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FARMS

Navigating the Complexities of Hemp & Cannabis Regulation: The New Cannabinoid Industry

Pamela N. Epstein, Esq., LL.M
Chief Legal & Regulatory Officer
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Understanding the Plant *Cannabis sativa l*

A Difference without a Distinction

Marijuana

Marijuana is not a scientific term - it was slang created to demonize users during Prohibition in the 1930s.

“Cannabis” is the correct term for the flower with higher levels of $\Delta 9$ -THC in the biomass. Cannabis can produce CBD and other minor cannabinoids as well.

The purpose of cannabis agriculture is to produce compounds with intoxicating effects. Final form products are inhaled, ingested, and applied topically

Both are the same plant:
Cannabis sativa l

Both produce cannabinoids and terpenes

Hemp

Hemp is not a scientific term either. This word for cannabis is now applied by statute for most industrial produced cannabis that has:

Minimal to no intoxicating compounds in the biomass,

A $\Delta 9$ -THC level at harvest of below .3%,

Higher levels of CBD and minor cannabinoids



Cannabis sativa l: Industrial Hemp vs. Cannabis



Industrial Hemp is grown for fiber, seed and stalk. Often planted close together leading to long stems for fiber decortication.



Cannabis Sativa L (female) flowers are grown for cannabinoid and other compounds. Hemp grown for flowering tops is cannabis.



The Consequence of the 2018 Farm Bill

The 2018 Farm Bill intended to **limit** delta-9-tetrahydrocannabinol (Δ 9-THC) to a *de minimus* amount.

SEC. 297A1,4

*“Hemp--The term ‘hemp’ means the plant *Cannabis sativa* L. **and any part of that plant**, including the seeds thereof and all derivatives, extracts, cannabinoids, isomers, acids, salts, and salts of isomers, **whether growing or not**, with a **delta-9 tetrahydrocannabinol concentration of not more than 0.3 percent on a dry weight basis.**”*

However, hemp-derived, intoxicating, THC manufactured products are freely sold across the country in an unregulated manner because of language in the 2018 Farm Bill, posing direct threats to public health and safety.



Intoxicating Hemp Derived Cannabinoids (IHDC)

With relatively simple science and use of volatile chemicals and heavy metals, CBD from hemp can be chemically converted into other intoxicating cannabinoids. IHDC hold market size of 400M with pace to be 1,000M by 2025.

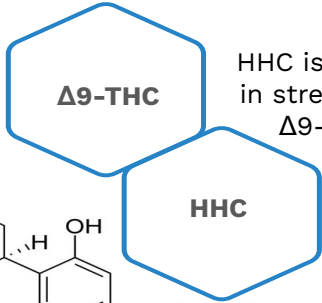
- The explosion of Intoxicating Hemp Derived Cannabinoids (IHDC) began in 2020 with the new cannabinoid *de jure* - Delta 8-THC (followed by HHC, THC-O, D-10, THC-V, THCjd, etc). These ADCs are cast as alternatives to $\Delta 9$ -THC. Most IHDCs are created by chemically converting hemp-derived CBD into a new/novel cannabinoid compounds, some of which are as intoxicating as $\Delta 9$ -THC, some which are less so and others which are significantly more potent. These products can have residual solvents which can turn these legal products into lethal ones.
- $\Delta 9$ -THC sourced from cannabis/marijuana is **molecularly identical** to $\Delta 9$ -THC sourced from hemp. The intoxicating | impairing effects are indisitinguable to the consumer. The current legal threshold for $\Delta 9$ -THC of .3% on a dry weight basis does not include the unlimited allowance for ADCs to be added to these products for increased potency.
- The current regulatory landscape is overly focused on source material. It fails to recognize cannabinoids as commodities allowing their comparable **intoxication and impairment potential to be unaddressed and harmful to misinformed consumers.**



Understanding the Relative Strengths of Novel Cannabinoids

NOT all Phytocannabinoids, THC's or THC Isomers are Created Equal

Approval of Novel Cannabinoids as ingredients in food and beverages rightfully falls under the jurisdiction of the U.S. Food and Drug Administration (FDA.) In order to protect public health and safety, the FDA must define and consumers must be made aware of a product's "total intoxicating cannabinoid concentration" based on the relative strengths of cannabinoids compared to $\Delta 9$ -THC.



