Synthetic Cathinones aka "Bath Salts"

In late 2009, exhibits containing synthetic cathinones, commonly referred to as "bath salts" or synthetic cocaine because of their stimulant effects, started appearing in small numbers across the United States. Bath salt products are sold in powder form in small plastic or foil packages, with brand names such as "Bolivian Bath," "Eclipse Exotic Bath Salts," "Ivory Wave," "Cloud Nine" and "Vanilla Sky." The package quantities vary, but are usually between 0.25g and 0.5g, with a price ranging from $20 to $75. Most of the packages bear the warning "Do Not Eat" or "Not for Human Consumption." They have been sold under the guise of research chemicals, novelty bath salts, plant food or plant growth regulators, even though there are no indications that these products have any usefulness as either plant fertilizer or actual bath salts. [1] These products can be found at head shops, convenience stores, tattoo parlors and via the Internet. "Bath salt" products are normally snorted, but can also be swallowed, injected or smoked.

A March 2011 DEA Bulletin listed the following components of "bath salts" as being of concern[2]:

MDPV *synonym* 3,4-methylenedioxypyrovalerone
Mephedrone *synonyms* 4-methylmethcathinone, 4-MMC
Methylone *synonyms* 3,4-methylenedioxymethcathinone, MDMC
Naphyrone *synonyms* napthylpyrovalerone, NRG-1
4-Fluoromethcathinone *synonyms* 4-FMC, flephedrone
3-Fluoromethcathinone *synonym* 3-FMC
Methedrone *synonyms* 4-methoxymethcathinone, bk-PMMA, PMMC
Butylone *synonyms* bk-MBDB, beta-keto-N-methylbenzodioxolylpropylamine

Nevada legislation was proposed during the past session that recommended adding the following substances to the NAC list of Controlled Substances (NV administrative code):

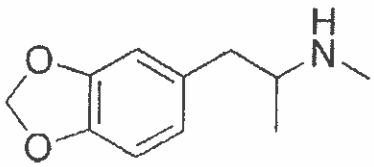
(a) 3,4-Methylenedioxymethcathinone (Methylone);
(b) 3,4-Methylenedioxypyrovalerone (MDPV);
(c) 4-Methylmethcathinone (Mephedrone);
(d) 4-Methoxymethcathinone;
(e) 3-Fluoromethcathinone; and
(f) 4-Fluoromethcathinone.

"Bath salts" are structurally similar to cathinone and methcathinone, which are both Schedule I controlled substances in Nevada and federally. According to an article by the Advisory Council on the Misuse of Drugs, synthetic cathinones have similar mechanisms of action in the brain as amphetamines; both groups of drugs bind to the transporters for norepinephrine, dopamine and serotonin.[1] Both amphetamines and cathinones act as a central nervous system stimulant. Cathinone compounds were found to be potent inhibitors of the noradrenaline (norepinephrine) transporter (NET). According to a study done by DEA Forensic Chemist Terry Dal Cason and others, when methylone was administered to rats, the animals showed the same reaction as when they were given methylenedioxymethamphetamine (MDMA).[3] Most data about the effects of cathinones are self-

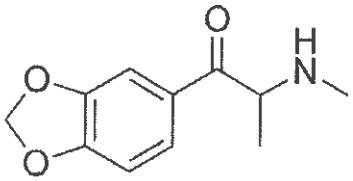
reported and clinical data is limited. No evidence of medical research being done on any of the bath salts could be found.

The most commonly reported clinical effects of "bath salts" are extreme paranoia, hallucinations, tachycardia, palpitations, agitation and anxiety. Bath salts are suspected in the deaths of at least ten people across the United States and several overdoses. Outside of the U.S., bath salts are suspected in at least 28 deaths. According to the girlfriend of an Indiana man who almost overdosed on "bath salts," the product is "like a substitute cocaine and you snort it", even though the package said that it was not for human consumption. She warned "do not take this drug...it will kill you."[4] Before another Indiana man committed suicide, his family says he became addicted to bath salts and hallucinated that "agents from the Federal Bureau of Investigation were watching him eat lunch and were following him around town."[5] In North Carolina, the sister of a woman who died after taking bath salts told the Coal Valley News that "it is a nightmare to watch a loved one go through what I watched my sister go through" and that her sister only started taking bath salts after "she had heard people talking about it and how it would give you a little bit of energy".[6] In Texas, a man who committed suicide blamed bath salts in his suicide note. The man's sister warned "just because it's legal at this minute does not mean it's safe. It's not regulated. You don't know what you're buying. You don't know what you're taking."[7] In Illinois, a man was seen acting erratically and eating dirt before telling officers that he had taken bath salts. He later died at the hospital.[8] When a Missouri man got high on bath salts, he used his skinning knife to slit his face and stomach repeatedly. He later said he "couldn't tell you why I did it. The psychological effects are still there."[9]

