INTERNATIONAL STANDARD

ISO 6009

Fourth edition 2016-08-01

Hypodermic needles for single use — Colour coding for identification

Aiguilles hypodermiques non réutilisables — Code de couleurs pour l'identification





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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the WTO principles in the Technical Barriers to Trade (TBT) see the following URL: Foreword - Supplementary information.

The committee responsible for this document is ISO/TC 84, *Devices for administration of medicinal products and catheters*.

This fourth edition cancels and replaces the third edition (ISO 6009:1992), which has been technically revised. It also incorporates a Technical Corrigendum ISO 6009:1992/Cor.1:2008.

The main changes to the previous edition of ISO 6009 introduced by this revision are the following:

- a) broadening of the range of needles to designated needle size down to 0,18 mm;
- b) review of the use of instrumentally determined colour zones (chromaticity and luminance index) as used in previous editions to specify opaque colours and has decided that instrumental measurement is not practicable;
- c) revision of Annex A;
- d) deletion of Annex B.

Introduction

The intention of this International Standard is to specify colours to enable rapid visual identification of the outer diameter of single-use hypodermic needles. The presence of colour coding on a needle or package does not absolve the user of the responsibility to check the marked size of the needle. This revision defines, in addition, colours for more fine needles to follow the trend in the market.

The colours used to code needles may be applied in either opaque or transparent form, and the colour code is equally applicable to regular walled, thin-walled, extra-thin and ultra-thin walled needles. The nominal outer diameters of needles listed in this International Standard for which colours are given are those specified in ISO 9626.

This International Standard establishes a colour code but does not specify that needles are to be colour-coded or to what portion of the needle and/or packaging the colour is to be applied. Such requirements may be given in the relevant product standards such as ISO 7864.

The measurement of the colour zone of an opaque colour, especially of an item of the size and shape of the hub of a needle, is a complex procedure requiring apparatus and expertise that is to be found in relatively few laboratories and test houses. It may therefore be inconvenient, difficult or impossible for a manufacturer or purchaser routinely to assess compliance of a product with colour zone values. Such difficulties are compounded in the case of translucent colours, which are being used increasingly by needle manufacturers to allow air bubbles inside the hub to be seen and eliminated before injection.

As a consequence, the colours in this International Standard are only referenced by a colour reference system (RAL) or by Pantone Matching System accepting that this inevitably introduces a certain amount of subjectivity in the assessment of compliance.

Guidance on transition periods for implementing the requirements of this International Standard is given in ISO/TR 19244.

Hypodermic needles for single use — Colour coding for identification

1 Scope

This International Standard establishes a colour code for the identification of single-use hypodermic needles of designated metric size in the range of 0,18 mm (34 Gauge) to 3,4 mm (10 Gauge). It applies to regular-walled, thin-walled, extra-thin-walled and ultra-thin walled needles, and to opaque and translucent colours.

This International Standard is not applicable to pen-needles.

2 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

2.1

designated metric size

outer diameter designation of the tubing as defined in Table 1

Note 1 to entry: It is expressed in millimetres.

2.2

gauge

legacy size designation

Note 1 to entry: A particular gauge size corresponds to a designated metric size defining limits for outer diameters.

3 Colour code

The colour shall indicate the nominal outer diameter of the tube of the needle and shall be as given in Table 1.

<u>Annex A</u> contains certain guidance to commonly applied colour reference systems for opaque materials.

