LABS

PRODUCT GUIDE

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WHO WE ARE

MISSION

S10 Labs is dedicated to reinventing hardware standards for the cannabis industry. We are founded upon the mission to advance the industry through our expertise in material science and our relentless pursuit for quality.

EXPERIENCE & EXPERTISE

S10 Labs is a subdivision of a globally renowned organization that has worked with brands around the world, providing them with resources and vaporization hardware that is reliable, innovative, and best in class.

Our latest innovation, a zirconia ceramic 510 thread cartridge, Zirco™ is a complete reimagination of the traditional metal cartridge, delivering unrivaled efficacy, flavor and quality while solving the all-too-common problems faced by cannabis operators nationwide. From heavy metal leaching, micro-fracturing, to oil-leakage, this innovative cartridge technology offers the solution that not only improves the end-user experience but also ensures product compliance.

Beyond technical prowess, S10 Labs is truly the first of its kind operation to reimagine what it means to be a vertically-integrated manufacturer across the value chain because we believe our partners should enjoy a simple streamlined experience to help them expand their industry footprint.

INTRODUCING ZIRCO™

Next Era in Vaporization Tech

Not all vaporization hardware is made the same.
The Zirco cartridge is the world's premier zirconia ceramic cartridge. Using our proprietary Medical Zirconia Ceramic Technology (MZCT), S10 Labs has revolutionized the 510 cartridge.

Heavy Metals? No Way.

With a high-temperature resistance of up to 1400 ° C, our zirconia ceramic catridges have a high fracture toughness, resistance to oxidation and chemical corrosion, and present no heavy metal contamination or leaching.

Zirconia ceramic has ten times the hardness and strength of conventional alumina ceramics, making them well suited for use in extreme thermal and pressure conditions. Its high chemical stability means it can be used in conjunction with high THC concentrations and terpene rich oils without any discernible change in taste or color.

We Have Quite Literally Reinvented the 510 Cartridge

- Incomparable Thermal Properties

  Prevent over burning of cannabis extras and common issues such as micro fracturing and heavy metal corrosion.

- Robust Durability

  Circumvent chipping or shattering while maintaining a tighter seal to prevent leakage.

- Porous Nature

  Even heating of extracts while maintaining all the true natural flavours without compromise.

- Optimal Testing

  Unmatched resistance to corrosion which prevents the leaching of toxins over time.

WHY S10 LABS?

Partnership you can rely on

With S10 Labs, you have a devoted partner to develop reliable solutions for your brand with the best quality, efficiency, and traceability. As a one stop shop, clients no longer need to waste precious time and resources navigating through a field of vendors and sub-contractors who don't feel obligated to meet your expectations.

Design Development & Customization

Production

Logistics

Sourcing

Fill - Finish

Unparalleled Lead Times

Supply Chain Control

Co - Packaging

Warehousing

Best in Class Partners

For more than 10-years, we have been delivering innovative products for some of the best companies in this industry. Every step of the way we analyze the potential for improvements to product design factors, turnaround time, and any imaginable aspect to enhance your business and product.

Brand Customizations

S10 Labs is dedicated to providing our clients with a comprehensive range of capabilities to transition their ideas and concepts to tangible finished products. We ensure customization can be personalized to accommodate your product or project scope at a moment's notice.

Cutting Edge Products

Our cutting edge products are a result of many years of intensive research and development, following the highest safety, quality standards, and latest compliance rules. Our products are completely safe to use and are made with the highest quality materials in the industry.

Zirco™

Product Specifications

Size: 11mm * 57.3mm (0.5ml) & 11mm * 69mm (1.0ml)
Color Options: White, Pink, Black, Blue
Oil Capacity: 0.5ml & 1.0ml
Resistance: 1.4Ω
Material: Quartz Glass
Oil Intake Holes: 3 * 1.8mm & 3 * 2.0mm
Airflow Type: Bottom Intake
Filling: Top Filled
Testing Notes: Fill according to our standard filling instructions

Our Technology & Team

The backend of our technology is built by former engineers and members from Apple, Foxconn, etc. By leveraging our past experiences in our former lives mixed with a passion for manufacturing excellence, we are ready to bring disruptive tech solutions to the industry.

As early pioneers for vaporization technology and a turn-key manufacturer for custom vaporization hardware, our team has a proven track record for custom projects. Unlike other operators who claim to be manufacturers and have no real direct oversight of the manufacturing process, S10 Labs is fully vertically-integrated to ensure complete control of all our processes, from the synthesis of raw material parts to the assembly of finished goods.

