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Joint Committee on Food Equipment

August 18, 2025

Proposed revisions and new language to NSF/ANSI:

- 2 – Food Equipment (2i54r1)
- 4 – Commercial Cooking, Rethermalization, and Powered Hot Food Holding and Transportation Equipment (4i40r1)
- 8 – Commercial Powered Food Preparation Equipment (8i23r1)
- 18 – Manual Food and Beverage Dispensing Equipment (18i26r1)
- 20 – Commercial Bulk Milk Dispensing Equipment (20i11r1)
- 25 – Vending Machines for Food and Beverages (25i27r1)
- 59 – Mobile Food Carts (59i13r1)

Revision 1 of NSF/ANSI 2, issue 54, NSF/ANSI 4, issue 40, NSF/ANSI 8, issue 23, NSF/ANSI 18, issue 26, NSF/ANSI 20, issue, NSF/ANSI 25, issue 27, and NSF/ANSI 59, issue 13, is being forwarded to the Joint Committee on Food Equipment (JCFE) for consideration. Please review the proposal and submit your ballot by **September 8, 2025** via the NSF Online Workspace.

Please review all ballot materials. When adding comments, please include the section number for your comment and add all comments under one comment number whenever possible. If additional space is needed, you may upload a MS Word or .PDF version of your comments directly to the NSF Online Workspace.

## Purpose

The purpose of this ballot is to affirm proposed revised and new language regarding the performance testing of the CIP method in Standards 2, 4, 8, 18, 20, 25, and 59.

## Background

Issue paper ***FE-2025-08 – E.Coli CIP Boilerplate*** highlighted the importance of all food contact surfaces being exposed to a minimum density, positive control sample of the test organism.

The concept was first presented to the JC during the in-person meeting in October 2024 whereby the group agreed an issue paper proposing revisions should be submitted for consideration. These proposed updates are presented here as revision 1.

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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 *red italics* and only used to add clarity; these statements will NOT be in the finished publication.]**

***Rationale**: this revision ensures all food contact surfaces are exposed to the minimum density positive control samples during the performance testing.*

# NSF/ANSI Standard for Food Equipment –

# Food Equipment

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## 6 Performance

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### 6.1 Cleaning and sanitization procedures

#### 6.1.1 Performance requirement

Cleaning and sanitization procedures recommended by the manufacturer shall effectively clean and sanitize food contact surfaces.

NOTE — This requirement applies to manual cleaning and sanitizing procedures and to CIP and sanitizing procedures recommended by the manufacturer.

#### 6.1.2 Test method

Microbiological methods for stock culture preparation, and enumeration / analysis *Escherichia coli* shall be performed as specified in Annex N-1.

**6.1.2.1** The equipment shall be filled with the *E. coli* suspension.

**6.1.2.2** The equipment shall be operated so that food contact surfaces are exposed to the *E. coli* suspension. E. coli suspension shall be dispensed through the equipment, collecting three 200-mL positive control samples from the dispense point to ensure the entire food contact flow path is exposed to sufficient challenge. The average of the positive control samples shall serve as the initial inoculum density (Ni).

**6.1.2.3** 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 ~~1~~200-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 CIP 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 *Standard Methods.*[5]

NSF/ANSI Standard
for Food Equipment –

# Commercial Cooking, Rethermalization, and Powered Hot Food Holding and Transport Equipment

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## 6 Performance

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### 6.4 Cleaning and sanitization procedures

#### 6.4.1 Performance requirement

Cleaning and sanitization procedures recommended by the manufacturer shall effectively clean and sanitize food contact surfaces.

NOTE — This requirement applies to manual cleaning and sanitizing procedures and to CIP and sanitizing procedures recommended by the manufacturer.

#### 6.4.2 Test method

Microbiological methods for stock culture preparation, and enumeration / analysis of *Escherichia coli,* shall be performed as specified in Annex N-3.

**6.4.2.1** The equipment shall be filled with the *E. coli* suspension.

**6.4.2.2** The equipment shall be operated so that food contact surfaces are exposed to the *E. coli* suspension. E. coli suspension shall be dispensed through the equipment, collecting three 200-mL positive control samples from the dispense point to ensure the entire food contact flow path is exposed to sufficient challenge. The average of the positive control samples shall serve as the initial inoculum density (Ni).

**6.4.2.3** The equipment shall then be cleaned in place according to the manufacturer's instructions and refilled with SBDW. The SBDW shall be dispensed and five ~~1~~200-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 CIP 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 *Standard Methods*.**Error! Bookmark not defined.**

NSF/ANSI Standard
for Food Equipment –

# Commercial Powered Food Preparation Equipment

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## 6 Performance

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### 6.1 CIP and sanitization procedures

#### 6.1.1 Performance requirement

Cleaning and sanitization procedures recommended by the manufacturer shall effectively clean and sanitize food contact surfaces.

NOTE — This requirement applies to manual cleaning and sanitizing procedures and to CIP and sanitizing procedures recommended by the manufacturer.

#### 6.1.2 Test method

Microbiological methods for stock culture preparation, and enumeration/analysis *Escherichia coli* shall be performed as specified in Annex A.

**6.1.2.1** The equipment shall be filled with *the E. coli* suspension.

**6.1.2.2** The equipment shall be operated so that food contact surfaces are exposed to the *E. coli* suspension. E. coli suspension shall be dispensed through the equipment, collecting three 200-mL positive control samples from the dispense point to ensure the entire food contact flow path is exposed to sufficient challenge. The average of the positive control samples shall serve as the initial inoculum density (Ni).

