

The Cannabis Extractor's Guide to Edibles

White Paper



If you're considering making edibles or already have a cannabis processing lab that isn't making them yet, this guide is for you.

Table Of Contents

Market Overview	3
Operational Considerations	5
Infusions and Product Choices	8
Packaging and Compliance	11
Conclusion	13

Market Overview

Cannabis-infused edibles with THC, CBD, or other cannabinoid blends present some of the highest-margin opportunities in the entire industry. They're also extremely popular with consumer cohorts, and for good reason. According to data collected by Headset that was reviewed by MJBizDaily, as of 2021, the edibles market between CO, CA, NV, WA, MI, and OR is worth around 1.38 billion dollars, up a staggering 20% over 2020 (Schaneman, 2022). Another report directly from Headset indicates that the entire edibles market between Canada and the US is expected to reach over 3 billion by the end of 2022 (Headset, 2021). Schaneman with MJBiz reports further that edibles sales represents the 4th largest category of cannabis purchasing, just 45 million behind pre-rolls, and has outperformed the industry growth average. Gummy product sales make up the vast majority of the category, around 70% overall, with the next largest category being chocolate, which comes in at only 10% of total sales. In the same vein, in 2021 nearly 78% of all edibles sold were 100mg package sizes, which isn't actually that many cannabinoids per SKU compared to other cannabis products. This is why edibles are often so profitable once

If you are entering a highly-competitive and mature market (think Colorado or California), your offering has to be something special and potentially different in significant ways to get dispensary purchasing managers excited.

they pick up real sales volume. Consider a gram of live resin as an example, which retails for between \$30-\$50 in most places and can contain anywhere from 700 to 900 or more milligrams of THC. A similar price point for a 100mg edibles package can be \$15-\$25 – that’s a huge difference. It should come as little surprise to any newcomer that edibles are one of the hottest categories in the cannabis business landscape and one that many consumers seek out instead of or in addition to smoking or vaping their cannabis.

With this backdrop of opportunity for extractors, it’s no wonder that there are so many new businesses that are interested in cannabis edibles and why there are so many brands in it already. For operators

looking to break into this crowded space, coming to market with an extremely detailed execution plan is essential, otherwise your brand is going to get lost amongst highly efficient competitors that already have established shelf space with a legion of dispensaries. This guide is designed to give your business the tools to come up with your own plan to break into its locality’s edibles market. Depending on the state or location of your license, however, the type of offering required to be successful may vary dramatically. For entrants into much newer markets, the bar tends to be quite a bit lower for what will sell on shelves. These brands can usually get away with below average packaging designs, branding, and SKU variety.

Edibles Growth in 2021

Sales of marijuana edibles in 2021 grew more than sales of all MJ products in CA, CO, MI, NV, OR and WA. Gummies continue to dominate edibles sales.

Sales growth

Year-over-year from 2020



Source: Headset

Edibles growth by product category

Year-over-year from 2020

Category	2021 sales	Year-over-year growth
Gummies	\$976M	31%
Chocolate	\$150M	-7%
Caramels, Chews, Taffy	\$131M	32%
Candy, Lozenges, Gum	\$36M	-18%
Mints	\$33M	0%
Cookie	\$28M	-20%
Brownie, Cereal Bars	\$18M	2%
Other	\$7M	-20%

Package size

Share of edibles sales by package size.

THC	2020	2021
100mg	76.3%	77.8%
50mg	9.9%	10%
Other	4.3%	4.6%
10mg	2.6%	2.7%
<5mg	2.4%	1.4%
20mg	1.3%	1.0%
90mg	1.5%	0.9%
40mg	0.9%	0.9%
5mg	0.6%	0.4%
30mg	0.3%	0.2%

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Operational Considerations

As any experienced operator in the edibles space will attest to, making infused SKUs in small batches doesn't take a lot of room or equipment unless you're doing something complicated, especially when you're creating gummies. The "well, this will be easy" trap though is one that a lot of extractors who are new to the space fall into, because the next thing veteran edible producers will probably explain is how much foresight and planning is required to scale up from tiny batches to consistent production to meet demand if and when strong sales develop. Edibles kitchens have special considerations that often benefit from expert assistance, so if you don't have someone on your team who is familiar with candy making or food production, hiring a consultant is worth every cent. **All of the following aspects and more need to be carefully considered:**

Do we have the right equipment to make our edibles that will enable us to scale?

