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# 31A

# Proposed Regulation of the Nevada State Board of Pharmacy

Workshop - July 16, 2020

Explanation – Language in ***blue italics*** is new; language in ***red text*** [~~*omitted material*~~] is language to be omitted, and language in ***green text*** indicates prior Board-approved amendments that are in the process of being codified.

AUTHORITY: NRS 639.070; NRS 639.1371.

**A REGULATION relating to the delegation by a pharmacist to a pharmacy technician the ability to administer immunizations with appropriate training, and under the direct supervision of a pharmacist.**

**Section. 1. NAC Chapter 639 of NAC is hereby amended by adding thereto the following provisions:**

**NAC 639.245 Maintenance and availability of records regarding certain pharmaceutical personnel on duty; activities of pharmaceutical technicians. (**NRS 639.070**,** 639.1371**)**

1. A written record must be kept available for inspection showing the pharmacists, pharmaceutical technicians and pharmaceutical technicians in training on duty during the hours of business. This record must be:

(a) Readily retrievable; and

(b) Retained for 2 years.

2. A pharmaceutical technician under the direct supervision of a pharmacist may:

(a) Prepackage and label unit dose and unit of use and repackage drugs if a pharmacist:

(1) Inspects the final products; and

(2) Affixes his or her initials to the appropriate records for controlling quality.

(b) Prepare, package, compound and label prescription drugs pursuant to prescriptions or orders for medication if a pharmacist:

(1) Inspects the final product; and

(2) Affixes his or her initials to the appropriate records for controlling quality.

(c) Prepare bulk compounds if a pharmacist:

(1) Inspects the final product; and

(2) Affixes his or her initials to the appropriate records for controlling quality.

(d) Distribute routine orders and stock medications and supplies in the pharmacy or areas where care is provided to patients.

(e) Maintain inventories of supplies of drugs.

(f) Maintain pharmaceutical records.

(g) Request authorization to refill a prescription from the prescribing practitioner.

(h) Transfer a prescription through a computer network if the:

(1) Pharmaceutical technician is employed by a pharmacy that:

(I) Has more than one location; and

(II) Maintains a computer network which provides information between its pharmacies; and

(2) Prescription is transferred to one of the pharmacies within its computer network.

(i) Enter information into the pharmacy's computer system, including, without limitation, information contained in a new prescription concerning the prescription drug and the directions for its use.

***(j) Administer immunizations under the direct and immediate supervision of a pharmacist pursuant to NAC 639.2971(3). Immunization records must be readily retrievable and retained for 2 years.***

3. A pharmaceutical technician may not:

(a) Perform any action requiring a judgmental decision regarding a drug, the interpretation of a prescription or the instructions for the preparation of a prescription.

(b) Take new prescription or chart orders by telephone.

(c) Distribute medications pursuant to a chart order or dispense a prescription unless the order or prescription has been verified by a pharmacist.

4. A pharmaceutical technician shall prepare and distribute drugs only pursuant to written procedures and guidelines established by the pharmacy in which the pharmaceutical technician performs his or her duties.

[Bd. of Pharmacy, § 639.205, eff. 6-26-80] — (NAC A 12-3-84; 6-16-86; 3-27-90; 11-15-93; R214-99, 3-13-2000; R037-07, 1-30-2008***; XX-XX-2020***)

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**NAC 639.254 Initial and biennial in-service training of pharmaceutical technicians working in or for pharmacy; substitution of continuing education for in-service training. (**NRS 639.070**,** 639.1371**)**

1. The owner and managing pharmacist of a pharmacy shall provide training for pharmaceutical technicians working in or for the pharmacy that ensures the continuing competency of those technicians. Except as otherwise provided in this section, the training must consist of initial training upon employment and at least 12 hours of in-service training during the 2-year period immediately preceding the renewal of the registration of the pharmaceutical technician. One of the 12 hours of in-service training must be a jurisprudence program approved or presented by the Board that relates to the practice of pharmacy or the law concerning pharmacy in this State.

2. The managing pharmacist shall maintain a written record of the initial training and the annual training***, including immunization training pursuant to NAC 639.2971(3),*** completed by each pharmaceutical technician working in or for the pharmacy that contains:

(a) The name and signature of the person receiving the training;

(b) The date or dates on which the training was received;

(c) The number of hours of training received;

(d) A general description of the topics covered; and

(e) The name of the person or provider conducting the training.

3. A pharmaceutical technician may substitute the completion of the continuing education necessary for recertification by the Pharmacy Technician Certification Board or the National Healthcareer Association for the biennial in-service training required by subsection 1.

(Added to NAC by Bd. of Pharmacy, eff. 11-15-93; A by R033-02, 5-31-2002; R121-08, 9-18-2008; R016-09, 10-27-2009; R175-12, 12-20-2012***; XX-XX-2020***)

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**NAC 639.2971 Authorization; contents of and deviation from written protocol. (**NRS 454.213**,** 639.070**,** 639.137**)**

1. A physician may establish a written protocol authorizing pharmacists to administer immunizations by an intranasal, intramuscular or subcutaneous injection. Except as otherwise limited by the physician pursuant to subsection 4, any pharmacist who is trained and certified in accordance with NAC 639.2973 may subscribe to the written protocol and administer immunizations in compliance with the protocol. Such a protocol must contain:

(a) The name of the physician who is authorizing the administration of immunizations by a pharmacist;

(b) The immunizations that may be administered by a pharmacist;

(c) Detailed policies and procedures that a pharmacist must follow while administering immunizations, including, without limitation, procedures to follow in the case of adverse reactions or emergencies following administration;

(d) A procedure for the review of the protocol and its operation by the physician at least once annually, and the making and keeping of a record of the review;

(e) When appropriate, specific instructions related to the age of the patient;

~~***(f) Except as otherwise provided in subsection 2, a restriction that a pharmacist may not delegate his or her authority to administer an immunization;***~~

~~***(g)***~~ ***(f)*** A restriction that a pharmacist may not administer an immunization except at an authorized location, which location may not be the home of the patient, unless the patient resides in a licensed facility for long-term care or in a hospital;

~~***(h)***~~ ***(g)*** A requirement that the immunizations will be administered according to all applicable federal, state and local laws; and

~~***(i)***~~ ***(h)*** The signature of the physician authorizing the administration of the immunizations and the time period for which the written protocol is effective.

2. An intern pharmacist may administer immunizations by an intranasal, intramuscular or subcutaneous injection under the direct and immediate supervision of a pharmacist who has subscribed to a written protocol established by a physician.

***3. A pharmaceutical technician may administer immunizations by an intranasal, intramuscular or subcutaneous injection under the direct and immediate supervision of a pharmacist who has subscribed to a written protocol established by a physician. Before the pharmaceutical technician may administer immunizations, the pharmaceutical technician must complete a minimum of one (1) hour of training relating to vaccines, immunization and their administration from one of the following:***

***(a) Immunize Nevada;***

***(b) ACPE-approved CPE;***

***(c) In-service training provided by the owner or managing pharmacist to the pharmaceutical technicians working in or for the pharmacy that ensures the competency of the technicians; or***

***(d) Other Board approved training.***

~~***3.***~~ ***4.*** If a physician orders a deviation from the written protocol for the benefit of a specific patient, the physician shall note the deviations from the written protocol in the record of the patient.

~~***4.***~~ ***5.*** A physician may include restrictions to a written protocol established by the physician pursuant to subsection 1 by limiting the protocol to any of the following:

(a) A specific pharmacist or pharmacists;

(b) A specific location or locations;

(c) The administration of a specific immunization or immunizations; or

(d) Other limitations as the physician determines necessary.

