Conference for Food Protection
2020 Issue Form

Issue: 2020 III-024

Council Recommendation:	Accepted as Submitted	_____	Accepted as Amended	_____	No Action	_____
Delegate Action:	Accepted	_____	Rejected	_____		

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Issue History:

This is a brand new Issue.

Title:

Amend Food Code by removing the flavor enhancers monosodium glutamate

Issue you would like the Conference to consider:

We would like the U.S. Food & Drug Administration (FDA) to amend the most current edition of the Food Code by removing the flavor enhancer monosodium glutamate (MSG) from the list on page 564 of 767 "*Annex 4, Table 2b- Added Chemical Hazard at Retail, Along with their Associated Foods and Control Measures*."

By way of brief background, the *1999 Food Code* published examples of chemical hazards that included naturally occurring chemicals and added chemicals that was adopted from the textbook, *"HACCP Principles and Applications*" (Pierson and Corlett, Ed. 1992, Chapman & Hall, New York, NY). It is our understanding the *1999 Food Code* first mentioned monosodium glutamate as a chemical hazard. Subsequent Food Code publications have revised the table with a list of added chemical hazards and no longer references Pierson and Corlett, 1992; however, the Food Code retains monosodium glutamate as a chemical hazard even given the FDA's extensive review of MSG in the 1990s and its public position affirming the safety of MSG.

According to most current edition of the Food Code, it defines chemical hazards as, *"... naturally occurring or added to foods during processing. At high levels, toxic chemicals may cause acute cases of food borne illness while at low levels may cause chronic illnesses. Per 21 CFR Parts 109, chemical hazards may include poisonous or deleterious substances that are naturally occurring chemicals, and food allergens. In addition, food additives permitted for direct addition to food for human consumption (21 CFR Part 172) may have allowable limits for many of the chemicals added during processing."*

It is important to note that MSG does not fit in the aforementioned definition of 'chemical hazards' categories. Per 21 CFR 182.1, MSG is a safe food ingredient regulated as a Generally Recognized as Safe (GRAS) substance, and the FDA has not set any limitation on its use other than Good Manufacturing Practices (GMPs). In fact, the FDA assigns MSG a GRAS status for its intended use alongside salt, pepper, vinegar, and baking powder.

It is also noteworthy that MSG is the sodium salt of glutamic acid, which is found in many foods that contain protein. In fact, the FDA's "*Questions and Answers on Monosodium Glutamate*" website states, "*MSG occurs naturally in ingredients such as hydrolyzed vegetable protein, autolyzed yeast, hydrolyzed yeast, yeast extract, soy extracts, and protein isolate, as well as in tomatoes and cheeses.*"[2] The human body utilizes and metabolizes MSG in the same way whether it comes from MSG or other dietary sources of protein. Furthermore, on average, an adult in the United States consumes approximately 0.55 grams per day added MSG, significantly lower quantity compared to 13 grams of glutamate consumed each day from protein in the diet.[2]

It is therefore inappropriate and contradictory to include MSG in the list of added chemical hazards in the Food Code because the FDA rightfully recognizes it to be a safe ingredient and has not been shown to elicit any reproducible adverse reactions in people[2]. The inclusion of MSG as a chemical hazard in the Food Code is misleading and could potentially weaken the integrity of the Food Code as a science-based document. In addition, it sends an erroneous message that there is a safety concern with MSG and distracts food service establishments from focusing on real concerns that pose legitimate known chemical hazards to the public. To our knowledge, the FDA has not listed MSG as a chemical hazard in other relevant guidance documents. For example, there is no mention of MSG as a chemical hazard on the FDA's *Fish and Fishery Products Hazards and Control Guidance*[3] or *A Regulator's Manual for Applying HACCP Principles to Risk-based Retail and Food Service Inspections and Evaluating Voluntary Food Safety Management Systems.*[4]

