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Sequence Number: 03-18-15
 Rule ID(s): 5897
 File Date: 3/24/15
 Effective Date: 6/22/15

Rulemaking Hearing Rule(s) Filing Form

Rulemaking Hearing Rules are rules filed after and as a result of a rulemaking hearing (Tenn. Code Ann. § 4-5-205).

Pursuant to Tenn. Code Ann. § 4-5-229, any new fee or fee increase promulgated by state agency rule shall take effect on July 1, following the expiration of the ninety (90) day period as provided in § 4-5-207. This section shall not apply to rules that implement new fees or fee increases that are promulgated as emergency rules pursuant to § 4-5-208(a) and to subsequent rules that make permanent such emergency rules, as amended during the rulemaking process. In addition, this section shall not apply to state agencies that did not, during the preceding two (2) fiscal years, collect fees in an amount sufficient to pay the cost of operating the board, commission or entity in accordance with § 4-29-121(b).

Agency/Board/Commission:	Department of Agriculture
Division:	Division of consumer & Industry Services
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Revision Type (check all that apply):

- Amendment
 New
 Repeal

Rule(s) Revised (ALL chapters and rules contained in filing must be listed here. If needed, copy and paste additional tables to accommodate multiple chapters. Please enter only ONE Rule Number/Rule Title per row)

Chapter Number	Chapter Title
0080-04-12	Standard of Identity - Honey
Rule Number	Rule Title
0080-04-12-.01	Purpose
0080-04-12-.02	Definitions
0080-04-12-.03	Essential Composition and Quality Factors
0080-04-12-.04	Labeling

Chapter Number	Chapter Title
Rule Number	Rule Title

Chapter 0080-04-12
Standard of Identity – Honey

0080-04-12-.01 Purpose

This standard applies to all honey produced by honey bees from nectar and covers all styles of honey presentation that are processed and ultimately intended for direct consumption and to all honey packed, processed or intended for sale in bulk containers as honey, that may be repacked for retail sale or for sale or use as an ingredient in other foods.

Authority: T. C. A. § 53-1-205

0080-04-12-.02 Definitions

- (1) "Honey" means the natural food product resulting from the harvest of nectar by honeybees and the natural activities of the honeybees in processing nectar. It consists essentially of different sugars, predominantly fructose and glucose as well as other substances such as organic acids, enzymes and solid particles derived from honey collection. The color of honey can vary from nearly colorless to dark brown. The consistency can be fluid, viscous or partially to completely crystallized. The flavor and aroma vary, but are derived from the plant's origin.
- (2) "Blossom Honey" or "Nectar Honey" is the honey which comes from nectars of plants.
- (3) "Honeydew Honey" is the honey which comes mainly from excretions of plant sucking insects (Hemiptera) on the living parts of plants or secretions of living parts of plants.

Authority: T. C. A. § 53-1-205

0080-04-12-.03 Essential Composition and Quality Factors

- (1) A product sold or offered for sale as honey shall not have added to it any food additives, as defined in T.C.A. § 53-1-102(15), nor shall any other additions be made other than honey. It shall not have begun to ferment or effervesce and no pollen or constituent unique to honey may be removed except where unavoidable in the removal of foreign matter. Honey shall not be heated or processed to such an extent that its essential composition is changed or its quality is impaired. Chemical or biochemical treatments shall not be used to influence honey crystallization.
- (2) Moisture Content – No water may be added to honey in the course of extraction or packing for sale or resale as honey. Honey shall not have a moisture content exceeding 20%.
- (3) Sugars Content.
 - (a) The ratio of fructose to glucose shall be greater than 0.9.
 - (b) Fructose and Glucose (Sum of Both) shall not be less than 60g/100g.
 - (c) The Maltose content shall not exceed 10%.
 - (d) The sucrose content shall not be more than 5g/100g with the following exceptions:
 1. Alfalfa (*Medicago sativa*), Citrus spp., False Acacia (*Robinia pseudoacacia*), French Honeysuckle (*Hedysarum*), Menzies Banksia (*Banksia menziesii*), Red Gum (*Eucalyptus camaldulensis*), Leatherwood (*Eucryphia lucida*), *Eucryphia milligani* – not more than 10g/100g.