HHC is similar in strength to $\Delta 9$ -THC



$\Delta 8$ -THC is said to be about half as potent as $\Delta 9$ -THC

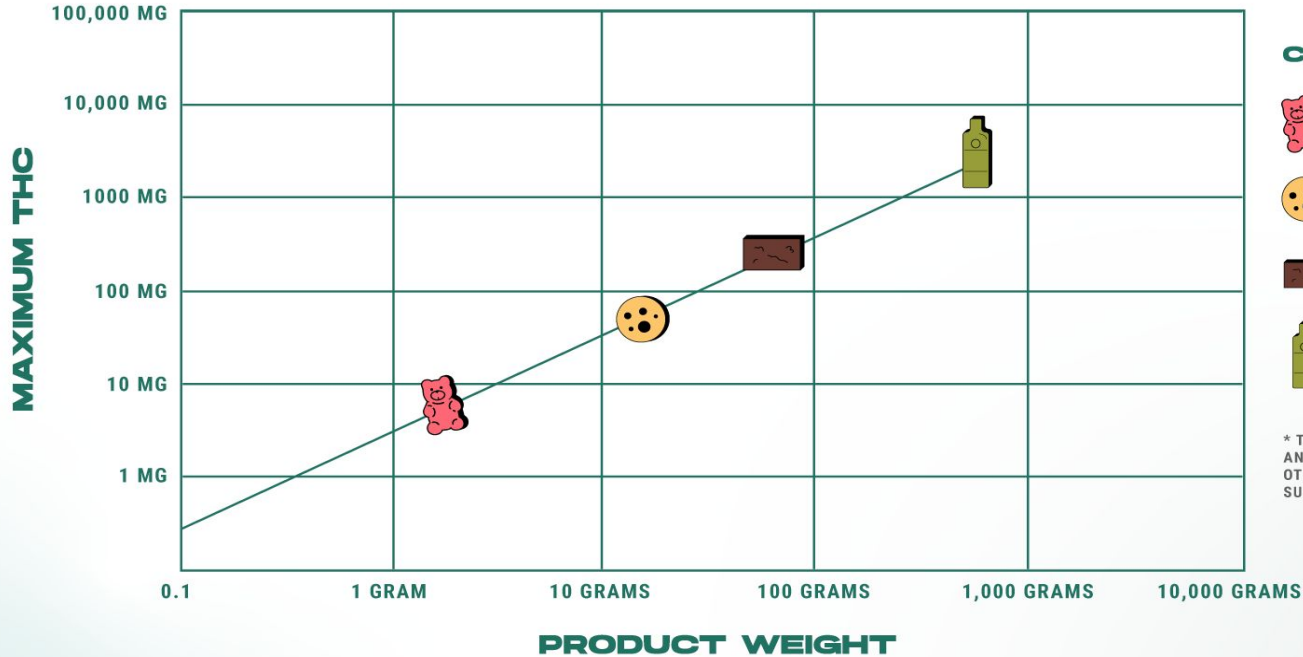
The control is set at $\Delta 9$ -THC.
The effects of all other cannabinoids are quantified as compared to the pharmacological and experiential effects of $\Delta 9$ -THC

THC-O can be 3x stronger than its is said to have semi-hallucinogenic effects. It's an acetate and could cause serious lung disease if smoked.

THC-JD is said to be 10x stronger than $\Delta 9$ -THC.

THC-P is said to be 30x more effective at binding to cannabinoid receptors than $\Delta 9$ -THC making it extremely potent.

