

TEST DALTONISMO ISHIHARA - Libro da 24 tavole
ISHIHARA COLOUR TEST - Book of 24 plates
TEST CHROMATIQUE D'ISHIHARA - Livre de 24 planches
TEST DALTONISMO ISHIHARA - Libro de 24 tablas

MANUALE D'USO E MANUTENZIONE
USE AND MAINTENANCE BOOK
INSTRUCTIONS DE FONCTIONNEMENT ET ENTRETIEN
MANUAL DE USO Y MANTENIMIENTO

ATTENZIONE: Gli operatori devono leggere e capire completamente questo manuale prima di utilizzare il prodotto.

ATTENTION: The operators must carefully read and completely understand the present manual before using the product.

AVIS: Les opérateurs doivent lire et bien comprendre ce manuel avant d'utiliser le produit.

ATENCIÓN: Los operadores tienen que leer y entender completamente este manual antes de utilizar el producto.





Numero di tavola	Soggetti con vista normale	Soggetti con carenze sul rosso-verde				Soggetti con daltonismo totale
1	12	12				12
2	8	3				X
3	29	70				X
4	5	2				X
5	3	5				X
6	15	17				X
7	74	21				X
8	6	X				X
9	45	X				X
10	5	X				X
11	7	X				X
12	16	X				X
13	73	X				X
14	X	5				X
15	X	45				X
		Protan		Deutan		
		Forte	Lieve	Forte	Lieve	
16	26	6	(2)6	2	2(6)	
17	42	2	(4)2	4	4(2)	

La lettera "X" significa che la tavola non viene letta. Le cifre tra parentesi indicano una lettura poco chiara.



Introduction

The plates for color blindness testing are designed to provide a test which gives a quick and accurate assessment of color vision deficiency of congenital origin.

Most cases of congenital color vision deficiency are characterized by a red-green deficiency. There is also a very rare group of persons who suffer from total color blindness and show a complete failure to discriminate any color variations, usually with an associated impairment of central vision with photophobia and nystagmus.

Furthermore, a failure in the appreciation of blue and yellow may be termed tyritanomalia if partial, and tritanopia if complete, but, even if such cases do exist, they are extremely rare. The plates are not designed for the diagnosis of such cases.



Only a trained eye care professional can properly diagnose vision disorders, home use of the charts is not a replacement for professional vision testing.

How to use the test

The plates are designed to be appreciated correctly in a room which is lit adequately by daylight. The introduction of direct sunlight or the use of electric light may produce some discrepancy in the results because of an alteration in the appearance of shades of color. When it is convenient only to use electric light, it should be adjusted as far as possible to resemble the effect of natural daylight.

The plates should be held at a distance of approx 70 cm. from the subject and tilted so that the plane of the paper is at right angles to the line of vision.

The numerals or symbols which are seen on plates are stated, and each answer should be given without more than three seconds delay. It is not necessary in all cases to use the whole series of plates.

Care of plates

To avoid fading of the colors; care must be taken to keep the plates stored in case except during use and not to expose the plates to strong light. Tracing curves must be soft in order to prevent scratching.

Explanation of the plates

No. 1. Both the normal and those with all sort of color vision deficiencies read it as 12.

No. 2, 3. The normal read them as 8 (No. 2) and 29 (No. 3). Those with red-green deficiencies read them as 3 (No. 2), and 70 (No. 3). Those with total color blindness can not read any numeral.

Nos. 4-7. The normal read them as 5 (No. 4), 3 (No. 5), 15 (No. 6) and 74 (No. 7). Those with red-green deficiencies read them as 2 (No. 4), 5 (No.5), 17 (No.6) and 21 (No.7). Those with total color blindness can not read any numeral.

No. 8, 9. The normal read them as 6 (No.8) and 45 (No.9). The majority of those with color vision deficiencies can not read them or read them incorrectly.

Nos. 10-13. The normal read them as 5 (No.10), 7 (No.11), 16 (No.12) and 73 (No.13). The majority of those with color vision deficiencies can not read them or read them incorrectly.

