



EU EARLY WARNING SYSTEM ALERT

Date	08 February 2016	RCS ID	EU-EWS-RCS-AL-2016-0002
Issued by	EMCDDA	Transmitted by	Rachel Christie
Subject	Serious adverse events associated with MDMB-CHMICA in Europe		

1. Read me first

This alert provides information on 36 serious adverse events — 13 deaths and 23 non-fatal intoxications — in Europe associated with the synthetic cannabinoid MDMB-CHMICA. The alert also provides a summary of the information on this substance that is of relevance to Europe.

This alert should be read in conjunction with:

- the alert issued on 15/12/2014 with the subject '7 non-fatal intoxications associated with 'Bonzai citrus' and/or 'Bonzai Winter Boost' products thought to contain MDMB-CHMICA'; and,
- the alert issued on 19/12/2014 with the subject '4 deaths and 6 non-fatal intoxications in Sweden associated with MDMB-CHMICA (methyl-2-(1-(cyclohexylmethyl)-1 H-indol-3-ylcarbonylamino)-3,3-dimethylbutanoate)'.

Please report any additional information to ews@emcdda.europa.eu

2. Data use restrictions

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

3. Details of the event(s)

As of 20 January 2016 the EMCDDA has received reports of 13 deaths and 23 non-fatal intoxications that are associated with the synthetic cannabinoid MDMB-CHMICA. These occurred between September 2014 and July 2015.

The 13 deaths occurred in four countries: Germany (n=4), Hungary (n=2), Norway (n=1), and, Sweden (n=6). MDMB-CHMICA was analytically confirmed in biological samples or epidemiologically linked samples in all deaths. The cause of death was reported in 11 cases: in 8 cases MDMB-CHMICA was reported to either be the cause of death or may have contributed to the death; in the remaining 3 cases the cause of death was reported as drug overdose or mixed intoxications.

The 23 non-fatal intoxications occurred in six countries: Austria (n=7), France (n=2), Germany (n=4), Spain (n=2), Sweden (n=6), and, the United Kingdom (n=2). MDMB-CHMICA was analytically confirmed either in biological samples (n=13) or in samples of products seized/collected from the patients (n=10).

4. Detections by the EU EWS Network

MDMB-CHMICA has been detected in 21 countries: Austria, Croatia, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Latvia, Lithuania, Luxembourg, the Netherlands, Norway, Poland, Romania, Spain, Sweden, Slovakia, Turkey, and, the United Kingdom.

Formal notification

MDMB-CHMICA was formally notified by the EMCDDA on behalf of Hungary in September 2014. The notification was made based on its identification in a seizure of 0.19 g of a green/brown herbal product made by the Hungarian Police in August 2014.

Seizures

Since September 2014, more than 1200 seizures totalling approximately 50 kg have been made in Europe. Seizures have been made at street level and at international borders. These seizures include powders as well as a range of branded 'legal high' smoking mixtures.

The largest single seizure was made by customs at Luxembourg Airport in December 2014, when 40 kg of white powder was seized in transit from Shanghai, China, to Madrid, Spain.

Collected samples

Collected samples of MDMB-CHMICA have been reported to the EMCDDA, some of which have been linked to serious adverse events.

Serious adverse events

13 deaths and 23 non-fatal intoxications have been reported to the EMCDDA, all of which were analytically confirmed (see Section 3 'Details of the events').

These include 7 non-fatal intoxications reported by Austria which was the subject of an alert issued on 15/12/ 2014 and 4 deaths and 6 non-fatal intoxications reported by Sweden which was the subject of an alert issued on 19/12/14.

5. Names of substance and other identifiers

- **IUPAC name:** methyl 2-[[1-(cyclohexylmethyl)indole-3-carbonyl]amino]-3,3-dimethylbutanoate
- **Common name:** MDMB-CHMICA
- **Other names:** often erroneously referred to as MMB-CHMINACA
- **CAS Registry number:** none available

6. Substance classification

Synthetic cannabinoid

7. Chemistry and analysis

MDMB-CHMICA is an indole-based synthetic cannabinoid with structural similarities to AB-CHMINACA. Information on the characterisation of MDMB-CHMICA and its metabolites are available on the EDND.

8. Pharmacology and toxicology

Studies on the pharmacology and toxicology of MDMB-CHMICA have not been published. Based on its structural similarities to AB-CHMINACA it is thought that MDMB-CHMICA acts a synthetic cannabinoid receptor agonist. Information on its effects on other pharmacological targets is not available.

Information reported to the EMCDDA suggests that patients with acute toxicity associated with exposure to MDMB-CHMICA may present with clinical features including: mydriasis, tachycardia, nausea and vomiting, paranoia, hallucinations, confusion, agitation, breathlessness, drowsiness, unconsciousness or coma, severe motor impairment, and loss of control of urethral and anal sphincters.

Analysis of 'legal high' products that contained MDMB-CHMICA sold on the German market have found visible small lumps of the substance in the plant material. This suggests the presence of 'pockets' where the substance may be highly concentrated. The role of such 'pockets' in causing serious adverse events is unknown.

The metabolism of MDMB-CHMICA is similar to AB-CHMINACA and is dominated by ester cleavage and hydroxylation [1–3].

9. Epidemiology

It appears that most of the use of MDMB-CHMICA is from the use of branded 'legal high' smoking mixtures. More than 20 products have been identified on the European drug market that contain the substance, sometimes in combination with other synthetic cannabinoids. They include:

Bonzai Citrus (Austria), Bonzai Obliteration (Austria), Black Mamba (United Kingdom), Sweet Leaf Obliteration (United Kingdom), Skyhigh (United Kingdom), Vertex Pirate Edition (United Kingdom), AK47 Loaded (Germany), Manga Hot (Germany), King Kong (Germany), Kush or Kush Pink (Germany), Grape Ape (Germany), New Dimension (Germany), Mr. Nice Guy (Germany), Cloud-9 2nd Generation Mad Hatters Incense (Germany), Black Diamond (Germany), Cloud-9 Mad Hatter (Germany), Mad Hatter (Germany), Phantom (Germany), Tropicana Incense (Norway), Rainbow Special, Althea Officinalis (Croatia), Green Hammock (Germany).

It is likely that the majority of users are unaware that they are using MDMB-CHMICA. Data on the prevalence on MDMB-CHMICA use is not available.

10. Additional Information

Further information on MDMB-CHMICA is available on the EDND:

https://ednd.emcdda.europa.eu/html.cfm/index7246EN.html?SUB_ID=441&detail

11. Attachments

There are no attachments to this document.

12. Acknowledgements

The EMCDDA would like to acknowledge the Reitox National Focal Points which have contributed to the information provided in this alert.

13. References

- 1) Schwörer, N et al., Metabolism and urine analysis of the new synthetic cannabinoid MDMB-CHMICA, P28. Toxichem Krimtech. 2015;82(2):110.
- 2) Dobos A, et al. P209. Identification of the main metabolites of MDMB-CHMICA in human urine using UHPLC/MS/MS and GC/MS techniques. 53rd TIAFT Meeting 2015. p.231.
- 3) Franz F, et al. Metabolism and urine analysis of the new synthetic cannabinoid MDMB-CHMICA. Toxichem Krimtech. 2015;82(Special Issue):192–8.