Emerging Designer Drug Monograph

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Drug Name: Pentedrone

Synonyms: 2-(methylamino)-1-phenylpentan-1-one, 2-(methylamino)-1-phenyl-1-pentanone, monohydrochloride, α-methylamino-Valerophenone

Structure:

\[
\text{O} \quad \text{H}_3\text{C} \quad \text{NH} \\
\text{CH}_3 \\
\text{C}_6\text{H}_5
\]

Formula: \( \text{C}_{12}\text{H}_{17}\text{NO} \)

Molecular Weight: 191.3

Pharmacological Drug Class: Ketone derivative of amphetamine that acts as a CNS stimulant.

Metabolism: Metabolism for Pentedrone has not been recorded in the literature.

Blood Concentrations: No blood concentrations have been recorded in literature on pentedrone.

Effects and Toxicity: Pentedrone is a stimulant drug structurally related to methcathinone. User accounts describe effects similar to cocaine at moderate doses including alertness, mild euphoria, numbness, and paranoia. Toxicity in cases of co-administration with other stimulants is caused by cardiovascular effects (1).

Analysis: This is a low molecular weight, basic compound that can be found has a hydrochloride salt. Pentedrone base form has been analyzed by NMR and GC-MS. GC-MS analysis should follow derivatization of active hydrogens. Trimethylsilyl derivatives give a molecular ion of m/z 249 and an alpha cleavage ion of m/z 234. Silylated derivatives yield ions m/z 144 and 105 (2). SWGDRUG outlines GC-MS parameters and sample chromatograms.
References:


Cayman Chemical
[https://www.caymanchem.com/app/template/Product.vm/catalog/11011](https://www.caymanchem.com/app/template/Product.vm/catalog/11011)

Forendex

SWGDRUG Monograph
[http://www.swgdrug.org/Monographs/pentedrone.pdf](http://www.swgdrug.org/Monographs/pentedrone.pdf)

Drugs- Forum User Accounts