



In response to recent vaping related illnesses, we took a deeper dive into this issue. The attached report expands on our initial findings and provides further insights into the current state of regulated cannabis. CannaSafe's mission is to push cannabis science forward in a way familiar to FDA and medical professional protocols. We hope this report encourages cannabis industry leaders to continue working together to provide information that assists regulators and lawmakers in navigating this burgeoning industry. The goal is to use this data to educate consumers, regulators, and the media.

Recent federal investigations show that the majority of reported vaping-related illnesses are linked to vape cartridges containing THC.¹ The CDC reported many of those in the first two states to report illnesses – Illinois and Wisconsin – said they were sickened by counterfeit marijuana products from the illicit market.²

California is the largest cannabis consumer market in the world. Unfortunately, CA is also the largest illicit market for cannabis in the world. Licensed cannabis in CA contains the industry's best operators, which are controlled by the most stringent final-product testing standards.

CannaSafe performed its own testing on vape products purchased from the legal, regulated market, as well as those from the illicit market. The 104 legal, regulated vape products tested met the label claims of THC% and had no Vitamin E Acetate or pesticides. Out of 12 illicit vape products tested, 9 contained Vitamin E Acetate, and all of them had detectable levels of pesticides, including myclobutanil, which can break down into hydrogen cyanide when heated. All 7 illicit vape products that made a THC% label claim, tested false.

CannaSafe's results prove it is more difficult for these types of adulterants to enter a regulated market. All the illicit products we tested would have failed California Phase III compliance testing, meaning that 0% of the products from the illicit supply chain would have made it through California regulatory standards and onto the shelves of licensed retailers. Vitamin E Acetate is the first dangerous additive in the illicit market to make headlines, but it may not be the last.

Data accumulated by Americans for Safe Access reports that patients prefer vaping as a delivery method over smoking flower, edibles and pills.³ With vaping, patients are able to control their dosing and are not using hydrocarbons, such as lighters, that may introduce another byproduct with a potential health risk. For patients that have difficulty with swallowing, nausea, or vomiting, pills and edibles aren't effective options. Additionally, ingestion hinders the onset of the medication, making it harder for the patient to regulate and medicate acute pain.

The cannabis industry has come together to propose solutions to combat counterfeit products and identify approved sources for additives. We conclude that a ban on vaping would only endanger the progress made and force vulnerable patients back into unsafe and unregulated markets where dangerous products thrive. The THC vape cart industry alone is estimated at \$5 billion annually, and it will remain a lucrative business for illegal producers if a legal market isn't supported.





On behalf of the cannabis industry, CannaSafe urges lawmakers not to take this delivery method away from patients and consumers. We also encourage patients to speak out and use the channels available to make their voices heard. We are currently working on establishing a client portal to post our client's testing results and make them a resource to all for information and research.

Thank you for your time. We hope the following report helps you make a more informed decision. Please buy legal, whenever and wherever possible.

Aaron Riley
President

Sources

¹ Fertig, Natalie, et al. "CDC Says Majority of Vaping-Related Illnesses Linked to THC." POLITICO, 30 Sept. 2019, <https://www.politico.com/newsletters/morning-cannabis-preview/2019/09/30/cdc-says-majority-of-vaping-related-illnesses-linked-to-thc-761462>.

² "E-Cigarette Product Use, or Vaping, Among Persons with Associated Lung Injury - Illinois and Wisconsin, April–September 2019 | MMWR." Centers for Disease Control and Prevention, Centers for Disease Control and Prevention, 27 Sept. 2019, https://www.cdc.gov/mmwr/volumes/68/wr/mm6839e2.htm?s_cid=mm6839e2_w.

³ "ASA Creates Patient-Focused Recommendations in Light of the Vaping Crisis." Americans for Safe Access, 2 Oct. 2019, https://www.safeaccessnow.org/asa_creates_patient_focused_recommendations_in_light_of_the_vaping_crisis.