Methylone, one of the more commonly encountered drugs in the "bath salt" genre, is a stimulant like the amphetamine, phenethylamine and cathinone classes. It is a close structural analog of MDMA (ecstasy). It is sometimes referred to as bk-MDMA because it differs from MDMA only by the addition of a β-ketone group.[10] It has been sold under the brand name "Explosion," with a package warning to "keep away from children" and to "never use more than one bottle." One user reports that methylone gave him side effects similar to when he took LSD or psilocybic mushrooms.[11] Methylone is controlled in Estonia, Israel, and the United Kingdom and controlled in Arkansas, Florida, Indiana, Louisiana, New Jersey, Pennsylvania and Utah. According to Texas House Bill 2118, methylone will be controlled in Texas on September 1, 2011.[12]



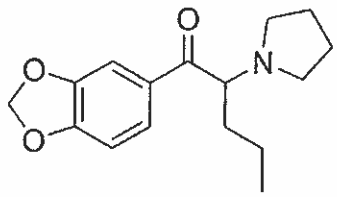
MDMA



Methylone

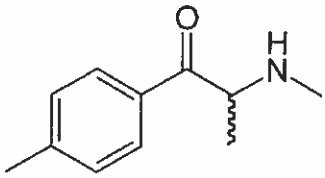
Methylenedioxypyrovalerone (MDPV) is a synthetic stimulant that produces effects similar to amphetamine, cocaine or methylphenidate.[13] It is also known by the slang terms MDPK, Magic and Super Coke.[10] MDPV has no approved medical use in the United States. Like other "bath salts," it has

been sold on the internet as a research chemical and "not for human consumption."[14] One user reported MDPV to be a powerful short-acting stimulant.[11] MDPV is a synthetic derivative of cathinone (Schedule I), which is the main psychoactive chemical compound found in khat, a flowering plant native to East Africa and the Arabian Peninsula. MDPV is controlled in Czech Republic, Denmark, Israel and Sweden and controlled in Alabama, Arkansas, Florida, Illinois, Indiana, Kentucky, Louisiana, Michigan, New Jersey, North Dakota, Pennsylvania, Utah, Virginia and West Virginia. According to Texas House Bill 2118, MDPV will be controlled in Texas on September 1, 2011.[12]

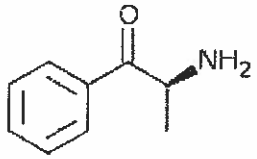


MDPV

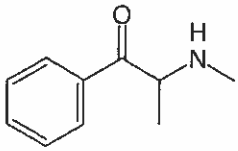
Mephedrone is a synthetic stimulant that produces effects similar to amphetamine, cocaine or ecstasy.[10] Mephedrone has no approved medical use in the United States. It has several street names, such as meow-meow, M-CAT, bubbles, sunshine and plant feeder, and has been seen in "bath salt" products, illicitly manufactured tablets and in capsules. Like MDPV, mephedrone is also a synthetic derivative of cathinone (Schedule I), which is the main psychoactive chemical compound found in khat, a flowering plant native to East Africa and the Arabian Peninsula. One user reported that he prefers mephedrone over ecstasy, because it has all the wanted side effects without the subsequent hangover.[11] Mephedrone is controlled in Czech Republic, Estonia, Israel and Sweden and controlled in Alabama, Arkansas, Florida, Indiana, Kentucky, Louisiana, Michigan, New Jersey, North Dakota, Pennsylvania, Utah, Virginia and West Virginia. According to Texas House Bill 2118, mephedrone will be controlled in Texas on September 1, 2011.[12]



