TO: Technical Committee on Food Equipment
Bob Powitz, Steve Steingart, Steve Tackitt

FROM: Michael Halko, Chair of the Technical Committee

DATE: February 17, 2020

SUBJECT: Proposed revision to NSF/ANSI 6 – Dispensing Freezers (6i16r1)

Revision 1 of NSF/ANSI 6, issue 16 is being forwarded to the Technical Committee for consideration. Please review the proposal and submit your ballot by March 9, 2020 via the NSF Online Workspace <www.standards.nsf.org>.

When adding comments, please identify the section number/name for your comment and add all comments under one comment number where possible. If you need additional space, please upload a word or pdf version of your comments online via the browse function.

Purpose

This ballot is to affirm the proposed revised language for Standard 6, regarding the acceptance criteria in section 6.1.3.

Background

Issue paper FE-2019-08 notes that the acceptance criteria in section 6.1.3 requires the number of colony forming units (CFU) recovered in each sample be less than zero:

If Nf < 0, the samples shall be considered acceptable.

Since it is not possible for the CFU value to be less than zero, the acceptance criteria value currently in the standard appears to be a typographical error. NSF/ANSI 18 – 2016, Manual Food and Beverage Dispensing Equipment also includes a cleaning and sanitization procedure, but the acceptance criteria requires the number of CFU remaining be less than 1:

If Nf < 1, the samples shall be considered acceptable.

The issue 16, revision 1 language was sent to the task group on dispensing equipment (TG) as a straw poll where it received a 10:0:0 (yes:no:abstain) result with one comment. The TG briefly discussed the straw poll results during its last teleconference and motioned to send the revision 1 language to the JCFE as an approval ballot and is presented here for your consideration.
If you have any questions about the technical content of the ballot, you may contact me in care of:

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6  Performance

6.1 Cleaning and sanitization procedures

6.1.1 Performance requirement

The cleaning and sanitization procedures recommended by the manufacturer shall effectively clean and sanitize the food contact surfaces of the dispensing freezer.

NOTE – This requirement applies to manual cleaning and sanitization procedures used in conjunction with mechanical sanitization and to IPC procedures recommended by the manufacturer.

6.1.2 Test method

Microbiological methods for stock culture preparation, and enumeration / analysis Escherichia coli (American Type Culture Collection\(^1\) #11229), shall be performed as specified in Normative Annex 1.

6.1.2.1 The equipment shall be filled with the E. coli and product mix suspension.

If a remote product supply system is being tested, the product supply lines shall be configured to the manufacturer’s recommended installation restrictions (see Section 7.3) indicated in the manual prior to testing.

6.1.2.2 The equipment shall be operated so that food contact surfaces are exposed to the E. coli and product mix suspension. If a remote product supply system is being tested, the remote line set shall be filled with E. coli and product mix suspension so all food contact surfaces are exposed (i.e., no air in remote line set). The equipment shall then be cleaned in-place according to the manufacturer’s instructions and refilled with sterile buffered dilution water (SBDW). The SBDW shall be dispensed and five 100 mL samples shall be collected at intervals from the start of the dispensing until the unit is empty. When adequate sample volumes cannot be realized, more SBDW shall be added accordingly. The equipment shall then be operated so that food contact surfaces intended for IPC are exposed to the SBDW. Sufficient SBDW shall then be dispensed. The challenge organisms present in each sample shall be collected and enumerated using the Standard Total Coliform Membrane Filter Procedure in accordance with APHA’s Standard Methods for the Examination of Water and Wastewater.

\(^1\) ATCC. PO Box 1549, Manassas, VA 20108 <www.atcc.com>.
6.1.3 Acceptance criteria

For each sample, the total counts on the initial inoculum density \( (N_i) \) of at least 1,000,000 \( (1 \times 10^6) \) and the total counts on the CFUs recovered \( (N_f) \) shall demonstrate a reduction equal to or greater than 99.9999\% (6 log). The log reduction, \( R \), is calculated from the equation:

\[
R = \log_{10} \left( \frac{N_i}{N_f} \right)
\]

where

\[
N_i = \text{Initial inoculum density (CFU/mL)}
\]
\[
N_f = \text{The number of CFU recovered in each sample (CFU/mL)}
\]

If \( N_f < 0 \) or \( N_f < 1 \), the samples shall be considered acceptable.

*Rationale: It is impossible for there to exist less than zero Colony Forming Units, as zero is a finite number in this case. This typo occurred sometime in the past and the correct statement, and that which is proposed here for revision, is located in the other dispensing related standard, NSF/ANSI 18.*