



Designation: F2342/F2342M – 09

Standard Specification for Design and Construction of Composition or Quality Constituent Measuring Devices or Systems¹

This standard is issued under the fixed designation F2342/F2342M; 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 specification covers the requirements for design and construction of electronic devices or systems for measuring composition or quality constituents of live animals, livestock and poultry carcasses, and individual cuts of meat, or a combination thereof. Examples include, but are not limited to, half and whole carcasses, primals, subprimals, and boxed meat.

1.2 The values stated in either SI units or inch-pound units are to be regarded separately as standard. The values stated in each system may not be exact equivalents; therefore, each system shall be used independently of the other. Combining values from the two systems may result in non-conformance with the standard.

1.3 *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 requirements prior to use.*

2. Referenced Documents

2.1 *ASTM Standards:*²

F2463 Terminology for Livestock, Meat, and Poultry Evaluation Systems

3. Terminology

3.1 For definitions relating to livestock, meat, and poultry evaluation systems, see Terminology F2463.

3.2 *Definitions of Terms Specific to This Standard:*

3.2.1 *electronic device, n*—device operating by the principles of electronics, which may consist of one or more subassemblies and perform a specific function.

¹ This specification is under the jurisdiction of ASTM Committee F10 on Livestock, Meat, and Poultry Evaluation Systems and is the direct responsibility of Subcommittee F10.10 on Design Specification.

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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.

3.2.1.1 *Discussion*—Electronic devices may be complete measuring instruments (for example, pH meter, composition measuring device) or part of a measuring instrument (for example, measuring element, indicator).

3.2.2 *electronic system, n*—electronic device or group of electronic devices used to measure and record composition or quality constituents.

3.2.3 *fault condition, n*—abnormal condition that may cause a reduction in, or loss of the capability of, a functional unit to perform a required function.

3.2.3.1 *Discussion*—Principally, a fault is the result of an error in the data contained in or flowing through an electronic measuring device or system.

3.2.4 *inch-pound unit, n*—in ASTM standards, unit based on the inch and pound, commonly used in the United States of America and defined by the National Institute of Standards and Technology, including certain other units accepted for use with the units.

3.2.4.1 *Discussion*—Inch-pound, also known as US Customary Units, are one type of non-SI units. Another example of non-SI units is the centimetre gram second (cgs) system.

3.2.5 *indicating element, n*—element incorporated in a measuring device or system by means of which its output, relative to quantity or quality measurement, is displayed or “read” from the device itself as, for example, a digital indicator.

3.2.6 *meat, n*—all edible products and by-products harvested by the meat-packing industry.

3.2.7 *National Type Evaluation Program (NTEP), n*—program administered by the National Conference on Weights and Measures, Inc. (NCWM) in cooperation with the National Institute of Standards and Technology (NIST), state and local governments, and the private sector for determining, on a uniform basis, conformance of a type, with an applicable standard.

3.2.8 *recording element, n*—element incorporated in a measuring device by means of which its output, relative to quantity or quality measurement, is permanently recorded on a tape, ticket, card, electronic storage medium, or the like, in the form of a printed, stamped, punched, perforated representation, or a retrievable electronic record.