NSF/ANSI 49 – 2004a
Addendum 2.0 – 2004

Class II (laminar flow) biosafety cabinetry

NSF International Standard/ American National Standard

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NSF International Standard/
American National Standard
for Biosafety Cabinetry –

Class II (laminar flow) biosafety cabinetry

Standard Developer
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Foreword[2]

The purpose of this Standard is to establish minimum requirements for materials, design, construction, and performance of Class II (Laminar Flow) Biosafety Cabinetry that are designed to protect personnel, product, and the environment. This standard details requirements for performance testing as well as field certification testing.

This edition of the Standard, Addendum 2.0 to NSF/ANSI 49-04a, expands the definition of high efficiency filters (3.13) to include specifications for both high efficiency particulate air (HEPA) filters and ultra-low-penetrating air (ULPA) filters and revisions to rounding errors that affect the pass/fail criteria throughout the document. It also clarifies significant digits in metric and English system conversions**.** Revisions from Addendum 1.0 have been added to this document for the convenience of our customers.

This Standard was developed by the NSF Joint Committee on Biosafety Cabinetry using the consensus process described by the American National Standards Institute.

Suggestions for improvement of this Standard are welcome. Comments should be sent to Chair, Joint Committee on Biosafety Cabinetry, c/o NSF International, Standards Department, PO Box 130140, Ann Arbor, Michigan 48113-0140, USA., Standards Department, PO Box 130140, Ann Arbor, Michigan 48113-0140, USA.

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Revisions to NSF/ANSI 49 – 2004 are shown in this addendum as ~~crossouts~~ for deletions and highlights for additions.

Addendum to NSF/ANSI Standard for Biosafety Cabinetry –

Class II (laminar flow) biosafety cabinetry

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3 Definitions

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3.4.2.2 Class II, Type A2 cabinets (formerly designated Type B3)

– maintain a minimum average inflow velocity of 100 ft/min (0.51 m/s) through the work access opening;

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3.4.2.3 Class II Type B1 cabinets

– maintain a minimum average inflow velocity of 100 ft/min (0.51 m/s) through the work access opening;

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3.4.2.4 Class II Type B2 cabinets (sometimes referred to as "total exhaust")

– maintain a minimum average inflow velocity of 100 ft/min (0.51 m/s) through the work access opening;

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3.11 high efficiency ~~particulate~~ air ~~(HEPA)~~ filters:

3.11.1 high efficiency particulate air (HEPA) filter: A throwaway, extended/pleated medium, dry-type filter with the following:

– rigid casing enclosing the full depth of the pleats;

– minimum particulate removal of 99.99% for thermally generated monodisperse dioctylphthalate (DOP) smoke particles or equivalent with a diameter of 0.3 μm

– maximum pressure drop of 1.0 in w.g. (250 Pa) when clean and operated at rated airflow capacity; and

[3] Addendum 1.0 to NSF/ANSI 49-2004a follows addendum 2.0.