

NSF/ANSI/3-A 14159-1 – 2002

# Hygiene requirements for the design of meat and poultry processing equipment

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**NSF International/  
American National  
and 3-A Standard**

NSF/ANSI/3-A 14159-1 – 2002





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The 3-A Sanitary Standards Committees are a voluntary consensus standards development organization dedicated to protection of public health through development and promulgation of equipment standards applied to milk, milk products, and other comestibles. The tripartite 3-A Sanitary Standards Committees represent fabricators, users, and sanitarians.

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**NSF/ANSI/3-A 14159-1 – 2002**

NSF International/  
American National/  
and 3-A Standard for  
Food Processing Equipment

## **Hygiene requirements for the design of meat and poultry processing equipment**

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**NSF International**

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## Foreword<sup>2</sup>

The purpose of this Standard is to establish minimum hygienic design and construction requirements for meat and poultry processing equipment, excluding hand-held tools and mechanical belt conveyors.

This Standard and the accompanying text are intended for voluntary use by certifying organizations, regulatory agencies, users, and equipment manufacturers as a basis for providing assurances that adequate public health protection exists for products covered by the scope of this document.

The 2002 edition of this Standard has been revised to be much easier to understand and to be more applicable to the needs of today's equipment manufacturers, processors, and inspectors. The changes made to the 2000 edition represent the Joint Committee on Food Processing Equipment's best attempt to create a "living" standard that will best serve the meat and poultry processing industry as a whole and primarily serve to protect public health.

Changes made to the 2000 version and found here reflect the address of language and formatting inconsistencies between NSF/3-A/ANSI 14159-1, ISO 14159, and NSF food service equipment standards. Changes also reflect the use of the recently adopted ISO 14159 as the framework document on which this specific standard was developed. More specifically, the inappropriate operator safety references have been removed, the NSF/3-A supplemental requirements have been moved from text boxes to the primary text of the standard, and, where duplicative, NSF/3-A definitions have been included in place of ISO definitions. In addition, sections that did not provide auditable requirements, but only provided information, albeit valuable, were moved to non-normative annexes.

NSF International and the 3-A Sanitary Standards Committees have collaborated to develop this American National Standard for food processing equipment. This Standard was developed by the NSF Joint Committee on Food Processing Equipment using the NSF consensus process as accredited by the American National Standards Institute. The Joint Committee membership includes a balanced representation of equipment manufacturers, food processors and producers, as well as federal, state, and local public health regulators who have food protection responsibility.

Suggestions for improvement of this Standard are welcome. Comments should be sent to the Chair of the Joint Committee on Food Processing Equipment, c/o NSF International, Standards Department, P.O. Box 130140, Ann Arbor, Michigan, 48113-0140, USA.

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## **NSF International<sup>3</sup>**

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### **3-A Sanitary Standards Committees**

The objectives of the 3-A Sanitary Standards Committees are to formulate standards and accepted practices for equipment and systems used to process milk and milk products and other perishable foods. These standards are developed through the cooperative efforts of local, state, and federal sanitarians, equipment manufacturers, and equipment users thereby gaining acceptability by those involved in the sanitary aspects of the dairy and related food industries. The ultimate goal is to protect dairy and food products from contamination and to ensure that all product contact surfaces can be mechanically cleaned or can be dismantled easily for manual cleaning, and when necessary, dismantled for inspection.

The 3-A Sanitary Standards Committees consist of representation from the International Association of Milk, Food and Environmental Sanitarians (IAMFES), the United States Public Health Service, the United States Department of Agriculture, the Dairy Industry Committee (DIC), the International Association of Food Industry Suppliers (IAFIS), and Farm Industry Committee. The success of 3-A is due to mutual cooperation and trust of manufacturers, users, and sanitarians in objectively meeting a need for specific hygienic standards and practices, which has resulted in the adoption of more than 75 voluntary Sanitary Standards and 3-A Accepted Practices. The value of this joint effort is evidenced in the effective application of these standards and practices within the dairy and food industries. 3-A criteria are being used throughout North America and are gaining worldwide recognition through cooperative standards development with the European Hygienic Equipment Design Group (EHEDG), ISO and the International Dairy Federation.

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<sup>3</sup> The information contained in this section is not part of this American National Standard (ANS) and has not been processed in accordance with ANSI's requirements for an ANS. As such, this section may contain material that has not been subjected to public review or a consensus process. In addition, it does not contain requirements necessary for conformance to the Standard.

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## NSF/ANSI/3-A Standard for Food Processing Equipment

# Hygiene requirements for the design of meat and poultry processing equipment

## 1 General

### 1.1 Purpose

This NSF/ANSI/3-A Standard establishes minimum food protection and sanitation requirements for the materials, design, fabrication, and construction of meat and poultry processing equipment. This Standard does not contain operator safety requirements.

### 1.2 Scope

This NSF/ANSI/3-A Standard applies to equipment intended for use in the slaughter, processing, and packaging of meat and poultry products, excluding hand held tools and mechanical belt conveyors. The requirements are to be applied by designers and manufacturers who in turn are to provide guidance to the users for the intended use of the equipment.

Excluded from this NSF/ANSI/3-A Standard are requirements for the uncontrolled egress of micro-biological agents from the equipment.

### 1.3 Measurement

Decimal and metric (SI) conversions provided parenthetically shall be considered equivalent. Metric conversions have been made according to IEEE/ASTM SI 10.

## 2 Normative references

The following documents contain provisions that, through reference, constitute provisions of this NSF/ANSI/3-A Standard. At the time of publication, the editions indicated were valid. All referenced documents are subject to revision, and par-

ties are encouraged to investigate the possibility of applying the most recent editions of the documents listed below.

3-A Accepted Practice, No. 604-04 – 1994, *Supplying air under pressure in contact with milk, milk products, and product contact surfaces*<sup>4</sup>

ANSI/ASME B46.1 - 1995, *Surface texture (surface roughness, waviness, and lay)*<sup>5</sup>

Code of Federal Regulations, Title 21, (21 CFR) Parts 170-199, *Food and Drugs*<sup>6</sup>

Federal Food, Drug, and Cosmetic Act of 1938, as amended<sup>7</sup>

IEEE/ASTM SI 10-1997, *Standard for the Use of the International System of Units (SI): The Modern Metric System*<sup>8</sup>

## 3 Definitions

For the purposes of this Standard, the following definitions apply.

<sup>4</sup> 3-A, International Association of Food Industry Suppliers, 1451 Dolley Madison Boulevard, McLean, VA 22101-3850

<sup>5</sup> American Society of Mechanical Engineers (ASME), Three Park Avenue, New York, NY 10016-5990

<sup>6</sup> U.S. Government Printing Office, Washington, DC 20402

<sup>7</sup> Superintendent of Documents, U.S. Government Printing Office, Mailstop SSOP, Washington, DC 20402-0001

<sup>8</sup> Institute of Electrical and electronics Engineers, Inc., 445 Hoes Lane, Piscataway, NJ 08854