Mephedrone



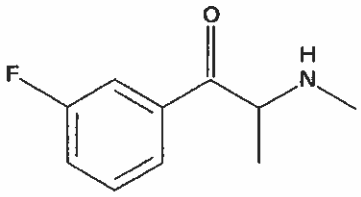
Cathinone



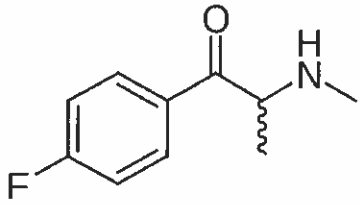
Methcathinone

3-Fluoromethcathinone and **4-fluoromethcathinone** have not been scientifically studied, but 3-Fluoromethcathinone is suspected to be like mephedrone.[10] 3-Fluoromethcathinone is a controlled drug in Israel, the United Kingdom, Arkansas, Florida, Louisiana, New Jersey and Utah. 4-Fluoromethcathinone, also known as flephedrone or "Flephe" by users, can cause hyperthermia and convulsions. One user reported effects including numbness, dizziness, nausea and muscular stiffness.[11] 4-Fluoromethcathinone is controlled in Israel, Poland, the United Kingdom, Arkansas, Florida, Louisiana, New Jersey, Pennsylvania and Utah. Both 3-fluoromethcathinone and 4-fluoromethcathinone are synthetic drugs of the amphetamine, phenethylamine and cathinone chemical classes. Fluoromethcathinone (with no positional isomer designated) became controlled in Indiana on July 1,

2011. According to Texas House Bill 2118, 3-fluoromethcathinone and 4-fluoromethcathinone will be controlled in Texas on September 1, 2011.[12]

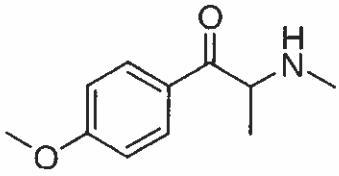


3-fluoromethcathinone



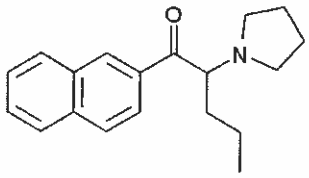
4-fluoromethcathinone

4-methoxymethcathinone, also known as methedrone, is a synthetic drug of the amphetamine, phenethylamine and cathinone chemical classes.[10] Subjective effects have been reported to be similar to MDMA and amphetamine. Responses to the drug include pupil dilation, hyperthermia and increased perspiration. One user reported being very clumsy while using the drug and experienced depression for several days after.[11] Methedrone is banned in Sweden and the United Kingdom. It is controlled in Arkansas, Florida, Indiana, Louisiana, New Jersey, Pennsylvania and Utah.



4-methoxymethcathinone

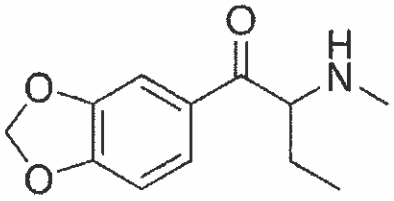
Naphyrone, or napthylpyrovalerone, has close structural resemblance to other synthetic cathinones, such as MDPV and mephedrone. It is known by its street names, Energy 1 and NRG-1. It has been reported as being stronger than cocaine, methamphetamine and MDMA.[10] One user reported effects including elevated blood pressure and body temperature, and warned not to combine naphyrone with any other drugs.[11] After mephedrone was banned in the United Kingdom, websites began selling naphyrone in its place. Naphyrone is controlled in Michigan, Estonia, Israel, and the United Kingdom. According to Texas House Bill 2118, naphyrone will be controlled in Texas on September 1, 2011.[12]



Naphyrone

Butylone, also known as β-keto-*N*-methylbenzodioxolylpropylamine (bk-MBDB), is a stimulant of the phenethylamine chemical class.[15] It is sold on the Internet under the guise of a research chemical. Its effects are similar to that of MDMA. One user reported sweating, jaw clenching and muscular tension.[11] Butylone has been referred to as a methamphetamine replacement. Butylone is controlled in Estonia

and the United Kingdom. According to Texas House Bill 2118, butylone will be controlled in Texas on September 1, 2011.[12]



Butylone

Several states have written legislation banning "bath salts".