(Added to NAC by Bd. of Pharmacy by R009-01, eff. 11-1-2001; A by R142-03, 4-8-2004; R180-05, 12-29-2005; R115-08, 9-18-2008***; XX-XX-2020***)

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**NAC 639.2974 Certification in basic cardiac life support; continuing education. (**NRS 454.213**,** 639.070**,** 639.137**)**

***1.*** A pharmacist who administers immunizations or an intern pharmacist acting under the direct and immediate supervision of a pharmacist who administers immunizations shall:

~~1.~~***(a)*** Maintain certification in basic cardiac life support from the American Heart Association; and

~~2.~~ ***(b)*** On or before October 31 of each year, complete:

~~(a)~~ ***(i)*** At least 2 hours of continuing education in a course or courses that address the life cycle of diseases, drugs and administration of immunizations; or

~~(b)~~ ***(ii)*** A course provided by the Centers for Disease Control and Prevention regarding epidemiology and prevention of diseases which are preventable through immunization.

***2. A pharmaceutical technician acting under the direct and immediate supervision of a pharmacist who administers immunizations shall, on or before October 31 of each year, complete at least 1 hour of continuing education in a course relating to vaccines, immunization and their administration from one of resources listed pursuant to NAC 639.2971(3)(a)-(d).***

(Added to NAC by Bd. of Pharmacy by R009-01, eff. 11-1-2001; A by R180-05, 12-29-2005***; XX-XX-2020***)

**NAC 639.2975 Legal possession and control of drugs administered as immunizations; drugs to counteract adverse reactions. (**NRS 454.213**,** 639.070**,** 639.137**)**

1. The drugs administered as immunizations by a pharmacist**,** or an intern pharmacist ***or pharmaceutical technician*** acting under the direct and immediate supervision of a pharmacist**,** must be in the legal possession of:

(a) The pharmacy that employs the pharmacist**,** ~~or~~ intern pharmacist**,** ***or pharmaceutical technician*** who will be administering the immunizations, which pharmacy is responsible for the drugs and the maintenance of records of administration of the immunizations; or

(b) The physician who has established a written protocol for the administration of the immunizations, which physician is responsible for the drugs and the maintenance of records of administration of the immunizations.

2. The drugs used for immunizations must be transported and stored at the proper temperatures indicated for the drugs by the manufacturer.

3. While engaged in the administration of immunizations, a pharmacist**,** ~~or~~[YL1] an intern pharmacist ***acting under the direct and immediate supervision of a pharmacist, or pharmaceutical technician*** acting under the direct and immediate supervision of a pharmacist**,** may have in his or her custody and control the drugs for immunization that are identified in the written protocol and any other dangerous drugs listed in the written protocol to treat an adverse reaction.

4. If a pharmacist**,** ~~or~~[YL2] an intern pharmacist ***acting under the direct and immediate supervision of a pharmacist, or pharmaceutical technician*** acting under the direct and immediate supervision of a pharmacist**,** administers immunizations at a location other than a pharmacy, the

pharmacist***, ~~or~~*** intern pharmacist***, or pharmaceutical technician*** must return all unused drugs to the pharmacy or physician responsible for the drugs.

(Added to NAC by Bd. of Pharmacy by R009-01, eff. 11-1-2001; A by R180-05, 12-29-2005; R115-08, 9-18-2008***; XX-XX-2020***)

**NAC 639.2976 Reporting of certain information concerning immunizations. (**NRS 454.213**,** 639.070**,** 639.137**)** A pharmacist ***who administers ~~vaccines~~ immunization or directly supervises the administration of the immunization ~~vaccine~~ by a pharmaceutical technician,*** or an intern pharmacist acting under the direct and immediate supervision of a pharmacist who administers immunizations***,*** shall report the information required for inclusion in the Immunization Information System established by the Department of Health and Human Services pursuant to NRS 439.265 and the regulations adopted pursuant thereto.

(Added to NAC by Bd. of Pharmacy by R009-01, eff. 11-1-2001; A by R180-05, 12-29-2005; R115-08, 9-18-2008***; XX-XX-2020***)

# 31B

# Proposed Regulation of the Nevada State Board of Pharmacy

Workshop July 16, 2020

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AUTHORITY: NRS 453.146; NRS 639.070

**A REGULATION relating to controlled substances; adding certain substances commonly classified as "designer benzodiazepines" to the controlled substances listed in Schedule I; and providing other matters properly relating thereto.**

**Section 1.** NAC 453.510 is hereby amended to read as follows:

453.510 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]-N-phenylacetamide);

Acetylmethadol;

*Acryl fentanyl (N-(1-phenethylpiperidin-4-yl)-N-phenylacrylamide) (some trade or other names: Acryloylfentanyl);*

Allylprodine;

Alphacetylmethadol (except levo-alphacetylmethadol, commonly referred to as levo-alpha-acetylmethadol, 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);

Beta-hydroxythiofentanyl (some other trade names: N-[1-[2-hydroxy-2-(thiophen-2-yl)ethyl]piperidin-4-yl]-N-phenylpropionamide; N-[1-[2-hydroxy-2-(2-thienyl)ethyl]-4-piperidinyl]-N-phenylpropanamide);

Betameprodine;

Betamethadol;

Betaprodine;

Butyryl fentanyl (some other trade names: N-(1-phenethylpiperidin-4-yl)-N-phenylbutyramide; N-(1-phenethylpiperidin-4-yl)-N-phenylbutanamide);

Clonitazene;

*Cyclopentyl fentanyl (N-(1-phenethylpiperidin-4-yl)-N-phenylcyclopentanecarboxamide);*

*Cyclopropyl fentanyl (N-(1-phenethylpiperidin-4-yl)-N-phenylcyclopropanecarboxamide);*

Dextromoramide;

Diampromide;

Diethylthiambutene;

Difenoxin;

Dimenoxadol;

Dimepheptanol;

Dimethylthiambutene;

Dioxaphetyl butyrate;

Dipipanone;

Ethylmethylthiambutene;

Etonitazene;

Etoxeridine;

*4-Fluoroisobutyryl fentanyl (N-(4-fluorophenyl)-N-(1-phenethylpiperidin-4-yl)isobutyramide) (some trade or other names: Para-fluoroisobutyryl fentanyl);*

*Furanyl fentanyl (N-(1-phenethylpiperidin-4-yl)-N-phenylfuran-2-carboxamide);*

Furethidine;

Hydroxypethidine;

*Isobutyryl fentanyl (N-(1-phenethylpiperidin-4-yl)-N-phenylisobutyramide);*

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]-N-phenylpropanamide);

*Methoxyacetyl fentanyl (2-methoxy-N-(1-phenethylpiperidin-4-yl)-N-phenylacetamide);*

Morpheridine;

MPPP (1-methyl-4-phenyl-4-propionoxypiperidine);

Noracymethadol;

Norlevorphanol;

Normethadone;

Norpipanone;

*Ocfentanil (N-(2-fluorophenyl)-2-methoxy-N-(1-phenethylpiperidin-4-yl)acetamide*

*Para-chloroisobutyryl fentanyl (N-(4-chlorophenyl)-N-(1-phenethylpiperidin-4-yl)isobutyramide);*

Para-fluorofentanyl (N-(4-fluorophenyl)-N-[1-(2-phenethyl)-4-piperidinyl]propanamide);

*Para-fluorobutyryl fentanyl (N-(4-fluorophenyl)-N-(1-phenethylpiperidin-4-yl)butyramide);*

*Para-methoxybutyryl fentanyl (N-(4-methoxyphenyl)-N-(1-phenethylpiperidin-4-yl)butyramide);*

PEPAP (1-(-2-phenethyl)-4-phenyl-4-acetoxypiperidine);

Phenadoxone;

Phenampromide;

Phenomorphan;

Phenoperidine;

Piritramide;

Proheptazine;

Properidine;

Propiram;

Racemoramide;

*Tetrahydrofuranyl fentanyl (N-(1-phenethylpiperidin-4-yl)-N-phenyltetrahydrofuran-2-carboxamide);*

Thiofentanyl (N-phenyl-N-[1-(2-thienyl)ethyl-4-piperidinyl]-propanamide);

Tilidine; or

Trimeperidine.

