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# Cannabinoid MONTHLY PLAYBOOK

January 2023





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# Dear Reader,

We want to thank you for your trust, and, most importantly, your time. With the endless number of resources at your disposal, we appreciate you leaning on us as your guide through the muddy waters of this industry's limitless news and intelligence.

In an industry that changes as aggressively as ours, we can't stress the importance of effective decision-making enough. Though the information in the report is never meant to dictate specific actions or guarantee certain outcomes, we hope that we're able to provide another voice in the room, one that illuminates, simplifies, and supports you.

If you find one area of information more helpful than others and want us to expand on the topic, please never hesitate to reach out. For any suggestions or questions, we can be reached directly at [info@8threv.com](mailto:info@8threv.com)

## Welcome to the Revolution

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### **Bryan Fields**

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## IN THIS ISSUE

# January 2023

### The Legalization of Cannabis Continues

Kellen Finney, Eighth Revolution

The cannabis industry will grow tremendously over the next few years, with analysts predicting it will be as big as a hundred-billion-dollar industry. The legalization of cannabis in many states has opened the door to a variety of new opportunities, including the development of new products and services, the growth of existing businesses, and the introduction of new technologies. With challenging times ahead, it is essential to understand how far the industry has come and to view your company's place in the industry from a macro perspective. As more states legalize cannabis, the stigma associated with cannabis use continues to decrease. A stigma reduction will likely lead to increased demand for cannabis products and further investment in the industry. The long-term future of the cannabis industry is bright, so don't be afraid to take risks and explore new opportunities.

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### New Year Brings Optimism?

Bryan Fields, Eighth Revolution

Happy New Year! Turning the calendar year to 2023 brings the conclusion of a challenging year for the cannabis industry. Optimism around a catalyst has started to settle, and the belief that the path forward will continue with challenges remains. More states will be unlocked this year, bringing enthusiasm for new opportunities and for the incumbents ready to fight in the struggle known as cannabis.

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***Dispensaries' Cashless ATM  
Transactions Get the Ax***

***Cashless ATMs, a popular method  
for handling cannabis  
transactions, are being shut down  
by payment processing  
companies.***

***- Hightimes.com***

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“



## Cannabis is Chess, Not Checkers.

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Some companies play the move in front of them, and others are 5-10 moves ahead.

Like grand masters, certain moves only come to the front after additional actions happen that enlighten the strategy.

This is the beauty and the curse of the visionary strategist. It's essential to recognize how tiny a nuisance these setup moves are; most can-not see them.

Strategic locations or being patient are critical in a high-stakes, capital-intensive industry.

The beauty of this strategy is that it goes relatively unnoticed by the majority. Sure, most see the main assets that are bright and bold, but the smaller elements are the true beauty of these strategic measures.

These calculated moves and positions sit and idle until the time is right.

These visionary strategists see the board in cannabis *differently*.

They can see future moves, counterattacks, and obstacles in the distance, especially where the landscape is still unknown.

This is their superpower.

"All men can see the tactics whereby I conquer, but what none can see is the strategy out of which victory is evolved." – Sun Tzu, *The Art of War*

Most can agree on the basic principles.

Cannabis is not going away.

- States will continue to legalize
- Medical markets will convert to adult use
- Interstate commerce will happen
- Federal legalization
- Operational expertise will grow
- Research is coming
- Politicians will eventually stop using cannabis as a pawn

The current game these cannabis companies are playing will look entirely different in 15- 20 years.

The current game has challenging conditions. In the future, the challenging conditions will be different.

Some are aggressively fighting to survive or wandering blindly through the forest. Its survival at all costs

Others have the foresight for the future and are aggressively building foundational resources that are difficult for the everyday person to see.

Both can win.

The ones that understand the optionality and flexibility required to survive the unknown today in preparation for the future will have a wider edge when the time comes.

Until then, happy hunting and surviving.

---



# The Dime



Listen Now

A weekly podcast covering the entire Cannabis Industry.

## Inside look at Cannabis M&A Strategy ft. Olivier Blechner

### What happens after an acquisition?

We have a whole team that's dedicated to working on this. There's always [that] beautiful [bit of] corporate speak called "post-integration." What [this] means is: how do we all work together now? What can we learn from you? What can you learn from us? And it's really about bringing [the] best practices [and] also about finding more efficient ways of working.

### What's the most misunderstood thing about Jushi Holding?

I think the thing to keep in mind with us is [that] a lot of what we've done is [...] very medium and long-term focused. [With] Virginia, [...] we've been investing for two years.

If you're looking for immediate kind of results, we didn't put that kind of money into Virginia because it's just a medical market that's small. [But] we did that because we're looking at January 1st, 2024. We're going to be the only operator in an area of two and a half million people.

