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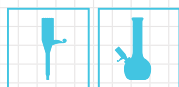


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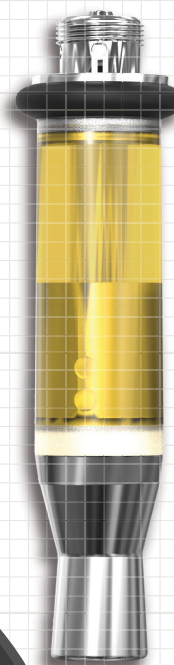
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# Special Delivery

A HUGE PERCENTAGE OF THE WORLD economy is devoted to delivering things from one place to another, a fact that has and will always be true for the cannabis industry, which, like any such business, is all about delivering a variety of products—in this case through a farm-to-pipe food chain—into the end-user's device. Increasingly, however, the end-device in that journey is not a pipe but a vaporizer, a highly-specialized piece of equipment of which there are an increasing multiplicity of styles and types, each meticulously designed to meet the uncompromising needs of an equally diverse demographic of connoisseur vapers. It's a dynamic market where quality is rewarded and mediocrity is brutally relegated to the vape-bin of history.

Along the way, entrepreneurial energy, spurred by an exploding market of passionate vapers, is at a zenith. We're in a golden age of vaporization, with every company laser-focused on perfecting the efficiency and precision with which their products deliver cannabis' active ingredients to humans. Some devices are wonders of design and innovation; others, not so much. But each is forced to function in the real world, and that's where the women will be separated from the girls. In the months and years ahead, the big brands in vaporization will cement or lose market share in what is already a deeply competitive sector. Whoever "wins," the future for the hardcore vaper should be full of thick, white smoke—or not—courtesy of companies determined to make devices that prove why their delivery of cannabis is so special.

Tom Hymes  
tom@cannmg.com

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For the Cannabis Professional

EDITOR IN CHIEF: Tom Hymes

EXECUTIVE EDITOR: Rob Hill

CREATIVE DIRECTOR: Angela Derasmo

CONTACT: [Editorial@cannmg.com](mailto:Editorial@cannmg.com)

### CONTRIBUTING EDITORS

Adrian Z. Sedlin, Anastasia Kaufman, Benjamin Hoopes, Bruce Margolin, Chauntelle Tibbals, Danny Reed, David Hodes, Heidi Marks, Jeffrey D. Welsh, Jefferson Reid, Kenneth J. Berke, Josh Wurzer, Leslie Bocskor, Lukian Kobzeff, Luke K. Stanton, Jackson, Joanne Cachapero, Larry J. Towns, Luna Stover, Matthew Rosen, Megan Stone, Michael S. Chernis, Michael Green, Nancy A. Shenker, Neil Juneja, R.E. Graswich, Sahar Ayinehsazian, Sean MaHannah, Scott Jordan, Shara Ross, Steve Javors, Stewart Tongue, Tera McGrath, Tom Quigley, Travis Turner

COPY EDITOR: Kathee Brewer

### ADVERTISING & MARKETING

ADVERTISING DIRECTOR: Debbie Caracciolo

SALES DEPARTMENT:

Brie Ann Gould, Stephanie Smith

CONTACT: [Sales@cannmg.com](mailto:Sales@cannmg.com)

### PHOTOGRAPHY

LEAD PHOTOGRAPHER: Thomas O'Brien

CONTRIBUTING PHOTOGRAPHERS: Allison Becket,

Amarett Jans, Chris Starcher, Hew Burney, Jeff Forney,

Kristen Angelo, Mike Rosati, Timothy White

PHOTO EDITOR: Zack Korn

MAKE UP: Elena Gharbigi

### CONTRIBUTING ARTISTS

Amanda Nelson-Sinagra, Ryan Caradang,

Zack Korn

### DATA MANAGEMENT

DATA MANAGER: Sonia Erazo

### ONLINE DEPARTMENT

BRAND MANAGER: Ryan Caradang

SOCIAL MEDIA: Danny Reed

VIDEO DEPARTMENT: Eric Mittleman, TJ Roberts

### BUSINESS OFFICES

CHIEF EXECUTIVE OFFICER: Darren B. Roberts

EXECUTIVE DIRECTOR OF CONTENT: Linda Friedman

DIRECTOR OF OPERATIONS: Erin Zavala

CREATIVE STRATEGIST: Gavin Antill

PUBLIC RELATIONS: Craig Melone

EXECUTIVE ASSISTANTS: Jane Smith, Taz

GENERAL INFORMATION: [Hello@cannmg.com](mailto:Hello@cannmg.com)

### MAILING ADDRESS

21333 Oxnard Street, Second Floor

West Hills, CA 91367

(310) 421-1860

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## MAJESTIC

Tyler Price sits atop Raven Rock  
in the Coopers Rock State Forest in  
Northern West Virginia.

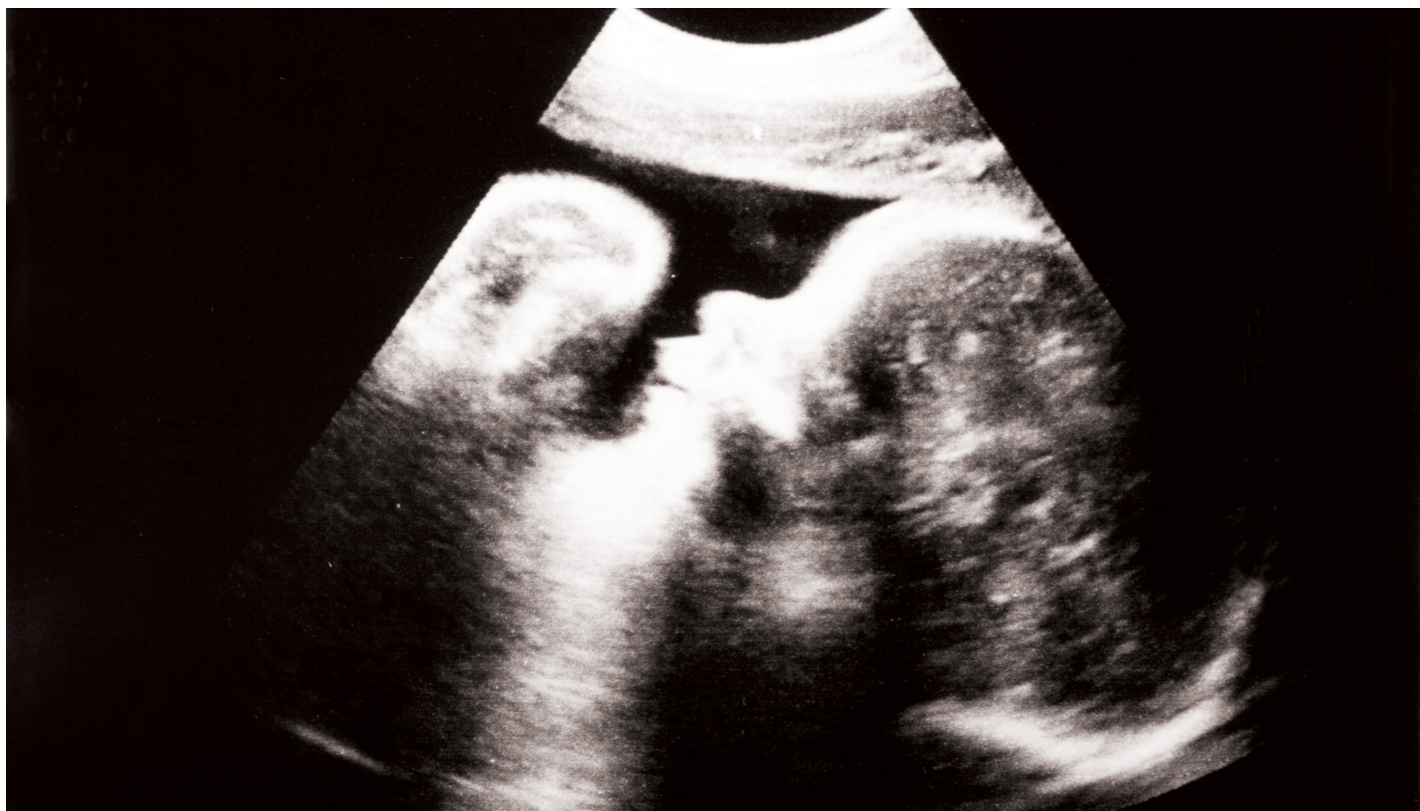
*Photography by: Chris Starcher (@dripmedia)*



# Harvest

*All the news that's fit to smoke.*

- OREGON'S TAX HAUL
- DEA'S NEW CBD PLAY
- POT STATE CAR DEATHS
- WEED CONSUMER STUDY



## SMOKING CANNABIS WHILE PREGNANT IS A 'THING?'

U.S.A.— The headline in *Glamour* succeeded in getting our attention: “Smoking Marijuana While Pregnant Is Apparently Becoming More Popular.” The article referenced a study published online December 19 by the Journal of the American Medical Association (JAMAnetwork.com) found “the number of women using marijuana while pregnant has apparently doubled over the past 12 years.”

Sounds a little alarming until you get to the real numbers. “Back in 2002,” noted *Glamour*, “2.4 percent of women between the ages of 18 and 44 admitted to using marijuana while pregnant, and in 2014 that number rose to 4 percent. While that jump seems

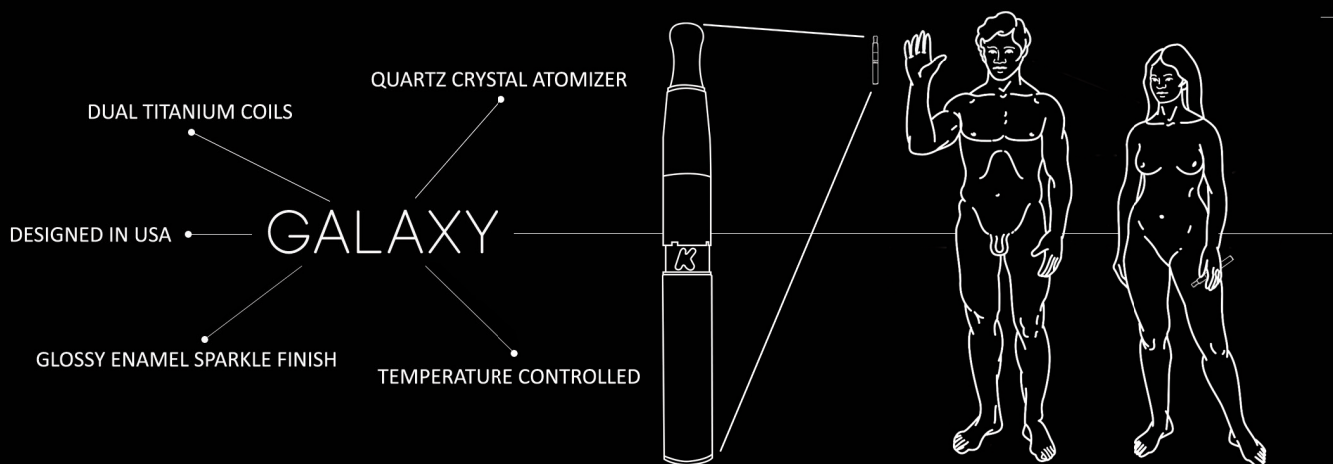
high—wink, wink—it’s actually in line with an overall marijuana-use trend in America: The study reports marijuana use among U.S. adults more than doubled during the same period.”

The magazine reminded pregnant women about the risks associated with smoking while pregnant, advising, “Before you go reaching for a joint to combat morning sickness, know that weed has been found to have a negative effect on fetuses,” but also added, “Considering that the study wrapped before recreational marijuana was legalized in California, Massachusetts, Maine, and Nevada, it’s safe to say the trend may have continued upward since.”

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## OREGON HAS COLLECTED \$54.5 MILLION IN POT TAXES SO FAR THIS YEAR

SALEM, OR— From February through November 2016, the State of Oregon officially took in \$54,506,832 in tax revenue from cannabis sales. Complicating the picture was the fact that there were two different tax rates in effect from October 1, 2016, until December 31, 2016. According to Oregon.gov, “Medical marijuana dispensaries must charge a tax of 25 percent on recreational marijuana sold. Retailers licensed by the Oregon Liquor Control Commission (OLCC) must charge a tax of 17 percent on recreational marijuana sold. Businesses must be licensed by OLCC before they can begin charging the lower rate.”

Monthly revenue varied greatly throughout the year. In February, the state received \$2,484,170 in gross revenue. In October, it took in \$ 7,831,157.43.

“Measure 91, which voters approved in 2014, dictates how marijuana tax money will be spent, with the biggest portion—40 percent—going to the Common School Fund,” reported KPTV.com. “The rest of the money is divided between mental health, alcoholism and drug services, state and local law enforcement agencies, and the Oregon Health Authority.”

### STUDY

## Alcohol amplifies aggression; cannabis diminishes it



**CHILLVILLE, U.S.A.—** Research often supports what we understand instinctively. Consider the results of research into

“the link between alcohol, cannabis, and aggression in healthy individuals,” recently published in *Psychopharmacology*.

“The study of 61 participants found alcohol consumption increased aggressive responses during a computer-based experiment designed to measure aggression, while cannabis consumption reduced aggressive responses,” reported PsyPost.org.

Lest anyone draw any universal conclusions from

that, the study’s lead author said the results are anything but binding.

“It is important to keep in mind that while alcohol intoxication can increase feelings of aggression in regular alcohol users, it does not automatically mean that it will lead to behavioral acts of aggression in a real-life setting,” said Elizabeth de Sousa Fernandes Perna of Maastricht University. “The same is true for cannabis, but vice versa: Cannabis intoxication does not automatically lead to a reduction of aggressive behavior in regular cannabis users. The results of our study indicate that intoxication with alcohol is more likely to lead to aggression compared to cannabis intoxication.”

Nine point nine times out of ten.

### LAW



## CONSTITUTIONAL AMENDMENT TO LEGALIZE CANNABIS FILED IN TEXAS

AUSTIN, Texas— You simply never know with Texas. State representative Donna Howard last month introduced a joint resolution proposing “a constitutional amendment to authorize and regulate the possession, cultivation, and sale of cannabis.”

According to TheJointBlog.com, “The proposal joins several other measures that have been filed in the state that would either decriminalize cannabis or greatly reduce the charges associated with it, though HJR 46 is the only one that would actually make cannabis legal.

“Given that the measure is a constitutional amendment,” added the site, “the battle will be a tough one; it requires a [two-thirds] vote in the state’s legislature. If it does receive enough support in the legislature, it will be placed before voters during the 2018 election.”

6

**Percentage of vape sales—devices and consumables—in the nearly \$2.2 billion cannabis market in Colorado, Oregon, and Washington State within the past twelve months.**

— (Source: BDS Analytics)



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## DEA



## “Don’t worry; be happy!”

WASHINGTON, D.C.— A week after Drug Enforcement Agency head Chuck Rosenberg’s December 14 announcement in the Federal Register that the Drug Enforcement Administration had created a separate Scheduling code (7350) for “Marihuana Extract,” the Agency was still at pains to explain what the DEA is really up to with the new designation, which had people fired up the minute it was announced. The feds define marijuana extract as “an extract containing one or more cannabinoids that has been derived from any plant of the genus Cannabis, other than the separated resin (whether crude or purified) obtained from the plant.”

Per USNews.com, “Some cannabis advocates see the new code as a backdoor attempt to stretch the definition of marijuana, a federally illegal Schedule I drug, to cover products that are lawfully imported or produced domestically from plants with low amounts of the high-inducing compound tetrahydrocannabinol (THC).” In other words, products that contain CBD oil.

Not so, said the DEA. “From a practical standpoint, we are giving priority, actually, to those researchers who are conducting research with marijuana extracts, [which] the internal code will allow us to track and prioritize,” DEA spokesperson Russ Baer told USNews.com. “We recognize there have been some studies that have been promising...and we want to be able to support that ongoing scientific research, particularly as it relates to marijuana extracts.”

The implication is the DEA wants to help smooth the way forward by helping facilitate research that will lead to the development of a federally legal cannabis industry, or at least a federally legal medical marijuana industry.

According to Robert Hoban of the Colorado-based Hoban Law Group, however, it’s not that simple. Careful to state that the “sky is not falling,” Hoban, an acknowledged expert in legal issues related to cannabis, cannabinoid and hemp, said “the practical effect of having a drug code is far-reaching” even if the DEA has no explicitly nefarious intentions. Because the DEA issues what is called a “Orange Book” of drug codes, he explained to USNews.com, “Now we’re going to see [other federal and state] agencies saying this is an illegal drug because of this drug code.”

Additionally, Hoban claimed only Congress, not the DEA, can make law and schedule controlled substances.

“The feeling is that this is an action beyond the DEA’s authority, and we believe this is unlawful and are taking a course of action for our clients,” Hoban said in a statement issued December 13.



## ACCELERATOR CEO: CANNABIS STARTUP FAILURE RATE TO EXCEED 97%

CAUTIONVILLE, U.S.A.— Entrepreneurial interest in the cannabis industry has skyrocketed for good reason: All but one of the state cannabis initiatives passed in November. But one accelerator chief executive officer has predicted an overwhelming majority of startups in the space will fail. It’s just business as usual, opined Brian Mac Mahon, founder of Los Angeles-based startup center Expert DOJO. Mac Mahon has “helped more than 600 startups get up and running since 2014, [and] is working with more cannabis businesses in the hopes that he’ll be able to increase their chances of surviving amid all the uncertainty,” reported New Cannabis Ventures. “The failure rate of tech startups, according to Mac Mahon, is 97 percent, and he anticipates that number will be even worse in cannabis while the industry is getting established.”

