TO: Joint Committee on Biosafety Cabinetry

FROM: Robert W. Powitz, Chairperson of the Joint Committee

DATE: March 21, 2024

SUBJECT: Proposed revision to NSF/ANSI 49 – *Biosafety Cabinetry: Design, Construction, Performance and Field Certification* (49i191br1)

Revision 1 of NSF/ANSI 49 issue 191b is being forwarded to the BSC Joint Committee for balloting. Please review the changes proposed to this standard and **submit your ballot by April 11, 2024** 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

The purpose of this ballot is to affirm revised language related to the downflow setpoint of the performance testing of the personnel protection test in N-1 of Standard 49.

Background

Issue paper **BSC-2023-17 – Product Protection Test Method** highlights the difficulty in achieving the high downflow setpoint airflow in the microbiological testing of personnel protection. The proponent contends that the language should include a statement accommodating the highest possible that the blower can attain for the setpoint instead.

This issue paper was presented during the 2023 JC Face-to-Face meeting in June 2023, including a part A and B. This is part B of that issue paper and was motioned directly to ballot as presented within the issue paper.

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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[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.]

NSF/ANSI International Standard for Biosafety Cabinetry —

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Normative Annex 1

(formerly Annex A)

Performance tests

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N-1.6.3 **Personnel protection test** (system challenged with 1 × 10^8 to 8 × 10^8 *B. subtilis* spores in 5 min),

N-1.6.3.1 **Method**

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g) For new and major modification redesign cabinet models, repeat the above steps after setting the cabinet airflow velocities at the manufacturer's recommended nominal set points ± 2 ft/min (0.01 m/s) - 10 ft/min (- 0.051 m/s) inflow using a direct airflow reading instrument and + 10 ft/min downflow (as high as downflow can be achieved by the blower):

— airflow velocity readjustments shall be made per the manufacturer's procedure;

— the overall average downflow velocity shall be used in making downflow adjustments; and

— removable equipment not essential to cabinet operation shall be removed to set the downflow velocity.

***Rationale**: In certain cases of developing new cabinets, there is experience with the blower not achieving the high downflow in set point airflow. This language would allow for the downflow set point to be as high as possible.*