Louisiana used the following wording to control six bath salts:

The following drugs or dangerous substances are added to Schedule I of the Louisiana Uniform Controlled Dangerous Substances Law:
3,4-Methylmethcathinone (Methylone)
3,4-Methylenedioxypyrovalerone (MDPV)
4-Methylmethcathinone (Mephedrone)
4-Methoxymethcathinone
3-Fluoromethcathinone
4-Fluoromethcathinone

Pennsylvania and Utah used very similar wording to Louisiana. Indiana listed fluoromethcathinone (with no positional isomer designated) and also added 4-ethylmethcathinone. Florida listed methylmethcathinone, methoxymethcathinone, fluoromethcathinone (with no positional isomer designated) and also added methylethcathinone.

Kansas used the following wording to control bath salts:

Substituted cathinones
Any compound, except bupropion or compounds listed under a different schedule, structurally derived from 2–aminopropan–1–one by substitution at the 1-position with either phenyl, naphthyl, or thiophene ring systems, whether or not the compound is further modified in any of the following ways:
(a) By substitution in the ring system to any extent with alkyl,alkylenedioxy, alkoxy, haloalkyl, hydroxyl, or halide substituents, whether or not further substituted in the ring system by one or more other univalent substituents;
(b) by substitution at the 3–position with an acyclic alkyl substituent;
(c) by substitution at the 2-amino nitrogen atom with alkyl, dialkyl, benzyl, or methoxybenzyl groups; or
(d) by inclusion of the 2-amino nitrogen atom in a cyclic structure.

Texas used the similar wording as Kansas, and then also listed examples including MDPV, mephedrone, methylone, 3-fluoromethcathinone, 4-fluoromethcathinone, 3,4-dimethylmethcathinone, naphyrone, butylone, pentylone, eutylone and ethylone. This act takes effect September 1, 2011.[12]

Arkansas used a combination of the wording used in Louisiana and the wording used in Kansas, specifically listing 6 bath salts, but also controlling many other derivatives:

4-Methylmethcathinone (Mephedrone);
Methylenedioxypyrovalerone (MDPV);
3,4-Methylenedioxy-N-methylcathinone (Methylone);
4-Methoxymethcathinone;
3-Fluoromethcathinone;
4-Fluoromethcathinone;
A compound, unless listed in another schedule or a legend 4 drug, that is structurally derived from 2-Amino-1-phenyl-1-propanone by modification or by substitution:
(A) In the phenyl ring to any extent with alkyl, alkoxy, 7 alkylenedioxy, haloalkyl or halide substituents, whether or not further 8 substituted in the phenyl ring by one (1) or more other univalent substituents;
(B) At the 3-position with an alkyl substituent; or
(C) At the nitrogen atom with alkyl or dialkyl groups, or by inclusion of the nitrogen atom in a cyclic structure.

Israel banned four classes of drugs: amphetamines, methamphetamines, cathinones and methcathinones in July 2010. Prior to this amendment, each controlled substance was listed individually.[16]

The Las Vegas Metropolitan Police Department Forensic Laboratory has received 11 submissions containing bath salt(s). Several of these submissions also contained caffeine. Nine exhibits consisted of clandestinely manufactured tablets and two were white powder. Some of the tablets contained only methylone, while the other tablets contained both methylone and butylone. The white powder submissions contained methylenedioxypyrovalerone (MDPV).

The LVMPD Forensic Laboratory purchased two bath salt products from local head shops for research purposes. Both of these products contained MDPV (methylenedioxypyrovalerone).

The LVMPD Forensic Laboratory does not have the capability/instrumentation to distinguish positional isomers such as 3,4-methylenedioxymethcathinone, 3,4-methylenedioxypyrovalerone, 4-methylmethcathinone, 4-methyoxymethcathinone, 3-Fluoromethcathinone and 4-Fluoromethcathinone. Therefore, it is recommended that the "bath salts" are scheduled without any positional numbers. Since the DEA listed butylone and naphyrone as being of concern, it is recommended that these compounds are added to the proposed Nevada Administrative Code list of controlled substances. The LVMPD Forensic Laboratory does not recommend using wording like Kansas or Arkansas used in their legislation. The general wording used by Arkansas and Louisiana is not consistent with the current NAC, which specifically lists each compound by name. The LVMPD Forensic Laboratory recommends adding the following "bath salts" to Schedule I of the NAC based on the fact that there is no evidence that any of the compounds have accepted medical use in treatment in the United States.