2023 is a hugely transformative year for us [in which] those investments should pay off. That comes in a number of ways. One is [that] when we didn't have any growers [or] processors, we weren't selling any of our products in our stores because we didn't have any of our products. I think now [that] we're somewhere around 20% of retail sales [being] from our brand of product.



**Olivier Blechner, EVP of Business Development at Jushi Holding**

### Early Jushi Strategy Days

It started when I moved here. We had a meeting at Jim's home. The entire company could actually fit around the dining table. We had sessions where we discussed, "Hey, which states do we want to be in? Where do we [...] want to focus? What should the strategy be? Then you kind of go along, and then, you adjust. I think that's just the nature of entrepreneurship. It's the nature of decision-making, and you learn more, and you adapt, stuff happens, and stuff changes.



\*\*\* The following transcript is AI-generated and some words have been removed for spacing. Please listen to the episode for full context.





# The Dime



Listen Now

A weekly podcast covering the entire Cannabis Industry.

## The Kush Queen, Disrupting The Beauty Industry

On the incredible value and importance of building an audience

What I got right was building an audience. I see 99.999% of people building businesses that have no actual audience. They have no demand. They have no desire. And I've built an email list of over a hundred thousand people and counting. At any given time, [if] I want to hit them up and tell them about what I'm doing, they're going to be there for me. They're going to buy my products. They're the ones who go to dispensaries. They're the ones who've put food on my table and kept me going. My audience is invaluable, and I focused on that. And that was because I was saying something, and I was catering to a niche that didn't exist.

Best product for new consumers to try

The people who are really scared of THC, I always give them the bath bomb first because it's like a door opener. That's literally why I have stayed on the shelves of this market. They're effective; your skin is your biggest organ.

You soak in a tub of hot water, open up your pores, and then your body absorbs the cannabinoids, and it's like you don't get high from the bath bomb, but your skin gets high—and people, it changes their lives, [...] especially like athletes' recovery. Lady Gaga uses my bath bombs after her show in Vegas[, too].

Like all those viral baths she posted, those are Kush Queen bath bombs. There are so many athletes and people who have [used these]; there's [even] a group of nuns buying us out at the Med Men store. They're buying everything they had because they told people at Med Men that our baths were helping them speak to God.

And I think it's because it's also a form of meditation. You get in there; you're soaking; you're not really on your phone; you're, like, with yourself.



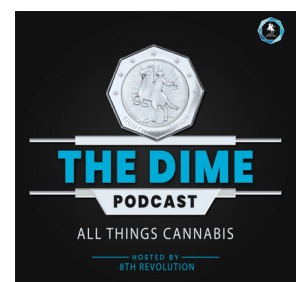
Olivia Alexander, CEO & Founder of Kush Queen

On the importance of feeling in control

A lot of women like don't want to feel out of control; they don't want to feel like they have no control over their bodies. Now, you eat a certain amount of THC, your heart [rate]'s going to increase, but that also happens to the skin, to the body.

You increase circulation, you have deep relaxation, and then you combine them with essential oils, which is also combining a whole different type of herbal medicine.

\*\*\* The following transcript is AI-generated and some words have been removed for spacing. Please listen to the episode for full context.





# The Dime



Listen Now

A weekly podcast covering the entire [Cannabis Industry](#).

## One Plant = 30,000+ Opportunities, Breaking Down Industrial Hemp

### Industrial Hemp Business Opportunities

When the farm bill passed, we looked at the industrial hemp industry. It doesn't take a whole lot of work on Google to figure out that there are so many different use cases for the plant, right? I mean, there are some people who say 20,000, and some people say 30,000. And so, [...] you start thinking about all of the different applications that you can use for what I call "entire plant utilization," right? I mean, our focus is on the stalk of the plant. You have a plant that you can use a hundred percent of [that] plant, [...] the majority of it, the majority of the biomass, and the stalk of the plant. There are so many different verticals that you can go into. You start thinking about those addressable markets, and then you combine the fact that this is a natural product, [a] natural material. With the world moving towards sustainable materials, you, when you're conceiving the idea, you say, "Oh my gosh, this can change the world."

### Secret Unknowns About Industrial Hemp Capabilities

I think one of the things that a lot of people don't know is that industrial hemp is the number one carbon-sequestration plant on the planet.

We've done some studies and research in the past, and [...] if you take all the farmland here in the United States and, in an extreme example, if you converted all of that to industrial hemp, what does that mean for helping solve the US emissions rate?



**Coleman Beale, CEO of Bastcore**

### Did You Know?

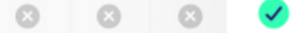
It's fairly well known, at least within the hemp industry, that Henry Ford built a car and fueled it with hemp.

\*\*\* The following transcript is AI-generated and some words have been removed for spacing. Please listen to the episode for full context.