*Valeryl fentanyl (N-(1-phenethylpiperidin-4-yl)-N-phenylpentanamide);*

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;

Acetylfentanyl;

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:

***Adinazolam (some trade or other names: 8-chloro-1-((dimethylamino)methyl)-6-phenyl-4H-s-triazolo(4,3-a)(1,4)benzodiazepine; adinazolamum; Deracyn)***;

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

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

***Bromazolam (some trade or other name: 8-bromo-1-methyl-6-phenyl H[1,2,4]triazolo[4,3a][1,4]benzodiazepine; XLI-268);***

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-(4-Chloro-2,5-dimethoxyphenyl)ethanamine (some trade or other names: 2C-C);

*4-(2-chlorophenyl)-2-ethyl-9-methyl-6H-thieno[3,2-f][1,2,4]triazolo[4,3-a][1,4]diazepine (some trade or other names: Etizolam);*

***Clonazolam (some trade or other names: 6-(2-chlorophenyl)-1-methyl-8-nitro-4H-[1,2,4]triazolo[4,3-a][1,4]benzodiazepine; clonitrazolam);***

1-cyclohexylethyl-3-(2-methoxyphenylacetyl)indole (some trade or other names: SR-18; BTM-8; RCS-8);

***Diclazepam (some trade or other names: 7-chloro-5-(2-chlorophenyl)-1,3-dihydro-1-methyl-2H-1,4-benzodiazepin-2-one; 7-chloro-5-(2-chlorophenyl)-1-methyl-1,3-dihydro-2H-benzo[e][1,4]diazepin-2-one; 2'-chlorodiazepam; Chlorodiazepam; Ro 5-3448);***

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-(2,5-Dimethoxy-4-ethylphenyl)ethanamine (some trade or other names: 2C-E);

2-(2,5-Dimethoxy-4-methylphenyl)ethanamine (some trade or other names: 2C-D);

2-(2,5-Dimethoxy-4-nitro-phenyl)ethanamine (some trade or other names: 2C-N);

All 2,5-Dimethoxy-N-(2-methoxybenzyl) phenethylamine (NBOMe) and any derivatives thereof (some trade or other names: 2C-X-NBOMe; N-benzylated phenethylamines; N-o-methoxybenzyl analogs; NBOMe; 25H-NBOMe; 25B-NBOMe; 25C-BOMe; 25D-NBOMe; 25E-NBOMe; 25I-NBOMe; 25N-NBOMe; 25P-NBOMe; 25T2-NBOMe; 25T4-NBOMe; 25T7-NBOMe)

2-(2,5-Dimethoxy-4-(n)-propylphenyl)ethanamine (some trade or other names: 2C-P);

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

2-(2,5-Dimethoxyphenyl)ethanamine (some trade or other names: 2C-H);

3-[2-(Dimethylamino)ethyl]-1H-indol-4-yl acetate (some trade or other names: 4-acetoxy-N,N-dimethyltryptamine; 4-AcO-DMT; psilacetin; O-acetylpsilocin; 4-acetoxy-DMT)

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);

*Ethyl 2-(1-(5-fluoropentyl)-1H-indazole-3-carboxamido)-3,3-dimethylbutanoate (some trade or other names: 5F-EDMB-PINACA);*

4-ethylnaphthalen-1-yl-(1-pentylindol-3-yl)methanone (some trade or other names: (4-ethyl-1-naphthalenyl)(1-pentyl-1H-indol-3-yl)-methanone; JWH-210);

2-[4-(Ethylthio)-2,5-dimethoxyphenyl]ethanamine (some trade or other names: 2C-T-2);

***Flualprazolam (some trade or other names: 8-chloro-6-(2-fluorophenyl)-1-methyl-4H-[1,2,4]triazolo[4,3-a][1,4]benzodiazepine; 8-chloro-6-(2-fluoro-phenyl)-1-methyl-4h-benzo[f][1,2,4]triazolo[4,3-a][1,4]diazepine; 2'-fluoro alprazolam; ortho-fluoro alprazolam);***

***Flubromazepam (some trade or other names: 7-bromo-5-(2-fluorophenyl)-1,3-dihydro-2H-1,4-benzodiazepin-2-one; 7-Bromo-5-(2-fluorophenyl)-1H-benzo[e][1,4]diazepin-2(3H)-one; 7-bromo-5-(2-fluorophenyl)-1,3-dihydro-1,4-benzodiazepin-2-one);***

***Flubromazolam (some trade or other names: 8-bromo-6-(2-fluorophenyl)-1-methyl-4H-[1,2,4]triazolo[4,3-a][1,4]benzodiazepine);***

***Flunitrazolam (some trade or other names: 6-(2-fluorophenyl)-1-methyl-8-nitro-4H-benzo[f][1,2,4]triazolo[4,3-a][1,4]diazepine);***

*(1-(4-fluorobenzyl)-1H-indol-3-yl)(2,2,3,3-tetramethylcyclopropyl)methanone (some trade or other names: FUB-144);*

*2-(1-(4-fluorobenzyl)-1H-indazole-3-carboxamido)-3-methylbutanoate (Some trade or other names: FUB-AMB; MMB-FUBINACA);*

[1-(5-fluoropentyl)-1H-indazol-3-yl](naphthalen-1-yl)methanone (some trade or other names: THJ-2201; 5-fluoro THJ 018; AM2201 indazole analog; fluorpentyl JWH 018 indazole);

[1-(5-fluoropentyl)-1H-indol-3-yl]-1-naphthalenyl-methanone (some trade or other names: 1-(5-fluoropentyl)-3-(1-naphthoyl)indole; AM-2201);

[1-(5-fluoropentyl)-1H-indol-3-yl]-(2-iodophyenyl)-methanone (some trade or other names: 1-(5-fluoropentyl)-3-(2-iodobenzoyl)indole; AM-694);

(1-(5-fluoropentyl)-1H-indol-3-yl)(2,2,3,3-tetramethylcyclopropyl)methanone (some trade or other names: XLR-11);

*1-(5-fluoropentyl)-N-(2-phenylpropan-2-yl)-1H-indazole-3-carboxamide (some trade or other names: 5F-CUMYL-PINACA; SGT-25);*

1-(5-fluoropentyl)-N-(tricyclo[3.3.1.13,7]dec-1-yl)-1H-indazole-3-carboxamide (some trade or other names: N-((3s,5s,7s)-adamantan-1-yl)-1-(5-fluoropentyl)-1H-indazole-3-carboxamide; APINACA 5-fluoropentyl analog; 5F-AKB48; 5-Fluoro-AKB48; 5F-APINACA; 5-Fluoro-APINACA)

1-(5-fluoropentyl)-8-quinolinyl ester-1H-indole-3-carboxylic acid (some trade or other names: 1-(5-fluoropentyl)-1H-indole-3-carboxylic acid 8-quinolinyl ester; 5-Fluoro-PB-22; 5F-PB-22)

***Flutoprazepam (some trade or other names: 7-chloro-1-(cyclopropylmethyl)-5-(2-fluorophenyl)-1,3-dihydro-2H-1,4-benzodiazepin-2-one);***

2-(4-Iodo-2,5-dimethoxyphenyl)ethanamine (some trade or other names: 2C-I);

2-[4-(Isopropylthio)-2,5-dimethoxyphenyl]ethanamine (some trade or other names: 2C-T-4);

1-hexyl-3-(1-naphthoyl)indole (some trade or other names: JWH-019);

