



Standard Terminology Relating to Sampling and Analysis of Atmospheres^{1,2}

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1. Scope

1.1 This terminology is a collective vocabulary relating to sampling and analysis of atmospheres. As a convenience to general interest, it contains most of the standard terms, definitions, and nomenclature under the jurisdiction of Committee D22.

1.2 Many of the entries in this terminology are copied (with attribution) from the standards of origin referenced in Section 2. The standards of origin are noted in bold type at the right margin of the applicable definition.

1.3 Certain terms in the common language that comprise multiple concepts are included herein with the definition specific to standards and practices of Committee D22.

2. Referenced Documents

2.1 ASTM Standards:

- D 1357 Practice for Planning the Sampling of the Ambient Atmosphere³
- D 3249 Practice for General Ambient Air Analyzer Procedures³
- D 3614 Guide for Laboratories Engaged in Sampling and Analysis of Atmospheres and Emissions³
- D 3631 Test Methods for Measuring Surface Atmospheric Pressure³
- D 3670 Guide for Determination of Precision and Bias of Methods of Committee D22³
- D 3686 Practice for Sampling Atmospheres to Collect Organic Compound Vapors (Activated Charcoal Tube Adsorption Method)³
- D 3687 Practice for Analysis of Organic Compound Vapors Collected by the Activated Charcoal Tube Adsorption Method³
- D 4023 Terminology Relating to Humidity Measurements³
- D 4096 Test Method for Determination of Total Suspended Particulate Matter in the Atmosphere (High-Volume Sampler Method)³
- D 4240 Test Method for Airborne Asbestos Concentration

in Workplace Atmosphere⁴

- D 4298 Guide for Intercomparing Permeation Tubes to Establish Traceability³
- D 5011 Practices for Calibration of Ozone Monitors Using Transfer Standards³
- D 5015 Test Method for pH of Atmospheric Wet Deposition Samples by Electrometric Determination³
- D 5096 Test Method for Determining the Performance of a Cup Anemometer or Propeller Anemometer³
- D 5111 Guide for Choosing Locations and Sampling Methods to Monitor Atmospheric Deposition at Non-Urban Locations³
- D 5366 Test Method for Determining the Dynamic Performance of a Wind Vane³
- D 5438 Practice for Collection of Floor Dust for Chemical Analysis³
- D 5527 Practices for Measuring Surface Wind and Temperature by Acoustic Means³
- E 104 Practice for Maintaining Constant Relative Humidity by Means of Aqueous Solutions³

3. Terminology

absolute temperature—See **temperature**.

absolute filter—See **filter**.

absorbance, *n*—the logarithm to the base of 10 of the reciprocal of *transmittance*.

absorbate, *n*—material that has been retained by the process of absorption.

absorbent, *n*—material in which absorption occurs.

absorption, *n*—a process in which one material (the absorbent) takes up and retains another (the absorbate) with the formation of an homogeneous mixture having the attributes of a solution.

DISCUSSION—Chemical reaction may accompany or follow absorption.

acceptance angle ($\pm\alpha$, deg), *n*—the angular distance, centered on the array axis of symmetry, over which the following conditions are met: (a) wind components are unambiguously defined, and (b) flow across the transducers is unobstructed or remains within the angular range for which transducer shadow corrections are defined. **D 5527**

¹ This terminology is under the jurisdiction of ASTM Committee D22 on Sampling and Analysis of Atmospheres and is the direct responsibility of Subcommittee D22.01 on Quality Control.

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² See also Terminology D 4023 for terms relating to Humidity Measurements.

³ *Annual Book of ASTM Standards*, Vol 11.03.

⁴ Discontinued; see 1995 *Annual Book of ASTM Standards*, Vol 11.03.