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."

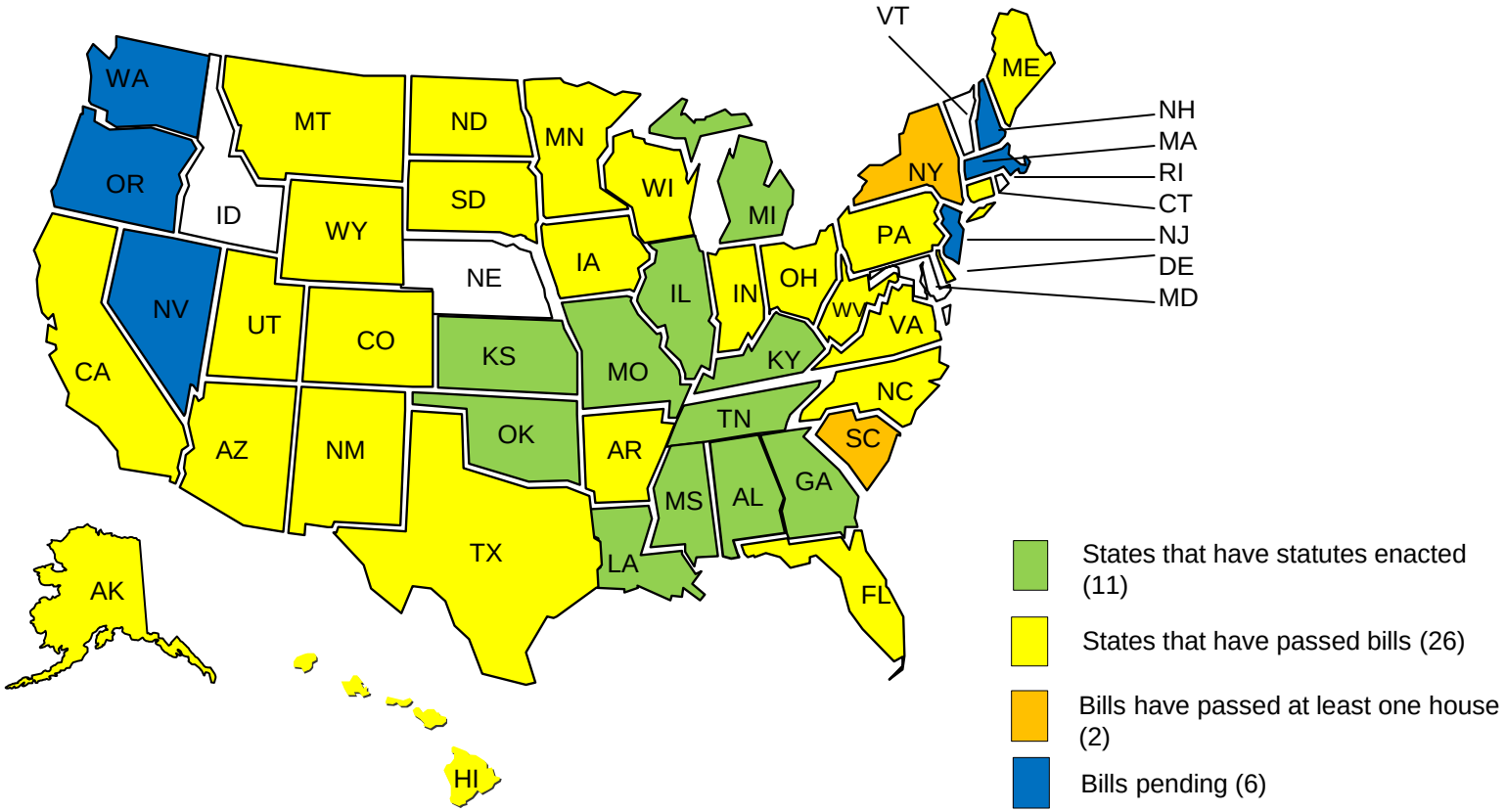
Group 3 (Naphthoylpyrroles) (N = 32)
"Any compound structurally derived from 3-(1-naphthoyl)pyrrole by substitution at the nitrogen atom of the pyrrole ring by alkyl, alkenyl, cycloalkylmethyl, cycloalkylethyl or 2-(4-morpholinyl)ethyl, whether or not further substituted in the pyrrole ring to any extent ,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."

