

# THC Analogs

## Isomers vs. Derivatives

### Analog

A compound having a similar structure to another compound; includes both isomers and derivatives

### Isomer

Same number of carbons, hydrogens, and oxygens, but rearranged. **For example:** Delta-8 vs. Delta-9 vs. Delta-10

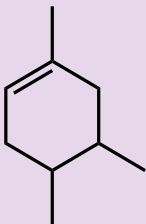
### Derivative

Looks like Delta-9-THC, but has a different number of carbons, hydrogens and oxygens. **For example:** HHC, THC-O, or THC-P

## Delta-9-THC

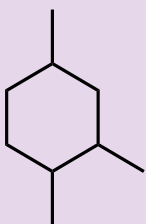
The location of the double bond provides the number for the delta.

### Delta-8-THC (Isomer)

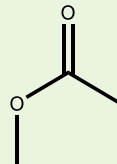


If a double bond is **NOT** present in this area, this compound is called hexahydrocannabinol (HHC).

### HHC (Derivative)



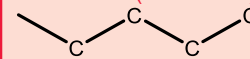
### THC-O (Derivative)



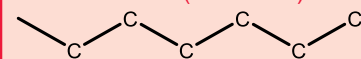
This functional group can be chemically modified to produce THC-O (also known as THC-O acetate).

The length (number of carbons) of the side chain can be altered to make different compounds.

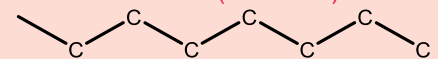
### 4 = THCB (Derivative)



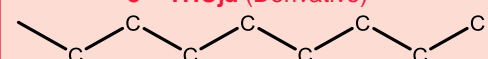
### 6 = THCH (Derivative)



### 7 = THCP (Derivative)



### 8 = THCjd (Derivative)



**Any combination of these changes are possible, producing molecules that look similar to Delta-9-THC with unknown effects and safety. Thousands of THC-like compounds can be formed (e.g., HHC-O, Delta-10-THCH, Delta-8-THCP-O).**