NDAA 2011 Summer Conference

SYNTHETIC DRUGS

Presented by Sherry Green, CEO National Alliance for Model State Drug Laws

SYNTHETIC SUBSTANCES

Where We Are

(information current as of 10/14/2011)

Categories of Synthetic Cannabinoids

- JWH-018
- JWH-073
- JWH-200
- CP 47,497
- CP 47,497 homologues
- Cannabicyclohexanol

The Drug Enforcement Administration (DEA) and the Advisory Council on the Misuse of Drugs (ACMD), a panel of experts tasked with advising the British government on the regulation and control of substances, have generic language related to scheduling and/or regulating the above named substances.

The DEA indicates that the following generic language is used by other countries to control the named synthetic cannabinoids:

The term Cannabimimetic Agents means, collectively, the chemicals that meet the criteria of any one or more of paragraphs (a) through (e). Any substance within the structural classes identified below that is a cannabinoid receptor type 1 (CB1 receptor) agonist as demonstrated by binding studies and functional assays:

- (a) 2-(3-hydroxycyclohexyl)phenol with substitution at the 5-position of the phenolic ring by alkyl or alkenyl, whether or not substituted on the cyclohexyl ring to any extent.
- (b) 3-(1-naphthoyl)indole or 3-(1-naphthyl)indole by substitution at the nitrogen atom of the indole ring, whether or not further substituted on the indole ring to any extent, whether or not substituted on the naphthoyl or naphthyl ring to any extent.
- (c) 3-(1-naphthoyl)pyrrole by substitution at the nitrogen atom of the pyrrole ring, whether or not further substituted in the indole ring to any extent, whether or not substituted on the naphthoyl ring to any extent.
- (d) 1-(1-naphthylmethyl)indene by substitution of the 3-position of the indene ring, whether or not further substituted in the indene ring to any extent, whether or not substituted on the naphthyl ring to any extent.
- (e) 3-phenylacetylindole or 3-benzoylindole by substitution at the nitrogen atom of the indole ring, whether or not further substituted in the indole ring to any extent, whether or not substituted on the phenyl ring to any extent.

The Advisory Council on the Misuse of Drugs (ACMD) has proposed the following generic language:

Groups 1 and 2 (Naphthoylindoles and naphthylmethylindoles) (N = 74 and 9 respectively)

"Any compound structurally derived from 3-(1-naphthoyl)indole or 1H-indol-3-yl-(1-naphthyl)methane by substitution at the nitrogen atom of the indole ring by alkyl, alkenyl, cycloalkylmethyl, cycloalkylethyl or 2-(4-morpholinyl)ethyl whether or not further substituted in the indole ring to any extent, whether or not substituted in the naphthyl ring to any extent."

Group 3 (Naphthoylpyrroles) (N = 32)

"Any compound structurally derived from 3-(1-naphthoyl)pyrrole by substitution at the nitrogen atom of the pyrrole ring by alkyl, alkenyl, cycloalkylmethyl, cycloalkylethyl or 2-(4-morpholinyl)ethyl, whether or not further substituted in the pyrrole ring to any extent, whether or not substituted in the naphthyl ring to any extent."

Group 4 (Naphthylmethylindenes) (N = 3)

"Any compound structurally derived from 1-(1-naphthylmethyl)indene by substitution at the 3-position of the indene ring by alkyl, alkenyl, cycloalkylmethyl, cycloalkylethyl or 2-(4-morpholinyl)ethyl whether or not further substituted in the indene ring to any extent, whether or not substituted in the naphthyl ring to any extent."

Group 5 (Phenylacetylindoles) (N = 28)

"Any compound structurally derived from 3-phenylacetylindole by substitution at the nitrogen atom of the indole ring with alkyl, alkenyl, cycloalkylmethyl, cycloalkylethyl or 2-(4-morpholinyl)ethyl, whether or not further substituted in the indole ring to any extent, whether or not substituted in the phenyl ring to any extent."

Group 6 (Cyclohexylphenols) (N = 16)

"Any compound structurally derived from 2-(3-hydroxycyclohexyl)phenol by substitution at the 5-position of the phenolic ring by alkyl, alkenyl, cycloalkylmethyl, cycloalkylethyl or 2-(4-morpholinyl)ethyl, whether or not substituted in the cyclohexyl ring to any extent."

- States that have statutes enacted
 - Alabama
 - Georgia
 - Illinois
 - Kansas
 - Kentucky
 - Louisiana
 - Michigan
 - Mississippi
 - Missouri
 - Oklahoma
 - Tennessee

Note that Kansas passed a bill that removes JWH-018 from its list of Schedule I substances and adds the generic language from the ACMD report.

- States that have scheduled JWH-018 by regulation
 - Arkansas
 - Idaho
 - lowa
 - Nevada
 - North Dakota
 - Washington

All of these states with the exception of Idaho either have bills pending or have passed legislation to schedule JWH-018.