# Jurisdiction Roundup

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## Federal

The Medical Marijuana and Cannabidiol Research Expansion Act, approved in early December, supports the research on the therapeutic and health benefits of the use of cannabis. The new act implements procedures for the processing and acceptance of Cannabis Research Applications by the Attorney General, and protocol standards for institutions, such as universities, to manufacture and perform research on cannabis for its medicinal benefits and properties.



## New York

Dispensaries are set to begin selling adult-use cannabis following the Cannabis Control Board's issuance of 36 cannabis licenses last month and consumers will have the ability to confirm that the storefront they visit is legitimate due to the establishment of the New York State Licensed Cannabis Dispensary verification tool. A universal symbol will be displayed on all licensed storefront businesses as well as on individual products sold, ensuring that the dispensary and the products they sell are regulated and tested by the state. Governor Kathy Hochul unveiled the verification tool this month, citing its main purpose as a way to help protect the health and safety of the public from consuming untested, illicit cannabis products.



## Colorado

The Board of County Commissioners approved the draft of an ordinance prohibiting the public consumption of alcohol and marijuana on all public properties throughout the County for the duration of the 2023, 2024, and 2025 Winter X Games. Despite the statewide prohibition on the public consumption of cannabis, the Board intends to reprise the County's stance through the adoption of the ordinance, affecting the upcoming and future events. A public hearing is set for December 21, 2022, for final consideration.



# INTERNATIONAL UPDATE

## Mexico

The Sinaloa Cartel is losing its marijuana business, and El Chapo's sons are going after the 'premium weed' market to make up for it

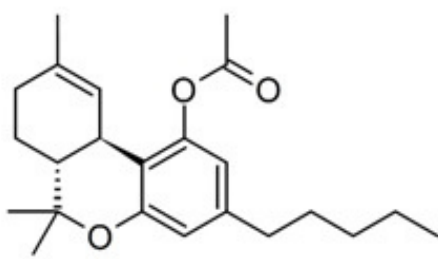
## Germany

Germany Set to Ignite a Legal Marijuana Revolution in Europe

## Colombia

Colombia's Congress Agrees To Final Marijuana Legalization Bill, Which Key Senator Expects To Be Enacted By June

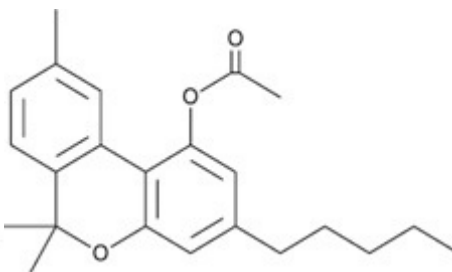
## Minor Cannabinoid Wholesale Pricing



Industry Name: THC-OAcetate

CAS Number: 23132-17-4

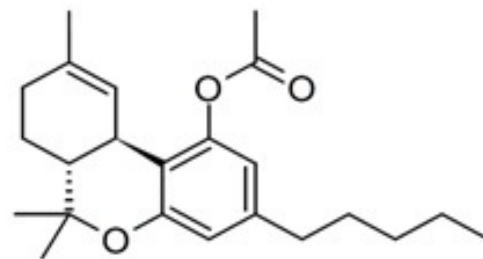
IUPAC: (6aR,10aR)-6,6,9-trimethyl-3-pentyl-6a,7,8,10a-tetrahydro-6H-benzo[c]chromen-1-yl acetate



Industry Name: HHC Acetate

CAS Number: 6692-85-9 (racemic)

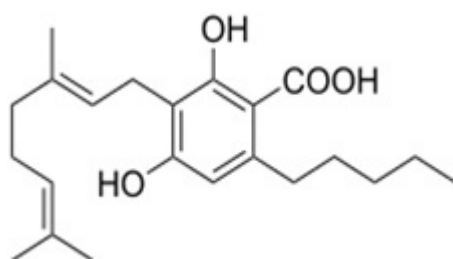
946512-74-9 (6aR,10aR)  
IUPAC: (6aR,10aR)-6,6,9-trimethyl-3-pentyl-6a,7,8,9,10,10a-hexahydrobenzo[c]chromen-1-ol



Industry Name: CBN-O Acetate

CAS Number: 51895-51-3

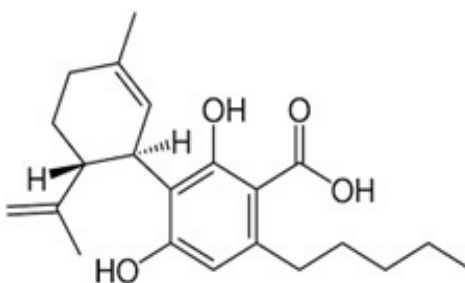
IUPAC: 6,6,9-trimethyl-3-pentyl-6H-dibenzo[b,d]pyran-1-ol, 1-acetate



