

## 4-CN-CUMYL-BUTINACA (4-CN-CUMYL-BINACA; SGT-78)

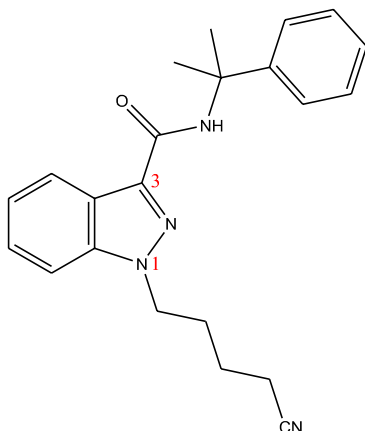
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### Introduction:

In recent years, various products containing synthetic cannabinoids (e.g., JWH-018, UR-144, AKB48, etc.) laced on plant material have been encountered by law enforcement and are smoked for their psychoactive effects. In response to Federal control of these synthetic cannabinoids, a transition to new synthetic cannabinoids laced on plant material has been observed. 4-CN-CUMYL-BUTINACA is a synthetic cannabinoid that has been encountered on the designer drug market and has been found laced on plant material and marketed under the guise of herbal incense products.

### Chemistry:

The chemical structure for 4-CN-CUMYL-BUTINACA <sup>1</sup> is shown below.



4-CN-CUMYL-BUTINACA is classified as an indazole. 4-CN-CUMYL-BUTINACA is based on an indazole core structure where the 1- and 3-positions of the indazole ring system are substituted. The 1-position of 4-CN-CUMYL-BUTINACA is substituted with a linear four carbon chain terminated with a cyano (CN) group. The 3-position is substituted with an amide linker, and the nitrogen atom (N) of this linker is further substituted with a 2-phenylpropan-2-yl group.

### Pharmacology:

Data from preclinical studies show that 4-CN-CUMYL-BUTINACA binds to and acts as an agonist at the CB1 receptor. In drug discrimination studies in rats, 4-CN-CUMYL-BUTINACA generalized to  $\Delta^9$ -THC, i.e. produced subjective effects similar to those of  $\Delta^9$ -THC.

There are no published studies on the safety of 4-CN-CUMYL-BUTINACA for human use.

### Licit Uses:

There are no commercial or medical uses for 4-CN-CUMYL-BUTINACA.

### Illicit Uses:

4-CN-CUMYL-BUTINACA has been encountered in numerous synthetic cannabinoid products that are smoked for their psychoactive effects.

### User Population:

Information on user population in the U.S. is limited. 4-CN-CUMYL-BUTINACA abuse is not monitored by any national drug abuse surveys. Poison control centers continue to report adverse health effects in response to the abuse of synthetic cannabinoids and this abuse is both a public health and safety concern. Serious adverse effects including death have been reported following the use of 4-CN-CUMYL-BUTINACA.

### Illicit Distribution:

According to DEA's National Forensic Laboratory Information System (NFLIS) Drug database, which collects scientifically verified data on drug items and cases submitted to and analyzed by federal, state, and local forensic laboratories, there have been over 1,060 reports of 4-CN-CUMYL-BUTINACA since it was first reported in 2016.

### Control Status

4-CN-CUMYL-BUTINACA is a Schedule I controlled substance under the Federal Controlled Substances Act.

Comments and additional information are welcomed by the Drug and Chemical Evaluation Section; Fax 571-362-4250, Telephone 571-362-3249, or E-mail [DPE@dea.gov](mailto:DPE@dea.gov).

<sup>1</sup> Chemical name: 1-(4-Cyanobutyl)-N-(2-phenylpropan-2-yl)-1H-indazole-3-carboxamide