2. Lavender (*Lavandula* spp) and Borage (*Borago officinalis*) – not more than 15g/100g.

- (e) There shall be no oligosaccharides indicative of invert syrup.
- (4) The absolute value of Carbon Stable Isotope Ratio Analysis (CSIRA) shall be more negative than -20.0.
- (5) CSIRA Internal Standard Procedure with a protein value minus honey value shall not be more negative than -1.0.

Authority: T. C. A. § 53-1-205

0080-04-12-.04 Labeling

- (1) Products conforming to the standard of identity as adopted in this rule shall be designated "honey". Foods containing honey and any flavoring, spice or other added ingredient or if honey is processed in such a way that a modification to honey occurs that materially changes the flavor, color, viscosity or other material characteristics of pure honey, then such foods shall be distinguished in the food name from honey by declaration of the food additive or modification.
- (2) Honey may be designated according to floral or plant source if it comes predominately from that particular source and has the organoleptic, physicochemical and microscopic properties corresponding with that origin.
- (3) Where honey has been designated according to floral or plant source paragraph (2), then the common name or the botanical name of the floral source shall be used in conjunction with or joined with the word "honey".
- (4) Honey may be designated by the name of the geographical or topographical region if the honey was produced exclusively within the area referred to in the designation.
- (5) The styles of honey identified in subparagraphs (6)(b) and (c) shall be declared on packaging labeling as "Comb Honey", "Cut Comb in Honey", "Honey with Comb" or "Chunk Honey" as appropriate.
- (6) Honey may be designated according to the following styles:
 - (a) "Honey" which is honey in liquid or crystalline state or a mixture of the two;
 - (b) "Comb Honey" which is honey stored by bees in the cells of freshly built broodless combs and which is sold in sealed whole combs or sections of such combs;
 - (c) "Cut Comb in Honey", "Honey with Comb" or "Chunk Honey" which is honey containing one or more pieces of comb honey.

Authority: T. C. A. § 53-1-205

* If a roll-call vote was necessary, the vote by the Agency on these rulemaking hearing rules was as follows:

Board Member	Aye	No	Abstain	Absent	Signature (if required)

I certify that this is an accurate and complete copy of rulemaking hearing rules, lawfully promulgated and adopted by the Commissioner (board/commission/ other authority) on 02/18/2015 (mm/dd/yyyy), and is in compliance with the provisions of T.C.A. § 4-5-222.

I further certify the following:

Notice of Rulemaking Hearing filed with the Department of State on: 09/23/2014

Rulemaking Hearing(s) Conducted on: (add more dates), 11/17/2014

Date: Feb. 18, 2015

Signature: Julius T. Johnson

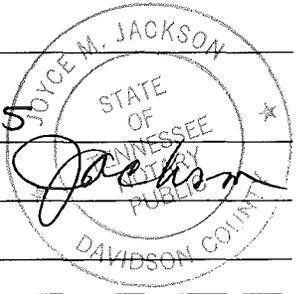
Name of Officer: Julius T. Johnson

Title of Officer: Commissioner

Subscribed and sworn to before me on: 02/18/2015

Notary Public Signature: Joyce M. Jackson

My commission expires on: 09/11/2017



All rulemaking hearing rules provided for herein have been examined by the Attorney General and Reporter of the State of Tennessee and are approved as to legality pursuant to the provisions of the Administrative Procedures Act, Tennessee Code Annotated, Title 4, Chapter 5.

Herbert H. Slatery III

Herbert H. Slatery III
Attorney General and Reporter

3/20/2015
Date

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Filed with the Department of State on: 3/24/15

Effective on: 6/22/15

Tre Hargett

Tre Hargett
Secretary of State

Public Hearing Comments

The Department of Agriculture held a public hearing on November 17, 2014. Oral comments received during the hearing and written comments from constituents are summarized below along with the Department's response.

Comment:

Mr. Richard Brickner indicated that he was in favor of a standard of identity for honey but submitted his concern that the standard as written does not indicate how it will be applied or how it will affect various stakeholders and producers of honey. He also set forth his concerns that the standard would grow in scope and that some keepers would not be able to pay for required testing.

