

**INSTITUTE OF
ENVIRONMENTAL
SCIENCES AND
TECHNOLOGY**

**Contamination Control Division
Recommended Practice 005.3**

IEST-RP-CC005.3

**Gloves and Finger Cots Used in
Cleanrooms and Other Controlled
Environments**

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1 SCOPE AND LIMITATIONS

1.1 Scope

This Recommended Practice (RP) describes procedures for testing and evaluating gloves and finger cots used in cleanrooms and other controlled environments. Tests are provided for determining cleanliness, physical and chemical integrity, and other relevant properties. Guidelines are also provided to assist users in the proper selection of gloves or finger cots.

1.2 Limitations

It is impractical to design and manufacture gloves or finger cots to meet all requirements of every application. Therefore, the user should base the selection of gloves and finger cots upon the requirements of the process, the analytical data resulting from evaluation testing, and the product data provided by the manufacturer. The application for which a glove is intended should determine which tests are appropriate and relevant.

2 REFERENCES

2.1 Applicable documents

ANSI/AMMO 11737-1:1995: *Sterilization of medical devices—Microbiological methods—Part 1: Estimation of population of microorganisms on product.*

ANSI/ISEA 105-2000: *American National Standard for Hand Protection Selection Criteria.* Section 6, "Test Method for Chemical Degradation Resistance." The Safety Equipment Association (ISEA).

ASTM D130-94(2000)e1: *Standard Test Method for Detection of Copper Corrosion from Petroleum Products by the Copper Strip Tarnish Test*

ASTM D207-97(1998): *Standard Test Methods for Rubber Products—Chemical Analysis*

ASTM D412-08a: *Standard Test Methods for Vulcanized Rubber and Thermoplastic Elastomers—Tension*

ASTM D413-98: *Standard Test Methods for Rubber Property—Adhesion to Flexible Substrate*

ASTM D471-98e1: *Standard Test Method for Rubber Property—Effect of Liquids*

ASTM D573-99: *Standard Test Method for Rubber—Deterioration in an Air Oven*

ASTM D1349-99: *Standard Practice for Rubber—Standard Temperatures for Testing*

ASTM D2420-91: *Standard Test Method for Hydrogen Sulfide in Liquefied Petroleum (LP) Gases (Lead Acetate Method)*

ASTM D3389-94: *Standard Test Method for Coated Fabrics Abrasion Resistance (Rotary Platform, Double-Head Abrader)*

ASTM D3577-01ae2: *Standard Specification for Rubber Surgical Gloves*

ASTM D3578-01ae2: *Standard Specification for Rubber Examination Gloves*

ASTM D3772-01: *Standard Specification for Rubber Finger Cots*

ASTM D4966-98: *Standard Test Method for Abrasion Resistance of Textile Fabrics (Martindale Abrasion Tester Method)*

ASTM D5151-99: *Standard Test Method for Detection of Holes in Medical Gloves*