

# The TIC Times

Spring 2006

News & Information from TIC Gums

## The Ins and Outs of Inulin

Every once in a while, an ingredient moves out of the near-anonymity of the ingredient statement and gains a certain cache within the food and beverage industry. One of the latest buzzworthy ingredients is inulin, which offers health benefits that have captured the attention of the nutrition community, manufacturers and consumers alike.

Derived from a variety of plants, inulin is a fructooligosaccharide with a terminal glucose unit. Inulin has been shown to act as a prebiotic to stimulate the growth of bifidobacteria, retard pathogens in the intestinal tract, protect the lining of the colon, and improve overall digestive health. From a health and nutrition standpoint, it also has been shown to aid in calorie and fat reduction and serves as a source of soluble dietary fiber.

Beyond its myriad health benefits, inulin imparts key functional characteristics in various foods and

beverages. For instance, over the past few years, inulin has been frequently used in dairy products and frozen desserts, where it helps with sugar and fat replacement, adds a creamy mouthfeel, enhances foam stability, and inhibits syneresis in low-fat products like yogurt.

Meanwhile, in baked goods, inulin again supplies important prebiotic and fiber characteristics, in addition to aiding in moisture retention and working as a sugar replacement.

As one might imagine, inulin has frequent applications in functional foods such as dietetic products and meal replacers.

For superior performance in a range of foods and beverages, TIC Gums offers TIC Pretested® Inulin LV-100. The cold water soluble ingredient offers all of the benefits of inulin and a low viscosity, even at usage levels up to 15%. Inulin LV-100 is an all-natural and Kosher ingredient.

As a testament to the emergence of inulin as a hot-topic ingredient, manufacturers are beginning to tout the inclusion of inulin in their products. Labels and promotional materials for products ranging from natural and organic yogurts to functional foods increasingly call out inulin as a key

Now Available:  
**TICorganic**  
Certified Organic  
**Inulin**



ingredient and describe its health benefits to consumers.

For samples of Inulin LV-100 call TIC Gums' technical service hotline at (800) 899-3953 or visit [ticgums.com](http://ticgums.com).

### The Inside Scoop

Letter from the President . . . . .	2
Getting to Know . . . . .	2
Gaga for Agar: Asian Diet Craze Causes Supply Issues . . . . .	3
Dr. Mar Nieto Speaks in Manila . . . . .	3
Hot New Stabilizer for Cold Set Production of Mayonnaise . . . . .	4
Research Studies . . . . .	4
A Rapid Path To Production Success . . . . .	5
In and Around TIC . . . . .	6

**TIC GUMS**

## Letter from the President



### A Stabilizing Force

Taking a look at recent industry news, the trend toward consolidation and globalization continues, as several manufacturers in this business have been acquired or are acquiring other organizations. Such moves make headlines, but they also make a difference to customers.

Indeed, when divisions of, or companies themselves are divested, it is

often a reflection of the marketplace's rejection of their performance or based upon their own financial interests. At TIC Gums, our nearly century-long spirit of independence and innovation continues, as we look not as much internally, but externally to focus on customer needs and how to grow their success.

From our perspective, we are more invigorated than ever about the dynamic food and beverage marketplace. To be sure, there are plenty of opportunities to help our customers maximize value through product development and efficiency improvements across several aspects of their operations.

That TIC Gums' philosophy is evidenced in several of our more recent advancements. Pre-Hydrated® Ticaxan® Rapid-3, for instance, was created as a solution for leading dressing and sauce manufacturer E.D Smith, who sought to cut production time and costs while ensuring quality and consistency. They share their story in this issue of the newsletter.

In the same vein, TIC Gums recently developed a new gum system, Saladizer® Mayo Cold Set, a product that also reduces cost by eliminating the

need for heat activation in mayonnaise style dressings. Meanwhile, the addition of Inulin LV-100 to our nutraceutical product line expands our offering of dual functionality ingredients that have perceived health benefits. At the same time, our development of TICorganic® Certified Organic Inulin is another example of our ongoing anticipation of and response to ingredient trends.

Providing solutions and value with enthusiasm is pervasive at TIC Gums, extending throughout our organization. For instance, reflecting our participation in a broad base of industries and demonstrating the expanding sphere of prepared foods, TIC Gums' team member Terry Van Winkle was recently elected to the board of directors for the Research Chefs Association (RCA).

In a time of industry shakeups then, our customers can count on all of us at TIC Gums to be here for them. We hope you think of us as the "stable stabilizer company," now and for the future.



Scott Riefler

## Getting to Know: Libby Haven

It is in the manufacturing process where everything comes together, from raw materials to cutting-edge technology. For Libby Haven, TIC Gums' manufacturing manager, working in the actual production of gum systems has enabled her to not only help improve the company's processes but to solve customer problems as well. "We often have the same challenges with equipment and processing as our customers and are able to make recommendations and offer solutions based on our past successes."