It is recommended that the NAC list the following substances in Schedule I of the NAC:

Methylenedioxymethcathinone (Methylone);
Methylenedioxypyrovalerone (MDPV);
Methylmethcathinone (Mephedrone);
Methoxymethcathinone;
Fluoromethcathinone;
Butylone; and
Naphyrone

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15. Characterization of Three Methcathinone Analogs: 4-Methylmethcathinone, Methylone, and bk-MBDB. Microgram Journal, Volume 7, Number 2 (December 2010).

16. 'Celebration' drug added to list of banned substances. July 13, 2010. www.jpost.com/Israel

Nevada State Board of Pharmacy

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August 4, 2011

Honorable Brian Sandoval
Capitol Building
101 North Carson Street
Carson City, Nevada 89701

Dear Governor Sandoval,

Pursuant to your executive order establishing a freeze on proposed regulations, this letter serves as a request to move forward with the regulatory change outlined below involving the scheduling of "bath salts" as a controlled substance. We feel that the following proposal meets your criteria for being exempt from the freeze because it affects public health and safety. The proposed regulatory change being asked to consider is:

Amendment of Nevada Administrative Code 453.510(7) Schedule I

Because of the increasing popularity and abuse of a variety of synthetic compounds that produce stimulant effects when ingested, snorted or injected, sold under the guise of "bath salts" or "plant food" in retail outlets or on the internet, and at the request of law enforcement and at least one legislator, the Board of Pharmacy would like to hold a workshop and ultimately a public hearing on placing these compounds in Schedule I. The compounds known on the street as "Ivory Wave", Purple Wave", "Vanilla Sky", "Fake Cocaine", "Bliss" and several other names are not approved by the FDA for any indication and are not currently scheduled in any schedule under the Controlled Substances Act, yet are beginning to exhibit in our emergency rooms.

The specific compounds that we would like to consider for scheduling in schedule I are:

3,4-Methylenedioxymethcathinone (Methylone)
3,4-Methylenedioxypyrovalerone (MDPV)
4-Methylmethcathinone (Mephedrone)
4-Methoxymethcathinone (Methedrone)
Fluoromethcathinone
Beta-keto-N-methylbenzodioxolylpropylamine (bk-MBDB, butylone)

All can be tested for in the crime laboratories, and again we feel that this proposed regulatory change falls within your exemption to the freeze for public health and safety reasons.

Thank you for your consideration.

Sincerely,

Larry L. Pinson, Pharm. D.
Executive Secretary

Jeri Walter

From: LARRY L. PINSON
Sent: Friday, August 26, 2011 12:33 PM
To: Carolyn J. Cramer; Jeri Walter
Subject: Fwd: Reg Exemption

Gov's ok with regulating bath salts!

Sent from my iPhone

Begin forwarded message:

> **From:** "Lucas Foletta" <lfoletta@gov.nv.gov>
> **To:** "LARRY L. PINSON" <lpinson@pharmacy.nv.gov>
> **Subject: Reg Exemption**
>
> Mr. Pinson, I am in receipt of your letter of August 4, 2011(attached here) requesting that your agency go forward with rulemaking pursuant to an exception to the Governor's Executive Order 2011-01. Your request, insofar as it relates to the consideration of scheduling the compounds listed in the letter as a controlled substances, is approved as falling within the exception applying to regulations that affect public health. EO 2011-01(4)(a). Feel free to contact me with any questions you might have on this issue.
>
> Lucas M. Foletta
> General Counsel*
> Office of the Governor
> State of Nevada
> 101 North Carson Street
> Carson City, NV 89701
> Phone: (775) 684-5774
> Fax: (775) 684-5683
> *Certified under SCR 49.10
>
> <Pharm Reg Letter.PDF>

PROPOSED LANGUAGE FOR MAKING BATH SALTS
A SCHEDULE I DRUG

Italics and underline is new proposed language

NAC 453.510 Schedule I. (NRS 453.146, 639.070)

1. Schedule I consists of the drugs and other substances listed in this section by whatever official, common, usual, chemical or trade name designated.

