

Phenethylamines

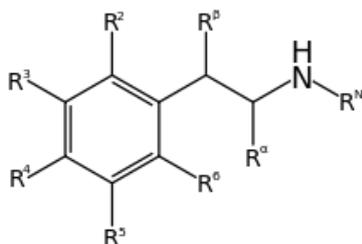
Phenethylamines represent a wide class of molecules with psychoactive stimulant activity which includes amphetamine, methamphetamine and 3,4-methylenedioxyamphetamine (MDMA, also known as ecstasy), molecules that are controlled by the Convention of 1971. They are divided into different sub-groups according to the different substitution on the aromatic ring, on the alkyl chain and on the nitrogen and are identified for most of numbers and letters: the series "2C" is characterized by replacing 2,5-dimethoxy, the series "D" (DOI, DOC), is analogous to the series 2C, but has a methyl on the chain, the series "NBOMe", with several examples recently appeared on the market of drugs, are phenethylamines that see the nitrogen atom substituted with a 2-methoxybenzyl group. These structural variations give the phenethylamines effects that vary from the stimulating effects to hallucinogenic type, such analogs of mescaline, a phenethylamin of natural origin, which belongs to the "2C" series.

Description

Phenethylamines are sold in tablets of various colors/shapes, capsules, powder/crystals. Recently in Italy has been recorded numerous seizures of phenethylamines of the "NBOMe" series in the form of "blotters", typical formulation of highly potent hallucinogens.

Some phenethylamines registered by the National Early Warning System from 2010, are herein reported: 25I-NBOMe, la 2C-B, la 2C-H, la 2C-E, la DOB, la DOC, la 4-FA, la 4-MA, la PMA e la PMMA.

Chemical structures of some phenethylamins registered by the National Early Warning System.



NAME	RN	R α	R β	R2	R3	R4	R5	R6
Phenethylamine	H	H	H	H	H	H	H	H
Amphetamine	H	CH ₃	H	H	H	H	H	H
Methamphetamine	CH ₃	CH ₃	H	H	H	H	H	H
PMA	H	CH ₃	H	H	H	CH ₃	H	H

PMMA	CH3	CH3	H	H	H	CH3	H	H
4-MA	H	CH3	H	H	H	CH3	H	H
4-FA	H	CH3	H	H	H	F	H	H
DOC	H	CH3	H	OCH3	H	Cl	OCH3	H
DOB	H	CH3	H	OCH3	H	Br	OCH3	H
DOI	H	CH3	H	OCH3	H	I	OCH3	H
2C-H	H	H	H	OCH3	H	H	OCH3	H
2C-C	H	H	H	OCH3	H	Cl	OCH3	H
2C-B	H	H	H	OCH3	H	Br	OCH3	H
2C-E	H	H	H	OCH3	H	CH ₂ CH ₃	OCH3	H
25H-NBOMe	BOMe	H	H	OCH3	H	H	OCH3	H
25I-NBOMe	BOMe	H	H	OCH3	H	I	OCH3	H

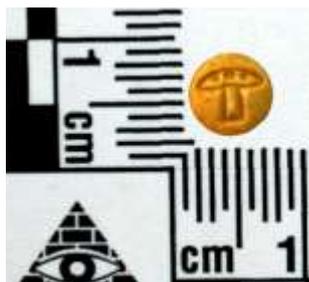
Note: BOMe=(2-methoxyphenyl)methyl

Phenethylamines is a very large group of substances therefore their pharmacological activity and their potency varies from product to product. Phenethylamines of amphetamine-type (MDMA or ecstasy, amphetamine and methamphetamine), have stimulating activity and circulate generally in the form of tablets of various color, and logos, while phenethylamines recently appeared on the territory, belonging to the series of the so-called "NBOMe," have hallucinogenic effects and circulating in the form of "blotters" similar to those of LSD, as extremely potent at very low doses.

Potency

Phenethylamines are reported to be ingested, snorted, and more recently taken sublingually (blotters). The phenethylamines cause an increase in heart rate, respiration, blood pressure and body temperature; the latter effect can cause seizures and coma. One of the most dangerous effects of this type of drugs is the muscle stiffness. The effects, however, varies from substance to substance, and include for example for 2C-I, very high blood pressure associated with seizures, confusion; for the 2B-B, cardiovascular disorders, dehydration, confusion; for 2C-T, depression of the central nervous system, panic attacks, vomiting, delirium, loss of memory; for 2C-T-2, panic attacks, paranoia, muscle rigidity, vomiting, anxiety; for 2C-T-7, vomiting, headache, confusion, delirium, high blood pressure, muscle spasms.

Assumption and effects



Photos of some products notified to the National Early Warning System and resulted to contain phenethylamines



Since 2010, in Italy, there have been 4 cases (aged 16 and 39 years) of acute intoxication by phenethylamines. Two cases were related to the assumption of PMA/PMMA with symptoms such as agitation, confusion, hallucinations, sweating, mydriasis, hyperemia, tachycardia, normothermia. One intoxication related to 2C-E consumption and one to 2C-B consumption, with presentation of symptoms such as mydriasis, delirium, agitation, tachycardia, coma, convulsions. The cases were registered in Liguria (2 cases), Umbria and Veneto.

Intoxication cases registered in Italy

In Italy, the following phenethylamines are illegal (Tables of the Law on the regulation of narcotic drugs and psychotropic substances, prevention, treatment and rehabilitation of drug addiction Presidential Decree 309/90 as amended): 2C- B, 2C- I, 2C-T-2, 2C-T-7, 4-MTA, amphetamine, DMA, DOB, DOET, DOM, MBDB, MDA, MDEA, MDE, MDMA, methamphetamine, MMDAN-ethylamphetamine, N-hydroxy-MDA, PMA, PMMA, TMA, TMA-2. More recently there have been placed under control other molecules: 4-methylamphetamine (4-MA) and 4-fluoroamphetamine (4-FA) (Decree of October 24, 2012, OJ 264 of 12/11/2012). Have also been brought under control molecules 5-IT (Decree of December 10, 2012, OJ No. 303 of 31/12/2012) and 6-APB, 5-APB, 6-APDB, 5-APDB (Decree of 25 June 2013, OJ No. 158 of 08.07.2013), which despite being indole derivatives (the 5-IT) or benzofuran derivatives, they have a phenethylamines basic skeleton.

Legal status

Amphetamine, methamphetamine and ecstasy are detected with normal screening tests on urine, like other traditional drugs, as well as other structural analogues may give positivity to such tests. The other phenethylamines are instead not easily detectable to the normal screening test but are subsequently detected through blood tests and urine tests conducted in the laboratory. In case of positivity to these substances driving a car, motorcycle or scooter, the law enforcement may withdraw the license, impound the vehicle, impose fines, make report to the Prefecture, pick up

your passport.