



## Designation: ~~C224 – 78 (Reapproved 2009)~~ C224 – 78 (Reapproved 2014)

# Standard Practice for Sampling Glass Containers<sup>1</sup>

This standard is issued under the fixed designation C224; 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 ( $\epsilon$ ) indicates an editorial change since the last revision or reapproval.

## 1. Scope

1.1 This practice covers the sampling of glass containers (for example, bottles, jars, and so forth) for performing such tests as mechanical strength, dimensions, and other measurable characteristics, and for visual examination.

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:<sup>2</sup>

[C147 Test Methods for Internal Pressure Strength of Glass Containers](#)

[C149 Test Method for Thermal Shock Resistance of Glass Containers](#)

### 2.2 Military Standard:

[MIL-STD 105 E Sampling Procedures and Tables for Inspection by Attributes](#)<sup>3</sup>

## 3. Classification

3.1 For sampling purposes the pertinent characteristics of glass containers are classified as follows:

3.1.1 Grade of annealing (relative annealing stress).

3.1.2 Hydrostatic pressure.

3.1.3 Thermal shock strength.

3.1.4 Visible characteristics readily graded or judged by visual examination, namely, deformities.

3.1.5 Mold characteristics of a structural character (as distinguished from appearance) where the component part or unit of the manufacturing process that controls the characteristic is the mold or mold cavity (as distinguished from the furnace, feeder, or lehr), namely, capacity, dimensions.

## 4. Number of Specimens

4.1 Unless otherwise specified, the minimum number of specimens for the various classifications of Section 3 is given in [Table 1](#).

## 5. Procedure

5.1 *Continuous Process*—Sampling from a continuous manufacturing process shall be in accordance with a time schedule. For those characteristics affected by the degree of annealing, take the samples from the exit of the lehr (or from packed cases whose continuity in point of time is known). For those characteristics not affected by the degree of annealing, quickly cooled samples may be taken ahead of the lehr.

5.2 *Lot*—Select the sample from a lot by a procedure consistent with the purpose of the sample. For some purposes, the sample may come from the lot as a whole; for other purposes, it may be necessary to sort the lot before sampling. Such sorting may be for the purpose of segregating lots based on style, color, size, manufacturer, or mold designation, as examples. Take the specimens composing the sample according to the principles of random sampling; for instance, do not take all the specimens from the same

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<sup>2</sup> For referenced ASTM standards, visit the ASTM website, [www.astm.org](http://www.astm.org), or contact ASTM Customer Service at [service@astm.org](mailto:service@astm.org). For *Annual Book of ASTM Standards* volume information, refer to the standard's Document Summary page on the ASTM website.

<sup>3</sup> Available from Standardization Documents Order Desk, DODSSP, Bldg. 4, Section D, 700 Robbins Ave., Philadelphia, PA 19111-5098, <http://www.dodssp.daps.mil>.