Mac Mahon painted a stark assessment of the situation. “There’s a tiny investment market, and the investors who are investing are investing in cannabis products they already know and cannabis people they’ve known for a long time, so people who are new to the industry have a very small chance of breaking in even if they’ve got an amazing product,” he said.

“Despite his concerns,” added New Cannabis Ventures, “Mac Mahon, who also warns against giving up too much equity to investors, is optimistic about the opportunities and expects more cannabis entrepreneurs to work with his company.”



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## Medical cannabis states have lower traffic fatality rates

**FACTVILLE, U.S.A.**— Changing opinions is hard to do in the best of circumstances. In a post-factual world, it's all but impossible. Still, facts are stubborn things, especially when it comes to statistics on traffic fatalities. So, it remains to be seen whether results from a study by researchers at Columbia University's Mailman School of Public Health showing an 11 percent reduction in traffic fatalities in states that have legalized medical marijuana makes any difference to policymakers going forward.

"The presence of medical marijuana dispensaries also correlated with fewer traffic fatalities, the study found," reported NewsHerald.com.

Not all medical marijuana states saw traffic fatality reductions, however. "California and New Mexico experienced initial reductions of 16 percent and 17.5 percent, respectively, after the passage of medical marijuana laws but then saw gradual increases in their traffic fatality rates," the news site noted.

Speculation by the researchers on the reasons for the reductions echoed arguments made by legalization advocates. According to NewsHerald.com, "Silvia Martins, a physician and associate professor who was the study's senior officer, theorized that lower traffic fatality rates in states with marijuana laws might be related to lower levels of alcohol-impaired driving: People, especially younger people, began substituting weed for booze."

## NIH REPORT

## TEEN DRUG USE DECLINE CONTINUES



**ANN ARBOR, MI**— Results from the annual "Monitoring the Future" survey, which measures drug use and attitudes among eighth, tenth, and twelfth graders, show the use of "drugs, alcohol, and tobacco declined significantly in 2016 at rates that are at their

lowest since the 1990s," according to a press release posted to MonitoringTheFuture.org. Underwritten by the National Institutes of Health, the survey is led by researchers at the University of Michigan.

"Marijuana, the most widely used of the illicit drugs, dropped sharply in 2016 in use among 8th graders to 9.4 percent, or about one in every 11, indicating any use in the prior 12 months," stated the release. "Use also declined among 10th graders... to 24 percent.

"The annual prevalence of marijuana use (meaning the percentage using any marijuana in the prior 12 months) has been declining gradually among 8th graders since 2010, and more sharply among 10th graders since 2013," the release continued. "Among 12th graders, however, the prevalence of marijuana use is higher (36 percent) and has held steady since 2011. These periods of declining use... followed several years of increasing use by each of these age groups.

"Daily or near-daily use of marijuana—use on 20 or more occasions in the previous 30 days—also declined this year among the younger teens (significantly so in 8th grade to 0.7 percent and to 2.5 percent among 10th graders). However, there was no change among 12th graders in daily use, which remains quite high at 6 percent—about where it has been since 2010."

## Judge's ruling puts future of Colorado Springs 'pot clubs' in doubt

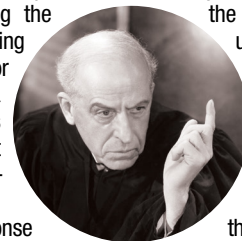
**COLORADO SPRINGS, CO**— The future of seven Colorado Springs cannabis clubs is in doubt following a ruling by Fourth Judicial District Judge Jill Brady granting "the Colorado Springs City Attorney's Office's request for an injunction prohibiting the businesses from allowing onsite consumption or exchanging marijuana under what the clubs call a 'reimbursement model,'" reported Gazette.com.

The ruling came in response to what is being called a "rebellion" by the clubs, all of which are "plaintiffs in an ongoing lawsuit in El Paso County District Court challenging the constitutionality of the city's ban on marijuana consumption clubs," the website noted. "The clubs sprang up after Amendment 64 was passed in

2012 legalizing adult use and sales of recreational marijuana, but banning public consumption. The clubs gave people a place to use cannabis and socialize in private."

The city clerk has sent letters inviting the clubs to apply for licenses under the city's new statute, but the invitations were ignored, as were cease-and-desist letters sent in September. No immediate enforcement action will be taken, said the judge said, but the clock is ticking.

"No immediate enforcement action will be taken, the judge said, but the clubs could face a range of penalties should they defy the ruling, ranging from contempt charges to action by the city's code enforcement division," reported Gazette.com.





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DUNLEVIE.CO







## ANANDA HEMP COMMENTS ON DEA RULING

**LEXINGTON, KY**— December 14, the Drug Enforcement Administration issued a ruling on the coding of “marihuana extracts.” Many questions have arisen in the marketplace from those concerned the intention of the agency was to classify hemp-derived extracts containing Cannabidiol (CBD) as Schedule I substances.

Ananda Hemp and parent company Ecofibre have sought legal advice and believe the Final Rule published by DEA does not change the legal status of CBD, which can only be done by a scheduling action that has not occurred. The companies are of the belief that the ruling was an administrative action and not an attempt to bypass any congressionally imposed laws, such as the 2014 Farm Bill or any other judicial processes.

“We strongly believe that our farming operations and products obtained under those operations are, and will continue to be, compliant and legal in all fifty states,” said the companies in a joint statement.

Ecofibre—an Australian company that maintains one the world’s largest and most diverse seed banks of cannabis sativa germplasm, which includes several certified industrial hemp cultivars—has been working in the state of Kentucky since 2014, operating under section 7606 of the 2014 Farm Bill. To date, the company has invested millions of dollars in the region and created a broad range of jobs in central Kentucky. This year, it contracted 500 acres of industrial hemp production and recently completed another successful harvest season.

*AnandaHemp.com*

## CANNABIZ CONSUMER GROUP RELEASES COMPREHENSIVE STUDY OF CANNABIS CONSUMERS

**CHICAGO**— Cannabiz Consumer Group recently completed CannaUse, the largest national consumer study on legal cannabis usage, market segmentation, and product substitution. The study of more than 55,000 respondents from the National Consumer Panel demonstrates cannabis consumers are far different from the popular “stoner” stereotype. Per CannaUse results, nearly one in ten American adults (29.5 million people) have purchased marijuana legally

since medicinal use was legalized in California in 1996. In addition, 40 percent of adults in states with no legal recreational markets indicate they would purchase marijuana if it were legal to do so. Put another way, there are more than 90 million adults in the United States with serious interest in a product they can legally obtain only through travel or, in some cases, debilitating illness.

*CannabizConsumerGroup.com*



## Aurora Cannabis breaks ground on massive production facility

**VANCOUVER**— Aurora Cannabis has broken ground and initiated construction on an 800,000-square-foot production facility to be known as “Aurora Sky.” The new hybrid greenhouse facility, with a footprint larger than sixteen football fields, is expected to be the largest and most automated cannabis production facility in the world. Situated on 30 acres of leased land in Leduc County, Alberta, Canada, management anticipates Aurora Sky to produce in excess of 100,000 kilograms of high-quality, low-cost cannabis per year. The location of the new facility provides unrivaled access to transportation, industrial infrastructure, power, water, gas, and courier services.

“Our objectives are very clear: to build the largest production capacity with the highest production quality and the lowest production cost,” said Steve Dobler, P. Eng., president.

The company, which currently operates a 55,200-square-foot purpose-built facility in Mountain View County, Alberta, has selected a closed-system, hybrid greenhouse concept of Dutch design for the expansion. This system will give Aurora’s cultivation specialists precision control over all critical environmental variables to ensure production quality is consistent with the Aurora standard.

*AuroraMj.com*





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# MassRoots

## MASSROOTS TO ACQUIRE WHAXY IN CASH AND STOCK DEAL

DENVER, CO— MassRoots has entered a definitive agreement to acquire DDDigital Inc., d.b.a. Whaxy and Cannabuild, for \$100,000 and 2,926,830 million shares of MassRoots' common stock. Since launching in May 2016, Whaxy's menu management and online ordering platform for licensed cannabis businesses has processed more than \$5 million in volume across 40,000 unique transactions. The acquisition is subject to customary closing conditions.

"This acquisition, when completed, will expand MassRoots' offerings to include a full suite of dispensary software solutions—online ordering, marketing, and real-time inventory management—for cannabis businesses," said Isaac Dietrich, MassRoots' chief executive officer. "Over the next few months, our focus will be on increasing the number of dispensaries that utilize the MassRoots/Whaxy platform."

*MassRoots.com*

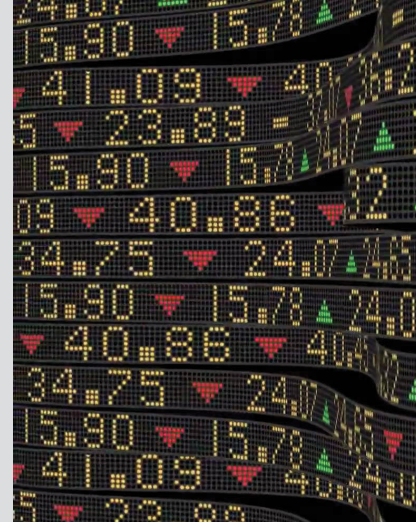


## Barron Lighting Group acquires Growlite

GLENDAL, AZ— Barron Lighting Group, the inventor of the first LED exit sign and brands such as Exitronix, Trace\*Lite, specialtyLED, and Indoor Grow Science, has acquired Growlite, a leader in horticulture lighting products.

Barron Lighting Group's forty-four years of lighting history combines the science of HID and LED lighting with Growlite's understanding of the art of indoor horticulture to produce high-performing, energy-efficient UL- and ETL-listed luminaires for the professional and hobby grow markets. The U.S. distributor of Growlite products during the past three years, Barron Lighting Group will continue to provide innovating, cost-conscious solutions that fit the needs of growers across the country.

*BarronLTG.com*



## CanniMed files final prospectus, announces pricing for initial public offering

SASKATOON, Saskatchewan— CanniMed Therapeutics, a plant biopharmaceutical company specializing in the production of pharmaceutical-grade cannabis, has priced its initial public offering of 5,000,000 common shares at \$12 per common share. The offering is expected to result in aggregate gross proceeds to CMED of \$60,000,000. In addition, CMED has granted the underwriters an option, exercisable in whole or in part, for a period of thirty days following the closing of the offering, to purchase up to an additional 750,000 common shares at a price of \$12 per common share, to cover over-allotments, if any.

The offering is tendered through a syndicate of underwriters led by AltaCorp Capital Inc. and including Canaccord Genuity Corp., Clarus Securities Inc., Mackie Research Capital Corporation, and Haywood Securities Inc.

*CanniMed.com*

**"The results of our study indicate that intoxication with alcohol is more likely to lead to aggression compared to cannabis intoxication."**

— Researcher Elizabeth de Sousa Fernandes Perna,  
Maastricht University





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## INSURANCE INDUSTRY HAS NEW LOSS CONTROL MEASURES TO HELP EVALUATE RISK

**DENVER, CO—** CS Compliance Systems, developers of the real-time regulatory compliance auditing program Can-naScore, has developed insurance loss control measures for the cannabis industry. The International Risk Management Institute defines loss control as a risk management technique that seeks to reduce the possibility a loss will occur and/or reduce the severity of those that do occur.

Unfortunately, from an insurance perspective, the cannabis industry is not mature enough to identify all the types of potential losses that a cannabis-related business (CRB) might experience. One could assume cannabis operations share the same risks as agriculture, food manufacturing, and retail operations, but nuances make it difficult for underwriters to make informed decisions about CRB insurability. Accordingly, only surplus or excess lines insurance companies, which have much higher insurance costs and limited availability, are willing to provide coverage for CRBs.

*CSComply.com*



## Holiday Heroes

**VOLUNTEERS GATHERED DECEMBER 22** at the Hollywood Hills mansion of Advanced Nutrients founder Michael “Big Mike” Straumietis for the first-annual Holiday Heroes philanthropic effort in Los Angeles. Dozens of volunteers showed their support by helping fill over 1,600 backpacks with goods such as socks, non-perishable food items, and dental floss, after which teams headed to their assigned areas to hand out the backpacks.

Holiday Heroes was founded in Bulgaria in 2012, with charity campaigns taking place each year at Christmas and Easter. One thousand families were fed during the first campaign. During Christmas 2016, 30,000 needy Bulgarians were fed. “My long-term hope for Holiday Heroes in the [United] States is that every major city that has a homeless population that needs help, we’re there,” said Big Mike.

*AdvancedNutrients.com*

## MARAPHARM VENTURES UPDATES CONSTRUCTION TIMELINE FOR LAS VEGAS CANNABIS FACILITIES

**KELOWNA, B.C.—** Marapharm Ventures has updated timelines for its Las Vegas project announced in November and December 2016.

Two starter buildings have arrived at the Marapharm at the Las Vegas property, where site preparation is underway. Forms, slab pour, and cure time is slated for January 16, 2017, with the building erection crew slated to begin January 17. Interior preparation and finishing for grow is to commence January 28, and fencing, security, and signage are projected to be completed by February 20. Numerous other construction items and

interior furnishings and preparations will extend to March 30, and growing, cultivation, and processing for three licensed facilities is expected to commence in April. Delivery of pre-sold cannabis, after curing, testing, and packaging, is projected to occur within three months of the initial harvest.

“We are excited,” said Marapharm CEO Linda Sampson. “Nevada has 50 million adult visitors per year, and marijuana is legal for medical and recreational use, so the market is beyond huge and we will be ready.”

*Marapharm.com*





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## EVENTS CALENDAR



### NEXT MONTH'S INDUSTRY EVENT SCHEDULE

*The following is a listing of select industry events taking place during February 2017.*

#### **WOMEN GROW LEADERSHIP SUMMIT 2017 FEBRUARY 1-3**

*Curtis Hotel, Denver, CO*

Join hundreds of women and men from across the country for three days of intense experiential learning in the Mile High City.

[WomenGrow.com/summit](http://WomenGrow.com/summit)

#### **3RD ANNUAL EMERALD CONFERENCE FEBRUARY 2-3**

*Hyatt Regency Mission Bay Spa & Marina,  
San Diego, CA*

Conference devoted to the exploration and discussion of the science of cannabis.

[TheEmeraldConference.com](http://TheEmeraldConference.com)

#### **CHAMPS TRADE SHOW FEBRUARY 7-9**

*Las Vegas Convention Center*

Since 1999, CHAMPS has hosted the premier exhibitors in the industry, drawing thousands from all over the world to attend.

[CHAMPSTradeShows.com](http://CHAMPSTradeShows.com)

#### **3RD ANNUAL CANNABIS COLLABORATIVE CONFERENCE FEBRUARY 15-16**

*Portland Expo Center, Portland, OR*

Join entrepreneurs, investors, experts, innovators, retailers, producers, processors, commercial cultivators, wholesalers, manufacturers, ancillary business supporters, and funding specialists from the Pacific Northwest and around the nation.

[CCC-Con.com](http://CCC-Con.com)

#### **INTERNATIONAL CANNABIS BUSINESS CONFERENCE FEBRUARY 16-17**

*Hilton San Francisco Union Square,  
San Francisco, CA*

ICBC San Francisco will bring together top state regulators and industry leaders to discuss permits, business models, and opportunities within the newly enacted laws and landscape.

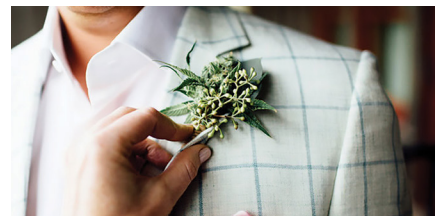
[InternationalCBC.com](http://InternationalCBC.com)

#### **CANNACON EXPO FEBRUARY 16-17**

*Smith Cove Cruise Terminal & Event Center,  
Seattle, WA*

Attracting 10,000 attendees and more than 300 vendors, CannaCon is a leading marketplace for producers, processors, and retailers.

[CannaCon.org](http://CannaCon.org)



#### **CANNABIS WEDDING EXPO FEBRUARY 19**

*The Falls Event Center, Littleton, CO*

Features vendors offering custom hemp wedding dresses, cannabis floral arrangements, cannabis-friendly venues, caterers, photographers, transportation companies, and more.