Industry Name: CBGA

CAS Number: 25555-57-1

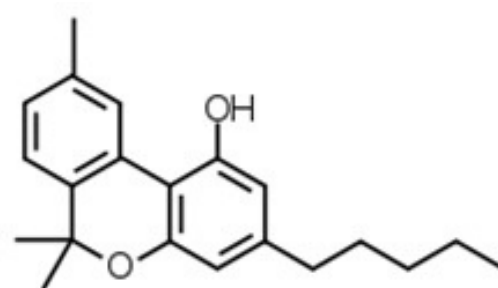
IUPAC: 3-[(2E)-3,7-Dimethylocta-2,6-dien-1-yl]-2,4-dihydroxy-6-pentylbenzoic acid



Industry Name: CBDA

CAS Number: 1244-58-2

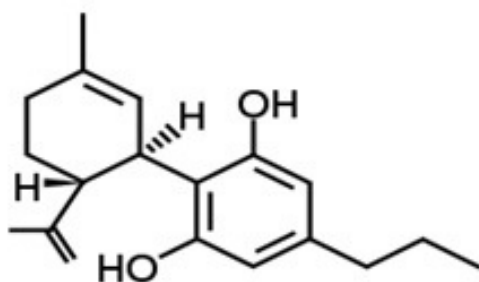
IUPAC: 2,4-dihydroxy-3-[(1R,6R)-3-methyl-6-(1-methylethenyl)-2-cyclohexen-1-yl]-6-pentyl-benzoic acid



Industry Name: CBN

CAS Number: 521-35-7

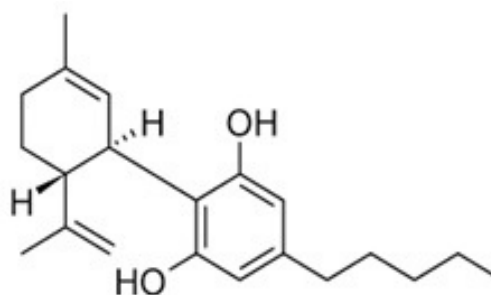
IUPAC: 6,6,9-trimethyl-3-pentyl-6H-dibenzo[b,d]pyran-1-ol



Industry Name: CBDV

CAS Number: 24274-48-4

IUPAC: 2-[(1R,6R)-3-methyl-6-(1-methylethenyl)-2-cyclohexen-1-yl]-5-propyl-1,3-benzenediol



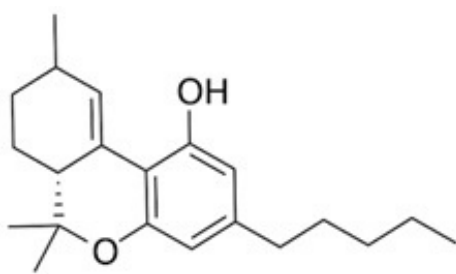
Industry Name: CBD

CAS Number: 13956-29-1

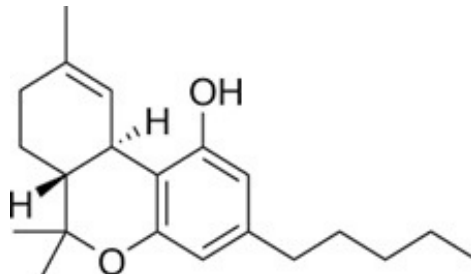
IUPAC: 2-[(1R,6R)-3-methyl-6-(1-methylethenyl)-2-cyclohexen-1-yl]-5-pentyl-1,3-benzenediol



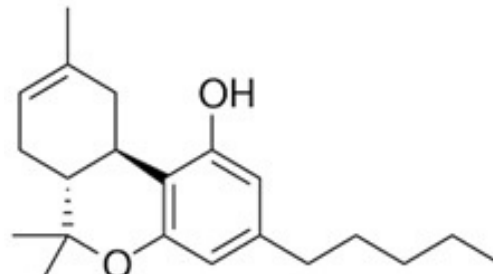
## Minor Cannabinoid Wholesale Pricing



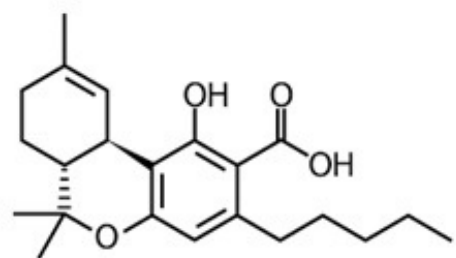
Industry Name: Δ8-THC  
CAS Number: 5957-75-5  
IUPAC: 6aR,7,10,10aR-tetrahydro-6,6,9-trimethyl-3-pentyl-6H-dibenzo[b,d]pyran-1-ol