The FDA has investigated the safety of MSG on multiple occasions and concluded it to be a safe food ingredient. In the 1995 report by Life Sciences Research Office (LSRO) commissioned by the FDA, the review concluded, that MSG is safe for the general population[5]. The FDA website re-confirms the LSRO review that in studies with individuals who claim to be sensitive to MSG, when such individuals were given MSG or a placebo, scientists have not been able to consistently trigger adverse reactions. This conclusion is consistent to a double-blind, placebo-controlled with a crossover study design conducted at a multicenter, multiphase institutions at Harvard, Northwestern and the University of California Los Angeles where 130 individuals who claimed sensitivity to MSG following the administration of oral doses of up to 5 grams of MSG with and without food found "neither persistent nor serious effects from MSG ingestion are observed, and the responses were not consistent on retesting."[6]

There is no legitimate scientific evidence to include monosodium glutamate as a 'chemical hazard' in "*Table 2b- Added Chemical Hazard at Retail, Along with their Associated Foods and Control Measures"* in the most current edition of the *Food Code*. The overwhelming scientific evidence proves that monosodium glutamate is a safe food ingredient. We strongly urge the FDA to remove MSG as a chemical hazard from the Food Code because it is misleading and contradicts the agency's own internal documents and other global regulatory bodies' positions that affirm the safety of the ingredient.

Public Health Significance:

Monosodium glutamate is a GRAS affirmed safe ingredient that has been thoroughly evaluated by the FDA, Joint FAO/WHO Expert Committee on Food Additives (JECFA), European Food Safety Authority (EFSA) and other major regulatory bodies. Furthermore,

MSG plays a useful role in reducing dietary sodium intake while at the same time enhancing the flavor of food. MSG contains approximately 12% sodium by weight, which is approximately one-third contained in regular table salt (39%).

Publications by authoritative bodies such as the Institute of Medicine's (IOM) *Strategies to Reduce Sodium Intake in the United States* mention MSG as flavoring techniques to reduce the need for added salt by imparting a savory taste ("umami") as well as a salt taste to food.[7] The *2019 Dietary Reference Intakes (DRI) for Sodium and Potassium* report, explores opportunities that can be applied to reduce sodium intake in the food supply using MSG. The report states that, "*a flavor enhancer to help reduce sodium is free glutamate, used mainly in the form of monosodium glutamate (MSG)*."[8] The statements from these authoritative bodies concurs with studies that have shown monosodium glutamate utility in flavor enhancement and sodium reduction.[9]

Listing MSG as a chemical hazard in the most current edition of the Food Code results in misinformation and confusion among the public at large and those employed in the food service industry, which can prevent them from addressing legitimate chemical hazards that can impact the health of their patrons. MSG is a well-studied, safe ingredient that can play a useful role in dietary sodium intake. Dietary sodium reduction is recommended for reducing hypertension, a major public health concern in the United States. Listing MSG as a chemical hazard in the Food Code threatens the use of this ingredient as a safe, effective way to reduce dietary sodium. Its listing also creates confusion by reinforcing an urban legend based on scientifically unconfirmed safety concerns about MSG when the FDA's publicly available information confirms the ingredient is safe.

Supportive References 1-9 on content document is provided as attachments: 1) References web link on MSG Safety and sodium reduction benefits 2) References on MSG sodium reduction benefits.

Recommended Solution: The Conference recommends...:

The Conference recommends that a letter be send to the FDA requesting that the most recent edition of the Food Code be amended as follows:

"*Annex 4, Table 2b- Added Chemical Hazard at Retail, Along with their Associated Foods and Control Measures*." on page 564 of 767.

Added Chemical Hazard

Associated Foods

Control Measures

~~Flavor enhancers monosodium glutamate (MSG)~~

~~Asian or Latin American Food~~

~~Avoid using excessive amounts~~

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Content Documents:

- "References web link on MSG safety and sodium reduction benifits"

Supporting Attachments:

- "Reference on MSG sodium reduction benifits"

It is the policy of the Conference for Food Protection to not accept Issues that would endorse a brand name or a commercial proprietary process.