

"HOT SHEET"

2ND QUARTER - 2024



Objective: The goal of this, and subsequent bulletins, is to provide information regarding identified changes in drug trends, and/or to educate and forewarn about newly identified substances.

Subject Matter: This release attempts to provide clarification regarding the complex and confusing legal status of products containing tetrahydrocannabinol (THC) throughout the states comprising Midwest HIDTA. Additionally, it will expound on the differences between Delta 8, Delta 9 and Delta 10 THC, including THC infused beverages, and present the alarming numbers of Delta 8 exposures reported to poison control centers.

THC products: methods of ingestion and duration of effects

The wide variety of products containing THC allow for a broad range of administration routes to the end-user. Products such as raw flower can be smoked, THC infused food products can be consumed orally, and concentrated oils can be aerosolized and inhaled as a vapor. The administration route is one of the key components in determining the length of a consumers impairment, which can range from 3 to 10 hours.⁵

The exact duration is dependent upon multiple factors, which include: "(1) *dose*: higher THC doses produced longer lasting impairment; (2) *route of administrations*: oral THC produced longer lasting impairment than inhaled THC (e.g. smokes, vaporized), owing to the fact that gastrointestinal absorption is slower than pulmonary absorption; and (3) *regularity of cannabis use*: occasional cannabis users became more impaired than regular cannabis users who appear to be more tolerant to the impairing effects of THC."⁵



Generated Images of THC/CBD Infused Beverage Product Examples*



*Images AI generated by author using Photosonic

- Following the legalization of marijuana for medical and/or recreational use, edible food products, including THC and CBD beverages, "have emerged as a popular and lucrative facet of the legalized market."¹⁰
- The duration of the effects following the consumption of these beverages varies, as with other ingestion methods, the quicker the effects initiate, the faster they subside.⁵
- Precautions should be taken prior to ingesting CBD infused beverages, due to the overall lack of regulation in the industry, potential for the beverage to contain THC, unproven efficacy, and potential for negative interactions with other medications.¹¹
- Typically, a single serving is allowed a specific THC concentration, such as 5-10 mgs; however, the total THC content per product or container can be higher, often capped at around 100 mgs. Therefore, one 12 fluid ounce can/container, infused with 100 mgs, would allow ready access to 10-20 servings.
- Although the use of THC-infused beverages has increased among individuals who ingest THC, "smoking" is still the most popular means of ingestion, while the use of THC-infused beverages was the mechanism for 10% of those who utilized edibles.¹²
- The United States Tax and Trade Bureau (TTB) "will not approve any formulas or labels for alcoholic beverages that contain a controlled substance under Federal law, including marijuana."¹³ Hemp ingredients (hemp seed oil, sterilized hemp seeds), are excluded from the definition of marijuana under the Controlled Substance Act.¹³
- "Formula approval from TTB is required before a hemp ingredient may be used in the production of an alcohol beverage product."¹³ When deemed appropriate, the TTB will confer with the Drug Enforcement Administration (DEA) to obtain their "interpretation of the CSA."¹³ The TTB will also utilize the FDA when questions arise regarding ingredient safety concerns.¹³
- "For alcohol beverage products containing a hemp ingredient, the product label must accurately and specifically identify the ingredient in a manner that makes it clear the ingredient is not a controlled substance. Additionally, labeling statements for alcohol beverage products may not create the misleading impression that the product contains a controlled substance or has effects similar to those of a controlled substance."¹³



Understanding Delta 8 THC

Delta 8 THC, a cannabinoid derived primarily from CBD, presents a unique profile in the cannabis market.¹ Unlike its more prevalent counterpart, Delta 9 THC, Delta 8 THC is not typically found in significant amounts within the Cannabis sativa plant.¹ Instead, it is most commonly manufactured through chemical conversion (cyclization) from hemp-derived cannabidiol.¹ This process, however, is not regulated by the Food and Drug Administration (FDA), raising concerns regarding the safety and quality of Delta 8 THC products. The lack of federal oversight means these products have not been evaluated for safe use, and their manufacturing could involve potentially harmful chemicals.⁴