THE TRUTH OF USING .3% THC AS FUNCTION OF WEIGHT



COMMON CPG FORM FACTORS



SINGLE SERVING GUMMY

2 GRAMS | THC: 6 MILLIGRAMS



COOKIE

20 GRAMS | THC: 60 MILLIGRAMS



DENSE BROWNIE

50 GRAMS | THC: 150 MILLIGRAMS



12 OZ BEVERAGE

340 GRAMS | THC: 1,020 MILLIGRAMS

* THE ABOVE IS LIMITED TO THE AMOUNT OF DELTA-9 THC AND DOES NOT ACCOUNT FOR TOTAL THC CONCENTRATION OF OTHER PSYCHOACTIVE AND INTOXICATING CANNABINOIDS SUCH AS DELTA-8, DELTA-9, THC-0, HHC, ETC.





ASSESSMENT OF ALASKA'S HEMP FRAMEWORK

Codified the 2018 Farm Bill definition of hemp with additional Regulatory Oversight

11 AAC 40.910(40) Industrial hemp product or hemp product: means an item derived from all parts of and varieties of the plant *Cannabis Sativa* L. Containing not more than .3% of Delta-9 THC. (FFP)

Fails to account for non-THC isomers and other intoxicating cannabinoids in final form products.

11 AAC 40.415 Hemp Product Sizing: *A processed industrial hemp product intended for human or animal consumption may not contain more than 50 milligrams of delta-9-THC per individual product.*

What is a individual “product” - the unit or the individual servings? Half of the regulated cannabis allowance for potency (Delta-9) for the same intoxicant.

11 AAC 40.420. Labeling: *(a)(8) if the product contains any delta-9-THC, the statement “warning: contains THC”*

Only required to inform the consumer if there is THC not if there are isomers or other intoxicating cannabinoids or their amounts for the container or the serving. Fails to account for any other warnings that are associated with marijuana.



ASSESSMENT OF ALASKA'S HEMP FRAMEWORK

11 AAC 40.320 Testing. (a)(1)cannabinoid concentration and profile; (2) residual solvents; (3) microbials; (4) pesticides; and (5) heavy metal concentrations.

The testing is required by a registrant but this does not address products which are sold direct to consumers via eCommerce websites.

11 AAC 40.630. Cannabinoid and terpene potency. (b) all processed industrial hemp products intended for human or animal consumption must also undergo a cannabinoid potency test that must at least determine the concentration of tetrahydrocannabinol, cannabinol, cannabichromene, cannabigerol, cannabichromene, and cannabidivarin, including acid forms.

While the testing procedure requires testing for various cannabinoids and acids forms there is no translation to label or otherwise to inform the consumer. Furthermore, there lacks any testing for known intoxicating cannabinoids such as Delta-8, etc.

11 AAC 40.515 Incorporation of a processed hemp product into a non-hemp product intended for human or animal consumption.

There are strict restrictions in regulated marijuana for pre-packaged final form products sold expressly at retail outlets. Allows non-marijuana outlets such as restaurants and coffee shops to combine intoxicating products with non-marijuana ingredients directly to end-use consumers sans any requirement to communicate potency other than not to exceed 50mg of Delta-9.



A Comparative Analysis of Intoxicating Cannabinoid Supply Chains

Cannabis/Marijuana ($\Delta 9$ THC) vs. Hemp (IHDC)

Regulated Cannabis / Marijuana Products (Adult Use & Medical Programs)

- + THC Potency Cap:
 - o Per serving not to exceed 10mg
 - o Per package not to exceed 100mg
 - o Standard micro dose 2.5mg
- + Age verification at retail required and enforced
- + Testing for contaminants to parts per billion on final form products
- + Packaging and Labeling cannot be attractive to children, use cartoons
- + Robust track & trace requirements
- + Required Government Warning Labels
- + Required child resistant packaging
- + Edibles cannot imitate existing commercially available candy or snack food (i.e. sour patch kids, doritos, etc).
- + Restricted advertising close to schools, where children are present
- + Sold in licensed Dispensaries

Intoxicating Hemp-Derived Cannabinoid Products

- $\Delta 9$ -THC Potency: **50mg** limit on package size
- NO** limit on serving size
- Does not account for any other THC isomer
- X NO** Age Restriction
- X NO** Tax Collection
- X NO** Government Warning
- X NO** requirement to verify age of consumer
- X NO** track & trace requirements
- X NO** government warning labels
- X NO** child resistant packaging
- X NO** restrictions on familiar candy, cookies brands that are known to be attractive to children
- X NO** restrictions on recognizable shapes - gummy bears, etc
- X NO** advertising restrictions limited to health and medical claims
- X** Sold everywhere - eCommerce & mixed directly into non-cannabis products by retail registrant



