



INTERVIEW REGARDING

Amazon's Hemp Market

This interview was conducted by CBD Oracle via email on February 3, 2024, and is provided here for full transparency. Learn more about [CBD Oracle's Editorial Policy](#).

Erik Paulson, PhD

Lab Manager
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Erik grew up in San Diego, CA, and received his Bachelor of Science in Chemistry from the University of California, Riverside. He continued his studies in Riverside to obtain a teaching credential and then taught high school chemistry in Burbank, CA, for five years. His passion for learning brought him back to San Diego to study organometallic chemistry in the Joint Doctoral Program at San Diego State University and the University of California, San Diego. His projects involved the development of catalysts for the selective migrations of double bonds in organic molecules. Erik's focus since joining Infinite in 2019 has been the validation and development of potency, residual solvent, and terpenes analyses

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CBD Oracle: Based on the results I've seen so far, just under half of the products actually contained cannabinoids. Does this mean there is no hemp at all in the other products?

Erik: Hemp is typically infused into consumable products in one of two ways: 1) The hemp seeds, which contain no cannabinoids, are either included whole or pressed to extract the hempseed oil, or 2) Extractable material is pulled out of the leaves, stems and/or buds using some solvent or solventless extraction technique, and generally further processed to isolate the cannabinoid/cannabinoids of interest. If the second method is taken, it is usually performed in order to make a product that contains cannabinoids. If products are being made from hemp seeds or hempseed oil, then the product should not contain cannabinoids (unless there were some contamination issues during the harvesting of the seeds). So it



certainly is possible that we could see 'hemp infused products' not contain cannabinoids, but they would then have to contain hemp seeds or hempseed oil. We did run some tests however to see if we could see evidence of the presence of hempseed oil, and in only one of the samples we tested we saw evidence that hempseed oil was present. If there are no cannabinoids, hemp seeds, or hempseed oil in the product, then what else could they be putting in there that could still be considered hemp?

CBD Oracle: Would you say these types of results are typical of CBD products? i.e. is it common that a "CBD gummy" wouldn't actually contain CBD?

Erik: I think that CBD products in the past more often would often claim the presence of a certain amount of CBD but contain a fraction or none of that labeled amount. I think the CBD industry has come a long way from where it used to be. Most of the large brands have specific claims of an amount of CBD or other cannabinoid on their labels, and most also have lab testing performed and make COAs available to clients and customers. I think consumers should be more wary of something with a vague title of 'hemp gummy' as opposed to a 'CBD gummy'.

CBD Oracle: Given what we've seen through the testing, would you recommend consumers purchase hemp products such as those sold through Amazon?

Erik: If people are purchasing these hemp gummies from Amazon with the understanding that they will derive some

benefit from the hemp that they think is present, then I would absolutely not recommend purchasing these products. As far as we can tell, there are no signs of hemp in most of these gummies. If you are purchasing hemp products or other supplements through Amazon, they actually do require that if an ingredient is listed in the 'Supplement Facts' label with a specific amount, there has to be at least some sort of third-party or GMP verification of that content. So I would stick to products with more specific ingredient claims, or better yet, ones that come with a certificate of analysis.

CBD Oracle: These products often claim to contain millions of milligrams of hemp extract, despite clearly listing the weight of the whole product as just a few hundred grams. I find this totally baffling. As a scientist, do you have any comments about this? Are people really so unfamiliar with metric measurements that they wouldn't see the issue here?

Erik: Yeah, that boggles my mind too. Even a product labeled at 1,000,000 milligrams equates to 1 kilogram, which is 2.2 pounds, which is clearly way more than the mass of the product itself. I think some people do recognize this issue, as you can read in some of the reviews for these products, but surely they are taking advantage of people who just aren't thinking about it enough, or are unfamiliar with the metric system. I think it also may be that the manufacturers themselves are just trying to one-up their competitors, so they put bigger and bigger numbers on the label until they've reached a point where it's physically impossible for a product to contain that amount of 'hemp'. ■