

# STANDARD TEST METHOD 3

## COLOUR GRADING OF DIAMOND

### 1.1 SCOPE

This Standard describes the method of colour grading of diamond of the “colourless to yellow and brown series”.

### 1.2 APPLICATION

The item submitted shall be unmounted and polished.

Prior to grading, the test item submitted shall be confirmed as being a Type Ia diamond by the Authenticity Identification.

### 1.3 DEFINITIONS

1. Colour grade: The colour of diamond ranges from colourless to yellow and brown (GIA colour grades D to Z).
2. Colour masterstones: The masterstones shall be round brilliant-cut diamonds. All masterstones in any one set shall represent either the higher limit or the lower limit for its grade (with the exception of the “D” grade of GIA masterstones, where there cannot be a masterstone representing the higher limit).

The Definitions stated in the section “Terms and Definitions” or in other parts of this standard apply to this test method.

### 1.4 APPARATUS

The following apparatus is required:

1. First generation colour masterstones or second generation colour masterstone: Both first generation and second generation masterstones shall be not smaller than 0.25 carat. The masterstones shall be certified by the Gemmological Association of Hong Kong as being traceable to recognised sources. Masterstones shall not have internal characteristics that are eye visible under normal or corrected to normal vision or otherwise affect colour or decrease the transparency when viewed through the pavilion. The fluorescence shall not be greater than the grade “Faint”. Finish and Cut shall be at least “Good”. All stones in a set shall be of similar weight and proportions (within a deviation of 10%), and the nature of the girdles shall be the same.

2. An artificial light source: The specification of an artificial light source shall range from D55 to D65 of the International Commission on Illumination (CIE) standard illuminant in a light intensity of 1500-2200 lux.

### 1.5 TEST ITEM

The grading of colour of diamond is a single unit test for a whole piece of test item in its entirety. Sampling of a number of test items to represent a batch of diamond products shall not be permitted.

### 1.6 PROCEDURES

1. No grading for colour shall be carried out immediately following grading for fluorescence.
2. Clean each test diamond prior to grading. Diamonds with dirty girdles shall be cleaned by appropriate means, e.g. alcohol.
3. The colour of the diamond to be graded shall be determined by visual comparison with masterstones and shall be observed from the pavilion side from a point almost parallel to the level of the girdle, and perpendicular with the pavilion facets (see Figure 1). Place the stone between two of the masterstones and move the stone until the correct position is found.
4. Round stones shall be examined in several directions within the rotation axis indicated in Figure 1. If different colours are observed, the predominant D to Z grade shall be taken as conclusive.
5. The colour of fancy-shaped diamonds shall be graded in diagonal directions as indicated in figure 2. In the case of cuts with points or corners, these directions shall not be taken into account as indicated in Figure 2. If different colours are observed, the predominant D to Z grade shall be taken as conclusive.
6. Colour grading shall be carried out under an artificial light source with a stable light output in a range of approximately 15-30cm and simulating illumination ranging from D55 to D65 in a light intensity of 1500-2200 lux.

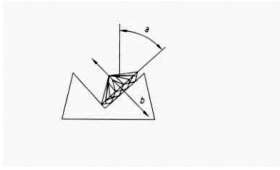
7. Place the masterstones and the stone to be graded with the table down on a dull white background under the central area of the tube. Reflections and distractions from the environment shall be excluded. Prevent direct view of the light sources.
8. Place the diamond being graded and the masterstones directly below the light source. For an observer with normal eyesight the distance between the light source and the diamond being graded shall be approximately 20 cm and the light intensity at that point shall not be less than 2200 lux.
9. The colour grade shall be given with one full colour grading or corresponding colour description in accordance with table 1.
10. For diamonds over 1.0 carat, the colour shall be graded by two Diamond Graders recognised by the GAHK, with at least one of them being a GAHK Certified Gemmologist (Diamond). The results of the grading shall be consistent between the two graders; otherwise the grading process shall be repeated until consistency of the grading results can be obtained.

## 1.7 TEST REPORT

The report shall affirm that the test was carried out in accordance with this Standard. The colour grading should be reported as far as possible in conjunction with other test results such as authenticity identification, weight measurement, fluorescence, clarity, shape & cutting style, proportion and finish and cut grading. In general, the test report shall include but not be limited to the following:

- (a) Identification number of the diamond.
- (b) Date of test.
- (c) Standard method of colour grading of diamond.
- (d) Colour Grading Result of the diamond
- (e) Traceability of the colour master stones
- (f) Name and signature of person responsible for testing.

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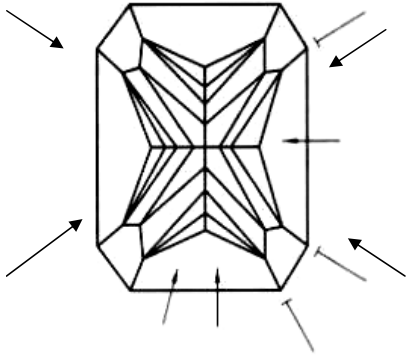
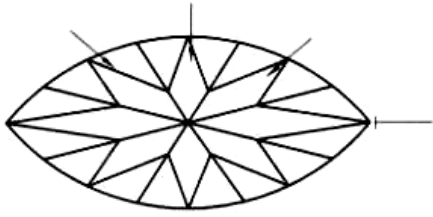


**Key**

- a Viewing angle
- b Rotation axis

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Figure 1 – Colour grading criteria



Example Grading direction →

Non-grading direction —|

Figure 2 – Directions for colour grading of fancy-cut diamond colour within the D-Z range and the directions from which colour grading shall not be taken.

GIA	CIBJO/IDC						Scan.D.N
	English	German	French	Italian			
D	Exceptional white +	D Hochfeines Weiss +	D Blanc exceptionnel +	D Bianco extra eccezionale +	D	River	D
E	Exceptional white	E Hochfeines Weiss	E Blanc exceptionnel	E Bianco extra eccezionale	E	River	E
F	Rare white +	F Feines Weiss +	F Blanc extra +	F Bianco extra +	F	Top Wesselton	F
G	Rare white	G Feines Weiss	G Blanc extra	G Bianco extra	G	Top Wesselton	G
H	White	H Weiss	H Blanc	H Bianco	H	Wesselton	H
I	Slightly tinted white	I Leicht getöntes Weiss	I Blanc nuancé	I Bianco sfumato	I	Top crystal	I
J	Slightly tinted white	J Leicht getöntes Weiss	J Blanc nuancé	J Bianco sfumato	J	Crystal	J
K	Tinted white	K Getöntes Weiss	K Légèrement teinté	K Bianco leggermente colorito	K	Top cape	K
L	Tinted white	L Getöntes Weiss	L Légèrement teinté	L Bianco leggermente colorito	L	Cape	L
M	Tinted	M Getönt	M Teinté	M Colorito	M	Cape	M
N		N	N	N	N	Cape	N
O		O	O	O	O	Cape	O
P		P	P	P	P	Cape	P
Q		Q	Q	Q	Q	Cape	Q
R		R	R	R	R	Cape	R
S		S	S	S	S	Cape	S
T		T	T	T	T	Cape	T
U		U	U	U	U	Cape	U
V		V	V	V	V	Cape	V
W		W	W	W	W	Cape	W
X		X	X	X	X	Cape	X
Y		Y	Y	Y	Y	Cape	Y
Z		Z	Z	Z	Z	Cape	Z

Table 1 – Corresponding Terms for Colour Grades