



Standard Method of Test for NUMBER OF NEPS IN COTTON SAMPLES¹

This Standard is issued under the fixed designation D 1446; 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.

1. Scope

1.1 This method covers the determination of the number of neps larger than a specified size in samples of raw or partially processed cotton.

1.2 The procedure described is not recommended for acceptance testing and should not be used in purchase specifications because of the difficulty of securing reproducible results.

2. Applicable Documents

2.1 *ASTM Standards:*

D 123 Definitions of Terms Relating to Textile Materials²

D 1440 Test for Length and Length Distribution of Cotton Fibers (Array Method)²

D 1441 Sampling Cotton Fibers for Testing²

3. Definitions

3.1 *nep*, *n*—One or more fibers occurring in a tangled and unorganized mass.

3.1.1 Neps are distinct from certain other imperfections found in cotton, including fibers still attached to parts of seeds. One of these imperfections is the "mote," which consists of a whole undeveloped seed of any size or age, covered with fuzz and short fibers, certain of which bear mature lint fibers. Seed coat and mote fragments with lint or fuzz fibers attached are not neps. Large masses of curled and more-or-less loosely matted fibers found in raw cotton and in cotton in the opening and picking processes are sometimes called "naps." True naps disappear during carding and subsequent processing and are not neps.

3.2 For definitions of other terms used in this method, refer to Definitions D 123.

4. Summary of Method

4.1 The specimen is spread on a dark background, either by hand or mechanically, into a web thin enough that all the neps are easily visible. The neps are classified as to size by comparison with a photographic standard, and the neps larger than a specified size are counted. Neps are reported on the basis of the number per unit weight or per unit area.

5. Uses and Significance

5.1 For most uses, neps are considered an undesirable quality in cotton since they cause cotton yarns to appear rough. Also, abrasion of the neps may cause yarn breakage in winding, because of the accumulation of broken fibers in guides, tension devices, or slub catchers, and difficulties in slashing and weaving. Fabrics woven from neppy yarns have an unattractive appearance, and when dyed, any neps composed largely of immature fibers are likely to stand out as light-colored, white, or dark specks.

NOTE 1—The term weight is used in this method, because of established trade practice, in place of the technically correct term "mass."

5.2 It is difficult, if not impossible, to prepare a specimen of raw cotton for nep counting without adding appreciably to the number of neps already present, since any mechanical method of preparing specimens (such as carding or by the use of laboratory machines to form suitable webs) may increase

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² *Annual Book of ASTM Standards*, Part 25.