



Interview with Jesse Krater, scientist on staff at Curaleaf

Jesse Krater

- Typically, when it is converted you see a lot more isomerization, the creation of minor isomers of other forms of THC. In fact, this process is usually obvious in tests, because without significant additional steps, there can be a whole host of compounds present that are a sign that a conversion has taken place.
- It is possible to run a chromatography process to remove the residual chemicals. So a laboratory that is claiming to provide naturally derived d9 could pull it off through a thorough chromatography process, which would remove these other signature compounds, so you couldn't tell it was derived as a result of the conversion process. But most don't do that because it is costly and time consuming.
- "Naturally derived" means that the substance (such as a molecule like D9 or CBD) was naturally grown and occurring in the plant material. It might be refined further, but the molecule itself is not being altered.
- "Semi-synthetic" means that you start with a naturally grown base material which contain one or more molecules that you alter into a new molecule. E.G. applying a chemical process to alter the CBD molecule and convert it into D8 or D9. The problem is that you also create other residual chemicals that are related to the target compound, included as additional chemicals.
- Synthetic means that all building blocks are man made to begin with, completely chemically derived. This is largely what the pharmaceutical industry uses, often with materials from the petrochemical industry. There is no agricultural product involved. (Full synthetic is pretty common in Europe.)
- The net of all this is that products that are sold as D8 or another cannabinoid are almost certainly not naturally derived, but rather semi synthetic. A really good lab can minimize the residual chemicals that are produced in the conversion process, but it is difficult to do (when there are other much more crude and easier ways to do it). This means that without further refinement, the process results in likely harmful chemicals that need to be removed before people consume the relatively safe D8 molecule.
- Target compound is what you are looking to get. The purity is how close you get to that target compound. The more residuals, the less pure. Even the best lab will have at least some residuals around. There is a chromatographic process that could be applied to fully purify the target compound out of that semi-synthetic process.
- Delta 8 is not naturally occurring in the plant. The plant material can deteriorate under the right conditions and end up with trace amounts of Delta 8, but generally it is always converted and is not naturally occurring like Delta 9 is. We very likely never see a Delta 8 cultivar. Thus, the MJ Light narrative around D8 is fiction.
- Jesse believes that D8 itself is "safe" when qualified chemists using the right equipment refine, purify, test and subject it to purity analysis, tests for pesticides and residual solvents, normal industry regs and standards.
- Residuals - the chemical soup created in the conversion process, unknown compounds, random breakdown products, labs can't even identify many of these molecules (that are then being ingested or heated and inhaled). E.g. When you convert to the D8 isomer, there is normally D9

- in there. It, too, can be processed out like other residuals.
- (I can't find anything on "incipients".)