Novel Cannabinoids - Legal → Lethal



THC-P: known as THC-Heptyl or trans-delta-9- tetrahydrocannabiphorol structurally similar to Δ 9-THC but modified to include two additional carbon atoms on the side chain. It's believed to be **30x** more effective at binding to cannabinoid receptors than Δ 9-THC making it extremely potent.

THCj: Also known as tetrahydrocannabioctyl is semi-synthetic. Being hailed for its “psychedelic effect” it is reported to be **19x more potent than Δ 9-THC.**

THC-H: Also known as tetrahydrocannabihexol is said to be **10 to 15x more potent than Δ 9-THC.**

THC-O: is Δ 8-THC that's been further modified to be more mind-altering. According to Leafly, a leading industry media company, THC-O “can be **3x stronger** than its more mainstream cousin” and borders on “hallucinogenic.” It is also an acetate linking it when inhaled to VAPI | EVALI and [seizures](#). It is associated with delayed effects.

HHC | HXC, or hexahydrocannabinol: On a molecular level, HCC is Δ 9-THC with extra hydrogen atoms. It's reportedly stronger than Δ 8-THC and Δ 10-THC and similar to traditional Δ 9-THC in its effect.



500mg of a ‘knockout blend’ featuring hemp derived HHC, THC-O, Δ 8-THC, and THC-P! Say goodbye to reality and wrap your mind with one of our extremely powerful [SHOCKWAVE](#) sour belts.



Warnings on Intoxicating Products

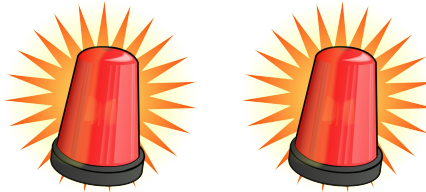
Alcohol Product

ABC WINERY
AMERICAN
MERLOT
ALC. 15.5% BY VOL.
BOTTLED BY XYZ VINTNERS, CITY, STATE
750 ML

GOVERNMENT WARNING: (1) ACCORDING TO THE SURGEON GENERAL, WOMEN SHOULD NOT DRINK ALCOHOLIC BEVERAGES DURING PREGNANCY BECAUSE OF THE RISK OF BIRTH DEFECTS. (2) CONSUMPTION OF ALCOHOLIC BEVERAGES IMPAIRS YOUR ABILITY TO DRIVE A CAR OR OPERATE MACHINERY, AND MAY CAUSE HEALTH PROBLEMS. **CONTAINS SULFITES**



Non-Dispensary, Hemp Derived Intoxicating Product



No required government warnings

CONTAINS THC limited D9 (is the only thing required)

Regulated Marijuana Product

11 AAC 306.345(b)(3)

- A) Marijuana has intoxicating effects and may be habit forming and addictive;
- (B) Marijuana impairs concentration, coordination, and judgment. Do not operate a vehicle or machinery under its influence;
- (C) There are health risks associated with consumption of marijuana
- (D) For use only by adults twenty-one and older. Keep out of the reach of children;” and
- (E) Marijuana should not be used by women who are pregnant or breast feeding;



Lack of Uniform Standards ➔ Poor Business Practices Consumers Pay the Price

Fraudulent, Unfair & Deceptive Trade Practices

THC-O Example: THC-O is an acetate similar to Vitamin E Acetate (responsible for EVAL VAPI crisis) when inhaled. Coincidentally, 3Chi introduced a “delta9o” product around the same time studies about the dangers of vaping THC-O were published.



Buy Delta 9o Products

Say hello to the next evolution in ultra pure cannabis products - Delta 9o! Also known as D9o, Δ9o, Delta 9 THC-o-acetate, and Delta 9 THCO, our delta 9o products deliver a similar yet smoother, stronger, and longer-lasting euphoria compared to traditional marijuana products. This high-quality and federally legal hemp-derived product raises the bar for what you should expect from a cannabis product in both effects and experience!



