From: Maye, John Paul
To: P65Public Comments
Cc: Schwarz, Harald
Subject: NOIL-beta-myrcene
Date: Monday, March 24, 2014 11:01:15 AM

Dear Sir or Madam,

I would like you to not list beta-myrcene to your Porposition 65 List. Hops have been used in the brewing of beer in this country for over 200 years, in Europe for over 400 years and in Germany for nearly 1000 years. Hops are one of the many agricultural spices that naturally contain beta-myrcene. In fact, some hop varieties contain as much as 1% - 2% w/w beta-myrcene. Hops are typically used in extremely low concentrations, about 5 to 10 oz per 100 gallons of beer. However, it's safe to say most beers contain some myrcene, perhaps as little at 1 ppm to as much as 500 ppm depending on how the hops are used.

I read the NTP Technical Report on the Toxicology and Carcinogenesis Study of B-Myrcene in rats. I think it's important to note that at the bottom of page 9 they state: Genetic Toxicology: B-Myrcene did NOT show genotoxicity. Also NO mutagenicity was observed in any of the strains in two independent Ames assays conducted… The AMES results reported in this study are in line with AMES results obtained by the hop industry on variety of hop extracts and hop products. In addition, the Explanation of Levels of Evidence of Carcinogenic Activity sited (Page 12) clearly states on line 4, "Positive results demonstrate that a chemical is carcinogenic for laboratory animals under the conditions of the study and indicate that exposure to the chemical has the potential for hazard to humans." This statement is important because the amount of mycene used in this study, even at its lowest level, 0.25 grams per Kg body weight, is extremely high. That "low" level of myrcene would be equivalent to a 150 pound person consuming 17 grams of myrcene per day. In order to achieve this level of myrcene a person would have to consume 9 gallons of beer containing 500 mg/L myrcene every day. Note: The average American adult consumes 20 gallons of beer per year.

Given the repeated Genetic Toxicology and AMES safety results I think it would be inappropriate to list a natural product like myrcene with a long history of use in the food chain as a potential carcinogen for humans.

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