



Flavoring Milk without Adding Calories - Naturally
All-natural, GMO-free sweetener finds a sweet spot in school lunch program

Discussions around school lunches, childhood nutrition and specifically the role of chocolate milk, are rife with varying views. Most people agree that childhood obesity and the consequent risk of disease, is a problem that requires solutions. Not everyone agrees on the approach. Jamie Oliver's Food Revolution, promoted by the popular chef and TV personality, has this to say on his website. "When kids drink chocolate and strawberry milk every day at school, they're getting nearly two gallons of extra sugar each year. That's really bad for their health." A photo of Jamie, standing in front of a school bus that's spewing forth sugar, emphasizes the point. Subsequently, many schools, including those in Los Angeles and Minneapolis, have banned chocolate milk from their lunch programs.

The USDA School Lunch Program requires kids across all school grades be served one cup of fluid milk at breakfast and lunch every day. The milk may be flavored or unflavored if it is fat-free, but it must be unflavored if it is low-fat. Full fat milk is not allowed. Critics of the restrictions argue that a lot of kids don't like plain milk. The mandatory serving is meaningless if it's trashed. Milk is nutritionally important because it provides protein, vitamins A, D and B12, riboflavin, niacin, potassium, and phosphorous. Children get as much as 72% of their calcium requirements by drinking milk.

Calcium is essential to growing bodies. It also provides long lasting benefits. Building bone mass when we're young reduces osteoporosis as we grow older. A 2009 study shows that if kids skip chocolate milk, they often don't drink any milk at all and miss these significant nutrients. (Am Diet Assoc. 2009; 109, (9): A97.2). Chocolate milk offers other benefits important to student athletes. It's proven to be an excellent sports recovery drink. When compared to two commercially available sports drinks, chocolate milk consumption improved endurance capacity according to a UK study (Appl Physiol Nutr Metab. 2009 Feb;34(1):78-82).

Several health organizations including the American Academy of Pediatrics and the American Dietetic Association believe flavored milks are a healthier choice than sodas and fruit drinks. International Dairy Foods Association (IDFA) and the National Milk Producers Federation (NMPF) are adding another piece to the conversation. In a petition filed with FDA (Docket No. FDA-2009-P-0147), they ask that the standard of identity for milk and 17 other dairy products be amended to provide for the use of any safe and suitable sweetener as an optional ingredient. The petition notes that the standard of identity in § 131.110 only provides for the use of "nutritive sweetener" in an optional characterizing flavor. Milk may contain a characterizing flavor that is sweetened with a non-nutritive sweetener if the food's



label bears a nutrient content claim (e.g., “reduced calorie”) and the non-nutritive sweetener is used to add sweetness to the product so that it is not inferior in its sweetness property compared to its standardized counterpart. IDFA and NMPF argue that nutrient content claims such as “reduced calorie” are not attractive to children. FDA has opened the docket to comments from February 20, 2013 until May 21, 2013. In the first two months, 34,442 comments were submitted.

Many of the comments posted on the FDA website and attached to news stories, say things like: “No aspartame in milk!”; “Aspartame should be taken off the market.”; “Do not allow aspartame into dairy products.”; “Additives to our food and/or dairy products should be clearly labeled on the product packaging.” Speaking in FDA’s Consumer Update page, April 15, 2013, (<http://www.fda.gov/ForConsumers/ConsumerUpdates/ucm347194.htm>.) Mary Poos, Ph.D., deputy director of FDA’s Office of Nutrition, Labeling and Dietary Supplements, says, “Based on these comments, we’re seeing a fair amount of confusion about what the labeling change would actually mean.” FDA makes it clear that the ingredient statement would not change under the new request. Just as regulations now require, non-nutritive ingredients must be listed in the ingredient statement. Currently, the front label tag, “Reduced-Calorie” signals the presence of non-nutritive (artificial) sweeteners, the agency points out. That tag – not an ingredient label - is the crux of the issue.

Whether or not the proposed rule is accepted, these themes become evident in the discussions. Consumers overwhelmingly associate this rule with aspartame, as judged by nearly 43% of the public comments posted online. Consumers who dislike artificial ingredients are passionate and vocal about their beliefs. Many consumers do not understand the petition is focused on a nutrient content claim and not ingredient labeling. Large numbers of consumers rely on front of package labeling.

In the flurry of comments and controversy, one question is being cast aside. How do we get kids to drink their milk? Fewer kids prefer plain milk. Flavored milk requires sweetening, but that adds calories or in many cases, artificial ingredients. Using a natural sweetener in flavored milk strengthens consumer appeal and gives it the taste that encourages kids to give it the bottoms up.

Incorporating stevia into flavored milk adds a calorie advantage. Steviva Brands offers natural stevia products derived from the South American plant, *Stevia rebaudiana*. Flavor contribution from the company’s proprietary blend of steviol glycosides is exceptionally clean and free from the bitter notes and aftertaste that are found in some stevia products. For sweetening flavored milk, Thom King, president, Steviva Brands, recommends incorporating Fructevia as a direct replacement for sugar. The profile of Fructevia is further enhanced by combining these proprietary steviol compounds with non- GMO crystalline fructose and inulin fiber, a pre-biotic which promotes healthy gut flora. The resulting sweetness curve resembles HFCS or a blend of sucrose and fructose, meaning that it’s well rounded



and lacks sharp peaks. Because it goes into solution easily, it can be used to sweeten flavored milk and other beverages. “We have engineered several flavored sweetened milk recipes in our test kitchens and the results have been exciting,” says King. There is absolutely no aftertaste and the final product had a mouth feel and flavor profile identical to milks sweetened with sugar.” Naturally – and uniquely - water extracted, Steviva Brands’ products meet labeling claims that are important to consumers. All of the company’s products are certified GMO free, pesticide free and petrochemical free. Plus, a flag on the front panel may declare “Sweetened with Stevia.”

Because stevia is 200 to 300 times as sweet as sugar, minute quantities provide a powerful sweetening impact economically, making it an ideal choice for school lunch programs. The health benefits of this all-natural sweetener will interest schools and milk producers looking for a low caloric and low glycemic option to sugar, HFCS or artificial sweeteners. Fructevia contributes just 1.2 calories per gram. Not only is it safe for children, it can be an important ingredient in defense against developing childhood obesity and diabetes.

###

Editor’s note: A white paper discussing Fructevia™, StevivaSweet 95-60™ and SteviaSweet RA98™ can be found at http://www.steviva.com/press/white_sheets/Stevias%20_Sweet_Spot_RA98.pdf

