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AMENDMENT 1
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Jewellery — Colours of gold alloys — Definition, range of colours and designation

AMENDMENT 1

Joaillerie, bijouterie — Couleurs des alliages d'or — Définition, gamme de couleurs et désignation

AMENDEMENT 1

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This document was prepared by Technical Committee ISO/TC 174, *Jewellery and precious metals*.

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Jewellery — Colours of gold alloys — Definition, range of colours and designation

AMENDMENT 1

5.2.2.1

Add the following new paragraph:

"This document describes the colour measurement of gold alloy coatings with a 2° standard observer. Annex B shall be given for the colour measurement with a 10° standard observer which is also widely used in the industry."

After Annex A

Add the following new Annex B:

Annex B
(normative)

Colour measurement with a standard 10° observer

B.1 General

This annex describes the spectrophotometer setup and the nominal values for the colour measurement with a 10° standard observer.

When a 10° standard observer is used, it shall be specified with a clear reference to the present document.

B.2 Spectrophotometer setup and colour measurement

The colour measurement shall be done according to Clause 5, except for the setup of the apparatus (5.2.2.3) that shall be done with the following parameter:

— 10° standard observer.

B.3 Gold alloy colours using a 10° standard observer

Colour nominal values and tolerances are given in Tables B.1, B.2 and B.3 in accordance with 5.2. and B.2.

Figures B.1, B.2, B.3, and B.4 illustrate graphically nominal and tolerance values.

Table B.1 — Nominal values and tolerances for xyY using a 10° standard observer

Colour	Chromaticity coordinates					
	Nominal values			Tolerances		
	x	y	Y	x	y	Y (max/min)
0N	0,3497	0,3715	83,1	0,3549 0,3479 0,3448 0,3511	0,3734 0,3662 0,3693 0,3771	86,8 79,3
1N	0,3564	0,3705	79,9	0,3607 0,3543 0,3522 0,3583	0,3719 0,3663 0,3688 0,3748	83,6 76,2
2N	0,3647	0,3760	76,7	0,3688 0,3628 0,3607 0,3664	0,3771 0,3721 0,3748 0,3801	80,4 72,9
3N	0,3649	0,3706	74,4	0,3696 0,3622 0,3604 0,3675	0,3719 0,3665 0,3691 0,3749	78,1 70,7
4N	0,3641	0,3648	72,4	0,3685 0,3614 0,3598 0,3667	0,3656 0,3611 0,3637 0,3686	76,1 68,7
5N	0,3625	0,3587	69,9	0,3666 0,3597 0,3585 0,3651	0,3592 0,3556 0,3581 0,3621	73,6 66,2
6N	0,3595	0,3525	67,6	0,3636 0,3565 0,3556 0,3624	0,3528 0,3497 0,3520 0,3555	71,3 63,9

Table B.2 — Nominal values and tolerances for *L*a*b using a 10° standard observer**

Colour	Chromaticity coordinates					
	Nominal values			Tolerances		
	*L**	*a**	*b**	*L** (max/min)	*a**	*b**
0N	93,0	−1,14	21,15	94,6 91,4	0,38 0,32 −2,41 −2,85	22,82 18,94 19,40 23,36
NOTE Tolerances on *a** and *b** are converted from xyY using the nominal value of Y.						

Table B.2 *(continued)*

Colour	Chromaticity coordinates					
	Nominal values			Tolerances		
	*L**	*a**	*b**	*L** (max/min)	*a**	*b**
1N	91,6	2,27	21,84	93,3	3,54	23,20
					3,10	19,98
				89,9	1,13	20,44
					1,29	23,72
2N	90,2	3,47	25,10	91,9	4,74	26,31
					4,29	23,37
				88,4	2,30	23,86
					2,54	26,85
3N	89,1	5,74	23,05	90,8	7,16	24,43
					6,32	21,09
				87,3	4,45	21,63
					5,04	25,04
4N	88,1	7,78	20,71	89,9	9,25	21,86
					8,16	18,93
				86,3	6,42	19,51
					7,26	22,52
5N	87,0	9,51	18,11	88,8	11,01	19,05
					9,72	16,52
				85,1	8,12	17,12
					9,19	19,74
6N	85,8	10,82	15,27	87,7	12,38	16,12
					10,76	13,77
				83,9	9,35	14,37
					10,75	16,82
NOTE Tolerances on *a** and *b** are converted from xyY using the nominal value of Y.						