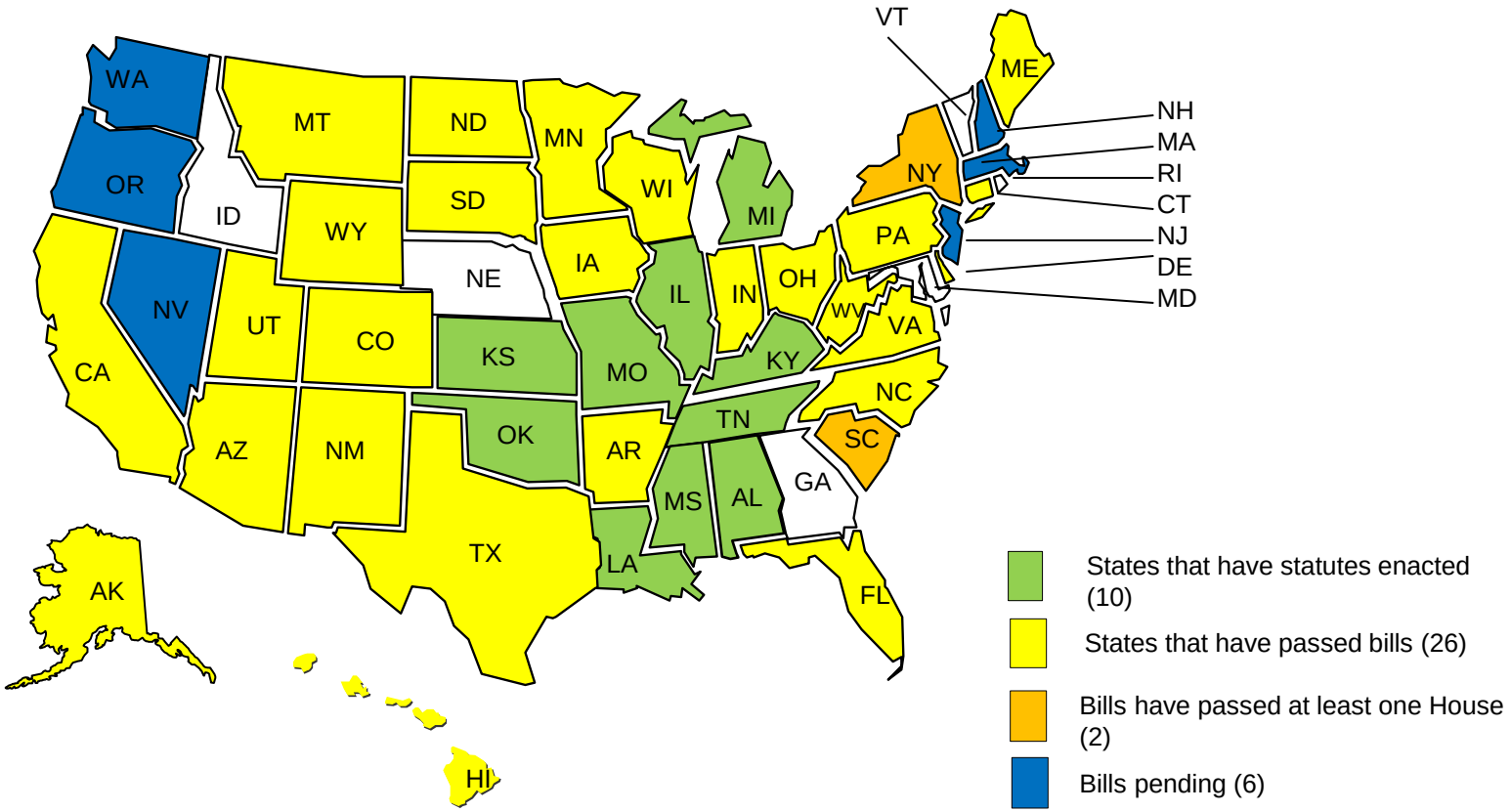
Group 5 (Phenylacetylindoles) (N = 28)
"Any compound structurally derived from 3-phenylacetylindole by substitution at the nitrogen atom of the indole ring with alkyl, alkenyl, cycloalkylmethyl, cycloalkylethyl or 2-(4-morpholinyl)ethyl, whether or not further substituted in the indole ring to any extent, 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 ."

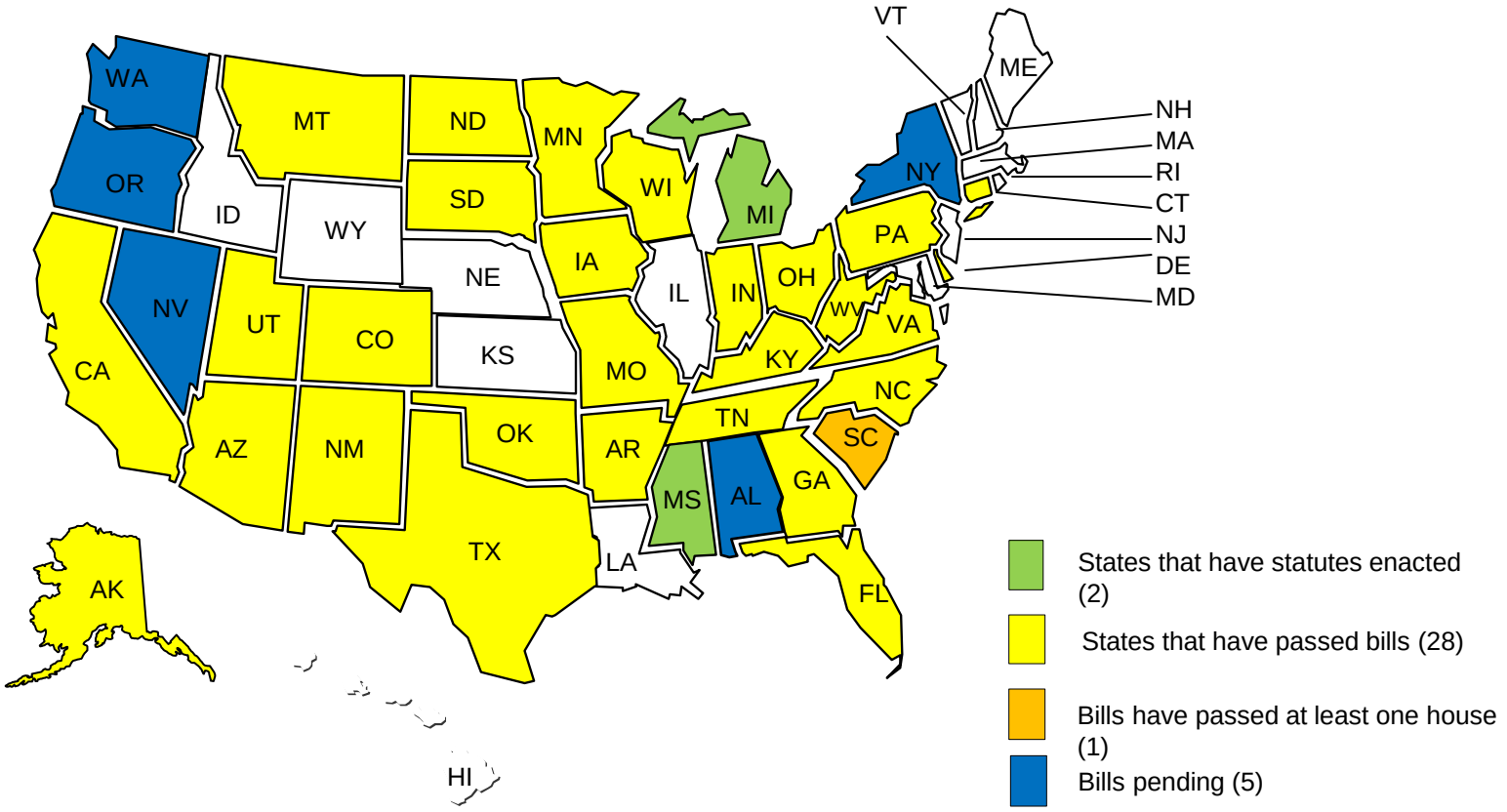
Synthetic Cannabinoids – JWH-018 [1-pentyl-3-(1-naphthoyl)indole]



Synthetic Cannabinoids – JWH-073 [1-butyl-3-(1-naphthoyl)indole]