GMP Environment & ISO 9001

Our state of the art facilities and QA/QC team is guided by an experienced team of professionals assuring your product meets the strictest of industry guidelines. We are currently operating in a GMP environment with ISO 9001 facility while building a secondary facility which will meet the standards of ISO 13485 certification.

Quality Control

With compliance in mind, our team continually tests throughout the development and production process. We perform an array of industry specific testing to assure your products meet the highest criteria for reliability and safety in real-world scenarios such as impact and draw testing.

R&D Resources

Since our establishment in 2010, S10 Labs has been focusing on the innovation of vaporization technology and product research and development. With this insight, S10 Labs has formed an independent R&D elite team of more than 250 staff globally, continuously optimizing and upgrading cutting edge technologies.

Supply Chain Control

We maintain meticulous end-to-end supply chain management, from production to delivery, to ensure that only products which meet our quality standards are allowed to be processed through our supply chain.

OUR CLIENTS

ZIG-ZAG

IGNITE

ITEM NINE LABS CORPORATION

SUORIN

TURNING POINT BRANDS

gkua ULTRA PREMIUM

pinkies

elicit Labs

S10 COMPENDIUM

UNDERSTANDING VAPORIZATION HARDWARE

Vaporizers are devices used to vaporize substances for inhalation. All vapor devices contain a lithium battery to heat a wire coil. A wick, surrounding the coil, is used to draw extracts to the coil. When heated by the coil, the extract vaporizes and can be inhaled in a similar fashion to smoking.

Vaporizer Pen (colloquially known as “vape pens”) are small vaporizers shaped like a pen. Vape pens primarily utilize conduction heating instead of a convection heating method, therefore it’s critical to understand how to properly operate your vape to ensure your product does not overheat.

Direct draw is commonly found with portable/pen vaporizers. These vaporizers offer mouthpieces directly attached to the unit to allow the vapor to flow from the heating coil to the mouth of the user. Some direct draw vaporizers offer a removable stem (typically glass), while others have the mouthpiece permanently attached (like pen vaporizers).

Cartridge

For the cannabis industry, the standard cartridge is called the 510 thread cartridge. The cartridge is the system that houses the oil from extractors and is one of the simplest entry points into cannabis use. The 510 thread cartridge is broken down into two subcomponents: the mouthpiece and the tank. The tank consists of the outer housing, centerpost, atomizer, coil, base collar, and the 510 thread connector.

Batteries

There are two main categories of batteries. The first is considered the all-in-one systems, disposable and rechargeable vaporization devices. These devices have built-in batteries that are meant for simple consumption. The second category is the 510 thread battery system in which a detachable cartridge system, 510 thread cartridge, is utilized to complete the set. Typical 510 thread battery systems have two options, draw-activated or button-press.

Coils

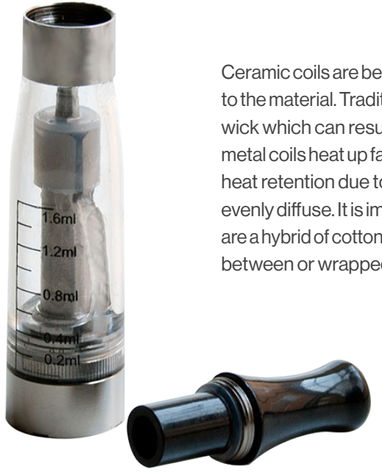
Coils can be made using nickel, titanium, stainless steel and other similar metals. Coils are thin wires wound into the shape of a coil which are located within a vape device’s tank and heated by an atomizer’s electrical current. Coils’ structure may also range from a sole, twisted wire to a complex wired braid. When heated coils come into contact with extracts, the extract is transformed from liquid to a vapor form that users can inhale.

Atomizers

Atomizers have a negative and positive pole, both of which attach to a vaporizer coil. These poles heat the coil when electrified. As the temperature of the coil rises, the surrounding extract within the tank turns into vapor. Most cartridge systems combine the functions of the coil, atomizer and wick into one multi-function internal coil.

EVOLUTION OF VAPORIZATION TECHNOLOGY

Since 2003, the invention of the e-cigarette as we know today, there have been many advancements in vaporization technology, but none as profound as the transition from metal to ceramic.



Ceramic coils are better in delivering consistent high-quality vapor due to the material. Traditional cartridges feature metal wrapped in a cotton wick which can result in metal leaching and contamination. Although metal coils heat up faster than ceramic, the ceramic coils offer superior heat retention due to the porosity of the ceramic layer allowing oils to evenly diffuse. It is important to note, however, that some ceramic coils are a hybrid of cotton wick and ceramic, with the fiber either sandwiched between or wrapped around the ceramic.