***Meclonazepam (some trade or other names: (3S)-5-(2-chlorophenyl)-1,3-dihydro-3-methyl-7-nitro-2H-1,4-benzodiazepin-2-one; Ro 11-3128);***

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

(4-methoxy-1-naphthalenyl)(1-pentyl-1H-indol-3-yl)-methanone (some trade or other names: JWH-081);

5-methoxy-3,4-methylenedioxyamphetamine *(some trade or other names: MMDA)*;

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");

(4-methyl-1-naphthalenyl)(1-pentyl-1H-indol-3-yl)-methanone (some trade or other names: JWH-122);

*Methyl 2-(1-(5-fluoropentyl)-1H-indazole-3-carboxamido)-3,3-dimethylbutanoate (some trade or other names: 5F-ADB; 5F-MDMB-PINACA);*

*Methyl 2-(1-(5-fluoropentyl)-1H-indole-3-carboxamido)-3,3-Dimethylbutanoate (some trade or other names: 5F-MDMB-PICA);*

~~[3,4-m]~~*M*ethylenedioxyamphetamine *(some trade or other names: MDA)*;

~~[3,4-m]~~*M*ethylenedioxymethamphetamine (MDMA);

~~[3,4-m]~~*M*ethylenedioxy-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-(adamantan-1-yl)-1-(4-fluorobenzyl)-1H-indazole-3-carboxamide (some trade or other names: FUB-AKB48; FUB-APINACA; AKB48 N-(4-fluorobenzyl);*

N-(1-adamantyl)-1-pentyl-1H-indazole-3-carboxamide (some trade or other names: 1-pentyl-N-tricyclo[3.3.1.13,7]dec-1-yl-1H-indazole-3-carboxamide; APINACA; AKB48)

N-(1-amino-3,3-dimethyl-1-oxobutan-2-yl)1-(cyclohexylmethyl)-1H-indazole-3-carboxamide (some trade or other names: ADB-CHMINCA or MAB-CHMINACA )

N-(1-amino-3,3-dimethyl-1-oxobutan-2-yl)-1-pentyl-1H-indazole-3-carboxamide (some trade or other names: ADB-PINACA)

N-(1-amino-3-methyl-1-oxobutan-2-yl)-1-pentyl-1H-indazole-3-carboxamide (some trade or other names: AB-PINACA);

N-(1-amino-3-methyl-1-oxobutan-2-yl)-1-(4fluorobenzyl)-1H-indazole-3-carboxamide (some trade or other names: AB-FUBINACA)

N-[(1S)-1-(aminocarbonyl)-2-methylpropyl]-1-(cyclohexylmethyl)-1H-indazole-3-carboxamide (some trade or other names: AB-CHMINACA)

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

2-(2-methoxyphenyl)-1-(1-pentylindol-3-yl)ethanone (some trade or other names: 1-(1-pentyl-1H-indol-3-yl)-2-(2-methoxyphenyl)-ethanone; 1-pentyl-3-(2-methoxyphenylacetyl)indole; JWH-250);

***Nifoxipam (some trade or other names: 5-(2-fluorophenyl)-1,3-dihydro-3-hydroxy-7-nitro-2H-1,4-benzodiazepin-2-one; 1,3-Dihydro-5-(2-fluorophenyl)-3-hydroxy-7-nitro-2H-1,4-benzodiazepin-2-one; 3-hydroxydesmethylflunitrazepam; DP 370);***

***Nitrazolam (some trade or other names: 1-methyl-8-nitro-6-phenyl-4H-[1,2,4]triazolo[4,3-a][1,4]benzodiazepine);***

*Norflurazepam (some trade or other names: 7-chloro-5-(2-fluorophenyl)-1,3-dihydro-2H-1,4-benzodiazepin-2-one; nor-Flurazepam; N-Desalkylflurazepam; Desalkylflurazepam; Ro 5-3367);*

1-Pentyl-3-(2-chlorophenylacetyl)indole (some trade or other names: JWH-203);

1-Pentyl-3-(4-cholor-1-naphthoyl)indole (some trade or other names: JWH-398);

1-Pentyl-3-[(4-methoxy)-benzoyl]indole (some trade or other names: SR-19; BTM-4; RCS-4);

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

(1-pentylindol-3-yl)-(2,2,3,3-tetramethylcyclopropyl)methanone (some trade or other names: UR-144);

1-pentyl-N-(tricyclo[3.3.1.1 $^{3,7}$]dec-1-yl-1H-indole-3 carboxamide (some trade or other names: APICA; JWH-018 adamantyl carboxamide; 2NE1; SDB-001);

1-pentyl-8-quinolinyl ester-1H-indole-3-carboxylic acid (some trade or other names: 1- pentyl-1H-indole-3-carboxylic acid 8-quinolinyl ester; PB-22; QUPIC)

*Phenazepam (some trade or other names: 7-bromo-5-(2-chlorophenyl)-1,3-dihydro-2H-1,4-benzodiazepin-2-one; 7-bromo-5-(2-chlorophenyl)-1,2-dihydro-3H-1,4-benzodiazepin-2-one; BD 98; Fenazepam; Elzepam; Phezipam; Phenorelaxan; Phenzitat);*

*Pyrazolam (some trade or other names: 8-bromo-1-methyl-6-(2-pyridinyl)-4H-[1,2,4]triazolo[4,3-a][1,4]benzodiazepine; 8-bromo-1-methyl-6-(pyridin-2-yl)-4H-benzo[f][1,2,4]triazolo[4,3-a][1,4]diazepine; Pirazolam);*

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, N-dimethyltryptamine; mappine);

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

Dimethyltryptamine (some trade or other names: DMT; N,N-DMT; N,N-Dimethyltryptamine);

Fluorophenylpiperazine (some trade or other names: FPP, pFPP, 2-fluorophenylpiperazine, 3-fluorophenylpiperazine, 4-fluorophenylpiperazine);

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

Gamma 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;

Methoxyphenylpiperazine (some trade or other names: MeOPP, pMPP, 4-MPP, 2-MeOPP, 3-MeOPP, 4-MeOPP);

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;

Psilocin;

Salvinorin A (some trade or other names: Divinorin A; Methyl (2S,4aR,6aR,7R,9S,10aS,10bR)-9-(acetyloxy)-2-(furan-3-yl)-6a,10b-dimethyl-4,10-dioxododecahydro-2H-benzo[f]isochromene-7-carboxylate);

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

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

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

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

Trifluoromethylphenylpiperazine (some trade or other names: 1-(3-trifluoromethylphenyl)piperazine; 3-trifluoromethylphenylpiperazine; TFMPP)

➥ 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:

*Alpha-pyrrolidinoheptaphenone (some trade or other names: PV8);*

*Alpha-pyrrolidinohexanophenone (some trade or other names: Alpha-PHP);*

Alpha-PBP (some trade or other names: 1-phenyl-2-(pyrrolidine-1-yl)butan-1-one, alpha-pyrrolidinobutiophenone);

Alpha-PVP (some trade or other names: 1-phenyl-2-(1-pyrrolidinyl)-1-pentanone, alpha-pyrrolidinopentiophenone, alpha-pyrrolidinovalerophenone, O-2387);

Aminorex;

Butylone (some trade or other names: 1-(1,3-benzodioxol-5-yl)-2-(methylamino)butan-1-one, β-keto-N-methylbenzodioxolylpropylamine, bk-MBDB);

Cathinone (some trade or other names: 2-amino-1-phenyl-1-propanone; alpha-aminopropiophenone; 2-aminopropiophenone; norephedrone);

*4-chloro-alpha-pyrrolidinovalerophenone (some trade or other names: 4-chloro-a-PVP);*

Dimethylone (some trade or other names: 3,4-methylenedioxy-N,N-dimethylcathinone; N,N-dimethyl MDCATH; N,N-dimethyl-3,4-methylenedioxycathinone; N,N-dimethyl-β-keto-3,4-methylenedioxyamphetamine; 1-(1,3-benzodioxol-5-yl)-2-(dimethylamino)propan-1-one; bk-MDDMA)