Designated metric size mm	Gauge	Colour
0,18	34	Orange
0,2	33	Black
0,23	32	Deep green
0,25	31	White
0,3	30	Yellow
0,33	29	Red
0,36	28	Blue-green
0,4	27	Medium grey
0,45	26	Brown
0,5	25	Orange
0,55	24	Medium purple

Table 1 — Colour code

 Table 1 (continued)

Designated metric size mm	Gauge	Colour
0,6	23	Deep blue
0,7	22	Black
0,8	21	Deep green
0,9	20	Yellow
1,1	19	Cream
1,2	18	Pink
1,4	17	Red-violet
1,6	16	White
1,8	15	Blue-grey
2,1	14	Pale green
2,4	13	Purple
2,7	12	Pale blue
3	11	Green-yellow
3,4	10	Olive brown

Annex A (informative)

Reference colour samples

Table A.1 — Reference colour samples

Designated metric size mm	Gauge	Colour	RAL reference	Pantone reference
			2007	1575
0,18	34	Orange	2003	157
			2008	164
			9004	Black 3
0,2	33	Black	9005	Black 4
			9017	Black 6
			6010	348
0,23	32	Deep green	6001	349
			6002	350
			9003	11-0601
0,25	31	White	9010	11-0602
			9016	11-0103
			1018	102
0,3	30	Yellow	1021	107
			1023	109
		Red	3017	1797
0,33	29		3018	711
			3031	187
			5009	3025
0,36	28	Blue-green	5001	302
			5020	309
			7047	427
0,4	27	Medium grey	7035	428
			7044	429
			8016	7517
0,45	26	Brown	8017	7518
			8015	7519
	25	Orange	2007	1575
0,5			2003	157
			2008	164
	24	Medium purple	4001	666
0,55			4005	667
			Not available	668

Table A.1 (continued)

Designated metric size mm	Gauge	Colour	RAL reference	Pantone reference
			5005	294
0,6	23	Deep blue	5010	541
			5002	540
			9004	Black 3
0,7	22	Black	9005	Black 4
			9017	Black 6
			6010	348
0,8	21	Deep green	6001	349
			6002	350
			1018	102
0,9	20	Yellow	1021	107
			1023	109
			1014	4545
1,1	19	Cream	1015	4535
			1001	4527
		Pink	Not available	196
1,2	18		3015	197
			3014	701
	17	Red-violet	Not available	2395
1,4			4006	2405
			4008	2415
	6 16	White	9003	11-0601
1,6			9010	11-0602
			9016	11-0103
			7000	7544
1,8	15	Blue-grey	7031	7545
			7011	7546
			Not available	331
2,1	14	Pale green	6019	344
			6021	345
	13	Purple	4001	666
2,4			4005	667
			Not available	668

Table A.1 (continued)

Designated metric size mm	Gauge	Colour	RAL reference	Pantone reference
			5015	285 C ¹
2,7	12	Pale blue	5012	2925 C ¹
			5024	7454 C ¹
			Not available	367
3	11	Green-yellow	6018	368
			Not available	369
			6007	554
3,4	10	Olive brown	6008	553
			6015	5605

RAL Colour palette:

RAL CLASSIC Colour palette K5, Edition 2012 used for definition in ISO 6009 Two other colour palettes available from RAL were not taken into consideration: RAL EFFECT Colour palette E2, Edition 2007 RAL DESIGN Colour palette D2, Edition 2013

Manufacturer:

RAL gemeinnützige GmbH Siegburger Straße 39 53757 Sankt Augustin

Telephone (within Germany): 0 22 41 - 2 55 16 - 30 Telephone (international): +49 (0) 22 41 - 2 55 16 - 60

Fax: + 49 (0) 22 41 – 2 55 16 - 16 E-Mail: RAL-Colours@RAL-gGmbH.de

Pantone colour palette:

PANTONE COLOR BRIDGE uncoated PANTONE COLOR BRIDGE coated

Manufacturer:

Pantone LLC 590 Commerce Boulevard Carlstadt, New Jersey 07072-3098 USA

Tel: 201-935-5500 Fax: 201-896-0242

E-Mail: corpnj@pantone.com Web: <u>www.pantone.com</u>

Bibliography

- [1] ISO 7864, Sterile hypodermic needles for single use Requirements and test methods
- [2] ISO 9626, Stainless steel needle tubing for the manufacture of medical devices Requirements and test methods
- [3] ISO/TR 19244, Guidance on transition periods for standards developed by ISO/TC 84 Devices for administration of medicinal products and catheters