States that have passed bills scheduling JWH-018

Alaska Montana

Arizona New Mexico

Arkansas North Carolina

California North Dakota

Colorado Ohio

Connecticut Pennsylvania

Delaware South Dakota

• Florida Texas

Hawaii Utah

Indiana Virginia

lowa West Virginia

Maine Wisconsin

Minnesota Wyoming

Maine goes into effect July 1, 2012. Ohio goes into effect 91 days after filed with the Secretary of State. The date the California bill goes into effect is unknown. All other bills are currently in effect.

States with bills still pending to schedule JWH-018

Massachusetts New York

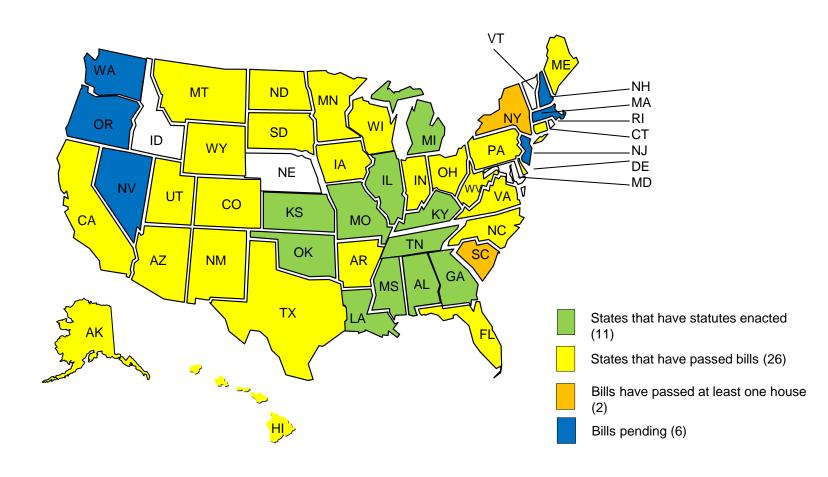
Nevada Oregon

New Hampshire South Carolina

New Jersey Washington

The New York and South Carolina bills have passed at least one House.

SYNTHETIC CANNABINOIDS – JWH-018 [1-pentyl-3-(1-naphthoyl)indole]



- States that have statutes enacted
 - Alabama
 - Illinois
 - Kansas
 - Kentucky
 - Louisiana
 - Michigan
 - Mississippi
 - Missouri
 - Oklahoma
 - Tennessee

Note that Kentucky has passed legislation that removes JWH-073 from its list of Schedule I substances and adds the generic language from the ACMD report.

- States that have scheduled JWH-073 by regulation
 - Arkansas
 - Idaho
 - lowa
 - Nevada
 - North Dakota
 - Washington

All of these states with the exception of Idaho either have bills pending or have passed legislation scheduling JWH-073.

States that have passed bills scheduling JWH-073

Alaska Montana

Arizona New Mexico

Arkansas North Carolina

California North Dakota

Colorado Ohio

Connecticut Pennsylvania

Delaware South Dakota

Florida Texas

Hawaii Utah

Indiana Virginia

lowa West Virginia

Maine Wisconsin

Minnesota Wyoming

Maine goes into effect on July 1, 2012. Ohio goes into effect 91 days after being filed with the Secretary of State. The date the California bill goes into effect is Unknown. All other bills are currently in effect.

States with bills still pending to schedule JWH-073

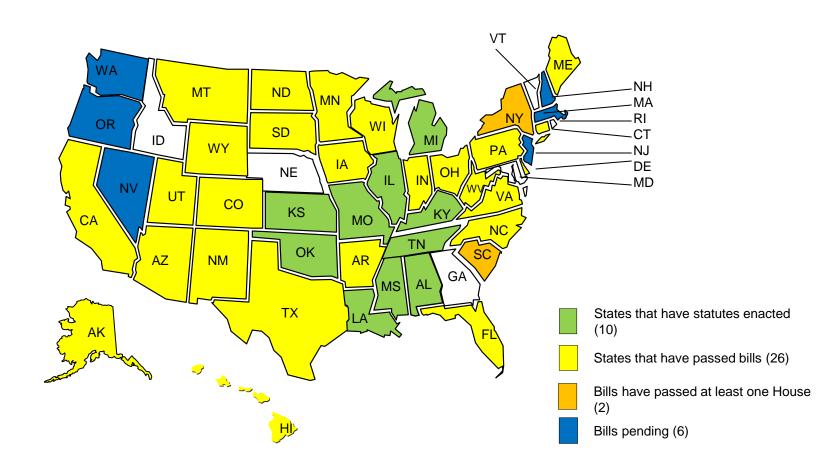
Massachusetts New York

Nevada Oregon

New Hampshire South Carolina

New Jersey Washington

The New York and South Carolina bills have passed at least one House.



Synthetic Cannabinoids — JWH-200 [1-[2-(4-morpholinyl)ethyl]-3-(1-naphthoyl)indole]

- States that have statutes enacted
 - Michigan
 - Mississippi
- States that have scheduled JWH-200 by regulation
 - Idaho
 - Nevada
 - Washington

Nevada and Washington have bills pending to schedule JWH-200.

