

The **TIC** Times

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News & Information from TIC Gums

Ticaloid® Lite: **Big on Flavor, Fiber and Freshness, Lite on Trans Fat**

It certainly isn't a white bread world anymore. A loaf of simple white bread can actually be an analogy for the food marketplace today, since consumers are looking not just for flavor and texture, but for breads that are high fiber, low gluten, lower in trans fats—and sometimes all of the above.

To help bakeries develop bread and bakery products like danishes and tortillas that meet the needs of their increasingly discerning customers from both a taste and health and nutrition standpoint, TIC Gums offers solutions like TIC Pretested® Ticaloid® Lite.

In recent times, for example, more baked goods manufacturers are using the product in their dough as a way to reduce total fat levels and trans fatty acid (trans fat) levels. Trans fats have moved to the center stage in food industry circles lately, with the Food and Drug Administration's trans fat labeling requirements that took effect earlier this year. Ticaloid Lite is used to add soluble fiber in breads, rolls and other

bakery products and may help reduce trans fats.

Beyond its effectiveness in high fiber products, Ticaloid Lite is also used to achieve other benefits. The gum system is designed to restore loaf volume and enhance grain appearance and allows for the use of more water in dough, helping to bind water during baking. The result is a moister finished product that is less prone to staling and has a greater shelf life.

Shortening adds to the mouthfeel of full fat products while also contributing to the physical properties of the finished food. Removing or reducing the fat level without sacrificing sensory characteristics is a delicate balancing act. Ticaloid Lite



makes the balancing act easier because it helps mimic the mouthfeel of fat while at the same time it improves flexibility and pliability in delicate products like tortillas.

Usage levels for Ticaloid Lite range from 1% to 2% based on flour weight, depending on the level of gluten.

For more information or samples call TIC Gums' technical service hotline at (800) 899-3953.



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TIC GUMS

Letter from the Vice President



Back to the Lab

Just as our products and processes are a focus of constant improvement and refinement at TIC Gums, so too are our people. In the spirit of evolution that has marked the company since its founding, we are thrilled that the legacy of the Andon family lives on through the recent promotions of Greg Andon to President of TIC Gums and Libby (Andon) Haven to Vice President of Operations.

It has been a pleasure mentoring Greg and Libby as they have grown and flourished in their leadership roles at TIC Gums. This is rewarding for me personally as the success of a manager

is often measured in terms of the success of those we manage. I firmly believe the organization is best served by embracing fresh mindsets and new skill sets at the highest ranks of its leadership.

For my part, I am thrilled to be going back to my roots as Vice President of Science and Technology. As I have mentioned before, I am a businessman by training and a technologist at heart. I look forward to being a part of our science and technology as it plays an integral role in our business—and yours. Chemistry, after all, is at the core of what we do.

Finally, in addition to thanking our customers and those within TIC Gums who have made my tenure as President so gratifying, I would like to leave you with a quote from a great American industrialist. It was Henry Ford who once advised, “Coming together is a beginning; keeping together is progress; working together is success.” That is the core essence of TIC Gums, and that will continue under the stewardship of Greg Andon.

Scott Riefler
VP of Science & Technology

TIC Passes Audit with Flying Colors

If third-party audits are like the ultimate exam for a supplier, then TIC Gums recently aced a major test. On a recent food safety audit conducted by the Food Products Association (FPA), TIC Gums received a 96.9% score.



Breaking down the results, the FPA-SAFE (Supplier Audits for Food Excellence) audit gave TIC Gums a 100% score on management responsibility and on regulatory consideration, a 96% score on

manufacturing quality systems, a 95% score on fundamentals and a 93% score on food safety and HACCP systems. The comprehensive audit, finished at the end of May, covered myriad aspects of food safety, including everything from personnel practices to handling, storage and delivery. Likewise, manufacturing quality systems encompassed a spectrum of steps, from process control to good laboratory practice, among others, while regulatory consideration reviewed labeling approval process and regularity compliance, in addition to other issues.

Getting to Know: Grace Wang

As the world gets bigger, some things get smaller. Take the dual trends of expanding international trade and the move toward more tailored products for customer needs; shifts in business that TIC Gums' inside technical sales representative Grace Wang has observed firsthand. “TIC Gums is definitely a part of the globalization that is occurring across many industries, evidenced by the companies that we are working with and the kinds of products they are interested in. But at the same time, the products we are working on are becoming much more customized,” she remarks.

