



Standard Practice for Chemical Protective Clothing Program¹

This standard is issued under the fixed designation F1461; 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 is intended to promote the proper selection, use, maintenance, and understanding of the limitations of chemical protective clothing (CPC) by users, employers, employees, and other persons involved in programs requiring CPC, thereby limiting potentially harmful and unnecessary skin exposures.

1.2 *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:²

F739 Test Method for Permeation of Liquids and Gases through Protective Clothing Materials under Conditions of Continuous Contact

F903 Test Method for Resistance of Materials Used in Protective Clothing to Penetration by Liquids

F1001 Guide for Selection of Chemicals to Evaluate Protective Clothing Materials

F1052 Test Method for Pressure Testing Vapor Protective Suits

F1154 Practices for Qualitatively Evaluating the Comfort, Fit, Function, and Durability of Protective Ensembles and Ensemble Components

F1194 Guide for Documenting the Results of Chemical Permeation Testing of Materials Used in Protective Clothing

F1383 Test Method for Permeation of Liquids and Gases through Protective Clothing Materials under Conditions of Intermittent Contact

F2588 Test Method for Man-In-Simulant Test (MIST) for Protective Ensembles

3. Terminology

3.1 Definitions:

3.1.1 *analytical detection limit, n*—a number, expressed in units of concentration (or amount), that describes the lowest concentration level (or amount) that an analyst can determine to be different from an analytical blank (background level).

3.1.2 *biological monitoring, n*—the chemical analysis of chemicals or metabolites, or both, from a worker's blood, urine, fingernails, sweat, breath, and so forth.

3.1.3 *buddy system, n*—a means of organizing employee work groups whereby each participant is matched with another so that prompt assistance can be rendered in the case of any emergency.

3.1.4 *chemical protective clothing (CPC), n*—an item of clothing that is specifically designed and constructed for the intended purpose of isolating all or part of the body from a chemical hazard.

3.1.5 *decontamination, n*—the reduction, removal, or neutralization of contaminant or contaminants from protective clothing to safely permit the protective clothing to be doffed (taken off), or reused, or discarded.

3.1.6 *elastomer, n*—an elastic polymer that has properties similar to rubber.

3.1.7 *fabric, n*—a planar structure consisting of yarns or fibers.

3.1.7.1 *Discussion*—Unlike a polymer sheet, a fabric is normally subject to penetration by gases and liquids.

3.1.8 *Fick's laws of diffusion, n*—mathematical descriptions of the movement of one type of molecule through another.

3.1.8.1 *Discussion*—Diffusion is not due to holes or pores in chemical protective clothing materials.

3.1.9 *hazard assessment, n*—an examination of the workplace to determine if hazards are present, or are likely to be present, which necessitate the use of personal protective equipment (PPE)

3.1.10 *industrial hygienist, n*—a person who, by experience and academic training, is qualified to recognize, evaluate, and

¹ This practice is under the jurisdiction of ASTM Committee F23 on Personal Protective Clothing and Equipment and is the direct responsibility of Subcommittee F23.30 on Chemicals.

Current edition approved Aug. 1, 2012. Published September 2012. Originally approved in 1993. Last previous edition approved in 2007 as F1461 - 07. DOI: 10.1520/F1461-12.

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.