

## BEVERAGE BUSINESS NEWS

# PERKING UP

## beverage applications with coffee ingredients

Product developers have a wide range of tools to choose from



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Coffee is a daily ritual for millions consumers. In recent years it has become much more than a simple morning cup of java or an afternoon pick-me-up latte. While it remains a popular base beverage to which cream and sugar are often added, it is developing more deeply as into a flavor and a source of naturally stimulating energy for many types of beverages.

Coffee also has become a logical delivery vehicle for functional ingredients and health benefits, with a growing number of innovations formulated to address specific need states, such as probiotics for gut health and collagen for beauty. Ready-to-drink (RTD) beverage formulators rely on a growing toolbox of coffee ingredients to simplify the manufacturing process.

"Coffee made at a beverage manufacturing facility is not like making a cup of coffee in your home," said Patrick Riolo, beverage lab manager, Allen Flavors Inc., South Plainfield, NJ. "Instead of coffee grounds or beans, beverage manufacturers will use coffee extracts or powders. Coffee powders are used when you want a less expensive finished beverage. Coffee extracts are used for more premium products."

The range of ingredients available allows beverage formulators to tap into experts who understand coffee so they can focus on the final product concept, according to Pam Everett, vice president of insights and product innovation,

S&D Coffee & Tea, Concord, NC.

Coffee powders resemble instant coffee and are rehydrated into a beverage. Coffee extracts are concentrated versions of brewed coffee. Concentration level may be adjusted for taste, color, cup cost and ease of use. Most innovation is taking place in the extract category.

"Specific offerings include extracts with different flavor profiles established by the blend of green coffee, extracts of different roast levels, special certifications and, of course, different brew types," Ms. Everett said.

### Cold, flash brew innovation

Cold brew continues to grow in popularity, especially with the addition of functional ingredients and format options such as nitro. Its unique taste profile is bringing new consumers into the cold coffee category.

"The appeal of cold brew is the slow brewing process that reduces the extraction of bitter compounds and in turn, produces a smoother, brighter flavor profile," Ms. Everett said. "It also serves as a great foundation for beverage manufacturers to get creative with the layering of flavors and on-trend ingredients. When you think about it, the options are endless. From botanicals, collagen and adaptogens to the addition of different flavors and milks, the packaged

cold brew trend is just getting started."

Cold brewing is a time-intensive process. It involves steeping coffee in ambient to cold water for up to 24 hours. Most beverage manufacturers don't have the space, time or expertise to make cold-brew coffee.

"Everything from the type of beans to the ratio of coffee to water and even the steeping time can all impact the final product," Ms. Everett said. "This is why many manufacturers turn to extracts. Cold-brew coffee extracts enable beverage manufacturers to get creative without investing in this time-consuming process."

Melanie Breitner, director of business development, Prova Inc., Danvers, Mass., said, "Whether cold brew or standard profiles, the brand holder can create a custom profile that also transfers into smooth production, guaranteeing a consistent flavor profile from lot to lot."

Flash-brewed coffee is a new concept rolling out into the market in RTD formats. The coffee is brewed hot and chilled rapidly, locking in flavor.

Each batch of coffee from Verve Coffee Roasters, Santa Cruz, Calif., is brewed in an oxygen-free environment, said Ryan O'Donovan, co-founder.

"We've dialed in a precise — and proprietary — hot-brewing process to ensure optimal flavor extraction," he said. "The hot coffee is flash chilled then infused



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*Cold-brew coffee extracts enable beverage manufacturers to be creative without investing in the time-consuming process.*

coffee fruit caffeine, coffee fruit cascara and coffee fruit extract.

“Our coffee fruit caffeine ingredient delivers organic native caffeine from the entire coffee fruit, not just the coffee bean,” said Andy Wheeler, vice president of marketing. “It is standardized to 70% caffeine and 5% polyphenols, including chlorogenic acids, organic acids and trigonelline. It was intentionally designed to retain natural coffee nutrients and meet the marketplace demand for natural energy sources.

“We also offer an ingredient made from the cascara, or skin of the coffee fruit. For centuries cascara have been the waste stream of the coffee production process. When the cascara is discarded, it decomposes and creates harmful mycotoxins that are released into the environment. We’ve created a sustainable solution that preserves the cascara and repurposes it as a superfood for today’s functional beverage applications.”

