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New Brewing Technologies for Today's Teas

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New Brewing Technologies for Today's Teas

Brewing tea today means first blending tea with fresh ingredients to craft flavourful creations. Thus, tea blending technologies are evolving to meet these needs.

By Rachel Northrop

Café menus and retail shelves are filled with beverages flavoured using a combination of ingredients, and tea-based beverages are no exception. It is common to see drinks like ginger turmeric black tea, strawberry mango green tea, and hibiscus jasmine herbal tisanes served both hot and iced. Today, brewing tea often means first blending tea ingredients with fresh fruits and spices to develop new flavour combinations.

The brewing process, then, must account for the needs of extracting both tea and spice flavours. The technologies for doing so use both traditional brewing with controlled heat and agitation and new applications of low-temperature brewing that combine vacuum pressure and infusion to make flavour extraction possible at lower temperatures.

Blended Brewing

BKON, based in Moorestown, New Jersey, recognized the market's desire to combine tea with a wider range of herbs and spices and developed a new technology for brewing any combination of botanical ingredients. "After investigating some non-traditional coffee brewing methods inspired by how chefs speed marinate proteins, the idea behind RAIN™ was born," said BKON co-founder Dean Vastardis.

RAIN technology is named for the reverse atmospheric infusion process it uses. First, a vacuum removes gases from the ingredients' cellular structure. The infusion occurs when the vacuum releases, as the liquid moves back into the cellular structure to re-establish balance. Through this pressure and release, the ingredient's flavour elements extract into the liquid. The use of multiple backing cycles allows for flavour extraction to occur at lower temperatures and with denser or more complicated ingredients.

"The power of BKON's RAIN technology



is how its flavour extraction advantages can be applied to almost any beverage brewing or infusion platform. It can craft natural beverages using any fruit or botanical with any liquid, at any temperature, scaling from household to industrial," said Vastardis.

Next Generation Chai

The extraction of flavours from both tea leaves and spices requires a balance of time and temperature, and the fresher the ingredients the more full-flavoured the final beverage will be. Sourcing, grinding and blending fresh spices is the first stage to crafting a much beloved tea and spice blend: masala chai.

DONA brews chai in its Brooklyn, New York facility, where founder Amy Rothstein grew the business from an artisan, small-batch chai blending and brewing operation to become the go-to brand for craft coffee shops looking for a chai concentrate as flavour-packed and fresh as ▶

BKON's STORM™ brewer is first being applied to cold brew coffee but BKON plans to apply it teas, waters and other beverages.

The Tea Control Brewer is Finum's most popular at home tea-brewing device.



their specialty roasted coffee.

“Since there is no ‘chai machine,’ our brewery is 100 percent custom made,” Rothstein told *T&CTJ*. “We have 500-gallon brew tanks, each with mechanical agitators that hold our ingredients in suspension the entire brew time.”

Regulating temperature is key to maximizing flavour extraction to keep the masala chai tea and spice blend balanced. “We control the temperature with thermometers within our tanks. Ours are heated both with steam jackets and heating elements,” she said. “The heater cuts on or off depending on the internal temperature. Heat helps extract our flavours.”

From Tea to Spice Drinks

DONA, previously named Dona Chai, updated its name to reflect a wider product portfolio, developed in response to customer demand for more spice-based drinks to complement teas. Chai will remain a staple in both retail and café settings, but the rich spices familiar in a chai blend have opened a new wave of flavour possibilities for maturing generations of tea and coffee drinkers.

More than a tea brewing company, DONA has become a spice brewing company. “We slow steep all our ingredients – spices, herbs, teas – for about an hour for all of our products. The brewing method is always the same, minus packaging.” DONA Masala Chai Concentrate is packed in 16oz glass bottles for retail and in 64oz plastic jugs with handles designed for ease of use in preparing chai beverages in a café setting.

“We begin with whole spices that we grind fresh in house. Then, our ingredients are brewed together for an hour, temp controlled and in circulation the entire time for even extraction. Then we strain, triple filter, sweeten and bottle, for concentrates, or carbonate and can, for sodas.”