*N-ethylhexedrone;*

Ethylone (some trade or other names: N-ethyl-3,4-methylenedioxycathinone; 1-(1,3-benzodioxol-5-yl)-2-(ethylamino)propan-1-one; MDEC; bk-MDEA)

*N-ethylpentylone (1-(1,3-benzodioxol-5-yl)-2-ethylamino)-pentan-1-one) (some trade or other names: Ephylone);*

Fenethylline;

Fluoroamphetamine (some trade or other names: 2-fluoroamphetamine, 3-fluoroamphetamine, 4-fluoroamphetamine, 2-FA, 3-FA, 4-FA, PFA);

Fluoromethcathinone (some trade or other names: 4-Fluoro-N-methylcathinone, 1-(4-fluorophenyl)-2-(methylamino)propan-1-one, 4-Fluoromethcathinone (Flephedrone), 4-FMC, 3-Fluoro-N-methylcathinone, 1-(3-fluorophenyl)-2-2(methylamino)propan-1-one, 3-Fluoromethcathinone, 3-FMC, 2-Fluoro-N-methylcathinone, 1-(2-fluorophenyl)-2-(methylamino)propan-1-one, 2-FMC);

*4-methyl-alpha-ethylaminopentiophenone (some trade or other names: 4-MEAP);*

*4'-methyl-alpha-pyrrolidinohexiophenone (some trade or other names: MPHP);*

Mephedrone (some trade or other names: Methylmethcathinone, 4-Methylmethcathinone, 4-MMC, 4-Methylephedrone);

Methamphetamine;

Methcathinone (some trade or other names: N-Methylcathinone, cat);

Methedrone (some trade or other names: Methoxymethcathinone, 4-Methoxymethcathinone, bk-PMMA, methoxyphedrine);

4-methyl-alpha-pyrrolidinopropiophenone (some trade or other names: 1-(4-methylphenyl)-2-(pyrrolidin-1-yl)-propan-1-one, 4-MePPP);

(±)cis-4-methylaminorex ((+)cis-4,5-dihydro-4-methyl-5-phenyl-2-oxazolamine);

Methylenedioxypyrovalerone (some trade or other names: 3,4-Methylenedioxypyrovalerone, MDPV);

Methylethcathinone (some trade or other names: 2-(ethylamino)-1-(4-methylphenyl)propan-1-one, 4-MEC, 4-methyl-N-ethylcathinone);

Methylone (some trade or other names: Methylenedioxy-N-methylcathinone, Methylenedioxymethcathinone, 3,4-Methylenedioxy-N-methylcathinone, bk-MDMA);

N,N-dimethylamphetamine (commonly referred to as N,N-alpha-trimethyl-benzeneethanamine; N,N-alpha-trimethylphenethylamine);

N-ethylamphetamine;

Naphyrone (some trade or other names: 1-(naphthalen-2-yl)-2(pyrrolidin-1-yl)pentan-1-one, naphthylpyrovalerone, naphpyrovalerone, NRG-1, O-2482); or

Pentedrone (some trade or other names: 2-(methylamino)-1-phenylpentan-1-one, α-methylaminovalerophenone)

Pentylone (some other trade names: 1-(1,3-benzodioxol-5-yl)-2-(methylamino)pentan-1-one; beta-keto-methylbenzodioxolylpentanamine; bk-MBDP; bk-methyl-K)

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.

9. Unless specifically listed in another schedule Tetrahydrocannabinols (natural or 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 9 cis or trans tetrahydrocannabinol, and their optical isomers, also known as; Delta 1 cis or trans tetrahydrocannabinol, and their optical isomers,

Delta 8 cis or trans tetrahydrocannabinol, and their optical isomers, also known as; Delta 6 cis or trans tetrahydrocannabinol, and their optical isomers,

Delta 3, 4 cis or trans tetrahydrocannabinol, and its optical isomers;

Tetrahydrocannabinols contained in the genus Cannabis or in the resinous extractives of the genus Cannabis;

Synthetic equivalents of tetrahydrocannabinol substances or synthetic substances, derivatives and their isomers with a similar chemical structure; and

Since nomenclature of these substances is not internationally standardized, compounds of these structures, regardless of numerical designation of atomic positions covered).

10. Unless specifically listed in another schedule, any material, compound, mixture or preparation which contains any quantity of CBD (natural or synthetic equivalents of the substances contained in the plant or the resinous extractives of Cannabis sp. or synthetic substances. Derivatives and their isomers with similar chemical structure and pharmacological activity). ***Any CBD drug product that has been approved by the Food and Drug Administration and contains not more than 0.1 percent residual THC by weight is not a controlled substance.***

# 31C

# Proposed Regulation of the Nevada State Board of Pharmacy

Workshop July 16, 2020

Explanation – Language in ***blue italics*** is new; language in ***red text*** [~~*omitted material*~~] is language to be omitted, and language in *green text* indicates prior Board-approved amendments that are in the process of being codified.

AUTHORITY: NRS 453.146; NRS 639.070

**A REGULATION relating to controlled substances; adding certain substances commonly known as Kratom (Mitragyna speciosa korth) to the controlled substances listed in Schedule I; and providing other matters properly relating thereto.**

**Section 1.** NAC 453.510 is hereby amended to read as follows:

453.510 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]-N-phenylacetamide);

Acetylmethadol;

*Acryl fentanyl (N-(1-phenethylpiperidin-4-yl)-N-phenylacrylamide) (some trade or other names: Acryloylfentanyl);*

Allylprodine;

Alphacetylmethadol (except levo-alphacetylmethadol, commonly referred to as levo-alpha-acetylmethadol, 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);

Beta-hydroxythiofentanyl (some other trade names: N-[1-[2-hydroxy-2-(thiophen-2-yl)ethyl]piperidin-4-yl]-N-phenylpropionamide; N-[1-[2-hydroxy-2-(2-thienyl)ethyl]-4-piperidinyl]-N-phenylpropanamide);

Betameprodine;

Betamethadol;

Betaprodine;

Butyryl fentanyl (some other trade names: N-(1-phenethylpiperidin-4-yl)-N-phenylbutyramide; N-(1-phenethylpiperidin-4-yl)-N-phenylbutanamide);

Clonitazene;

*Cyclopentyl fentanyl (N-(1-phenethylpiperidin-4-yl)-N-phenylcyclopentanecarboxamide);*

*Cyclopropyl fentanyl (N-(1-phenethylpiperidin-4-yl)-N-phenylcyclopropanecarboxamide);*

Dextromoramide;

Diampromide;

Diethylthiambutene;

Difenoxin;

Dimenoxadol;

Dimepheptanol;

Dimethylthiambutene;

Dioxaphetyl butyrate;

Dipipanone;

Ethylmethylthiambutene;

Etonitazene;

Etoxeridine;

*4-Fluoroisobutyryl fentanyl (N-(4-fluorophenyl)-N-(1-phenethylpiperidin-4-yl)isobutyramide) (some trade or other names: Para-fluoroisobutyryl fentanyl);*

*Furanyl fentanyl (N-(1-phenethylpiperidin-4-yl)-N-phenylfuran-2-carboxamide);*

Furethidine;

***Hydroxymitragynine (some trade or other names: 7-hydroxymitragynine, (αE,2S,3S,7aS,12bS)-3-ethyl-1,2,3,4,6,7,7a,12b-octahydro-7a-hydroxy-8-methoxy-α-(methoxymethylene)-indolo[2,3-a]quinolizine-2-acetic acid methyl ester; 9-methoxycorynantheidine hydroxyindolenine; mitragynine hydroxyindolenine)***

Hydroxypethidine;

