



Functional Foods - Beyond Metabolic Health

Q3 | 2019

INDUSTRY PULSE

FOOD &
NUTRITION

INDUSTRY
INSIDER

FutureBridge

HALF-YEARLY PLAYER ANALYSIS

Jul 2019 - Sep 2019

Product launches

Product categories mainly encompass cannabis-based ingredients, beverages, CBD-infused sparkling waters, capsules and oils

Collaborations

Startups are partnering with ingredient manufacturers as well as retail stores for production and distribution

Expansions

Startups and small companies are expanding their products portfolio and their market reach

Funding

Ingredient developers are investing towards the large scale production of CBD extract

FutureBridge Insights:

- Since 2014, **CBD** has emerged as a **highly potential functional ingredient** with popular **claims** like **boosting energy** and **cognitive performance**.
- Most of the activity is centered around **startups and small companies** who are launching **products** only with **beyond metabolic health** claims.
- **Established players** are **attracted towards the segment**, but are launching products containing **hemp seeds** and **oils** owing to the **lack** of sufficient **regulations** and **higher risk factor**.
- The ever growing **product launches** is prompting **ingredient developers** like **Socati** and **Bell** to undertake strategic **decisions** for large scale **production** and **commercialization** of **CBD solutions**.

Things to look out for:

- **Launch** of unique cannabis-containing **research-based products** with **no detectable cannabis taste** and **better absorption capabilities** by the body.
- Stricter **regulatory protocols** by regulatory bodies like the **FDA** and **USDA**, for streamlined retailing of cannabis-products. Possible regulation may include **restrictions on claims** and **concentration control**.
- Innovative **patent filings** associated with the extraction of **CBD** from **hemp** without the presence of **THC**.

Key players :



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- Q3-2019 showed **highest product launches** in the **cannabis-related beverages** and **snacks** categories from **startups**.
- **Strategic acquisitions, collaborations** and **investments** from **companies** were noted with a view to **develop CBD-related products** or for **market expansion**.
- The segment is still **dominated** by **startups** with **established players** keenly **looking out for regulatory developments**.



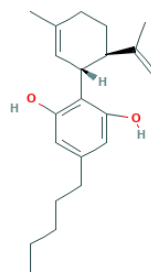
Why not watch our recent webinar, which looks at recent CBD developments via [this link](#)

Cannabis-infused products showcase potential to be disruptive to the functional food market



Cannabidiol: Overview

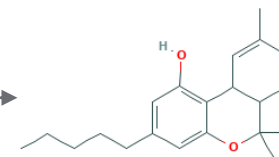
- **Cannabidiol (CBD)**, is a **non-psychoactive compound** obtained naturally from the cannabis species of plants, also known as **marijuana plants**.
- It makes up about **40%** of the cannabis plant extract and is currently being studied actively for usage in **food supplements** and as a **new drug**.
- Its is primarily used as a drug, under the name of “**Epidiolex**” in the treatment of **epileptic** conditions like **Dravet syndrome**, **Lennox-Gastaut syndrome**, and **Tuberous Sclerosis Complex (TSC)**.
- Opposed to its **psychoactive** cousin, **tetrahydrocannabinol (THC)**, CBD works as a pain relieving substances without inducing a state of “**high feeling**” which is commonly associated with consumption of cannabis.
- According to a [report](#) by the **World Health Organization (WHO)**, “**In humans, CBD exhibits no effects indicative of any abuse or dependence potential**”.



Cannabidiol



Cannabis sativa



Tetrahydrocannabinol

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- **Regulatory dilemma** is caused because CBD was initially considered as a **drug**, which **prevents** its usage in **food** products.
- Ongoing **R&D** identifies the advantages of using CBD as a **food supplement** without pointing out the possible **side effects** of consumption.
- The **lack** of R&D **data** has led to a state of **uncertainty** regarding the **consumption** of **CBD**.