The psychoactive effects of Delta 8 THC mimic those of Delta 9 THC, albeit typically at a lower intensity. Users often seek out Delta 8 for its purported benefits, such as alleviating symptoms of stress, depression, or chronic pain. However, the scientific community has yet to confirm these therapeutic claims.⁴ The legal landscape for Delta 8 THC also varies significantly by state, despite its federal legality. This cannabinoid can be synthesized from Delta 9 THC, which complicates its legal status and raises additional safety and efficacy concerns.⁴

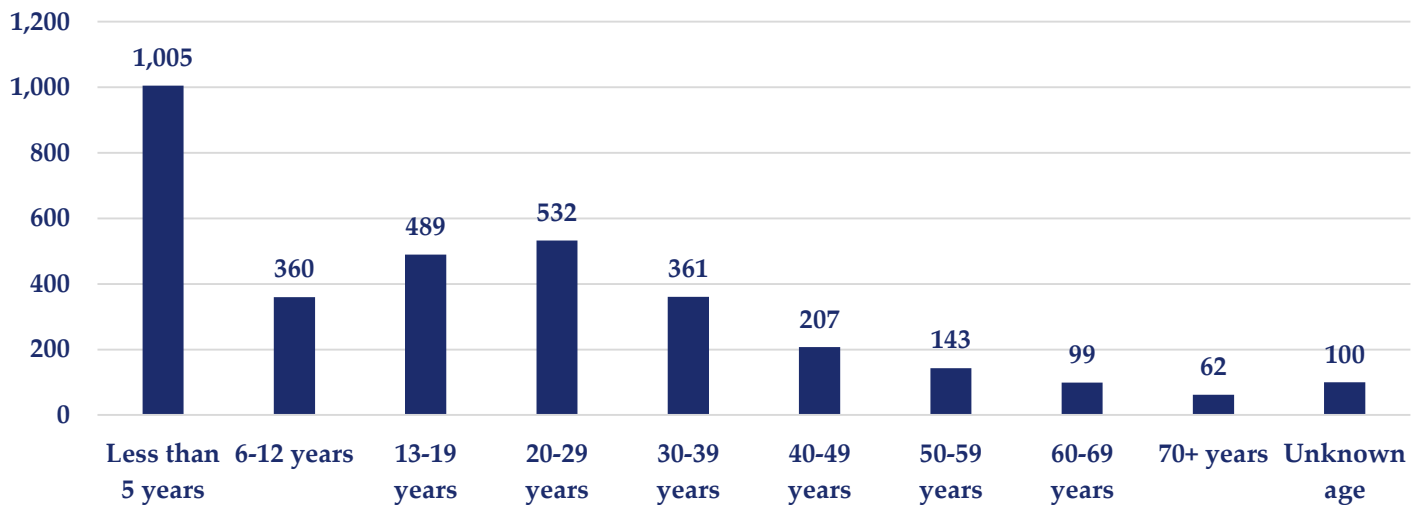
Generated Images of Delta 8 THC Product Examples*



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Delta 8 THC Exposures Among Age Groups - 2022⁶



Source: America's Poison Centers 2022 Annual Report of the National Poison Data System

- The data from the America's Poison Centers 2022 Annual Report revealed 56 percent of the reported exposures to Delta 8 THC were under 20 years of age, with the vast majority of these being children under the age of 12 (41 percent), and 30 percent under 5 years of age⁶

Exploring Delta 9 THC

Delta 9 THC, commonly recognized as the primary psychoactive component in cannabis, is naturally present in raw cannabis plants. Due to its psychoactive effects, it is commonly associated with recreational use.¹ Despite its popularity, Delta 9 THC remains a Schedule I drug under U.S. federal law, indicating a high potential for abuse and no accepted medical use.²

