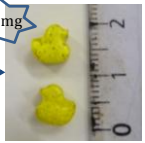


## Introduction



135 mg

Two unrelated seized materials containing tablets were submitted to the lab for analysis



160 mg

## Material and Methods

First, tablets are crushed and submitted to presumptive tests

Substance	Reaction	Color if positive
Sugars	Moline Reagent	
Starch	Iodine Test	
Cocaine	Cobalt Thiocyanate	
Basic N Atoms	Marquis Reagent	

Then, tablets are submitted to chromatographic analysis (internal standard = prazepam)

### HPLC-DAD (Waters)

Alliance 2695 + PDA 2996  
**Column:** Symmetry C8, 5 µm, 250 X 4.6 mm (Waters)  
**Mobile Phase A:** 43.5 mM PO<sub>4</sub> buffer pH 3.8  
**Mobile Phase B:** Acetonitrile  
**Gradient mode:** 45 min runtime



### UHPLC-TOF-MS (Sciex)

Eksigent LC 100 XL + TripleTOF 4600  
**Column:** Kinetex 2.6 C18, 100 Å, 50 x 3.00 mm (Phenomenex)  
**Mobile Phase A:** 10 mM NH<sub>4</sub> formate  
**Mobile Phase B:** ACN/MeOH (50/50)  
**Gradient mode:** 15.5 min runtime

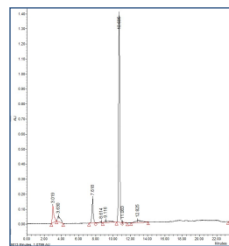
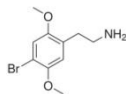


### Colorimetric tests

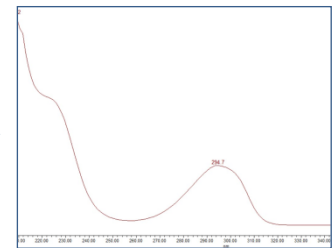


This case: green to blue

### HPLC-DAD

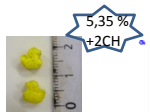
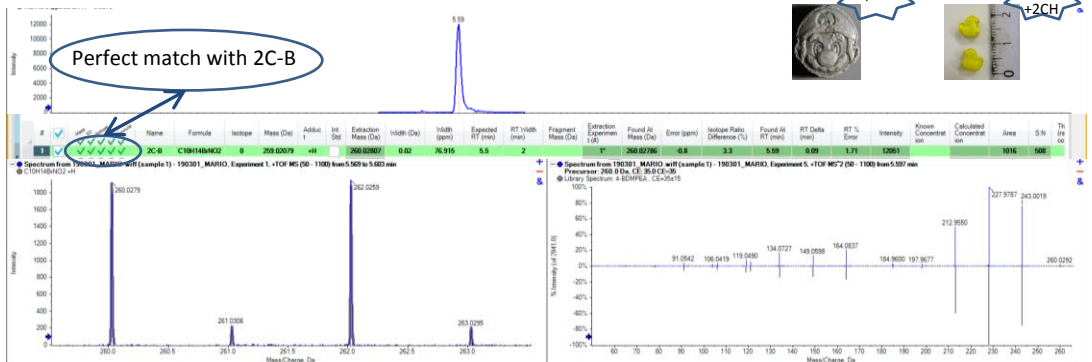


Both tablets:  
unidentified peak  
at 10,8 min



### UHPLC-TOF-MS

Perfect match with 2C-B



## Discussion

Obtaining a green color with the Marquis reagent is unusual for the phenethylamine derivatives mostly found in Belgium. On UHPLC-TOF-MS, all criteria (exact mass, retention time, library, isotopic profile) suggested 2C-B. Once identified with UHPLC-TOF-MS, the compound was added to the HPLC-DAD library, the match was confirmed and quantification was done.

2C-B, also called 4-BDMPEA, is an entactogen drug with psychedelic and hallucinogenic properties. This amphetamine derivative was synthesized in 1974 by Alexander Shulgin and has already appeared in the drug market in the mid-1980's, it's scheduled in Belgium.

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

## Conclusion

Two pills containing 2C-B were identified for the first time in our Belgian laboratory. Even if this compound was discovered several decades ago, it is not forgotten by the party population, and thus requires proper identification capacities by the forensic labs.

## Reference

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