2. Unless specifically excepted or unless listed in another schedule, any of the following opiates, including, without limitation, their isomers, esters, ethers, salts and salts of isomers, esters and ethers, whenever the existence of such isomers, esters, ethers and salts is possible within the specific chemical designation:

Acetyl-alpha-methylfentanyl (N-[1-(1-methyl-2-phenethyl)-4-piperidinyl]-Nphenylacetamide);
Acetylmethadol;
Allylprodine;
Alphacetylmethadol (except levo-alphacetylmethadol, commonly referred to as levo-alphaacetylmethadol, levomethadyl acetate or "LAAM");
Alphameprodine;
Alphamethadol;
Alphamethylfentanyl (N-[1-(alpha-methyl-beta-phenyl)ethyl-4-piperidyl] propionanilide; 1-(1-methyl-2-phenylethyl)-4-(N-propanilido) piperidine);
Alpha-methylthiofentanyl (N-[1-methyl-2-(2-thienyl)ethyl-4-piperidinyl]-N-phenylpropanamide);
Benzethidine;
Betacetylmethadol;
Beta-hydroxyfentanyl (N-[1-(2-hydroxy-2-phenethyl)-4-piperidinyl]-N-phenylpropanamide);
Beta-hydroxy-3-methylfentanyl (other name: N-[1-(2-hydroxy-2-phenethyl)-3-methyl-4-piperidinyl]-N-phenylpropanamide);
Betameprodine;
Betamethadol;
Betaprodine;
Clonitazene;
Dextromoramide;
Diampromide;
Diethylthiambutene;
Difenoxin;
Dimenoxadol;
Dimepheptanol;
Dimethylthiambutene;
Dioxaphetyl butyrate;
Dipipanone;
Ethylmethylthiambutene;

Etonitazene;
Etoxeridine;
Furethidine;
Hydroxypethidine;
Ketobemidone;
Levomoramide;
Levophenacylmorphan;
3-Methylfentanyl (N-[3-methyl-1-(2-phenylethyl)-4-piperidyl]-N-phenylpropanamide);
3-Methylthiofentanyl (N-[(3-methyl-1-(2-thienyl)ethyl-4-piperidinyl]-
Nphenylpropanamide);
Morpheridine;
MPPP (1-methyl-4-phenyl-4-propionoxypiperidine);
Noracymethadol;
Norlevorphanol;
Normethadone;
Norpipanone;
Para-fluorofentanyl (N-(4-fluorophenyl)-N-[1-(2-phenethyl)-4-piperidinyl]propanamide);
PEPAP (1-(-2-phenethyl)-4-phenyl-4-acetoxypiperidine);
Phenadoxone;
Phenampromide;
Phenomorphan;
Phenoperidine;
Piritramide;
Proheptazine;
Properidine;
Propiram;
Racemoramide;
Thiofentanyl (N-phenyl-N-[1-(2-thienyl)ethyl-4-piperidinyl]-propanamide);
Tilidine; or
Trimeperidine.

3. Unless specifically excepted or unless listed in another schedule, any of the following opium derivatives, including, without limitation, their salts, isomers and salts of isomers, whenever the existence of such salts, isomers and salts of isomers is possible within the specific chemical designation:

Acetorphine;
Acetyldihydrocodeine;
Benzylmorphine;
Codeine methylbromide;
Codeine-N-Oxide;
Cyprenorphine;
Desomorphine;
Dihydromorphine;
Drotebanol;
Etorphine (except hydrochloride salt);
Heroin;
Hydromorphinol;

Methyldesorphine;
Methyldihydromorphine;
Morphine methylbromide;
Morphine methylsulfonate;
Morphine-N-Oxide;
Myrophine;
Nicocodeine;
Nicomorphine;
Normorphine;
Pholcodine; or
Thebacon.

