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Standard Specification for Laboratory Glass Boiling Flasks¹

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1. Scope

1.1 This specification provides standard dimensional requirements for flat-bottom and round-bottom glass boiling flasks.

NOTE 1—For packaging standards, choose among the following standards, E 920, E 921, E 1133, and E 1157.

2. Referenced Documents

2.1 *ASTM Standards:*²

E 438 Specification for Glasses in Laboratory Apparatus

E 671 Specification for Maximum Permissible Thermal Residual Stress in Annealed Glass Laboratory Apparatus

E 676 Specification for Interchangeable Taper-Ground Joints

E 677 Specification for Interchangeable Spherical Ground Joints

E 920 Specification for Commercially Packaged Laboratory Apparatus

E 921 Specification for Export Packaged Laboratory Apparatus

E 1133 Practice for Performance Testing of Packaged Laboratory Apparatus for United States Government Procurements

E 1157 Specification for Sampling and Testing of Reusable Laboratory Glassware

3. Classification

3.1 Boiling flasks shall be in the following types and sizes.

3.1.1 *Type I*—Flat bottomed

3.1.1.1 *Class 1*—Tooled top; long neck in the following sizes: 50 mL, 125 mL, 250 mL, 500 mL, 1 000 mL, 2 000 mL, 3 000 mL, 6 000 mL, and 12 000 mL.

3.1.1.2 *Class 2*—Ring neck, long neck in the following sizes: 500 mL, 1 000 mL, 2 000 mL, 6 000 mL, and 12 000 mL.

3.1.1.3 *Class 3*—Ring neck, long neck, wicker protector in the following size: 500 mL and 1000 mL.

3.1.1.4 *Class 4*—Standard Taper ($\bar{\text{S}}$) neck, short neck in the following sizes: 50 mL, 125 mL, 250 mL, 300 mL, 500 mL, and 1000 mL.

3.1.1.5 *Class 5*—Standard Taper ($\bar{\text{S}}$) neck, long neck in the following sizes: 250 mL, 500 mL, and 1000 mL.

3.1.2 *Type II*—Round Bottomed

3.1.2.1 *Class 1*—Tooled top, long neck in the following sizes: 25 mL, 50 mL, 100 mL, 250 mL, 500 mL, 1000 mL, 2000 mL, 5000 mL, and 6000 mL.

3.1.2.2 *Class 2*—Ring neck, short neck in the following sizes: 250 mL, 500 mL, 1 000 mL, 2 000 mL, 3 000 mL, 5 000 mL, 12 000 mL, and 22 000 mL.

3.1.2.3 *Class 3*—Standard Taper ($\bar{\text{S}}$) neck, short neck in the following sizes: 5 mL, 10 mL, 25 mL, 50 mL, 100 mL, 250 mL, 500 mL, 1 000 mL, 2 000 mL, 3 000 mL, 5 000 mL, and 12 000 mL.

3.1.2.4 *Class 4*—Standard Taper ($\bar{\text{S}}$) neck, long neck in the following sizes: 100 mL, 250 mL, 500 mL, and 1000 mL.

3.1.2.5 *Class 5*—Standard Taper ($\bar{\text{S}}$) neck, short neck with side arm in the following sizes: 250 mL and 300 mL.

3.1.2.6 *Class 6*—Standard Taper ($\bar{\text{S}}$) neck, short neck with thermometer well in the following sizes: 500 mL, 1000 mL, and 2000 mL.

3.1.2.7 *Class 7*—Ball and socket ($\bar{\text{S}}$) neck, short neck in the following sizes 250 mL, 500 mL, 1000 mL, and 2000 mL.

3.1.3 *Type III*—Heart-shape bottomed

3.1.3.1 *Class 1*—Standard Taper ($\bar{\text{S}}$) neck, short neck in the following sizes: 5 mL, 10 mL, 25 mL, 50 mL, and 100 mL.

NOTE 2—The term millilitre (mL) is commonly used as a special name for the cubic centimetre (cm³) and similarly the litre (L) for 1000 cubic

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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, Vol 14.02, volume information, refer to the standard's Document Summary page on the ASTM website.