

Letter to the Editor

α -Phenylethylamine identified in judicial samples

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To the Editor:

Underground chemists synthesize chemically slightly altered substances (designer drugs) to circumvent legal restrictions and to obtain drugs with specific effects. Chromatographic (HPLC-DAD, GC-MS and GC-FTIR) and spectrometric (NMR) analyses performed in our laboratory from April 1994 till the present on several judicial samples, led to the structural elucidation of a new amphetamine-like compound, i.e. α -phenylethylamine (= α -methylbenzylamine).

α -Phenylethylamine is the two-carbon homologue of amphetamine and a positional isomer of β -phenylethylamine. Analogous to the synthesis of amphetamine from phenylacetone, α -phenylethylamine can be synthesized from phenyl methyl ketone [1].

In a first judicial seizure, about 1 kg of a white powder was found in a basement laboratory together with 11 other pieces of evidence. The powder contained caffeine and more than 15% α -phenylethylamine, described in the literature as an endogenous putrefaction product of visceral origin [2] and having only a weak central stimulant activity [3].

In a second case, small amounts of two white powders were found in the possession of a 20-year-old girl and sent by a general practitioner for analysis. One powder consisted of pure amphetamine, the other was a mixture of caffeine, amphetamine and α -phenylethylamine.

Four months later, a couple of known drug-users were found death in their apartment. Urine samples of both victims contained large amounts of amphetamine together with α -phenylethylamine. No other drugs were present.

Very recently, substantial amounts of a white and an orange powder (about 0.13 kg and 0.3 kg, respectively) were seized in a law enforcement operation. Both powders were mixtures of caffeine, amphetamine and α -phenylethylamine.

It is not clear whether phenyl methyl ketone was intentionally used in this synthesis or whether it was supplied by a fraudulent operator and used unintentionally. Alternatively, the hydrochloride salt was formed directly from the commercially available α -phenylethylamine base, which is a liquid.

With their experiments, however, basement chemists may again have complicated the diagnosis and management of drug intoxications.

Acknowledgements

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