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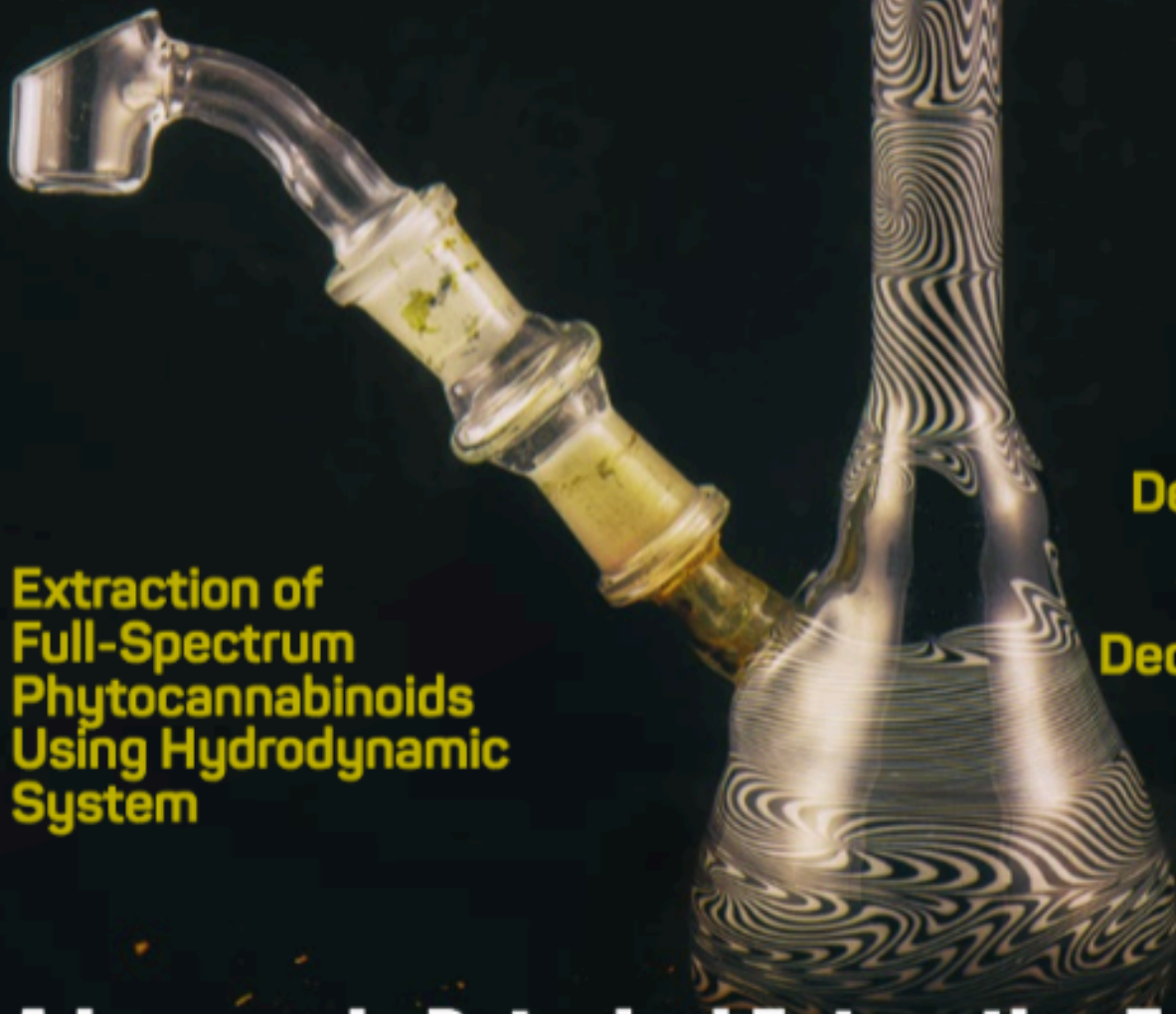
Nov/Dec 2020



The Posh and Dowdy World of Cannabis Concentrates

What's Popular Today
May Not Be Tomorrow

The Controversy and Opportunity of Delta-8-THC



Extraction of Full-Spectrum Phytocannabinoids Using Hydrodynamic System

A Visual Demonstration of Terpene Volatility and Decarboxylation

Advances in Botanical Extraction Technology Solvent-Free, Microwave Extraction

The ABSTRAX World of Kevin Koby

Interview Conducted by Jason S. Lupoi, Ph.D.

