Joint Committee Issue Paper

NSF Standard(s) Impacted: NSF/ANSI 173

Background:

Provide a brief background statement indicating the cause and nature of concern, the impacts identified relevant to public health, public understanding, etc, and any other reason why the issue should be considered by the Committee. Reference as appropriate any specific section(s) of the standard(s) that are related to the issue.

Background:

This issue paper has been prepared by the NSF International Toxicology Services department to document an addition to NSF/ANSI 173 (2018).

Following international usage of hemp derived ingredients in consumer products (e.g. Canada), the passage of the Farm Bill (2018) and the U.S. FDA no objection GRAS dossiers (765, 771 and 778) the NSF International Toxicology Services department convened a hemp task group. The purpose of this task group was to discuss developing and adding hemp specific criteria to NSF/ANSI 173. This issue paper submission demonstrates the commitment of NSF International to add hemp based criteria to NSF/ANSI 173 through collaboration with our Joint Committee.

A list of additions for the definitions section are outlined below. These definitions clarify terms used in the hemp specific criteria sections and were generated in consultation with the hemp task group.

Section 5.3.6 has been updated to address adulterants in hemp and hemp derived ingredients. It is the intent of the update of this section to require that hemp and hemp derived ingredients are evaluated for known adulterants, including artificial cannabinoids. The hemp task group considered that a list of specific adulterants and artificial cannabinoids should be provided if the list was complete. Given that the list of artificial cannabinoids is continuously evolving it was not feasible to provide a comprehensive list of chemicals to be analyzed. The hemp task group agreed that to be consistent with the standard a general statement regarding adulterants and artificial cannabinoids was most appropriate.

Section 5.7 has been added to provide criteria for hemp and/or hemp derived ingredients. It is the intent of this section to mandate that all dietary ingredients and finished products containing hemp and/or hemp derived ingredients have the THC content tested and verified at no more than 0.3% on a dry weight basis.

Please see the recommendations section for the addition of definitions, criteria for hemp-specific adulterants and criteria for hemp and/or hemp derived ingredients.

These additions will have no negative impact on public health.

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Recommendation:
Clearly state what action is needed: e.g., recommended changes to the standard(s) including the current text of the relevant section(s) indicating deletions by use of ~~strike-out~~ and additions by highlighting or underlining; e.g., reference of the issue to a Task Group for detailed consideration; etc.

3.X Definitions

cannabinoids: Typically, C_{21} or C_{22} (for the carboxylated derivatives) terpenophenolic compounds, their carboxylic acids, analogs and transformation products that bind to cannabinoid receptors, and endo- and artificial compounds that do the same.

nature identical cannabinoids: synthesized or isolated cannabinoids identical to phytocannabinoids or endocannabinoids with respect to structure and stereochemistry.

phytocannabinoids: cannabinoids typical of and present in *Cannabis* species. For the purposes of this standard, phytocannabinoids includes only cannabinoid compounds produced by *Cannabis sativa* L.

synthesized cannabinoids: compounds ~~solely~~ synthesized in the laboratory or industrial plant.

artificial cannabinoids: synthesized compounds not found in nature and that act by biological mechanisms similar to phytocannabinoids or endocannabinoids, e.g. K2 and Spice.

chemovar: a chemically distinct cultivar.

cultivar: a cultivated variety, often referred to as a strain.

endocannabinoids: neurotransmitters produced in the human body that bind to cannabinoid receptors.

hemp: the *Cannabis sativa* L. plant with a THC concentration of not more than 0.3% on a dry weight basis that is the source of hemp plant parts. It is used to manufacture hemp ingredients and products. It is also the source material for cannabinoids and cannabinoid derivatives, other than synthesized cannabinoids. Hemp is distinguished from drug-type *Cannabis* chemovars which contain THC concentrations above 0.3%.

hemp-derived ingredients: ingredients that are from the source material hemp. This includes phytocannabinoids and phytocannabinoid derivatives.

identical compounds: compounds with the same bonding between atoms and their orientation in space, i.e. the same structure and stereochemistry.

THC: delta-9-tetrahydrocannabinol.

THCA: delta-9-tetrahydrocannabinolic acid.

5.3.6 Known adulterants

Products shall be evaluated to ensure that they do not contain known adulterants including, but not limited to, the following:

- *Eleutherococcus senticosus* shall not contain *Periploca sepium*;
- *Plantago lanceolate* shall not contain *Digitalis lanata*; ~~and~~
- *Scutellaria lateriflora* shall not contain *Teucrium chamaedrys*; and
- *Cannabis sativa* (hemp) derived materials shall not contain artificial cannabinoids.

5.7 Hemp and/or hemp derived ingredients

Dietary ingredients and finished products containing hemp, hemp plant parts and/or hemp derived ingredients shall have the THC content tested and verified at not more than 0.3% on a dry weight basis. The determination of the THC concentration must take into account the potential to convert THCA into THC.

Supplementary Materials (photographs, diagrams, reports, etc.):
If not provided electronically, the submitter will be responsible to have sufficient copies to distribute to committee members.

- Farm Bill
- GRAS 765, 771, 778

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Is this a revision of a previous Issue Paper (if yes put original issue number):_____
Submission Date: _____

Please submit to: Joint Committee Secretariat, Rachel Brooker at rbrooker@nsf.org or to standards@nsf.org

**Type written name will suffice as signature*