

Comments on “Assessment of Test Results for Mercury in HFCS,” Dr. Woodhall Stopford, Duke University Medical Center. www.corn.org.

By Renee Dufault, Blaise LeBlanc, Roseanne Schnoll, Charles Cornett, Laura Schweitzer, David Wallinga, Jane Hightower, Lyn Patrick and Walter J Lukiw.

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According to the Corn Refiner Association’s web page, Dr. Stopford was commissioned to review the results of analytical testing of high fructose corn syrup (HFCS) samples for mercury submitted by CRA members to a third party laboratory. The “study” that was conducted on the samples submitted by CRA members did not undergo a peer review process. The only reviewer was Dr. Stopford and he was paid by the CRA to review the study. There is no statement of other potential conflicts of interests or Dr. Stopford’s relationship to the CRA which is a national trade association representing the corn refining industry of the United States.

According to Dr. Stopford’s report, one hundred nineteen samples of HFCS were supplied by “the 5 U.S. and Canadian producers from each of their 22 production facilities.” A quick review of all of these producers’ annual reports reveals that between them they have more than 22 production facilities that produce HFCS, so the CRA did not submit samples from each of their facilities. They submitted samples from selected facilities. They did not provide any details on how the samples were collected and who collected them, nor did they provide any details as to the raw materials used to make the product samples. From the finding of the study that “no quantifiable mercury was detected in any of the samples analyzed,” we can only assume the samples were recently collected from plants that are not currently using mercury grade chlor-alkali products in their manufacturing process.

Mercury levels in foods prior to the use of high fructose corn syrup in the 1960s and early 1970s may have been higher but the source of this mercury was most likely due to the uncontrolled use of pesticides. To compare mercury levels found in foods from the 1960s to mercury levels found today and conclude that the mercury levels in today’s food are from “background mercury” and not from high fructose corn syrup is invalid. Dr. Stopford compared the results of mercury analyses in food that were conducted in 1964 by Goldwater to Dr. David Wallinga’s findings but there seems to be a problem with this comparison. For example, Dr. Stopford states that Goldwater found between 2.2 –25 ppb mercury in bread, but according to a World Health Organization document, in 1964 Goldwater reported finding mercury in bread at the 0.08 ppm or 80 ppb level. Goldwater attributed the mercury to be from pesticide residues.

<http://www.inchem.org/documents/jmpr/jmpmono/v66apr14.htm>

Because of the harm to the environment that resulted from the uncontrolled use of pesticides, the U.S. government enacted laws to better control and regulate the use of pesticides and this is why many foods today do not contain mercury residue.

Dr. Stopford implies that because mercury is ubiquitous in the environment that mercury in food is normal and natural. Furthermore, he states that mercury in various foods can range up to 141 ppb but does not provide a peer reviewed reference for this statement. On the one hand, he is

claiming that mercury in food is normal and on the other hand he is claiming that there is no mercury in high fructose corn syrup. We disagree that mercury in food is natural and normal. The FDA has tested and not found mercury in many foods.

<http://www.cfsan.fda.gov/~acrobat/tds1byel.pdf>

The peer reviewed work by Dufault et al provides a plausible explanation for finding a range of mercury levels in the high fructose corn syrup samples that were collected by a FDA field investigator and sent to a laboratory with chain-of-custody intact for mercury analysis by cold vapor atomic absorption. The samples were collected and analyzed a few years ago when it was more common for mercury grade chlor-alkali products to be used in the high fructose corn syrup manufacturing process. The peer-reviewed work of Dufault et al demonstrated that HFCS samples provided by certain manufacturers contained significant amounts of mercury. This product was likely used in commercial food products.

We see many problems with the conclusions made by Dr. Stopford with regard to the information provided to the public in his assessment of test results for mercury in HFCS. While a change in number of manufacturers using the chloro-alkali process in refining HFCS has taken place over the past two years, the results of Dufault et al suggest that mercury contamination via HFCS refining may pose a serious health concern and should be examined further.