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Standard Specification for Color Coding of Reusable Laboratory Pipets¹

This standard is issued under the fixed designation E 1273; 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.

ϵ¹ Note—Section 7, Keywords, was added editorially in March 1998.

1. Scope

- 1.1 This specification covers a system of color coding for one-mark pipets for identification of nominal capacities, and for graduated pipets for identification of nominal capacities and units of sub-division.
- 1.2 This specification applies to one-mark and graduated pipets of the nominal capacities listed in Table 1 and Table 2, respectively.

Note 1—Many pipets not covered by other ASTM standards are included in Table 1 and Table 2, in order, firstly, to ensure uniformity of color coding as far as possible for non-standard as well as standard pipets and, secondly, to reserve suitable codes for possible future standards for other types of pipet.

2. Referenced Documents

- 2.1 ASTM Standards:
- E 1157 Specification for the Sampling and Testing of Reusable Laboratory Glassware²

3. Significance and Use

3.1 The purpose of this specification is to ensure that if a color code is used on pipets, all manufacturers will use the same code; it is not intended as an encouragement of color coding if this is not required.

4. Color Properties

- 4.1 *Coding*—The color coding used on one-mark pipets shall be in accordance with Table 1, and graduated pipets shall be in accordance with Table 2.
- 4.2 *Variations*—Variations in the enamels used in the methods of application appropriate for pipets made from different types of glass inevitably result in minor variations of color, and it is therefore not appropriate to specify closely the seven colors listed in the tables.