Grace started with TIC Gums nearly a year ago after receiving her master of

science degree in food science and human nutrition from the University of Illinois. Prior to that, she received a bachelor of science degree in food science from Cornell University and spent time as an intern in the research and development groups of two large food companies. Her daily role at TIC Gums includes providing all-around support to customers by learning about their applications and helping them achieve their product development goals. “Usually this is done by answering their technical questions and providing them with product recommendations. I follow up on their projects and provide any additional support they might need,” she explains.



When not engaged in learning about customers' applications and devising solutions, Grace keeps active by playing tennis and swimming. Other pastimes in her spare time include reading and traveling.

Breaking Out the Bubbly with Culinary Foams

Consumers really are foaming at the mouth for innovative culinary dishes. With culinary foams all the rage in fine restaurant menu items ranging from hot drinks to main courses to sweet desserts, chefs and food manufacturers alike are discovering the benefits of adding texture, flavor, and eye-appeal in a simple bubbly form. Foam may be a very basic concept, but it's a growing marketplace favorite due to its functional—and fun—characteristics.

That said, making foam, whether in a restaurant kitchen or a commercial food or beverage processing plant, isn't always practical when time and labor are of the essence. To make it easier and more cost effective for foodservice professionals and manufacturers, TIC Gums recently introduced TIC Pretested® Stabilizer Culinary Foam.

Launched in late spring, Stabilizer Culinary Foam is comprised of a special combination of gums, which combines emulsification properties with viscosity building ingredients to create an all-purpose foam stabilizing system. These ingredients together promote aeration and stability of the flavored foam.

TIC Gums developed Stabilizer Culinary Foam in a form that can be used in different types of dishes and products. It can be incorporated as a topping or flourish to teas and coffees (both hot and cold), infused in entrees for a subtle yet unmistakable hint of flavor, added to a plated dish for an



aesthetic touch or packaged in aerosol cans for a do-it-yourself application at home.

For more information or samples call TIC Gums' technical service hotline at (800) 899-3953.



Ticaloid® 780 Fills the Lambda Carrageenan Gap

In an ingredient market where supply and demand mean the difference between profit and loss, TIC Gums regularly keeps on top of marketplace trends to meet immediate and long-term customer needs. One of the latest examples is the availability and expanded use of TIC Pretested® Ticaloid® 780.

Considered a lambda carrageenan, Ticaloid 780 is a readily available alternative in the current time of tight supplies of other sources of lambda carrageenan. Lambda carrageenan is commonly used to add a smooth and creamy texture in dairy products.

More readily available than other types of lambda carrageenan, Ticaloid 780 is increasingly a preferred choice among dairy manufacturers because of its reactivity with milk. The all-natural carrageenan adds body and viscosity to fluid milk and milk-based beverages like shakes and smoothies at low usage levels, from 0.1% to 0.3%.

Ticaloid 780 is also formulated for versatility; in chocolate milk, for example, the ingredient also aids in the suspension of cocoa. Meanwhile, the stabilizer can be used at higher usage levels for other types of dairy products. At usage levels between 0.8% to 1.2%, Ticaloid 780 helps form soft gels in instant puddings or thick shakes.

For more information or samples call TIC Gums' technical service hotline at (800) 899-3953.

A Certified Boom: The Organic Market Continues to Flourish

It wasn't all that long ago that "organic" was a term associated with a quaint farmstand or local health food shop known for tofu and oat bran.

These days, a wealth of offerings in mainstream grocery stores and restaurant menus reflect the growing general demand for organic products, with items ranging from organic deli meats to yogurt smoothies to cookies. Retailers specializing in natural and organic foods are taking up more real estate across the country—and a greater share of the consumer food dollar. Meanwhile, many mom-and-pop organic producers have seen their businesses expand to become major national companies with well-known brands.

Market research confirms the organic market has deeper roots. According to the Organic Trade Association, organic food sales totaled nearly \$14 billion in 2005 and are projected to reach nearly \$16 billion by the end of this calendar year. In its National Eating Trends report, the market research firm NPD Group found that 12.7% of Americans eat organic products at least once every two weeks.

The profile of organic consumers is changing, too. A survey by Whole Foods Market discovered that consumers are going organic for different reasons: the top three factors cited among shoppers were the avoidance of pesticides, freshness, and health and nutrition.