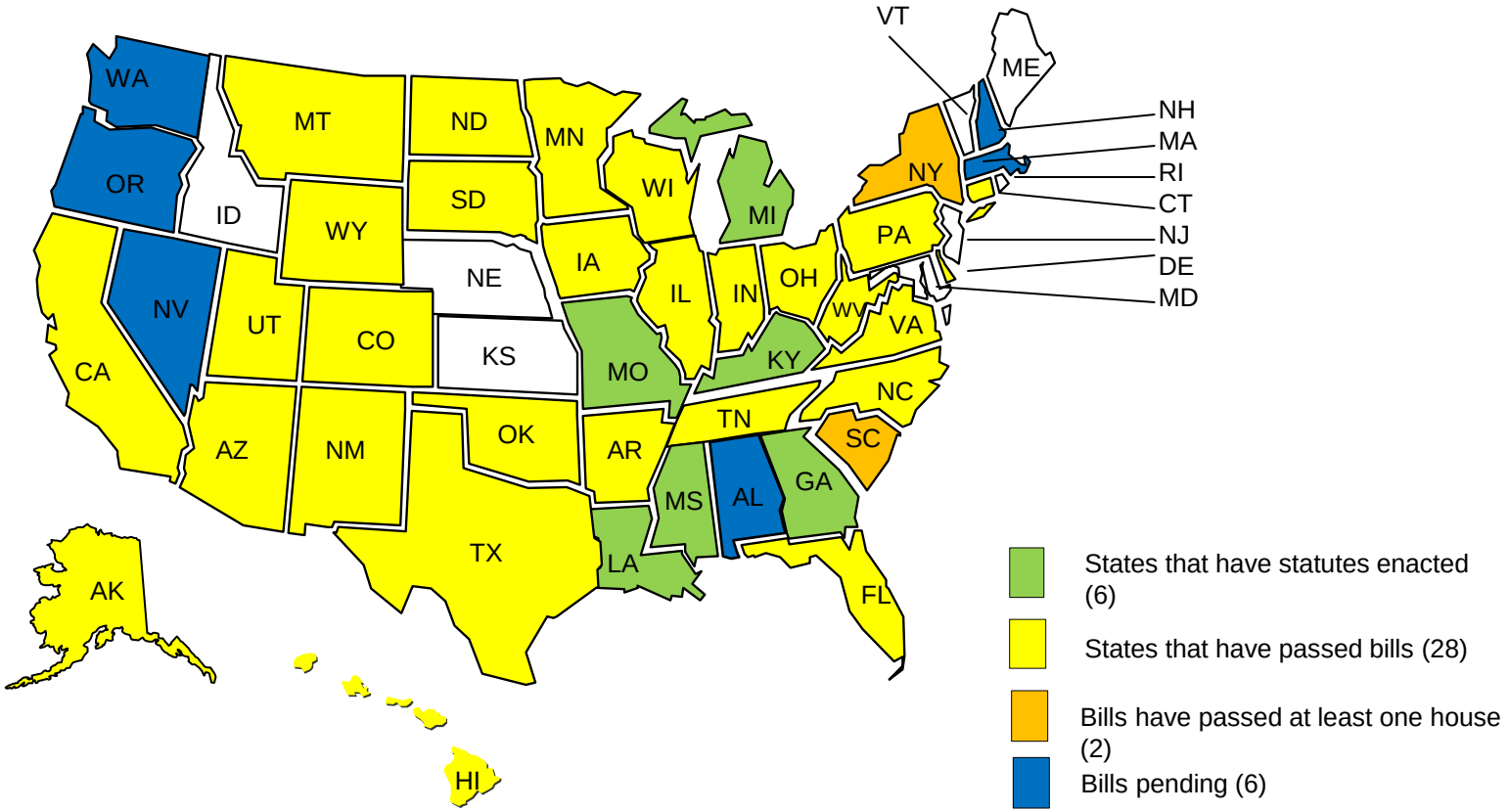


Synthetic Cannabinoids – JWH-200
[1-[2-(4-morpholinyl)ethyl]-3-(1-naphthoyl)indole]

