

# Dairy Detective

**Q** What is the trans fatty acid content of dairy foods and dairy ingredients, and what does it mean for processors and ingredient manufacturers?

**A** Trans fats occur naturally in small amounts in some foods, including meat and dairy products, but most trans fats in the American diet are formed when vegetable oils are modified through a process called hydrogenation. For this reason, most dairy ingredients would not make a significant contribution to the total trans fatty acid content in finished food products.

In fact, while milk and dairy foods contain small amounts of naturally occurring trans fats, in most cases, the amount per serving is less than the labeling threshold recently set by the FDA, which is 0.5g per serving. Emerging research shows that some naturally occurring trans fats may have health benefits. For example, there is a trans fatty acid found in dairy foods known as conjugated linoleic acid (CLA) that has been shown to have potential cancer inhibiting properties. The new regulation does not require CLA to be included in the labeling of trans fats.

In some bakery applications, dairy ingredients such as butter and anhydrous butter oil may in fact be used to replace hydrogenated vegetable fats, which have much higher levels of trans fat. In certain confectionery applications, these dairy ingredients may offer a more attractive option than some tropical oils, which have higher levels of saturated fats. Especially in applications where a harder fat is needed for functionality, dairy ingredients may become the ingredient of choice because of their superior flavor.

For dairy ingredients, food manufacturers already have begun requesting information on the level of trans fatty acids, so that they can modify their nutrition labels to meet the new regulations. Food manufacturers generally want to know the grams of trans fat per 100g of ingredient. From these data, they can estimate the amount of trans fat in a serving of finished food. Some manufacturers also may choose to reformulate some of their products in order to decrease the level of trans fats. To get an accurate value of the trans fat content of their finished dairy products and ingredients, manufacturers will need to submit their products for analysis by a reputable analytical laboratory. Dairy manufacturers can look to published data for approximate values. Some older data indicated that approximately 3% of milkfat was trans fat.

To get a rough estimate of the level of trans fat in the milkfat of a dairy product or ingredient, multiply the level of milkfat in the ingredient times the estimated level of trans fat (TFA) in milkfat. For example in whole milk: 3.25 g milkfat per 100 g x ~3.3% TFA = 0.11 g TFA per 100 g. A 1 cup serving of milk, 244g, contains approximately 0.3g of TFA, which is below the 0.5g trans fat threshold and would be labeled as 0 grams. If a cookie contained 4% anhydrous butter oil, and 1% nonfat dry



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milk, the dairy ingredients would contribute less than 0.5 g of TFA to the 28g finished cookie. The manufacturer would need to add the trans fat contributions of any other ingredients that might be present in the formula to calculate the total trans fat for the finished cookie.

Food manufacturers have until Jan. 1, 2006, to list trans fat on the nutrition label. Dairy Management Inc. is working with other industry groups such as the International Dairy Foods Association, and the American Dairy Products Institute, to assist the dairy industry in meeting this challenge.

For more information on the new trans fat guidelines, visit the FDA website <http://www.fda.gov/oc/initiatives/transfat/> and call us at the DMI Technical Support Line at 800/248-8829 or e-mail us at [technicalsupport@doitwithdairy.com](mailto:technicalsupport@doitwithdairy.com). Suggestions for future columns are also welcome. ■

*Dairy Management Inc.™ (DMI) is the domestic and international planning and management organization that builds demand for U.S.-produced dairy products on behalf of America's dairy farmers. A food technologist by trade, Sharon Gerdes helps food formulators find answers to dairy-based ingredient questions via DMI's toll free technical support hotline, 1/800-248-8829. Leveraging her firsthand expertise, she provides helpful information regarding the use of dairy ingredients such as whey, whey protein concentrates and isolates, and nonfat dry milk in food products.*