*Isobutyryl fentanyl (N-(1-phenethylpiperidin-4-yl)-N-phenylisobutyramide);*

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]-N-phenylpropanamide);

*Methoxyacetyl fentanyl (2-methoxy-N-(1-phenethylpiperidin-4-yl)-N-phenylacetamide);*

***Mitragynine (some trade or other names: methyl (E)-2-[(2S,3S,12bS)-3-ethyl-8-methoxy-1,2,3,4,6,7,12,12b-octahydroindolo[2,3-a]quinolizin-2-yl]-3-methoxyprop-2-enoate; αE,2S,3S,12bS)-3-ethyl-1,2,3,4,6,7,12,12b-octahydro-8-methoxy-α-(methoxymethylene)-indolo[2,3-a]quinolizine-2-acetic acid methyl ester; (E)-16,17-didehydro-9,17-dimethoxy-17,18-seco-20α-yohimban-16-carboxylic acid methyl ester; 9-methoxy Corynantheidine)***

Morpheridine;

MPPP (1-methyl-4-phenyl-4-propionoxypiperidine);

Noracymethadol;

Norlevorphanol;

Normethadone;

Norpipanone;

*Ocfentanil (N-(2-fluorophenyl)-2-methoxy-N-(1-phenethylpiperidin-4-yl)acetamide*

*Para-chloroisobutyryl fentanyl (N-(4-chlorophenyl)-N-(1-phenethylpiperidin-4-yl)isobutyramide);*

Para-fluorofentanyl (N-(4-fluorophenyl)-N-[1-(2-phenethyl)-4-piperidinyl]propanamide);

*Para-fluorobutyryl fentanyl (N-(4-fluorophenyl)-N-(1-phenethylpiperidin-4-yl)butyramide);*

*Para-methoxybutyryl fentanyl (N-(4-methoxyphenyl)-N-(1-phenethylpiperidin-4-yl)butyramide);*

PEPAP (1-(-2-phenethyl)-4-phenyl-4-acetoxypiperidine);

Phenadoxone;

Phenampromide;

Phenomorphan;

Phenoperidine;

Piritramide;

Proheptazine;

Properidine;

Propiram;

Racemoramide;

*Tetrahydrofuranyl fentanyl (N-(1-phenethylpiperidin-4-yl)-N-phenyltetrahydrofuran-2-carboxamide);*

Thiofentanyl (N-phenyl-N-[1-(2-thienyl)ethyl-4-piperidinyl]-propanamide);

Tilidine; or

Trimeperidine.

*Valeryl fentanyl (N-(1-phenethylpiperidin-4-yl)-N-phenylpentanamide);*

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;

Acetylfentanyl;

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-ethyltryptamine (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-(4-Chloro-2,5-dimethoxyphenyl)ethanamine (some trade or other names: 2C-C);

*4-(2-chlorophenyl)-2-ethyl-9-methyl-6H-thieno[3,2-f][1,2,4]triazolo[4,3-a][1,4]diazepine (some trade or other names: Etizolam);*

1-cyclohexylethyl-3-(2-methoxyphenylacetyl)indole (some trade or other names: SR-18; BTM-8; RCS-8);

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-(2,5-Dimethoxy-4-ethylphenyl)ethanamine (some trade or other names: 2C-E);

2-(2,5-Dimethoxy-4-methylphenyl)ethanamine (some trade or other names: 2C-D);

2-(2,5-Dimethoxy-4-nitro-phenyl)ethanamine (some trade or other names: 2C-N);

All 2,5-Dimethoxy-N-(2-methoxybenzyl) phenethylamine (NBOMe) and any derivatives thereof (some trade or other names: 2C-X-NBOMe; N-benzylated phenethylamines; N-o-methoxybenzyl analogs; NBOMe; 25H-NBOMe; 25B-NBOMe; 25C-BOMe; 25D-NBOMe; 25E-NBOMe; 25I-NBOMe; 25N-NBOMe; 25P-NBOMe; 25T2-NBOMe; 25T4-NBOMe; 25T7-NBOMe)

2-(2,5-Dimethoxy-4-(n)-propylphenyl)ethanamine (some trade or other names: 2C-P);

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

2-(2,5-Dimethoxyphenyl)ethanamine (some trade or other names: 2C-H);

3-[2-(Dimethylamino)ethyl]-1H-indol-4-yl acetate (some trade or other names: 4-acetoxy-N,N-dimethyltryptamine; 4-AcO-DMT; psilacetin; O-acetylpsilocin; 4-acetoxy-DMT)

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);

*Ethyl 2-(1-(5-fluoropentyl)-1H-indazole-3-carboxamido)-3,3-dimethylbutanoate (some trade or other names: 5F-EDMB-PINACA);*

4-ethylnaphthalen-1-yl-(1-pentylindol-3-yl)methanone (some trade or other names: (4-ethyl-1-naphthalenyl)(1-pentyl-1H-indol-3-yl)-methanone; JWH-210);

2-[4-(Ethylthio)-2,5-dimethoxyphenyl]ethanamine (some trade or other names: 2C-T-2);

*(1-(4-fluorobenzyl)-1H-indol-3-yl)(2,2,3,3-tetramethylcyclopropyl)methanone (some trade or other names: FUB-144);*

*2-(1-(4-fluorobenzyl)-1H-indazole-3-carboxamido)-3-methylbutanoate (Some trade or other names: FUB-AMB; MMB-FUBINACA);*

[1-(5-fluoropentyl)-1H-indazol-3-yl](naphthalen-1-yl)methanone (some trade or other names: THJ-2201; 5-fluoro THJ 018; AM2201 indazole analog; fluorpentyl JWH 018 indazole);

[1-(5-fluoropentyl)-1H-indol-3-yl]-1-naphthalenyl-methanone (some trade or other names: 1-(5-fluoropentyl)-3-(1-naphthoyl)indole; AM-2201);

[1-(5-fluoropentyl)-1H-indol-3-yl]-(2-iodophyenyl)-methanone (some trade or other names: 1-(5-fluoropentyl)-3-(2-iodobenzoyl)indole; AM-694);

(1-(5-fluoropentyl)-1H-indol-3-yl)(2,2,3,3-tetramethylcyclopropyl)methanone (some trade or other names: XLR-11);

*1-(5-fluoropentyl)-N-(2-phenylpropan-2-yl)-1H-indazole-3-carboxamide (some trade or other names: 5F-CUMYL-PINACA; SGT-25);*

1-(5-fluoropentyl)-N-(tricyclo[3.3.1.13,7]dec-1-yl)-1H-indazole-3-carboxamide (some trade or other names: N-((3s,5s,7s)-adamantan-1-yl)-1-(5-fluoropentyl)-1H-indazole-3-carboxamide; APINACA 5-fluoropentyl analog; 5F-AKB48; 5-Fluoro-AKB48; 5F-APINACA; 5-Fluoro-APINACA)

1-(5-fluoropentyl)-8-quinolinyl ester-1H-indole-3-carboxylic acid (some trade or other names: 1-(5-fluoropentyl)-1H-indole-3-carboxylic acid 8-quinolinyl ester; 5-Fluoro-PB-22; 5F-PB-22)

2-(4-Iodo-2,5-dimethoxyphenyl)ethanamine (some trade or other names: 2C-I);

2-[4-(Isopropylthio)-2,5-dimethoxyphenyl]ethanamine (some trade or other names: 2C-T-4);

1-hexyl-3-(1-naphthoyl)indole (some trade or other names: JWH-019);

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

(4-methoxy-1-naphthalenyl)(1-pentyl-1H-indol-3-yl)-methanone (some trade or other names: JWH-081);

5-methoxy-3,4-methylenedioxyamphetamine *(some trade or other names: MMDA)*;

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");