Synthetic Cannabinoids – JWH-200

[1-[2-(4-morpholinyl)ethyl]-3-(1-naphthoyl)indole]

States that have passed bills scheduling JWH-200

Alaska Montana

Arizona New Mexico

Arkansas North Carolina

California North Dakota

Colorado Ohio

Connecticut Oklahoma

Delaware Pennsylvania

Florida South Dakota

Georgia Tennessee

Indiana TexasIowa Utah

Kentucky Virginia

Minnesota West Virginia

Missouri Wisconsin

The Ohio bill goes into effect 91 days after being filed with the Secretary of State. It is unknown when the California bill goes into effect. All other bills are currently in effect.

Synthetic Cannabinoids — JWH-200 [1-[2-(4-morpholinyl)ethyl]-3-(1-naphthoyl)indole]

States with bills still pending to schedule JWH-200

Alabama Oregon

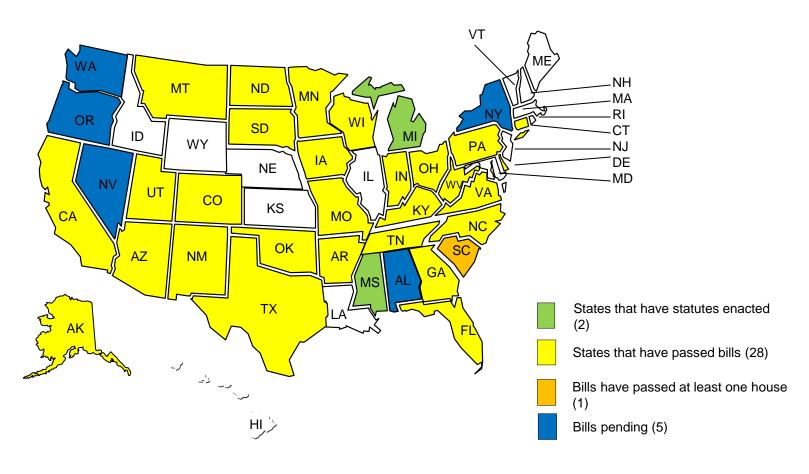
Nevada South Carolina

New York Washington

The South Carolina bill has passed at least one House.

Synthetic Cannabinoids – JWH-200

[1-[2-(4-morpholinyl)ethyl]-3-(1-naphthoyl)indole]



[5-(1,1-dimethylheptyl)-2-[(1R,3S)-3-hydroxycyclohexyl]-phenol]

- States that have statutes enacted
 - Georgia
 - Kentucky
 - Louisiana
 - Michigan
 - Mississippi
 - Missouri
- States that have scheduled CP 47,497 by regulation
 - Idaho
 - Iowa
 - Nevada
 - North Dakota
 - Washington

Iowa, Nevada, North Dakota and Washington either have bills pending or have passed legislation scheduling CP 47,497.

[5-(1,1-dimethylheptyl)-2-[(1R,3S)-3-hydroxycyclohexyl]-phenol]

States that have passed bills scheduling CP 47,497

Alaska New Mexico

Arizona North Carolina

Arkansas North Dakota

• California Ohio

Colorado Oklahoma

Connecticut Pennsylvania

Delaware South Dakota

Florida Tennessee

• Hawaii Texas

· Illinois Utah

· Indiana Virginia

Iowa West Virginia

• Minnesota Wisconsin

Montana Wyoming

Nevada

The Ohio bill goes into effect 91 days after being filed with the Secretary of State. It is unknown when the California bill goes into effect. All other bills are currently in effect.

[5-(1,1-dimethylheptyl)-2-[(1R,3S)-3-hydroxycyclohexyl]-phenol]

States that have bills still pending to schedule CP 47,497

Alabama New York

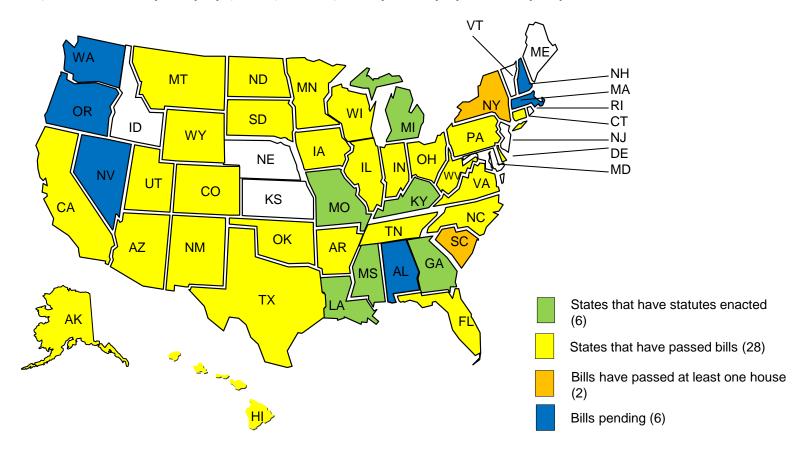
Massachusetts Oregon

Nevada South Carolina

New Hampshire Washington

The New York and South Carolina have passed at least one House.