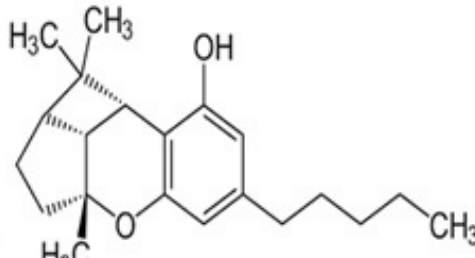
Industry Name: Δ9-THC  
CAS Number: 1972-08-3  
IUPAC: 6aR,7,8,10aR-tetrahydro-6,6,9-trimethyl-3-pentyl-6H-dibenzo[b,d]pyran-1-ol



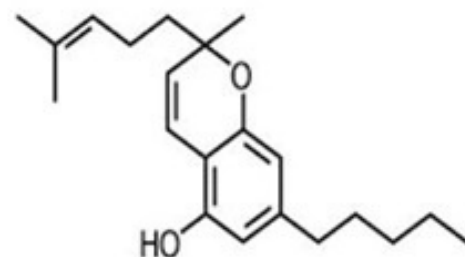
Industry Name: Δ10-THC  
CAS Number: (6aR, 9S) 95588-87-7  
IUPAC: (6aR-trans)-6a,7,8,9-tetrahydro-6,6,9-trimethyl-3-pentyl-6H-dibenzo[b,d]pyran-1-ol



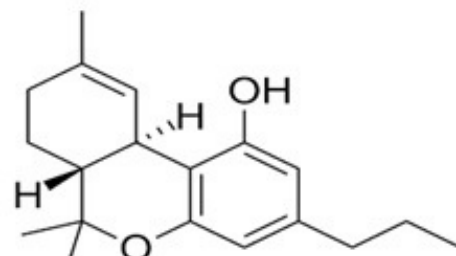
Industry Name: THCA  
CAS Number: 23978-85-0  
IUPAC: 6aR,7,8,10aR-tetrahydro-1-hydroxy-6,6,9-trimethyl-3-pentyl-6H-dibenzo[b,d]pyran-2-carboxylic acid



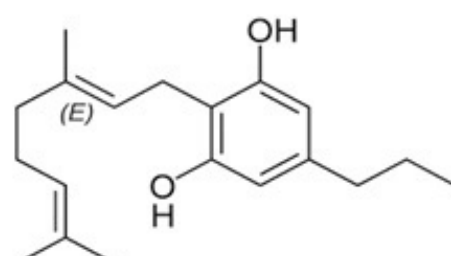
Industry Name: CBL  
CAS Number: 21366-63-2  
IUPAC: (1aS,1aIR,3aR,8bR)-1,1,3a-trimethyl-6-pentyl-1a,1aI,2,3,3a,8b-hexahydro-1H-4-oxabenzof[cyclobuta[cd]inden-8-ol



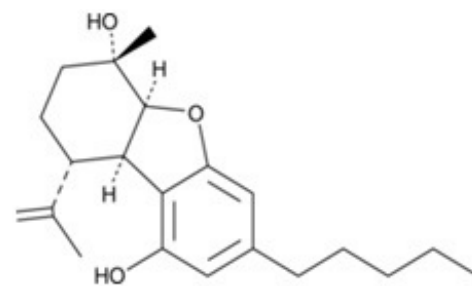
Industry Name: CBC  
CAS Number: 20675-51-8  
IUPAC: 2-methyl-2-(4-methyl-3-penten-1-yl)-7-pentyl-2H-1-benzopyran-5-ol



Industry Name: THCV  
CAS Number: 31262-37-0  
IUPAC: 6aR,7,8,10aR-tetrahydro-6,6,9-trimethyl-3-propyl-6H-dibenzo[b,d]pyran-1-ol

