TO: Joint Committee on Drinking Water Additives – Treatment Chemicals

FROM: France Lemieux, Chair of the Joint Committee

DATE: February 23, 2024

SUBJECT: Proposed revision to NSF/ANSI/CAN 60: Drinking Water Treatment Chemicals – Health Effects (60i100r1)

Revision 1 of NSF/ANSI/CAN 60, issue 100 is being forwarded to the Joint Committee for consideration. Please review the proposal and **submit your ballot by March 15, 2024** via the NSF Online Workspace <https://standards.nsf.org/home>.

Please review all ballot materials. When adding comments, please include the section number applicable to your comment and add all comments under one comment number whenever possible. If you need additional space, please use the attached blank comment template in the reference documents and upload online via the browse function.

Purpose

The proposed revision will update language in Section N-1.3.1.2 – Reagent Water regarding trace organic contaminants that may be present in reagent water.

Background

At the 2023 annual meeting of the Joint Committee on Drinking Water Additives – Treatment Chemicals it was brought to the group's attention that that NSF 60 currently requires that reagent water not contain any analytes of interest at concentrations that exceed half the designated analytical report limit of a given analyte. The technologies listed in N-1.3.1.2, however, are not consistent in reducing all contaminants. In particular, it can be difficult to reduce some organic compounds below their analytical reporting limit, even when TOC is less than 100 ug/L. However, application of TOC destructive UV (185 nm) following the described treatment processes is an effective method for testing laboratories to further control organic compounds. This treatment process has been allowed for reagent water under NSF 61, and it is recommended to be extended to NSF 60.

It was recommended that updated language be added to Section N-1.3.1.2 – Reagent Water in order to allow testing laboratories to determine whether trace amounts of a given contaminant present in the reagent water are acceptable or not depending on the potential to impact pass/fail evaluation of a product.

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

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[Note – the recommended changes to the standard which include the current text of the relevant section(s) indicate deletions by use of ~~strikeout~~ and additions by grey highlighting. Rationale Statements are in *italics* and only used to add clarity; these statements will NOT be in the finished publication.]

NSF/ANSI/CAN Standard
for Drinking Water Additives –

Drinking Water Treatment Chemicals – Health Effects

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Normative Annex 1
(previously Annex B)

Sampling, preparation, and analysis of samples

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N-1.3 Preparation of samples

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N-1.3.1 General

Acid-washed glassware and equipment, organic-free deionized water for dilutions, trace metals grade acids, and reagent blanks, shall be used in all preparation methods referenced in this section.

N-1.3.1.1 Reagent blank

A reagent blank shall be prepared using the same reagents and in the same manner as a product sample, but no product sample shall be added.

N-1.3.1.2 Reagent water

All test samples shall be prepared using a reagent water produced through one or more of the following treatment processes: distillation, reverse osmosis, ion exchange, or other equivalent treatment processes. The reagent water shall have the following general water characteristics:

- electrical resistivity, minimum 18 MΩ-cm at 25 °C (77 °F); and
- total organic carbon (TOC) maximum 100 µg/L.

For each specific analytes of interest, the reagent water shall not contain the target analyte at a concentration greater than one-half the designated analytical report limit of that analyte. If trace organic contaminants may be present at levels greater than half the designated analytical report limit of that target analyte, it is permissible to treat the reagent water with TOC destructive UV (185 nm) to reduce those

contaminants to acceptable concentrations. This UV treatment often results in a decrease in electrical resistivity of the reagent water to below 18 MΩ-cm, which is allowed in this circumstance. When reagent water fails to meet acceptable criteria for target analytes, test results may be acceptable when background contamination does not impact evaluation to health effects criteria under NSF/ANSI/CAN 600.

N-1.3.2 Method A

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Rationale: Adds language to allow the lab the ability to determine whether trace amounts of contaminants can be allowed in reagent water if the lab determines that it does not impact the pass/fail criteria, because it is well below the threshold level.