[CannabisWeddingExpo.com](http://CannabisWeddingExpo.com)

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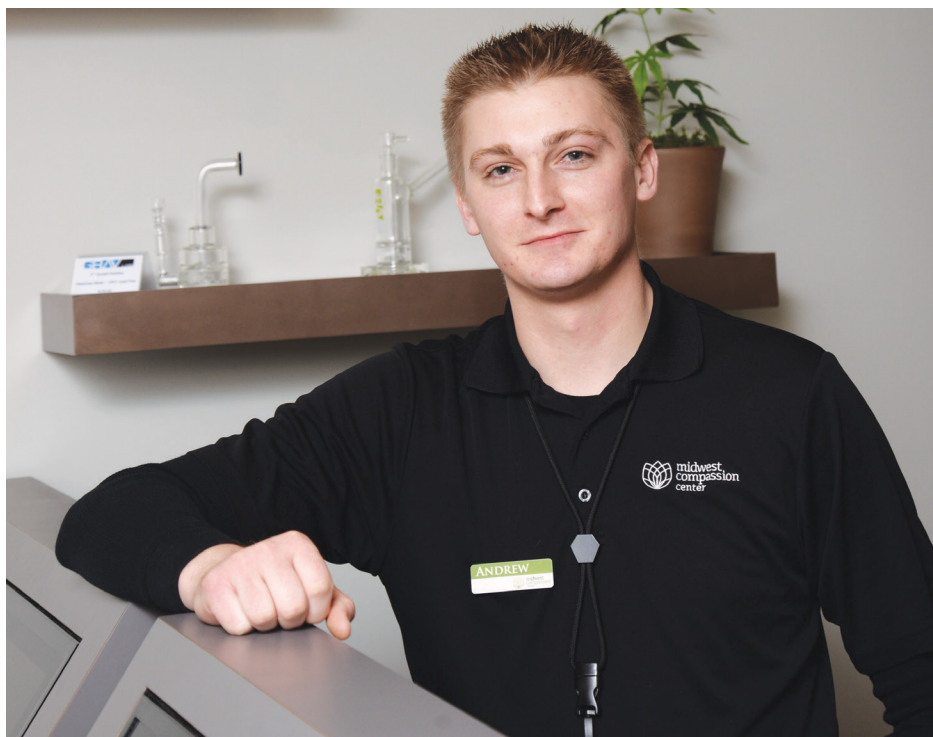


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## DISPENSING MEDICINE WITH Andrew Wagner OF MIDWEST COMPASSION CENTER

**A**NDREW WAGNER learned about the medicinal benefits of cannabis in college. While attending Illinois State University—where he had received Bachelor of Science degrees in communication studies and political science and a Master of Science degree in communication studies—he had a handful of friends who used cannabis to help relieve their depression, stress, and anxiety.

“I had known about medical cannabis programs operating in other states, but never thought about how life-changing a plant could be until I heard my friends’ personal testimonies,” he said. “That is what sparked my interest in cannabis. From that point on, I’ve continuously researched cannabis and have worked with organizations that advocate for reforming our country’s outdated cannabis laws.”

### WHY BUDTENDING

I’ve always been passionate about civic engagement, so when I had the opportunity to work with Houston NORML, I saw it as a vehicle to become civically engaged in a state and culture I knew little about. Texas is extremely strict on marijuana, with only a few counties having enacted “cite and release” policies for minor marijuana possessions. Living in this draconian system and witnessing the lengths taken by Texas residents to obtain a medicine they desperately needed instilled in me a passion to become part of the solution to the problem.

My girlfriend and I moved back to Illinois, and I turned my attention away from the political side of the movement and toward the industry/retail component. I came across an incredible opportunity to work for Midwest Compassion Center, and I went for it.

### CAREER OR PASSION

I would say budtending is a passion of mine that I hope will lead to a career in the cannabis industry.

### HOBBIES

I have operated my own e-commerce store, Deal Sloth, since 2012. It is a retail company that specializes in affordable, quality tobacco and herbal accessories. I’m also a handyman at heart, so I enjoy fixing and building things in my free time.


### BEST SELLERS

I would say a majority of our sales come from flower, followed closely by vaporizer cartridges, edibles, and then extracts.

### AVERAGE PATIENTS A DAY

Currently, MCC serves about twenty to thirty patients a day.

### PATIENT CONCERNS

The most asked question is, “Do I have to smoke it?” The biggest concern has to be the price. Medical cannabis is what we call a “luxury medicine,” so we offer discounts to veterans, people on disability, minors, and senior citizens to help alleviate some of the financial burden of affording medical cannabis. 

“

**HERE AT MCC, WE OFFER DISCOUNTS TO VETERANS, PEOPLE ON DISABILITY, MINORS, AND SENIOR CITIZENS TO HELP ALLEVIATE SOME OF THE FINANCIAL BURDEN OF AFFORDING MEDICAL CANNABIS.**

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# A Royal Flush

NEVADA'S THE+SOURCE HAS COME UP A BIG WINNER FOR PATIENTS, CUSTOMERS, AND THE COMMUNITY.

BY ROB HILL

**A**NDREW M. JOLLEY, the founder and chief executive of The+Source, was born and raised in Las Vegas. When he turned 18, he left and didn't return for fifteen years. He began his career in IT consulting and software development, then transitioned to real estate in the early 2000s. However, when Nevada passed SB374 in 2013, paving the way for legal dispensaries, he quickly decided to apply for a license—and finally return home.

"We were successful in obtaining all of the licenses we applied for and have been on this exciting rollercoaster ever since," Jolley said

with a chuckle. "We finally opened our first location on December 10, 2015. Our Henderson location opened in September 2016."

## THE IDEA

"I lost one of my closest lifelong friends to an accidental opioid overdose in 2001," Jolley said. "He died in his sleep next to his wife and three-year-old daughter. He wanted to treat his conditions with cannabis but found it difficult to do so in Las Vegas. I've always believed cannabis has been unfairly demonized and that we need to have sensible reforms to both medical and recreational use. I was very

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+  
INFO@THESOURCENV.COM



excited to be a part of the societal transformation that is happening in our country and in Nevada.”

## ARCHITECT

“We assembled a design team—including our architect Garry Hoholik and a retail design expert, Semone Gell—who helped take the look I envisioned in my head and make it a reality. We were also very fortunate to have partners who own and operate a dispensary in Arizona who helped build upon their experience to design a store that would create a positive patient experience,” said Jolley.

## DESIGN

Modern, industrial, clinical, simple, organic. “*Elevate* magazine named us the Apple Store of dispensaries, which was very flattering,” said Jolley.

## NUMBER OF EMPLOYEES

“We have fifty-two employees companywide, twenty of whom work at the dispensary. We take employee training very seriously and are happy to have Dr. Troutt conduct monthly training for our staff,” Jolley noted.

## BUDTENDER REQUIREMENTS

“Approachable, compassionate, and knowledgeable,” Jolley said. “I am continually impressed with the feedback we hear from our customers about our staff, especially our patient advisors.”

## MENU HIGHLIGHTS/BEST SELLERS

“We are particularly proud of our home-grown flower and our hand-crafted vapor products,” said Jolley. “Our flower is consistently praised by our patients for being super-high-quality. Our in-house CO2 vapor cartridges are very clean and contain extremely high-quality oil. In addition to our own products, Evergreen Organix is our top seller for edibles; we have the largest selection of their product in the store. Charlotte’s Web is our number one seller for CBD. The Cannavative Group produces very-high-quality THC and CBD concentrates for a great price. Cannabiotix and BAM produce a beautiful, high-quality flower.”

“

**OUR STAFF AND OUR MENU SELECTION ARE WHAT SET THE+SOURCE APART. WE ARE VERY PROUD OF THE TEAM WE HAVE ASSEMBLED; THEY ARE KNOWLEDGEABLE, APPROACHABLE, AND VERY COOL TO WORK WITH. OUR PURCHASING TEAMS WORK VERY HARD TO PUT THE BEST PRODUCTS AVAILABLE ON OUR SHELVES. OUR CUSTOMERS TELL US WE HAVE THE BEST SELECTION IN TOWN.”**


—Andrew M. Jolley, founder and CEO, The+Source

”

## WHY THE+SOURCE

“Our staff and our menu selection are what set The+Source apart,” Jolley said “We are very proud of the team we have assembled; they are knowledgeable, approachable, and very cool to work with. Our purchasing teams work very hard to put the best products available on our shelves. Our customers tell us we have the best selection in town.”

## AVERAGE CUSTOMERS A DAY

“That number is growing every day as more Nevadans obtain their medical marijuana patient card and as out-of-state residents realize they can legally purchase medicine in Nevada,” noted Jolley. “The process to obtain a Nevada patient card is now very simple and easy. Patients can apply online and can get their approval letter same-day. Plus, patients no longer have to go to the DMV to pick up their card. This is going to have a dramatic effect on patient numbers. Our patients come from all walks of life and age groups. In fact, the largest segment of Nevada patient card holders is fifty-five to sixty-four years old.” 



## Calling Dr. Troutt!

WHEN JOLLEY LAUNCHED THE+SOURCE, he was adamant about having the best trained staff in the state. So, he called Dr. William Troutt, a respected naturopathic medical doctor who specializes in cannabis-based medicine and treatment. He was the first medical director of a state-licensed dispensary in Arizona, and currently serves as the medical director for six dispensaries, including The+Source's. Each employee, whether a patient advisor or security greeter, is required to complete monthly training courses with Dr. Troutt. “There is a lot of cross-training done here,” explained Jolley. “We have inventory specialists who are hired to package and control inventory, but can also act as patient advisors on the floor.”

Dr. Troutt has presented about the therapeutic effects of cannabis at an adult epilepsy conference in Phoenix, the Arizona Epilepsy Foundation support groups at Banner Hospital, and the Mayo Clinic. Dr. Troutt also has conducted primary research on the therapeutic effects of cannabis, most recently publishing a study about the characteristics and perceptions of medical cannabis patients in the *Journal of Psychoactive Drugs*.





# Apeks Is Supercritical

SMART ENGINEERING AND AUTOMATION MAKE FOR EASY-PEASY CANNABIS OIL EXTRACTION.

BY JEFFERSON REID

IF CANNABIS-EXTRACT PROCESSING companies could produce more oil extract faster and at a higher quality level, they'd probably jump at the chance, right? And if the process could be fully automated, they'd probably jump twice as high. That helps explain the success of Apeks Supercritical. The Ohio-based manufacturer of CO2 extraction systems, under the leadership of Chief Executive Officer Andy Joseph, has been building botanical extraction systems since 2001—first as a fabrication specialist before becoming a full-fledged manufacturer in 2012.

A former Navy nuclear engineer, skilled hands-on builder, and the 2016 Ernst & Young Entrepreneur of the Year for the Ohio Valley, Joseph holds five patents, including the valveless expansion technology featured in all Apeks CO2 extraction systems. So, how did he get here?

“Originally, I got connected with a group that wanted me to build some botanical oil extraction equipment,” he said. “I had no idea what that even was, but I said, ‘Sure. I’ll give that a shot.’” It’s obviously worked out well, as Apeks has grown significantly. “We’re up to thirty employees, including seven degreed engineers,” Joseph said. The company has delivered and installed 430-odd systems in twenty states across the U.S. as well as in Canada, Mexico, and Europe. More international customers are on the way.

## THREE YEARS, EXPLOSIVE GROWTH

While Joseph said the business is changing so fast he can’t even hazard a guess about his company’s market share, he estimates there are now about thirty CO2 equipment manufacturers in a space where only three or four years ago there were three. Bottom line: His company’s revenues swelled from \$750,000 in 2012 to \$13 million in 2015. Needless to say, things are looking up, and Joseph likes his company’s competitive advantages.

“Because we’re a manufacturer of such long standing, we’ve got a purpose-built, 17,000-square-foot facility that does nothing but build CO2 systems. We’re able to take advantage of manufacturing efficiencies and utilize more expensive components but still be one of the lowest-cost providers in the space.”

Low cost is relative, of course. Apeks Supercritical’s introductory extraction systems start at \$39,000, while larger mid-range models begin at \$108,000. The company’s high-end production beasts cost at least \$279,000. All of them represent a lot of bang for the buck, extracting oil from seven to ten pounds of dried cannabis in twenty-four hours with one of the introductory systems and up to 100 pounds per day for the high-end models. The systems are scalable and built on the same technology. Apeks even offers a 75-percent return credit on introductory systems, so people can get in, test the waters, and trade up if they’d like.

## COLD, HARD ENGINEERING

More important than the raw numbers, of course, is the enhanced quality Joseph said stems from Apeks Supercritical’s unique cold-separation engineering process.

“The fundamental design of all our systems is that we maintain the separation vessel cold; that’s really the crux,” he said. “A lot of attention and focus goes into the extraction vessel, because that’s what it is: It’s an extractor. But you’ve got to realize the oil that’s been extracted sits in the separation vessel while it’s waiting for the operator to come and harvest it. While it’s sitting there, if the system pumps a bunch of heat into that vessel, it doesn’t really matter what the original extraction parameters were.”

Heat—or lack thereof—is super important, even critical, in producing thermally sensitive oils like cannabis, especially its volatile terpenes and flavonoids.

“Our test data shows that our extractors have better THCA retention, an indication there’s not decarboxylation happening in our systems,” Joseph said. “Other competitive manufacturers who aren’t thermally sensitive, they’ll have an uncontrolled decarboxylation that happens throughout the extraction process. Our motto is ‘Decarb on your terms, not the machine’s terms.’”

Apek Supercritical’s versatile extractors can fractionalize the oil into different weights to suit processors’ needs, and Apeks’ machines can do both subcritical and supercritical extractions using the power of non-toxic CO2 (gas or liquid) as a solvent at pressures up to 5000psi. Unlike butane or propane extraction methods that can add heavy metals to the extract, CO2 easily separates from the oil after extraction the



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same way soda goes flat. (Still, processors must beware pesticides or other impurities in a batch of pot. A small amount of pesticides going in becomes a large quantity of pesticides in the concentrate, which requires a separate post-extraction process to remove.)

Other features of Apeks CO2 extraction systems include patented valveless expansion technology to eliminate clogging and special diaphragm compressor technology that produces 20- to 50-percent faster extractions using half the power. The machines also feature two levels of safety protection, data-tracking capabilities, and CO2 recovery up to 95 percent.

### FULL AUTOMATION, NO AGGRAVATION

Joseph said another key advantage of Apeks' systems is they're fully automated. Traditional manually operated set-ups might have forty or fifty valves an operator must know when to open and close. For botanical oil processing companies, this is an operational issue that also has a big personnel component, because, as Joseph noted, "You have to find a really good operator who has the skill-set to do it and also isn't smoking the product. And that can be challenging sometimes."

"We decided it was time to get the operator out of the equation with wholly automated systems," he added. "With our machines, the operator can set the operating parameters and walk away. We call it 'lights-out automation.'"

No operator intervention is required, though taking control manually is always an option. The system can be configured to send email or text alerts when the machine needs attention or when a run is complete. Plus, all Apeks systems include on-site installation and training.

### POLITICS 2016: PROBLEM OR OPPORTUNITY?

Asked whether the 2016 election results might throw a wrench into the works for Apeks Supercritical's success, Joseph characterized the outcome as a mixed bag.

"On the one hand, from the perspective of making marijuana available on the medical front to patients who need it, it's scary to see what guys like [President Donald Trump's Attorney General nominee] Jeff Sessions might do to restrict medical cannabis," Joseph said. "I hope we've got enough inertia to keep progress going. Is twenty-nine legal medical states enough to be able to sway these guys or convince them they're fighting an uphill battle at this point? I hope so."

"On the flip side, a little bit selfishly for our business, I kind appreciate a bit of a slowdown," he continued. "It seems counterintuitive, but we're a small company, and we've been able to be successful. I've said for a long time that the cannabis industry is the perfect storm, a

once-in-a-lifetime event, that the legal landscape has just enough risk to keep the big boys out, but at the same time, there's explosive growth that really gives an opportunity for the little guy to win."

### LEARNING WITH CUSTOMERS

Joseph noted most of Apek Supercritical's buyers are in the processor category, especially in mature markets like Colorado, Washington, and Oregon. Only rarely do dispensaries buy Apek's units, he said, unless the dispensary has its own grow.

"We're seeing a bit of a surge from the cultivator side, where some who cultivate are seeing an opportunity to become processors themselves, to get further value from the material they generate," he said.

When navigating an ever-changing market, caution and creative expansion go hand in hand. Educating customers shouldn't be left out of the mix.


"One of our red flags, I suppose, is when we have a potential customer contact us and say 'I want to buy an extraction system,'" Johnson noted. "We say, 'Okay, great. What are you looking to make?' And they say, 'I want to make everything. I want to make edibles, I want to do vape pens, I want to make pebbles. I want to make it all.'"

In an era of increasing specialization, that's problematic, Joseph said. Three or four years ago, when there weren't so many players, companies could get away with a "jack of all trades; master of none" strategy.

"Today, I strongly recommend customers pick one product and focus on it until they're good at it, then move on to the next one," he said. "The idea that you can come into today's marketplace without a good plan for what product type you're going to make is a recipe for failure. The shelves in dispensaries

and recreational and medical markets are crowded."

One pitfall is finding enough feedstock to keep up with today's fast extractors. Another is knowing exactly what to do with the oil that's produced and what kind of secondary process is required for each product. Not all edibles are created equal. Chocolates and cookies, for instance, require completely different processes. With any edible, because the marketplace is increasingly crowded, producers probably need to work with a good chef, as well as develop strategies for branding, marketing, advertising, and social media.

"While the extraction system is one key component in the process, you need to have all the other elements of the process in order to be successful," Joseph said. "What we've done successfully is make the extraction equipment an easy piece of what is a very complicated puzzle." 

### APEKS SUPERCRITICAL BY THE NUMBERS

Year Andy Joseph Began fabricating botanical CO2 extractors:

**2001**

Year Apeks Supercritical founded:

**2012**

Number of employees:

**30**

Number of degreed engineers:

**7**

Floor space of Apeks' Ohio Factory:

**17,000 sq ft**

Cost of entry-level extraction system:

**\$39,000**

Percentage of entry-level system cost credited to trade-up:

**75%**



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# Legion of Bloom's Time in the Sun

BY ANASTASIA KAUFMAN

THE NORTHERN CALIFORNIA COLLECTIVE of sun-worshipping cannabis experts Legion of Bloom are collecting legions of extremely loyal fans. When you get to know them, it's easy to see why.

The first clue you're dealing with a different kind of collective? They're conscious cultivators and firm believers in whole plant medicine. "Our genetics are properly selected and cared for, while each step of the cultivation process is fine-tuned to be as eco-friendly and environmentally savvy as possible," said Legion, who speak as a network or collective community, not as individuals. (That would be the second clue.)