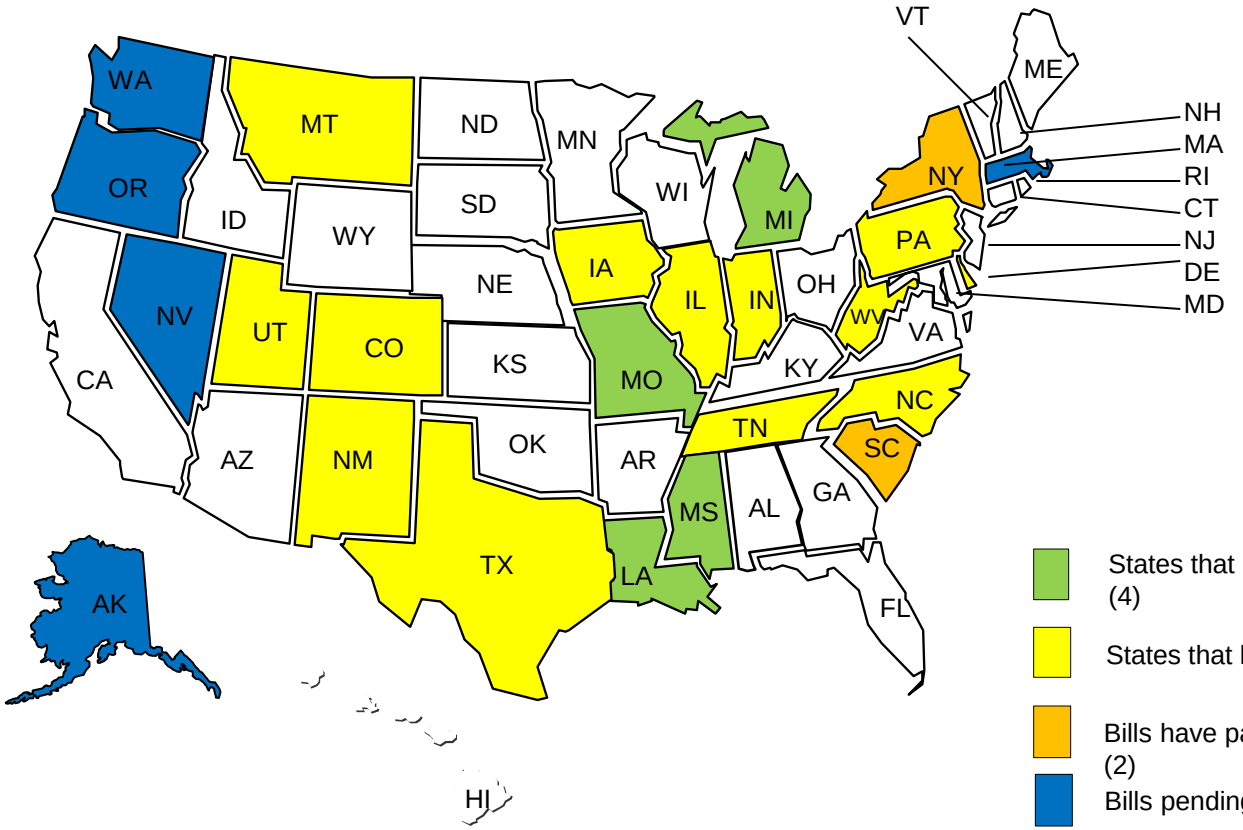


Synthetic Cannabinoids – CP 47,497

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

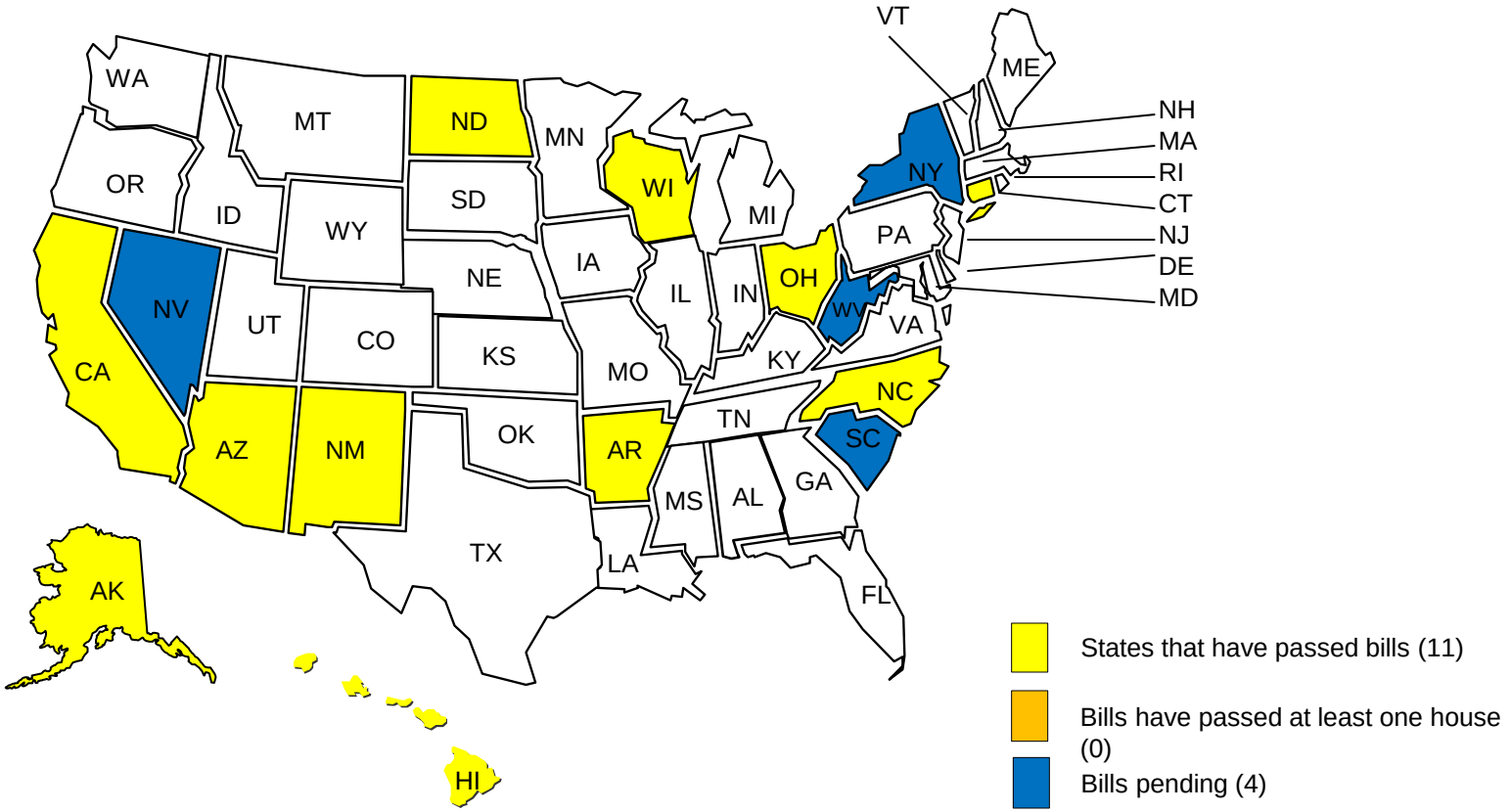


Synthetic Cannabinoids – CP 47,497 homologues

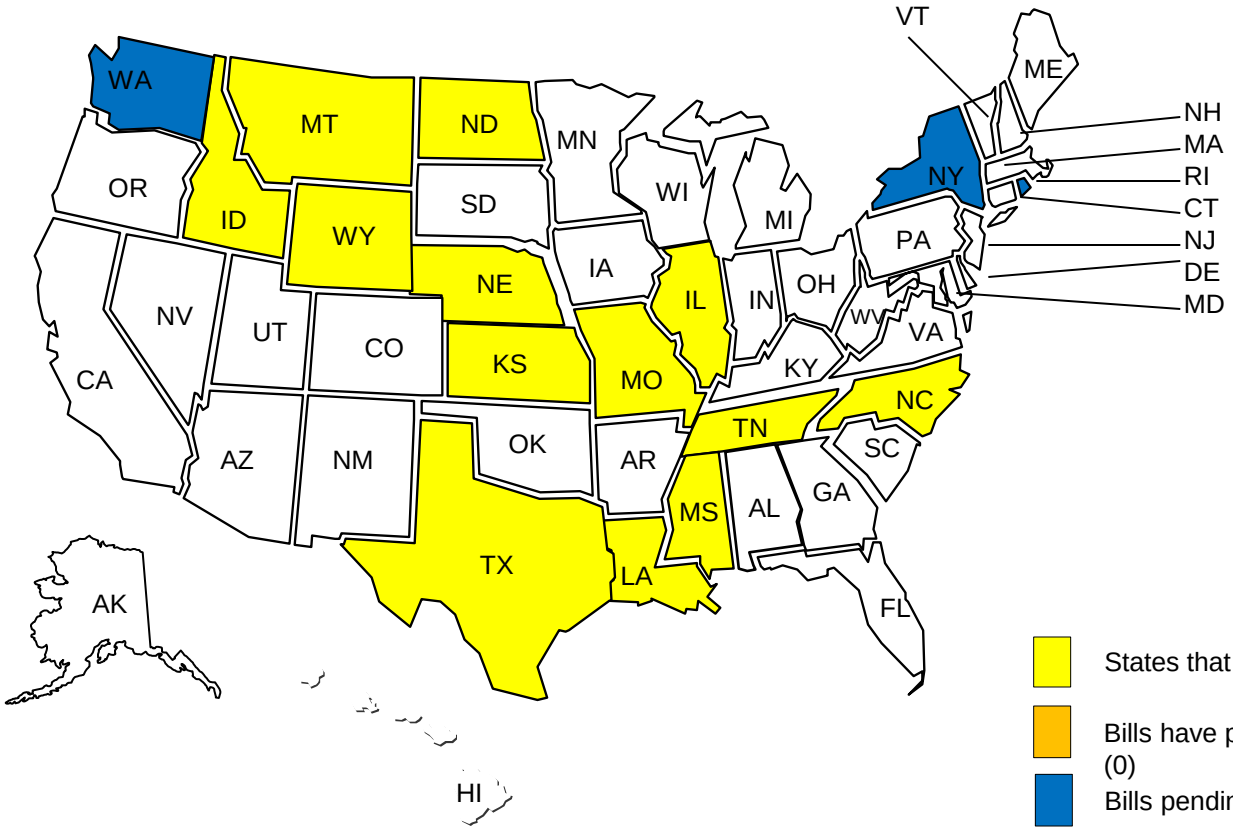


Synthetic Cannabinoids - Cannabicyclohexanol