ONCE IN A WHILE A PRODUCT COMES ALONG AND DISRUPTS THE ENTIRE INDUSTRY.

METAL vs CERAMIC

Traditional Metal Cartridge

The evolution of metal to ceramic cartridges is a massive development for the industry in the right direction. Ceramic based vaporization systems were created to resolve some of the drawbacks of the metal-based cartridges, such as heavy metal contamination, oxidation and corrosion.

Technological Breakthrough with Zirconia Ceramics

Zirconia (zirconia dioxide, ZrO2) combines the biocompatible properties of ceramics to formulate a material that is comparable in strength to titanium while maintaining strong thermal dynamic properties and most importantly, resistance to corrosion and oxidation.

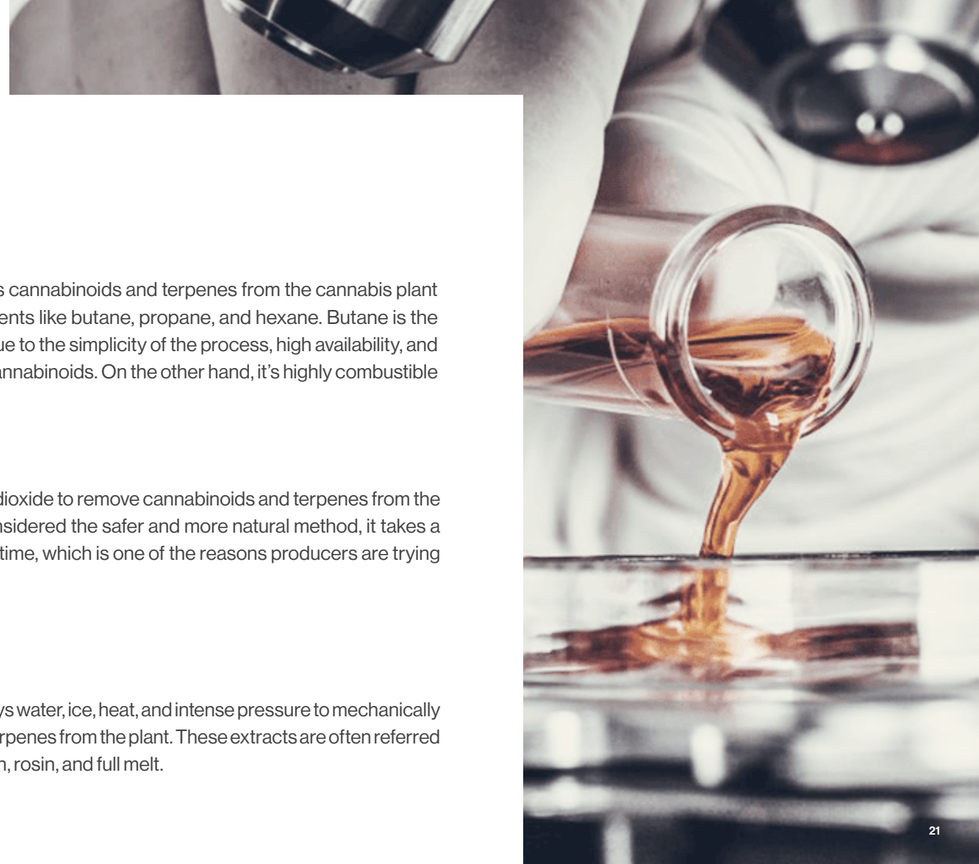
The clean natural white coloring of ceramics also provide a spotless backdrop for your extract to be clearly and accurately showcased.

EXTRACTION METHODS

Trichomes are the microscopic crystalline structures that are produced around the edges of the flowers produced by the plant, typically associated with cannabis' psychoactive and medicinal properties. Extraction processes remove the molecules from the trichomes to isolate the active parts of the plant - that's why extracts are so potent.

Extracts can range from solid to liquid consistencies, offering various ways to take cannabis. Depending on the strain used to make the extract, extracts can vary in concentration and composition of cannabinoids and terpenes.

Depending on the extraction method used, the extract can take different forms, and meet different standards of quality. Hydrocarbon and CO_2 extractions are two of the most common forms of extraction - let's take a look at how they compare.



Hydrocarbon Extraction

Hydrocarbon extraction pulls cannabinoids and terpenes from the cannabis plant using petroleum-based solvents like butane, propane, and hexane. Butane is the popular extraction method due to the simplicity of the process, high availability, and capacity to isolate specific cannabinoids. On the other hand, it's highly combustible and more costly.