CannaSafe

Vitamin E Acetate Report

Table of Contents

<i>Introduction</i>	<i>3</i>
<i>Current Data on Vape Illnesses</i>	<i>4</i>
<i>Preliminary CannaSafe Testing Results</i>	<i>5</i>
<i>Further Findings</i>	<i>6</i>
<i>California Illicit Market</i>	<i>7</i>
<i>Authentic vs. Counterfeit Products</i>	<i>8</i>
<i>Safe Access for Patients</i>	<i>9</i>
<i>Conclusion</i>	<i>10</i>

Introduction

In response to recent vaping related illnesses, we took a deeper dive into this issue. The attached report expands on our initial findings and provides further insights into the current state of regulated cannabis. CannaSafe's mission is to push cannabis science forward in a way familiar to FDA and medical professional protocols. We hope this report encourages cannabis industry leaders to continue working together to provide information that assists regulators and lawmakers in navigating this burgeoning industry. The goal is to use this data to educate consumers, regulators, and the media.

Current Data on Vape Illnesses

805+
Lung Injuries

46
States

1
**U.S.
Territory**

**Cartridges
Packaging
Distillate
+ Terpenes**

500%

**Profit in
the illicit market**

**Over
15
Deaths**












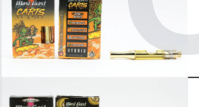


Recent federal investigations show that the majority of reported vaping-related illnesses are linked to vape cartridges containing THC.¹ The CDC reported many of those in the first two states to report illnesses – Illinois and Wisconsin – said they were sickened by counterfeit marijuana products from the illicit market.²

Data as of October 3, 2019

¹Fertig, Natalie, et al. "CDC Says Majority of Vaping-Related Illnesses Linked to THC." POLITICO, 30 Sept. 2019, <https://www.politico.com/newsletters/morning-cannabis-preview/2019/09/30/cdc-says-majority-of-vaping-related-illnesses-linked-to-thc-761462>.

²"E-Cigarette Product Use, or Vaping, Among Persons with Associated Lung Injury - Illinois and Wisconsin, April–September 2019 | MMWR." Centers for Disease Control and Prevention, Centers for Disease Control and Prevention, 27 Sept. 2019, https://www.cdc.gov/mmwr/volumes/68/wr/mm6839e2.htm?s_cid=mm6839e2_w.

Preliminary CannaSafe Testing Results

LICENSED CARTS		LICENSED CARTS		LICENSED CARTS		CannaSafe		
LICENSED CARTS		Orchid	California Phase 3 Compliance	Claim 63% Tested 67%	0%	None Detected		LICENSED CARTS
		Tikun	California Phase 3 Compliance	Claim 48% Tested 48%	0%	None Detected		
		Select	California Phase 3 Compliance	Claim 84% Tested 87%	0%	None Detected		
		Heavy Hitters Diablo OG	California Phase 3 Compliance	Claim 91% Tested 91.6%	0%	None Detected		
COUNTERFEIT CARTS		Brass Knuckles Sour Apple	None	No Claim Tested 75%	4.2%	Bifenazate Boscalid Chlorfenapyr Etoxazole Fipronil Myclobutanil Paclobutrazol Permethrin Piperonyl Butoxide		COUNTERFEIT CARTS
		Brass Knuckles Gushers	None	No Claim Tested 70%	10.1%	Bifenazate Chlorfenapyr Fipronil Myclobutanil Permethrin		
		Heavy Hitters Pineapple Express	None	No Claim Tested 60%	25.1%	Bifenazate Chlorfenapyr Etoxazole Fipronil Myclobutanil Permethrin		
		Dank Vapes Dole Whip	None	No Claim Tested 59%	29.7%	Bifenazate Chlorfenapyr Fipronil Myclobutanil Permethrin		
		Dank Vapes Lemon Berry	None	Claim 90.99% Tested 26%	33.1%	Bifenazate Malathion Metalaxyl Myclobutanil Permethrin Piperonyl Butoxide Propicanazole Tebucanazole Trifloxystrobin		
COUNTERFEIT CARTS		Cereal Carts Trix	None	Claim 85-90% Tested 23%	32.3%	Bifenazate Metalaxyl Myclobutanil Paclobutrazol Permethrin Piperonyl Butoxide		COUNTERFEIT CARTS
		Exotic Carts Mars OG	None	Claim 80-85% Tested 27%	38.5%	Bifenazate Chlorfenapyr Chlorpyrifos Fenpyroximate Malathion Myclobutanil Piperonyl Butoxide		
		West Coast Carts Hybrid	None	Claim 80-85% Tested 60%	0%	Myclobutanil		
		West Coast Carts Indica	None	Claim 80-85% Tested 61%	0%	Myclobutanil		
		Mario Carts Skunk OG	None	Claim 83-87% Tested 46%	32.9%	Bifenazate Chlorfenapyr Etoxazole Metalaxyl Myclobutanil Paclobutrazol Permethrin Piperonyl Butoxide		
CannaSafe COUNTERFEIT CARTS		COUNTERFEIT CARTS		COUNTERFEIT CARTS		CannaSafe		