According to Libby, ongoing improvements in equipment and facilities are pivotal to the production of new gum systems. "There is always a project for continual improvement going on," she says of TIC Gums'

investments in plant operations in recent years. "Our biggest push is to improve our plant efficiencies, increase capacity, and reduce downtime. Success in these areas means cost savings for both us and our customers."

During Libby's time with TIC Gums, she's been a driving force in building a strong relationship between the scientists in research and development and the engineers and operators in manufacturing. Innovative ingredients like the company's line of TICA-mulsion® emulsifiers and Pre-Hydrated® Ticaxan® Xanthan Rapid-3 are the latest examples of projects this team has created jointly.

Libby has worked in the industry for several years, after earning a degree



Libby Haven

in wood science and business management from Virginia Tech.

In her spare time, she enjoys spending time with her family and putting her food processing background to use by cooking in her home kitchen.

# Gaga For Agar: Asian Diet Craze Causes Supply Issues

As the low-carbohydrate craze in the United States a couple years ago spurred new product development and caused short-term shortages of products such as sugar substitutes, a hot new eating trend in Japan is causing a similar tightening in the international ingredient marketplace.

Recently, dieters in Japan have gobbled up a low-calorie gelatin dessert made from ground-up seaweed that “tricks” a person into a feeling of fullness. While it is good news that many people are finding success with this diet method, the fad has led to shortages of agar (a derivative of seaweed known as kanten in Japan) in the region and, increasingly, in the global market.

Agar has long been used in food and beverage manufacturing for its unique thickening and gelling

properties. It is frequently called on to form gels and provide the necessary “set” in products like bakery glazes and icings, confections, and yogurts. TIC Gums offers a range of agar systems, including

traditional agar that must be boiled to reach the desired gel texture, as well as readily soluble grades that do not require boiling and engineered gum systems that match the gel-forming characteristics of agar with other gums that provide other desired functionality.

As for the future of the kanten craze, it's not clear yet if the seaweed diet will go the way of the now-cooled carb clamor (and before it, eating plans centered on grapefruit, oat bran, etc.) or will expand in popularity beyond its Pacific Rim base. Health professionals do point out that agar alone won't cause or maintain weight loss, but works best when balanced by a healthful eating plan and overall lifestyle. Balance, in turn, is what leads to stability in the market.



## Dr. Mar Nieto Speaks in Manila



Dr. Mar Nieto, director of technical service, recently presented information on TICA-mulsion® modified gum arabic to a group of food industry professionals in Manila, Philippines.

# Hot New Stabilizer for Cold Set Production of Mayonnaise

To help manufacturers more quickly and easily manufacture fat-free and low-fat mayonnaise, TIC Gums has pioneered a new gum system: TIC Pretested® Saladizer® Mayo Cold Set.

Saladizer Mayo Cold Set is an innovative stabilizer system that allows manufacturers to make fat-free mayonnaise using a cold process, replacing the previous method in which heat was needed to activate component starches. Heating not only can affect the consistency of fat-free mayonnaise formulations, but often causes manufacturers to slow down production which ends up costing time and money.

Geared for manufacturers of mayonnaise and mayonnaise-based sauces and dressings, the new gum system is also designed to be flexible in applications. "Saladizer Mayo Cold Set was created for completely fat-free mayonnaise but it can easily be adjusted for low-fat formulas as well," says TIC Gums' food scientist Maureen Akins, M.S., who worked on the product's development as a solution to production challenges faced by many food processors. The product has a captive market: demand for fat-free and reduced-fat mayonnaise and dressings has remained steady in recent years, as consumers continue to look for ways to balance food choices.

Cold-water soluble Saladizer Mayo Cold Set is easy to use, typically combined with water in a mixing tank before other ingredients, such as preservatives, sugar, egg whites, salt and other flavors are incorporated. Usage levels vary, but are generally around 6 to 7%.



Samples of this latest gum system from TIC Gums are available by calling the company's technical service hotline at (800) 899-3953.

## Fat Free Cold Set Mayonnaise

### TIC Pretested® Saladizer® Mayo Cold Set

INGREDIENTS	%
Water	82.38
Saladizer Mayo Cold Set	6.67
Sugar	6.25
Vinegar	2.00
Salt	2.00
Egg Whites	0.50
Sodium Benzoate	0.10
Potassium Sorbate	0.10
Flavor	q.s.
Citric Acid	q.s.
<hr/>	
	Total 100.00

### PROCEDURE

Add Saladizer Mayo Cold Set to moving water in mixing tank. Add preservatives. Allow to mix until completely incorporated (about 5–10 min). Add sugar, egg whites, salt, and flavors. Mix until incorporated. Slowly add vinegar and mix until uniform. Adjust pH to 3.5 with citric acid, if necessary. Run product through colloid mill and package as desired.

## Research Studies

### Guar Gum and Pectin Shown to Reduce LDL Cholesterol

This final report by the Adult Treatment Panel (ATP) recommends lifestyle changes that can reduce cholesterol and heart disease risk. The group recommends the use of viscous fiber in the diet as an appropriate way to help lower LDL cholesterol. Specifically, guar gum and pectin are mentioned as fibers that reduce serum cholesterol and LDL cholesterol. According to the report, 5-10 grams of viscous fiber per day have been shown to reduce LDL cholesterol by approximately 5%.