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



Synthetic Cannabinoids – Generic Language



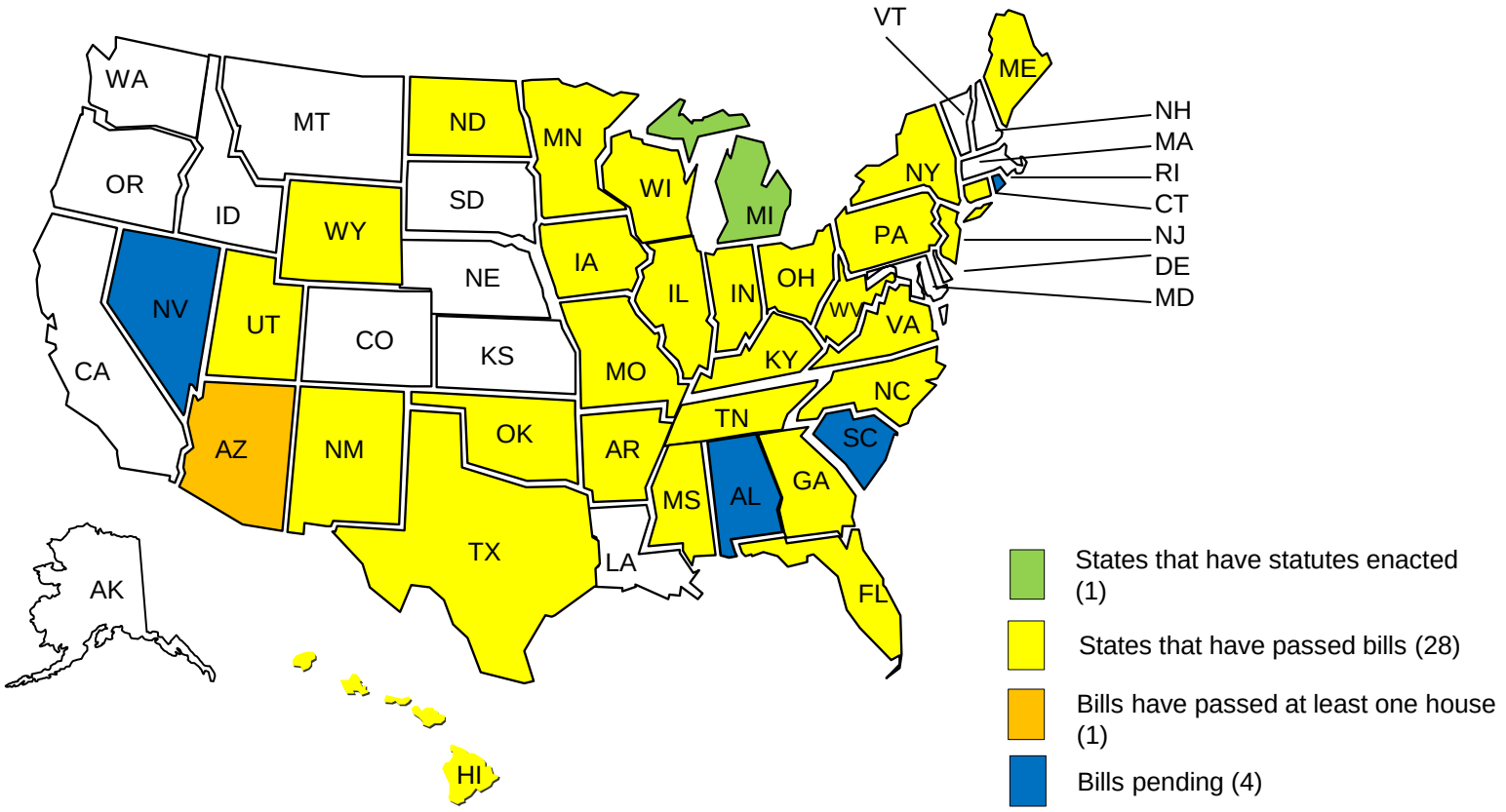
Categories of Cathinone Derivatives

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

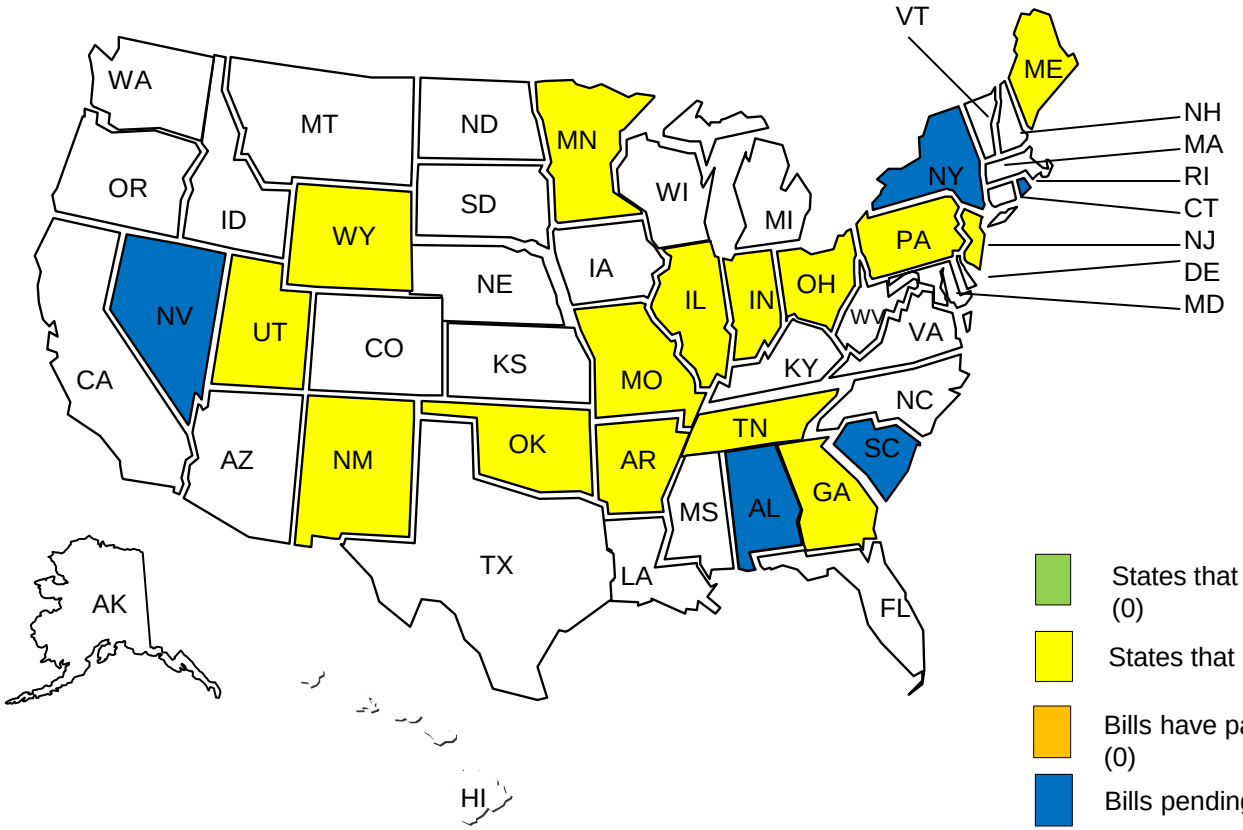