Further Findings

Licensed

104
Samples

0%
Vitamin E

No
Pesticides

CannaSafe performed its own testing on vape products purchased from the legal, regulated market, as well as those from the illicit market. The 104 legal, regulated vape products tested met the label claims of THC% and had no Vitamin E Acetate or pesticides. Out of 12 illicit vape products tested, 9 contained Vitamin E Acetate, and all of them had detectable levels of pesticides, including myclobutanil, which can break down into hydrogen cyanide when heated. All 7 illicit vape products that made a THC% label claim, tested false.

**Illicit/Counterfeit
Cartridges
Tested**



Illicit

12
Samples

9
contain
Vitamin E Acetate

Up To 38.5%
Vitamin E Acetate

100%
contain
Pesticides

16
detected
Pesticides

1
contain
Heavy Metals

8ppm
of Lead

California Illicit Market

Licensed
vs
Unlicensed

California is the largest cannabis consumer market in the world. Unfortunately, CA is also the largest illicit market for cannabis in the world. Licensed cannabis in CA contains the industry's best operators, which are controlled by the most stringent final-product testing standards.

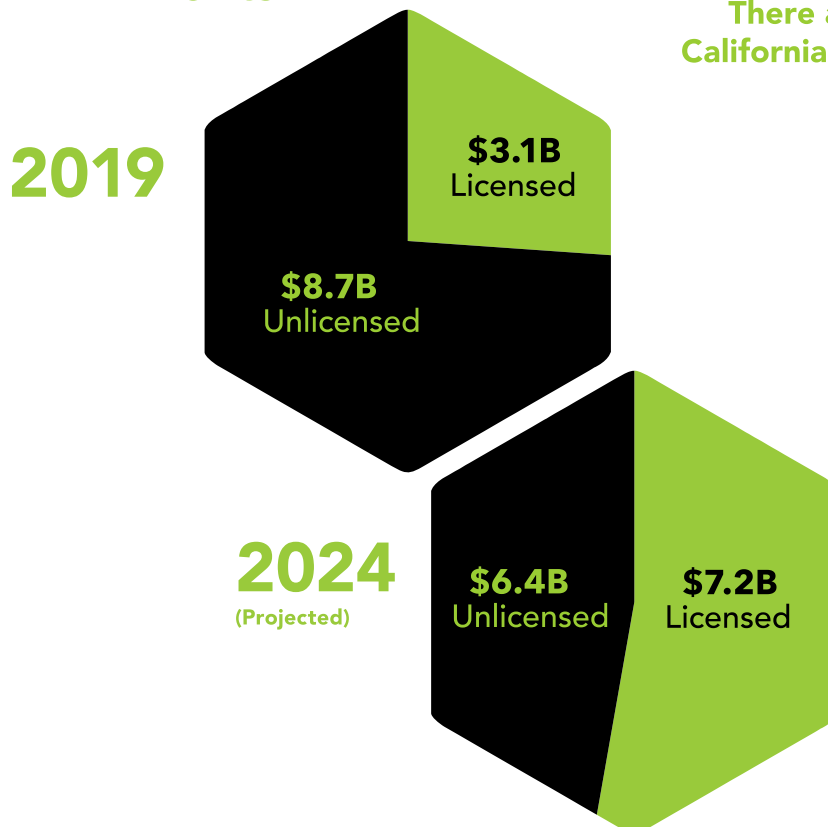
CannaSafe's results prove it is more difficult for these types of adulterants to enter a regulated market.