### Gums Help Frozen Dough Appear Fresh

While frozen dough is convenient for bakers and consumers alike, the quality of the finished bread is usually inferior to the fresh baked products. Researchers evaluated the use of locust bean gum, gum arabic, and CMC on the characteristics of the finished bread including loaf volume, crumb moisture, bread firmness and color values. Locust bean gum was found to impart the most appealing characteristics, followed by gum arabic and CMC.

### Gums Improve Quality of Frozen Bread

Frozen dough enjoys widespread use in the bakery industry because it is convenient and cost effective for manufacturers. However, there are disadvantages to using frozen dough because long-term storage can reduce dough quality due mainly to the damage to the gluten network caused by ice crystallization and recrystallization. This study evaluated the effectiveness of gum acacia, CMC, and locust bean gum at improving dough quality of frozen bread. The gums provided lower proof times with 2% CMC performing best followed by 3% locust bean gum, 3% CMC, 2% arabic, 2% locust bean gum, and 3% arabic. Researchers also measured the baking quality of the frozen dough using a texture analyzer. Dough containing locust bean gum yielded better gluten quality, followed by CMC and gum arabic.

Call TIC Gums' marketing department at (800) 899-3953 for more details.

# A Rapid Path To Production Success

*Dressing manufacturer shaves minutes from batch times by switching to Ticaxan® Xanthan Rapid-3*

As the pace of business moves ever-so-swiftly these days, quicker solutions to production challenges and enhanced overall capabilities are high on the priority list of food and beverage manufacturers. With that in mind, TIC Gums recently worked with a longtime customer to create more efficient, consistent formulations.

E.D. Smith USA, Inc., a Northeast, PA-based salad dressing, marinade and sauce company, approached TIC Gums nearly two years ago to find a better way to incorporate xanthan gum into its batch production. "We were looking for an agglomerated gum that was readily dispersible and that hydrated quickly," recalls Eric Esterline, director of product development, adding that the existing gum system was working, but not quite up to the company's ideal goals.

Over the course of the next several months, food scientists and technical experts at TIC Gums regularly traveled to E.D. Smith for on-site trials. A range of xanthan gum systems were evaluated, according to Greg Andon, TIC Gums' national sales manager.

"They were so excited to make their process more efficient that they saw a huge value in letting us work closely with them in their plant. We tried things that didn't work, but we learned along the way," he recalls.

Indeed, an entirely new gum system emerged along the way. TIC Pretested® Pre-Hydrated® Ticaxan® Xanthan Rapid-3 was the solution that ultimately worked for E.D. Smith's emulsified dressings. According to Andon, Ticaxan Xanthan Rapid-3 is effective because it saves on time while increasing performance. "You can put Rapid-3 in at the beginning of the batch and not worry about having extended batch times or having lumps," he notes.

Esterline estimates that hydration time for Ticaxan Xanthan Rapid-3, compared to an earlier version of the gum system, is about 30 to 40 percent quicker, averaging between five to seven minutes a batch. There is potential to shave another three minutes off that time. "It's also very consistent," Esterline adds. "I know every time it will give me the exact same finished product."

Meeting another need of today's food processors, Ticaxan Xanthan Rapid-3 is also a versatile ingredient. On E.D. Smith's production line, for instance, Rapid-3 is added to oil-based, creamy and reduced-sugar and fat dressings in addition to marinades and sauces, with varying usage levels. "We saw particular increase in performance in low-sugar applications because the viscosity was higher," reports Esterline.

Pre-Hydrated Ticaxan Xanthan Rapid-3 is now available to the general food and beverage marketplace. Esterline, for his part, already has spread the word about its applications to others in the industry. "We have had success in our case, and we have recommended it to several companies that we co-pack for," he says.

Shorter batch times and easier incorporation of xanthan gum could be in your future. Call our Technical service hotline at (800) 899-3953 or visit [www.ticgums.com](http://www.ticgums.com) to order a sample of Ticaxan Xanthan Rapid-3.



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## In and Around TIC

### TIC Gums Achieves Superior AIB Rating for the 14th Year

TIC Gums earned a superior rating in an American Institute of Baking (AIB) audit for the 14th year in a row. The annual audit rates facilities on food safety practices in the following areas:

- ▼ Adequacy of the food safety program
- ▼ Pest control
- ▼ Operational methods
- ▼ Personnel practices
- ▼ Maintenance for food safety and overall cleaning practices.

TIC Gums scored in the superior category.



### New extended customer service hours

**Our Customer Service department is now open Monday through Thursday from 8:30 AM–6:30 PM ET and until 5:00 PM ET on Friday. Call our order line at (800) 221-3953.**

### Terry Elected to the RCA Board

Terry VanWinkle, TIC Gums vice president of sales, was recently appointed to the RCA board of directors. Congratulations, Terry!