Companies with equipment and packing lines for brewing and bottling tea beverages can explore

the potential of crafting new drinks brewed from spice and herbal blends.

Keeping It Real

Today’s consumers shop at farmers’ markets and like to know where their food and beverage ingredients come from. Combining fresh spices, fruit and herbs with tea can add to a beverage’s authenticity. “RAIN is an advantageous alternative to lab-engineered flavours,” noted Vastardis of BKON. “The true extraction of botanicals and fruits by RAIN eliminates the need for artificial flavours and allows companies to innovate true farm-to-bottle beverages with clean and vivid flavour experiences.”

DONA crafts its beverages using exclusively fresh-ground spices that it sources through suppliers who travel directly to the source. The millennial cohort favours bold, real flavours and often chooses products based on the quality and traceability of their ingredients.

The Tea Control Brewer is the most popular at home tea-brewing device made by Finum, an Essen, Germany-based tea and coffee brewing equipment and filter manufacturer. “The Tea Control brewer was originally intended to be used for loose-leaf tea, but it can also be used with a tea bag,” commented Christian Justus, Finum founder and lead designer. In Germany, the Tea Control is referred to as the “brew stop pot” because of the patented brew-control mechanism; a simple turn of the lid corners the tea leaves and slows the brewing process.

Because of the open brew basket design, consumers can use the Tea Control brewer to craft unique tea and spice blends, combining loose leaf tea and fresh spices of their choice in the brew basket to customize their own flavour combinations and control the flavours’ intensity based on personal taste. Brewing flavour combinations at home makes consumers more likely to try a new product and embrace a beverage with a unique blend of flavours.

One application of RAIN technology is the BKON Craft Brewer, which prepares beverages by the cup, consistently extracting more flavour elements from the ingredients using recipe’s stored in the brewer’s programming feature. One advantage of the Craft Brewer is its speed; the cycles of vacuum pressure and release shorten the time required for full flavour extraction. Craft beverages sometimes earn a reputation of being slow to prepare and therefore not interesting to consumers who look for convenience and speed. New brewing methods can turn old concoctions into fresh, blended tea beverages.

Learning from Cold Brew's Success

The same way that the coffee industry has learned – through experimentation and iteration – that coffee can be extracted using room-temperature rather than near-boiling water, the tea industry is also discovering new extraction processes for teas that will be bottled and served cold.

Another application of BKON's RAIN technology is the industrial STORM™ brewer. "This application is first supporting the production of cold brew coffee. Moving forward, BKON plans to revolutionize the industrial brewing of teas, waters and other beverages," Vastardis explained. "We are inspiring brands to experience the flavour, stability and operational efficiencies that the coffee industry is currently benefitting from with BKON." Applying the same technology to both single-cup scale for the café setting and industrial scale brewing for manufacturing and distribution is an example of how today's brewing tools are most useful when they can adjust to beverage preparation at all scales.

Coffee preparations borrow from traditional tea steeping, and cold tea brewing borrows from formats designed for cold brew coffee. What works in coffee can be applied to tea, and vice versa, promoting collaboration between the industries to

strengthen both categories.

Finum's counterpart to the Tea Control Brewer is the Iced Tea Control Brewer, designed as a carafe with a larger brew basket to fit fresh or dried fruit pieces as well as tea. The heat resistant glass allows for the tea blend to be hot extracted and then chilled, or, the steeping can occur with colder water, leaving the tea, herbs, fruit, or spices in contact with the water for a longer period of time to slowly achieve the desired flavour intensity.

Consumers, especially younger generations, favour innovation over tradition. Brewing technologies that embrace continued innovation and allow for new ingredient blends to be brewed together are those that will keep up with flavour trends. The most agile, adaptable technologies will be the most successful in today's diverse, category-crossing beverage landscape, where consumers expect both a hot and cold version of each tea and spice beverage they encounter. ■

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