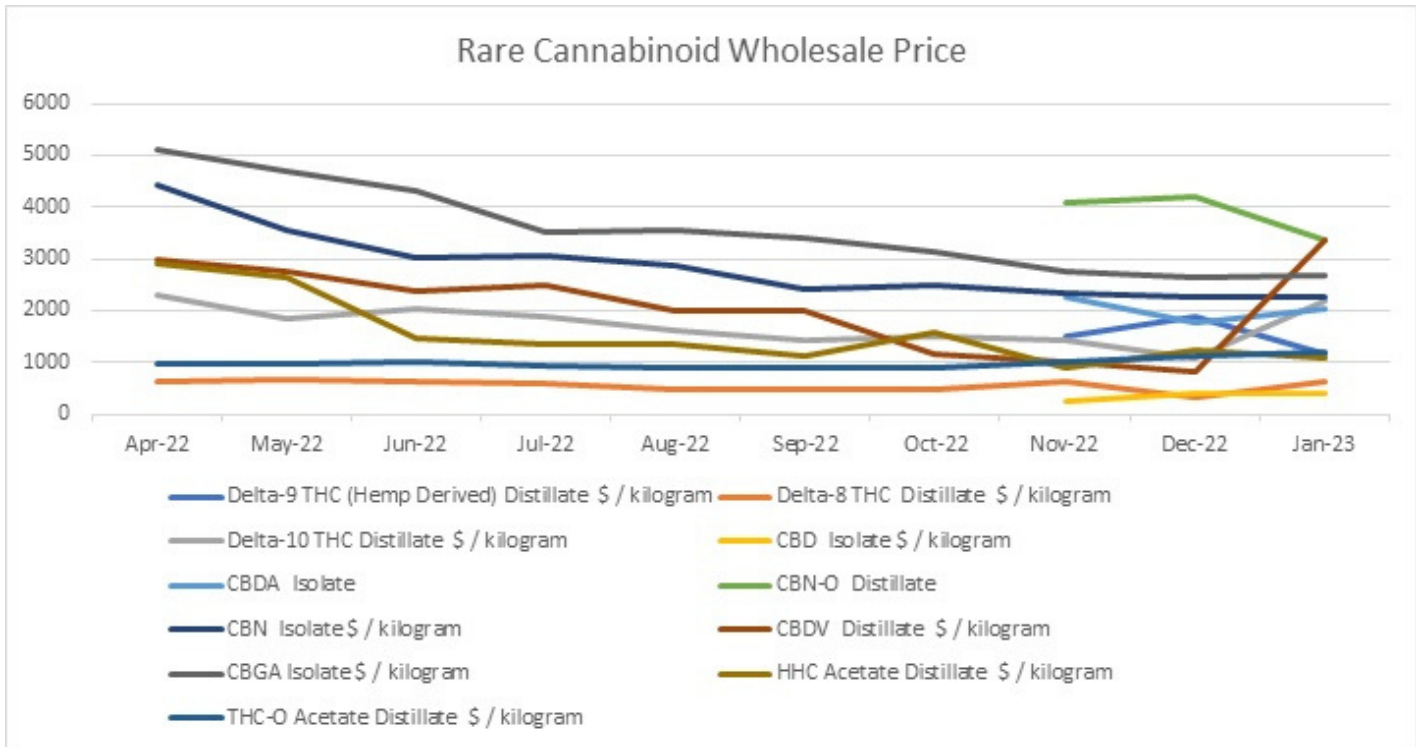


Industry Name: CBGV  
CAS Number: 558224-11-8  
IUPAC: 2-[(2E)-3,7-dimethyl-2,6-octadien-1-yl]-5-propyl-1,3-benzenediol



Industry Name: CBE  
CAS Number: 52025-76-0  
IUPAC: (5aS,6S,9R,9aR)-5a,6,7,8,9,9a-hexahydro-6-methyl-9-(1-methylethenyl)-3-pentyl-1,6-dibenzofurandiol

## Minor Cannabinoid Wholesale Pricing



This month's data shows some interesting trends in the prices of hemp-derived products. For example, the price of Delta-8 THC Distillate was highest last February at \$839 before decreasing steadily to the low of \$484 in August. Prices then increased slightly from September to November before dropping sharply to \$309 in December. Similarly, the price of CBN Isolate increased from \$3,630 in January to a peak of \$4,435 in March before decreasing steadily to \$2,250 in December. CBDV Distillate followed a similar trend, rising from \$4,863 in January to a peak of \$3,000 in March before steadily declining to \$3,375 in December. Overall, the data paints a picture of a highly volatile market for hemp-derived products in the United States, with prices fluctuating significantly throughout the year. Our information also suggests that prices may have been influenced by seasonal trends, with prices generally decreasing towards the end of the year. The increase in supply post-harvest in the fall is likely due to the above factors.

\*Disclaimer: Some of the text from this analysis was generated with an AI system.

# LEADING THE EVOLUTION OF CANNABIS SCIENCE



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## IDENTIFYING AREAS FOR AUTOMATION IN CANNABIS

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When evaluating current processes and identifying areas where automation can improve efficiencies, companies should consider the potential cost savings associated. Automation can reduce the time spent on manual tasks, resulting in increased productivity and fewer labor costs. Automation can also improve speed and accuracy, resulting in better-quality products and fewer errors. Leading to cost savings through less rework and waste. Ultimately, automation can optimize workflows, improving efficiency and fewer delays. All these factors can result in significant cost savings for companies that adopt automation. To achieve automation, sensors need to be utilized to measure parameters previously monitored by humans and parameters that humans cannot watch.

