Ex. 1

THE SUGAR ASSOCIATION

1300 L Street, NW Suite 1001
Washington DC 20005-4263

Sugar Content of Popular Sweetened Beverages Based on Objective Laboratory Analysis: Focus on Fructose Content

The following is a summary of the fructose, glucose and sucrose content data published in the October 14th pre-publication, on-line edition of *Obesity*. The authors acknowledged the study was funded by the National Cancer Institute (U54 CA 116848).

EE Ventura, JN Davis and MI Goran. Sugar Content of Popular Sweetened Beverages Based on Objective Laboratory Analysis: Focus on Fructose Content. *Obesity* (2010) doi:10.1038/oby.2010.255.

Overall Summary

The reported fructose, glucose and sucrose levels are essentially meaningless for the following seven major deficiencies.

1. While the authors state the individual sugars were determined by an Association of Official Analytical Chemists (AOAC) method, the explicit AOAC method was not identified. Conventional practice requires the citation of the exact analytical method so that other laboratories can verify the published results (standard practice).

2. The individual beverages were analyzed only once. Good laboratory practice (GLP) minimally requires beverage samples to be analyzed in triplicate and in random order.

3. Beverage samples and standards were analyzed independently of one another. GLP dictates samples and standards are assayed simultaneously to harmonize detector response which varies daily.

4. The levels of 3-member glucose to 9-member glucose oligosaccharides (present in all HFCS-42 and HFCS-55 syrups) were not reported, and maybe were possibly not measured. If these maltodextrins had been quantified, the authors would have realized the sucrose results (point 5) were flawed.

5. The authors report the presence of sucrose in domestic soft drinks formulated exclusively with HFCS-55. This is only possible if sample integrity was not maintained or, and more likely, the testing laboratory is not qualified to analyze for monosaccharides and disaccharides. Sugars are among the most difficult carbohydrates to accurately quantify.

6. The authors claim the sucrose reference solution contained traces of fructose but no glucose. Again, this is possible only if either (or both) circumstance noted in point -5 occurred.

7. Based on the authors comments about the fructose, glucose and sucrose levels measured in the sample of Mexican Coca-Cola, the authors lack the expertise to comprehend the process of inversion. The authors are claiming the Mexican Coca-Cola sample contains HFCS-55, not sugar.

Other shortcomings could be listed. However, the apparent lack of a non-sugar reference solution (determine precision of detector response) and the large variability reported for the fructose, glucose and sucrose reference solutions are important only when another laboratory tries to verify these published results.

Since the individual fructose, glucose and sucrose data are so illogical, the fructose-glucose ratios are equally groundless.

Recommendation

The sole purpose for this "study" is revealed when the authors call for more precise information regarding what soda and other sweetened beverages contain, including the "listing of the fructose content." This study is so totally flawed the Association should neither include this study in the body of evidence nor should issue any public statement on it.