Draft 2 of NSF/ANSI 6, issue 10 is being forwarded to the Joint Committee on Food Equipment for consideration. Please review the changes proposed to this standard and submit your ballot by October 17, 2014 via the NSF Online Workspace (http://standards.nsf.org).

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

**Purpose**

The purpose of this ballot is to affirm proposed new language for thermocouple 4 in section 6.3.2.2 of NSF/ANSI 6.

**Background**

Revision 1 balloted between April 22nd and May 13th, made changes to sections 6.3, 6.4 and 6.5 permitting manually loaded product reservoir(s) or container(s) that are not heat treated but remain less than 41°F environment. Revision 1 was affirmed by the Joint Committee on Food Equipment by a vote of 28 affirmative and 0 negative ballots. Revision 1 ballot documents are available for reference at:


Please note that the revision 1 ballot documents are available for informational purposes only and are NOT part of this ballot. The flow diagram included with revision 1 as a supporting document will not be published with the standard.

Revision 2 adds a clarification to section 6.3.2.2 covering the potential need of multiple thermocouples in product transfer circuits. This clarification is the result of a negative ballot cast by a Council of Public Health Consultants member. A comment submitted with the negative ballot suggested adding specific language covering the potential need for multiple thermocouples. Subsequent discussions by the Dispensing Equipment task group affirmed this as useful and relevant.

**Public Health Impact:**

The proposed changes have no negative impact on public health.

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

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NSF International Standard for Food Equipment –

Food equipment

6.2.2 Test method

The ability of dispensing equipment to maintain the temperature of its contents at 41 °F (5 °C) or below shall be evaluated by monitoring the temperature in the product reservoir (hopper or refrigerated cabinet) and in the product holding area of the dispensing head. The equipment, while operated in accordance with the manufacturer's instructions, shall be evaluated in a test chamber in which the following conditions are maintained for the duration of the test:

- ambient air temperature of 86 ± 3 °F (30 ± 2 °C); and
- no vertical temperature gradient exceeding 1.5 °F/ft (2.5 °C/m).

The product reservoir shall be filled with the intended product mix at 35 ± 1 °F (1.5 ± 0.5 °C) and the system shall be purged of entrapped air by dispensing approximately 1 qt (1 L) of product. Prior to starting the test, the equipment shall be allowed to establish thermal equilibrium according to the manufacturer's instructions, or the compressor shall be allowed to cycle on and off at least two full times at room temperature. At the start of the test period, the temperature of the product shall be 41 °F (5 °C) or below. Remote temperature sensors with an accuracy of ± 0.5 °F (± 0.3 °C) shall be used to monitor the product temperature. A sensor shall be placed 1 ± 0.1 in (25 ± 2 mm) below the product level in the middle of the product reservoir. A sensor shall be placed in the product holding area of at least one dispensing head. If a dispensing freezer has a remote product feed, a sensor shall be placed in the remote feed line. The temperature at each sensor location shall be recorded every 5 min during a 4-h test period. This test shall be performed while the freezer is operated in the standby (night) mode, if available.

6.3.2.2 For machines with pre-packaged product.

Thermocouple #1: 1 ± 0.1 in (25 ± 2 mm) below the product level in the middle of the product reservoir.

Thermocouple #2: product-holding area of the dispensing head.

Thermocouple #3: as close to the rear of the freezing barrel as possible.

Thermocouple #4: located in all product transfer circuits (Multiple thermocouples may be required. See section 6.2.2).
The product temperature at thermocouple #1 shall be recorded for the duration of the test. The time required for the temperature at monitoring locations 2-4 to increase from 41 °F (5 °C) to 150 °F (65 °C) shall be recorded. The time elapsed while the product temperature is continuously maintained at 150 °F (65 °C) or greater shall be recorded for thermocouple location 2-4. The heat treatment cycle shall be allowed to continue through the cooling portion. The test shall be conducted in a controlled temperature environment at an ambient temperature of 73 ± 3 °F (23 ± 2 °C).

Rationale: Clause 6.3.2.2 has been added to the standard for heat treatment equipment which is designed for pre-package product that will remain at <41°F at all times and will not be heat treated on a daily basis. This section includes additional temperature measurement locations for the product transfer circuits to verify acceptable product temperature during heat treatment. A thermocouple will also be placed in the pre-package product left in the refrigerated area during the heat treatment cycle to verify that product remains <41°F during heat treatment operation.