[5-(1,1-dimethylheptyl)-2-[(1R,3S)-3-hydroxycyclohexyl]-phenol]



Synthetic Cannabinoids – CP 47,497 homologues and cannabicyclohexanol [5-(1,1-dimethyloctyl)-2-[(1R,3S)-3-hydroxycyclohexyl]-phenol]

States that have scheduled the CP 47,497 homologues by statute

Louisiana

Mississippi

Michigan

Missouri

• States that have scheduled the CP 47,497 homologues by regulation

Idaho

North Dakota

lowa

Washington

Nevada has scheduled cannabicyclohexanol by regulation.

Synthetic Cannabinoids – CP 47,497 homologues and cannabicyclohexanol [5-(1,1-dimethyloctyl)-2-[(1R,3S)-3-hydroxycyclohexyl]-phenol]

 The following states have passed bills that schedule either the CP 47,497 homologues or cannabicyclohexanol or both

Alaska Montana

Arizona New Mexico

Arkansas North Carolina

California North Dakota

Colorado Ohio

Connecticut
 Pennsylvania

Delaware Tennessee

Hawaii Texas

• Illinois Utah

Indiana West Virginia

lowa Wisconsin

The Ohio bill goes into effect 91 days after being filed with the Secretary of State. It is unknown when the California bill goes into effect. All other bills are currently in effect.

Synthetic Cannabinoids – CP 47,497 homologues and cannabicyclohexanol [5-(1,1-dimethyloctyl)-2-[(1R,3S)-3-hydroxycyclohexyl]-phenol]

 States with bills still pending to schedule the CP 47,497 homologues and/or cannabicyclohexanol

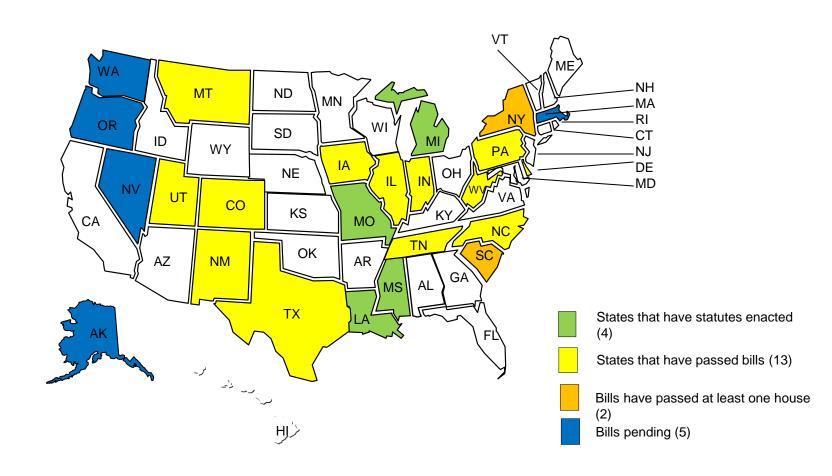
Massachusetts Oregon

Nevada South Carolina

New York
 Washington

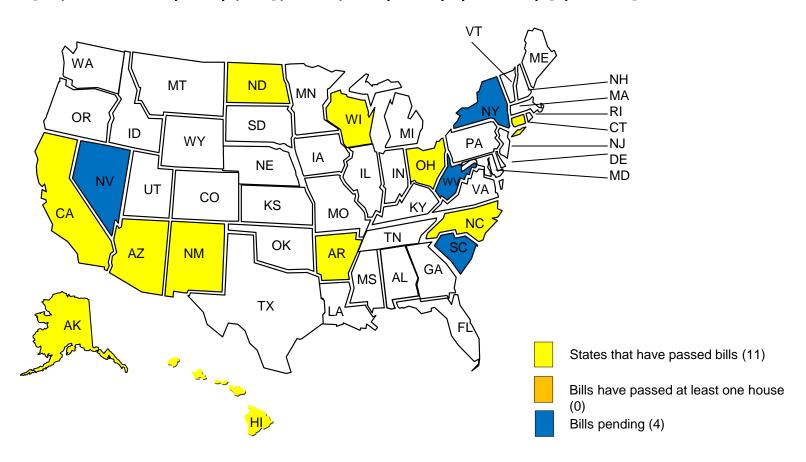
The New York and South Carolina bills have passed at least one House.

