**2C-B draws attention on the Belgian market: description of the first of the 2Cs**

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**Introduction**

Two distinct and unrelated seized materials containing pills were brought to the laboratory and our mission was to identify the composition. The first pill was a small yellow duck and the other one represented a green Super Mario’s face.

**Material and methods**

Classical identification methods include colour tests followed by chromatographic techniques. Colour tests allow a rapid identification of sugars (Molisch reaction), starch (iodine test), cocaine (cobalt thiocyanate) and amphetamine derivatives (Marquis test).

Powders are then diluted in methanol before chromatographic analysis by high performance liquid chromatography with a diode array detector (HPLC-DAD) from Waters and ultra high performance liquid chromatography combined with a time-of-flight detector (UPLC-TOF-MS) from Sciex. Quantification was done by HPLC-DAD.

**Results and discussion**

Marquis test led to a green color, which was unusual for the phenethylamine derivatives that are mostly found in Belgium, as Marquis reagent turns orange when exposed to (met)amphetamine and turns black with MDMA. Other presumptive tests were negative.

Injection on HPLC-DAD led to a significant peak characterized by a retention time of 10.8 min and an UV spectrum showing maxima at 225 and 295 nm.

A prominent peak was also found in UPLC-TOF-MS after 5.54 min runtime, characterized by an exact mass of 259.0208. The corresponding mass spectrum showed 3 specific fragments at 243.0012, 227.9776 and 212.9541.

Library of the MS identified 4-bromo-2,5-dimethoxyphenethylamine, also called 2C-B or 4-BDMPEA.

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| **Pill** | **2-CB concentration** |
| Super Mario | 9,71 % |
| Duck | 5,35 % |

This ring-substituted phenethylamine was synthetized in 1974 by Alexander Shulgin and appeared in the drug market already in the mid-1980’s. However, it’s obviously still popular on the drug market, even if it’s scheduled in Belgium. 2C-B is an psychostimulant drug with psychedelic and hallucinogenic properties.

Finally, trace amounts of 2C-H were found in the “Duck” pill, which is a synthesis intermediate corresponding to the debrominated analogue of 2C-B.

**Conclusion**

Two pills containing 2C-B were identified for the first time in our Belgian laboratory. Even if this compound is known since decades, it isn’t forgotten by the party population and labs have to be able to identify it.

**Reference**

I. Papoutsis et al., 25B-NBOMe and its precursor 2C-B: modern trends and hidden dangers, Forensic Toxicol (2015) 33, 1-11