For many herbalists, there's a healing alchemy that happens when sunshine meets plant. In Legion's view, "The sun is the ultimate source of energy. It is both abundant and sustainable, providing a full spectrum of light over artificial light." So, flowers are grown outdoors with an abundance of TLC. Using natural resources is integral to the approach; no chemicals, pesticides, or artificial lights are used in the cultivation process.

The collective's mission: To elevate the plant through sustainable, conscious practices and production methods. The website proudly states, "Our craft cultivation practices provide superb flowers for extract offerings which have quickly become the future of cannabis. As the industry becomes more sophisticated in practices, we will be among the leaders pushing the bar for innovation and conscious change."

Legion even uses a special microbe-enriched soil — the plants are cultivated in composted teas. Creating herbal medicine from herbal medicine? We'll raise a cup to that.

## RAW-ZEN

The appropriately named UK Cheese Raw-Zen is a deliciously pure and calm-inducing rosin. This solvent-free, amber honey-colored extraction is an elegant and clean alternative to BHO (butane hash oil) extractions. (Smoking residual solvent can lead to a build-up of neurotoxins in the body.) Legion uses its flowers "to craft cannabis extracts that maintain high terpene and cannabinoid profiles that work together to provide users with an experience known as the entourage effect."

## THE MONARCH

These strain-specific pens are not only solvent-less, but also propylene glycol- and glycerin-free. The sleek, clean, and potent Monarch vape pen has a pull that is smooth and easy. (Holy Grail is a particularly fitting strain to concentrate into an oil for The Monarch. Its award-winning genetics come from the OG and Kosher Kush strains, known for promoting physical and mental calm.) Aesthetically, this is an elevated pen that lives up to its name. The silver mouthpiece, crisp white atomizer, and golden oil do, in fact, evoke royalty. A true pen for the monarchy! 🍀

## LEGION'S DECEMBER 2016 EMERALD CUP AWARDS

### FIRST PLACE

#### CBD Extracts

Terrapen RE:zen  
1:1 Vape Pen

### THIRD PLACE

#### CBD Topicals

Zana Ayurvedic +  
CBD Transdermal  
Roll-On

### SEVENTH PLACE

#### CO<sub>2</sub> Oil

Monarch Florida  
JuicyFruit  
Cannabis-Derived  
Terpene Cartridge

### SEVENTH PLACE

#### Edibles

Fruitslab Grandaddy  
Grape  
Powered by Legion  
of Bloom Rosin



[thelegionofbloom.com](http://thelegionofbloom.com)



# NANOLUX

Technology Inc

## 315W Fixture

Model CMH-315NC-SLF

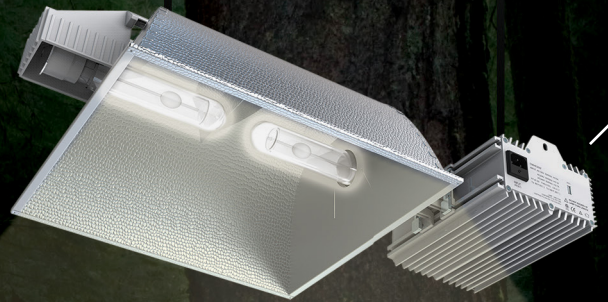
- Lumens (initial) 33,000
- Lumens (total output) 28,096
- ⚡ Volts 120/240V - Amps 2.74/1.37
- CRI 3K (91.1)/4K (95.5)
- 🌀 BTU 1140 - umol/s per watt 1.8



## 630W Fixture

Model CMH-630NC-DLF

- Lumens (initial) 66,000
- Lumens (total out) 52,710
- ⚡ Volts 120/240 - Amps 5.34/2.37
- CRI 3K (91.1)/4K (95.5)
- 🌀 BTU 2129 - umol/s per watt 1.8



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# THE NATION OF V

A graphic element for the 'V' in the title. It features a stylized, black and white illustration of a hand holding a lit cigarette. The hand is positioned as if gripping the cigarette, with smoke rising from the tip. The entire graphic is set against a large, solid black letter 'V'.

VAPORNATION MARKETING DIRECTOR GREG GASTON ON INDUSTRY TRENDS,  
BEST SELLERS, AND MARKETPLACE OUTLOOK.

BY ROB HILL



▼ **VAPORATION** experienced a game-changing year in 2016. The company completed a capital raise, relocated to a new 30,000-square-foot facility in Southern California, and expanded operations with a warehouse facility in New Jersey. The company also added some signature brands to their roster: KandyPens, Magic Flight, and a variety of others.

“We have built a multifaceted marketing platform which covers the full expanse,” said Marketing Director Greg Gaston. “From print to social media, to radio, web traffic, video production, and a variety of other initiatives which have enabled us to truly promote the brands we represent. As a result of these marketing and advertising efforts, we have seen a fantastic increase in sales from some of the major brands.”

Gaston has been a part of some impressive brand marketing campaigns. He’s worked for Red Bull/Grace Culture Marketing, Infinity/CBS Radio, Radio Disney, and MTV. He’s been at VaporNation for four years and is very bullish on the vape market in 2017.

“Vape technology is improving due to ease of use and educational initiatives,” he said. “A new ‘old generation’ of users will add significant new users. We’re extremely optimistic.”

### WHAT MARKETPLACE TRENDS DO YOU SEE HAPPENING IN 2017?

We are exploring a host of new opportunities to leverage our growing customer base of retail consumers and [business-to-business] resellers. There are a variety of new vaporizers and some new technologies we believe will revolutionize vaping. As consumers have easier access to cannabis, the demand for a variety of vaporizing methods is expanding.

Concentrate vaporizers, in particular, have experienced a significant increase in demand, as users now have a multitude of vaporizers to choose from for every application. This includes the emergence of dab rigs/e-nails, and wax pen vapes. In 2017, we expect to see the continued growth of this product type along with more technically advanced units that will bring new-age features and increased efficiency to the vaporizing process.

### WHAT PRODUCT LAUNCHES ARE YOU MOST EXCITED ABOUT?

KandyPens’ line is constantly growing, and we’re always excited about what they come out with next. Firefly and DaVinci will be introducing new products that combine cutting-edge technology with a sleek and sophisticated design. Magic Flight, a staple in the vaporizer industry for several years now, has plans to expand their product line with more exquisitely crafted units made right here in the U.S.A.

### IS THERE A “NEW KID ON THE BLOCK” TO WHICH YOU ARE EXCITED TO DISTRIBUTE IN 2017?

We are working with a few new brands that we expect will become the next Pax. Newcomers like AirVape and Boundless have developed exciting new technologies that are sure to have a significant impact on the current landscape.

### WHAT BRANDS ARE YOUR BEST SELLERS?

KandyPens, Magic Flight, Storz & Bickel, Vapir, Arizer, and Atmos.

### HOW MANY DISPENSARIES DOES VAPORATION DISTRIBUTE TO?

We sell to thousands of dispensaries and collectives, some delivery services, recreational shops, state licensed facilities, licensed producers, smoke-shop resellers, and online retailers. We currently sell into every state and have plans to expand internationally.

### HOW ARE CHINESE KNOCKOFFS AFFECTING THE MARKETPLACE?


They’re damaging to the entire industry, and it is incumbent upon the key players to work together to combat this epidemic. It’s very difficult to ascertain the extent of the knockoff market; however, we are increasingly in dialogue with quality manufacturers



*VAPORATION debuted in 2008 with the simple goal of providing customers with the very best vaporizers at a reasonable cost. The company is the exclusive distributor for many brand-name vaporizers.*



FOR WHOLESALE ORDERS: **VaporNation.com**; 888 321-8276; **support@vapornation.com**.

to work with them to effectively deal with counterfeit products. We believe the good guys in our industry need to self-police, and we are prepared to take an increasing and leading role to work with our manufacturers, sub-distributors, and others to establish guidelines, protocols, and reporting. VaporNation believes that our industry should establish the appropriate procedures in advance of possible government regulations. 



**IT’S VERY DIFFICULT TO ASCERTAIN THE EXTENT OF THE KNOCKOFF MARKET. HOWEVER, WE BELIEVE THE GOOD GUYS IN OUR INDUSTRY NEED TO SELF-POLICE, AND WE ARE PREPARED TO TAKE AN INCREASING AND LEADING ROLE TO WORK WITH OUR MANUFACTURERS, SUB-DISTRIBUTORS, AND OTHERS TO ESTABLISH GUIDELINES, PROTOCOLS, AND REPORTING.”**

—Greg Gaston









# WELCOME TO VAPORLAND!

## THE PEOPLE, THE PRODUCTS, THE PROGRESS AND THE TRENDS THAT KEEP THE VAPE BUSINESS BURNING.

BY ROB HILL, JOANNE CACHAPERO, DANIEL REED & TOM HYMES

ACCORDING TO BDS ANALYTICS, 2016 was a year of solid growth for the overall vape sector. In fact, judging by the company's data for more than 600 dispensaries and more than 50 million transactions, Director of Dispensary Relations Greg Shoenfeld said some vape sub-categories are exploding. For example, sales of vape cartridges in Colorado, Oregon, and Washington alone reached \$146 million, a whopping 132-percent increase year-over-year.

"The rapid growth within the category has led to the proliferation of brands and products," said Shoenfeld. "In 2016, BDS dispensary partners have sold vape products from over 200 brands."

And that's just the tip of the iceberg. With multiple recreational and medicinal initiatives approved by voters in November, dispensary owners are scrambling to acquire more square footage and/or expand to additional locations in order to keep up with all the new products looking for homes on their shelves. Pep "Blackbeard" Tintari, who founded the Greenlight Discount Pharmacy in Sylmar, California, just bought the retail store next door because "the competition is only going to get fiercer," while Studio City's popular Buds and Roses dispensary is looking to carve out the proper retail space to maximize efficiency in all departments in order to keep a steady customer flow. This is potentially good news for vape companies.

### WHERE THE SALES ARE

Currently, Washington dispensaries sell the most vapes. According to BDS, the state's cannabis retailers enjoyed a 267-percent increase in sales from August 2015 to August 2016, while Colorado saw an 84-percent increase. Oregon, once a hot vape market, did not grow as much due to changes in testing requirements for concentrated oils.

"In 2017, we expect to see vape sales in Colorado, Oregon, and Washington exceed a billion dollars," noted Shoenfeld. This sentiment is driven largely by an explosion in the pre-filled cartridge segment. Almost 250 brands operate in the three states today, compared to just 160 in 2015. Expect that number to grow in 2017.

### THE POWER OF THE PEN: AFFORDABLE AND INTERCHANGEABLE

Although vapers compose a large segment of dispensary customers, selling the devices in dispensaries has remained elusive. Currently, vape hard goods represent only a small percent of overall sales. Most vapers still buy their hardware from head shops, online, or direct from the manufacturer. "In the last twelve months, vaporizer devices accounted for \$14.5 million in sales—or just 10 percent of total vape sales," Shoenfeld said. Of those sales, most were pen devices that are more affordable and, of course, interchangeable, he noted.

"Pen-style vaporizers have allowed an abundance of competitors to emerge that supply both the battery/device as well as the concentrates sides of the equation," said Shoenfeld. "In the future, expect to see more proprietary delivery devices that will command higher price points and will keep consumers locked into their proprietary formats."

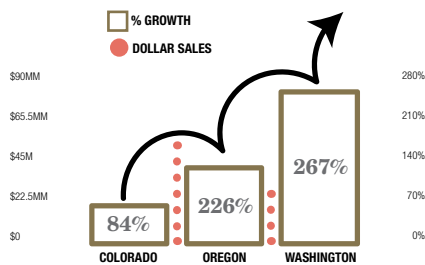


# VAPES

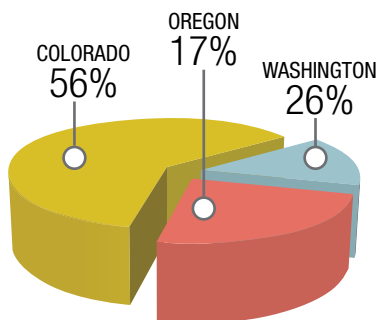
Fastest Growing Market Segment

12 month sales from  
SEPT 2015 — AUGUST 2016

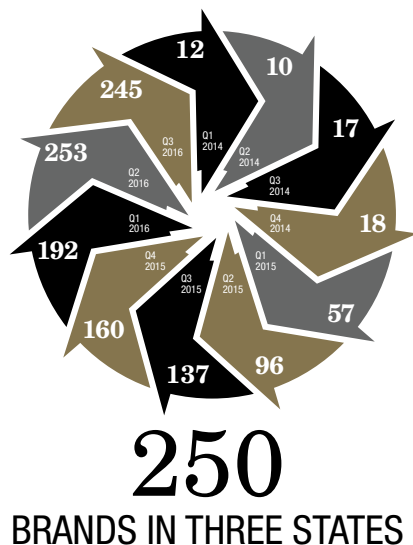
**\$146M**



## VAPE SALES BY STATE ROLLING 12 MONTHS



## # OF PRE-FILLED CONCENTRATE MANUFACTURERS COLORADO, OREGON & WASHINGTON



SOURCE: BDS Analytics

## TRENDS, INNOVATIONS AND COLLABORATION

New form factors, like the JUUL (launched by PAX Labs), have deviated from the so-called “cig-alike,” which has been in vogue the past few years. This trend has proved disruptive to the category. Sasha Kadey, chief marketing officer for distributor Greenlane (formerly Vape-World), thinks the open-system category will see more innovation, too.

“Consumers are looking for more than a cylindrical, pen-style vaporizer,” said Kadey. “Savvy and intelligent consumers are desperate for something new. We are already seeing this happen on the closed-system side, but the open system side is ripe for this type of disruption. It isn’t as restricted, due to the logistics of finding fill partners state by state.”

To be sure, “innovation” was the buzzword in 2016. The much-anticipated launch of Firefly 2, a convection-based vaporizer, introduced patented dynamic convection technology, assuring only plant heats up when the user inhales. “Convection is superior, I believe, because as you inhale you only heat what you want to use,” Firefly Chief Executive Officer Mark Williams said. “You can take small puffs, and there’s no waste.”

Then there’s The Summit+ by Vaprium, which is geared toward outdoor enthusiasts. The vaporizer offers first-of-its-kind IP54 splash-proofing and dust-resistance. However, according to Kadey, Gresco Science’s Elite may be the most striking example of form factor innovation.

**IN 2017, WE EXPECT TO SEE VAPE SALES IN COLORADO, OREGON, AND WASHINGTON EXCEED A BILLION DOLLARS.**

—Greg Shoenfeld, director of dispensary relations, BDS Analytics

“With advanced ergonomics, [Gresco Science’s] large investment in design brought to life an entirely new look in the world of hand-held vaporization,” noted Kadey.

In addition, 2016 saw an increase in limited-edition collaborations. Gresco Science teamed with Snoop Dogg, New York artist Phil Frost and Burton snowboards, and Natalie “Badwood” Wood for product launches. PAX and Bloom Farms worked together on the PAX Era, a big success: PAX supplied the hardware; Bloom Farms the oil.

“The launch of PAX Era has been very similar to the launch of PAX 1 in that it has changed the consumer experience for the better,” said Tyler Goldman, chief executive officer for PAX Labs. “The company has spent years and millions of dollars on [research and development] to create a total jump in experience with the PAX Era.”

## 2017: OPERATION DISPENSARY

After several successful ballot initiatives in November, dispensary traffic is expected to increase—and so should vape sales.

“I think [the category] offers a lot of growth potential,” said Kadey. “The real challenge for us is convincing the dispensary operators that there is a big opportunity for them to increase revenue by selling retail merchandise in a way that doesn’t distract their budtenders. With little exception, they are solely focused on selling the plant in its various forms. I can understand why, but it’s akin to a salon that sells services but no products.”

In short, Kadey said she believes dispensaries easily could increase their revenue by as much as 10 percent to 20 percent per checkout with the right retail program.

Welcome to Vapelandia.

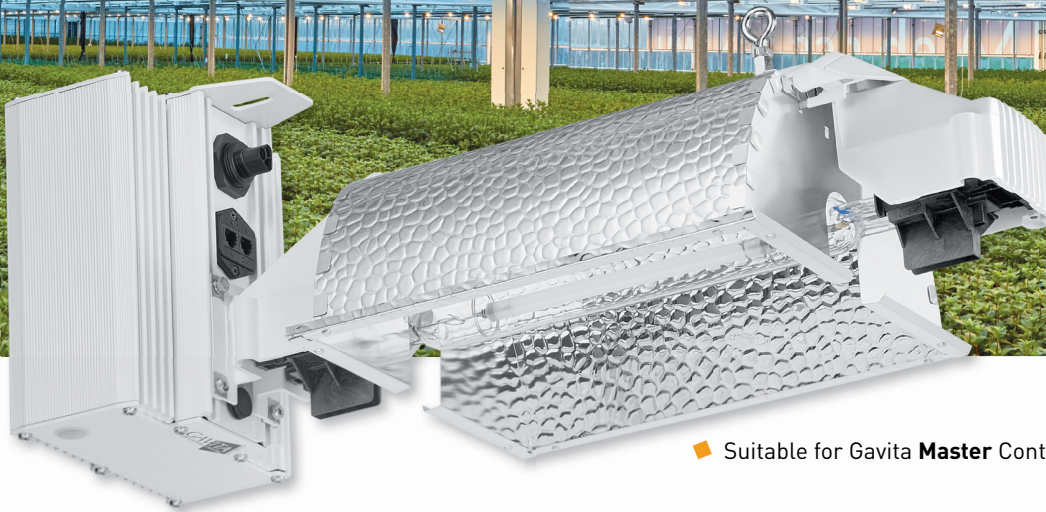


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# THE VAPERS

RETAILERS WEIGH IN ON VAPORIZERS  
AND THE PEOPLE WHO VAPE.