The beauty of the research and development that Kevin Koby, his brother Max, and the rest of the crew at ABSTRAX are working on lay within the details, the trace molecules, the subtle nuances that make a specific cannabis cultivar unique. Fortuitously, their interest in sorting out what puts the gas in Sour Diesel, as well as the molecular trademarks of other cannabis fragrances (e.g., fruity, and, I hope, cheesy funk) means they are heavily invested in discovering every terpene in the bouquet.

To achieve this, Kevin and his team have designed methodology using three-dimensional gas chromatography. So, while some terpene profiles might include the standard starting lineup of caryophyllene, limonene, myrcene, or linalool, ABSTRAX wants to precisely recreate a specific plant's fragrance by plucking every last terpene needle out of the molecular haystack. They've even gone so far as to recreate cannabis cultivars in vape pen form, just without any cannabinoids! But Kevin's written about this for us all before. [1-3] This time, we wanted to pick his brain on a more personal level.

JSL: How did you get into the cannabis industry?

KK: Destiny. When I was 15, I told my friends this is exactly what I would be doing.

JSL: How have you seen the industry grow during your time in it? What have been the most important, compelling moments in your cannabis career?

KK: Aside from the hard transition in legality, the industry has grown in its ability to raise equity, secure investors, access a much better talent pool, and the ability to work with established companies and universities. Minor changes, ha!

The most important part of my career was breaking away from

my previous employers and partners to start my own company with family.

JSL: You know how easy it is to fawn all over beautiful cannabis plants and the cool science that's divulging the plants' secrets. What's the most amazing thing you've learned about cannabis?

KK: We've always known that cannabis is an elegantly complex plant and a cocktail of a drug. The most amazing discovery we make regularly is the extent of how complex of a cocktail it is! We've discovered numerous compounds (I can't publish until validated) that have stunned us. We regularly quantify ~400 compounds in each flower sample depending on numerous factors, so you can imagine there are some curveballs in that data.

JSL: ABSTRAX has worked with an analytical instrumentation manufacturer to create the instrumentation that you wanted. How did this come about? Why did you want to dive deeper within the trichomes to better identify perhaps more trace ingredients?

KK: We knew we would have to dig deeper and be on the cutting edge to stay relevant. Our passion is research and science, so it was a natural decision. The fact that the territory we were diving into is so undiscovered only validated this decision further.

JSL: There was a time when terpenes almost seemed to be a by-product of our interest in tetrahydrocannabinol (THC). That's not really the case anymore, as more people are migrating back to the terpenes. Why do you think terpenes are important, not just in cannabis products, but in life?

KK: Terpenes are what people experience when they walk through nature and our bodies respond to these terpenes



in various ways. The more we understand the relationship between our biology and terpenes, the better.

Not by coincidence, terpenes are what people experience when they smell or smoke cannabis. This is the experience that has intrigued me and others. THC is just a catalyst in some sense to experience them further or in a different way.

JSL: What is the most important aspect of cannabis product design?

KK: The experience.

JSL: You are omnipotent. What's the one thing you'd change about the cannabis industry?

KK: The amount of information available. I wish there was more education and resources available to the public.

JSL: If you could only tell someone one profound thing about cannabis what would you say?

KK: Cannabis is a natural plant that offers seemingly endless benefits, from its terpenes that can be used to improve products, to its healing properties that can be used to improve lives. Cannabis was put on this earth for an important reason and we are on the cusp of discovering its true purpose.

JSL: I once postulated that 2020 would be a Year of Perfect Vision. Man was I wrong! Or, maybe I was right, and we'll use this year as a baseline for exponential personal and

physiological growth. Where do you see the industry, post-2020?

KK: I see the industry maturing into the mainstream consumer packaged goods industry. But it will be our once-in-a-lifetime opportunity to ride the wave over there.

JSL: Desert Island: one album, one book, one food, one beverage, and one cannabis product (style) - what would you choose

KK:

Album: Y2k Lalala

Book: Mendeleyev's Dream: The Quest for the Element

Food: Carne Asada Burrito from Pedro's Tacos

Beverage: Sweetwater 420 Strain Ale

Cannabis: Anything Jack Herer

References

- ▲ [1] Koby, K. Untangling Terpenes. *Terpenes & Testing Magazine*, May-June 2019 edition.
- ▲ [2] Koby, K. The Discovery of "The Gas" is Revolutionizing the Terpene and Cannabis Industries. *Extraction Magazine*, May-June 2020 edition.
- ▲ [3] Koby, K. The Mystique of Cannabis "Gas" & The Equation That Changed Everything. *Extraction Magazine*, September-October 2020 edition.