

*Institute of Environmental Sciences and Technology*

## **IEST-RP-CC021.5**

Contamination Control Division

Recommended Practice 021.5

# **Testing HEPA and ULPA Filter Media**



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## RP-CC021.5 WHAT IS NEW AND IMPROVED

### New:

- Appendix C, **HEPA Filter penetration test “cold” photometric method** merged into Section 4.2 of the document. Previously “hot” and “cold” DOP methods were described separately although they utilize the same method. This is a more economical way to include both methods in the document.
- Added section 4.5 “**Testing Electrostatically Charged Media**” to address the use of this media type in place of traditional mechanical media for high efficiency filters in certain applications.

### Improved:

- Appendix A, **Calibration Period Summary**, edited for improved clarity.
- Appendix B, revised calculations in tables B2 and B3.

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### 1 SCOPE AND LIMITATIONS

#### 1.1 Scope

This Recommended Practice (RP) discusses test methods for physical and filtration properties of high-efficiency particulate air (HEPA) and ultra-low penetration air (ULPA) filtration media.

Application of this RP is by mutual agreement between the customer and the supplier. Use of this RP should be applied to the following:

- a) Acceptance criteria for test methods
- b) Test aerosol and particle size
- c) Test face velocity

#### 1.2 Limitations

This RP does not include discussion of special applications testing, such as nuclear, biological, chemical, and other such testing. Although the general approach to testing media outlined in this RP may be used for testing media with lower efficiencies than HEPA media, the user is cautioned that specific recommendations noted on aerosols, statistics, instrumentation, and other factors may not be appropriate.

**NOTE:** Testing in accordance with this RP may involve hazardous materials, operations, and equipment. This RP does not purport to address all the safety problems associated with its use. It is the responsibility of the user to establish appropriate safety and health practices and to determine the applicability of regulatory limitations before use.

### 2 REFERENCES

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

#### 2.1 Reference Documents

*ASTM F778-88 2007: Standard Methods for Gas Flow Resistance Testing of Filtration Media*

*ASTM D2986: Standard Practice for Evaluation of Air Assay Media by the Monodisperse DOP (Diocetyl Phthalate) Smoke Test*

*IEST-RP-CC001: HEPA and ULPA Filters*

*IEST-RP-CC007: Testing ULPA Filters*