Response:

The Department appreciates Mr. Brickner's support. The Department strives to promulgate regulations that are minimalistic in carrying the Department's programs and that are the least burdensome to the Tennessee public.

This standard will be applied through the Tennessee Food, Drug and Cosmetic Act and the Department's manufactured food sampling protocols for regulatory enforcement, applicable to constituents who engage in the production and/or wholesale or retail sale of honey. Products that violate the standard of identity will be considered adulterated or misbranded. Under these protocols private citizens will not be required to pay for sample testing, nor will samples submitted by private citizens be accepted by the Department for testing.

Comment:

Mr. George Martin offered his support for the standard of honey.

Response:

The Department appreciates Mr. Martin's support for this rule.

Comment:

Mr. Jim Primus offered his support of Mr. Brickner's comments above. Mr. Primus also submitted his concern that the standard is vague in its requirement that honey not be heated or processed to an extent that its essential compound composition is changed. Mr. Primus suggested that heating be allowed to specific temperature limits.

Response:

The Department makes the same response as noted above for Mr. Brickner's comments.

Regarding specific temperature limits for heating honey, the Department's prime concern for this issue is to ensure that no valuable constituent is omitted or abstracted from honey such that it would be deemed adulterated. Prolonged exposure of honey to temperatures as low as 106 degrees Fahrenheit can degrade valuable constituents through accumulation of hydroxymethylfurfural and reduction of volatile compounds and enzyme activities. Conversely, flash heating of honey to temperatures as high as 160 degrees can be useful to kill yeast spores and slow granulation without impairing or changing the quality of the honey. This relationship between the temperature and duration of heat to which honey is exposed makes difficult an exact designation of temperature to which honey may be exposed without omitting its valuable constituents. The matter is made more difficult where different types of honey react differently to the same heat exposure.

Ultimately, the Department is unaware of any national or international organization that has designated an exact temperature to which honey may be heated and finds that the language in this rule—that honey "not be heated or processed to such an extent that its essential composition is changed or its quality is impaired"—is best suited to ensure the authenticity of honey.

Comment:

Mr. Howard Kerr from Maryville, Tennessee inquired as to the impetus of the Department in promulgating this SS-7039 (November 2014)

standard of identity for honey. Mr. Kerr submitted his primary concern that this standard be drafted to stop manufacturers from mixing corn syrup with honey and selling the mix as honey. To that end, Mr. Kerr stated both support for the standard and various concerns as follow.

Mr. Kerr stated his concern that the standard as written focuses primarily on floral sources that originate in Florida and southern Georgia and not in Tennessee. Mr. Kerr would like the standard to address a standard for honey from Tennessee floral sources. Mr. Kerr also stated a concern if the standard regulates the mixing of two or more flavors of honey.

Mr. Kerr set forth his concern regarding the standard's essential composition requirement that honey not have begun to ferment or effervesce. Mr. Kerr maintains that honey with a high water content, e.g. above 18% moisture, may ferment but that the honey can be warmed to kill the yeast and not change the essential nature of the honey. Nonetheless, he also noted his concurrence that this fermentation is rare in honey below 18% moisture and his support for requiring honey's essential composition to be below 18% moisture, as opposed to the standard's requirement of less than 20% moisture.

Like Mr. Primus, Mr. Kerr suggested that the standard's requirement that honey not be heated so as to change its essential composition be prescribed by an exact temperature regulation.

Mr. Kerr submitted a concern with the standard's requirement that no pollen or constituent unique to honey may be removed except where unavoidable in the removal of foreign matter. Mr. Kerr maintained that producers often remove pollen as a source of nucleation and that disallowing pollen's removal will subject those producers to greater granulation of their product prior to sale.

Mr. Kerr suggested that the standard not require label designations for different flavors of honey.

Mr. Kerr suggests addition of "cream honey" as a style of honey.

Mr. Kerr would like explanation of the process for submitting samples of retail honey for testing, including the tests the sample will undergo, the costs of that testing, and identification of the parties responsible for payment of the testing.

Response:

The Department's prime impetus for this rule, consistent with Tenn. Code Ann. §53-1-205, is to promulgate a standard of identity for honey that will promote honesty and fair dealing in the interest of consumers.

