



## EU EARLY WARNING SYSTEM FORMAL NOTIFICATION

Date issued	27 October 2020	RCS ID	EU-EWS-RCS-FN-2020-0038
Issued by	EMCDDA	Transmitted by	Action on New Drugs Sector, EMCDDA
Subject	Formal notification of 3-(4-acetyl-1-methylpiperidin-4-yl)phenyl acetate (O-AMKD) by Germany 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 3-(4-acetyl-1-methylpiperidin-4-yl)phenyl acetate (O-AMKD) for the first time in Europe.

Please report any additional data you have on this substance to: [ews@emcdda.europa.eu](mailto:ews@emcdda.europa.eu)

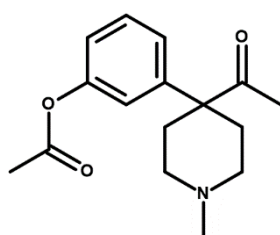
### 2. Data use restrictions

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: 3-(4-acetyl-1-methylpiperidin-4-yl)phenyl acetate
- Chemical names: [3-(4-acetyl-1-methyl-4-piperidyl)phenyl] acetate; 1-[4-[3-(acetyloxy)phenyl]-1-methyl-4-piperidiny]-ethanone
- Common name: O-AMKD
- Other names: acetoxymethylketobemidone
- Chemical formula: C<sub>16</sub>H<sub>21</sub>NO<sub>3</sub>
- Molecular weight: 275.34
- CAS Registry number: 878895-45-5 (base); 878766-13-3 (hydrochloride salt)
- InChIKey: ZXPASXBVYVTLRG-UHFFFAOYSA-N

Molecular structure



#### 4. Substance classification

Opioid

#### 5. Detection

Type: Collected sample

Case Report identifier: EDND-CR-2020-716

Details: O-AMKD was identified in 0.5 grams of powder test-purchased from an online research chemical vendor by the Institute of Forensic Medicine at the University of Freiburg, Germany, in April 2020. Two grams of the substance were ordered and 0.5 grams were delivered. The sample was declared as the fumarate salt.

The substance was analytically confirmed using GC-MS, LC-MS and NMR by the Institute of Forensic Medicine at the University of Freiburg.

#### 6. Chemistry and Analysis

Chemical classification: azacyclic; piperidine

O-AMKD, a phenylpiperidine also known as acetoxymethylketobemidone, is structurally related to the internationally controlled opioid ketobemidone (Schedule I of the 1961 United Nations Single Convention on Narcotic Drugs). O-AMKD differs from ketobemidone due to the replacement of hydroxy with acetoxy (attached at the phenyl ring) and due to the replacement of propanone with ethanone (attached at the piperidine ring).

O-AMKD is the acetoxy ester of methylketobemidone, which is not under international control. O-AMKD differs from methylketobemidone due to replacement of hydroxy with acetoxy (attached at the phenyl ring).

O-AMKD and the internationally controlled cathinone MDPV are structural isomers.

O-AMKD was originally described in a patent on 'esters of 1-alkyl-4-hydroxyphenyl 4-piperidyl ketones' in 1949 [1].

#### 7. Pharmacology and toxicology

Pharmacological classification: opioid

There is no information available on the pharmacology and toxicology of O-AMKD. Based on its chemical structure and on its similarity to ketobemidone, O-AMKD is expected to have opioid narcotic analgesic effects.

#### 8. Further information

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

<https://ednd2.emcdda.europa.eu/ednd/substanceProfiles/1153>

## **9. Acknowledgements**

The German National Focal Point and the Institute of Forensic Medicine at the University of Freiburg are kindly acknowledged for the information and analytical data provided.

## **10. Attachments**

None.

## **11. References**

[1] Miescher, K *et al.* Esters of 1-alkyl-4-hydroxyphenyl 4-piperidyl ketones. US Patent. 1949; 2486796.