Counterfeit Products

The FDA’s policies & statements on Δ8-THC and CBD, along with the enforcement letters regarding inaccurate and fraudulent health claims regarding CBD, are greatly appreciated. These acts spark conversation and receive large press and social media coverage

These alone are not enough

Combating the impacts to ill-informed and uninformed consumers means creating a culture of educational awareness utilizing the tools at the FDA’s disposal:

- Expanding the policy statements and consumer notification to all chemically converted cannabinoids
- Coordinate with the Attorney General Office on enforcement actions to the egregious bad actors.



Minnesota

In a joint investigation with the FDA Minnesota's Board of Pharmacy filed a lawsuit against Northland Vapor Moorhead, LLC for their delta-8 Death by Gummy Bears.

The products sold are up to 50 times the allowable 5mg THC/serving and 50mg THC per package threshold, sold products without the requisite testing, and sold products that appealed to children.

The affidavit from the MN Board of Pharmacy Investigator contains a couple adverse event reports from the FDA regarding gummies produced by Northland Vapor which are incredibly concerning. One of the adverse event reports involved five female high school students which consumed 1/2 - 2 gummies. Each gummy contained 100mg of delta-8 THC. The high school students reported symptoms including severe difficulty breath, hypotension, tachycardia and decrease in consciousness.



This is an extremely concerning development and perfectly captures our concerns with the under-regulated intoxicating hemp derived cannabinoid market.



Tennessee



Tennessee has a prohibition on medical and adult use cannabis.

1st legal “cannabis” bar and restaurant, [Buds & Brews](#), now open featuring Δ9-THC from Hemp. “Cannabis” infused sauces include 5 mgs. of Δ9-THC each.

Also serving alcohol, this restaurant would fall outside of the regulated system in all adult-use states.

CRAFT CANNABIS INFUSED SAUCES

60mg Full-Spectrum Hemp Extract (5mg THC) per sauce. (All Pairings contain THC)

2oz | 7

BBQ	Cajun Butter	Hot Mustard	Soy Sauce
Buffalo	Dark Chocolate	Ketchup	Sleak
Bleu Cheese	Garlic Butter	Marinara	White Sauce
Caesar	Herb Butter	Mayonnaise	Yellow Mustard
Canna-Butter	Honey	Olive Oil	
Caramel	Honey Mustard	Ranch	
Coconut Oil	Hot Wing Sauce	Sesame Seed Oil	

Buy 4 sauces get the 5th Free

SHAREABLES

CHEESE CURDS Lightly Breaded & Fried. Side of Ranch Pairings: Marinara , White Sauce , Ranch	9.99	NUGGED OUT NACHOS Tostito Chips, Homemade Chili, Queso, Shredded Lettuce, Shredded Cheese & Fire Roasted Salsa. Side of Sour Cream. ADD Chicken \$5 Pairings: BBQ , Hot Wing , Ranch	12.49
SOUTHWEST CHICKEN ROLLS Seasoned Chicken, Corn, Black Beans & Peppers in a Crispy Flour Wrapper. Side of Ranch. Pairings: Ranch , White Sauce , Honey Mustard	10.99	420 PRETZEL 10oz Soft Bavarian Twisted Pretzel. Side of Queso & Dijon Spicy Mustard Pairings: Hot Mustard , Yellow Mustard , Garlic Butter	12.49
CHICKEN TENDERS 3 Fried or Grilled Chicken Tenders. Comes with Fries or Tots. *Try the Fried Nashville Hot! \$1 Pairings: Honey Mustard , Ranch , BBQ	12.49	CHILI - CUP Original Chili Featuring Ground Beef, Jalapeno Peppers, Beans, Onions & Signature Blend of Spices. Topped with Mixed Cheese & Jalapenos. Side of Sour Cream & Crackers Pairings: Hot Wing	4.99
FRIED PICKLES Spicy Hand Breaded Pickle Chips. Side of Ranch Pairings: Ranch , Hot Wing , Buffalo	7.99	DUDE WHERE'S MY WINGS Choose from Buffalo, BBQ, Nashville Hot or Naked Pairings: Buffalo , Hot Wing , BBQ , Bleu Cheese , Ranch	11.99

