789 N. Dixboro Rd,
Ann Arbor, Michigan
48105-9753 USA

T +1 734 769 8010
E standards@nsf.org
nsf.org

Joint Committee on Drinking Water Additives – System Components

August 29, 2024

**Proposed revision to NSF/ANSI/CAN 61 – Drinking Water System Components – Health Effects (61i190r1)**

Revision 1 of NSF/ANSI/CAN 61, issue 190 is being forwarded to the Joint Committee for consideration. Please review the proposal and **submit your ballot by September 19, 2024** via the NSF Online Workspace.

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 move duplicate language regarding Samples, Finished products, and Materials in Sections 4 and N-1 to Section 3: General requirements.

## Background

As part of the effort of the DWA task group on 61 Reorganization, the group is working to organize similar information into one location rather than scattered throughout the standard. Several sections of the standard provide guidance for sample requirements. The task group reviewed the sections and determined that the guidance in Sections 4.4.2, 4.4.3, N-1.2.3.2, N-1.4.1, N-1.4.3, and N-1.5.1.3 could be harmonized for inclusion in the general section.

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

France Lemieux, Chair
Joint Committee on Drinking Water Additives – System Components
c/o Amy Jump, Joint Committee Secretariat
T (313) 426-4918
E ajump@nsf.org

**[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 System Components – Health Effects

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## 3 General requirements

### 3.1 General

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#### 3.1.6 Samples

Samples shall consist of the entire finished product device, a portion(s) / component(s) of the finished product, or a specimen of the material(s). The manufacturer shall have the option to request that the samples represent a product line of varying sizes, as described in section 3.1.5 and/or the relevant section of the standard to which the product is being evaluated. When it is necessary to calculate normalization factor(s), the wetted exposed surface area of the sample shall be calculated and recorded prior to testing.

#### 3.1.6.1 Finished products

When a finished product (e.g., pipe, fitting, component, or device) is proposed for evaluation, a sample of the finished product shall be used for testing except in the following specific instances:

— concrete cylinders, cubes, or other concrete surrogate samples may be evaluated on behalf of concrete-lined pipes and other concrete-based products;

— coatings, applied to the appropriate substrate, may be evaluated on behalf of products whose entire water contact surface is covered by the coating; or

— finished products shall be permitted to be evaluated using material samples if a finished product evaluation is impractical for one or more of the following reasons:

— an internal volume > 20 L (5.3 gal);
— a weight > 34 kg (75 lb); or
— in situ manufacture of the finished product.

Material samples shall be permitted to be evaluated on behalf of a finished product if no chemical or physical difference exists between the material sample and the material as represented in the finished product. All material samples shall be produced using the same manufacturing processes as the finished product.

**3.1.6.2 Materials**

When a material is proposed for evaluation, a representative sample of the material shall be used. Material test samples (e.g., plaque or sheet) shall be used only if no chemical or physical difference exists between the material sample and the material as represented in the finished product. A material intended to be processed by more than one method (e.g., injection molding, extrusion, or stamping) shall be tested in each of its processed forms. All material samples shall be produced using the same manufacturing processes as the finished product. Materials shall be exposed at a surface area-to-volume ratio greater than or equal to the manufacturer's maximum recommended field use. In some cases (e.g., materials with minimal relative surface areas), it may be appropriate to maximize surface area-to-volume ratios (e.g., ten-fold greater than the wetted surface area of the product) to ensure that the reporting level of the analysis, when normalized, is equal to or less than the pass/fail criteria for all contaminants.

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## 4 Pipes and related products

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### 4.4.2 Materials

Refer to section 3.1.6.2.

~~When a material is proposed for evaluation, a representative sample of the material shall be used. Material test samples (e.g., plaque or sheet) shall be used only if no chemical or physical difference exists between the material sample and the material as it is used in applications covered by Section 4. A material intended to be processed by more than one method (e.g., injection molding, extrusion, or stamping) shall be tested in each of its processed forms.~~

### 4.4.3 Finished products

Refer to section 3.1.6.1.

~~When a finished product (e.g., pipe or fitting) is proposed for evaluation, a sample of the finished product shall be used for testing except in the following specific instances:~~

~~— concrete cylinders, cubes, or other concrete surrogate samples can be evaluated on behalf of concrete-lined pipes and other concrete-based products;~~

~~— coatings, applied to the appropriate substrate, can be evaluated on behalf of products whose entire water contact surface is covered by the coating; or~~

~~— finished products shall be permitted to be evaluated using material samples if a finished product~~

~~evaluation is impractical for one or more of the following reasons:~~

- ~~an internal volume > 20 L (5.3 gal);~~
- ~~a weight > 34 kg (75 lb); or~~
- ~~in situ manufacture of the finished product.~~

~~Material samples shall be permitted to be evaluated on behalf of a finished product if the first and second criteria listed under Section 4.4.1 are satisfied.~~

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## Normative Annex 1

### Product / material evaluation

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## N-1.2 General evaluation requirements

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**N-1.2.3.2 Finished product evaluation**

Refer to section 3.1.6.1.

~~samples of the finished product (e.g., pipe, fitting, or device) shall be exposed except in the following specific instances:~~

- ~~concrete cylinders, cubes, or other concrete surrogate samples shall be permitted to be evaluated on behalf of concrete lined pipes and other concrete-based products;~~
- ~~coatings, applied to an appropriate substrate, shall be permitted to be evaluated on behalf of products whose entire water contact surface is covered by the coating; and~~
- ~~finished products shall be permitted to be evaluated using material samples if finished product evaluation is impractical for one or more of the following reasons:~~
  - ~~an internal volume greater than 20 L (5.3 gal);~~
  - ~~a weight greater than 34 kg (75 lb); or~~
  - ~~in situ manufacture of the finished product.~~

~~Material samples shall be permitted to be evaluated on behalf of a finished product if, and only if, no chemical or physical difference exists between the material sample and the material as represented in the finished product. All material samples shall be produced using all the same manufacturing processes as~~

~~the finished product.~~

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**N-1.4.1 Samples**

Refer to section 3.1.6.

~~Samples shall consist of the entire device, portion(s) / component(s) of the device, or a specimen of the material(s). The manufacturer shall have the option to request that the samples represent a product line of varying sizes, as described below. When it is necessary to calculate normalization factor(s), the wetted exposed surface area of the sample shall be calculated and recorded prior to testing.~~

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**N-1.4.1.3 Material**

Refer to section 3.1.6.2.

~~The material shall be representative of that used in the component or device. Materials shall be evaluated using a minimum surface area-to-volume ratio of 50 $cm^2$/L.~~

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**N-1.5.1.3 Material**

Refer to section 3.1.6.2.

~~The material shall be representative of that used in the component or device. Material samples not related to a specific component or device can also be evaluated.~~

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***Rationale: This moves the general sample guidance for finished products and materials to section 3.1. Note that section N-1.4.1.3 (for section 8, mechanical devices) provided a minimum surface area to volume amount of 50 cm2/L for material exposure guidance, which is removed from the text above to harmonize the language for the general section but is still retained in Table N-1.2. The content in this section may later be reorganized into its own section during the comprehensive reorganization.***