Using sensors to measure cannabinoids in real-time is an opportunity for automation in the cannabis industry. Sensors are electronic devices that measure physical conditions such as temperature, pressure, and moisture. In the cannabis industry, sensors can measure the concentration of cannabinoids in real-time, thus allowing growers, extractors, and manufacturers to accurately monitor the levels of THC and CBD in their products. Using sensors to measure cannabinoids in real-time can help improve the quality of cannabis products. By measuring the levels of THC and CBD in real time, cannabis companies can ensure that their products meet the desired specifications. For extractors, this is especially important, who need to ensure that their extracts have the appropriate levels of THC and CBD to provide the desired effects. In addition, sensors can monitor the conditions of the environment in which the cannabis is grown, such as temperature and humidity, to ensure optimal growing conditions. In addition to improving the quality of cannabis products, using sensors to measure cannabinoids in real time can also help decrease production costs. By monitoring cannabinoid levels in real-time, cannabis companies can reduce the time and resources spent on testing their products. Fewer hours spent on testing and fewer resources used are both major wins for cost saving.

Using sensors to measure cannabinoids in real time can help improve compliance with regulatory standards. By monitoring cannabinoid levels in real-time, cannabis companies can ensure that their products meet the desired criteria. In states with strict regulations on THC and CBD levels in cannabis products, this is especially important. Overall, using sensors to measure cannabinoids in real time is an opportunity for automation in the cannabis industry. By measuring the levels of THC and CBD in real time, cannabis companies can ensure the quality of their products, reduce production costs, and comply with regulatory standards. This is especially important for extractors, who need to ensure that their products meet the desired THC and CBD levels to provide the desired effects. Using sensors for measuring cannabinoids in real time can help cannabis companies reduce testing costs, improve the quality of their products, and ensure compliance with regulatory standards.



## Artificial Intelligence in the cannabis industry

By Marc Brandl

The cannabis industry is more than growing, manufacturing, transporting and selling product to the end consumer, it is infused every step of the way with technology. QR codes, online ordering and delivery and seed to sale tracking are three prominent examples. Some of the biggest companies in the space are ancillary technology companies focusing SAAS and other software solutions for specific needs up and down the cannabis supply chain. In an industry that is labor intensive with high fixed costs and taxes it's not farfetched to say the legal cannabis industry wouldn't exist without a big assist from the tech sector.

We've already seen more cutting-edge technology make major inroads in day to day operations, the biggest examples being machine learning (ML) and use of algorithms in the business-facing side of the industry such as CRMs, consumer data analytics applied to menus, product creation and marketing and cultivation systems.

More exotic technologies like NFTs and blockchain technology generally have had a lot of hype and interest but so far found very limited use cases around marketing, non-cash payments and genetics. While these technologies hold a lot of promise, widespread adoption within the cannabis industry remains far off.

The last quarter 2022 saw the next wave of promise and hype in technology come in the form of artificial intelligence (AI) with all eyes and keyboards focused on natural language processors that employ massive sets of data to mimic general AI responses to questions, sometimes uncannily so and text to images platforms like DALL-E where you type what you want to see and often receive a psychedelic image generated in response.

The cannabis industry is likely to use artificial intelligence (AI) in a number of ways in the future. Here are a few examples of how AI might be used in the cannabis industry:

- **Quality control:** AI-powered sensors and cameras could be used to monitor the growth and cultivation of cannabis plants, ensuring that they are grown in optimal conditions and are of high quality. HVAC and IPM come to mind.
- **Predictive analytics:** AI algorithms can be used to analyze data on consumer preferences and buying habits to predict future trends and demand for different strains and products in lieu of or supporting traditional consumer surveys.
- **Supply chain management:** AI will be used to optimize the logistics of transport and distribution of cannabis products, helping to ensure that they reach customers efficiently and in a timely manner. Last mile delivery services could be improved considerably.
- **Personalization:** AI-powered chatbots or virtual assistants could be used to provide personalized recommendations to customers based on their individual preferences and needs. Current ratings and reviews systems leave a lot to be desired and cross referencing human input with large sets of purchasing data could make product selection and brand loyalty easier for customers.

The KPIs to pay attention to as AI powered systems come into cannabis will be enabling true data driven decisions and performance improvement processes and lowered labor costs.



## Artificial Intelligence in the cannabis industry

by Marc Brandl

Overall, AI has the potential to greatly enhance the efficiency and effectiveness of the cannabis industry, and it is likely that it will play an increasingly important role in the industry in the coming years.




*DeepAI's version of a cannabis leaf*

I asked OpenAI's popular natural language processing tool ChatGPT when to expect cannabis legalization in the United States. Would it have a surprise in store for cannabis industry veterans who have been

*"It is difficult to predict when federal legalization of cannabis will occur in the United States. There has been growing support for legalization at the federal level, with a number of bills being introduced in Congress to remove cannabis from the list of controlled substances and legalize it at the national level. However, these efforts have not yet been successful, and it is uncertain when or if they will be."*

So, three to five years until we get federal reform. Sounds suspiciously familiar.


