FDA takes up furan

By David Joy, Contributing Editor

The Food and Drug Administration (FDA) recently announced it is examining the presence of furan in food and requested relevant data and information. This activity is very reminiscent of the agency’s ongoing work to evaluate the safety of acrylamide. Both substances are believed to cause cancer in laboratory animals, and they appear to occur naturally in food through an unknown mechanism at levels measured in parts per billion.

Chemically, furan is a five-membered cyclic compound with one oxygen and four carbons in the ring. Furan is distributed commercially for limited uses, primarily as an intermediate in the production of furan derivatives. It is not added to food for any purpose; however, some furan derivatives, such as furfural, are added to food as flavor substances. The furan that occurs naturally in food may make a minor contribution to flavor.

According to analytical data posted on FDA’s web site and presented as exploratory data, furan may be present in a wide variety of foods at extremely low levels ranging from a few parts per billion (ppb) to approximately 100 ppb. Based upon a cursory review of this information, it seems likely that consumers typically ingest a few micrograms of furan per day.

This is not completely new information. It’s been known for some time that furan is present in the diet. FDA analyzed 120 food samples and notes that furan was found in a wider variety of foods than was reported previously. This is probably attributable to the improved sensitivity of FDA’s analytical methods and the number of foods tested.

FDA is aiming to learn more about the presence of furan in the diet. Some basic issues the agency would like to explore include whether this quantity of furan in the diet is actually harmful to consumers, the mechanism by which furan is formed in food and whether its presence can be reduced.

Importantly, FDA is still in an information-gathering mode. The agency has not concluded that dietary furan is dangerous and recommends that consumers not make any changes in their diets out of concern over furan.

Regarding furan’s safety, the existing animal studies presumably allow for a quantitative risk assessment, whereby it can be estimated that a person might experience a very slight incrementally higher risk of getting cancer attributable to dietary exposure to furan. However, even if all available scientific evidence does suggest dietary furan increases a human’s lifetime risk of developing cancer — and that conclusion has not yet been reached — this information would need to be kept in perspective.

According to the American Cancer Society, approximately one out of every two American men and one out of every three American women will have some type of cancer at some point during their lifetimes. When placed in context with other risk factors, dietary furan almost certainly presents an increased risk that is negligible at best. And to the extent that dietary furan presents any quantifiable risk, it is a risk to which we’ve been exposed for as long as we’ve been eating heated foods.

FDA can be trusted to undertake a comprehensive analysis, with an understanding that there are many more significant risk factors for cancer than the natural, low-level presence of possibly carcinogenic substances in the diet. Unfortunately, not everyone can be trusted to undertake a thoughtful, comprehensive and rational examination of dietary furan. It is likely that lawsuits are already being planned under California’s Proposition 65 against food manufacturers whose products contain ppb quantities of furan. Some attorneys are going so far as to solicit clients who feel they may have been injured by exposure to furan, as improbable as it may be that an illness or injury could be conclusively linked to dietary furan.

It is difficult to fault FDA for wanting to know more about dietary furan. However, it would be regrettable if the agency diverts any significant amount of regulatory resources toward studying a whole series of naturally occurring substances in the diet, starting with acrylamide and furan and followed by many others. Many other food safety issues would seem to be better candidates for study, notably the presence pathogenic microorganisms in the diet which is clearly associated with illnesses and deaths each year. Furthermore, it might be sensible for FDA to complete its ongoing action plan for acrylamide and evaluate the costs and benefits associated with this type of inquiry before embarking on another one.

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