The legal landscape for Delta 9 THC varies significantly, as federally, it is illegal; however, specific products derived from hemp that contain Delta 9 THC are legal under certain conditions set by the 2018 Farm Bill. For these products to be legal, they must contain less than 0.3% THC by dry weight and must be derived from hemp rather than marijuana.¹ On the state level, the legality of Delta 9 THC products can vary, with some states allowing its use for adult/recreational and medicinal purposes.¹

The effects of Delta 9 THC on the human body are varied. The compound interacts with the body's cannabinoid receptors, found predominantly in the brain and central nervous system, influencing a range of physiological processes. In the short-term its use can cause altered perceptions, changes in mood, impaired movement, delusions/hallucinations, and impaired cognitive functions.³ Despite its potential therapeutic benefits, such as treating nausea and chronic pain, the risks associated with its use long-term use, such as impaired brain development and mental illness, remain significant.³



Generated Images of Delta 9 THC Product Examples*



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Delta 10 THC – Effects and Source

Delta 10 THC is one of the many forms of THC found in cannabis plants.⁷ Delta 10 THC is naturally found at low levels in cannabis plants.⁸ Therefore, it may be synthetically produced, or obtained from cannabis plants specifically produced to have higher levels of Delta 10 THC.⁸ If the Delta 10 THC is derived from the chemical extraction process involving raw cannabis plant material that has not been tested for impurities, there is a risk factor that the final product could be contaminated with bio-hazardous toxins, heavy metals or pesticides.⁹

Delta 10 THC is reported to have weaker psychoactive effects than Delta 9 THC, approximately half as potent, thereby producing a milder “high.”⁷ Although Delta 10 THC has gained attention in recent years due to its potential therapeutic benefits and recreational use, it and other hemp-derived intoxicating cannabinoids should be considered unsafe, until additional research regarding their ability to be safely ingested by humans.⁹

Generated Images of Delta 10 THC Product Examples*



*Images AI generated by author using Photosonic



Legal Status in Midwest HIDTA States:

Iowa – Under state law, hemp-derived products like Delta 8 and 9 THC are permissible provided they contain no more than 0.3% THC by dry weight.¹⁴ However, the synthesis process that converts CBD to Delta 8 THC has raised legal concerns, as it might fall under the illegal manufacturing of a controlled substance according to the Federal Analog Act.¹⁵ Recent legislative efforts aim to tighten these loopholes. House File 2605 proposes stricter limits on THC content in consumable hemp products, including beverages, capping it at 4mg per serving and no more than 10mg per container, and limits sales to people 21 or older.¹⁶

Kansas – Tetrahydrocannabinols are schedule I drugs in Kansas, which would include Delta 8, Delta 9 and Delta 10 THC products; the exceptions are tetrahydrocannabinols in any of the following: industrial hemp (K.S.A 2021 Supp. 2-3901); solid waste (K.S.A. 65-3402) and hazardous waste (K.S.A 65-3430) “if such waste is the result of the cultivation, production or processing of industrial hemp” (K.S.A 2-3901), and “such waste contains a delta 9 THC concentration of not more than 0.3%,” or hemp products (K.S.A. 2-3901), “unless otherwise deemed unlawful pursuant to K.S.A 2-3908, and amendments thereto.”^{17,18}

Missouri - Delta 8 THC is currently permissive, allowing the sale of products as long as the Delta 9 THC content remains below 0.3%.⁹ However, the proposed "Intoxicating Cannabinoid Control Act," which seeks to align the regulation of hemp-derived products such as Delta 8 THC with those of the marijuana industry, could lead to significant changes. This act would include age restrictions, mandatory labeling and testing requirements, and a stipulation that such products can only be sold in licensed dispensaries regulated by the cannabis division within the Missouri Department of Health and Senior Services.¹⁹ Delta 9 THC products can only be purchased by those over the age of 21.²⁰