Table B.3 — Nominal values and tolerances for *L*C*h* using a 10° standard observer

Colour	Chromaticity coordinates					
	Nominal values			Tolerances		
	*L**	*C**	*h* (deg)	*L** (max/min)	*C**	*h* (deg)
0N	93,0	21,18	93,10	94,6	22,83	89,06
					18,94	89,03
				91,4	19,55	97,09
					23,53	96,95
1N	91,6	21,96	84,08	93,3	23,47	81,33
					20,22	81,17
				89,9	20,47	86,83
					23,75	86,89
NOTE Tolerances on *C** and *h* are converted from xyY using the nominal value of Y.						

Table B.3 *(continued)*

Colour	Chromaticity coordinates					
	Nominal values			Tolerances		
	L^*	C^*	h (deg)	L^* (max/min)	C^*	h (deg)
2N	90,2	25,34	82,13	91,9	26,74	79,78
					23,76	79,60
				88,4	23,97	84,50
					26,97	84,59
3N	89,1	23,76	76,01	90,8	25,46	73,66
					22,02	73,33
				87,3	22,08	78,38
					25,54	78,62
4N	88,1	22,12	69,42	89,9	23,73	67,07
					20,61	66,67
				86,3	20,54	71,80
					23,66	72,12
5N	87,0	20,46	62,29	88,8	22,00	59,97
					19,16	59,53
				85,1	18,95	64,64
					21,78	65,03
6N	85,8	18,71	54,70	87,7	20,32	52,47
					17,47	51,99
				83,9	17,15	56,97
					19,96	57,43
NOTE Tolerances on C^* and h are converted from xyY using the nominal value of Y.						

