

Muscles and meth: Drug analog identified in 'craze' workout supplement

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An international team of scientists have identified potentially dangerous amounts of methamphetamine analog in the workout supplement Craze, a product widely sold across the U.S. and online. The study, published in *Drug Testing and Analysis*, was prompted by a spate of failed athletic drug tests. The results reveal the presence of methamphetamine analog N, α - DEPEA, which has not been safely tested for human consumption, in three samples.

"In recent years banned and untested drugs have been found in hundreds of dietary supplements. We began our study of Craze after several athletes failed urine [drug tests](#) because of a new methamphetamine analog," said lead author Dr. Pieter Cohen, of Harvard Medical School, U.S.A.

A workout supplement marketed as a 'performance fuel', Craze is manufactured by Driven Sports, Inc., and is sold in stores across the United States and internationally via body supplement websites.

The supplement is labeled as containing the compound N,N-diethylphenylethylamine (N,N-DEPEA), claiming it is derived from endangered dendrobium orchids. However, while there is no proof that this compound is found within orchids, it is also structurally similar to the methamphetamine analog N, α -diethylphenylethylamine (N, α -DEPEA), a banned substance.

The team analyzed three samples of Craze for traces of N, α -

DEPEA. The first sample was brought from a mainstream retailer in the U.S., while the second and third samples were ordered from online retailers in the U.S. and Holland.

The team used ultra-high performance liquid chromatography to detect the presence of N, α -DEPEA. The first two samples were analyzed by NSF International, while the third was tested at the Netherland's National Institute for Public Health. The findings were independently corroborated by the Korean Forensic Service, which confirmed the presence of N, α -DEPEA in two further samples of Craze in a parallel investigation.

"We identified a potentially dangerous designer drug in three separate samples of this widely available [dietary supplement](#)," said Cohen. "The tests revealed quantities of N, α -DEPEA of over 20mg per serving, which strongly suggests that this is not an accidental contamination from the manufacturing process."

As a structural analog of methamphetamine, N, α -DEPEA, may have stimulant and addictive qualities; however, it has never been studied in humans and its adverse effects remain unknown.

The product labeling claims that Craze contains several organic compounds, known as phenylethylamines. However, phenylethylamines are a very broad category of chemicals which range from harmless compounds found in chocolate to synthetically produced illegal drugs.

"The phenylethylamine we identified in Craze, N, α -DEPEA, is not listed on the labeling and it has not been previously identified as a derivative of dendrobium orchids," said Cohen.

"If these findings are confirmed by regulatory authorities, the FDA (The U.S. Food and Drug Administration) must take action to warn

consumers and to remove supplements containing N,alpha-DEPEA from sale," concluded Cohen. "Our fear is that the federal shutdown may delay this, resulting in potentially dangerous supplements remaining widely available."

More information: Cohen. P, Travis. J, Venhuis. B, A methamphetamine analog (N,alpha-diethyl-phenylethylamine) identified in a mainstream dietary supplement, *Drug Testing and Analysis*. DOI: [10.1002/dta.1578](https://doi.org/10.1002/dta.1578)

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