Although long-term growth of the organic segment may not mirror the dramatic pace of the past 20 years, a recent report compiled by the OTA featured rosy predictions from various organic manufacturers and market experts. Survey respondents forecasted that within 20 years, the average consumer will have at least one, if not more, organic products in their household at a given time, including food products as well as other household goods. In 2025, the organic market will be supported by the youth of today as they move into their prime purchasing years, the OTA report concluded, because that generation is known for their willingness to try new things and their diversity in culture and lifestyle.

If current interest in organic products is any indication, such predictions may be on the mark. Spurred by strong marketplace demands for new products, TIC Gums has continually expanded its TICorganic® series of certified organic gums. After TICorganic Gum Arabic was launched in 2001, the line has grown to include other hydrocolloids like TICorganic Guar Gum 3500F and TICorganic Locust Bean Gum, all with myriad applications among food and beverage processors looking to label their products certified organic.

One of the latest additions to TIC Gums' organic series of hydrocolloids is TICorganic Certified Organic Inulin. Introduced earlier this year, TICorganic Inulin is designed for use in nutritional and functional foods that are increasingly popular in the organic and natural category.

As with "traditional" gum systems, organic gums are also becoming more customized. One case in point is TIC Pretested® Dairyblend Organic IC for 100% organic ice cream, developed last year based on burgeoning demand among ice cream manufacturers.

For more information or samples call TIC Gums' technical service hotline at (800) 899-3953.



TICorganic® Certified Organic Gums

TICorganic® Certified Organic gums improve thickening, suspension, freeze/thaw stability, emulsion stability and mouthfeel properties of many popular organic products.

TICorganic® Certified Organic Gums Include:

- ▼ Gum Arabic
- ▼ Guar Gum
- ▼ Locust Bean Gum
- ▼ Inulin
- ▼ Custom Stabilizers

At TIC Gums, our dedicated staff of Gum Gurus work with our customers to determine the proper systems and formulations for their organic applications and test those systems in our state-of-the-art pilot plant. For more information or to request samples, please **visit ticgums.com** or call our technical service hotline at **(800) 899-3953**.

TIC GUMS

We're your Gum Guru™



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TIC Gums is certified as an organic processor and handler by the Maryland Department of Agriculture.

Hydrocolloids *Help Support* Healthy Heart Function

The fast paced modern day lifestyle has compelled us to compromise with the needs of our body. In effect, we have started gambling with our well being. Recent studies have indicated that there is a significant discrepancy between the recommended consumption of certain nutrients and their actual intake, fiber being one of them.

It is hardly surprising, therefore, that the Standard American Diet should go by the acronym SAD. The Dietary Guidelines for Americans, published in January this year, advise that adults consume between 25–30 grams of fiber a day; yet, the average American consumes only 14 to 15 grams of dietary fiber on a daily basis. This difference may prove to be crucial in terms of how long a person lives. According to the 2001 Fresh Trends Survey, “56% of U.S. consumers surveyed said that increasing their fiber intake was important to them.”¹ However, while many consumers feel that the consumption of fiber is important, they are still unsure as to what it is and which types are best. This lack of awareness is contributing to increases in obesity, type 2 diabetes and cardiovascular disease.

Besides being wholesome, fiber is known to maintain many of the body's

most crucial functions. The fiber category can be subdivided into soluble and insoluble fiber, both of which are essential components of a healthy diet because they normalize bowel functions and help maintain regularity. However, the functionality of soluble fiber has been talked about in greater detail. It has been linked to benefits such as energy management, weight management and gut health, in addition to promoting heart health.

Hydrocolloids are rich in soluble dietary fiber. Having been used extensively as thickening and gelling agents in various foods and beverages, their health benefits have received little press; this is slowly changing as consumers are selecting more healthful foods. One reason consumers are looking for ways to add soluble fiber to their diets is because gums act as prebiotics and serve as a source of energy for the beneficial colonic microflora, which cling to our intestines. This is a vital function, given that the digestive tract contains about 70% of our immune system.