The company also offers a nootropic ingredient derived from whole coffee fruit. It contains a unique profile of polyphenols that have been shown in clinical studies to stimulate the production of Brain-Derived Neurotropic Factor (BDNF), a key

with nitrogen to remove any remaining oxygen. This critical step keeps the coffee ultra-fresh while providing an extra silky mouthfeel. Flash brew is immediately canned then stored in refrigerators until you’re ready to enjoy.”

**Applications beyond coffee**

Some coffee ingredients don’t taste or look like a cup of java. They are added to beverages for their inherent functionalities, including caffeine and antioxidant content.

Gojai Beverage Inc., Ojai, Calif., uses organic unroasted coffee beans as a source of caffeine in its line of sparkling waters. Made with a reverse osmosis triple filtration process, an 11-oz can of the clear beverage has the same amount of caffeine as a half-cup of coffee and contains no calories, preservatives or sweeteners.

FutureCeuticals, Momence, Ill., markets a range of caffeine ingredients made from 100% Rainforest Alliance Certified Arabica coffee fruit. The range includes



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neuroprotein involved in overall brain health.

"The BDNF has been widely reported to play a critical role in neuronal development, maintenance, repair and protection against neurodegeneration," Mr. Wheeler said.

Austin, Texas-based Applied Food Sciences had been working with coffee extraction for the past 20 years, when its business changed from oncology research to food science and ingredient manufacturing. The company has since developed several functional ingredients utilizing green unroasted coffee beans. This includes an organic caffeine powder standardized to 95%-plus caffeine.

"It is made from sustainably sourced green coffee beans," said Brian Zapp, creative director. "It is primarily used in energy drinks, sports nutrition products and dietary supplements. The water extraction process allows for no residual solvents, while also providing formulation benefits in being fully water-soluble with a neutral taste profile."

Another coffee ingredient provides the antioxidants in green coffee beans in a highly bioavailable delivery system.

"Many of our customers in the natural products industry are calling this healthy or balanced energy," Mr. Zapp said. "The actives in green coffee beans are caffeine and chlorogenic acids, the principal polyphenol antioxidant in coffee. The ingredient is standardized so that a serving provides both the caffeine and antioxidant benefits from coffee."

The company also offers a protein ingredient derived from green coffee beans. It contains 30% protein and 20% fiber, serving as a tool to boost the nutritional profile of coffee beverages.

### Adding extras

Functional RTD beverages are booming, and coffee ingredients are increasingly part of the formulation. Danone North America, White Plains, NY, for example, is embracing the keto trend with its new STOK Fueled Cold Brew Unsweet Coffee. It provides caffeine for quick-start energy, along with energy from 10 grams of dairy protein, 5 grams of medium-chain triglyceride oil from coconut and palm, fat from butter and no added sugars.

Keera Perumbala, marketing manager, Sensient Flavors, Hoffman Estates, Ill., said, "For consumers today, especially the younger generation, everything is about the experience. It is about the premium ingredients used and how to get a bit 'extra' from your coffee."

The growing toolbox of coffee



ingredients is allowing RTD coffee formulators to add value by adding back the nutrition inherent in coffee beans, said Mr. Zapp.

"Green unroasted coffee beans are packed full of antioxidants," Mr. Zapp said. "We developed a patented process that preserves these polyphenols throughout the roasting process. The result is delicious, gourmet coffee with 200% more antioxidants than the same coffee beans using a conventional roasting process."

Joe Farinella, vice president of research and development, Imbibe, Niles, Ill., said, "New RTD coffee beverages continue to roll out, with many having unique twists. Some are positioned as energy drinks while others speak to specific eating regimes. There's been an uptick in brands incorporating other functional ingredients into coffee for an even bigger boost. Functional coffee — or what some might call super coffee — is especially attractive to consumers who demand convenient formats and enjoy getting multiple benefits from a single product."

Spruce Haven, Union Springs, NY, is relying on its coffee ingredients and milk source to stand out in the market. The company is rolling out Pursue Happiness Cowffee, which is made with milk inherently higher in conjugated linoleic acid (CLA), and combines it with fully traceable Guatemalan coffee that is roasted and cold-brewed locally. One 11-oz container provides 120 mg of CLA, a naturally occurring component of ruminant milk fat and meat. Consumption by humans is associated with lean-muscle development and fat burning. It also has cancer-fighting properties.

Bolthouse Farms, Bakersfield, Calif., is rolling out Bolthouse Farms Protein Keto, which comes in a coffee flavor. The beverage relies on milk protein isolate, coconut cream and medium chain triglycerides. **FBN**

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March 17, 2020