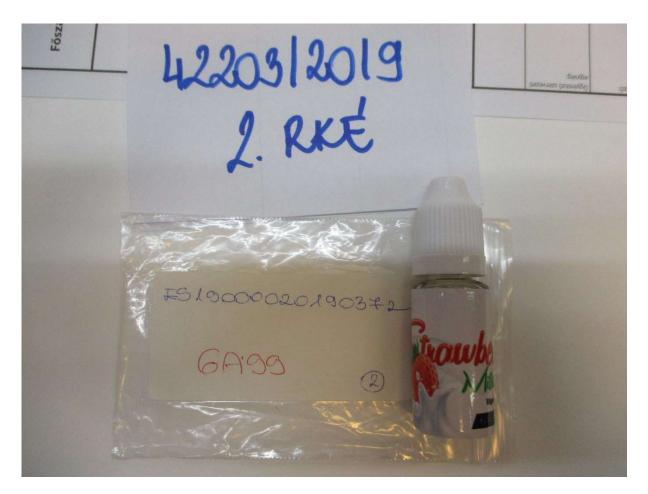
Bruker AVANCE NEO 400, CryoProbe Prodigy; solvent: DMSO-d $_{\rm 6}$ 

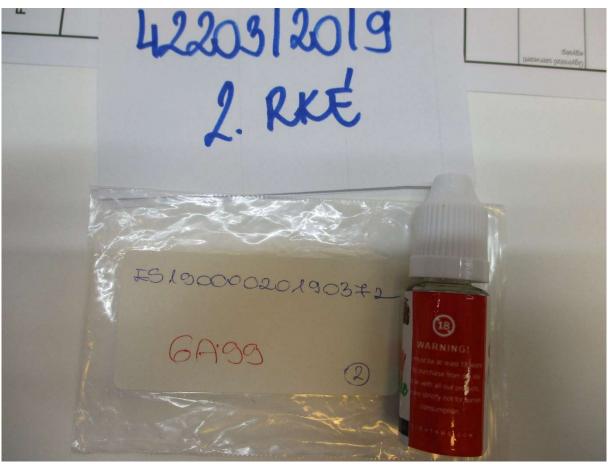
09-04-2020 8/10



Bruker AVANCE NEO 400, CryoProbe Prodigy; solvent: DMSO-d<sub>6</sub>

09-04-2020 9/10





09-04-2020