

FOOD ENGINEERING

THE MAGAZINE FOR OPERATIONS AND MANUFACTURING MANAGEMENT

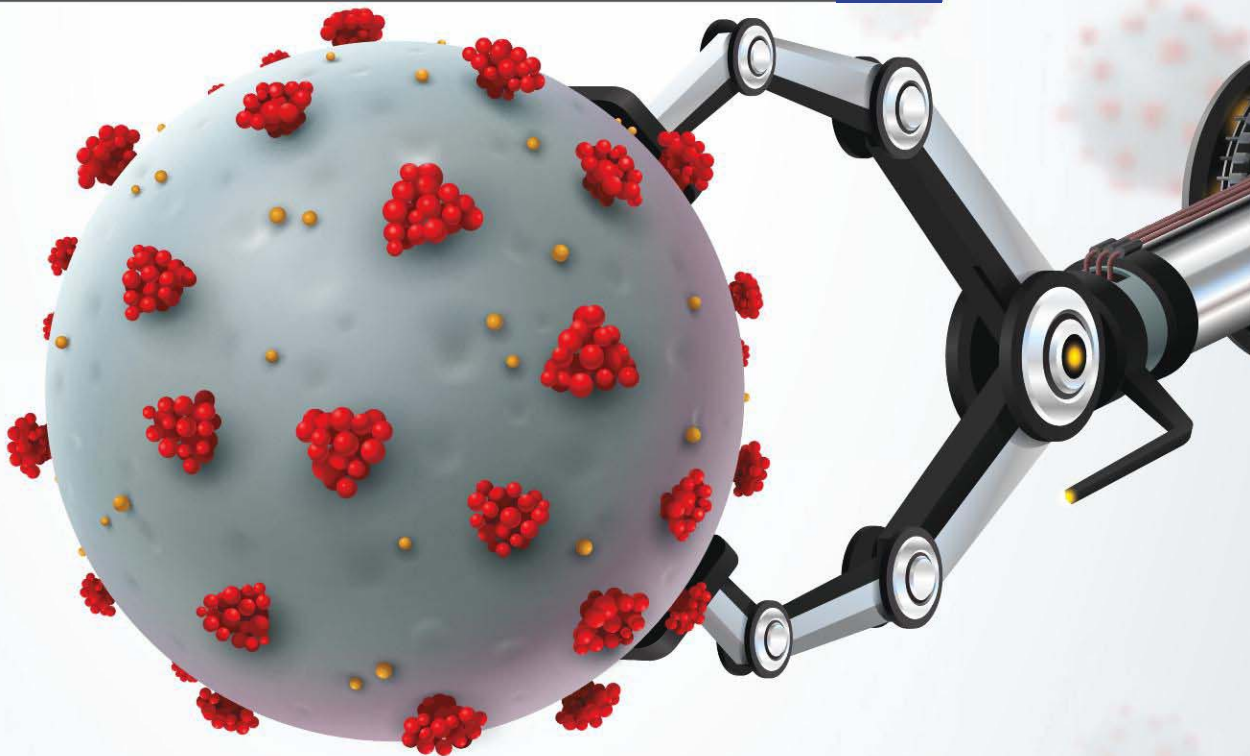


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Biron tea party

How a rotary batch mixer from Munson Machinery allowed Biron Teas to co-pack, mix for other tea purveyors



Biron Tea's rotary batch MX-3-SS mini mixer's tumble-turn-cut-fold action achieves uniformity in 3 minutes with no product degradation.

GENTLE MIXING, SHORT CYCLES

Premium tea blends require special handling at each phase, according to Biron. The first step is to screen dust, twigs and foreign matter from the ingredients.

When Macon, Ga.-based Biron Teas was founded in 2015, the owners, Andi and Roland Biron, relied on a Seattle-based co-packer to blend their tea varieties. Cross-country shipping fees, delays and growing demand, however, prompted the company to expand capacity and bring blending in-house.

Their first thought was to use a V-cone mixer, as their co-packer had, says Andi Biron. But the swinging operation of the mixer consumed too much floor space. Mixing teas requires gentle handling, so the company ultimately specified a Rotary Batch MX-3-SS mini mixer from Munson Machinery for its smaller footprint and ability to produce uniform blends without product degradation or cross-contamination.

"With chrysanthemum flowers, we want the blossoms but must remove the pebble-hard buds," says Biron. "Ginger root also requires a thorough cleaning."

Proprietary combinations of herbs, florals, fruits and spices are loaded into the 3 cu. ft. (85 l.) mixer, which is composed of a stainless steel, horizontal drum having no internal shaft or shaft seals. Internal mixing flights impart a four-way mixing action that tumbles, folds, cuts and turns the material, causing particles to recombine 288 times per minute, with no shear or heat generation.

Natural oils and liquid flavors are metered through an integral stainless steel spray line and pumped from a pressure pot on a scale for accurate liquid additions by weight. Biron says the mixer blends 70 lb.

FIELD REPORTS



Biron Teas' mixer blends teas with or without liquid additions with no shear or damage to delicate ingredients.

The company produces both traditional and unique artisanal tea blends, and the organic certification of each ingredient and lot numbers are tracked and managed. After blending, each special tea mix is scooped into a tea bagging machine, yielding about 20,000 bags per batch.

Biron tea bags are pyramid-shaped sachets made of Soilo woven mesh fiber

to 80 lb. (32 to 36 kg) batches of tea blends with or without liquid additions, uniformly, in 3 minutes.

"Organic artisanal teas, especially blends with herbs, wild flowers, oils and berries, can't be crushed or pulverized," says Biron. "The mixer gently tumbles and turns a delicate—and sometimes sticky—tea mix into a uniform blend without pulverizing or powdering," she says.

The blending action prevents segregation of materials, regardless of size, shape or bulk density. "Chamomile and ginger can be especially difficult to mix, but the mixer does the job, which is essential for uniform flavor."

The mixer's internal flights also serve to elevate and direct blended material through a discharge gate, with no residual or product waste.

"The mixer can be cleaned rapidly between blends," says Biron. Because certain tea mixes incorporate natural flavors, oils and other ingredients that cling, selecting a mixer with a large drum access door for interior access was important.

made from corn starch that is certified as biodegradable. Biron Teas also uses recyclable, biodegradable packaging for its hospitality product lines. "Our teas are organic and the overwraps are made from compostable biomaterial certified as bio-preferred by the U.S. Department of Agriculture," she says. "We're concerned about the planet and so are our customers."

The company's on-line products are packaged in decorative tins. "They have a greater lifecycle than paper since they can be recycled and reused over and over," she says.

Thanks to booming sales and newfound mixing capacity, Biron Teas has expanded into co-packing and mixing for other tea purveyors. "When you are blending 70 to 80 lb. (32 to 36 kg) of tea, there is no way that can be done in a commercial kitchen with stainless steel mixing bowls," says Biron. "I love the idea that we can help other artisan tea makers grow, too." ❁

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