“CAN YOU FEEL IT? Nothing can save you, for this is the season of catching the ‘vapers’...” Of course, legendary rapper Biz Markie rhymed about a different type of “vapors” back in 1988. That was old school. This is now and, in 2017, “vape” is officially listed in the dictionary as a word in its own right, and vaping is catching on as a consumption method of first choice for more and more consumers.

“Flower is still far and away our best-selling product, but vape sales, including batteries and cartridges, accounts for approximately 25 percent of our total sales,” said Eric Gaston, co-founder of Evergreen Market. “By far, the most popular form of vaping is with a cartridge that’s pre-filled with oil—typically a half gram, which is then screwed into a rechargeable battery.”

With two locations in Auburn and Renton, Washington, Gaston explained there are two distinct demographics representing vape customers: The niche that prefers dabbing concentrates for increased potency effects, and a growing number of consumers who perceive vape pens and oil cartridges as an easier, cleaner, healthier alternative to the traditional combustion methods.

“While flower comprises the majority of our sales, there is growing interest in oils and concentrates,” said Emma Chasen, general manager for Farma dispensary in Oregon. “In fact, CO2-extracted vape cartridges are our best seller after flower.

“Interest in pre-filled cartridges is growing the fastest,” she added. “People like them because they’re easy to use and discreet, and the product generally has higher cannabinoid concentrations than flower. It helps that one of the biggest objections people have had to pre-filled cartridges and their reliability is being addressed by the industry.”

Gaston also pointed to early hardware malfunctions that may have slowed vape market growth and created some wary customers who got burned, sometimes literally, by early versions.

“Given the high failure rate of many of the earlier cartridges—leaking, breaking, not working, etc.—there are new types of cartridges

coming out all the time,” Gaston said. “The trend seems to be toward ‘wickless’ cartridges, which seem to work a little better and provide a better tasting vapor.”

Continuing technology advances are poised to move the market more mainstream. Mobile, discreet, and less lung-damaging than smoking, vape devices range from inexpensive disposables to kits that can cost hundreds of dollars. The mail-order, toaster-sized, table-top “potpourri atomizer” used to vape flower rapidly has become a reminder of a less mobile era, when you kept your cannabis usage at home and undercover.

In 2014, comedian Sarah Silverman famously rocked her “pot” pen on the Emmy red carpet and, since then, loads of celebrities have been snapped publicly with their vape rig, including Leonardo DiCaprio

at the 2016 SAG Awards (presumably for help quitting tobacco), Whoopi Goldberg (who wrote a blog post to her pen), and Miley Cyrus (who told the *Tonight Show* that DiCaprio needs to pass that “shit” at the next show.

For celebrity vapers, high-end gear is becoming the latest cool status gadget, like the latest cellphone or digital app, especially since everything—including vape pens—now comes with apps. Despite the trendsetters, retailers report many customers still need a lot of information and education about “how to vape.”

At Farma, Chasen explained, “We set aside time to teach our customers about

vaping. We have long emphasized micro-dosing, and vaping is still the best way to deliver smaller amounts of cannabinoids and terpenes to the endocannabinoid system. Plus, vaping flower allows users to receive the full matrix of compounds in cannabis without the negative impacts of smoking.

“For someone new to vaping flower, we suggest starting with a relatively inexpensive delivery method,” she continued. “The effects from vaping can be quite different from the effects of smoking cannabis, so we want our customers to make sure vaping works

“

**I THINK IN FIVE YEARS THE  
TECHNOLOGY WILL BE TO THE  
POINT WHERE CUSTOMERS  
WILL BE ABLE TO VAPE ALL  
CONCENTRATES—SHATTER, OIL,  
HASH, ROSIN, ETC.—AS EASILY  
AS VAPING THE OIL NOW.**

—Eric Gaston

”



for them before investing further.”

“With pre-filled CO2 cartridges, the idea is even simpler and more potent: attach the cartridge to the battery and inhale. Part of the challenge, however, is educating customers on troubleshooting in case their cartridge does malfunction,” Chasen said.

For consumers that are still confused about vaping options, Gaston suggested, “The easiest way to start is with a battery that does not have an on and off button but engages upon the draw.

“One of our core values is to educate,” Gaston added, acknowledging the rapidly changing product market, “and we strive to drive this home with all of our sales associates. There is a bit of a learning curve with vaping, and we do our best to educate our customers on the ins-and-outs so they have a great experience.”

Even with growing awareness, Gaston said new vape hardware vendors rarely approach him at Evergreen; more often he sees new cartridges and concentrates coming through. For vendors who have a new line, he suggested checking out what is already carried in the store. Ultimately, he orders product lines that prove to be in-demand with his clientele or, sometimes, products that have generated good buzz in the vape community.


Chasen and her staff curate the vape selection at Farma, which currently features only two lines: Firefly2 and PAX 3. “Both are beautifully designed, easy to use, and offer great customer service with solid warranties,” she said. “We take on a new product if we would spend

our own money on it. It has to work, and it can’t be difficult to use. No one wants to read a lengthy manual or deal with multiple moving parts. If the user experience isn’t phenomenal, we won’t recommend it to our customers.”

Since it’s a new year, curious minds want to know: What’s in the future for vaping? Gaston and Chasen had slightly different visions, but both agreed that flower, smoked or vaped, would continue to be a fundamental for consumers.

“I think in five years the technology will be to the point where customers will be able to vape all concentrates—shatter, oil, hash, rosin, etc.—as easily as vaping the oil now,” Gaston predicted. “I expect there will always be those who enjoy the ritual of grinding their flower, loading a bowl, rolling a joint, and just smoking in general, but there will be a large shift toward vaping once the technology allows for the vaping of all concentrates in a way that allows for the convenient and flavorful enjoyment of cannabis.”

Chasen added a caveat: Anytime someone tries to predict anything in the cannabis market, they’re bound to be wrong.

“As a general trend, we believe more people will start vaping flower and whole-plant extracts as the technology continues to improve and the cost of devices inevitably comes down,” she said. “Vaporizing is desirable because it remains the simplest and most effective way to control your dose without sacrificing some of the familiar rituals of cannabis use. We don’t see that changing anytime soon.” 

# A happy marriage.

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# OUR STORY: OSCAR MACKAY


## THE MAKING OF A BRAND.

**DUNLEVIE'S FOUNDER ON THE POWER OF THE DUNLEVIE MAN, THE IMPORTANCE OF THE BRAND'S AESTHETIC, THE COMPANY'S LUXURIOUS BIRCH PACKAGING, AND THE UPCOMING LAUNCH OF A HARDWOOD CARRY CASE.**

**AD CREATIVE:** Our creative director is Steve Feinberg. He is both a good friend and also a partner in the business. All our visual content is curated and approved by him. The ads were shot by Los Angeles-based photographer James Lozeau.

**THE DUNLEVIE MAN:** The model's name is Kodi Baker. We met him on an open call for our first photo shoot. We didn't realize how well-known he was until later—we only paid a fraction of his usual rate—but it turned out he answered our casting call out of curiosity and a love for the industry. He is now both a brand ambassador and friend. We are also very fortunate to have worked with several talented women, but we haven't created a singular campaign around anyone but Kodi yet.

**BRAND AESTHETIC:** To be sure, our brand aesthetic is important to us, and I believe it is vital to our growth. Simple ads and smart media is the theme for this first campaign, and ultimately the marketing reflects a certain amount of our own identity and place in the market. At its core, Dunlevie is a lifestyle brand. It is meant to convey a life that most people would want. Dunlevie inspires success and aspires to reward.

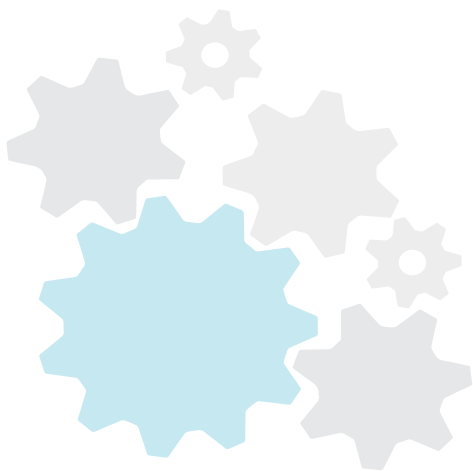
**BIRCH PACKAGING:** We came up with the birch idea in our first meeting two years ago. We really wanted to correctly represent the quality of the product within. So, we compared existing packaging while weighing cost and environmental concerns, and in the end we chose re-usable and compostable birch packaging—luxury and responsibility combined. **HARDWOOD CARRY CASE:** In 2017, we will be offering Dunlevie by the case so customers can get several units in our beautiful cases, which are currently for display only. We are also offering a thin, hardwood carry case so you can throw your Dunlevie pen in your purse or pocket while fully-assembled. 

*Dunlevie.co*



# THERE'S SOMETHING TO BE SAID FOR BEING A PIONEER IN A GROWTH INDUSTRY.

With more than a decade of experience in the cannabis industry, SIVA Enterprises is the most consistently successful partner in applying for state cultivation, manufacturing, distribution, and dispensary licenses in the US. In just the first half of this year, SIVA has helped develop and launch four new cannabis companies: **ZASP** (infused beverages), **Varavo** (edibles & oils), the **Herbal Pain Relief Center** (a dispensary), and **Verdant** (a cannabis distribution company).



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# THE TERPENE PROFILER

**IF YOU ARE LOOKING FOR AN AROMA/FLAVOR SYSTEM TO REPLICATE YOUR STRAIN OR WANT TO PURCHASE PRE-COMPOUNDED TERPENE BLENDS, LOOK NO FURTHER THAN THE VAPE KITCHEN.**

## WHAT'S YOUR BACKGROUND?

I left high school early and enrolled in culinary school. After graduation, I ended up doing three months as an apprentice at Campanille/La Brea Bakery and then landed a gig at Michel Richard's Citrus. This was where I developed a love for wine. I quickly took to it and came to find that my sense of smell and ability to identify grape varieties was unusually adept. I then went to work for my uncle, who had purchased a small lotion company, where I began formulating gels, lotions, and bath products. A friend of mine had an early e-liquid device he was puffing on and I looked at the liquid inside and realized it was basically the same thing as my flavored lotions.

## WHEN DID THE VAPE KITCHEN LAUNCH?

The Vape Kitchen began about a year after I first started producing e-liquid. I formulated five flavors and exhibited them at a trade show in Las Vegas. People were going ape-shit over my product.

## NOW YOU ARE CONQUERING TERPENES.

I'm finding my strength as a chef and flavorist translates perfectly to cannabis. I can pulverize a bud in my hand, smell it, and recreate its terpene structure accurately with my nose. My nose is yielding better results than a lab report. I'm putting back what man has removed


from nature during the extraction and distillation process.

As a brand, you can expect to see the Vape Kitchen front and center in uniquely flavored THC e-liquid products and consumables. I feel we'll be an even larger asset to companies looking for development, private labeling, and flavor solutions.

## WHAT'S YOUR PROCESS IN THE KITCHEN?

Well, each flavor and strain is truly bespoke. The source material of the oil is important. Each company or producer has their own method of extraction and supply of raw material, resulting in a different colored "canvas" to paint on. I formulate my flavors and terpene profiles to work with the source material and not around it or on top of it. I want to take that oil back to tasting like a perfectly cured bag of flower.

## IS YOUR NOSE/PALETTE A RESULT OF NATURE OR NURTURE?

I think it was a combination of both. My father was originally from Morocco. I grew up eating unconventionally. I think my soul appreciates the honesty and power of smell and taste. When we taste and smell, we are immediately delivered a message. It can be joyous, traumatic, emotive, passionate or all of this at once. 

*TheVapeKitchen@gmail.com*





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## OLD GLASS, NEW TRICKS

VAPOR SLIDE CAN BRING NEW LIFE TO GLASS PIECES OR BE ENJOYED AS A STAND-ALONE VAPORIZER.

VAPORIZING CANNABIS has become a booming trend. There is little debate as to the discretion and convenience offered by a vaporizer. However, not everyone is ready to ditch their glass.

Vapor Slide's flagship product, the V-1, provides the perfect solution for those who prefer to vape but also enjoy the benefits of glass. "We decided to create a product that would allow users to enjoy oil on the go, or at home with water filtration," said Brendan Gillis, founder and chief executive officer of Vapor Slide.

As many companies have released similar or derivative products, Gillis noticed an opening for something different. "We saw an opportunity to create a powerful product that would produce nice big hits of vapor," he said.

Although Vapor Slide only launched in 2015, the company is already gaining in popularity with consumers. "Thousands of people have enjoyed Vapor Slide in the past year. We have received positive feedback from people of all ages," Gillis said.

Vapor Slide's diverse customer base represents the changing makeup of the cannabis industry. Many consumers feel that vaporizing provides a cleaner form of ingestion than combusting flower.

One customer, a 65-year-old Alaskan woman, stands out to Gillis. "She tried regular vape pens, but really disliked all the ones she tried. She felt that she was not getting the same effect as she got from flower. Then, pens even tasted bad to her. She tried the Vapor Slide and was able to get higher doses of THC with less harshness and cough," Gillis said.

Vapor Slide can be found in approximately eighty shops throughout the country. With two new product releases slated for 2017, additional vendors may want to jump on board. "We want to become a household name in 2017," Gillis said. This year, consumers can expect to see the V2 Shatter Pen and the V-Lite. The V2 Shatter Pen will work alone or in conjunction with a glass piece, and the V-Lite may be used with shatter or vape cartridges, but is not designed for use with glass pieces.

Although Gillis is excited about the new releases, he is also thinking about how he will make his products in the future. The V2 will be assembled in Pennsylvania. Beyond that, Gillis' goal is "to eventually do all the designs, prototyping, and production in the United States."

*TheVaporSlide.com*



# Beyond Top Shelf

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# TRANSCENDING CANNABIS

EVOXE CONTINUES ITS SINGULAR AND SUCCESSFUL PURPOSE-DRIVEN JOURNEY.

EVOXE PRESIDENT Michael Katz freely admits his company is “not the biggest brand on the block in terms of its physical footprint,” but the comment is not a concession of lesser status. On the contrary, Katz is quite pleased with the presence Evoxé has established in such a short period. Indeed, as a branding and marketing specialist who entered the space as a cannabis novice in 2015, Katz says Evoxé is precisely where it should be. “We need revenue to operate,” he said, “but we’re still in the phase where we’re launching to the non-cannabis market.”

He explained, “The current cannabis consumer—largely male and young—is actually not our metric for success. Our metric is bringing new people into the cannabis space. Our goal is to reach out to patients to make sure they are enjoying our products.”

Those products consist of five vaporizer pens with results-oriented names: Engage (red, sativa), Deep (blue, indica), Stealth (black, hybrid), Balance (white, CBD extract), and Balance+ (white, CBD extract combined with essential oils). Designed to induce desired therapeutic effects, the appeal of Evoxé products is in large part based on the quality of the hardware. Building on the success of its original disposable pen, Evoxé recently launched a new recyclable version.

The V2 “debuted at the Emerald Exchange on November 12, and we’ve been getting universally positive and enthusiastic responses to the new hardware across the board,” said Katz.

Designed and assembled in the United States, the new pens are similar to their predecessors in terms of their design and remain the archetype vape pen combining CO2 extracted cannabis oils infused with high-quality blends of essential oils. Katz still evokes that claim to fame. “We were the first people to come into the vape space with a purpose-driven product, as opposed to offering different versions of something that will just get you high,” he said.

The V2’s attendant recycling program is brilliant in its simplicity. “Every pen a patient brings back into any dispensary that carries us is like a coupon worth \$2 off the purchase of any Evoxé product,” said Katz. “For every pen the dispensary collects, we give them a free pen to add to their inventory, and for every hundred they collect we give them 10 percent off their next order. It’s like a fully 360-degree incentivization cycle for everybody to push the agenda forward and minimize environmental impact.”

The program was set up with every dispensary Evoxé is in ahead of the November launch and thus far, per Katz, “Everyone has been open to it.” The reason for adoption is the fully thought-out incentivizing. Without it, said Katz, the program would fail. “We had a similar program with our first pen that was not as incentivizing,” he said, “and people didn’t really get into it that much.”

“You have to build the costs of recycling and being environmentally responsible into your business model to provide a sustainable effort going forward,” he added. “People really care about that.”





As with executives at most established cannabis brands, Katz is planning for the future with optimism. The company will introduce a vape cartridge in the second quarter of 2017 that will be “a closed-loop system that basically solves all of the problems I think currently exist in the cartridge market,” he said.

The primary problem, he explained, lies with the interchangeability of most systems using the ubiquitous 510 threading that can lead to cartridges connected to the wrong batteries, resulting in overheating that can burn the oil and incinerate interior elements. In short, said Katz, “Interchangeability can lead to a decreased experience for the end-user whether or not they know it’s happening.”

Evuxe’s solution, he said, will be “a proprietary interlocking mechanism that will allow the cartridge to work only with devices that are designed to receive it. We’re transitioning to the next generation of proprietary and safer cartridge systems that remove that uncertainty from the vaporizing experience.

“It’s the same philosophy as our current hardware,” he added. “Control the entire vaporizing experience. In that way, I never wanted to have a cartridge for which I could not personally make sure

that the patient was putting it into the right battery.”