5. Marking Requirements

5.1 The color code shall take the form of color bands

TABLE 1 Coding System for One-Mark Pipets

0.001	Nominal Capacity, mL	Color Code Bands
0.003 0.004 0.005 1 white 0.01 1 orange 0.015 2 blue 0.02 1 black 0.025 2 white 0.03 2 yellow 0.035 2 black 0.04 2 red 0.05 1 green 0.075 2 orange 0.1 1 blue 0.15 0.2 1 red 0.2 1 yellow 0.4 2 red 0.5 1 yellow 0.5 1 white 0.2 1 blue 1 orange 3 thick 0.04 2 red 0.5 2 green 1 yellow 0.5 2 green 1 yellow 0.6 1 blue 1 orange 3 thick 4 2 red 0.5 2 black 1 blue 1 orange 3 thick 4 2 red 0.5 1 blue 1 orange 3 thick 4 thick 4 thick 5 thick 1 blue 9 thick 1 blue 9 thick 1 blue 9 thick 1 blue 1 thick	0.001	1 blue
0.004	0.002	2 red
0.005 0.01 0.01 0.015 0.02 1 blue 0.02 0.025 2 white 0.03 0.035 2 yellow 0.035 0.04 2 red 0.05 0.075 2 orange 0.1 1 blue 0.15 0.2 1 red 0.2 1 red 0.5 1 yellow 0.4 0.5 1 yellow 0.4 0.5 1 blue 1 orange 0.1 1 blue 0.15 1 white 0.2 1 red 0.5 1 preon 0.7 2 green 0.8 1 blue 1 orange 1 black 1 blue 1 orange 3 1 black 4 2 red 1 white 2 orange 1 black 4 2 red 1 blue 1 orange 3 1 black 4 2 red 1 blue 1 orange 1 black 4 1 red 1 orange 1 black 4 1 preon 1 blue 1 orange 1 black 4 1 preon 1 blue 1 orange 1 black 4 1 preon 1 blue 1 orange 1 black 4 1 preon 1 blue 1 orange 1 black 1 orange	0.003	1 yellow
0.005 0.01 0.015 0.02 1 blue 0.025 2 white 0.03 0.035 2 yellow 0.035 2 black 0.04 2 red 0.05 1 green 0.075 2 orange 0.1 1 blue 0.15 0.2 1 red 0.25 2 green 0.3 1 yellow 0.4 2 red 0.5 1 yellow 0.5 1 tred 0.5 1 blue 1 orange 3 1 blue 1 orange 3 1 blue 1 orange 3 1 black 4 2 red 4 2 red 1 white 2 orange 3 1 black 4 2 red 1 blue 1 orange 3 1 black 4 2 red 1 blue 9 1 black 10 1 red 15 1 green 1 yellow 2 green 1 yellow 2 red 1 blue 1 orange 1 black 4 1 pred 1 blue 1 orange 1 black 4 1 pred 1 blue 1 bl	0.004	2 green
0.015 0.02 0.025 0.03 0.035 0.03 0.035 0.04 0.05 0.075 0.1 0.15 0.1 0.15 0.2 0.25 0.25 0.3 0.4 0.5 0.5 0.5 0.5 0.5 0.5 0.6 0.7 0.7 0.8 0.7 0.8 0.9 0.9 0.9 0.9 0.9 0.9 0.9 0.9 0.9 0.9	0.005	
0.02	0.01	1 orange
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0.04 0.05 0.075 0.075 0.075 0.1 1 blue 0.1 0.15 1 white 0.2 1 red 0.25 2 green 0.3 0.4 0.5 2 black 1 blue 1 orange 3 1 black 4 2 red 3 8 1 black 4 2 red 1 white 6 2 orange 8 1 black 9 1 black 10 1 red 15 1 green 20 1 yellow 25 1 blue 1 orange 1 black 1 tred 1 t	0.03	2 yellow
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0.075 0.1 1 blue 0.15 0.2 1 red 0.25 0.3 0.4 0.5 1 blue 0.5 1 blue 0.5 1 blue 1 orange 3 1 black 4 2 red 5 1 white 6 2 orange 1 black 9 1 black 10 1 red 15 1 green 10 1 red 15 1 green 10 1 black 40 1 white 50 1 red 1 pellow	0.04	2 red
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0.25 0.3 0.4 0.5 1	0.15	1 white
1 yellow 2 red 0.4 0.5 2 black 1 blue 1 orange 3 1 black 4 2 red 3 white 2 orange 1 blue 1 green 1 yellow 2 black 1 white 1 preen 1 blue 1 blu	0.2	1 red
0.4 0.5 2 red 0.5 1 blue 1 orange 3		2 green
0.4 0.5 2 red 0.5 1 blue 1 orange 3	dards o.3 teh all	1 yellow
1 blue 1 orange 3	0.4	2 red
3 1 black 4 2 red 3-88(1997) 6 2 orange 18cb-4a30-87 27-3cafc490d09 2 green 273-881997 8 1 blue 9 1 black 10 1 red 15 1 green 20 1 yellow 25 1 blue 30 1 black 40 1 white 50 1 red 75 1 green 100 1 yellow 2 1 yellow 2 2 1 yellow 2 2 2 3 1 black 4 2 3 1 black 4 3 1 black 4 4 1 black 5 1 black 5 1 black 6 1 yellow 7 2 1 green 7 3 1 green 1 1 yellow 1 5 1 yellow		2 black
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25 1 blue 30 1 black 40 1 white 50 1 red 75 1 green 100 1 yellow 150 2 black		
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50 1 red 75 1 green 100 1 yellow 150 2 black		
75 1 green 100 1 yellow 150 2 black		
100 1 yellow 150 2 black		
150 2 black		
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	200	1 blue

extending at least 150° around the circumference of the pipet and situated not more than 70 mm from the top of the pipet and not less than 20 mm above the nearest graduation line.

5.2 For a code consisting of a single band of color, the band shall be 5 to 10 mm wide. For a code consisting of two bands of color, each band shall be 3 to 5 mm wide and the two bands shall be separated by a space of 2 to 3 mm. Color bands do not have to be continuous but may be broken as long as they cover 40 % of the circumference of the pipet.

¹ This specification is under the jurisdiction of ASTM Committee E-41 on Laboratory Apparatus and is the direct responsibility of Subcommittee E41.01 on Glass Apparatus

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² Annual Book of ASTM Standards, Vol 14.02.