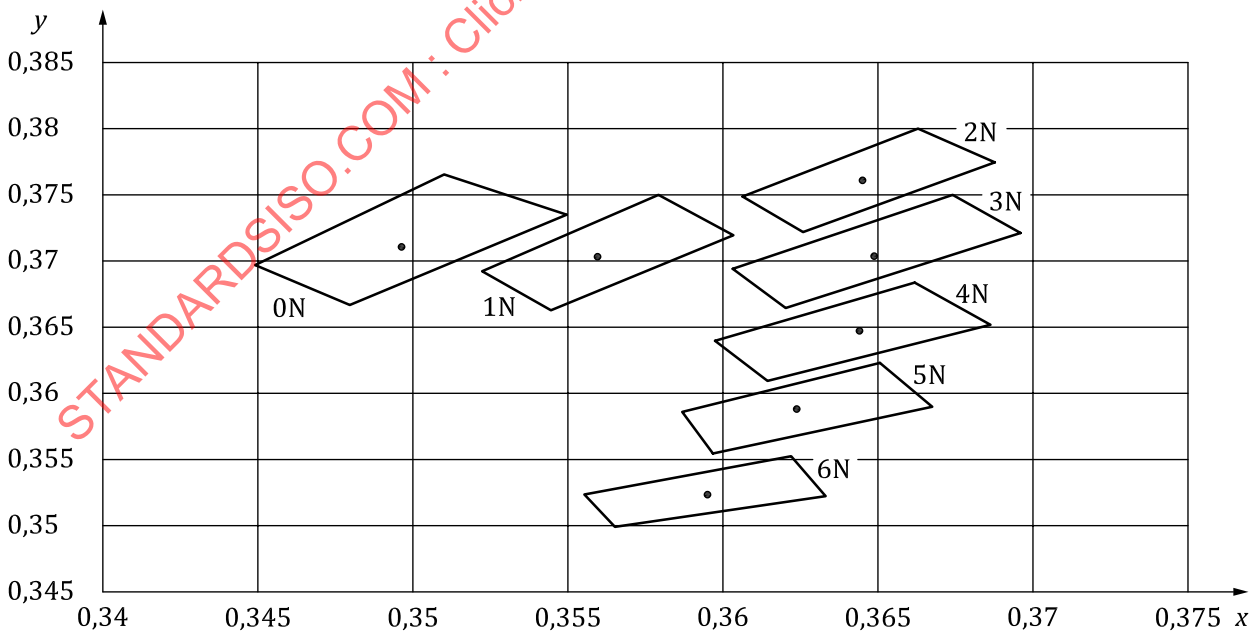

Figure B.1 — xy tolerances according to Table B.1 using a 10° standard observer

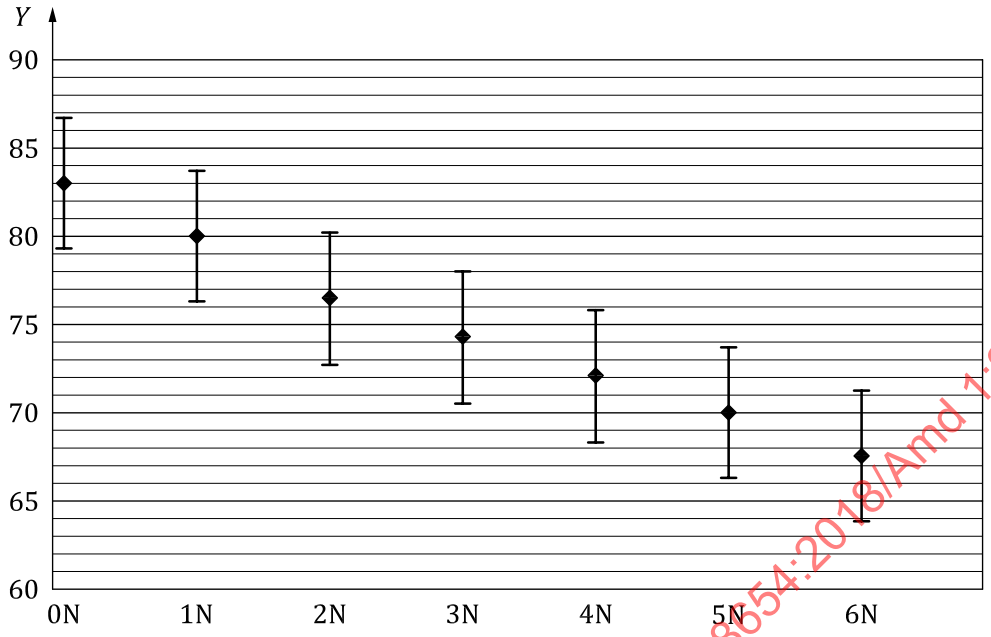

Figure B.2 — Y tolerances according to Table B.1 using a 10° standard observer

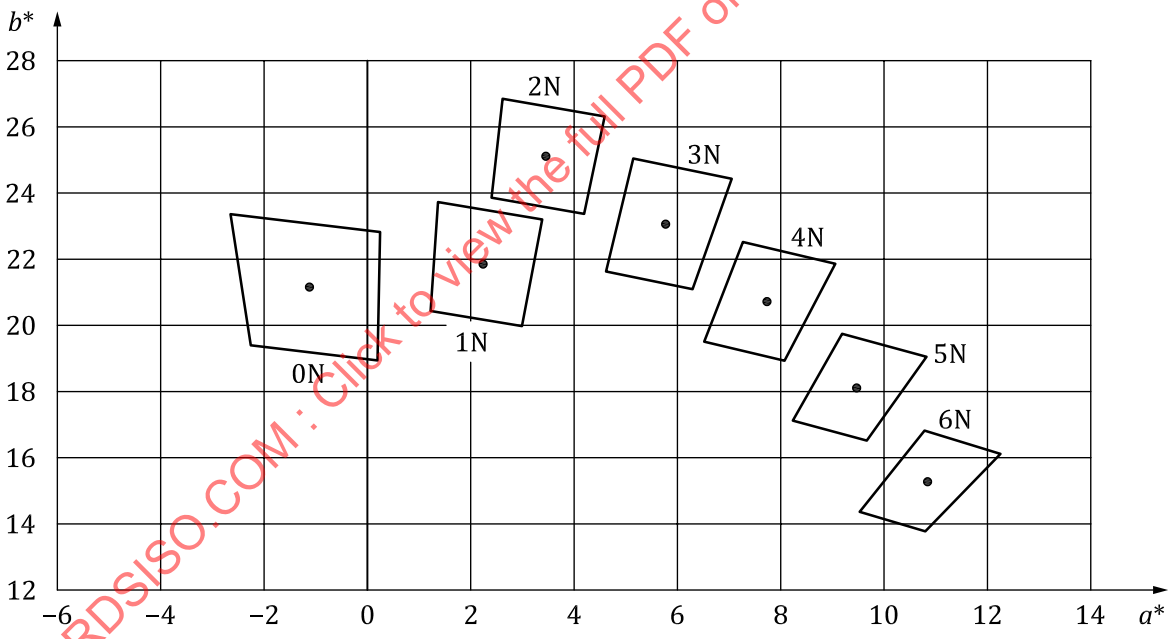

Figure B.3 — *ab** tolerances according to Table B.2 using a 10° standard observer**