



Designation: E982 – 94 (Reapproved 2004)

Standard Specification for Laboratory Glass Test Tubes¹

This standard is issued under the fixed designation E982; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of last revision. An underscored number indicates the year of superscript epsilon (ϵ) indicates an editorial change since the last revision or reapproval.

Specification E438. Class A screw caps shall be molded of phenol-formaldehyde type resin, which is free of cellulose acetate and urea, in accordance with Specification D700. Class B screw cap shall be molded of polypropylene resin in accordance with Specification D2146. Screw caps shall not deform, crack, turn color, or become tacky; and liners shall not detach or become tacky when autoclaved the first time.

4.3 *Liners*—Liners for Class A screw caps shall be fabricated of resilient white rubber. Class B caps shall have a polytetrafluoroethylene liner interface firmly bonded to the glued-in white rubber liner as described for Class A caps.

4.4 *Annealing*—Maximum thermal residual stress shall be in accordance with Specification E671 approval. A superscript epsilon (ϵ) indicates an editorial change since the last revision or reapproval.

5. Design

5.1 *Shape*—Test tubes covered by this specification shall be tubular, with one end having a rounded closure.

5.2 *Capacity*—Capacities on ungraduated tubes are only approximate, but any graduation on Type II tubes shall indicate the contained capacity within $\pm 5\%$ of nominal tube capacity.

5.3 *Types I and II*—The open end of Types I and II test tubes shall have a beaded rim; dimensions shall be as specified in Table 1.

5.4 *Type III*—The open end of Type III test tubes shall have a standard taper stopper. The joint and stopper shall be in accordance with Specification E675 and Table 1.

5.5 *Types IV, V, and VIII*—The open end of Types IV, V, and VIII test tubes shall be rimless and fire polished, dimensions shall be as specified in Table 1.

5.6 *Type VI*—The open end of Type VI test tubes shall have a standard GPI thread finish made to accommodate a plastic screw-on type cap. The inner edge of the cap shall be sufficiently threaded with a continuous thread formed as an integral part of the cap. The cap shall form a close fit with the tube to prevent loss of the contents. Class A and B screw caps shall be lined with tight-fitting cemented-in liner. Class C screw caps shall be one piece and shall contain no liner. Dimensions and threaded finish of the test tubes shall be as shown in Table 1.

5.7 *Type VII*—The open end of Type VII test tubes shall have a beaded rim and a ribbed sidearm near the open end. Dimensions shall be as specified in Table 1.

5.8 *Area for Marking*—Side wall of test tubes (except Types VII and VIII) may have an area that provides for marking. This area shall be durable, fused-on white enamel or roughened by sandblasting.

6. Identification Marking

6.1 Each test tube may be permanently and legibly marked with the manufacturer's name or trademark.

7. Sampling and Testing

7.1 For sampling, refer to Specification E1157.

8. Packaging

8.1 For packaging, select from Specifications E920, E921, or Practice E1133.

9. Keywords

9.1 glass; test; tubes