Regarding the rule's inclusion of floral sources that originate in Florida and Georgia, this standard is meant to define honey generally and not honey that is produced exclusively from Tennessee floral sources. Additionally, as far as the Department is aware, all Tennessee Varietal honeys fall within the normal standard definition of honey as stated in the rule. The rule does not regulate the mixing of two or more authentic honeys, so long as the mixed product is otherwise honey as defined in the rule.

Regarding fermentation of honey, once fermentation begins, ethanol and carbon dioxide is formed, and the product becomes MEAD and is not suitable for use as table honey. The ethanol in the presence of oxygen may form acetic acid and water, resulting in a sour taste. Fermented honey can sometimes be reclaimed by heating it up to 150 degrees Fahrenheit for a short time. However, heating the honey in this manner typically only stops the fermentation and evaporates some of the off-flavor. Flash heating will not reverse the process of fermentation, and consequently it is not recommended for honey that is to be sold as authentic honey. Flash heating can be used earlier in production to kill yeasts so that the honey does not ferment, but this process must be carefully controlled so as not to change the honey's essential composition or impair its quality, as discussed above.

Regarding the 20% moisture standard in the rule, the Department is aware of moisture's correlation with fermentation of honey and appreciates Mr. Kerr's concern for limiting instances where honey may ferment. However, the 20% moisture standard promulgated by the Department is already more restrictive than other accepted honey standards. Ultimately, moisture content of honey is directly related to variables of temperature and humidity and their effects on the bee hive. A 20% moisture content standard is best suited to allow a margin for these variables' effects and not to constrain industry production of honey while also balancing concerns for fermentation and the production of authentic honey.

Regarding specific temperature limits for heating honey, the Department makes the same response as noted previously.

Regarding pollen removal, the Tennessee Food, Drug, and Cosmetic Act provides that “[f]ood shall be deemed to be adulterated if any valuable constituent has been, in whole or in part, omitted or abstracted from the food.” Pollen is a valuable nutritional component of honey and is expected by the consumer to be present. International standards for honey concur. Therefore, the rule’s prohibition against removing pollen from honey—absent its removal as an unavoidable consequence in the removal of foreign matter—is appropriate.

Regarding label requirements for flavors of honey, under the rule flavored honey—i.e. honey to which a flavoring or spice other than honey has been added—must be designated as such in the food name of the product. This rule is necessary to guard against products other than authentic honey being sold to Tennessee consumers as simply “honey.”

Regarding “cream honey” as a proposed style of honey, creamed honey is a form of very fine crystalline honey and is covered under the rule as stated—“Honey’ which is honey in liquid or crystalline state or a mixture of the two.” Therefore, creamed honey can be labeled and sold as “honey.” However, if flavorings are added, ingredients must be designated in the food name as discussed above and listed on the label as with any food product with more than one ingredient.

Regarding the process of submitting samples and testing protocols, the Department makes the same response as noted previously.

Regulatory Flexibility Addendum

Pursuant to T.C.A. §§ 4-5-401 through 4-5-404, prior to initiating the rule making process as described in T.C.A. § 4-5-202(a)(3) and T.C.A. § 4-5-202(a), all agencies shall conduct a review of whether a proposed rule or rule affects small businesses.

- (1) Type or types of small business subject to the proposed rule that would bear the cost of and/or directly benefit from the proposed rule:

Beekeepers who wish to produce honey and businesses that wish to process, wholesale, and/or retail honey will be affected by these rules, but will not bear the cost of compliance testing under the rule.

- (2) Identification and estimate of the number of small businesses subject to the proposed rule:

Approximately 30 honey manufacturers and 3,850 beekeepers are registered with the Department and/or have certified facilities in Tennessee.

- (3) Projected reporting, recordkeeping and other administrative costs required for compliance with the proposed rule, including the type of professional skills necessary for preparation of the report or record:

Reporting, recordkeeping, and other administrative costs of small businesses are unaffected by this rule inasmuch as the rule does not alter or duplicate those reporting or recordkeeping requirements otherwise applicable under other food safety laws.