Nos. 14, 15. The majority of those with red-green deficiencies read them as 5 (No.14) and 45 (No.15). The majority of the normal and those with total color blindness cannot read any numeral.

Nos. 16, 17. The normal read them as 26 (No.16) and 42 (No.17). In protanopia and strong protanomalopia only 6 (No. 16) and 2 (No.17) are read, and in case of mild protanomalopia both numerals on each plate are read but the 6 (No.16) and 2 (No.17) are clearer than the other numerals. In deuteranopia and strong deuteranomalopia only 2 (No.16) and 4 (No.17) are read, and in case of mild deuteranomalopia both numerals on each plate are read but the 2 (No.16) and 4 (No.17) are clearer than the other numerals.

No. 18. In tracing the winding lines between the two X's, the normal trace along the purple and red lines. In protanopia and strong protanomalopia only the purple line is traced, and in the case of mild protanomalopia both lines are traced but the purple line is easier to follow. In deuteranopia and strong deuteranomalopia only the red line is traced, and in case of mild deuteranomalopia both lines are traced but the red line is easier to follow.

No. 19. In tracing the winding line between the two X's, the majority of those with red-green deficiencies trace along the line, but the majority of the normal and those with total color blindness are unable to follow the line.

No. 20. In tracing the winding line between the two X's, the normal trace the bluish-green line, but the majority of those with color vision deficiencies are unable to follow the line or follow a line different from the normal one.

No. 21. In tracing the winding line between the two X's, the normal trace the orange line, but the majority of those with color vision deficiencies are unable to follow the line or follow a line different from the normal one.

No. 22. In tracing the winding lines between the two X's, the normal trace the line connecting the bluish-green and yellowish-green, those with red-green deficiencies trace the line connecting the bluishgreen and purple, and those with total color blindness can not trace any line.

No. 23. In tracing the winding lines between the two X's, the normal trace the line connecting the purple and orange, those with red-green deficiencies trace the line connecting the purple and bluishgreen, and those with total color blindness and weakness can not trace any line.

No. 24. Both the normal and those with all sort of color vision deficiencies can trace the winding line between the two X's.

Analysis of the results

As assessment of the readings of plates 1 to 15 determines the normality or defectiveness of color vision.

If 13 or more plates are read normally, the color vision is regarded as normal. If only 9 or less than 9 plates are read normally, the color vision is regarded as deficient. However, in reference to plates 14 and 15, only those who read the numerals 5 and 45 and read them easier than those on plates 10 and 9 are recorded as abnormal readings.



It is rare to find a person whose recording of normal answers is 14-16 plates. An assessment of such a case requires the use of other color vision tests, including the anomaloscope.

Number of Plate	Normal Person	Person with Red-Green Deficiencies		Person with Total Colour Blindness and Weakness	
1	12	12		12	
2	8	3		X	
3	29	70		X	
4	5	2		X	
5	3	5		X	
6	15	17		X	
7	74	21		X	
8	6	X		X	
9	45	X		X	
10	5	X		X	
11	7	X		X	
12	16	X		X	
13	73	X		X	
14	X	5		X	
15	X	45		X	
		Protan		Deutan	
		Strong	Mild	Strong	Mild
16	26	6	(2)6	2	2(6)
17	42	2	(4)2	4	4(2)

The letter "X" shows that the plate cannot be read. The numerals in parenthesis show that they can be read but they are comparatively unclear.

Simbologia / Index of symbols

	<p>Leggere e seguire attentamente le istruzioni per l'uso <i>Please read instructions carefully</i></p>
REF	<p>31291 Codice prodotto <i>Product code</i></p>
LOT	<p>Numero di lotto (vedi scatola / imballo) <i>Lot number (see box / package)</i></p>

	<p>Tenere al riparo dai raggi solari <i>Keep away from direct sunlight</i></p>
	<p>Custodire in luogo asciutto ed al riparo dall'umidità <i>Store in a dry place and avoid humidity.</i></p>

CE	<p>Prodotto conforme alla Direttiva Europea n. 93/42/CEE (e successive modifiche) sui dispositivi medici <i>Product complies with European Directive no. 93/42/EEC (and following amendments) regarding medical devices</i></p>



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