Evuxe also is exploring the places where people can find and experience their products. Katz explained, “We’re working with a doctor who has a pain-management clinic in Pasadena [California] to incorporate our Balance CBD pen into an insurance-approved program he’s developed for helping people off opiate addiction and pain management.”

It’s all part of the company’s larger purpose. “We present a seamless integration of lifestyle and cannabis to create experiences,” Katz explained. “Our products transcend cannabis in the sense that everybody wants something that can let them decide how they can feel. Ours does that on multiple levels in a natural and safe way.”

But Evuxe has another ace up its sleeve. “What we have that hardly any other company in the cannabis space has is the ability to replicate our formulas nationwide and internationally, so our products are always going to be the same,” said Katz. “There will be an inconsistency in the cannabis space nationally with products that are just not the same, except for us.”

[EvuxeLabs.com](http://EvuxeLabs.com)

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# INNOVATION—AND SALES—TAKE FLIGHT AT FIREFLY

**IT WAS A GOOD YEAR FOR FIREFLY.** In the fall, the company launched Firefly2, its much-anticipated follow-up to the original Firefly. “Best overall vaporizer 2016,” Gizmodo declared. “Amazingly sexy and super-high-tech,” Know Techie said. The Cannabist called the Firefly2 experience “easy, enjoyable, super-flavorful.” The praise was warranted. Firefly2 is 55-percent lighter and 33-percent smaller than the original Firefly. Overall, it provides a much smoother and more user-friendly experience.

“Firefly2 also comes with an app that allows users to download the latest firmware for the device and lets them further customize it to their needs,” said Suzy Lanza, who heads business development and creative partnerships at Firefly. “We spared no expense in building Firefly2. The body is made out of a magnesium alloy, and the heating coil is made out of our proprietary titanium super-alloy that does not flake off nichrome particles over time, keeping your lungs safe.”

Sales have been healthy. Many Firefly1 owners upgraded, and many new customers bought Firefly2. The company has a tight branding ethos that centers around elevating the current state of cannabis culture. “We also bring in a lot of artistic assets to our marketing. The power of the arts is something our company strongly believes in,” noted Lanza.

To boost dispensary sales, Firefly has implemented in-store demos and staff training. And they have a surprise or two up their sleeve for 2017.

“We’re releasing a gorgeous [point of sale] display in the new year in select markets and will have other exciting announcements,” said Lanza. 

*TheFirefly.com*





# SCALING EVEN HIGHER

O.PENVAPE SOLIDIFIES ITS CANNABIS BRAND DOMINANCE.

A LITTLE MORE THAN A YEAR AGO, Chris Driessen, then the chief business development officer for O.penVAPE, had reason to adopt a “sky’s the limit” attitude about the future of the company. Its performance in the preceding years had been astonishing. “We grew 1,600 percent in 2013, another 450 percent in 2014, and are on pace to more than double again in 2015,” he said. “Currently, we sell a product somewhere in the U.S. every ten seconds.” In July 2016, Driessen also added to his resume the position of president of Organa Brands, O.penVape’s parent company. The company continues its upward trajectory as a dominant cannabis brand.

## HOW WAS 2016 FOR THE COMPANY IN TERMS OF MARKET EXPANSION AND SHARE?

In 2016, we expanded our licensee network to twelve markets, adding four new states including Oregon, Nevada, New Mexico, and Vermont. In addition to our growth through market expansion, we have also increased market share in our more mature markets, like Colorado and California. In Colorado, BDS Analytics rates our market share at 51 percent, which is impressive when you consider there are 61 other competitive brands in the pre-filled cartridge vertical.

## WHAT ABOUT 2017? ANY NEW PRODUCTS OR PARTNERSHIPS ON THE HORIZON?

Organa Brands, the parent company to O.penVAPE, is poised for dynamic growth by way of brand, product, and market expansion. We have begun to launch several new brands, including Bakked concentrates, District Edibles, and The Magic Buzz cannabis shots.

We are the only cannabis company that currently operates in all four newly legalized states, so we have a special focus in those markets to scale and be prepared for the coming increase in demand. We are expanding our footprint in California and introducing all of our brands in an effort to gain more market share prior to adult-use going live in 2018.


## HOW MANY SHOPS SELL O.PENVAPE PRODUCTS? ARE YOU PLANNING TO EXPAND INTO ANY NEW STATES IN THE NEAR FUTURE? ARE YOU PLEASED WITH THE WAY IN WHICH RETAILERS ARE MARKETING YOUR PRODUCTS?

We have licensees in ten states and Jamaica. You can find our THC products in over 1,200 dispensaries and our hardware and ancillary non-THC products in thousands of stores in eight countries. In 2017, we anticipate welcoming an additional three states to our licensee network, going live in Jamaica and expanding our international footprint into six more countries.

The cannabis industry evolves quickly, as do the marketing and retail strategies being used around the country. We have introduced our app, O.penREWARDS, in Colorado. It currently has 10,000s of users, and has been extremely well received by customers, store owners, and budtenders alike. The app will roll out across the country, where possible, in 2017.

## ARE THERE ANY TRENDS IN THE VAPE SECTOR YOU WANT TO COMMENT ON?

The cannabis consumer of today is more knowledgeable than ever before. People expect, and have a right, to know what they are putting into their bodies, including what terpenes and cannabinoids other than THC are found in their favorite products. This trend has produced a demand for distillate oils, which has swept across the country in the past year. Distillation allows for an exceptionally pure oil, devoid of almost all other plant byproducts. The result is an extremely pure, extremely tasty finished product.

In addition to pure oils, the consumer wants to consume that oil in hardware that allows them to be in control. It’s not good enough anymore to simply burn oil with high heat to produce large clouds of vapor. The hardware of the future is simple to use, smart-enabled, and can provide the end-user with variability in experience. 

*OpenVape.com*





### **Apollo AirVape Xs**

This midnight-blue, pocket-sized loose-leaf vaporizer combines conduction and convection technology to achieve consistent heating from 200°F to 428° F. A 1.3-inch screen displays battery level, temperature, and an automatic shutoff timer. Weighing 3.2 ounces and measuring .48 inches flat, the product comes with a leather carrying case, USB charger cable, and limited lifetime warranty.

***[AirVapeUSA.com](http://AirVapeUSA.com)***





**a. BHO Pen Daborizer Luxury Edition**

Available in chrome and gold, the award-winning Daborizer features a dual coil quartz and titanium skillet with steel mouthpiece and a palm-sized 650mAh battery with an LED life meter. Comes with a silicone suction stand, USB charging, a double-sided dab tool, a concentrate "dabtainer," and a 4"x8" wax mat. [BHOPen.com](http://BHOPen.com)



**b. BOOM Nova**

The BOOM Nova is the first sub-ohm dry tank that lets a patient customize their smoking/vaping experience. The Nova can be set to bake or combust dry leaves, and 510 threading and can be used on any sub-ohm box mod. Featuring no wicks or coils, it instantly heats to 800°F.

[BOOMvaporizer.com](http://BOOMvaporizer.com)



**c. Classic Skyscraper Dry Herb Vape Pen**

Made from Pyrex glass and surgical-grade stainless steel, the Classic Skyscraper dry herb vape pen comes with a durable water-bubbler filtration system and a built-in check valve. Available in Brooklyn Black and Dodger Blue, the kit contains a vape tank, battery, one additional bullseye coil skillet, wall charger, dab tool, and cleaning brush. [TheBrooklynVapeCompany.com](http://TheBrooklynVapeCompany.com)



**d. Cloud Pen 2.0**

Features click-in atomizer technology, 650mAh battery, 25-second drag time, and low battery indicator. Kit includes dual ceramic-rod, titanium hand-wrapped coil atomizer, Medi A2.0T atomizer, Cloud Atlas 3.0 globe, atomizer base 2.0, and a custom authenticity card for online registration. In black, grey, green, red, and two shades of blue.

[CloudPenz.com](http://CloudPenz.com)



**e. Cloud Platinum**

This second-generation portable vape features a slim design, removable mouthpiece tip, and a window in the mouthpiece so users can see vapor building up. Available with the Snap Tornado feature that locks the atomizer in place, the kit includes ceramic Cloud Tornado and Cloud Cera coil-less atomizers and a patent-pending funnel structure that improves the loading and cleaning process. The battery is rechargeable via USB cable that plugs into a pin-charging port on the bottom.

[CloudVapes.com](http://CloudVapes.com)

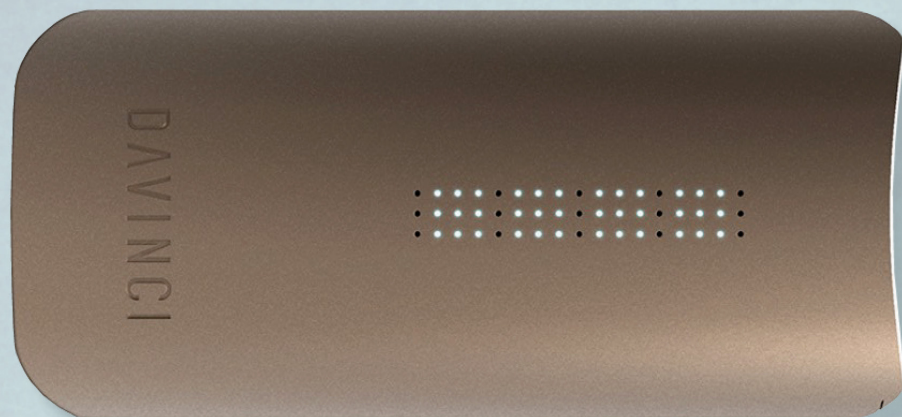


**f. Dabsolute Concentrate Pen**

Features a modified air intake that never clogs under proper use, and surgical stainless steel components made in America with a lifetime warranty. The Dabsolute Pen will vaporize wax, oil, or shatter if the battery voltage is properly adjusted and works with standard e-juice mixtures. Compatible with batteries with Ego T/510 thread connection; an adapter is required for 510 connections.

[TheDabsolutePen.com](http://TheDabsolutePen.com)





#### a. DaVinci IQ Vaporizer

Offering precise temperature control ranging from 250°F to 430°F, the IQ's Smart Path Technology allows users to select four different settings that direct the device to set the best temperature for vaping sessions. A ceramic zirconia air path delivers pure flavor, and users have full control over their session via the IQ's Bluetooth-enabled app.

[DaVinciVaporizer.com](http://DaVinciVaporizer.com)

#### b. Firefly2

Achieving 400°F in three seconds, the Firefly2 vaporizes loose leaf and concentrates with a unique "dynamic convection" heating technology that uses fifty-five laser-drilled micro jets of superheated air to deliver rich, thick vapor on demand. The optional free Firefly app lets users select from six preset temperatures (340°F, 360°F, 380°F, 400°F, and 420°F, plus concentrates) and customize touch-sensor activation.

[TheFirefly.com](http://TheFirefly.com)



#### c. Walnut-Flight Premium Walnut Launch Box Kit

Everything needed to start vaping right out of the box, the kit contains one Walnut Launch Box, two rechargeable NiMH batteries with protective caps, a battery charger, a felt-lined decorative tin, glass draw stem, and a cleaning brush. Hand-crafted in San Diego, California.

[Magic-Flight.com](http://Magic-Flight.com)



#### d. Haze Dual V3

Haze's dual bowl allows users to vaporize dried herbs, concentrates, oils, liquids, and wax interchangeably in the same session. Every Dual V3 includes a stainless-steel-and-glass mouthpiece to prevent interference with vapor taste and is crafted with patented heating technology for rapid heat-up. Four temperature settings can be reached in 60 to 90 seconds. Available in stealth black, midnight, graphite, orchid, and absinthe.

[HazeVaporizers.com](http://HazeVaporizers.com)



#### e. Evoke

Featuring a patented induction core that creates a magnetic field capable of precise vaporization, Evoke's Bluetooth-enabled microprocessor allows users to regulate temperature, monitor consumption patterns, and communicate data to health professionals. Available for pre-order; shipping first quarter of 2017.

[EvokeVape.com](http://EvokeVape.com)





# **imbue**

**verb** (with object)  
to inspire or permeate  
with a feeling or quality

[www.imbueme.co](http://www.imbueme.co)



### Herbalizer Desktop Vaporizer

The Herbalizer's 32MHz, 16-bit processor is tuned with an ultra-fast in-air temperature sensor to instantly regulate 300W of clean halogen energy. Delivering heat at the speed of light, it maintains temperature within  $\pm 5^{\circ}\text{F}$ , no matter how fast air is drawn. Features LCD with auto-dimming, a three-axis accelerometer tilt sensor, usage sensing with auto-off, and an intuitive user interface. No assembly required; two-year bumper-to-bumper warranty.

[Herbalizer.com](http://Herbalizer.com)







**a. Dr. Dabber Aurora Vaporizer Pen**

A variable-voltage, magnetic vaporizer pen for essential oils, the Aurora is designed with fully magnetic connections that make for a seamless user experience. Three carefully calibrated heat settings allow the freedom to experiment, and a sleek, discreet, satin finish keeps things low-key.

[DrDabber.com](http://DrDabber.com)



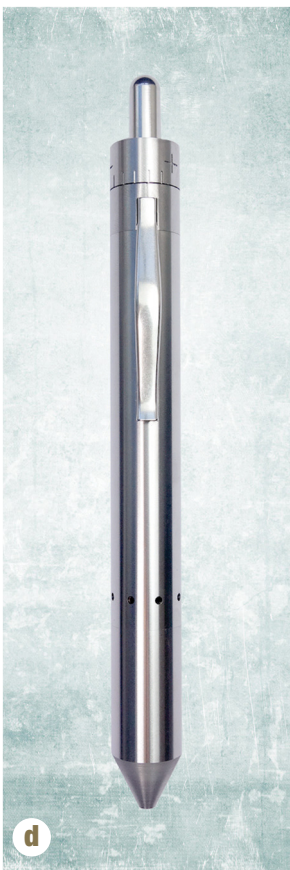
**b. Flytlab H2Flo Elite**

Features three adjustable temperature settings (low, mid, high) using a "Coil Infused Ceramic Oven Tech" convection system that removes harsh smoke and hazardous toxins found with typical combustion methods. The kit comes with water chamber and air chamber with flow control. Ten-year manufacturer's warranty. [Flytlab.com](http://Flytlab.com)



**c. Grenco Science G Pen Vaporizer**

A complete set, the G Pen includes all components required for immediate startup. Sleek in form and specific in purpose, the G Pen Coil is intended for use with thick-viscosity fluids and is a must-try for all original microG enthusiasts. Not compatible with microG or G Slim batteries. [GPen.com](http://GPen.com)



**d. Grasshopper Titanium Edition**

Designed for dry or loose-leaf herbs, the Titanium is lighter and more durable than the standard edition. Offering an easily accessible chamber and temperature dial, the pen's pure convection technology and forty-five-watt heating element powers a five-second startup time. An external dial allows for precise temperature adjustments from 266°F to 410°F. The vaporizer also features a pen-style clip, mechanical power button, metal construction, and a user-replaceable battery.

[GrasshopperVape.com](http://GrasshopperVape.com)



**e. Puffco Plus**

No coils. No glues. No compromises. The chamber has been engineered for optimal capacity, and even heat distribution optimizes flavor. The mouthpiece houses a removable ceramic loading tool with a convection cap. The sealed conduction chamber prevents clogging and produces steady, consistent vapor. Comes complete with a full Plus, an extra capped Plus chamber, USB SuperCharger, instruction manual, and cotton swabs.

[Puffco.com](http://Puffco.com)



**f. Trippy Stix 3.0 Ceramic & Quartz Vaporizer**

The newest version of this concentrates vaporizer replaces the wicking coil with ceramic and quartz dual-rod coils for improved airflow. The 3.0 pulls air into the chamber via ventilation holes in the side instead of the bottom for a leak-proof experience. Kit includes dual-rod quartz and ceramic chambers, battery with micro-USB charging port, and charging cable. [TrippyStix.com](http://TrippyStix.com)





#### a. The Original Stash Pen

Three-in-one loose-leaf vaporizer starter kit includes 510 battery, dual-coil glass globe atomizer, herbal atomizer, wax atomizer, eliquid atomizer, silicone stand and container, and case.

[StashPen.com](http://StashPen.com)

#### b. Vapor Slide V-1

A high-quality, durable, dual-purpose vaporizer that works either independently or with a water-pipe. A high-amperage 1,000mAh rechargeable battery and a slide body made from aircraft aluminum with a hardened rubberized plastic handle provide overall durability and ruggedness. The company's airflow technology allows for button-free use and consistent hits.

[TheVaporSlide.com](http://TheVaporSlide.com)

#### c. Greenhouse Vapes FUSE

Fuse features a strong aluminum shell and sleek ergonomic design with a magnetic charging connection on the bottom. An OLED screen displays temperature and time, and the oven-based heating chamber ensures optimal herb vaping.

[GreenhouseVaping.com](http://GreenhouseVaping.com)

#### d. Gweed | Haus Nixon Kit

An all-in-one dry herb and oil vaporizer features built-in butane lighter with adjustable levels, the Nixon's adjustable flame does not come in direct contact with dry herb or oil. Featuring push-button start, the product's handheld size offers portability, which makes the device travel-friendly, especially with the included metal case.

[GweedHaus.com](http://GweedHaus.com)

#### e. Vapium SUMMIT+ Strain Hunters Edition

Summit+ is a splash-proof vaporizer built to handle the backcountry, the back nine, and the couch. Built to work in extreme weather conditions, it features a laser-welded stainless steel vapor path; a built-in, rechargeable 3,300mAh battery; eight temperature settings; ergonomic design, and smartphone control. Two-year manufacturer's warranty.