4. Unless specifically excepted or unless listed in another schedule, any material, compound, mixture or preparation which contains any quantity of the following hallucinogenic substances, including, without limitation, their salts, isomers and salts of isomers, whenever the existence of such salts, isomers and salts of isomers is possible within the specific chemical designation:

Alpha-ethyltrytamine (some trade or other names: ET, Trip);

Alpha-methyltryptamine (some trade or other names: AMT);

1,4-Butanediol (some trade or other names: 1,4-butyleneglycol, dihydroxybutane, tetramethylene glycol, butane 1,4-diol, SomatoPro, Soma Solutions, Zen);

4-bromo-2,5-dimethoxyamphetamine (some trade or other names: 4-bromo-2,5-dimethoxy-alpha-methylphenethylamine; 4-bromo-2,5-DMA);

4-bromo-2,5-dimethoxyphenethylamine (some trade or other names: Nexus, 2C-B);

1-Butyl-3-(1-naphthoyl)indole-7173 (some trade or other names: JWH-073);

2,5-dimethoxyamphetamine (some trade or other names: 2,5-dimethoxy-alpha-methylphenethylamine; 2,5-DMA);

2,5-dimethoxy-4-ethylamphet-amine (some trade or other names: DOET);

2,5-dimethoxy-4-(n)-propylthiophenethylamine (some trade or other names: 2C-T-7);

5-(1,1-Dimethylheptyl)-2-[(1R,3S)-3-hydroxycyclohexyl]-phenol-7297 (some trade or other names: CP-47,497);

5-(1,1-Dimethyloctyl)-2-[(1R,3S)-3-hydroxycyclohexyl]-phenol-7298 (some trade or other names: cannabicyclohexanol; CP-47,497 C8 homologue);

4-methoxyamphetamine (some trade or other names: 4-methoxy-alpha-methylphenethylamine; para-methoxyamphetamine; PMA);

5-methoxy-3,4-methylenedioxyamphetamine;
5-methoxy-N, N-diisopropyltryptamine (some trade or other names: 5-meO-DIPT);

4-methyl-2,5-dimethoxyamphetamine (some trade or other names: 4-methyl-2,5-dimethoxy-alpha-methylphenethylamine; "DOM"; "STP");

3,4-methylenedioxyamphetamine;

3,4-methylenedioxymethamphetamine (MDMA);

3,4-methylenedioxy-N-ethylamphetamine (commonly referred to as N-ethyl-alpha-methyl-3,4(methylenedioxy) phenethylamine, N-ethyl MDA, MDE, MDEA);

1-[2-(4-Morpholinyl)ethyl]-3-(1-naphthoyl)indole-7200 (some trade or other names: JWH-200);

N-hydroxy-3,4-methylenedioxyamphetamine (commonly referred to as N-hydroxy-alpha-methyl-3,4(methylenedioxy) phenethylamine, N-hydroxy MDA);

1-Pentyl-3-(1-naphthoyl)indole-7118 (some trade or other names: JWH-018; AM678);

3,4,5-trimethoxyamphetamine;

Bufotenine (some trade or other names: 3-(beta-dimethylaminoethyl)-5-hydroxyindole; 3-(2-dimethyl-aminoethyl)-5-indolol; N, N-dimethylserotonin; 5-hydroxy-N, Ndimethyltryptamine; mappine);

Diethyltryptamine (some trade or other names: DET; N,N-Diethyltryptamine);

Dimethyltryptamine (some trade or other names: DMT);

Gamma [butylrolactone] *butyrolactone* (some trade or other names: GBL, Gamma Buty Lactone, 4-butyrolactone, dihydro-2(3H)-furanone, tetrahydro-2-furanone, Gamma G, GH Gold);

Gamma [hydroxybutyrate] *hydroxy butyric acid* (some trade or other names: GHB);
Ibogaine (some trade or other names: 7-ethyl-6, 6 beta, 7, 8, 9, 10, 12, 13-octahydro-2-methoxy-6, 9-methano-5H-pyrido (1',2':1,2) azepino (5,4-b) indole; *Tabernanthe iboga*);

Lysergic acid diethylamide;

Marijuana;

Mescaline;

Parahexyl (some trade or other names: 3-Hexyl-1-hydroxy-7, 8, 9, 10-tetrahydro-6,6,9-trimethyl-6H-dibenzo[b,d]pyran; Synhexyl);

