



STATE OF MARYLAND

DHMH

Maryland Department of Health and Mental Hygiene
201 W. Preston Street • Baltimore, Maryland 21201

Martin O'Malley, Governor – Anthony G. Brown, Lt. Governor – Joshua M. Sharfstein, M.D., Secretary

December 23, 2013

The Honorable Thomas V. Mike Miller, Jr.
President of the Senate
H-107 State House
Annapolis, MD 21401-1991

The Honorable Michael E. Busch
Speaker of the House
H-101 State House
Annapolis, MD 21401-1991

RE: SB 1026 (Ch. 598 of the Acts of 2013) Department of Health and Mental Hygiene – Study of Honey-Related Licenses and Permits

Dear President Miller and Speaker Busch:

Pursuant to SB 1026 (Ch. 598 of the Acts of 2013), the Department of Health and Mental Hygiene has conducted a study of honey-related licenses and permits. The attached report details this study and provides recommendations to the General Assembly.

If you have questions concerning this report, please contact Ms. Christi Megna, Assistant Director, Office of Governmental Affairs, at (410) 767-6509.

Sincerely,

Joshua M. Sharfstein, M.D.
Secretary

Enclosure

cc: Christi Megna, Esq.
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The Department of Health and Mental Hygiene 2013 Study of Honey-Related Licenses and Permits

A. Background and Introduction

Pursuant to Senate Bill 1026/Chapter 598 of the Acts of 2013, the Department of Health and Mental Hygiene (DHMH) is required to study whether it is necessary to continue to require: (1) a license for the sale of honey and herb mixtures, including flavored honey, at a farmer's market or public festival or event; and (2) an on-farm home processing plant license for a person to manufacture, process and sell honey and herb mixtures, including flavored honey. This report details the findings of this study and provides recommendations that take into consideration current Maryland laws and regulations, corresponding federal regulations, and food safety implications.

Honey is a sweet food made by bees using nectar from flowers. It has a long history of human consumption, and is used in various foods and beverages as a sweetener and for flavoring. Little data exists to suggest that honey has been associated with foodborne illness with the exception of infantile botulism. While data linking honey with foodborne illness is limited, DHMH believes that it is important to consider whether altering honey with dried or liquid flavorings would change the characteristics of honey and create a food that could cause foodborne illness. Allowing flavored honey to be produced without a process review, licensing or inspection is a food safety concern because there are many ingredients and different ways to produce a product that might allow growth of dangerous bacteria and cause human illness.

In Maryland, as well as nationally, a license is required for an individual to make foods for public consumption. Some states, including Maryland, allow an exemption from licensing to sell certain specific foods to the end consumer at certain retail sales locations in limited quantities only. Exempted Foods produced in Maryland must be non-potentially hazardous, meaning they must not need temperature control or specialized processing to control the growth of infectious or toxigenic microorganisms, and carry little risk of causing foodborne illness. For example, under COMAR 10.15.03.27 certain acid fruit jams and jellies, baked goods, and candies may be produced in a home kitchen for sale only at farmer's markets without State licensure.

B. Maryland Honey Regulations

DHMH considers honey to be a raw agricultural product, per COMAR 10.15.03.02. As such, a license to produce, package, and label honey is not required under the provisions of Health-General Article §21-304(d). However, if a honey producer in Maryland adds any food ingredient to honey, or honey is used as an ingredient in another food, the facility would be considered a food processing plant and is required to be licensed and regulated by DHMH under Health-General Article §21-305 and COMAR 10.15.04.

According to Agriculture Article §10-1902 there is a Maryland standard of identity for honey. A product meets the Maryland standard of identity for honey if it does

not contain any substance other than honey. Additionally, Agriculture Article §10-1905 states that if honey contains any additive, it must be distinguished from pure honey and the food additive must be designated. This statute was enacted in 2012 to protect the consumers from misbranded or falsely labeled honey, and to protect the Maryland beekeepers from the economic impact of misbranded honey.

If DHMH receives a complaint that a honey producer within Maryland is adding ingredients to honey without indicating so on the label, DHMH will conduct an investigation of that producer. Similar complaints regarding honey processors outside the State of Maryland are referred to the United States Food and Drug Administration (FDA).

Maryland regulation makes provisions for limited cottage food businesses under COMAR 10.15.03.27. Certain non-potentially hazardous foods may be processed without a license in a home kitchen for retail sale only at a farmer's market, bake sale, or public event. The foods that may be prepared and sold under this regulation include certain acid fruit jams and jellies, baked goods, and candies. Honey mixed with other ingredients is not included as a food that is allowable under this regulation.

Maryland regulation also makes provisions for farmers to process foods grown on their farm into other products in a home kitchen located on the farm, per COMAR 10.15.04.18. Honey and herb mixtures are included in the type of foods that are allowed to be processed in a farm kitchen. However, this type of food production is subject to plan review, licensure and inspection by DHMH.

