



Designation: D7822 – 18

Standard Practice for Dermal Wipe Sampling for the Subsequent Determination of Metals and Metalloids¹

This standard is issued under the fixed designation D7822; 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.

1. Scope

1.1 This practice describes a procedure for the wet wiping of potentially exposed skin of workers for the subsequent determination of metals and metalloids.

NOTE 1—For guidance on collection of wipe samples on surfaces other than skin, refer to Guide [D7659](#).

1.2 This practice does not address the sampling design criteria that are used for hazard evaluation, risk assessment, or other purposes.

1.3 This practice contains notes that are explanatory and are not part of the mandatory requirements of this practice.

1.4 The values stated in SI units are to be regarded as standard. No other units of measurement are included in this standard.

1.5 *This practice offers a set of instructions for performing one or more specific operations. This practice cannot replace education or experience and should be used in conjunction with professional judgment. Not all aspects of this practice may be applicable in all circumstances. This practice is not intended to represent or replace the standard of care by which the adequacy of a given professional service must be judged, nor should this practice be applied without consideration of a project's many unique aspects. The word "Standard" in the title means only that the practice has been approved through the ASTM consensus process.*

1.6 *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, health, and environmental practices and determine the applicability of regulatory limitations prior to use.*

1.7 *This international standard was developed in accordance with internationally recognized principles on standardization established in the Decision on Principles for the Development of International Standards, Guides and Recom-*

mendations issued by the World Trade Organization Technical Barriers to Trade (TBT) Committee.

2. Referenced Documents

2.1 ASTM Standards:²

[D1356](#) Terminology Relating to Sampling and Analysis of Atmospheres

[D4840](#) Guide for Sample Chain-of-Custody Procedures

[D6966](#) Practice for Collection of Settled Dust Samples Using Wipe Sampling Methods for Subsequent Determination of Metals

[D7659](#) Guide for Strategies for Surface Sampling of Metals and Metalloids for Worker Protection

[D7707](#) Specification for Wipe Sampling Materials for Beryllium in Surface Dust

[E1792](#) Specification for Wipe Sampling Materials for Lead in Surface Dust

2.2 ISO Standards:³

[ISO TR 14294](#) Workplace Atmospheres—Measurement of Dermal Exposure—Principles and Methods

[ISO 18158](#) Workplace Atmospheres—Workplace Exposure—Terminology

3. Terminology

3.1 Definitions:

3.1.1 For definitions of terms used in this standard, refer to Terminology [D1356](#).

3.1.2 *agent, n*—any chemical or biological entity on its own or admixed as it occurs in the natural state or as produced by any work activity, whether or not produced intentionally and whether or not placed on the market. **ISO TR 14294**

3.1.3 *dermal exposure, n*—process of contact between an agent and human skin at an exposure surface over an exposure period. **ISO TR 14294**

3.1.3.1 *Discussion*—Dermal exposure can originate from

¹ This practice is under the jurisdiction of ASTM Committee [D22](#) on Air Quality and is the direct responsibility of Subcommittee [D22.04](#) on Workplace Air Quality.

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² For referenced ASTM standards, visit the ASTM website, www.astm.org, or contact ASTM Customer Service at service@astm.org. For *Annual Book of ASTM Standards* volume information, refer to the standard's Document Summary page on the ASTM website.

³ Available from American National Standards Institute (ANSI), 25 W. 43rd St., 4th Floor, New York, NY 10036, <http://www.ansi.org>.