The Advisory Council on the Misuse of Drugs (ACMD) has suggested the following generic language to schedule and/or regulate cathinone derivatives:

> 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.

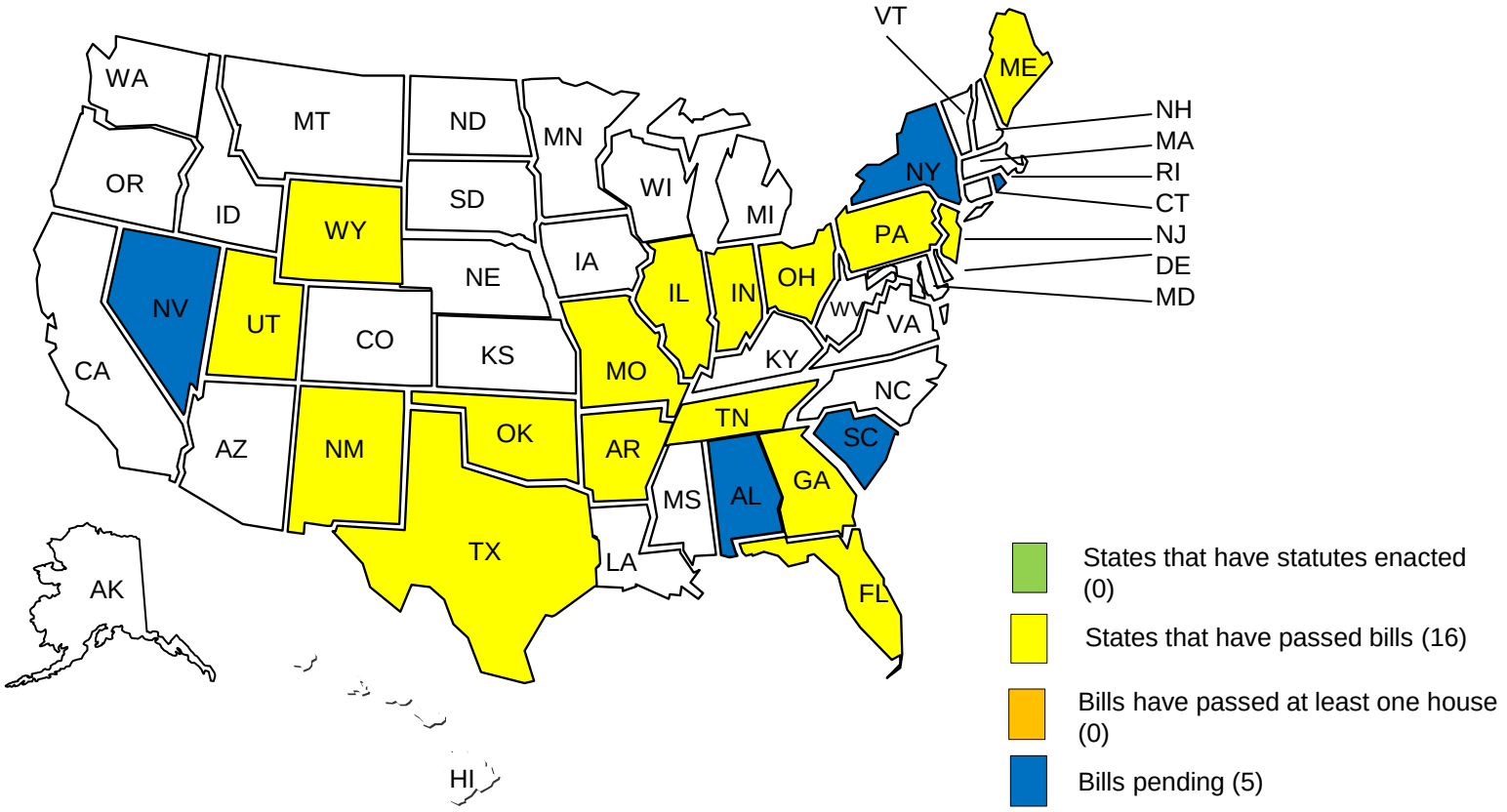
Cathinone Derivatives – Mephedrone [4-methylmethcathinone]