Synthetic Cannabinoids – CP 47,497 homologues



Synthetic Cannabinoids - Cannabicyclohexanol

[5-(1,1-dimethyloctyl)-2-[(1R,3S)-3-hydroxycyclohexyl]-phenol]



Synthetic Cannabinoids – DEA Generic Language

The term Cannabimimetic Agents means, collectively, the chemicals that meet the criteria of any one or more of paragraphs (a) through (e). Any substance within the structural classes identified below that is a cannabinoid receptor type 1 (CB1 receptor) agonist as demonstrated by binding studies and functional assays:

- (a) 2-(3-hydroxycyclohexyl)phenol with substitution at the 5-position of the phenolic ring by alkyl or alkenyl, whether or not substituted on the cyclohexyl ring to any extent.
- (b) 3-(1-naphthoyl)indole or 3-(1-naphthyl)indole by substitution at the nitrogen atom of the indole ring, whether or not further substituted on the indole ring to any extent, whether or not substituted on the naphthoyl or naphthyl ring to any extent.
- (c) 3-(1-naphthoyl)pyrrole by substitution at the nitrogen atom of the pyrrole ring, whether or not further substituted in the indole ring to any extent, whether or not substituted on the naphthoyl ring to any extent.
- (d) 1-(1-naphthylmethyl)indene by substitution of the 3-position of the indene ring, whether or not further substituted in the indene ring to any extent, whether or not substituted on the naphthyl ring to any extent.
- (e) 3-phenylacetylindole or 3-benzoylindole by substitution at the nitrogen atom of the indole ring, whether or not further substituted in the indole ring to any extent, whether or not substituted on the phenyl ring to any extent.

Synthetic Cannabinoids – ACMD Generic Language

Groups 1 and 2 (Naphthoylindoles and naphthylmethylindoles) (N = 74 and 9 respectively)

"Any compound structurally derived from 3-(1-naphthoyl)indole or 1H-indol-3-yl-(1-naphthyl)methane by substitution at the nitrogen atom of the indole ring by alkyl, alkenyl, cycloalkylmethyl, cycloalkylethyl or 2-(4-morpholinyl)ethyl whether or not further substituted in the indole ring to any extent, whether or not substituted in the naphthyl ring to any extent."

Group 3 (Naphthoylpyrroles) (N = 32)

"Any compound structurally derived from 3-(1-naphthoyl)pyrrole by substitution at the nitrogen atom of the pyrrole ring by alkyl, alkenyl, cycloalkylmethyl, cycloalkylethyl or 2-(4-morpholinyl)ethyl, whether or not further substituted in the pyrrole ring to any extent, whether or not substituted in the naphthyl ring to any extent."

Group 4 (Naphthylmethylindenes) (N = 3)

"Any compound structurally derived from 1-(1-naphthylmethyl)indene by substitution at the 3-position of the indene ring by alkyl, alkenyl, cycloalkylmethyl, cycloalkylethyl or 2-(4-morpholinyl)ethyl whether or not further substituted in the indene ring to any extent, whether or not substituted in the naphthyl ring to any extent."

Group 5 (Phenylacetylindoles) (N = 28)

"Any compound structurally derived from 3-phenylacetylindole by substitution at the nitrogen atom of the indole ring with alkyl, alkenyl, cycloalkylmethyl, cycloalkylethyl or 2-(4-morpholinyl)ethyl, whether or not further substituted in the indole ring to any extent, whether or not substituted in the phenyl ring to any extent."

Group 6 (Cyclohexylphenols) (N = 16)

"Any compound structurally derived from 2-(3-hydroxycyclohexyl)phenol by substitution at the 5-position of the phenolic ring by alkyl, alkenyl, cycloalkylmethyl, cycloalkylethyl or 2-(4-morpholinyl)ethyl, whether or not substituted in the cyclohexyl ring to any extent."

Synthetic Cannabinoids – Generic Language

 The following states have passed bills including the generic language as proposed by the ACMD

Idaho Nebraska

Illinois North Carolina

Kansas North Dakota

Louisiana Tennessee

Mississippi Texas

Missouri Wyoming

Montana

Illinois becomes effective on January 1, 2012, Missouri on August 28, 2011, North Dakota on August 1, and Texas on September 1, 2011. All other bills are currently in effect.

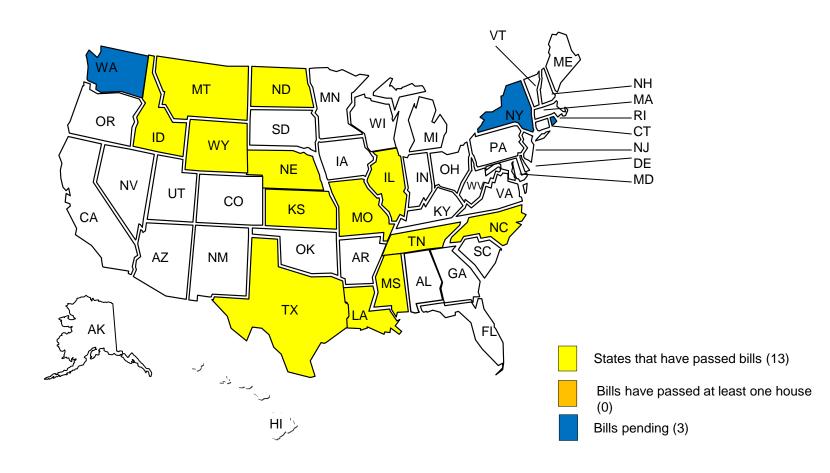
Synthetic Cannabinoids – Generic Language

- The following states have bills pending proposing to include the generic language
 - New York
 - Washington

The Oregon Board of Pharmacy passed a regulation including the ACMD generic language in Schedule I with all of the synthetic cannabinoids listed as trade or other names.