Nebraska - Permits the cultivation of hemp plants and sale of hemp-based products, provided they contain no more than 0.3% Delta-9 THC.²¹ However, recent findings in Sarpy County revealed Delta-8 products with Delta-9 THC levels as high as 15%, far exceeding the legal limit, which has prompted significant legal actions.²² Legislative efforts such as LB999 have been introduced to further regulate the hemp industry. This bill mandates that farmers must obtain a license from the US Department of Agriculture to grow hemp and seeks to restrict the sale of Delta-8 THC to non-consumption purposes only, effectively banning its sale in CBD shops.²³

North Dakota – Delta 8 THC is classified as a controlled substance and is completely banned.²⁴ Retailers in North Dakota “may not sell hemp, or hemp commodities or products that contain chemically derived cannabinoids.”²⁵ All hemp commodities or products sold “must comply with all product labeling rules as mandated by the Food, Drug, and Cosmetic Act [21 U.S.C.9 et seq.]”²⁵ Under the same Food, Drug, and Cosmetic Act, “non-food and drug administration approved hemp-derived products may not be sold as dietary supplements, food or beverage products, or marketed with medical claims.”²⁵

South Dakota –The South Dakota legislature passed House Bill 1125, which “prohibits the chemical modification or conversion of industrial hemp and the sale or distribution of chemically modified or converted industrial hemp.”²⁶ The bill is set to go into effect on July 1, 2024.

NOTE: The legal purchase of Delta 8/9 THC products in an authorized state/locale, does NOT inherently lead to the product being legal in the jurisdiction it is subsequently possessed within.



References:

1. Johnson L, Malone M, Paulson E, Swider J, Marelus D, Andersen S, Black D. Potency and safety analysis of hemp delta-9 products: the hemp vs. cannabis demarcation problem. *J Cannabis Res.* 2023 Jul 26;5(1):29. doi: 10.1186/s42238-023-00197-6. Erratum in: *J Cannabis Res.* 2023 Aug 5;5(1):33. PMID: 37496090; PMCID: PMC10369762.
2. Alcohol Policy Information System, <https://alcoholpolicy.niaaa.nih.gov/about/about-cannabis-policy#:~:text=Despite%20numerous%20State%20initiatives%20legalizing,Act%20as%20of%20December%202022>
3. NIDA. 2019, December 24. Cannabis (Marijuana) DrugFacts. Retrieved from <https://nida.nih.gov/publications/drugfacts/cannabis-marijuana> on 2024, May 20S
4. United States Food & Drug Administration, "5 Things to Know about Delta-9 Tetrahydrocannabinol –Delta-8 THC," <https://www.fda.gov/consumers/consumer-updates/5-things-know-about-delta-8-tetrahydrocannabinol-delta-8-thc>
5. McCartney D, Suraev A, McGregor IS. The "Next Day" Effects of Cannabis Use: A Systematic Review. *Cannabis Cannabinoid Res.* 2023 Feb;8(1):92-114. doi: 10.1089/can.2022.0185. Epub 2022 Dec 6. PMID: 36475998; PMCID: PMC9940812.
6. <https://learnaboutsam.org/2024/04/sam-4-12-2024-friday-fact-delta-8-thc-exposures-among-age-groups-in-2022/>
7. Osborne, K. (2022). Growing Industry: The 2018 Farm Bill and Delta-8 THC Legalization. *Wake Forest Journal of Business and Intellectual Property Law.* <https://jbipl.pubpub.org/pub/rxpagzgg>
8. Government of Canada, "About Cannabis," <https://www.canada.ca/en/health-canada/services/drugs-medication/cannabis/about.html>
9. Missouri Department of Health and Senior Services (18 April 2024), Health Advisory, *Health Risks Associated with Hemp-Derived Intoxicating Cannabinoids*, <https://health.mo.gov/safety/cannabis/pdf/hemp-derived-intoxicating-cannabinoids.pdf> Missouri Department of Health and Senior Services (18 April 2024), Health Advisory, *Health Risks Associated with Hemp-Derived Intoxicating Cannabinoids*
10. Barrus DG, Capogrossi KL, Cates SC, Gourdet CK, Peiper NC, Novak SP, Lefever TW, Wiley JL. Tasty THC: Promises and Challenges of Cannabis Edibles. *Methods Rep RTI Press.* 2016 Nov;2016:10.3768/rtipress.2016.op.0035.1611. doi: 10.3768/rtipress.2016.op.0035.1611. PMID: 28127591; PMCID: PMC5260817.
11. Cleveland Clinic (August 8, 2023) *Should You Try CBD-and Hemp-infused Drinks?* <https://health.clevelandclinic.org/hemp-cbd-drink-benefits>
12. Steigerwald S, Wong PO, Cohen BE, Ishida JH, Vali M, Madden E, Keyhani S. Smoking, Vaping, and Use of Edibles and Other Forms of Marijuana Among U.S. Adults. *Ann Intern Med.* 2018 Dec 18;169(12):890-892. doi: 10.7326/M18-1681. Epub 2018 Aug 28. PMID: 30167665; PMCID: PMC6296858.
13. U.S. Department of the Treasury, Alcohol and Tobacco Tax and Trade Bureau Hemp Policy <https://www.ttb.gov/faqs/alcohol#:~:text=TTB%20will%20not%20approve%20any,under%20Federal%20law%2C%20includi%20marijuana.>
14. Iowa, Health and Human Services, <https://hhs.iowa.gov/programs/programs-and-services/consumable-hemp>
15. Leas EC. The Hemp Loophole: A Need to Clarify the Legality of Delta-8-THC and Other Hemp-Derived Tetrahydrocannabinol Compounds. *Am J Public Health.* 2021 Nov;111(11):1927-1931. doi: 10.2105/AJPH.2021.306499. Epub 2021 Oct 7. PMID: 34618542; PMCID: PMC8630489.
16. Des Moines Register, Reyna-Rodrigues, Victoria, March 14, 2024, "Iowa hemp legislation could limit THC products. Here's what could be at risk," <https://www.desmoinesregister.com/story/news/local/2024/03/14/new-hemp-regulations-could-limit-thc-products-in-iowa-whats-at-risk-tetrahydrocannabinol/72956043007/>
17. Kansas Annotated Statute, 65-4105 (h)(1), https://www.ksrevisor.org/statutes/chapters/ch65/065_041_0005.html
18. Kansas Attorney General Opinion No. 2021-4, <https://ksag.washburnlaw.edu/opinions/2021/2021-004.pdf>
19. Missouri Independent, Rivas, Rebecca, April 1, 2024, "Proposed legislation could ban the majority of Delta-8 drinks and edibles in Missouri," <https://missouriindependent.com/2024/04/01/proposed-legislation-could-ban-the-majority-of-delta-8-drinks-and-edibles-in-missouri/>
20. Missouri Department of Health and Senior Services, <https://health.mo.gov/safety/cannabis/faqs-general.php>
21. Nebraska State Legislature, https://nebraskalegislature.gov/laws/display_html.php?begin_section=2-501&end_section=2-519
22. Marin, Johan, February 1, 2024, "Changes could be coming to Nebraska cannabis, CBD laws," <https://www.wowt.com/2024/02/02/bill-nebraska-legislature-would-ban-delta-8-cbd-shops/>
23. Nebraska Legislative Bill 999, <https://legiscan.com/NE/text/LB999/2023>
24. North Dakota Century Code t04.1c18.1, <https://ndlegis.gov/cencode/t04-1c18-1.pdf>
25. North Dakota Senate Bill No. 2096, <https://ndlegis.gov/assembly/68-2023/regular/documents/23-8110-01000.pdf>
26. 2024 South Dakota Legislature House Bill 1125, <https://sdlegislature.gov/Session/Bill/24425/261049>