



Designation: C324 – 01(Reapproved 2007)

Standard Test Method for Free Moisture in Ceramic Whiteware Clays¹

This standard is issued under the fixed designation C324; 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 test method covers the determination of free moisture in ceramic whiteware clays. Whiteware clays may be shipped as a bulk shipment in lumps, a bulk shipment of shredded or coarsely ground clay, or in bagged lots of ground or airfloated clay. Directions are given in this test method for obtaining representative samples of the clay shipment to be used in subsequent tests for the properties of the clay in the shipment.

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

C332 Specification for Lightweight Aggregates for Insulating Concrete

¹ This test method is under the jurisdiction of ASTM Committee C21 on Ceramic Whitewares and Related Products and is the direct responsibility of Subcommittee C21.04 on Raw Materials.

Current edition approved May 1, 2007. Published May 2007. Originally approved in 1953. Last previous edition approved in 2001 as C324 – 01^{ε1}. DOI: 10.1520/C0324-01R07.

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. Sampling

3.1 The sample shall be obtained in accordance with Specification C332. The sample submitted for testing shall weigh not less than 1000 g and shall be kept in an airtight container to prevent loss of water before testing.

4. Procedure

4.1 Remove the sample of clay from its container. Weigh about 500 g of the sample to the nearest 0.1 g. Spread out the weighed portion of the sample in a weighed shallow metal or porcelain container, and dry at 100 to 110°C for 24 h in a drying oven. Reweigh the dried clay, as quickly as possible, to the nearest 0.1 g.

5. Calculation

5.1 Calculate the percentage of free moisture to the nearest 0.1 % as follows:

$$\text{Free moisture, dry weight basis, \%} = [(A - B)/B] \times 100 \quad (1)$$

$$\text{Free moisture, wet weight basis, \%} = [(A - B)/A] \times 100 \quad (2)$$

where:

A = "as-received" weight of the portion of the sample used and

B = weight of sample after drying.

6. Keywords

6.1 ceramic whiteware clays; free moisture

ASTM International takes no position respecting the validity of any patent rights asserted in connection with any item mentioned in this standard. Users of this standard are expressly advised that determination of the validity of any such patent rights, and the risk of infringement of such rights, are entirely their own responsibility.

This standard is subject to revision at any time by the responsible technical committee and must be reviewed every five years and if not revised, either reapproved or withdrawn. Your comments are invited either for revision of this standard or for additional standards and should be addressed to ASTM International Headquarters. Your comments will receive careful consideration at a meeting of the responsible technical committee, which you may attend. If you feel that your comments have not received a fair hearing you should make your views known to the ASTM Committee on Standards, at the address shown below.

This standard is copyrighted by ASTM International, 100 Barr Harbor Drive, PO Box C700, West Conshohocken, PA 19428-2959, United States. Individual reprints (single or multiple copies) of this standard may be obtained by contacting ASTM at the above address or at 610-832-9585 (phone), 610-832-9555 (fax), or service@astm.org (e-mail); or through the ASTM website (www.astm.org). Permission rights to photocopy the standard may also be secured from the ASTM website (www.astm.org/COPYRIGHT/).