Rhode Island has proposed to schedule "synthetic cannabinoids" generally.

Synthetic Cannabinoids – Generic Language



Categories of Cathinone Derivatives

- Mephedrone
- Methedrone
- 3-fluoromethcathinone
- 4-fluoromethcathinone
- Methylone
- Methylenedioxypyrovalerone (MDPV)

The Advisory Council on the Misuse of Drugs (ACMD) has suggested the following generic language to schedule and/or regulate cathinone derivatives:

Any compound (not being bupropion ...) structurally derived from 2-amino-1-phenyl-1-propanone by modification in any of the following ways, that is to say,

- (i) by substitution in the phenyl ring to any extent with alkyl, alkoxy, alkylenedioxy, haloalkyl or halide substituents, whether or not further substituted in the phenyl ring by one or more other univalent substituents;
- (ii) by substitution at the 3-position with an alkyl substituent;
- (iii) by substitution at the nitrogen atom with alkyl or dialkyl groups, or by inclusion of the nitrogen atom in a cyclic structure.

Cathinone Derivatives – Mephedrone [4-methylmethcathinone]

 Michigan has scheduled 4-methylmethcathinone by statute but has "mephradone" as its trade name. Michigan passed legislation that changes "mephradone" to "mephedrone.

- States that schedule mephedrone by regulation
 - Florida
 - Louisiana
 - North Dakota
 - Oregon

Florida and North Dakota have also passed bills scheduling mephedrone.

Cathinone Derivatives – Mephedrone [4-methylmethcathinone]

States that have passed bills scheduling mephedrone

Arkansas New Mexico

Connecticut
 New York

Florida North Carolina

P Georgia North Dakota

Hawaii Ohio

Indiana Oklahoma

Illinois Pennsylvania

Iowa Tennessee

Kentucky Texas

Maine Utah

Minnesota Virginia

Mississippi West Virginia

Missouri Wisconsin

New Jersey Wyoming

Missouri goes into effect August 28, 2011, New York on August 15, North Dakota on August 1, Oklahoma on November 1, Pennsylvania on August 23, and Texas on September 1, 2011. Ohio goes into effect 91 days after being filed with the Secretary of State. All other bills are currently in effect.

• States with bills pending to schedule mephedrone

Alabama

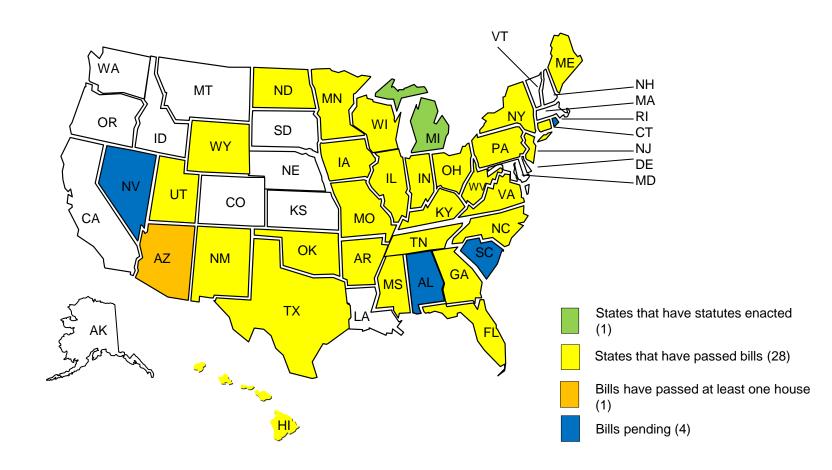
Rhode Island

Arizona

South Carolina

Nevada

The Arizona bill has passed at least one House.



 Rhode Island and South Carolina are proposing to schedule methoxymethcathinone generally

Louisiana and Oregon have scheduled methedrone by regulation

States that have passed bills scheduling methedrone

Arkansas New Jersey

Florida New Mexico

Georgia Ohio

Illinois Oklahoma

Indiana Pennsylvania

Maine Tennessee

Minnesota Utah

Missouri Wyoming

The Missouri bill becomes effective on August 28, 2011. Pennsylvania becomes effective August 23, and Oklahoma becomes effective November 1, 2011. Ohio becomes effective 91 days after being filed with the Secretary of State. All other bills are currently in effect.