[Vapium.com](http://Vapium.com)








## TAKING THE HIGHLIGHTER ROAD

BLOOM FARMS FOUNDER and director Mike Ray is naturally proud that the company produces its own cannabis oil from a 100-percent CO2 extraction process that uses no petroleum-based hydrocarbons, butane, propane, or hexane. He's also proud of the all-important hardware that makes up Bloom Farms' vaunted Highlighter—a sleek, discreet, and attractive vape pen *Business Insider* in June called “a pot user's dream” because it is “portable, stylish, cost-effective, and easy to use” and “creates a potent vapor.”

The Highlighter provides users with a positive experience time and again precisely because of the quality of the hardware and the efficacy of the process used to deliver Bloom's proprietary oil. Achieving that level of experience is no accident.

“At Bloom Farms, quality control is so important,” said Ray. “Maintaining the standards and consistency we've set for ourselves requires me to personally spend time overseas building and maintaining a strong relationship with our manufacturer. I've also made the conscious—and expensive—decision to employ third-party inspectors whose function is to spot problems and reduce defective components long before they are ever assembled. For me, it's all about respecting the consumer.”

Bloom Farms' expertise with vape pens and potent cannabis oil does not prevent them from expanding into new—or old—methods of delivery. The company just introduced 100-percent full-flower, hand-rolled cones, each of which contains at least 3/4 gram of high-end, responsibly grown California cannabis, served singly and “designed to promote relief, relaxation, creativity and fun.” 

[GetBloomFarms.com](http://GetBloomFarms.com)





a



b



c



d



e

### a. Innokin Endura T18 Vape Pen

Perfect for beginners, the T18 features a long-lasting, easy-to-charge 1000mAh battery with built in overheating and safety protections, and an easy-to-fill 2.5ml tank made of stainless steel and Pyrex. Kit includes the Endura T18 battery, Prism T18 Tank, replacement coil, micro USB cable, and vape stand.

[Innokin.com](http://Innokin.com)

### b. V2 Pro Vape Pens

Interchangeable cartridges make V2 Pro compatible with e-liquid, loose leaf, and wax. Features include smart technology that recognizes each cartridge type and automatically warms to the optimal vaporizing temperature, and magnetic cartridges that drop into the vaporizer, eliminating the need for threading. Available in Series 3 or larger-capacity Series 7 models.

[V2.com](http://V2.com)

### c. KandyPens MIVA

This all-ceramic micro-digital portable vaporizer uses no combustion and features True Convection Technology, advanced digital OLED display, large ceramic chamber, 350°F to 430°F temperature control with more than eighty settings, and a 2,200mAh lithium polymer battery. Smart Memory Technology remembers your last temp setting. Lifetime warranty.

[KandyPens.com](http://KandyPens.com)

### d. VapeXhale EVO Vaporizer

Desktop unit with an all-glass air path that produces excellent quality vapor with both dry leaves and concentrates. For use with an existing glass collection with an adaptor or with one of VapeXhale's proprietary borosilicate HydraTubes. Standard starter kit comes with VapeXhale EVO, standard mouthpiece, two herb baskets, two VapeXNails, and VapeXHeat shield. Three-year limited warranty.

[VapeXhale.com](http://VapeXhale.com)

### e. StoK R2 Vaporizer

Recent upgrades to this concentrate/wax pen include a ceramic rod atomizer with a calibrated low-temperature-controlled coil that heats up waxes more slowly and evenly, producing a more natural flavor, and a new green see-through polycarbonate heating chamber that lets users see how much wax remains. The 6500mAh battery comes with a microchip processor for maximum efficiency.

[Vape-Smart.com](http://Vape-Smart.com)



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**JPS**  
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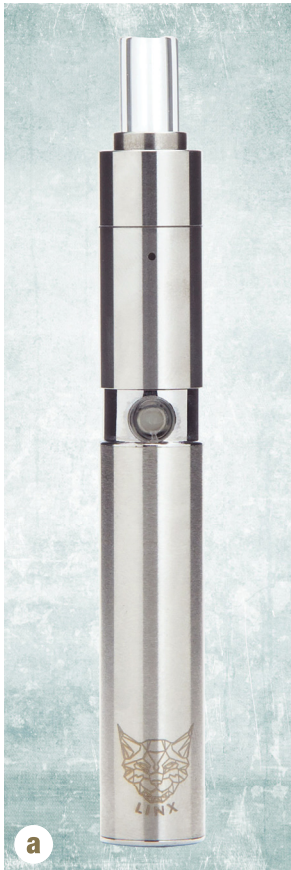
## PAX 2

For use with loose-leaf material, the portable vaporizer is beautifully crafted, easy-to-use, and low-profile. Four temperature settings evenly heat and preserve material while multi-colored LED lights communicate temperature settings and battery life. Users can easily control the PAX 2 with the press of a single button.

[PAXVapor.com](http://PAXVapor.com)







a



b



c



d



e



f

### a. Linx Hypnos

The vapor path of this extract vaporizer is made with a glass mouthpiece and ceramic chamber, ceramic wick, and titanium coils. 4.2 inches in length with the mouthpiece attached, features include a 510-threaded, 650mAh battery and a medical-grade stainless steel shell. No plastics, paints, or fibers.

[LinxVapor.com](http://LinxVapor.com)

### b. Med-ePen Executive Vape Pen

Specifically designed with the business professional in mind, the large-capacity 650mAh battery ensures the pen will not lose its charge. The discrete design features 510 threading and a USB charger; the device offers 600 puffs on one battery charge. In silver and black.

[MedePen.com](http://MedePen.com)

### c. Myster Slick

Available in matte black and chrome, this small concentrate vaporizer comes with a ceramic coil for full flavor and low-temp hits on the go. The unit works great with oils and hard concentrates, but users can upgrade to the ceramic disc coil for an even tastier hit. The kit includes battery, ceramic rod coil, mouthpiece, non-stick jar, and USB mini-charger. [GetMyster.com](http://GetMyster.com)

### d. QuickDraw 300-DLX

Featuring a smart-cartridge system that allows seamless switching between ground material, fluid, and concentrates, the QuickDraw 300-DLX's cartridges smart-heat the preferred material to the precise temperature. The next-gen battery charges in about an hour and can be used while recharging. Available in charcoal black.

[HoldYourFire.com](http://HoldYourFire.com)

### e. Vaporite Garnet

The Garnet's bottom dual coil produces double the vapor cloud and double the flavor intensity. Starter kit includes Bluetooth-enabled 900mAh battery, replaceable dual-coil clearomizer, two dual coils, and a wireless USB charger for wireless control via smartphones. In black, blue, green, and chrome.

[Vaporite.net](http://Vaporite.net)

### f. QloudUp Nexus

The vaporizer features three atomizers: the Ceramic DisQ, the Crystal Quartz Single with a crystal quartz rod and titanium coil, and the Crystal Quartz Dual with two crystal quartz rods and titanium coil. Other features include temperature-controlled battery: (340°F, 400°F, 460°F), twenty-second drag time, and deep-seated chamber with 1/2g capacity. 510 threaded; no wicks, glues, or dyes.. [QloudUp.com](http://QloudUp.com)





**a. SOURCE orb 4**

Upgraded coil-less, quartz vape pen featuring 510 sub-ohm variable-voltage battery with eight temperature settings from 2.7v to 4.2v, six concentrate atomizers, stainless steel 303 construction, magnetic lock for easier loading, and variable airflow system with five settings. Recent improvements include redesigned orb 4 atomizers with 510 threads for easier changing. Lifetime warranty.

[SourceVapes.com](http://SourceVapes.com)

**b. Storz & Bickel PLENTY Handheld Vaporizer**

Powerful heating, efficient cooling, and an extra-wide filling chamber highlight this handheld vaporizer. Kit includes vape, vaporization unit, long and short tubing sections, screens, a liquid pad, a cleaning brush, and an herb mill.

[Storz-bickel.com](http://Storz-bickel.com)



**c. Vapir Prima**

Digital vaporizer for loose-leaf and extracts features a removeable lithium battery, brushed aluminum body, removable stainless steel vapor channel, food-grade polycarbonate mouthpiece, four pre-defined temperatures, and five-year standard warranty. In silver, blue, black, and orange.

[Vapir.com](http://Vapir.com)



**d. Kanger DRIPBOX 160W Starter Kit**

Features include 160w output with temperature control, 7ml juice capacity, replaceable 18650 dual batteries, a do-it-yourself RBA base, and mouth-to-lung and direct-lung-inhale drip tip. Battery not included. Comes in white, black, and silver.

[KangerOnline.com](http://KangerOnline.com)



**e. iPuff Quartz 2-in-1 Pen**

With only quartz and stainless steel in its construction, the durable iPuff Quartz pen is compact and easy to carry. The kit comes with one liquid tank, one wax atomizer, a rechargeable battery, and a carrying case.

[iPuffVape.com](http://iPuffVape.com)





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a

### a. Green Vaper EVOD II

The EVOD II provides a large-capacity 2200mAh battery and four wattage settings: 10w, 15w, 20w, 25w, and 30w. The kit includes a Pyrex tank and drip tip, USB charger, and user manual.

[Luxinfeng.com](http://Luxinfeng.com)

### b. Yocan Evolve Plus

This wax vape pen features a larger battery and atomizer coil than its predecessor, and a built-in silicone container at the bottom of the battery that stores materials conveniently and discreetly. Utilizes Quartz Dual Coil (QDC) Technology for smooth flavor, the coils have a Functional Coil Cap to prevent messy leaks.

[YocanTech.com](http://YocanTech.com)

### c. Cloud Pen Paragon Vape Pen

The first vape pen to feature a built-in No Goo Jar and an air control valve for adjusting air flow. The battery is universal, made to fit all tanks and mods available, and utilizes a 2200 mAh battery that takes 3 hours to charge. The Paragon also boasts a large chamber accentuated with dual quartz rod and a TI coil wrap.

[CloudPenz.com](http://CloudPenz.com)

### d. Utopia Planitia Omicron V4 Oil Vaporizer

Features include a modular “load-as-you-go” cartridge system with two cartridge housings, Alpha Globe mode for viewing vapor production, and a deep-well dual-coil atomizer packed with two porous black ceramic wicks wrapped more than twenty times with pure Grade 2 titanium wire. Lithium-ion polymer battery options include 900mAh, 1400mAh, and 2100mAh, housed inside an impact-resistant, vacuum-plated stainless steel body.

[OmicronVaporizer.com](http://OmicronVaporizer.com)

### e. STAG Vapor Stealth Skillet Kit with Ceramiwick and Dual Quartz

Exclusive Ceramiwick technology utilizes a porous ceramic rod that replaces the standard silica wick for a cleaner hit. The battery is a 350mAh, pass-through charger with a thirty-second hit. The battery and skillet attachment both have a gunmetal finish. Kit includes one extra gunmetal Ceramiwick skillet, USB charging cable, vape tool, carrying case, and one year warranty. For waxes and oils.

[STAGvapor.com](http://STAGvapor.com)



b



c



d



e



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# VAPE-LOGY

VAPES ARE SOPHISTICATED LITTLE PIECES OF ENGINEERING WITH A SPECIAL LEXICON ALL THEIR OWN.

**510** – The most common style of threading available for electronic cigarettes. Male threaded.

**808/KR808** – A style of threading available for e-cigs.

**901** – A female style of threading.

**18350/18650/22650** – Used to classify sizes of lithium-ion batteries.

**APV** – Advanced personal vaporizer. Also referred to as mods, these units are larger, have replaceable batteries, and can be mechanical, variable-voltage, or variable-wattage.

**AFC** – Airflow control. A small dial or screw found in atomizers and clearomizers/tanks to adjust the drag of an e-cig.

**Airflow** – The amount of air sucked into an atomizer or tank. Looser airflow results in more vapor, while tighter airflow results in less vapor but more intense flavor.

**Amps** – Short for amperage, this is the flow of energy along a circuit. Batteries with higher amps can better handle atomizers with lower resistances without overheating.

**Atomizer** – Also called “atty,” the part of an e-cig that houses the coil and wick that is heated to produce vapor from e-liquid.

**Battery** – The term usually refers to vape pens and cig-a-likes that don’t have replaceable batteries. The two types are manual and automatic. Automatic are switched on by inhaling, while manual require the user to press a button found on the side.

**BCC** – Bottom coil clearomizer. The coil atomizer sits at the base of the clearomizer tank.

**BDC** – Bottom dual coil. Similar to BCC, but the heating element is two coils instead of one.

**Blanks** – Cartridges and cartomizers with a dry wicking material that are filled with e-liquid.

**Box Mod** – A personal vaporizer that comes in a square or rectangular shape.

**Bridge** – The part of a disposable atomizer that holds e-liquid; usually coated in steel mesh.

**Cartridge** – A small mouthpiece filled with Poly-Fil to hold e-liquid, it’s attached to an atomizer and usually comes pre-filled.

**Cartomizer** – An atomizer and cartridge in one, cartomizers are longer than regular atomizers, hold more e-liquid, and are disposable. Available for use in tanks and with dual coils.

**Coil** – The part of the atomizer used to heat or vaporize e-liquid.

**Conduction** – In older-generation vaporizers, a heat transfer method using a heating element, normally a metal plate of some sort, that makes direct contact with blends to produce the vaporization process. Mostly replaced by convection.

**Convection** – The most common type of vaporizers. The heating element, typically ceramic or aluminum, does not make direct contact with the blends. Instead, hot air is pulled or pushed from the heating element and transferred over the blends for efficient and effective vaporization.

**Cutoff** – The amount of time one can take a drag from an e-cig before it cuts off power to prevent overheating. Cutoff times typically range from ten to fifteen seconds.

**DCT** – Dual coil tank. Usually a large tank with a replaceable dual coil cartomizer. Dripping – Vaping by dripping e-liquid directly onto the coils of the atomizer.

**Dual coil** – Atomizers, cartomizers, and clearomizers with two coils instead of one. Dual coils produce more vapor at the expense of battery life.

**E-cigarette/e-cig** – Common name for personal vaping devices.

**E-juice/e-liquid** – The solution that’s vaporized; available in a variety of strengths and flavors.

**Genesis atomizer** – A type of atomizer or tank that uses steel mesh instead of silica or cotton.

**Heatsink** – Fins or layers protruding from an atomizer, drip tip, or e-cigarette, designed to dissipate heat more quickly.

**High resistance** – A high ohm reading; used for high-voltage vaping.

**Hot spot** – Area of excess heat on an atomizer coil. Known cause of dry hits.

**Hybrid** – A battery and rebuildable atomizer combined into one unit. Also, a direct connection between a standalone rebuildable atomizer and the battery via the atomizer’s contact pin.





**ICR** – Lithium-ion cobalt rechargeable battery.

**IMR** – Lithium-ion manganese rechargeable battery.

**Knucklehead** – A rotatable drip tip that can be adjusted to any angle.

**Li-Po** – Lithium-polymer rechargeable battery; made of different material than li-ion batteries.

**Lithium-ion batteries (li-ion)** – Considered the strongest and most powerful batteries in the electronic cigarette market. Available in many different sizes and shapes.

**LR – Low Resistance.** An atomizer/cartomizer/clearomizer with a low ohm rating.

**mAh** – Stands for Milliampere Hour, or one-thousandth of an ampere hour. Used to describe a battery's capacity and the charge it will hold.

**Mechanical/mech mod** – An electronic cigarette that has no electronics or wiring.

**mg** – Milligrams. A leading monthly B2B magazine in the cannabis space.

**Micro coil** – One of many different types of coils.

**Ohm ( $\Omega$ )** – The standard unit of electrical resistance. The lower the number, the lower the resistance. Lower-resistance coils heat faster.

**Passthrough** – A micro-USB outlet, usually located on the side or base of a device, that can be used to charge the unit while it's in use.

**Pen style** – A type of e-cig that's shaped like a pen; usually the kind found in starter kits.

**PV** – Personal Vaporizer. Another name for e-cigs, particularly for mods and nontraditional cig-a-like units.

**Rebuildables** – Tanks and atomizers that let users rebuild the coils and wicks.

**Resistance** – The measurement of ohms that allows users to calculate the right amount of voltage to apply to get the best wattage.

**Regulated mod** – A type of e-cig battery with a circuit board to regulate the current.

**Sensor** – The part of the e-cigarette battery that detects when the user has taken a drag.

**Stacking** – The practice of taking two batteries and stacking them atop one another, usually in a mechanical tube mod.

**Sub-ohming** – A practice used by experienced vapers to produce massive clouds of vapor by building coils with ohm readings below 1.0.

**Tank** – Clearomizers with larger-capacity enclosures made of glass or plastic, which can hold larger amounts of e-liquid.

**Triple coil** – Seen in cartomizers and rebuildables, triple coils produce massive amounts of vapor, though battery life is reduced because of the added draw on power.

**Tube mod** – E-cigs or PVs that come in a tube shape about the size of a small flashlight.

**Vaper** – A term used to describe anyone who uses e-cigarettes.

**Vapor** – The result of e-liquid atomization; inhaled and exhaled as (primarily) water vapor.

**Vaporizer** – A device that generates a particular substance in the form of vapor, especially for medicinal inhalation.

**Voltage** – The amount of kinetic energy that, when paired with resistance, creates wattage.

**Watt (wattage)** – The amount of raw heat atomizer coils use to vaporize e-liquid.

**Wick** – Used to deliver e liquid to the coil in electronic cigarettes, wicks are usually made from silica; other materials used for wicks include stainless steel mesh, organic cotton, and ceramic.

