

SEMI-SYNTHETIC CANNABINOIDS

TEST
PURCHASE

MAY
2026

PURPOSE: The objective of this report is to detail our findings from forensic testing of semi-synthetic cannabinoid marketed commercial products for notification to public health, public safety, clinicians, medical examiners, coroners, forensic laboratories, and other related communities regarding this emerging topic of concern.

BACKGROUND: Semi-synthetic cannabinoids represent an evolving and complex subclass of novel psychoactive substances (NPS). This subclass of drugs is generally defined by their structural similarity to plant-based cannabinoids (e.g., delta-9 tetrahydrocannabinol [THC]) and production from the non-psychoactive cannabinoid

cannabinoid (CBD). A rapid rise in the sale and popularity of semi-synthetic cannabinoids began after the passing of the Agriculture Improvement Act of 2018 (also referred to as the "Farm Bill"). This legislation set a threshold for distinguishing hemp vs. marijuana (>0.3% Δ9-THC by dry weight), but also opened the door to "hemp-derived" substances. Δ8-THC was the first semi-synthetic cannabinoid to appear with regularity in the United States, followed by a series of other substances, as shown in this report. Semi-synthetic cannabinoids are commonly sold in smoke shops in vape cartridges, but also appear in the form of flower, pre-rolls, concentrates (or dabs), gummies, candies, beverages, baked goods, and capsules, among others.

SUMMARY: Due to increased sale and availability of semi-synthetic cannabinoid products marketed as Δ8-THC, THCP, HHC, etc., our laboratory continually collects samples for comprehensive forensic drug analysis by GC-MS and LC-QTOF-MS. An interesting evolution has been observed. During the early stages of our testing, it was more common to see products advertising a range of semi-synthetic cannabinoids within a single product, some with obscure names; however, most products contained Δ8-THC and/or Δ9-THC, alongside some additional analogues. In more recent years, the market has shifted towards THCP and HHC marketed products, which were verified during testing; however, at times with other analogues present.



PRODUCT	ADVERTISED	DETECTED
P's – Tropic Wunder	THCP	Δ9-THCP
Ghost – Grape Ghoul	THC-P, Delta-9	Δ9-THCP, Δ9-THC
Mellow Fellow – Wellness	THCv	Δ9-THC
Mellow Fellow – Caramel Apple	THCp	Δ9-THCP
Mellow Fellow – Recover	THCM, Δ8, HHC, H4CBD, CBG	Δ8-THC, HHC, CBG, Δ10-THC, Δ9-THC, CBN
Mellow Fellow – Euphoria	THCp, Δ8, HHC, H4CBD, CBD, CBG	Δ9-THCP, HHC, CBD, CBG, Δ7-THC, Δ9-THC, CBN
Mellow Fellow – Introvert	THCB, THCP, Δ8, HHC, CBD, CBN, CBG	Δ9-THCB, Δ9-THCP, Δ8-THC, HHC, CBD, CBN, Δ10-THC, Δ9-THC

Note: Substances listed in bold were advertised.

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Luxe Vibey	THC-M, Delta 8, THC-A, THC-P	Δ8-THC , Δ9-THC
3CHI – Pineapple Express	Δ90	Δ9-THCO , Δ9-THC, Δ8-THC
3CHI – Jack Herer	Δ8THC	Δ8-THC
Rope Knockout	HHC, THC-P, D9	HHC , Δ9-THCP , Δ8-THC, CBD, CBN, CBG
Tap Out Blend	Delta 11, THC-X, Delta 8, THC-B	Δ8-THC
Kik – Sour Diesel	THC-A, THCP, HHCP	Δ8-THC, Δ9-THC, CBD
Kik – GMO Cookies	THCP, HHCP, THCJD, THCH, THC-X	HHC, Δ8-THC
Tigers Blood	PHC, THCP, D8, THCA	Δ8-THC , Δ9-THC

Note: Substances listed in bold were advertised.

