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Standard Specification for Crucibles, Ignition, Laboratory, Metal[1]

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This standard has been approved for use by agencies of the U.S. Department of Defense.

1. Scope

1.1 This specification covers two types of metal ignition crucibles, nickel or platinum, complete with covers, for laboratory use.

2. Referenced Documents

2.1 *ASTM Standards:*[2]
B162 Specification for Nickel Plate, Sheet, and Strip
2.2 *Federal Standards:*[3]
Fed. Std. No. 123 Marking for Shipment (Civil Agencies)
2.3 *Military Standards:*[3]
MIL-STD-105 Sampling Procedures and Tables for Inspection by Attributes
MIL-STD-129 Marking for Shipment and Storage
MIL-STD-1188 Commercial Packaging of Supplies and Equipment

3. Classification

3.1 *Types and Capacities*—The crucibles shall be furnished in one or more of the following types or capacities as specified (see S2.1).

3.1.1 *Type I*—Nickel.

Capacity: 100 mL
250 mL

3.1.2 *Type II*—Platinum.

Capacity: 20 mL

4. Materials

4.1 *Type I*—Crucibles and covers shall be made from 99.4 % nickel, spun and hardened in conformance with Specification B162.

4.2 *Type II*—Crucibles and covers shall be made from 99.9 % platinum plus iridium, with the iridium content of not more than 0.4 %.

5. Physical Requirements

5.1 *Crucibles* shall have a standard shape with a flat base to give a firm and stable resting surface. The side wall shall form a sloping and convex surface extending up to the brim. Crucibles shall be of one-piece construction.

5.2 *Covers* shall be flat, sunken in the center, and shall have an extension to serve as a handle. The sunken area in the center shall fit inside the crucible.

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[1] This specification is under the jurisdiction of ASTM Committee E41 on Laboratory Apparatus and is the direct responsibility of Subcommittee E41.01 on ~~Apparatus~~Laboratory Ware and Supplies.

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

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

6. Dimensions, Mass, and Permissible Variations

6.1 *Type I* crucibles and covers shall conform to the requirements of Table 1.

6.2 *Type II Crucibles and Covers:*

6.2.1 Type II crucibles shall conform to the requirements of Table 2.

6.2.2 Type II covers shall conform to the requirements of Table 3.

7. Workmanship

7.1 Crucibles and covers shall be free of defects (scratches, dents, discolorations) or contamination (grease, oil, foreign matter) that detract from their appearance or that impair their serviceability.

8. Keywords

8.1 crucibles; ignition; nickel; platinum

TABLE 1 Crucible Dimensions (Type I)

Capacity, mL	Outside Diameter, mm	Bottom OD[A], mm	Height, mm	Wall Thickness[B], mm	OD[A] Exclusive of Handle, mm	Length[A] incl. Handle, mm	Inside[B] Diameter of Sunken Section, mm	Wall[A] Thickness, mm
100	60	30	64	0.625	67	92	58	0.625
250	83	50	83	0.625	92	116	83	0.625

[A] Tolerance ± 2 mm.
[B] Tolerance ± 0.25 mm.