States with bills still pending to schedule methedrone

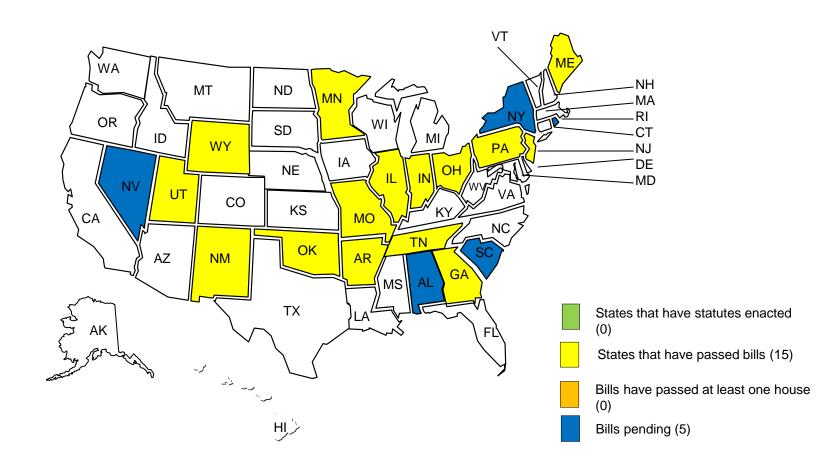
Alabama

Nevada

New York

Rhode Island

South Carolina



- Louisiana schedules both substances by regulation
- Oregon schedules "fluoromethcathinone (flephedrone)" by regulation
- Florida schedules both substances by regulation and has passed a bill that schedules "fluoromethcathinone" generally
- Indiana has passed a bill that schedules "fluoromethcathinone" generally
- Rhode Island and South Carolina have bills pending to schedule "fluoromethcathinone" generally
- Georgia has passed a bill that schedules only 4-fluoromethcathinone

States that have passed bills scheduling 3 & 4-fluoromethcathinone

Arkansas
 New Mexico

• Florida Ohio

Georgia Oklahoma

• Illinois Pennsylvania

Indiana Tennessee

Maine TexasMissouri Utah

New Jersey Wyoming

Note that Georgia schedules only 4-fluoromethcathinone, and Indiana and Florida schedule "fluoromethcathinone" generally.

The Missouri bill becomes effective August 28, 2011, Oklahoma on November 1, Pennsylvania on August 23, and Texas on September 1, 2011. Ohio goes into effect 91 days after being filed with the Secretary of State. All other bills are currently in effect.

States with bills pending to schedule 3 & 4-fluoromethcathinone

Alabama

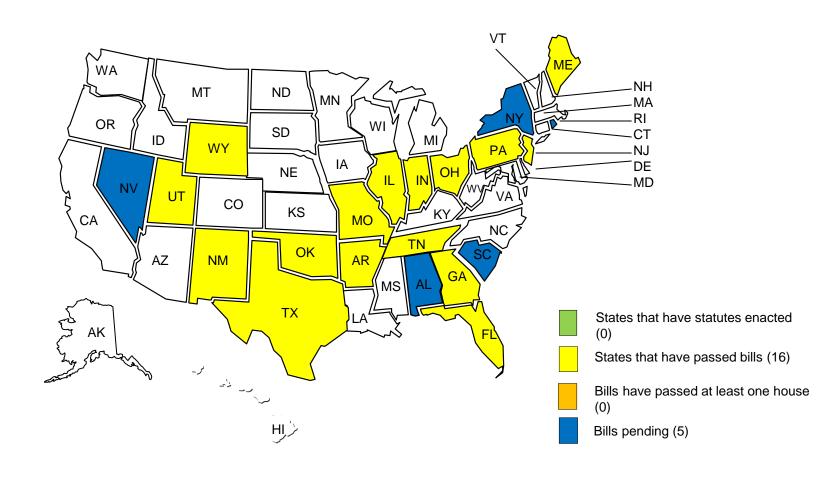
Rhode Island

Nevada

South Carolina

New York

Rhode Island and South Carolina seek to schedule "fluoromethcathinone" generally.



Louisiana and Oregon schedule methylone by regulation

 Florida schedules methylone by regulation and has also passed a bill that schedules it.

States that have passed bills scheduling methylone

Arkansas
 New Jersey

Florida New Mexico

Georgia Ohio

Illinois Oklahoma

Indiana Pennsylvania

Kentucky Tennessee

• Maine Texas

Minnesota Utah

Missouri Wyoming

The Missouri bill becomes effective on August 28, 2011, Oklahoma on November 1, Pennsylvania on August 23, and Texas on September 1, 2011. Ohio goes into effect 91 days after being filed with the Secretary of State. All other bills are currently in effect.

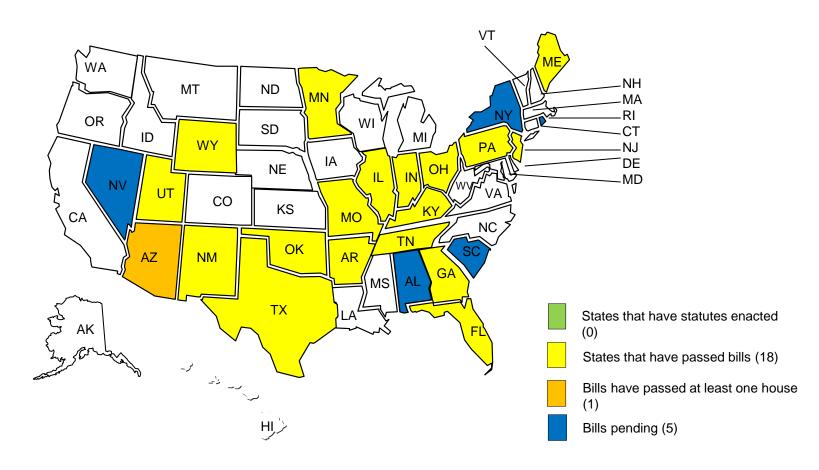
States with bills pending to schedule methylone

Alabama New York

Arizona Rhode Island

Nevada South Carolina

The Arizona bill has passed at least one House.