CO_2 Extraction

CO_2 extraction uses carbon dioxide to remove cannabinoids and terpenes from the cannabis plant. Although considered the safer and more natural method, it takes a significantly longer period of time, which is one of the reasons producers are trying new systems.

Solventless Extraction

Solventless extraction employs water, ice, heat, and intense pressure to mechanically separate cannabinoids and terpenes from the plant. These extracts are often referred to as dry sift ice oil, water hash, rosin, and full melt.

DISTILLATE, LIVE RESIN, ROSINS... WHAT ARE THEY?

Distillate

Distillate is a type of oil that is often extracted from cannabis utilizing a liquid solvent, typically an ethanol or pressurized CO2 extraction method. The substance is then put through a process called winterization in which the produced oil is hyper-purified, leaving behind a purified form of cannabinoids. Distillates often undergo a terpene reintroduction phase as terpenes are what causes the cannabis to have a distinct flavor and aroma.

Distillates typically boast a high THC concentration as the oil is stripped of impurities such as terpenes.

Live Resin

Live Resin is created through an extraction process that freezes and processes live cannabis flowers. Typical closed loop extractions are then utilized at subcritical temperatures to ensure that the trichomes form a congruent solution that is then converted into live resin.

Through the process, live resin contains the natural terpenes and cannabinoids of the flower which are preserved and extracted to produce taste and experience that replicates flower.

Rosin

Rosin is created through a mechanical process that combines pressure and heat to obtain a resinous substance. The main allure to rosin extractions is that the process is solventless, thus is considered one of the most natural processes for extraction.

Rosin is known for its flavor profile and potency that is comparable to other higher-end extraction processes.

CANNABIS EXTRACT VISCOSITY

Viscosity for extracts is the measure of thickness associated with the resistance to flow of the substance. Cannabis extract viscosity is affected by many variables such as temperature, terpene type and concentration, cannabinoid type and concentration, and many other factors. For example, the higher the temperature, the lower the viscosity of the extract.

The standard for extract viscosity is that distillates typically have the lowest viscosity and are free flowing whereas live resin and rosins tend to have higher viscosities resulting in a thick, slow moving substance. Extract viscosity is important for vaporization hardware because if the viscosity is too high or low, the effectiveness of the hardware utilized will lessen and the experience for the end user will not be satisfactory.

FAQ'S

How does S10 Labs maintain product reliability?

With our manufacturing standards, S10 Labs sets strict quality control measures to ensure qualities overseas and in our United States based facilities. Our process includes product quality control, immediate post production quality control, and post shipping quality control measures.

What is the standard delivery time of S10 Labs products?

S10 Labs is dedicated to ensuring that your order will get to you in the fastest way possible. Once everything has been verified and an order is placed, typical turnaround times for standard orders is anywhere from three to five weeks. Custom orders have a typical turnaround time of four to six weeks.

Does S10 Labs private label manufacture for brands?

Yes. At S10 Labs, we take pride in each and every client. Our manufacturing team has the complete capability to fully customize and private label each product with their design. Check out our Customization Page for the Standard Print Areas or further information about our product's customization. Ask our sales representative for more information on customization.

Does S10 Labs offer filling solutions?

S10 Labs specially manufactures vaporization hardware and we sell our cartridges and pods empty of ingredients. If you are in need of filling solutions, please reach out to our sales team and they will recommend one of our affiliated partners best suited to your needs.

What oil viscosities are S10 Labs' products compatible with?

Distillates, solventless extractions, live resin, and rosins are some of the few oils that we have geared our products to work with. Through the ability to customize aperture sizes, we ensure that each individual product is properly suited to your specific oil consistency and needs. All our team members are well versed in the different types of oils and can help you make the best selection possible.

What customization options does S10 Labs provide?

S10 Labs was created with the fundamental principle of solving any issue in the industry. With this in mind, S10 Labs offers a one stop shop of product, packaging, and customization. Our facilities are equipped with the resources and expertise to help bring your vision to life. Whether you need full scale design help from logo and artwork creation to simple graphic alterations, S10 Labs has the team for full customization support.

How can I purchase S10 Labs Products?

S10 Labs sells in large wholesale quantities to verifiable growers, extractors, retailers, and distributors alike. To place your order, please submit your information via the following options.

Fill out our submission form online at www.s10labs.com
Call us at our toll-free number: 888-318-1316
Email us at contact@s10labs.com

NOTES

TO LEARN MORE

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