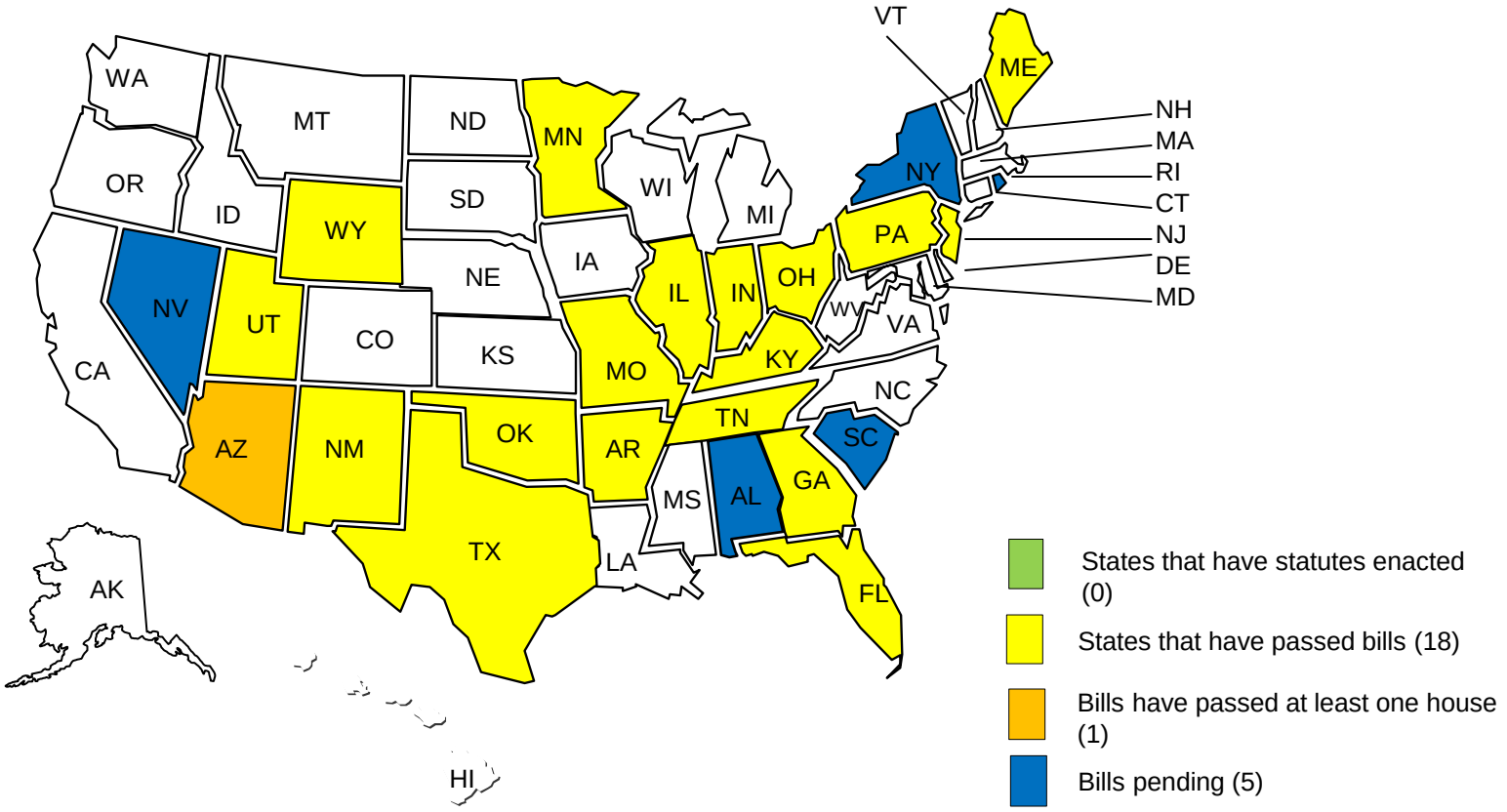
Cathinone Derivatives – Methedrone [4-methoxymethcathinone]