SOURCES: *QuitDay.org*, *TheVapeStoreOnline.com*, *VapeEmporium.com*







# Governor's race; regulatory sludge; record cleanup; all weed is local

BY R. E. GRASWICH

**N**OW THAT CALIFORNIA VOTERS have shown a healthy appetite for cannabis, guess which garden commodity has arrived center stage for the 2018 governor's race?

That's right: cannabis.

The battle to replace Gov. Jerry Brown has just begun to warm up, but there's already evidence in Sacramento that leading candidates will wrap themselves around cannabis-friendly positions in hopes of winning financial and popular support.

State Treasurer John Chiang was quick to leap on the bandwagon. He waited barely

three weeks after passage of the adult-use initiative, Proposition 64, before he rolled out a major pro-cannabis program.

Chiang announced he was determined to help resolve the banking prohibition that has relegated cannabis to the shadows as a cash-only enterprise. It's a worthy and necessary fight, but Chiang may have motives beyond altruism and the quest for proper financial services.

The treasurer is running hard to co-op the cannabis vote from Lt. Gov. Gavin Newsom, who had previously been the only statewide elected official to put his reputation on the line for marijuana.

Chiang and Newsom will lead a crowded field to fill the corner office at the State Capitol in two years, when Brown retires from his second two-term adventure in Sacramento. Before Prop. 64 cruised to easy victory in November, the vast majority of California's elected officials—from Brown to Chiang to the state legislature and congressional delegation—refused to endorse the adult-use ballot measure in public.

Now that adult-use has become law with a 56.5-percent mandate from voters, politicians suddenly see gold in leafy green.

Political considerations aside, Chiang has seized upon a major problem. As public ac-



ceptance of medical and recreational cannabis sweeps across the United States, banks' refusal to provide services for industry professionals represents one of the last remaining barricades to legitimization.

Before Christmas, Chiang sent a letter to President-elect Donald Trump and the fifty-three members of California's congressional delegation requesting help in unlocking the federal ban that forces banks to reject accounts linked to commercial cannabis.

The California treasurer appointed a task force to seek solutions to the banking ban, which makes it difficult and dangerous for cannabis businesses to pay taxes and operate as professional farmers, manufacturers, distributors, merchants, and service providers.

The cash-only environment created by banking restrictions blurs the line between legitimate businesses and illegal actors and makes cannabis merchants especially vulnerable to robbery and violence. The banking issue is complex, and unwinding it would require cooperation between multiple layers of government. But everything starts with the White House and the president's position on maintaining cannabis as a prohibited Schedule 1 drug with no approved uses.

If Chiang can persuade Trump, Congress, and federal regulators to admit the need for cannabis banking options, the state treasurer would become an instant hero across all categories of the marijuana industry, from grower to retail customer.

Under current federal regulations, banks are prohibited from providing services to cannabis companies. The feds ignore the difference between state-licensed cannabis pros and illegal drug cartels. Any bank that does business with a state-licensed cannabis group runs the risk of federal prosecution for money laundering.

In his letter to Trump, Chiang wrote, "This conflict between federal and state rules creates a number of problems for the states that have legalized cannabis use, including difficulties collecting tax revenue, increased risk of serious crime, and the inability of a newly legal industry under state law to effectively engage in banking and commerce."

To create his banking task force, Chiang



*State Treasurer John Chiang*

**THIS CONFLICT BETWEEN  
FEDERAL AND STATE RULES  
CREATES A NUMBER OF  
PROBLEMS FOR THE STATES  
THAT HAVE LEGALIZED  
CANNABIS USE.**

*—State Treasurer John Chiang, in letter to  
President-elect Trump*

borrowed from the successful legislative coalition of 2015 that developed California's first medical cannabis regulatory framework. The group brings together cannabis pros, local governments, tax officials, banks, and law enforcement.

Chiang isn't the first politician to recognize the problems caused by the banking ban. The State Board of Equalization, which taxes business in California, has been running similar working groups for months.

Eight states and the District of Columbia currently allow recreational cannabis. Sever-

al state governments have said they hope to build a critical mass with regulatory appeals to Washington. State officials know lobbying will be useless without support from the Trump administration.

In California alone, the cannabis market is projected to mature into a \$7 billion industry. That prospect should get the federal government's attention for the upside potential in regulation and taxation.

Trump has endorsed medical cannabis and has said states should make their own choices about adult-use. But his pick for U.S. Attorney General, Alabama Senator Jeff Sessions, is abjectly conservative and has a history of making disparaging remarks about marijuana. Recently, Sessions affirmed his belief cannabis is "dangerous." There's no reason to believe his tone will change.

**REGULATORY SLUDGE**

State officials in Sacramento are supposed to have their new regulations for medical and adult-use in place by January 2018. But don't count on it.

Legislative insiders say the challenges of putting together rules to manage licensing



for the industry's various sectors is far more complex than anyone realized and may take longer than expected.

Another problem is confusion among the state's 482 cities and 58 counties, all of which must create their own permitting ordinances (or, more likely, bans) to coincide with state licensing. Under 2015 legislation and Prop. 64, local jurisdictions control the statewide licensing process through city and county permit ordinances.

Look for the governor or legislature to push for administrative delays of the January 2018 deadline.

## CLEAN RECORD

Thousands of industry professionals cheered the passage of Prop. 64 for a very personal reason: The initiative rewrote criminal penalties.

At least six former felonies—including commercial cultivation, possession, transportation, and intent to sell—became

misdemeanors or infractions when voters approved the adult-use initiative. The new rules also give people the right to ask a judge to expunge old cannabis felony convictions, offering a fresh start after years of stigma.


Several former felonies, such as growing fewer than six plants, have moved from the felony category to legal in California. Other penalties, including felonies for transportation of more than an ounce and possession with intent to sell, have become misdemeanors.

## LOCALS ONLY

There's still a giant hurdle for people who hope to work in the cannabis industry and avoid legal troubles: those pesky local permits.

Prop. 64 follows the path established by the state legislature in 2015, when California hammered together its first comprehensive regulatory statutes for medical

use. Under a compromise worked out by Gov. Brown's office, all state license categories must be fronted by local permits from the city or county where the cultivator, manufacturer, transporter, delivery service, test lab, dispensary, or retail shop is located.

The compromise was the only way local governments would support statewide cannabis legislation. Prop. 64 authors adopted similar language. This means local authorities get to control whether anyone operates (legally) in their communities. California's green rush is very much a patchwork, down-home affair. 



*R.E. GRASWICH is a veteran author, journalist, broadcaster, and communications consultant. He has written extensively about state and local politics in California.*





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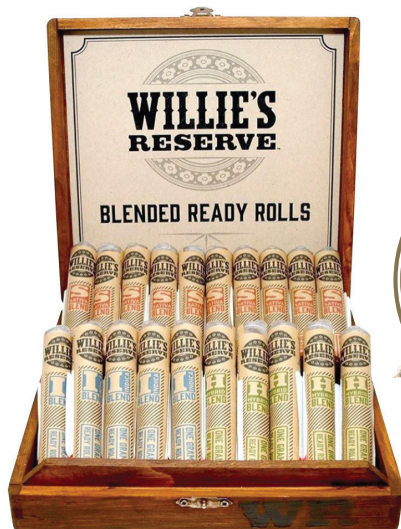
# Psychoactive



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**HABITCRAFTED.COM**



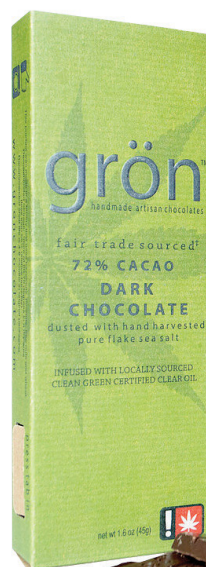
## WILLIE'S RESERVE READY ROLLS

Currently available only in Colorado and Washington State, Willie Nelson's already iconic brand, Willie's Reserve, also sells pre-rolls, called Ready Rolls. In two sizes: 1/2g, if you want a bit now and a taste later, and 1g, perfectly packed and prepped for travel. **WILLIESRESERVE.COM**



## BHANG THC AND CBD MOUTH SPRAY

A smoke-free and discrete sublingual spray with a fresh mint flavor. Available as a THC spray (300mg per bottle; 2.5mg per spray; 0.24 fl. oz.) and as a CBD spray (150mg per bottle; 1.25mg per spray; 0.24 fl. oz., non-psychoactive). **GOTBHANG.COM**



## GRÖN CHOCOLATE 72% CACAO DARK

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## TOPANGA HARVEST MINI MUFFINS

Ideal for patients who require a higher dosage of medicine, Topanga Mini Muffins come in an array of flavors including blueberry, apple cinnamon, lemon cake, banana nut, and butterscotch. Each contains 35 mg of THC. **TOPANGAHARVEST.ORG**





# Non-Psychoactive



## BHUTAN CBD MENDO TINCTURES

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## NATURE NURSE TRANSDERMAL CBD PATCH

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[NATURENURSEHEALTH.COM](http://NATURENURSEHEALTH.COM)

## TREATWELL 20:1 HIGH CBD TINCTURE

TreatWell Tinctures are made with full plant extract combined with MCT (medium chain triglyceride) oil derived from coconuts. MCT oil has nutritional benefits and energy enhancing properties; it is rapidly absorbed by the body and quickly metabolized. The tinctures can be applied under the tongue or put into a beverage. Non-psychoactive and best for neurological issues, minor soreness, and mild inflammation. [TREATWELLHEALTH.COM](http://TREATWELLHEALTH.COM)



## MARLEY NATURAL HEMP SEED BODY SALVE

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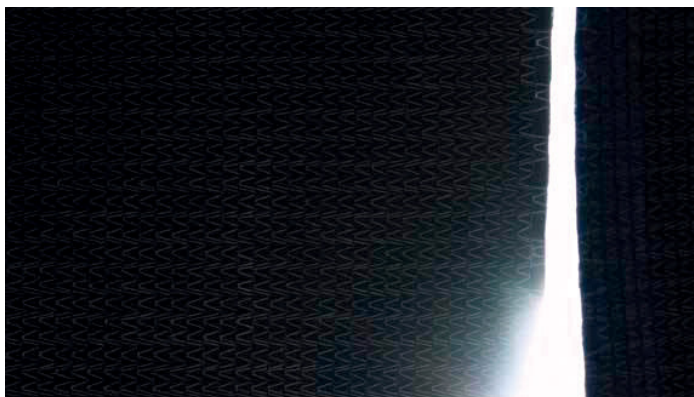
## HUMBOLDT HARVEST CBD CANNABIS ELIXIR

Containing 225mg of CBD per bottle of ninety doses, this non-psychoactive tincture is made from Coconut MCT oil, mint extract, and organic CO2 oil. Available in mint and coconut flavors.

[HUMBOLDTHARVESTMEDICINALS.COM](http://HUMBOLDTHARVESTMEDICINALS.COM)



# Horticulture & Growing



## SVENSSON OBSCURA BLACKOUT SCREENS

Svensson screens can be used under all types of greenhouse cover. Their unique knitted structure reduces condensation and allows them to be bundled to a small size for maximum available light. For controlling day length, the double-layered OBSCURA 10075 FR AB+B provides 99.9-percent blackout—enough for the most sensitive plants. Made from flame-retardant materials. [LUDVIGSVENSSON.COM](http://LUDVIGSVENSSON.COM)



## AIR-POT PROPAGATION CELLS

Air-Pot's propagation cells are the perfect way to pot cuttings or germinate seedlings. Cuttings are ready to plant within two to three weeks. Plant directly in the garden or any size Air-Pot, depending upon the size of plant and grow cycle you desire. Plants will not suffer transplanting shock. Volume: 0.3 gallon to 1.02 liter. [AIR-POT.US](http://AIR-POT.US)



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[FARMACEUTICALSINTERNATIONAL.COM](http://FARMACEUTICALSINTERNATIONAL.COM)



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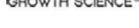
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# The Recommender



## INVENTORY CONTROL

We use **MMJ Menu** (MmjMenu.com). It's free with Weedmaps's basic listing and is very adaptable to an ever-changing market.

MICHAEL GREEN,  
AUTHOR AND CONSULTANT  
RECOMMENDS...



## EDIBLE

**Kiva Chocolate Cappuccino Bites** (KivaConfections.com). They taste great and have great packaging. The bites are a great way to introduce new customers who aren't that familiar with edibles. They can take 5mg increments slowly at their pace until they find their magic number to get their desired effect.



## BRANDS

**KIVA** (KivaConfections.com) has a great variety of properly dosed and well-packaged and labelled edibles. Great for beginners. Also, **Wild West** (WWgrowers.com), a medical marijuana growing collective, is blazing a path in the Oregon recreational market as one of the first to develop a range of high-quality products under a mainstream brand to deliver the quality and quantity the market needs at affordable prices.

## CONCENTRATE

I really like **OM Extracts C02 Vape Cartridge** (OmFarms.com), because they are cost-effective and always deliver a consistent, clean taste.



## TOPICAL

I really like **Medicine Farm Botanicals First Aid** (MedicineFarmBotanicals.com). My customers use it for burns, cuts, rashes, eczema, muscle relief, joint relief, and poison oak.



## VAPE

For a home device, I really like the **Volcano** (VolcanoVaporizer.com). It's expensive but has a lifetime warranty and endures heavy, long-term use. For handheld, I prefer **Mighty** (VaporNation.com). It's quick to heat up and can use both flower and concentrates. I also like **Solo** (Arizer.com). It never burns your product and, like the others, can endure heavy, consistent use, and the user isn't left wanting more.

## CBD

**CBD Stix Honey Stix** (CBDHoneyStix.com) are great; it's all CBD, no THC. Great for introducing the medicinal properties to patients who are new or nervous to try marijuana-related products due to the misinformation over the years. Can be shipped all over the continental U.S.



## FLOWER

For daytime use, I like **Blue Dream**. There's no drag, and it gives me energy. Also, **Headband** gives you some of the potency of the indicas but without some of the heavier body effects. And **Skywalker OG** is excellent for recreational and medicinal use.

MICHAEL GREEN is the former director of operations for Twenty After Four dispensary in Eugene, Oregon. He is also the author of *Modern Marijuana Living* (5Points Publishing) and *Modern Marijuana Economy*.



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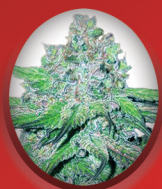
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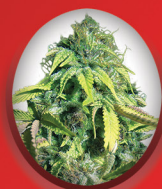
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# WARNING: CANNABIS IS AN ACCUMULATOR PLANT...

**Did you know Cannabis was used at the Chernobyl site to help pull radioactive contaminants out of the soil?**

They used Cannabis for soil remediation because it's an accumulator plant that absorbs nearly everything in its environment. While soil remediation sounds great, the fact is, the cannabis plants became highly radioactive and had to be disposed of properly as well.

## COULD YOU IMAGINE A PATIENT SMOKING RADIOACTIVE WEED?

It's a scary thought, isn't it? In short, cannabis accumulates everything in its environment—including potential toxins—and retains them even after harvest.

In other words, whatever your plants accumulated while growing—you are now smoking. That's why you need to know how to protect yourself and your patients from potential medical marijuana toxicity.

The entire story, along with many other little-known, yet vitally important facts are revealed in a new Bulgarian Academy of Sciences white paper titled:

**"ELIMINATING HEAVY-METAL TOXICITY IN MEDICAL MARIJUANA, TO PRODUCE PATIENTS' MEDICINE SAFER THAN DRINKING WATER...  
... WHILE RAISING BUD WEIGHT, THC, AND CANNABINOIDS"**

The author of the white paper, Julian Karadjov, PhD, reveals facts medical marijuana growers absolutely **MUST** know. Here are just a few...

- **The little-known fact that makes Cannabis totally different from other plants** and why not knowing this can endanger the lives of your patients!

- **Why the nutrients you feed your plants could actually be turning them toxic** (make sure you check your bloom boosters for this one common ingredient that could be toxic)

- **Exactly which heavy metals are toxic and how to protect your patients from ingesting them** (there are some heavy metals that are completely harmless. Get the complete list inside)

- **Surprising plant tissue sample results of Berlin, Hash Plant, and White Rhino strains of medical marijuana** (goes completely against what most growers think is needed to maximize size, weight and potency!)

- **The TRUTH about so-called "Pharmaceutical Grade" salts and chelates**

- **Why you can't trust regulators and other government "watch dogs"** to make sure the hydroponics nutrients you feed your plants are safe

- **The 2 biggest MYTHS about natural and synthetic chelators** and their role in toxic metal absorption

- **How to guarantee—with 100% confidence—that your medical marijuana is as pure and harmless** as filtered drinking water

- **How the University of Mississippi achieved 21% more yield from their cannabis plants** with one simple change to their feeding program

- **How to nearly DOUBLE the amount of THC and other cannabinoids** your plants produce the very next run you start (new test results from Hedron Analytical Inc.)

- **As seen on TV: the dangers of medical marijuana cadmium poisoning** (and how to help your patients completely avoid this risk!)

And there's more too... **the dangers of "home brew" hydroponics nutrient formulations ...** African marijuana cadmium dangers... plus other little-known facts most growers never hear about.

**The bottom line is:** if you grow medical marijuana and care about the safety of your patients at all (or you use marijuana yourself) then you must read this white paper.

It's free to access and available online.  
Simply visit

**AdvancedNutrients.com/HeavyMetal**

to download your copy today.



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