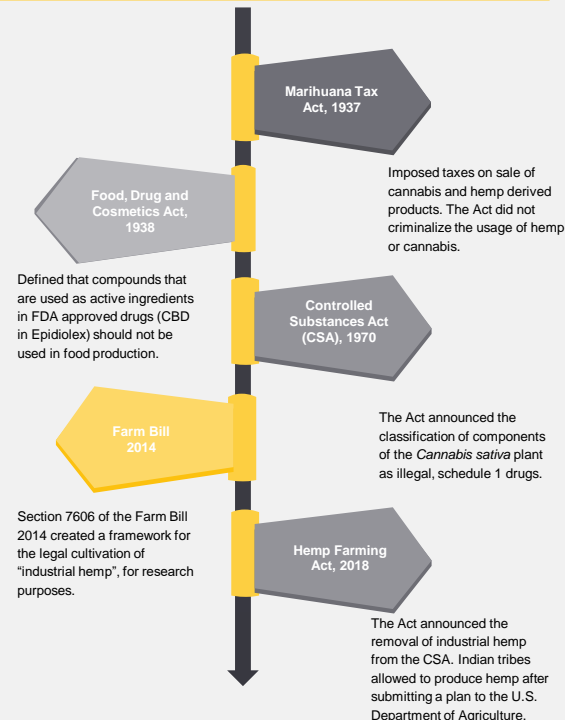


Established players & startups both are highly active in the space with product launches, acquisitions and collaborations



Regulatory challenges associated with the growth of the CBD segment

- The lack of a **well-defined regulatory protocol** is the **primary hurdle** encountered in the **CBD** segment of functional foods.
- According to the **Controlled Substances Act (CSA)**, the manufacturing, distributing, dispensing, or possession of cannabis products with a **THC** content greater than **0.3%**, is considered **illegal**.
- However, the introduction of the **Hemp Farming Act of 2018**, removed hemp from the CSA, thereby **legalizing** its **production**. This development led to a state of **confusion**, resulting in the **interpretation** that hemp could be consumed as a **food product, legally**.
- Consequently, **clash** in the regulatory **framework** was observed within the **FDA**, as the **Food, Drug and Cosmetics Act (FDCA)** prevents the use of any approved drugs, for food production.
- In the European region, **European Commission** reclassified **CBD** as a **novel food**, thereby implying its illegality in the production of food products and beverages without a **novel food application**.





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- Following **legalization** of industrial hemp cultivation by the **2014 Farm Bill**, a number of players began filing **patents** for the **formulation** of hemp-based products like **nootropics** and **meat substitutes**.
- **CBD oil** is the primary **ingredient extracted** from the **hemp plant**, for use in **food products** and **beverages**.
- The primary **assignee's** of patents published during **Q3-2019** are **individual inventors** and **academia in China** indicative of the **higher amount of research** in the segment.



Research activity for CBD is in the exponential phase and not looking to stop any time sooner

Technologies and solutions

- Recognizing the **potential** of **CBD** in multiple **food categories**, **patent activity** is increasing rapidly as ingredient developers and **end-product manufacturers** look to achieve a competitive advantage once the hurdle of **regulation** is overcome.
- Players are focused on developing **new technologies** for the preparation of CBD oil as well as identification of new **CBD-infused beverage formulations** and **pharmaceutical products**.

[CN109953233A](#)

Current Assignee: Li Fangkai

The patent describes an hemp and aloe beverage. The claims include the composition of the beverage. The beverage is claimed to have detoxifying effect along with beautifying and moisturizing qualities

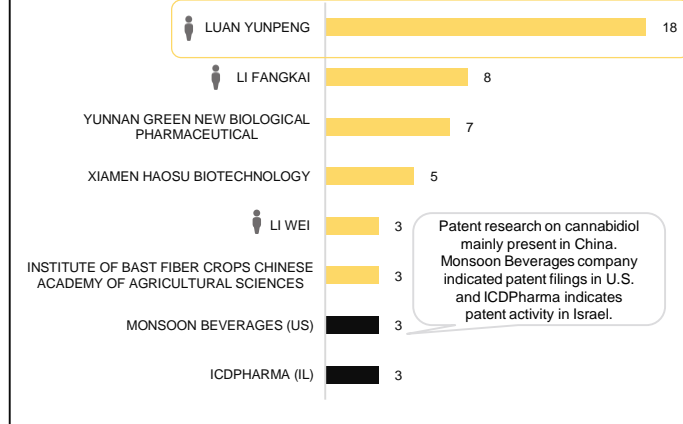
[US20190241536A1](#)



Current Assignee: WORLD CLASS EXTRACTIONS

The patent describes an ultrasound-enhanced solvent extraction process for cannabis. The claims include the procedure wherein the plant is shredded and ground. The ground plant is then introduced to a solvent to form a slurry and ultrasonic energy is applied. The residual plant-parts are removed and the liquid is taken for concentration.

