

Many cheeses already meet New York sodium targets; others will need reformulation

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By Joan Murphy

The first study to test sodium levels in cheese products found many already meet the 2012 voluntary sodium targets set by the New York's National Salt Reduction Initiative (NSRI), but processed cheese would have to undergo significant reformulation to make the cut.

Researchers with the Dairy Research Institute, in Rosemont, Ill., analyzed 650 samples of cheddar, 746 samples of low moisture part skim Mozzarella, and 269 samples of processed cheese from 16 U.S. cities to help the industry get a handle on how much sodium is in cheese. They looked for variability in sodium levels across brands and compared the sodium test results with the levels donned on Nutrition Facts labels, says the new study, published in the latest issue of the Journal of Dairy Science.

Processed cheese contained the highest mean (average) level of sodium (1,124 mg/100 g) among all of the cheeses tested by DRI, followed by string cheese (724 mg/100 g) and Cheddar cheese (615 mg/100 g). The New York target for processed cheese is 1,250 mg/100 g by 2012 but ratchets down to 1,040 mg/100g by 2014.

Most samples of Cheddar and some of Mozzarella were close to their 2012 New York target of 630 mg/100 g, and this suggests processors would need to make small changes to qualify for the voluntary program. The target for Cheddar, Colby, Jack, Mozzarella, Muenster, Provolone and Swiss cheese drops to 600 mg/100g by 2014.

String cheese manufacturers will need to make changes and process cheese makers "will need major reformulations" to meet New York's voluntary targets, lead researcher S. Agarwal says in the study. "Reduction of sodium in process cheese will be a greater challenge when compared with Cheddar or Mozzarella cheese."

A sodium shockwave

New York City sent a shockwave through the food industry last year when it set voluntary targets for food companies and pledged to monitor sodium in 62 categories of packaged food and 25 categories of restaurant food.

It's no surprise processed cheese contains higher sodium levels than Cheddar because salt is added for functionality, so the cheese melts, says Nigel Kirtley, vice president of cheese research, development and quality for Kraft Foods and member of the Health and Wellness Committee for the Innovation Center for U.S. Dairy. It will pose a technical challenge for cheese manufacturers to reduce sodium levels, he says.

"Kraft and other companies will be looking at this one," Kirtley says, as companies need to maintain taste and functionality.

Kraft announced last year that it pledged to reduce 10% of sodium across its portfolio of food products and is one of the companies participating in the New York program. New York has set a goal of reducing salt in products and menus by 25% over five years. Many of the cheese products already would meet the 2012 goal but still would have to make process change to make the future targets, Kirtley says.

The study picked New York's targets because they are the "bellweather" for where public health advocates would like the industry to move to, he adds.

The study also finds variations in sodium levels even among the same cheese types, and string cheese had higher sodium levels compared to chunk or shredded cheese.

The analysis shows that difficulties in achieving uniform salt distribution in commercial settings stems from a variety of factors, says Bill Graves, senior vice president of product research for the Dairy Research Institute, in a Feb. 21 statement.

"To date, research does show a number of approaches available to improve consistency, including greater formalization of cheese making steps and operations, improved design of equipment for uniform curd distribution and block forming, and improved quick and easy testing methods to check sodium levels during production," Graves says.

"Continued evaluation of best methods to reduce sodium and establish process controls are underway with cooperation among universities and dairy industry partners."

In December, the Innovation Center's Best Practices Task Force agreed to work on reducing sodium in cheese. The task force is working on three facets: maintaining taste and functionality in lower sodium products; updating process controls in manufacturing; and educating audiences about the role of sodium in cheese.

Kirtley calls the study "elaborate" and says the data would be valuable for the industry. "It's a very significant investment for the dairy industry." With cheese contributing to 8% of America's sodium intake, cheese manufacturers are looking to ways to reduce sodium.

The study also finds that cheese manufacturers tend to be conservative with their reporting of sodium on product labels. About 10% of the products tested contained 20% less sodium than the label declaration, the study says.

"This may be a bit of a surprise," Kirtley says. Cheese is a natural product and can vary depending on the seasonality of milk, for example, and other factors, so manufacturers are conservative on their labels. The task force is looking at developing a rapid measurement tool for sodium in the cheese process that may help make labeling more accurate, he says.