



EU EARLY WARNING SYSTEM FORMAL NOTIFICATION

Date issued	14 December 2020	RCS ID	EU-EWS-RCS-FN-2020-0045
Issued by	EMCDDA	Transmitted by	Action on New Drugs Sector, EMCDDA
Subject	Formal notification of <i>N</i> -(1-adamantyl)-1-(5-bromopentyl)indazole-3-carboxamide (5B-AKB48) by Slovenia as a new psychoactive substance under the terms of Regulation (EU) 2017/2101		

1. Read me first

This document provides formal notification of the analytical identification of *N*-(1-adamantyl)-1-(5-bromopentyl)indazole-3-carboxamide (5B-AKB48) for the first time in Europe.

Please report any additional data you have on this substance to: ews@emcdda.europa.eu

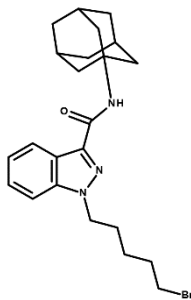
2. Data use restrictions

As with all formal notifications issued by the EU EWS remember that they may contain information that could be regarded as sensitive. Should you provide some of the information in this notification to other groups we would ask that you exercise your best judgment on what information needs to be provided. If you have any questions in this respect, please contact us.

3. Names of substance and other identifiers

- IUPAC name: *N*-(1-adamantyl)-1-(5-bromopentyl)indazole-3-carboxamide
- Chemical names: *N*-(adamantan-1-yl)-1-(5-bromopentyl)-1*H*-indazole-3-carboxamide; 1-(5-bromopentyl)-*N*-tricyclo[3.3.1.1^{3,7}]dec-1-yl-1*H*-Indazole-3-carboxamide
- Common name: 5B-AKB48
- Other names: 5B-AK48; 5Br-AKB-48; 5Br-AKB48; 5Br-APINACA; 5B-APINACA; 5-Bromo APINACA; 5-br-AKB48; 5-Bromo AKB48; 5-bromo AKB48; 5-Bromo-AKB-48
- Chemical formula: C₂₃H₃₀BrN₃O
- Molecular weight: 444.41
- CAS Registry number: 2160555-51-9 (base)
- InChIKey: JKYXWDCDKGVNGP-UHFFFAOYSA-N

Molecular structure



4. Substance classification

Synthetic cannabinoid

5. Detection

Type: Collected sample

Case Report identifier: EDND-CR-2020-972

Details: 5B-AKB48 was identified in 5 grams of yellow-brown powder test-purchased by the Slovenian National Forensic Laboratory and delivered on 1 September 2020.

The substance was analytically confirmed using GC-MS, GC-MS-IR Condensed Phase and LC-TOF by the National Forensic Laboratory, and NMR by the Faculty of Chemistry and Chemical Technology. The powder was found to contain both 5B-AKB48 and 5C-AKB48, in a molar ratio of 0.15:1 based on NMR analysis, with 5C-AKB48 detected as the major component and 5B-AKB48 detected in the base form. A purity of >97% was reported for the sample, based on NMR analysis. The substance was reported to be soluble in methanol and dichloromethane, and not soluble in water.

Other detections

5B-AKB48 was detected along with 5C-AKB48 in seized brown solid material analysed in the United States in 2018 [1].

6. Chemistry and Analysis

Chemical classification: azacyclic; azole; indazole

5B-AKB48 is structurally related to the internationally controlled 5F-AKB48, also known as 5F-APINACA (Schedule II of the 1971 United Nations Single Convention on Psychotropic Substances). 5B-AKB48 and 5F-AKB48 differ in the replacement of the fluorine atom with a bromine atom at the end of the pentyl side chain.

5B-AKB48 also shares structural similarities with 5C-AKB48, formally notified in 2015, differing due to the replacement of the chlorine atom with a bromine atom at the end of the pentyl side chain.

5B-AKB48 is available as a reference standard and an λ_{max} (ultraviolet wavelength of maximum absorbance) of 210, 304 nm is reported [2].

7. Pharmacology and toxicology

Pharmacological classification: cannabinoid

There is no information available on the pharmacology and toxicology of 5B-AKB48. Based on its structural similarity with other synthetic cannabinoids, such as 5F-AKB48 (5F-APINACA), 5B-AKB48 is expected to act as a cannabinoid receptor agonist.

8. Further information

Further information on this substance is available on the EDND profile:

<https://ednd2.emcdda.europa.eu/ednd/substanceProfiles/1181>

9. Acknowledgements

The Slovenian National Focal Point, the National Forensic Laboratory and the Faculty of Chemistry and Chemical Technology are kindly acknowledged for the information and analytical data provided.

10. Attachments

None.

11. References

[1] https://www.forensicscienceeducation.org/wp-content/uploads/2018/05/5CI-AKB48-and-5Br-AKB48_041018_NMSLabs_Report.pdf

[2] <https://www.caymanchem.com/product/25209/5-bromo-apinaca>