Chocolate, gummies, soft candies, caramels, taffies, and everything else need different components to be made correctly. Just because you don't see a Starburst®-like taffy in your market doesn't necessarily mean no one else has thought about it; taffies are actually some of the most difficult dosed candies to make because of how soft they are after pulling, and the cost of the equipment investment required to make them. Conversely, it's easy for new operators to get honey-potted into buying automated candy-making machines that produce vastly more units per hour or day than they need, not to mention the time, energy, and maintenance necessary to actually operate them.



Where are we sourcing our raw materials from?

The same principles apply here as to the last question. Each edible has different raw ingredients, most likely including different kinds of sugars even. In today's world, material sourcing from trusted vendors is of critical importance with pricing on the rise just about everywhere. Make sure you have lined up who you want to buy from, what their minimum order quantities are, and expected lead times. Buying in bulk if you have the storage space can save your operation enormous amounts of money, but may take quite a while to work through, so lining up your sales forecasts with ingredient expiration dates as best as you can is typically wise. Thankfully, many candy-making ingredients tend to last a long time.

Is our floorplan properly designed to produce the kinds of edibles we plan to make?

For gummies in particular, the actual setting and drying time varies quite a bit between pectin, gelatin, or combination formulas. Trying to cram your kitchen into a closet simply isn't going to work, and manufacturing often

Having a space with the right temperature and humidity is crucial for efficient production



requires significantly more storage space than new operators anticipate. These fine details and determining an actual process flow on paper long before sugar is being cooked is crucial.

Furthermore, where each company's brand comes into play has to be factored in from the very beginning. Are you positioning yourself as a wellness brand? If so, a standard THC gummy

might not fit the bill. Perhaps in this case your brand would be better suited to launching with THC/CBD combinations or other cannabinoids such as CBG or CBN (which require certain extraction equipment to distill and collect properly). Lab Society's industry-leading extraction equipment is widely used and trusted for distillation of this kind for hobbyists and industrial operations alike. Similarly, taking the wellness brand example and using gelatin for your gummies (which is an animal byproduct-based hydrocolloid) probably won't get your health-minded consumers behind you. They'll probably want something with pectin, which demands different formulas requiring different PH and brix levels than gelatin, typically. Or if you're trying to make a gourmet chocolate offering, be prepared to put extra time and marketing energy into educating your audience about your ingredient choices.

By preparing to match up your edible branding and marketing with your products from the beginning, your chances of success will grow considerably



Infusions and Product Choices

In all cases, the most expensive ingredient when making edibles is always the “active”—processor-speak for the activated cannabinoids that make an edible infused as opposed to just a standard food product. Complete decarboxylation is what enables cannabinoids to become ingestible by our systems, and different actives have various optimal ways of completing that process. Extractors can use almost any kind of oil to infuse their edibles, with the most common input being distillate. However, solventless ice water hash and rosin are now also being used by gourmet producers (bear in mind that the cost of these premium actives can multiple times that of the former oils). This type of high-quality active is made by PurePressure rosin presses and ice hash washing machines.

Distillate

Distillate is simply distilled cannabinoids and is made from inexpensive starting material. It’s highly desirable by edibles

producers because it’s cheap, potent, and consistent to cook with. Lab Society produces both benchtop short path distillation systems and industrial thin film distillation systems for this purpose.

CO₂

CO₂ oil can be used as well, but it’s less common for edibles given the inordinate equipment costs required.

Hydrocarbon

Hydrocarbon or even live resin can be used for edibles and represents a step up from distillate or CO₂, with a commensurate increase in active price. It also tends to contain more terpenes, which can affect formulas and need to be mindfully infused. Precision Extraction is the market leader for hydrocarbon extraction technology.

Solventless

Ice water hash—or better yet, rosin—represents the best oil input possible from a quality standpoint, but it comes with the heftiest price tag by a large margin. Solventless can be tricky to infuse, because of the high terpene content. Specialty edibles where a hashier flavor is desired represents the typical market use case for solventless edibles.

For most edibles, aside from the active, the raw materials required to make them cost pennies or just a fraction of the cost of the cannabinoids themselves. Even for expensive chocolates, ingredients like sugar, cacao, and others still only cost a small portion of what your cannabis or CBD oil used does when purchased in bulk. Raw ingredients really do matter though, and trying to find the cheapest one for each item on your formula's list is a great way to have a very average-tasting product. When it comes to gummy and jelly SKUs, the different types

of gelatin and pectin (or even agar, another gelling agent) have variable setting strengths, PH levels, and so on. Just getting any old pectin won't do if you're trying to make an edible that's competitive in your market, especially one that will actually retain shelf stability for a long time frame. Many dispensaries don't want to purchase any edibles unless it has a 6-month shelf life at room temperature, or ideally quite a bit longer. This is why many perishable edibles still haven't risen to their full potential yet in the market and probably won't for quite some time; freezer and refrigeration space in a dispensary requires precious square footage that often isn't available. This says nothing of the likely inconvenience a budtender experiences when picking the product for sale if that cold storage is in the back somewhere.



