Institute of Environmental Sciences and Technology

IEST-RP-CC002.4

Contamination Control Division
Recommended Practice 002.4

Unidirectional-Flow, Clean-Air Devices

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1 SCOPE AND LIMITATIONS

1.1 Scope

This Recommended Practice (RP) covers definitions, procedures for evaluating performance, and major requirements of unidirectional-flow, clean-air devices. The RP may be used to define a basis of agreement between customer and supplier in the specification, procurement, and certification testing of unidirectional-flow, clean-air devices with self-contained motor-blower(s) and powered terminal units with replaceable filters. This document also presents recommendations for recertification of devices owned by the customer, under direction of the customer.

1.2 Limitations

This RP does not cover cleanrooms or specialized minienvironments. The RP does not cover biological safety or containment cabinets in their entirety, but covers only certain cleanliness characteristics of these cabinets. This RP recommends ranges of acceptance limits where applicable.

NOTE: Where applicable, codes and standards may be applied to the construction and performance of clean-air devices. These codes and standards should be made a part of the agreement between the customer and the supplier.

2 REFERENCES

2.1 Reference documents

The following documents are incorporated into this RP to the extent specified herein. Users should apply the most recent editions of the references.

ACGIH: TLVs and BEIs

AMCA Publication 211: Certified Ratings Program – Product Rating Manual for Fan Air Performance

ANSI/AIHA Z9.5-2012 Laboratory Ventilation

ANSI/AIHA Z9.7-2007 Recirculation of Air from Industrial Process Exhaust Systems

ANSI/AMCA Publication 99: Standards Handbook

ANSI/IESNA RP-7-01: Lighting Industrial Facilities

ANSI/IESNA RP-29-06: Lighting for Hospitals and Health Care Facilities

ASHRAE Standard 52.2-2012: Method of Testing General Ventilation Air-Cleaning Devices for Removal Efficiency by Particle Size