All the illicit products we tested would have failed California Phase III compliance testing, meaning that 0% of the products from the illicit supply chain would have made it through California regulatory standards and onto the shelves of licensed retailers. Vitamin E Acetate is the first dangerous additive in the illicit market to make headlines, but may not be the last.

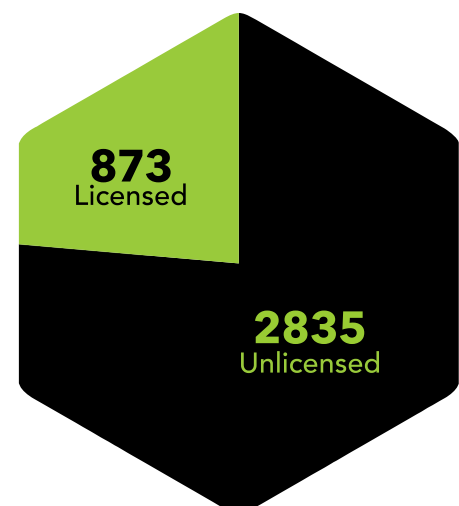
Fewer than 20% of cities in California — 89 of 482 — allow retail shops to sell cannabis for recreational use

There are currently 583 licensed pot shops in California and 263 licensed home-delivery firms.

Profits



Dispensaries



Source: McGreevy, Patrick. "California Now Has the Biggest Legal Marijuana Market in the World. Its Black Market Is Even Bigger." LA Times, August 15, 2019, <https://www.latimes.com/california/story/2019-08-14/californias-biggest-legal-marijuana-market>



HEAVY HITTERS

Authentic

THC%

Claim: 91%

Tested: 91.6%

Vitamin E: None

Pesticides
None



Kingpen

Authentic

THC%

Claim: 81.38%

Tested: 81.38%

Vitamin E: None

Pesticides
None



Counterfeit

THC%

Claim: No Claim

Tested: 60%

Vitamin E: 25.1%

Pesticides
Bifenazate
Chlorfenapyr
Etoxazole
Fipronil
Myclobutanil
Permethrin



Counterfeit

THC%

Claim: 75.13%

Tested: 63.29%

Vitamin E: 34.88%

Pesticides
Tebuconazole
Myclobutanil
Piperonyl Butoxide
Propiconazole
Permethrin

STIIZY

Stiiizy

Authentic

THC%

Claim: No Claim

Tested: 84.48%

Vitamin E: None

Pesticides
None



Counterfeit

THC%

Claim: No Claim

Tested: 63.29%

Vitamin E: None

Pesticides
Bifenazate
Etofenprox
Tebuconazole
Permethrin
Myclobutanil

Safe Access for Patients

Data accumulated by Americans for Safe Access reports that patients prefer vaping as a delivery method over smoking flower, edibles and pills.³ With vaping, patients are able to control their dosing and are not using hydrocarbons, such as lighters, that may introduce another byproduct with a potential health risk. For patients that have difficulty with swallowing, nausea, or vomiting, pills and edibles aren't effective options. Additionally, ingestion hinders the onset of the medication, making it harder for the patient to regulate and medicate acute pain.

Conclusion

The cannabis industry has come together to propose solutions to combat counterfeit products and identify approved sources for additives. We conclude that a ban on vaping would only endanger the progress made and force vulnerable patients back into unsafe and unregulated markets where dangerous products thrive. The THC vape cart industry alone is estimated at \$5 billion annually, and it will remain a lucrative business for illegal producers if a legal market isn't supported.

"The THC vape cart industry is estimated at 5 Billion dollars annually alone"

On behalf of the cannabis industry, CannaSafe urges lawmakers not to take this delivery method away from patients and consumers. We also encourage patients to speak out and use the channels available to make their voices heard. We are currently working on establishing a client portal to post our client's testing results and make them a resource to all for information and research.

Thank you for your time. We hope the following report helps you make a more informed decision. Please buy legal, whenever and wherever possible.