(4-methyl-1-naphthalenyl)(1-pentyl-1H-indol-3-yl)-methanone (some trade or other names: JWH-122);

*Methyl 2-(1-(5-fluoropentyl)-1H-indazole-3-carboxamido)-3,3-dimethylbutanoate (some trade or other names: 5F-ADB; 5F-MDMB-PINACA);*

*Methyl 2-(1-(5-fluoropentyl)-1H-indole-3-carboxamido)-3,3-Dimethylbutanoate (some trade or other names: 5F-MDMB-PICA);*

~~[3,4-m]~~*M*ethylenedioxyamphetamine *(some trade or other names: MDA)*;

~~[3,4-m]~~*M*ethylenedioxymethamphetamine (MDMA);

~~[3,4-m]~~*M*ethylenedioxy-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-(adamantan-1-yl)-1-(4-fluorobenzyl)-1H-indazole-3-carboxamide (some trade or other names: FUB-AKB48; FUB-APINACA; AKB48 N-(4-fluorobenzyl);*

N-(1-adamantyl)-1-pentyl-1H-indazole-3-carboxamide (some trade or other names: 1-pentyl-N-tricyclo[3.3.1.13,7]dec-1-yl-1H-indazole-3-carboxamide; APINACA; AKB48)

N-(1-amino-3,3-dimethyl-1-oxobutan-2-yl)1-(cyclohexylmethyl)-1H-indazole-3-carboxamide (some trade or other names: ADB-CHMINCA or MAB-CHMINACA )

N-(1-amino-3,3-dimethyl-1-oxobutan-2-yl)-1-pentyl-1H-indazole-3-carboxamide (some trade or other names: ADB-PINACA)

N-(1-amino-3-methyl-1-oxobutan-2-yl)-1-pentyl-1H-indazole-3-carboxamide (some trade or other names: AB-PINACA);

N-(1-amino-3-methyl-1-oxobutan-2-yl)-1-(4fluorobenzyl)-1H-indazole-3-carboxamide (some trade or other names: AB-FUBINACA)

N-[(1S)-1-(aminocarbonyl)-2-methylpropyl]-1-(cyclohexylmethyl)-1H-indazole-3-carboxamide (some trade or other names: AB-CHMINACA)

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

2-(2-methoxyphenyl)-1-(1-pentylindol-3-yl)ethanone (some trade or other names: 1-(1-pentyl-1H-indol-3-yl)-2-(2-methoxyphenyl)-ethanone; 1-pentyl-3-(2-methoxyphenylacetyl)indole; JWH-250);

1-Pentyl-3-(2-chlorophenylacetyl)indole (some trade or other names: JWH-203);

1-Pentyl-3-(4-cholor-1-naphthoyl)indole (some trade or other names: JWH-398);

1-Pentyl-3-[(4-methoxy)-benzoyl]indole (some trade or other names: SR-19; BTM-4; RCS-4);

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

(1-pentylindol-3-yl)-(2,2,3,3-tetramethylcyclopropyl)methanone (some trade or other names: UR-144);

1-pentyl-N-(tricyclo[3.3.1.1 $^{3,7}$]dec-1-yl-1H-indole-3 carboxamide (some trade or other names: APICA; JWH-018 adamantyl carboxamide; 2NE1; SDB-001);

1-pentyl-8-quinolinyl ester-1H-indole-3-carboxylic acid (some trade or other names: 1- pentyl-1H-indole-3-carboxylic acid 8-quinolinyl ester; PB-22; QUPIC)

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, N-dimethyltryptamine; mappine);

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

Dimethyltryptamine (some trade or other names: DMT; N,N-DMT; N,N-Dimethyltryptamine);

Fluorophenylpiperazine (some trade or o ther names: FPP, pFPP, 2-fluorophenylpiperazine, 3-fluorophenylpiperazine, 4-fluorophenylpiperazine);

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

Gamma 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;

Methoxyphenylpiperazine (some trade or other names: MeOPP, pMPP, 4-MPP, 2-MeOPP, 3-MeOPP, 4-MeOPP);

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;

Psilocin;

Salvinorin A (some trade or other names: Divinorin A; Methyl (2S,4aR,6aR,7R,9S,10aS,10bR)-9-(acetyloxy)-2-(furan-3-yl)-6a,10b-dimethyl-4,10-dioxododecahydro-2H-benzo[f]isochromene-7-carboxylate);

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

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

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

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

Trifluoromethylphenylpiperazine (some trade or other names: 1-(3-trifluoromethylphenyl)piperazine; 3-trifluoromethylphenylpiperazine; TFMPP)

➥ 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:

*Alpha-pyrrolidinoheptaphenone (some trade or other names: PV8);*

*Alpha-pyrrolidinohexanophenone (some trade or other names: Alpha-PHP);*

Alpha-PBP (some trade or other names: 1-phenyl-2-(pyrrolidine-1-yl)butan-1-one, alpha-pyrrolidinobutiophenone);

Alpha-PVP (some trade or other names: 1-phenyl-2-(1-pyrrolidinyl)-1-pentanone, alpha-pyrrolidinopentiophenone, alpha-pyrrolidinovalerophenone, O-2387);

Aminorex;

Butylone (some trade or other names: 1-(1,3-benzodioxol-5-yl)-2-(methylamino)butan-1-one, β-keto-N-methylbenzodioxolylpropylamine, bk-MBDB);

Cathinone (some trade or other names: 2-amino-1-phenyl-1-propanone; alpha-aminopropiophenone; 2-aminopropiophenone; norephedrone);

*4-chloro-alpha-pyrrolidinovalerophenone (some trade or other names: 4-chloro-a-PVP);*

Dimethylone (some trade or other names: 3,4-methylenedioxy-N,N-dimethylcathinone; N,N-dimethyl MDCATH; N,N-dimethyl-3,4-methylenedioxycathinone; N,N-dimethyl-β-keto-3,4-methylenedioxyamphetamine; 1-(1,3-benzodioxol-5-yl)-2-(dimethylamino)propan-1-one; bk-MDDMA)

*N-ethylhexedrone;*

Ethylone (some trade or other names: N-ethyl-3,4-methylenedioxycathinone; 1-(1,3-benzodioxol-5-yl)-2-(ethylamino)propan-1-one; MDEC; bk-MDEA)

*N-ethylpentylone (1-(1,3-benzodioxol-5-yl)-2-ethylamino)-pentan-1-one) (some trade or other names: Ephylone);*

Fenethylline;

Fluoroamphetamine (some trade or other names: 2-fluoroamphetamine, 3-fluoroamphetamine, 4-fluoroamphetamine, 2-FA, 3-FA, 4-FA, PFA);

Fluoromethcathinone (some trade or other names: 4-Fluoro-N-methylcathinone, 1-(4-fluorophenyl)-2-(methylamino)propan-1-one, 4-Fluoromethcathinone (Flephedrone), 4-FMC, 3-Fluoro-N-methylcathinone, 1-(3-fluorophenyl)-2-2(methylamino)propan-1-one, 3-Fluoromethcathinone, 3-FMC, 2-Fluoro-N-methylcathinone, 1-(2-fluorophenyl)-2-(methylamino)propan-1-one, 2-FMC);

*4-methyl-alpha-ethylaminopentiophenone (some trade or other names: 4-MEAP);*

*4'-methyl-alpha-pyrrolidinohexiophenone (some trade or other names: MPHP);*

Mephedrone (some trade or other names: Methylmethcathinone, 4-Methylmethcathinone, 4-MMC, 4-Methylephedrone);

Methamphetamine;

Methcathinone (some trade or other names: N-Methylcathinone, cat);

Methedrone (some trade or other names: Methoxymethcathinone, 4-Methoxymethcathinone, bk-PMMA, methoxyphedrine);