Louisiana and Oregon schedule MDPV by regulation

 Florida and North Dakota schedule MDPV by regulation and both have passed bills scheduling it

States that have passed bills scheduling MDPV

Arkansas New Mexico

Connecticut
 New York

Florida North Carolina

Georgia North Dakota

Hawaii Ohio

Illinois Oklahoma

Indiana Pennsylvania

Iowa Tennessee

Kentucky Texas

Maine Utah

Michigan Virginia

Minnesota West Virginia

Mississippi Wisconsin

Missouri Wyoming

New Jersey

Missouri becomes effective on August 28, 2011, New York on August 15, North Dakota on August 1, Oklahoma on November 1, Pennsylvania on August 23, and Texas on September 1, 2011. Ohio goes into effect 91 days after being filed with the Secretary of State. All other bills are currently in effect.

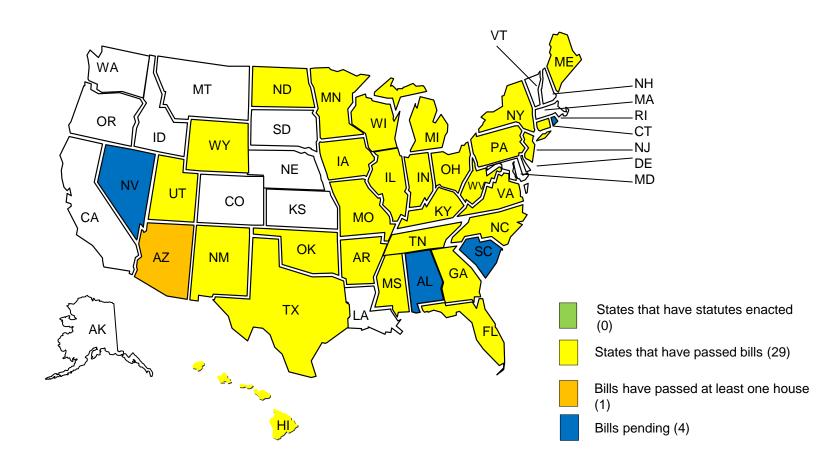
States with bills pending to schedule MDPV

Alabama Rhode Island

Arizona South Carolina

Nevada

The Arizona bill has passed at least one House.



Any compound (not being bupropion ...) structurally derived from 2-amino-1-phenyl-1-propanone by modification in any of the following ways, that is to say,

- (i) by substitution in the phenyl ring to any extent with alkyl, alkoxy, alkylenedioxy, haloalkyl or halide substituents, whether or not further substituted in the phenyl ring by one or more other univalent substituents;
- (ii) by substitution at the 3-position with an alkyl substituent;
- (iii) by substitution at the nitrogen atom with alkyl or dialkyl groups, or by inclusion of the nitrogen atom in a cyclic structure.

• States that have passed bills with the generic language

Arkansas Louisiana

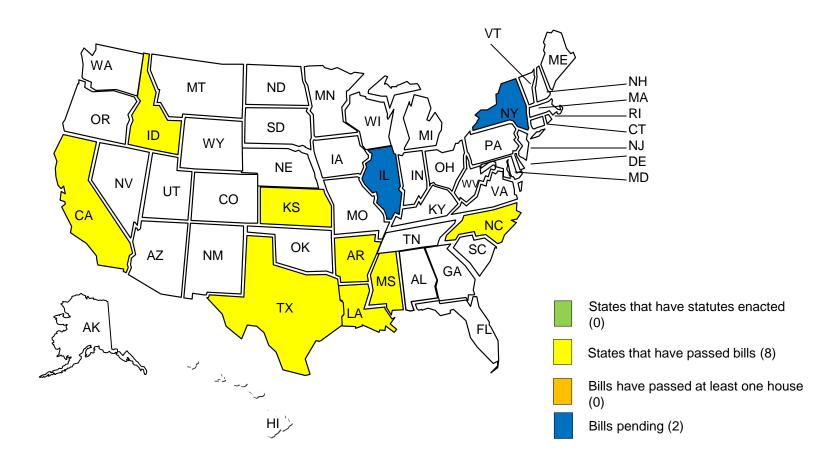
• California Mississippi

• Idaho North Carolina

Kansas Texas

All bills are currently in effect.

 Illinois and New York have bills pending which include the generic language.



CONTACT INFORMATION

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