TO: Joint Committee on Dietary Supplements
FROM: Brian Zamora, Chair of the Joint Committee
DATE: June 30, 2020
SUBJECT: Proposed revision to NSF/ANSI 173 – Dietary Supplements (173i68r2)

Revision 1 of NSF/ANSI 173, issue 68 is being forwarded to the Joint Committee for consideration. Please review the proposal and submit your ballot by July 21, 2020 via the NSF Online Workspace <www.standards.nsf.org>.

When adding comments, please use the comment file in the referenced items section and include the section number applicable your comment and well as a proposed solution.

Purpose
The proposed revision is intended to clarify the requirements of Section 6.1.1 for identification test methods for botanicals, as the selection of appropriate methods is highly dependent on the type of sample being identified.

Background
The dietary supplement industry is currently undertaking several voluntary initiatives to bring attention to the importance of supply chain management and the proper identification of botanical species used to product ingredients for these products. This topic extends to the appropriateness of the analytical techniques used to make the botanical identification.

This proposal is intended to clarify the requirements of Section 6.1.1 for identification test methods for botanicals, as the selection of appropriate methods is highly dependent on the type of sample being identified.

If you have any questions about the technical content of the ballot, you may contact me in care of:

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Chair, Joint Committee on Dietary Supplements
c/o Rachel Brooker
Joint Committee Secretariat
NSF International
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2 Normative references

The following documents contain provisions that, through reference in this text, constitute provisions of this Standard. At the time this Standard was written, the editions indicated were valid. All documents are subject to revision, and parties are encouraged to investigate the possibility of applying the most recent edition of the document indicated below.

- AHPA, Organoleptic Analysis of Herbal Ingredients
- International Code of Botanical Nomenclature (Vienna Code), 2006
- NTIS/IEC 17025:1999, General requirements for the competence of testing and calibration laboratories

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1 American Herbal Products Association. 8630 Fenton St., Suite 918, Silver Spring, MD 20910. <www.ahpa.org>
2 AOAC International. 2275 Research Boulevard, Suite 300, Rockville, MD 20850-3250. <www.aoac.org>
5 National Technical Information Service. 5301 Shawnee Road, Alexandria VA 22312. <www.ntis.gov>
6 Test methods used by testing laboratories for identification and quantification of ingredients – Dietary ingredients and finished products

6.1 Identification test methods

6.1.1 Botanicals

The identity of botanical dietary ingredients and components shall be verified with one or more tests or examinations in accordance with the most appropriate analytical method(s) as described in Sections 6.1.1.1 through 6.1.1.4. The selected test(s) or examination(s) shall be performed by an appropriately qualified individual using documented procedures and shall be scientifically valid and fit for the purpose of analysis of the specific sample type being tested. The qualified individual in each case shall identify and record reference(s) and in-house procedures used.

6.1.1.1 Macroscopic and organoleptic / sensory evaluation

Morphological test methods

The identity of botanical dietary ingredients shall be evaluated by an appropriately qualified individual based on the information contained in applicable monographs (AHP, BHP, USP and other compendial references). When no applicable monograph exists, the qualified individual shall confirm identity according to documented procedures and scientific references. Morphological test methods verify conformity to identity specifications of non-extract botanical dietary ingredients and components (whole plants, plant parts, or cut forms) by visual examination of morphological features. Scientifically valid and fit for purpose approaches include comparison to authentic reference materials (see ISO/TR 79:2015), official compendia, or other appropriate references, including botanical or pharmacognosy literature.

6.1.1.2 Microscopic test methods

The identity of non-extract botanical ingredients shall be evaluated by an appropriately qualified individual based on the information contained in applicable monographs (AHP, BHP, USP and other compendial references). When no applicable monograph exists, the qualified individual shall confirm identity according to documented procedures and scientific references. Microscopic test methods verify conformity to identity specifications of non-extract botanical dietary ingredients and components (whole plants, plant parts, cut or powdered forms) by examination of microscopic and/or microchemical features. Scientifically valid and fit for purpose approaches include comparison to authentic reference materials (see ISO/TR 79:2015), official compendia, or other appropriate references, such as pharmacognosy literature.

6.1.1.3 Sensory methods

Sensory evaluations\textsuperscript{6} verify conformity to identity specifications of botanical dietary ingredients and components in any form by examination of sensory characteristics such as appearance, aroma, and flavor / taste. These methods are highly dependent on individual training, experience, and sensory sensitivity. Guidance on their use, such as AHPA’s \textit{Organoleptic Analysis of Herbal Ingredients}, can be consulted. The qualifications of each individual using sensory evaluations shall be documented.

\textsuperscript{6} Also known as organoleptic analysis.
6.1.1.34 Chemical test methods

The identity of dietary ingredients shall be evaluated using methods that are scientifically valid and suitable for the intended purpose. Sources for methods should include AOAC International6, AHP4, USP17, and other method sources. Modification of an existing method to better suit the sample under test is allowable. If no appropriate method exists, development of a new method is allowable. The use of any modified or new method shall require that an assessment be performed which includes evaluation of the method specificity. Chemical test methods verify conformity to identity specifications of botanical dietary ingredients and components (all forms) by examination using analytical methods including but not limited to spectroscopic, spectrometric, chromatographic, and genomic tests. Methods and approaches used shall be scientifically valid and fit for purpose. Performance of all methods used must be verified and that verification documented.