**6.1.2.3** The equipment shall then be CIP according to the manufacturer's instructions and refilled with sterile buffered distilled or deionized water (SBDW). The SBDW shall be dispensed and five ~~1~~200-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 CIP 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.* **Error! Bookmark not defined.**

NSF/ANSI Standard
for Food Equipment –

# Manual Food and Beverage Dispensing Equipment

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## 6 Performance

### 6.1 Cleaning and sanitization procedures

#### 6.1.1 Performance requirement

Cleaning and sanitization procedures recommended by the manufacturer shall effectively clean and sanitize food contact surfaces.

NOTE — This requirement applies to manual cleaning and sanitizing procedures and to CIP and sanitizing procedures recommended by the manufacturer.

#### 6.1.2 Test method

Microbiological methods for stock culture preparation, and enumeration / analysis *Escherichia coli* shall be performed as specified in Annex N-1.

**6.1.2.1** The equipment shall be filled with the *E. coli* suspension.

**6.1.2.2** The equipment shall be operated so that food contact surfaces are exposed to the *E. coli* suspension. E. coli suspension shall be dispensed through the equipment, collecting three 200-mL positive control samples from the dispense point to ensure the entire food contact flow path is exposed to sufficient challenge. The average of the positive control samples shall serve as the initial inoculum density (Ni).

**6.1.2.3** 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 ~~1~~200-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 CIP 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 *Standard Methods for the Examination of Water and Wastewater.* **Error! Bookmark not defined.**

NSF/ANSI Standard
for Food Equipment –

# Commercial Bulk Milk Dispensing Equipment

## 6 Performance

### 6.2 Cleaning and sanitization procedures

#### 6.2.1 Performance requirement

Cleaning and sanitization procedures recommended by the manufacturer shall effectively clean and sanitize food contact surfaces.

NOTE — This requirement applies to manual cleaning and sanitizing procedures and to CIP and sanitizing procedures recommended by the manufacturer.

#### 6.2.2 Test method

Microbiological methods for stock culture preparation, and enumeration / analysis *Escherichia coli* shall be performed as specified in Annex N-1.

**6.2.2.1** The equipment shall be filled with the *E. coli* suspension.

**6.2.2.2** The equipment shall be operated so that food contact surfaces are exposed to the *E. coli* suspension. E. coli suspension shall be dispensed through the equipment, collecting three 200-mL positive control samples from the dispense point to ensure the entire food contact flow path is exposed to sufficient challenge. The average of the positive control samples shall serve as the initial inoculum density (Ni).

**6.2.2.3** 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 ~~1~~200-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 CIP 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 *Standard Methods for the Examination of Water and Wastewater.* **Error! Bookmark not defined.**

NSF/ANSI Standard
for Food Equipment –

# Vending Machines for Food and Beverage

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## 6 Performance

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### 6.1 Cleaning and sanitizing procedures

#### 6.1.1 Performance requirement

CIP and sanitizing procedures recommended by the manufacturer shall effectively clean and sanitize food contact surfaces.

**NOTE — This requirement applies to manual cleaning and sanitizing procedures and to CIP and sanitizing procedures recommended by the manufacturer.**

#### 6.1.2 Test method

Microbiological methods for stock culture preparation, and enumeration / analysis of *Escherichia coli,* shall be performed as specified in Annex N-1.

**6.1.2.1** The equipment shall be filled with the *E. coli* suspension.

**6.1.2.2** The equipment shall be operated so that food contact surfaces are exposed to the *E. coli* suspension. E. coli suspension shall be dispensed through the equipment, collecting three 200-mL positive control samples from the dispense point to ensure the entire food contact flow path is exposed to sufficient challenge. The average of the positive control samples shall serve as the initial inoculum density (Ni).

**6.1.2.3** The equipment shall then be cleaned and sanitized according to the manufacturer's instructions and refilled with sterile buffered dilution water (SBDW). The SBDW shall be dispensed, and five ~~1~~200-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 CIP 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 *Standard Methods*.**Error! Bookmark not defined.**

NSF/ANSI Standard
for Food Equipment –

# Mobile Food Carts

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## 6 Performance

### 6.1 Cleaning and sanitization procedures

#### 6.1.1 Performance requirement

Cleaning and sanitization procedures recommended by the manufacturer shall effectively clean and sanitize food contact surfaces.

NOTE — This requirement applies to manual cleaning and sanitizing procedures and to CIP and sanitizing procedures recommended by the manufacturer.

#### 6.1.2 Test method

Microbiological methods for stock culture preparation, and enumeration / analysis of *Escherichia coli,* shall be performed as specified in Annex N-1.

**6.1.2.1** The equipment shall be filled with the *E. coli* suspension.

**6.1.2.2** The equipment shall be operated so that food contact surfaces are exposed to the *E. coli* suspension. E. coli suspension shall be dispensed through the equipment, collecting three 200-mL positive control samples from the dispense point to ensure the entire food contact flow path is exposed to sufficient challenge. The average of the positive control samples shall serve as the initial inoculum density (Ni).

**6.1.2.3** The equipment shall then be cleaned in place according to the manufacturer's instructions and refilled with SBDW. The SBDW shall be dispensed and five ~~1~~200-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, additional SBDW shall be added accordingly. The equipment shall then be operated so that food contact surfaces intended for CIP 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 *Standard Methods*.**Error! Bookmark not defined.**