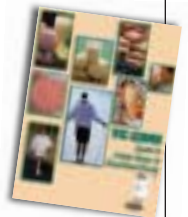
In the United States, coronary heart disease is a leading cause of death for both males and females. It is characterized by the build-up of cholesterol in the arteries that feed the heart. A Harvard study of over 40,000 male health professionals linked a high total dietary fiber intake to a 40% lower risk of coronary heart disease, compared to a low fiber diet.² Bile is responsible for the digestion of fat, and is synthesized by the liver using cholesterol as a precursor. It binds with the fiber and some of it gets excreted from our system. As such, the liver must make more bile, causing the transport of cholesterol from the blood to the liver by the high density lipoprotein.



56% of U.S. consumers surveyed said that increasing their fiber intake was important to them.

As with bile, soluble fiber traps carbohydrates and slows digestion. This helps maintain healthy blood sugar levels already within normal limits. If all health and wellness has a key in the modern day, it has got to be soluble dietary fiber.

For more information or to request a copy of TIC Gums' Functional Foods Guide, call our technical service hotline at (800) 899-3953.



¹ <http://www.nutraaceuticalsworld.com/articles/2004/09/fortifying-with-fibers-starches-gums.php>

² <http://www.hsph.harvard.edu/nutritionsource/fiber.html>

Keeping Chicken Juicy

From Strips to Whole Roasted Birds, Colloid PM-9399 is the Key!

As per capita consumption of chicken, including fresh, precooked and value added portions, continues to climb, so too do consumers' expectations of product quality and consistency. To help poultry processors produce chicken that is fresh, flavorful, moist, and appealing in appearance and texture, TIC Gums supplies broiler companies with hydrocolloids designed for their industry's unique applications.

The TIC Pretested® Colloid PM line includes Colloid PM-9399, which can be used for cooked and par-cooked poultry and as an ingredient in marinades, binders, and brine for injection. Known for its protein reactivity and superior water binding characteristics, Colloid PM-9399 is a high gelling, fine mesh carrageenan system that improves yield, freshness, and juiciness of finished products.

Applications with this particular hydrocolloid have expanded in recent years, as more portioned and precooked items are sold at the retail level and as foodservice operators look for convenient solutions like precooked and pre-marinated products in their own

kitchens. Processes like injection, tumbling, vacuum packaging, and reforming and emulsification of meat products, however, pose certain challenges to manufacturers. When not done properly or with the right type of gum system, problems like purge, unwanted gelling, and package leaks can occur and cause real losses in product and profits.

Colloid PM-9399 helps prevent such issues. Because it is standardized with sodium chloride (salt), the gum system is effective in preventing gel pockets and cook-out gel formation. In injection, meanwhile, the mesh

size of the hydrocolloid cuts down on clogging, while it allows for cold swelling and a reduced need for any add-back of brine. In tumbling, the addition of this ingredient helps ensure even distribution of brine. In vacuum packaging, the protein reactivity of Colloid PM-9399 results in a thick, tacky fluid around the meat that doesn't leak through the film like other less-tacky fluids often do. Even in the final step of cooking, this type of carrageenan binds any free water to halt purge or cooking loss that can occur when heating. The result: chicken products, from cut-up strips to whole roasted birds to deli logs and rolls, that are juicy and appealing in look and taste.

Because of the variety of applications, usage levels for Colloid PM-9399 vary. Typical usage in brine used for injection is between 1.5 to 2.0% or a carrageenan dose of 0.2 to 0.4% in the finished meat. For tumbling and massaging, typical usage level is between 0.2 to 0.3% of the marinade recipe.

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Trans Fat Free Tortilla Recipe

TIC Pretested® Ticaloid Lite

INGREDIENTS	%
Flour	59.40
Water	33.79
Sans Trans LC 30 MT [Trans fat free Shortening Loders % Crocklaan]	5.40
Salt	0.89
Baking Powder	0.02
Ticaloid Lite	0.50
	<hr/> 100.00%

NOTE: Higher usage such as 1% Ticaloid Lite also works but with additional water adjustment. Ticaloid Lite is just one of the many

products TIC Gums recommends for use in tortillas.

PROCEDURE

1. Weigh out dry ingredients and mix for one (1) minute on first speed of the kitchen aid with a dough hook.
2. Add water and mix for another one (1) minute on first speed.
3. Turn to second speed and mix for about 5 minutes or until all dry ingredients are thoroughly mixed and dough is developed.
4. Scale 35-40 g dough pieces. Sheet out 1/8" thick or thinner and cut into 8" or 12".
5. Bake 1 minute at 425° F.

