

fiber files

FIBER FOLLOWS FUNCTION

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fiber & protein: a dynamic duo

It looks like 2014 is shaping up to be protein's big year. That was certainly the takeaway from the recent IFT Annual Meeting & Food Expo in New Orleans, where protein ingredients and product concepts generated buzz among industry insiders from booth to booth across the trade show floor.

The buzz is for good reason: Protein increasingly tops Americans' list of "must-have" nutrients. Unlike sugar and fat, which have come under criticism from consumers and health experts alike, protein enjoys a pristine reputation thanks to its well-documented contributions to sports nutrition, muscle growth and maintenance, healthy aging, and an all-around balanced diet.

Attracting particular attention is protein's role in satiety and weight management—matters of concern to a nation in which Gallup¹ finds that just over half of all adults are trying to lose weight. And numerous studies have, in fact, demonstrated protein's ability to promote healthy body weight, increase thermogenesis, improve body composition, and tamp down food cravings following its consumption.



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The entire family of Fibersol ingredients provides healthful fiber and functional appeal to a range of applications.



But promoting protein isn't the only strategy for satiety success. Dieters and nutrition researchers have long known that fiber's bulk and ability to slow gastric emptying leave consumers feeling full longer. And studies now show that fiber stimulates satiety-inducing hormones like protein does—hormones that tell the feeding centers of the brain, "Enough." In one clinical study,² subjects who consumed soluble fiber in the form of Fibersol-2 not only experienced prolonged fullness and delayed post-meal hunger compared to those consuming a control, they also increased their production of the satiety hormones PYY and GLP-1.

That makes protein and fiber a dynamic duo for weight-management formulation. According to the IFIC Foundation's 2014 Food and Health Survey,³ 53 percent of Americans are trying to get a certain amount of protein—or as much as possible—into their diets, and 50 percent of Americans are striving for the same goal with fiber. Opportunities for dynamic product development are the logical next steps.

Those opportunities start with Fibersol-2. Not only does it deliver a concentrated 90 percent minimum dry solids basis soluble dietary fiber to formulations, it also enhances sensory qualities that when added to its satiety factor, leave consumers really satisfied—qualities such as improved mouthfeel in reduced-sugar and reduced-fat applications, an imperceptible flavor of its own, and even the ability to mask the bitterness and off-notes that can accompany

proteins and high-intensity sweeteners. In fact, ADM can deliver the total fiber and protein ingredient package that you're looking for to successfully develop products to meet consumers' hungry demand for satiety.

The entire family of Fibersol ingredients—from easy-to-use Fibersol-LQ liquid to pleasingly sweet Fibersol-HS—provides healthful fiber and functional appeal to a range of applications, including binding and sweetening bars, adding crispness to fiber-enhanced crackers, and extending the shelf life of everything from baked goods to RTE cereal puffs. And they do it all while contributing very little viscosity, withstanding the high heat of everything from baking to extrusion, and needing only minimal formulation and processing adjustments.

Fibersol-2 is even a go-to option for boosting fiber in protein-rich beverages, shakes and smoothies. It goes into transparent aqueous solutions at levels as high as 70 percent w/w while remaining stable in acidic conditions (pH 2) and elevated temperatures. Perhaps that's why it makes such a winning contribution to the protein-rich, fiber-enhanced, chocolaty dairy beverage described on the following pages.

1. <http://www.gallup.com/poll/166082/americans-desire-shed-pounds-outweighs-effort.aspx>

2. Higher Dose Fibersol-2 Increases Subjective and Biochemical Measures of Satiety When Ingested with a Meal Compared with Control or Lower Consumption, Suzanne Hendrich, Zhong Ye, Visalakshi Arumugam, Esther Haugabrooks, and Patricia Williamson-Hughes, 9th Vahouny Fiber Symposium, June 2010 (www.nsresearch.org/abstracts_revised_master_5-31-2010.pdf)

3. <http://www.foodinsight.org/press-releases/more-americans-choosing-foods-beverages-based-healthfulness>

the PROOF is in the prototype

Chocolaty dairy beverage—Fibersol-2 and dairy protein form a delicious, nutritious team!