Common edibles: Gummies, chocolate, baked goods



For any product, the flavors you plan to bring to market with your edibles will need to be formulated to work properly with your choice of active for each SKU, but there are plenty of flavor-blockers available too to mask the typically bitter taste of cannabis oil (if you're using solventless, for example). When used in the right quantities, these blockers can allow for a delicious candy or edible product, but many new producers don't factor in the time it will inevitably take to perfect their recipes. By budgeting for ongoing R&D, your operation should strive to get to a point where its formulas are competitive with the top sellers in your market. The bullseye for many newcomers is to offer SKUs that are meaningfully different in some way, purchasable at an acceptable price point by your average consumer, and which are branded in a way that stands out on the shelf.

**Simply being
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the lowest
common
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taste great
is of equal
or greater
importance
to product
differentiation**

Packaging and Compliance

As your team is working through its choice of active(s) and the actual edibles you want to make with starter formulas, you should also be investigating your packaging solutions. There are all kinds of considerations here that have to be worked out and the sooner you are finding solutions for your edible SKUs, the better. Virtually all states and provinces require that cannabis or CBD packaging be child-resistant in some form, but of course this does add another layer of cost. Not all child-resistant packaging is the same, and some can be fairly adult-resistant too. So make sure to get samples of all packaging you are considering before committing to a large purchase.

Layering in package design is another key aspect. It sounds obvious, but make sure to sit down and deeply think with your team about how gourmet or not your brand is attempting to position itself as. If you're going the top shelf route, a cheap plastic pouch with a large price tag could be an instantly recognizable brand/product mismatch for consumers.

Are you going to go with a primary, child-resistant vessel and a paperboard outer box? Or are you planning to use an all-in-one printed pouch? There are all kinds of extremely innovative solutions on the market, but their costs span a wide spectrum. Your bottom line can get eaten alive if the marketing team has all the say in which packaging solutions get chosen, but they should be heard to ensure you don't end up with something that is the least attractive looking option on the shelf. Finding the middle ground of affordability, presentation, and flexibility is a process that demands research, especially considering that lead times for manufacturers overseas can span many months. Most businesses can't afford to swing and miss on this part of the process, so make sure to triple proofread every design.



In addition, the physical size of each SKU's packaging matters quite a bit, because everything comes back to what the dispensary wants. If your fancy packaging takes up too much room on the shelf or in the back, it limits the amount of inventory a dispensary is willing to keep on hand and may prevent your brand from getting multiple SKUs available to be seen by customers because each company may only be allotted a small amount. Lastly, packaging compliance considerations vary widely and are highly dependent on local regulatory factors, so make sure you don't take this part of the equation lightly. In some places gummies can't resemble animals, or have to have a THC stamp on them. In others, there are hard limits on advertising or what packaging can convey. Ensuring that the right information and symbols are correctly placed in the right sizes could mean the difference between a state mandated recall or not. Typically there is a lot of information that has to exist somewhere on the package, so batch stickers and other specific cannabinoid information will most likely need to be produced with printers in house. Sometimes this can complicate the design, but staying compliant is of the utmost importance.

Whatever you do, make sure to talk to your legal team or work with designers who know these laws. The costs of cutting corners and falling out of compliance can be astonishing even to experienced operators

Conclusion

Developing and launching a new line of edibles is often simultaneously one of the most exciting and challenging things that a cannabis extraction business can do. This is especially true for a business that has never done so before. While a large amount of foresight, preparation, and preparatory purchasing are needed to successfully execute a new edible SKU, when done properly they can add tremendously to your business's bottom line. At the outset it can seem daunting, but what is most important

to remember is that each step in the process deserves thoughtful review. This starts with your competitor analysis to identify new product opportunities leading all the way through to the finished look and feel of the packaging itself as it would sit on a dispensary shelf. Given that edibles have outperformed other categories consistently, planning your company's path into the market should be an easy decision. When you're ready to talk to an expert, make sure to [contact us](#) to talk to a pro today.





Agrify is the world's most complete solution provider for cannabis cultivation and extraction. With decades of industry experience and the world's leading brands, Agrify is the solution to take your cannabis business to the next level

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