



**Summary of Substantive Changes
between the 2015 and the 2016 editions of
NSF/ANSI 53 “Drinking Water Treatment Units -
Health Effects”**

Presented to the IAPMO Standards Review Committee on April 10, 2017

General: The changes to this standard may have an impact on currently listed products. The substantive changes are:

- Revised the system conditioning requirement to specify the use of the test contaminant during conditioning (see Sections 7.2.1.7, 7.2.1.7.1, 7.2.1.7.3 and 7.2.3.7)
- Added a column for the Chemical Abstract Service (CAS) Number of the Analytes (See Table 4.1)
- Removed redundant sampling requirements already specified in section 7.2.1.8 (See Annex G.4)

7 Elective performance claims – test methods

Section 7.2, Chemical reduction claims: Changed the system conditioning requirement to specify the use of the test contaminant during conditioning as indicated in the following example:

7.2.1 Organic chemical reduction testing

7.2.1.7 Methods

Systems shall be conditioned using the test contaminant specified in table 7 and test water in 7.2.1.5. The conditioning volume shall be excluded from the volume measured as the influent challenge volume for capacity and sample point determination.

The additional text in Section 7.2.1.7 was similarly applied throughout the standard in the Sections:

7.2.2.7, 7.2.5.7;

7.4.1.1.6, 7.4.1.2.1.6;

7.4.2.7;

7.4.3.7; and,

7.4.4.7.

7.2.1.7.1 Plumbed-in systems without reservoirs and all faucet-mounted systems

Two systems shall be conditioned in accordance with the manufacturer's instructions and 7.2.1.7. using the appropriate general test water specified in 7.2.1.5. The systems shall be tested using the appropriate influent challenge water at the maximum flow rate attainable by setting an initial dynamic pressure of 410 ± 20 kPa (60 ± 3 psi). The pressure shall not be readjusted although the system may experience some change in dynamic pressure. The operating cycle specified in 7.2.1.6 shall be used.

7.2.1.7.3 Nonplumbed pour-through-type batch treatment systems

Two systems shall be conditioned in accordance with the manufacturer's instructions and 7.2.1.7.

(Revision of text in Sections 7.2.1.7.1 and 7.2.1.7.3 were similarly revised in the following Sections:

7.2.1.7.3.3, 7.2.1.7.3.4;

7.2.2.7.1, 7.2.2.7.2, 7.2.2.7.3, 7.2.2.7.3.3, 7.2.2.7.3.4;

7.2.3.7.1, 7.2.3.7.2, 7.2.3.7.3, 7.2.3.7.3.4;



7.2.5.7.1, 7.2.5.7.2, 7.2.5.7.3, 7.2.5.7.3.3, 7.2.5.7.3.4;
7.4.1.1.6.1, 7.4.1.1.6.2, 7.4.1.1.6.3, 7.4.1.1.6.3.3, 7.4.1.1.6.3.4, 7.4.1.2.1.6.1, 7.4.1.2.1.6.2, 7.4.1.2.1.6.3,
7.4.1.2.1.6.3.3, 7.4.1.2.1.6.3.4;
7.4.2.7.1, 7.4.2.7.2, 7.4.2.7.3, 7.4.2.7.3.3, 7.4.2.7.3.4;
7.4.3.7.1, 7.4.3.7.2, 7.4.3.7.3, 7.4.3.7.3.3, 7.4.3.7.3.4; and
7.4.4.7.1, 7.4.4.7.2, 7.4.4.7.3, 7.4.4.7.3.3, 7.4.4.7.3.4.

7.2.3.7 Method – POU

Two systems shall be conditioned ~~in accordance with the manufacturer's instructions~~ using the perchlorate reduction water specified in 7.2.3.5 with the test contaminant present. The conditioning volume shall be excluded from the volume measured as the influent challenge volume for capacity and sample point determination.

7.2.3.7.1 Plumbed-in systems without reservoirs and all faucet-mounted systems

Two systems shall be conditioned in accordance with the manufacturer's instructions and 7.2.3.7.

The systems shall be tested using the influent challenge water at the maximum flow rate attainable by setting an initial dynamic pressure of 410 ± 20 kPa (60 ± 3 psi). The pressure shall not be readjusted although the system may experience some change in dynamic pressure. The operating cycle specified in 7.2.3.6 shall be used.

(Revision of text in Sections 7.2.3.7 and 7.2.3.7.1 were similarly revised in Sections 7.2.5.7, 7.2.5.7.1

Table 4.1 – Extraction testing parameters: Added a column in Table 1 renumbered Table 4.1 for the Chemical Abstract Service (CAS) Number of the Analytes.

Annex G (normative); Test method for evaluating squeeze bottle drinking water treatment units:
Removed redundant sampling requirements already specified in section 7.2.1.8 as follows:

G.4 Sampling

~~For systems that include a performance indication device~~ Samples shall be collected from the first fill of the bottle, ~~and at 25, 50, 75, 100, and 120% of claimed capacity.~~ ~~For systems that do not include a performance indication device samples shall be collected from the first fill of the bottle, and at 50, 100, 150, 180, and 200% of capacity.~~ Effluent samples shall be collected from the entire volume dispensed during multiple sequential on/off cycles until the required volume for analysis is collected. Influent samples shall be collected from a sampling port located immediately prior to the test units connection.