- (4) Statement of the probable effect on impacted small businesses and consumers:

This rule is intended to clarify a standard of identity for authentic honey purchased in Tennessee. It is intended that greater clarity on what constitutes authentic honey will lend to greater consumer understanding and confidence in honey and honey products they purchase in Tennessee. Businesses will be impacted by associated costs to ensure that “honey” they sell complies with this standard or is properly labeled as a honey product, e.g. a flavored honey.

- (5) Description of any less burdensome, less intrusive or less costly alternative methods of achieving the purpose and/or objectives of the proposed rule that may exist, and to what extent such alternative means might be less burdensome to small business:

Less burdensome regulations for a standard of identity for honey are not possible because of the number of different varieties of honey and their unique compound compositions.

(6) Comparison of the proposed rule with any federal or state counterparts:

This rule is consistent with the authority of Tenn. Code Ann. §53-1-205, to promulgate standards of identity for food that promote honesty and fair dealing in the interest of consumers—in this case, that honey labeled and purchased as “honey” is actually authentic honey. It is also consistent with the Tennessee Food, Drug and Cosmetic Act, Tenn. Code Ann. §53-1-104, that deems adulterated any food product where a valuable constituent has been omitted from the food, any substance has been substituted for the food, or any substance has been added to the food so as to increase its bulk or weight or to reduce its quality.

Each of these state counterparts is consistent with the federal Food, Drug and Cosmetic Act, at 21 U.S.C.A. §§ 341, 342.

(7) Analysis of the effect of the possible exemption of small businesses from all or any part of the requirements contained in the proposed rule.

Exemption of small businesses from the requirements of this rule would compromise honesty and fair dealing in the interest of consumers in that labeling requirements for the same product would be inconsistent across Tennessee commerce.

Impact on Local Governments

Pursuant to T.C.A. §§ 4-5-220 and 4-5-228 “any rule proposed to be promulgated shall state in a simple declarative sentence, without additional comments on the merits of the policy of the rules or regulation, whether the rule or regulation may have a projected impact on local governments.” (See Public Chapter Number 1070 (<http://state.tn.us/sos/acts/106/pub/pc1070.pdf>) of the 2010 Session of the General Assembly)

There will be no expected impact on local governments.

Additional Information Required by Joint Government Operations Committee

All agencies, upon filing a rule, must also submit the following pursuant to T.C.A. § 4-5-226(i)(1).

- (A) A brief summary of the rule and a description of all relevant changes in previous regulations effectuated by such rule;

This is the first standard of identity for honey. Legislation regarding honey, previously codified at Title 53, Chapter 15 of the Tennessee Code, was repealed effective July 1, 2014.

- (B) A citation to and brief description of any federal law or regulation or any state law or regulation mandating promulgation of such rule or establishing guidelines relevant thereto;

Tenn. Code Ann. §53-1-205 authorizes the Department to promulgate standards of identity for food that promote honesty and fair dealing in the interest of consumers.

- (C) Identification of persons, organizations, corporations or governmental entities most directly affected by this rule, and whether those persons, organizations, corporations or governmental entities urge adoption or rejection of this rule;

Beekeepers and honey producers support adoption of this rule.

- (D) Identification of any opinions of the attorney general and reporter or any judicial ruling that directly relates to the rule;

is based. An agency shall not state that the fiscal impact is minimal if the fiscal impact is more than two percent (2%) of the agency's annual budget or five hundred thousand dollars (\$500,000), whichever is less;

No fees are associated with this rule. Only financial impact of the rule is that which would result from civil penalties issued in enforcement of the regulation.

- (F) Identification of the appropriate agency representative or representatives, possessing substantial knowledge and understanding of the rule;

Randy Jennings, Director of Operations, and Mike Studer, State Apiarist, Tennessee Department of Agriculture, Consumer and Industry Services Division

- (G) Identification of the appropriate agency representative or representatives who will explain the rule at a scheduled meeting of the committees;

Randy Jennings, Director of Operations, Tennessee Department of Agriculture, Consumer and Industry Services Division

- (H) Office address, telephone number, and email address of the agency representative or representatives who will explain the rule at a scheduled meeting of the committees; and

440 Hogan Road, Nashville, Tennessee 37220; (615) 837-5327; randy.jennings@tn.gov; mike.studer@tn.gov

- (I) Any additional information relevant to the rule proposed for continuation that the committee requests.