



AMERICAN SOCIETY OF
Brewing Chemists

Emerging Issues

by

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Chairman, ASBC Emerging Issues Committee

The Science of Beer

Agenda

- Charge of the Emerging Issues Committee
- Members
- Recent Activity
 - Sampling of Emerging Issues from 2012-2013
- Moving Forward
- Questions, Suggestions, Comments

Charge

- The Emerging Issues Committee (EI) is charged with the task to identify, monitor and prioritize
 - scientific issues
 - regulatory needs
 - environmental trends
 - That may impact brewers and suppliers to the industry worldwide
 - Provide regular updates to Board of Directors to aid in strengthening the scientific stature of ASBC
 - Members of this advisory panel should be thinking “outside the box” and be scanning for anything that impacts the planning of our society’s leadership
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Current Members

- From industry, academia, suppliers
 - David Maradyn, Chairman, Novozymes North America
 - John Engel, Member, MillerCoors
 - Cynthia Henson, Member, USDA-ARS Cereal Crops Research Unit
 - Tom Shellhammer, Member, Oregon State University
 - Bob Smith, Member, Hopsteiner
 - Stefan Kreis, Member, Carlsberg
 - Joe Casey, Member, Craft Brewers Alliance
 - Xiang Yin, Member, Cargill
- If anyone is interested in joining the committee, please contact

Issues from 2012-2013

1. Alcohol as the new tobacco

- Key-note lecture from EBC in Glasgow, 2011
 - Oliver F.W. James, Chairman of the Board of Directors, ERAB:
The **E**uropean **F**oundation for **A**lcohol **R**esearch
- Marketing restrictions, health warnings, minimum pricing, restrictions on point-of-sale – focused on Western Europe
- Industry needs to work in partnership with governments to promote responsible consumption

STATUS:

- Recommended to retain EBC key-note speaker for WBC 2012
 - Did not happen, but keep in mind for future events
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Issues from 2012-2013

2. 4-MEI (4-methylimidazole)

- As of 1/7/11, 4-MEI listed as a “chemical known to cause cancer” under Proposition 65 in California
- 4-MEI can be found in class III ammonia coloring agents for beer
- Warning labels?
- Can we measure 4-MEI in beer?
 - Do we need to?

STATUS:

- Rebecca Jennings agreed to write a white-paper on 4-MEI and publish in ASBC Buzz.

Issues from 2012-2013

3. High fructose corn syrup and consumer sensitivity

- Prevalence of high-fructose corn syrup (HFCS) in a variety of processed foods is becoming/has become known to consumers
 - People are looking for ways to avoid it
 - Myth *versus* reality?

STATUS:

- Touched on in 2012 WBC Global Conversation: Raw Materials of the Future, with Scott Helstad participating with respect to syrups in brewing

Issues from 2012-2013

4. Phthalates in packaging materials

- Bisphenol-A (BPA) is a key epoxy resin, used in protective coatings inside aluminum and steel cans to maintain the quality of canned food and beverages
- Numerous food safety groups around the world are proposing to limit, or have banned, the use of BPA in food and beverage containers
- Is this an issue for beer?
 - Is there an analytical method for quantification in canned beer?
 - What are the levels?
 - Are the levels of concern?
- What are the alternatives for coatings that do not contain BPA?

STATUS: Monitor

Issues from 2012-2013

5. Gluten-free beer

- Many brewers are looking to produce gluten-free beer for sufferers of Celiac disease, or those wishing to avoid gluten in their diets, by either one of two methods
 - Use alternate grains that do not contain gluten (sorghum, buckwheat, millet, etc.)
 - Reduce gluten levels in malt-based beer either by process adjustments or addition of processing aids
 - i.e. enzymes
- Several brewers are now using malted barley and enzymes to make gluten free beer

- Currently there is no recognized method of analysis for gluten in beer by TTB
- Do we need an ASBC method?
- Proposed in 2011 by Joe Casey, revised and elevated into top-ten in 2012
- ASBC Collaborative study on competitive R5 ELISA methodology started in fall 2012
 - AACC looking at same methodology

STATUS:

- Sub-Committee completed the collaborative study, has recommended acceptance to ASBC Technical Committee, and method is now published in MOA. Gluten workshop held at 2013 Annual Meeting in Tucson.

Issues from 2012-2013

6. Carrageenans

- Cornucopia's report, [*Carrageenan: How a "Natural" Food Additive is Making Us Sick*](#), compiles scientific studies pointing to harm from consuming food-grade carrageenan.
 - “Research links the controversial food ingredient carrageenan to gastrointestinal inflammation, including higher rates of colon cancer, in laboratory animals.”
 - Yet it is still found in many foods, including some certified organic foods.
- Members of the ASBC Emerging Issues Committee investigated

STATUS:

- There is no evidence to support author's conclusions from in vitro studies have any correlation to human ingestion of carrageenan
- FDA rejected author's petition, but publications continue to form the basis for widespread public misstatements of carrageenan risks by the Cornucopia Institute, Wikipedia, and many “public health” advocacy blogs

Issues from 2012-2013

7. FDA and Spent Grain

- Farmers have been procuring and feeding their livestock spent brewing grains for centuries
 - Farmers get low cost whole grain feed packed with fiber, protein
 - Of particular importance to livestock in arid climates - moisture
 - Brewers save millions by not having to landfill spent grains
- Food Safety Modernization Act (FSMA)
- [FSMA Section 116](#) exempts activities at facilities which “relate to the manufacturing, processing, packing, or holding of alcoholic beverages.”
- In a [proposed animal food safety regulation](#), FDA essentially nullifies this statutory exemption and “tentatively concludes” that when brewers or distillers go through the “mashing” process and then offer the by-product to farmers, they suddenly become **food producers**

- The FDA recently proposed that brewers dry and package their used grain before giving it to farmers for use as feed
 - Means to avoid contamination that could endanger both animals and humans
 - Brewers would be forced to throw-away spent grain in the future

STATUS:

- As of April 2014, brewers (and farmers) complained loudly and vigorously, and the FDA apparently heard them
- The FDA has said it will review the proposed rule change and offer a revised proposal in the summer of 2014
- Continue to monitor

Moving Forward

- Solicit membership input and comment at the Brewing Summit in Chicago, June 2104
 - Add new emerging issues to list
- Re-prioritize emerging issues list and actions
 - July 2014
- Provide ASBC Emerging Issues report to ASBC Technical Committee at 2014 fall technical committee meeting for discussion
- Chair ASBC Technical Committee will share ASBC Emerging Issues Committee report with ASBC BOD at fall meeting and discuss

Questions ?
Suggestions ?
Comments ?