## SECTOR ANALYSIS\*

	INDICES	3 MONTH%	6 MONTH %
	S&P 500	16.67%	21.52%
	DOW JONES	6.58%	6.96%
	NASDAQ	-5.92%	-4.15%
	GLOBAL CANNABIS	-17.87%	-30.58%
	AMERICAN CANNABIS	-18.52%	-21.08%



**According to Prohibition Partners,' the residual fallout from the pandemic and ongoing war in Ukraine has dragged global stock market prices down 25% this year.**

\*This text expresses the sole opinion of the writer. The thoughts expressed are independently formed and the writer is not compensated by any third party.

	SECTOR	3 MONTH	6 MONTH
	HEALTHCARE	27.09%	32.67%
	TECHNOLOGY SECTOR	-3.22%	0.05%
	INDUSTRIALS	7.46%	15.28%
	FINANCIALS	0.75%	7.24%
	CONSUMER CYCLICAL	-6.76%	3.27%
	CONSUMER NON-CYCLICAL	7.45%	10.73%
	BASIC	13.34%	6.52%
	ENERGY	5.29%	14.18%
	UTILITIES	-3.94%	9.85%
	ALTERNATIVE HARVEST ETF (MJ)	-10.19%	-22.77%
	MULTI-STATE OPERATORS (MSOS)	-18.12%	-22.65%

\*Information retrieved from NCV and E\*trade.



## Clinical Endocannabinoid System Consortium

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The Clinical Endocannabinoid System Consortium (CESC) is dedicated to the data & analysis necessary to validate Cannabis products for the benefit of a global marketplace.

*CESC curates real-world data in collaboration with a vetted group of scientific professionals, including physicians, chemists, biologists, botanists, engineers, economists, and regulatory affairs specialists. Our approach is informed by biotechnology and influenced by multivariate analysis (AI).*

*We pursue potency, dosage, and efficacy for product safety validation and clinical correlation. Our efforts are informed by the Cannabis used in active communities*

### Initiatives

**The Dosing Project:** Dose-effect relationships of multi-agent botanicals involve appropriate characterization and categorization of products actively used by consumers. This post market surveillance study of Cannabis products includes dosage (mg/kg), therapeutic and wellness indications, and an evaluation for adverse events,

**The Cannabis Mind:** Cannabis use results in a broad range of psychoactive states. From altered consciousness, energetic, sedative, focused, aroused, creative and many more, we map the Cannabis mind using subjective scales and Quantitative EEG as a biomarker.

**Agronomy:** CESC's focus corroborates appellations, water conservation best practices, remote monitoring, and soil remediation. Our Investigations in breeding, cultivation, and safer pest management techniques support a more sustainable Cannabis industry.

**Nomenclature:** Quality assurance and predictable effects start with Cannabis characterization and categorization. CESC applies untargeted laboratory analysis to appropriately characterize botanicals and develops algorithms to categorize Cannabis chemotype. Products are further characterized with in vitro cell-based potency bioassays and presented using consumer focused product labeling

**Cannabis & Immunity:** Interactions of Cannabis use and cellular & humoral immune responses with a focus on improved outcomes in malignant, auto immune, and infectious disorders.



## Clinical Endocannabinoid System Consortium

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### Capabilities

**Analytical Validation:** Laboratory characterization of botanical compounds for consistency, stability, and effectiveness.

**Good Manufacturing Practices (GMP):** Process definition & development; implementing Quality Management Systems; reviewing & certifying Compliance Programs.

**Contract Research Organization (CRO):** Executing clinical studies; selecting & monitoring sites; recruiting respondents from Cannabis using communities; analyzing & interpreting data for timely and cost-effective commercialization.

**Education:** Targeting the professional medical community; establishing practice standards; publishing categorical product reports.

*The CESC's broad approach & expertise guides our partners through all phases of the development life cycle: from concept to commercialization.*

The [CESC](https://www.thecesc.org) is a non-profit organization that relies on community support for its ongoing investigations.

[DONATE to Cannabis Science](https://www.thecesc.org/donate)

For more information visit the [CESC](https://www.thecesc.org) at [www.thecesc.org](https://www.thecesc.org).

# HOT IN THE NEWS

January 2023

- 1** The Sinaloa Cartel is losing its marijuana business, and El Chapo's sons are going after the 'premium weed' market to make up for it
- 2** NYC seizes 600 pounds of weed, issues flurry of summonses in crackdown on illegal pot sales
- 3** New York Governor Signs Bill Encouraging Businesses To Use Hemp For Construction, Packaging And Other Purposes
- 4** Ousted co-founders sue leaders of marijuana tech company Dutchie
- 5** Alaska ranks highest, New Jersey lowest in adult-use marijuana taxes, report says
- 6** Biden makes history by signing landmark marijuana research bill into law
- 7** As SAFE Banking prospects fade in Congress, marijuana industry tempers hopes
- 8** Dispensaries' Cashless ATM Transactions Get The Ax





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