WRAPS & SANDWICHES

Served with Fries or Tots. Sub Side for \$1. Moon Rocked Loaded Tots or Fries \$3

BUDS BURGER Two Pressed 4oz All Beef Patties, Lettuce, Tomato, Pickle & Onion on a Kaiser Bun or Flour Wrap. Choice of Cheese \$1: American, Cheddar, Pepper Jack Pairings: Mayonnaise , Ketchup , Yellow Mustard	10.99	CHICKEN SANDWICH Grilled or Fried Chicken, Lettuce & Tomato on a Kaiser Bun or Flour Wrap. *Try the Fried Nashville Hot! \$1 Choice of Cheese \$1: American, Cheddar, Pepper Jack Pairings: Mild Wing Sauce , Ranch , Bleu Cheese	12.99
CANNABIS CLUB Sliced Turkey, Ham & Bacon. Layered with Lettuce, Tomato & Chipotle Mayo on Three Slices of Sourdough Bread or Flour Wrap. Side of Honey Mustard, American Cheese Pairings: Mayonnaise , Honey Mustard , Yellow Mustard	11.99	HALF BAKED BLAT Bacon, Lettuce, Avocado & Tomato on Toasted Sourdough Bread or Flour Wrap. Choice of Cheese \$1: American, Cheddar, Pepper Jack Pairings: Mayonnaise , Ranch , Honey Mustard	9.99
VEGGED OUT BURGER Two Pressed 4oz Impossible Burger Meatless Patties, Lettuce, Tomato, Pickle & Onion on a Kaiser Bun or Flour Wrap. Choice of Cheese \$1: American, Cheddar, Pepper Jack Pairings: Mayonnaise , Ketchup , Yellow Mustard	13.99		

FAVORITES

WAKE & BAKE TACOS (3) Hardshells (Garnished Tots), Scrambled Eggs, Mashed Cheese, Bacon, Pepper Gravy & Fire Roasted Salsa in a Corn Tortilla Side of Sour Cream Pairings: Hot Wing , Buffalo , Ketchup	10.99	SOUTHERN CHICKEN Chicken Fried Chicken. Served with 2 Sides. Pairings: Soy Sauce , White Sauce	12.99
PHISH TACOS (3) Fried White Fish, Colossal, Tomatoes & Chipotle Mayo in a Corn Tortilla. Side of Tartar Sauce. Try it Nashville Hot! \$1 Pairings: Buffalo , Hot Sauce , Soy Sauce	10.99	GRILL MUNCHIES 8.99 Grilled Cheese on sourdough bread with Fries or Tots. Pairings: Honey Mustard , Hot Sauce , Cajun Butter	
FRIED PHISH PLATTER Fried 8oz White Fish & Tartar Sauce. Choice of 2 sides. *Try it Nashville Hot! \$1 Pairings: Cajun Butter , Garlic Butter , Canna Butter	12.99	OLD SCHOOL PEPPERONI PIZZA 5.99 A take back to the Cafeteria Pizza you ate at school. Served with Fries or Tots. Pairings: Ranch , Marinara , Garlic Butter	
		LUCKY CHARMS 3.99 A bowl of Lucky Charms Pairings: Real Crispy Treat	

SALADS

Add Fried or Grilled Chicken \$5 or Nashville Hot Fried Chicken \$5

HOUSE SALAD Mixed Green Leaf & Romaine Lettuce, Tomatoes, Bacon, Onions, Avocado & Cucumber Pairings: Bleu Cheese , Ranch , Buffalo	8.49	CAESAR Romaine Lettuce, Parmesan Cheese & Croutons Pairings: Caesar , Bleu Cheese , Ranch	11.99
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NON-INFUSED DRESSINGS

Balsamic Vinaigrette – Bleu Cheese – Caesar – Honey Mustard – Italian – Ranch – Creamy Italian

