



## Standard Test Method for Automated Separation and Collection of Particulate and Acidic Gaseous Fluoride in the Atmosphere (Double Paper Tape Sampler Method)<sup>1,2</sup>

This standard is issued under the fixed designation D 3266; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of last revision. A number in parentheses indicates the year of last reapproval. A superscript epsilon (ε) indicates an editorial change since the last revision or reapproval.

*This standard has been approved for use by agencies of the Department of Defense.*

<sup>ε1</sup> NOTE—Editorial corrections were made throughout in September 2000.

### 1. Scope

1.1 This test method describes the automatic separation and collection on chemically treated paper tapes of particulate and gaseous forms of acidic fluorides in the atmosphere by means of a double paper tape sampler. The sampler may be programmed to collect and store individual air samples obtained over time periods from several minutes to 3 h. A 30.5-m (100-ft) tape will allow unattended operation for the automatic collection of up to 600 samples.

1.2 The values stated in SI units are to be regarded as the standard. The values given in parentheses are for information only.

1.3 *This standard does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this standard to establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use.*

### 2. Referenced Documents

#### 2.1 ASTM Standards:

D 1071 Test Methods for Volumetric Measurement of Gaseous Fuel Samples<sup>3</sup>

D 1193 Specification for Reagent Water<sup>4</sup>

<sup>1</sup> This test method is under the jurisdiction of ASTM Committee D22 on Sampling and Analysis of Atmospheres and is the direct responsibility of Subcommittee D22.03 on Ambient Atmospheres and Source Emissions.

Current edition approved March 15, 1991. Published May 1991. Originally published as D 3266 – 73T. Last previous edition D 3266 – 79<sup>ε1</sup>.

<sup>2</sup> This test method was originally adopted editorially from the Intersociety Committee Method 42222-02-72T; 12202-04-72T, “Health Laboratory Science” Vol 9, No. 4, 1972, pp. 314–318. Revisions have been made to incorporate changes recommended by Committee D22.

This revision has been adapted from “Methods of Air Sampling and Analysis,” Intersociety Committee, Edited by James P. Lodge, Jr., 3rd ed., Lewis Publishers, Inc., 1989, pp. 352–356.

<sup>3</sup> Annual Book of ASTM Standards, Vol 05.06.

<sup>4</sup> Annual Book of ASTM Standards, Vol 11.01.

D 1356 Terminology Relating to Sampling and Analysis of Atmospheres<sup>5</sup>

D 1357 Practice for Planning the Sampling of the Ambient Atmosphere<sup>5</sup>

D 3195 Practice for Rotameter Calibration<sup>5</sup>

D 3268 Test Method for Separation and Collection of Particulate and Gaseous Fluorides in the Atmosphere (Sodium Bicarbonate-Coated Glass Tube and Particulate Filter Method)<sup>5</sup>

D 3269 Test Methods for Analysis for Fluoride Content of the Atmosphere and Plant Tissues (Manual Procedures)<sup>5</sup>

D 3270 Test Methods for Analysis for Fluoride Content of the Atmosphere and Plant Tissues (Semiautomated Method)<sup>5</sup>

D 3609 Practice for Calibration Techniques Using Permeation Tubes<sup>5</sup>

D 3614 Guide for Laboratories Engaged in Sampling and Analysis of Atmospheres and Emissions<sup>5</sup>

### 3. Terminology

3.1 *Definitions*—For definitions of terms used in this test method, refer to Terminology D 1356.

### 4. Summary of Test Method

4.1 Air is drawn through an air inlet tube (see Practice D 1357) and is first passed through an acid-treated prefilter paper tape to remove particulate matter which may contain fluoride and then through an alkali-treated paper tape to remove acidic fluoride gases.

4.2 The exhaust air is filtered through soda lime-glass wool, and the cleaned air is used to pressurize the front compartment to prevent fluoride contamination of the paper tapes from the ambient air.

<sup>5</sup> Annual Book of ASTM Standards, Vol 11.03.