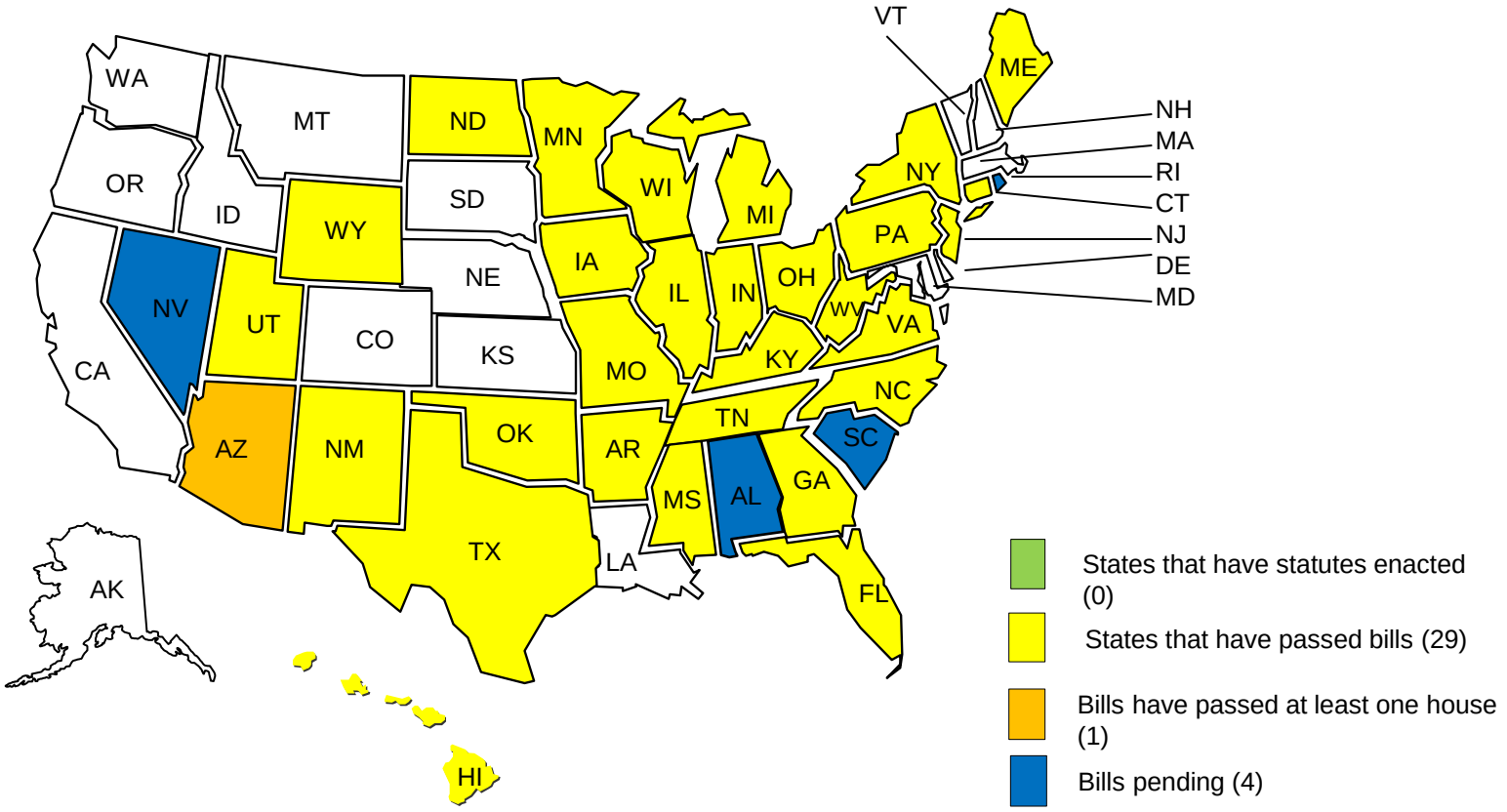
Cathinone Derivatives – 3-fluoromethcathinone and 4-fluoromethcathinone



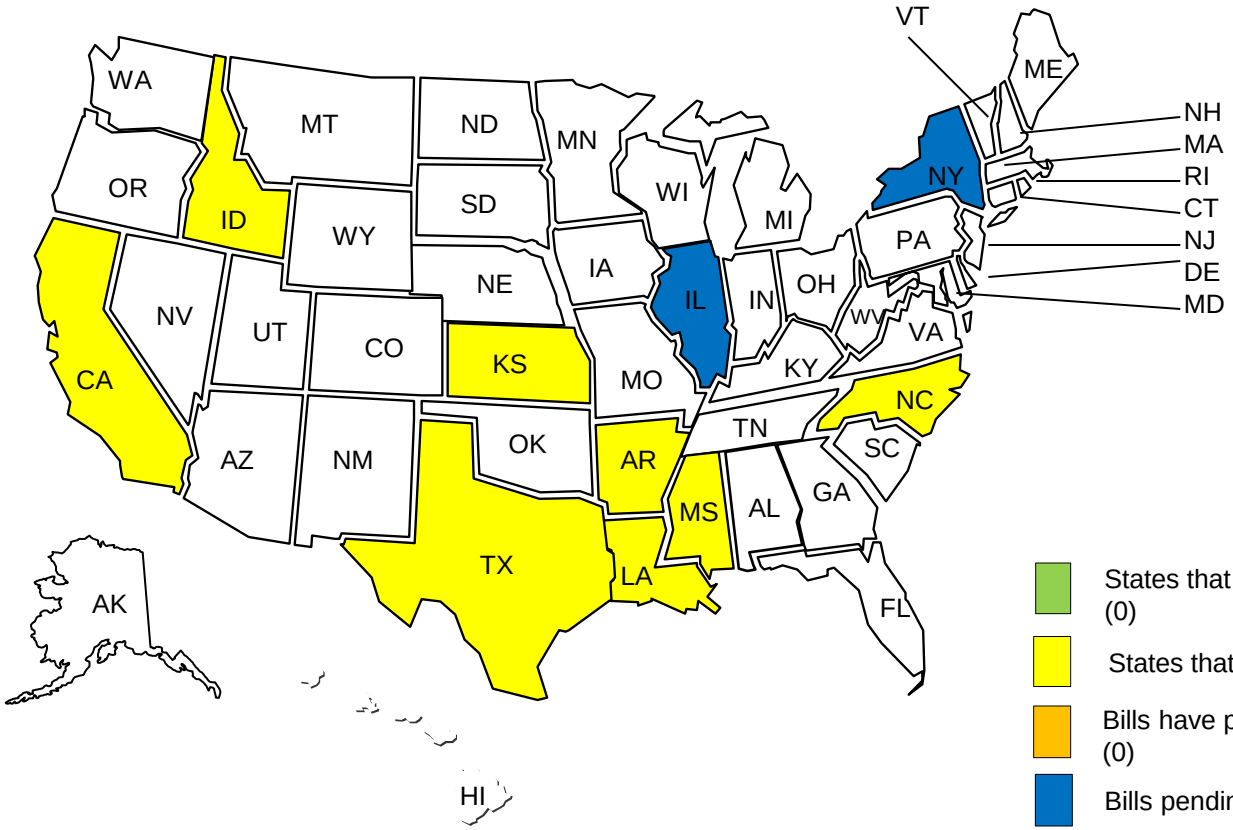
Cathinone Derivatives – Methylone [3,4-methylenedioxy-N-methylcathinone]



Cathinone Derivatives – MDPV [methylenedioxypyrovalerone]



Cathinone Derivatives – Generic Language



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