



ADDENDA

**ASHRAE Addendum a to
ASHRAE Standard 241-2023**

Control of Infectious Aerosols

Approved by ASHRAE on October 21, 2024.

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FOREWORD

Addendum a adds two references to the allowable test methods in Appendix A and clarifies the use of an AHAM standard for nonresidential applications.

Informative Note: In this addendum, changes to the current standard are indicated in the text by underlining (for additions) and ~~striking through~~ (for deletions) unless the instructions specifically mention some other means of indicating the changes.

Addendum a to Standard 241-2023

Modify Section 7 as shown. The remainder of Section 7 remains unchanged.

7. AIR CLEANING

[...]

7.3.2.2 Commercial and Industrial In-Room Air Cleaners Using Only Mechanical Fibrous Filters.

The *equivalent clean airflow rate* (V_{ACS}) of commercial and industrial in-room air cleaners using only mechanical fibrous filters shall be determined in accordance with ANSI/AHAM AC-1⁸ adapted for nonresidential applications with the chamber size criterion outlined in Normative Appendix A, Section A1.2.2. ~~Normative Appendix A using a custom test method similar to that described in ANSI/AHAM AC-1⁸ adapted with the chamber size criterion outlined in Section A1.2.2.~~

[...]

7.4.1.1 In-Duct Ultraviolet Germicidal Irradiation. The infectious aerosol reduction efficiency of ultraviolet lights for use in AHUs and air ducts shall be determined in accordance with ANSI/ASHRAE Standard 185.1¹¹⁺⁰ or ISO 15714¹² methodology with MS2 as the challenge organism. The safety of in-duct ultraviolet germicidal irradiation shall be determined in accordance with the safety requirements of Normative Appendix A.

[...]

Modify Section 11 as shown. (Note to Reviewers: Renumber remaining references accordingly in this section and throughout the standard.)

11. NORMATIVE REFERENCES

[...]

10. ASHRAE. 2024. ANSI/ASHRAE Standard 185.3, *Method of Testing Commercial and Industrial In-Room Air-Cleaning Devices and Systems for Microorganism Bioaerosol Removal or Inactivation in a Test Chamber*. Peachtree Corners, GA: ASHRAE.

11. ~~10.~~ ASHRAE. 2020. ANSI/ASHRAE Standard 185.1, *Method of Testing UV-C Lights for Use in Air-Handling Units or Air Ducts to Inactivate Airborne Microorganisms*. Peachtree Corners, GA: ASHRAE.

12. ISO. 2019. ISO 15714, *Method of Evaluating the UV Dose to Airborne Microorganisms Transiting In-Duct Ultraviolet Germicidal Irradiation Devices*. Geneva, Switzerland: International Organization for Standardization.

[...]

Modify Normative Appendix A as shown. The remainder of Normative Appendix A remains unchanged.

NORMATIVE APPENDIX A

DETERMINING AIR CLEANING SYSTEM EFFECTIVENESS AND SAFETY

A1. TESTING PROCEDURE

Where testing of the effectiveness or safety elements of *air cleaning* systems falls within the scope of a national consensus standard approved by the AHJ, these elements of the systems shall be tested in accordance with the applicable standard per the requirements of Section 7.

The consensus standards that shall be ~~permitted used~~ for determining effectiveness are as follows:

- a. ANSI/ASHRAE Standard 52.2⁵ (both the regular filter test and the bioaerosol test for non-UV-only devices specified in Appendix L). (*Informative Note:* After January 1, 2025, MERV-A ratings using Appendix J shall be required.)
- b. ISO 16890-1⁶
- c. ANSI/AHAM AC-1⁸
- d. ANSI/AHAM AC-5⁹
- e. ANSI/ASHRAE Standard 185.1¹¹⁺⁰
- f. ANSI/ASHRAE Standard 185.3¹⁰ (using MS2 as challenge organism)
- g. ISO 15714¹²

[...]

POLICY STATEMENT DEFINING ASHRAE'S CONCERN FOR THE ENVIRONMENTAL IMPACT OF ITS ACTIVITIES

ASHRAE is concerned with the impact of its members' activities on both the indoor and outdoor environment. ASHRAE's members will strive to minimize any possible deleterious effect on the indoor and outdoor environment of the systems and components in their responsibility while maximizing the beneficial effects these systems provide, consistent with accepted Standards and the practical state of the art.

ASHRAE's short-range goal is to ensure that the systems and components within its scope do not impact the indoor and outdoor environment to a greater extent than specified by the Standards and Guidelines as established by itself and other responsible bodies.

As an ongoing goal, ASHRAE will, through its Standards Committee and extensive Technical Committee structure, continue to generate up-to-date Standards and Guidelines where appropriate and adopt, recommend, and promote those new and revised Standards developed by other responsible organizations.

Through its *Handbook*, appropriate chapters will contain up-to-date Standards and design considerations as the material is systematically revised.

ASHRAE will take the lead with respect to dissemination of environmental information of its primary interest and will seek out and disseminate information from other responsible organizations that is pertinent, as guides to updating Standards and Guidelines.

The effects of the design and selection of equipment and systems will be considered within the scope of the system's intended use and expected misuse. The disposal of hazardous materials, if any, will also be considered.

ASHRAE's primary concern for environmental impact will be at the site where equipment within ASHRAE's scope operates. However, energy source selection and the possible environmental impact due to the energy source and energy transportation will be considered where possible. Recommendations concerning energy source selection should be made by its members.

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