With Fibersol-2 soluble corn fiber, uniting the “power couple” of fiber and protein is a snap—even in chocolaty dairy beverages. We used easy-to-dissolve Fibersol-2 to boost the dietary fiber of traditional low-fat milk from 0 g to 6 g, earning our drink an “excellent source” fiber claim to go with the “good source” claim it already had from its 9 g of naturally occurring protein.

INGREDIENTS: LOW-FAT MILK (VITAMIN A PALMITATE AND VITAMIN D3 ADDED), SUGAR, FIBERSOL-2 (SOLUBLE CORN FIBER), COCOA (PROCESSED WITH ALKALI), CORNSTARCH, SALT, CARRAGEENAN, VANILLIN, SUCRALOSE.



24%
reduction in sugar

16%
fewer calories

Just as impressive, Fibersol-2 helped reduce total calories and sugars in a chocolaty dairy beverage by as much as 16 and 24 percent, respectively, compared to traditional chocolate milk drinks, depending on the comparison beverage. And how does it taste? So chocolaty rich and creamy that kids will never notice the fiber that’s there, nor will they miss the sugar that isn’t. And that’s just the way we all like it.

chocolaty dairy beverage with FIBERSOL

Nutrition Facts	
Serving Size 8 FL OZ (256 mL)	
Servings Per Container 1	
Amount Per Serving	
Calories 160	Calories from fat 25
<small>% Daily Value*</small>	
Total Fat 2.5g	4%
Saturated Fat 1.5g	8%
Trans Fat 0g	
Cholesterol 10mg	3%
Sodium 110mg	5%
Total Carbohydrate 29g	10%
Dietary Fiber 6g	24%
Sugars 22g	
Protein 9g	18%
Vitamin A 2%	Vitamin C 0%
Calcium 30%	Iron 0%
<small>*Percent Daily Values are based on a 2,000 calorie diet. Your daily values may be higher or lower depending on your calorie needs:</small>	
	Calories 2,000 2,500
Total Fat	Less than 65g 80g
Saturated Fat	Less than 20g 25g
Cholesterol	Less than 300mg 300mg
Sodium	Less than 2,400mg 2,400mg
Total Carbohydrate	300g 375g
Dietary Fiber	25g 30g
Protein	50g 63g
<small>Calories per gram:</small>	
Fat 9 • Carbohydrate 4 • Protein 4	

making it better WITH FIBERSOL

Fibersol-2[®]

(90 PERCENT FIBER) in the chocolaty dairy beverage:

- ✓ Adds 6 g of dietary fiber to regular low-fat milk (at a use rate of 2.14 percent w/w of the formulation), earning an “excellent source” fiber claim
- ✓ Delivers a concentrated 90 percent minimum dry solids basis soluble dietary fiber
- ✓ Incorporates easily into formulation, dissolving readily into the low-fat milk base with the dry ingredients
- ✓ Has a clean, neutral taste that doesn’t interfere with the beverage’s chocolaty profile
- ✓ Maintains and even improves mouthfeel in this and other reduced-sugar and low-fat beverages
- ✓ Replaces bulk lost during sugar-reduction reformulations
- ✓ Creates minimal gastrointestinal distress, even at high-use rates
- ✓ Is appropriate for use in many applications with minimal formulation adjustments
- ✓ May appear on ingredient statements as “soluble corn fiber,” “digestion-resistant maltodextrin,” “resistant maltodextrin,” or “maltodextrin”

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Fibersol-2 is an operationally friendly soluble corn fiber that’s the go-to solution for beverage formulators’ fiber-fortification challenges. With its mild taste, ease of use, and positive effects on mouthfeel, it’s a prime option for reducing sugar and calories in all types of beverages while adding the dietary fiber that consumers demand.





www.fibersol.com

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