DESSERTS

POT TARTS Pairings: Dark Chocolate , Caramel , Honey	3.49	COLESLAW	2.99
CHRONIC CHURROS STICKS Pairings: Dark Chocolate , Honey	5.99	MAC 'N' CHEESE	2.99
*STONE SKILLET COOKIE SHAREABLE Served with Vanilla Bean Ice Cream Pairings: Dark Chocolate , Caramel , Honey	23.99	MASHED POTATODES	2.99
*LAST OF BROWNIE SHAREABLE Served with Vanilla Bean Ice Cream Pairings: Dark Chocolate , Caramel , Honey	23.99	ONION RINGS	2.99
*DANCING BEARS SHAREABLE * Contains THC	23.99	SIDEWINDER FRIES	2.99
		TATER TOTS	2.99
		SEASONAL SIDE	2.99

SIDES

BUDS & BREWS

Cannabis Bar & Restaurant is the place in Nashville where you can enjoy pairing food with culinary cannabis sauces. All drinks, food & outdoor side sauces by default do not contain any cannabis extract & are not cooked with cannabis of any kind. Only Craft Cannabis labeled sauces and mock tails contain cannabis extract & are always served separate. See front page "Craft Cannabis Infused Sauce" recommendations.

WE FOLLOW ALL STATE & FEDERAL LAWS

All Effects are 100% hemp derived. All products have less than 0.2% Delta-9-THC. For more info, please inquire with our management.

THC affects everyone differently... Please use proper judgement!
*Consuming raw or under cooked meats, poultry and seafood may increase your risk of foodborne illness.

THC affects everyone differently... Please use proper judgement!
*Consuming raw or under cooked meats, poultry and seafood may increase your risk of foodborne illness.



Texas

TX existing allowance & limited

The trend is proliferating in States with marijuana prohibitions like TX, with the announcement of Wild Montrose restaurant in Houston featuring $\Delta 9$ -THC infused food & drinks.

THC & CBD being added directly to alcohol, coffee & food in the restaurant kitchen with **NO** final form testing or information for the consumer.

✦ **HEMP - INFUSED ADDITIONS** ✦

all of our dishes can be infused with our hemp-derived specialties in your choice of CBD **or** THC

CBD +8	THC +12
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CHOOSE: BUTTER - AVOCADO OIL - CHILI CRISP - HONEY

Shop By Intent/Feeling

		
Energize & Euphoria Uplift your body and mind with a dose of Sativa THC. Ideal for morning use.	Focus & Flow Get into a flow state with THC hybrids. These blends promote creativity and focus.	Relax & Rest Relax at the end of your day with Indica THC. Perfect for serious rest.



Examples of State Addressing IHDCs

Colorado	SB22-205 Intoxicating Hemp and Tetrahydrocannabinol Product SB22-205 created a task force specific to IHDCs
Washington	Hemp in Food Task Force
California	AB45 includes language to ensure testing parity with regulated cannabis and to address the function of weight loophole and psychoactive cannabinoids requiring a total amount of THC concentration
Oregon	The first State to prohibit synthetic cannabinoids Adult Use Cannabis and Hemp Concentration Limits
Kentucky	KY has a prohibition on cannabis but by Executive Order addressed delta-8 THC products by aligning with the State's allowance for hemp derived CBD.



Avenues for State Level Engagement

- Continued Collaboration with Governor's Advisory Task Force address the inconsistencies and areas for improvement within the Hemp Regulations to advance public health and safety
 - Age Gating
 - Labeling Parity with Marijuana
 - Addressing all intoxicating cannabinoids not singling out delta-9
 - Serving and package cannabinoid caps
 - Removing the incorporation of intoxicant out of a regulated environment
- Engagement with Attorney General
 - Consumer Warnings
 - Enforcement to those who are not adhering to the existing requirements of the Hemp program especially from online direct to consumer sales.



TERPENE BELT FARMS

Points of Contact

Pamela Epstein Esq., LLM:

pamela@terpenebeltfarms.com

(520) 904-1482

Joanna H. Cedar:

joanna@terpenebeltfarms.com

(707) 953-5829

General Email:

legal@terpenebeltsfarms.com