Assignee's with highest patents in the period Jul 19 – Sep 19



Individual assignee

Yellow box represents entities presenting research from China

Source: Questel Orbit; *Patent search restricted for patents published in the food and pharmaceutical segment for Q3-2019. Patent Keywords include: cannabi* or hemp or marijuana* or tetrahydrocannabinoid*

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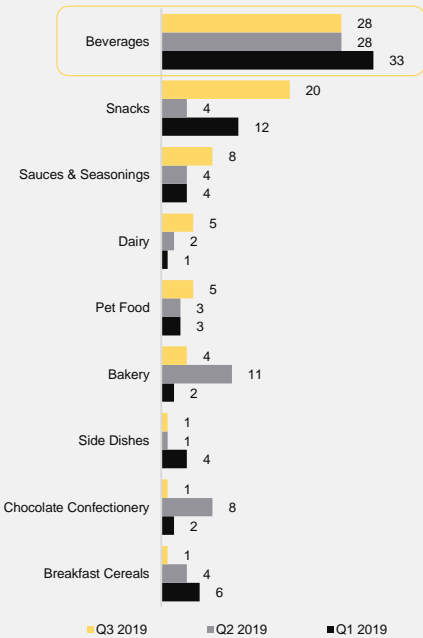
- Consumer preference for **on-the-go consumables** has prompted players to launch **CBD infused** products in the form of **snacks and beverages**.
- Due to **encapsulation technology** usage of **cannabidiol** in **soluble format** is easier and can account for the **high number of beverage launches**.
- **Germany and Canada** have the **highest number of cannabidiol-based product launches** as the **regulatory framework** in these region **allow commercial use** of cannabis in **restricted concentrations**.



With wide array of health benefits, CBD is infused in a variety of products such as beverages, snacks and breakfast cereals



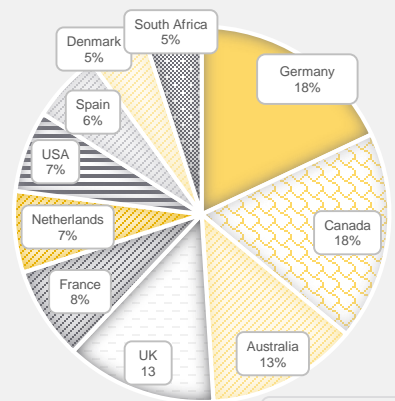
Comparison of quarterly product launch categories (2019)



Source: Mintel GNPD

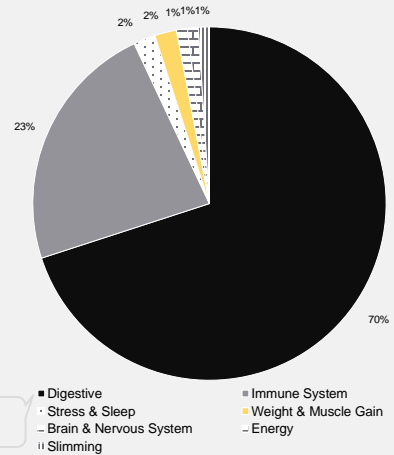
Yellow box represents entity with the highest parameter

Geographical representation of products launched



Q3-2019

Top functional claims for cannabis-based products



Companies with highest hemp-based product launches in 2019



Hemp Vegan Ice-cream, contains hemp, U.S., Lithuania



Hemp Oil Mayonnaise, contains hemp seed, Switzerland



Chocolate Peanut Butter Collagen Bar, contains hemp seed, Australia



CBD peppermint tea, Buddha Teas, UK



Activia Probiotic Smoothie, contains hemp seed, U.S.

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- **Player activity** keeps increasing with time in the **CBD segment** of functional foods, **despite the regularity restrictions** placed on the compound.
- Products with **functional claims** are being **released** into the market, whereas those with **unsubstantiated claims** related to **disease treatment** are being **issued warning letters** by the **FDA**.
- Established players such as **Danone** and **Nestlé** have **launched products** with **hemp seeds** and **oil** indicating the players **willingness to enter the cannabidiol segment**.



Startups and small players are involved in the development of novel CBD-infused products and ingredients with functional claims



- **Product manufacturers** mainly comprise of **startups** and **small companies** developing **CBD-infused beverages, gummies, oil extracts** and **snack** products.
- **Established players** activity is almost **absent** due to the absence of suitable a **regulatory framework** to govern the **production and distribution** of end-products.

Active players involved in various steps for cannabis-based product manufacturing & distribution(2019)



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