Cannabinol: Synthetic or Naturally Derived

First isolated in 1896, Cannabinol (CBN) is one of many tricyclic cannabinoids found in both marijuana and hemp plants in small amounts. CBN is a degradation product of $\Delta 9$ -THC and may be found at elevated levels in biomass that has been stored in poor conditions for extended periods of time. Despite the similarity in structure to $\Delta 9$ -THC, CBN is generally considered non-intoxicating, but some consumers may report mild psychoactive effects. Users may report a calming effect that leads to drowsiness. Thus, CBN is typically marketed as a sleep aid. This specific compound may be non-synthetically derived from cannabis by exposing extracted $\Delta 9$ -THC distillate to moderate heating conditions in an exposed atmosphere for a period of time. No chemical reagents are needed; thus, this pathway is not considered synthetic. This non-synthetic CBN is legal to sell in Montana by licensees.

$$\Delta^9$$
-THC CBN

Heat + O₂

The hemp derived cannabinoid market has capitalized on creating CBN synthetically from CBD. CBN does not occur in large percentages in cannabis biomass, thus any hemp derived CBN (distillate or isolate) is typically chemically synthesized from CBD to be financially profitable. Synthetically derived cannabinoids, including CBN, use toxic diluents, dangerous reagents, and lack a regulatory and enforcement framework to set requirements for purification, labeling, packaging, testing, and dosing standards. Some distributors might argue that precipitating CBN into isolate is enough of a purification step, however this may not always the case. Isolates may be concentrated, but still retain cannabinoid isomers, residual solvents, and other reagents.

The industry is constantly changing with new products and methods, and it may seem daunting to keep up. Remember, naturally derived CBN is legal for sale, but synthetically derived cannabinoids, included the majority of CBN available on the market, are prohibited in Montana. Lastly, a manufacturer supplied certificate of analysis (COA) does not adequately demonstrate the synthetic or non-synthetic status of CBN as it does not show the method in which the CBN used in product formulation was manufactured.

Many businesses have chosen to supplement their inventory with 3rd party hemp derived CBN isolate, distillate, or final form products. The CCD recommends doing research before adding these products to your business models. The sale of synthetically derived cannabinoids are prohibited in Montana as of May 22, 2023, under House Bill 948 and codified in 16-12-117 MCA. Scan the QR code to read House Bill 948.