4-methyl-alpha-pyrrolidinopropiophenone (some trade or other names: 1-(4-methylphenyl)-2-(pyrrolidin-1-yl)-propan-1-one, 4-MePPP);

(±)cis-4-methylaminorex ((+)cis-4,5-dihydro-4-methyl-5-phenyl-2-oxazolamine);

Methylenedioxypyrovalerone (some trade or other names: 3,4-Methylenedioxypyrovalerone, MDPV);

Methylethcathinone (some trade or other names: 2-(ethylamino)-1-(4-methylphenyl)propan-1-one, 4-MEC, 4-methyl-N-ethylcathinone);

Methylone (some trade or other names: Methylenedioxy-N-methylcathinone, Methylenedioxymethcathinone, 3,4-Methylenedioxy-N-methylcathinone, bk-MDMA);

N,N-dimethylamphetamine (commonly referred to as N,N-alpha-trimethyl-benzeneethanamine; N,N-alpha-trimethylphenethylamine);

N-ethylamphetamine;

Naphyrone (some trade or other names: 1-(naphthalen-2-yl)-2(pyrrolidin-1-yl)pentan-1-one, naphthylpyrovalerone, naphpyrovalerone, NRG-1, O-2482); or

Pentedrone (some trade or other names: 2-(methylamino)-1-phenylpentan-1-one, α-methylaminovalerophenone)

Pentylone (some other trade names: 1-(1,3-benzodioxol-5-yl)-2-(methylamino)pentan-1-one; beta-keto-methylbenzodioxolylpentanamine; bk-MBDP; bk-methyl-K)

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.

9. Unless specifically listed in another schedule Tetrahydrocannabinols (natural or 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 9 cis or trans tetrahydrocannabinol, and their optical isomers, also known as; Delta 1 cis or trans tetrahydrocannabinol, and their optical isomers,

Delta 8 cis or trans tetrahydrocannabinol, and their optical isomers, also known as; Delta 6 cis or trans tetrahydrocannabinol, and their optical isomers,

Delta 3, 4 cis or trans tetrahydrocannabinol, and its optical isomers;

Tetrahydrocannabinols contained in the genus Cannabis or in the resinous extractives of the genus Cannabis;

Synthetic equivalents of tetrahydrocannabinol substances or synthetic substances, derivatives and their isomers with a similar chemical structure; and

Since nomenclature of these substances is not internationally standardized, compounds of these structures, regardless of numerical designation of atomic positions covered).

10. Unless specifically listed in another schedule, any material, compound, mixture or preparation which contains any quantity of CBD (natural or synthetic equivalents of the substances contained in the plant or the resinous extractives of Cannabis sp. or synthetic substances. Derivatives and their isomers with similar chemical structure and pharmacological activity). ***Any CBD drug product that has been approved by the Food and Drug Administration and contains not more than 0.1 percent residual THC by weight is not a controlled substance.***

# KRATOM (*Mitragyna speciosa korth*)
## (Street Names: Thang, Kakuam, Thom, Ketum, Biak)

November 2019

**Introduction:**

Kratom, (*Mitragyna speciosa korth*), is a tropical tree indigenous to Thailand, Malaysia, Myanmar and other areas of Southeast Asia. Kratom is in the same family as the coffee tree (*Rubiaceae*). The tree reaches heights of 50 feet with a spread of over 15 feet.

Kratom has been used by natives of Thailand and other regions of Southeast Asia as an herbal drug for decades. Traditionally, kratom was mostly used as a stimulant by Thai and Malaysian laborers and farmers to overcome the burdens of hard work. They chewed the leaves to make them work harder and provide energy and relief from muscle strains. Kratom was also used in Southeast Asia and by Thai natives to substitute for opium when opium is not available. It has also been used to manage opioid withdrawal symptoms by chronic opioid users.

In 1943, the Thai government passed the Kratom Act 2486 that made planting of the tree illegal. In 1979, the Thai government enacted the Narcotics Act B.E. 2522, placing kratom along with marijuana in Category V of a five category classification of narcotics. It has been reported that young Thai militants drink a "4x100" kratom formula to make them "more bold and fearless and easy to control." The two "4x100" kratom formulas are described as a mixture of boiled kratom leaves, mosquito coils, and cola or a mixture of boiled cough syrup, kratom leaves, and cola served with ice. In this report, it also mentioned that the use of the "4x100" formula was gaining popularity among Muslim youngsters in several districts of Yala (Southern Thailand) and was available in local coffee and tea shops.

Kratom is promoted as a legal psychoactive product on numerous websites in the U.S. On those websites, topics range from vendors listings, preparation of tea and recommended doses, to alleged medicinal uses, and user reports of drug experiences.

**Licit Uses:**

There is no legitimate medical use for kratom in the U.S.

**Chemistry and Pharmacology:**

Over 25 alkaloids have been isolated from kratom; mitragynine and 7-hydroxymitragynine are the primary pschoactive alkaloids in the plant.

Pharmacology studies show that mitragynine and 7-hydroxymitragynine have mu-opioid receptor agonist activity. Kratom has been described as producing both stimulant and sedative effects. At low doses, it produces stimulant effects, with users reporting increased alertness, physical energy, talkativeness and sociable behavior. At high doses, opioid effects are produced, in addition to sedative and euphoric effects. Effects occur within 5 to 10 minutes after ingestion and last for 2 to 5 hours. Acute side effects include nausea, itching, sweating, dry mouth, constipation, increased urination, and loss of appetite.

Kratom consumption can lead to addiction. In a study of Thai kratom addicts, it was observed that some addicts chewed kratom daily for 3 to 30 years (mean of 18.6 years). Long-term use of kratom produced anorexia, weight loss, insomnia, skin darkening, dry mouth, frequent urination, and constipation. A withdrawal syndrome was observed, consisting of symptoms of hostility, aggression, emotional lability, wet nose, achy muscles and bones, and jerky movement of the limbs. Furthermore, several cases of kratom psychosis were observed, where kratom addicts exhibited psychotic symptoms that included hallucinations, delusion and confusion. In the U.S., the use of kratom has been associated with numerous cases of overdose and fatalities.

**Illicit Uses:**

In recent years, there has been an increase in the popularity of kratom and kratom-based products on the recreation drug market. Kratom is mainly being abused orally as a tea. Chewing kratom leaves is another method of consumption. Doses of 2 to 10 grams are recommended to achieve the desired effects.

Other countries are reporting emerging new trends in the use of kratom. In the United Kingdom, kratom is promoted as an "herbal speedball." In Malaysia, kratom (known as ketum) juice preparations are illegally available.

**User Population:**

Information on user population in the U.S. is limited. Kratom abuse is not monitored by any national drug abuse surveys.

**Illicit Distribution:**

The System to Retrieve Information from Drug Evidence (STRIDE)/STARLiMS, a federal database for the seized drugs analyzed by DEA forensic laboratories, and the National Forensic Laboratory Information System (NFLIS), which collects drug analysis information from federal, state and local forensic laboratories, indicate that there was one drug report of mitragynine, the primary active alkaloid in kratom, in 2010, 46 reports in 2011, and 139 reports in 2012. Since that time, the number of mitragynine drug reports have continued to increase to 193 in 2015, 321 in 2016, 333 in 2017; and, preliminarily to 589 drug reports for 2018. Kratom is widely available on the Internet. There are numerous vendors within and outside of the U.S. selling kratom. Forms of kratom available through the Internet include leaves (whole or crushed), powder, extract, encapsulated powder, and extract resin "pies" (40g pellets made from reduced extract). Seeds and whole trees are also available from some vendors through the Internet, suggesting the possibility of domestic cultivation.

**Control Status:**

Kratom is not scheduled under the Controlled Substances Act.

Comments and additional information are welcomed by the Drug and Chemical Evaluation Section; Fax 571-362-4250, Telephone 571-362-3249, or Email DPE@usdoj.gov.