Peyote (meaning all parts of the plant presently classified botanically as *Lophophora williamsii Lemaire*, whether growing or not, the seeds thereof, any extract from any part of such plant, and every compound, manufacture, salts, derivative, mixture, or preparation of such plant, its seeds or extracts);

N-benzylpiperazine (some trade or other names: BZP, 1-benzylpiperazine);

N-ethyl-3-piperidyl benzilate;

N-methyl-3-piperidyl benzilate;

Psilocybin;

[Psilocyn;] ***Psilocin;***

Tetrahydrocannabinols (synthetic equivalents of the substances contained in the plant, or in the resinous extractives of *Cannabis*, sp. or synthetic substances, derivatives and their isomers with similar chemical structure and pharmacological activity such as the following:
Delta 1 cis or trans tetrahydrocannabinol, and their optical isomers,
Delta 6 cis or trans tetrahydrocannabinol, and their optical isomers,
Delta 3, 4 cis or trans tetrahydrocannabinol, and its optical isomers;
since nomenclature of these substances is not internationally standardized, compounds of these structures, regardless of numerical designation of atomic positions covered);

Ethylamine analog of phencyclidine (some trade or other names: N-ethyl-1-phenylcyclohexylamine; (1-phenylcyclohexyl) ethylamine; N-(1-phenylcyclohexyl) ethylamine; cyclohexamine; PCE);

Pyrrolidine analog of phencyclidine (some trade or other names: 1-(1-phenylcyclohexyl)-pyrrolidine; PCPy; PHP);

1-(1-(2-thienyl)-cyclohexyl)-pyrrolidine (some trade or other names: TCPy); or

Thiophene analog of phencyclidine (some trade or other names: 1-(1-(2-thienyl)-cyclohexyl)-piperidine; 2-thienyl analog of phencyclidine; TPCP; TCP).

For the purposes of this subsection, "isomer" includes, without limitation, the optical, position or geometric isomer.

5. All parts of the plant presently classified botanically as *Datura*, whether growing or not, the seeds thereof, any extract from any part of such plant or plants, and every compound, manufacture, salt derivative, mixture or preparation of such plant or plants, its seeds or extracts, unless substances consistent with those found in such plants are present in formulations that the

Food and Drug Administration of the United States Department of Health and Human Services has approved for distribution.

6. Unless specifically excepted or unless listed in another schedule, any material, compound, mixture or preparation which contains any quantity of phencyclidine, mecloqualone or methaqualone having a depressant effect on the central nervous system, including, without limitation, their salts, isomers and salts of isomers, whenever the existence of such salts, isomers and salts of isomers is possible within the specific chemical designation.

7. Unless specifically excepted or unless listed in another schedule, any material, compound, mixture or preparation which contains any quantity of the following substances having a stimulant effect on the central nervous system, including, without limitation, their salts, isomers and salts of isomers:

Aminorex;
Cathinone (some trade or other names: 2-amino-1-phenyl-1-propanone; alphaaminopropiophenone; 2-aminopropiophenone; norephedrone);
Fenethylline;
Methamphetamine;
Methcathinone (some trade or other names: N-Methylcathinone, cat);
3,4-Methylenedioxymethcathinone (Methylone);
3,4-Methylenedioxypyrovalerone (MDPV);
4-Methylmethcathinone (Mephedrone);
4-Methoxymethcathinone (Methedrone);
Fluoromethcathinone;
beta-keto-N-methylbenzodioxolylpropylamine (bk-MBDB, butylone);
(±)cis-4-methylaminorex ((+)cis-4,5-dihydro-4-methyl-5-phenyl-2-oxazolamine);
N,N-dimethylamphetamine (commonly referred to as N,N-alpha-trimethylbenzeneethanamine;
N,N-alpha-trimethylphenethylamine); or
N-ethylamphetamine.

8. Unless specifically listed in another schedule, coca leaves, cocaine base or free base, or a salt, compound, derivative, isomer or preparation thereof which is chemically equivalent or identical to such substances, and any quantity of material, compound, mixture or preparation which contains coca leaves, cocaine base or cocaine free base or its isomers or any of the salts of cocaine, except decocainized coca leaves or extractions which do not contain cocaine or ecgonine.