C. **Findings**

Honey Processing in Other States

DHMH conducted a web-based search and found nine states with regulations related to honey. Of the nine states that had online information about honey regulations, most state's policies have rules that are similar to Maryland with respect to licensing honey processors. However, Florida does allow honey with added herbs or flavorings to be sold without a license. The following provides more details about each state's requirements:

1. Colorado specifies that no license is required for raw unprocessed honey comb only. A license must be obtained for all other honey processes.
2. Washington does not require a license to sell the beekeeper's own unprocessed honey at retail only. A license must be obtained for all other honey processes.
3. Wisconsin does not require a license to process the beekeeper's own honey, but a license is required to process other farmer's honey, if the seller adds anything to the honey, or if more than 25% is sold wholesale.
4. Georgia does not require a license for retail sale of the beekeeper's own honey. All other processors must obtain a license.
5. New York honey processors are exempt from licensure if no additives are used and there is no repackaging of honey from other hives. There is a list of sanitation conditions that must be met.
6. Florida processors can process honey for limited retail sale under their cottage food laws, and flavorings may be added if labeled.

7. South Carolina allows a limited amount of honey to be processed without a license for retail sale only. Processors must file for an exemption to licensure.
8. Virginia allows private homes where the resident processes and prepares a limited amount of honey produced by his own hives and the product must be labeled "PROCESSED AND PREPARED WITHOUT STATE INSPECTION. WARNING: Do Not Feed Honey to Infants Under One Year Old."
9. Oregon permits extractors who have 20 or fewer colonies and extract only their own honey are considered to be hobbyists, and exempt from licensing and inspection requirements if selling the honey retail only with a proper label. An application for exemption must be filed. Any beekeeper with 21 or more colonies of bees who is extracting and selling honey at retail or wholesale is required to be licensed as a food processor, and is subject to inspection by the department.

Federal Regulations

Currently, there are no corresponding federal regulations with regard to honey. However, the 2009 FDA Food Code, developed to establish uniform national standards for food safety in retail food service establishments states in Section 3-201.11 that "Food prepared in a private home may not be used or offered for consumption in a food establishment".

Safety

Pure honey can be stored indefinitely without spoiling because it is acidic and the high sugar content means it contains very little free water to support the growth of microorganisms. However, honey can contain spores of *Clostridium botulinum* (*C. botulinum*). These spores remain dormant unless they can germinate under certain storage conditions.¹ If this occurs, the bacteria are able to produce a very potent neurotoxin that can be deadly to humans.

C. botulinum and its spores are widely distributed in nature. They occur in soil, bottom sediments of streams, lakes, and coastal waters, and in the intestinal tracts of fish and mammals, and in the gills and viscera of crabs and other shellfish.² Spores are heat-resistant and can survive in foods that are incorrectly or minimally processed. Foodborne botulism (as distinct from wound botulism and infant botulism) is a severe type of food poisoning caused by the ingestion of foods containing the neurotoxin formed during growth of the organism. The incidence of the disease is low, but is of considerable concern because of its high mortality rate if not treated immediately and properly.

Most of the foodborne outbreaks that are reported annually due to *C. botulinum* in the United States are associated with inadequately processed, home-canned foods, but occasionally commercially produced foods have been involved in outbreaks. Sausages, meat products, canned vegetables and seafood products are the most frequent vehicles for human botulism. Other foods have been associated with botulism include baked potatoes and garlic in oil. Any food that is conducive to outgrowth of bacteria and toxin production and allows spore survival when processed can be associated with botulism if it is not properly heated before consumption. Almost any type of food that is not very

¹ <http://www.cdc.gov/nczved/divisions/dfbmd/diseases/botulism/#germ> (Accessed 11/8/13)

² Bad Bug Book (1st Edition) Foodborne Pathogenic Microorganisms and Natural Toxins Handbook. U.S. Food and Drug Administration, 2004.

acidic (pH above 4.6) can support bacteria growth and toxin production by *C. botulinum*. Toxin produced by *C. botulinum* has been found in a considerable variety of foods, such as canned corn, peppers, green beans, soups, beets, asparagus, mushrooms, ripe olives, spinach, tuna fish, chicken and chicken livers and liver pate, and luncheon meats, ham, sausage, stuffed eggplant, lobster, and smoked and salted fish. Botulinum toxin can be produced in the intestinal tracts of infants if pure honey is consumed.³ Therefore, honey is not recommended for infants under one year of age.

Minimal data exists on the potential changes in pH or water activity that may occur with various additives in honey. Therefore, it is unclear how different herbs or flavorings would change the pH level or water activity of honey and alter the characteristics that make it a low risk food that is resistant to bacterial growth. To minimize risk, each recipe, additive or flavoring, and processing method should be evaluated to assure safety of the finished product.

D. Recommendation

Pure honey, that does not contain additives, has been demonstrated to be a food with minimal risk of causing human food poisoning, with the exception of infants and immune compromised individuals. DHMH recommends continuing to require a license for the manufacture of honey products because ingredients added to honey may cause a change to the nature of pure honey that would render it potentially hazardous. This recommendation is also similar to the requirements of many other states' programs.

³ Bad Bug Book (Second Edition) Foodborne Pathogenic Microorganisms and Natural Toxins Handbook. U.S. Food and Drug Administration, 2012.