

# Appendix 2 of Annex A - Instruction for Testing Colour Vision

A-MD-154-000/FP-000

## General

1. The most common form of colour deficiency (blindness) is a recessive sex-linked hereditary defect that normally affects only males. About 8-10% of males and 0.4-0.8% of females are colour deficient.
2. The three (3) possible grades of colour vision are:
  - a. CV1 – Normal Colour Vision – CV Safe
    - i. Pass Colour plates
    - ii. No further testing is required
  - b. CV2 – Abnormal Colour Vision (Minor defects) – CV Safe
    - i. Fail Colour plates
    - ii. Pass Farnsworth D-15 Standard test
  - c. CV3 – Abnormal Colour Vision (Major defects) – CV Unsafe
    - i. Fail Colour plates
    - ii. Fail Farnsworth D-15 Standard test
3. Initially, recruits and serving members will be tested using the Ishihara pseudoisochromatic plates in accordance with the plate instructions. Those who fail this colour plate test will be tested with the Farnsworth Panel D-15 test. Both of these tests are available at CF Recruiting Centres (CFRC). If any problem in interpretation of the CV grading occurs, consultation with D H SVCS DEL, Vision Services Manager is recommended.
4. Assessment of colour vision by either the Holmes-Wright or Farnsworth perception lanterns will only be conducted at CFEME Ophthalmology Dept for selected MOSIDs. The colour lanterns are no longer used as secondary tests for those who fail the colour plates, except for aircrew applicants.
5. Persons who normally wear spectacles will have their colour vision tested while wearing their normal glasses provided these do not have tinted lenses.

# Colour Plate Test

## Equipment/Lighting/Set-Up/Procedure

1. Equipment
  - a. Colour plates – Modified 38 Plate Edition (no more than 4 years old)
  - b. Eye Patch
2. Lighting
  - a. True Daylight Illuminator if available or
  - b. If this is not possible, the test will be done using daylight, other than direct sunlight.
3. Set – Up
  - a. Viewing distance of 75 cm
  - b. Viewing angle of 45 Degrees
4. Procedure
  - a. All testing is monocular i.e. each eye is tested separately
  - b. Place book at a 45-degree viewing angle
  - c. Use only the first 17 plates of the 38 plate test
  - d. Explain to the subject that they will be shown a series of 17 plates showing either a single or double-digit number.
  - e. The subject must read the numbers out loud from left to right, allowing approximately 3 seconds/ page. Each eye must correctly identify 15/17 of the colour plates to pass. A score of 3 or more errors for plates 1 – 17 in either eye is a fail and the subject must proceed to the Farnsworth D-15 Standard test (D15 test).
  - f. Anyone who passes with one eye but fails in the other should be referred to an ophthalmologist for further evaluation.
  - g. A pass on the colour plates gives the subject a CV1 category and no further testing is required.
  - h. See Appendix 1 for recording the results.

# Farnsworth Panel D-15 Test

## Equipment/Lighting/Set-Up/Procedure

1. Equipment
  - a. Farnsworth D-15 Standard Test
  - b. Small table
2. Lighting
  - a. True Daylight Illuminator if available, or

- b. If this is not possible, the test will be done using daylight, other than direct sunlight.
3. Set – Up
- a. Table
  - b. Do not unduly expose the caps to light as colour fading may occur with prolonged exposure.
  - c. Avoid touching the colours with the fingers. Slight soiling has no influence on the accuracy of the test. but dirty or damaged caps must be replaced.
4. Procedure
- a. Testing is Binocular i.e. both eyes tested together.
  - b. Both examiner and subject should wear finger cots on the hand used to touch the coloured caps.
  - c. Rearrange caps numbered 1 to 15 in random order on the desk. The fixed cap (cap P) remains in the case.
  - d. Place the case in front of the subject with the fixed cap to the subject' left.
  - e. Instruct the subject to start at the fixed cap and match the colour of each cap as closely as possible to the preceding cap. The subject proceeds cap by cap until all the caps are back in the case.
  - f. Instruct the subject that the test should take approximately two (2) minutes.
  - g. After a few minutes, repeat the test a second time.
  - h. To score the test, close the case and turn it upside down onto the desk. Reopen the case and the cap numbers are visible. Write in the cap numbers on the scorecard, following the order of the exposed caps. Complete the diagram by joining the dots, again following the subject's numbering.
  - i. No error in numbering or minor errors with or without one (1) major crossing error are a pass. Two (2) or more Major crossing errors are a fail.
  - j. If both of the first two tests are a pass, then the subject is a CV2. No further testing is required.
  - k. If both of the first tests are a fail, then the subject is a CV3. No further testing is required.
  - l. If the first two tests are not in agreement, then a third test must be done. The result on the third test (i.e. the repeatable result) is the final decision.
  - m. Further testing can be obtained by referral to CFEME Ophthalmology Dept for questionable results or for those seeking a second opinion.
  - n. Examples of results are shown in Appendix 2.

## **Ishihara Colour Plates 38-Plate Edition**

**Year Edition:** \_\_\_\_\_

**Date of Testing:** \_\_\_\_\_

**Test Location:** \_\_\_\_\_

Examiner: \_\_\_\_\_

Patient/Candidate Name: \_\_\_\_\_

Service Number/Health Card Number: \_\_\_\_\_ Unit: \_\_\_\_\_ ASC#:  
\_\_\_\_\_

*Write the patient response for each plate*

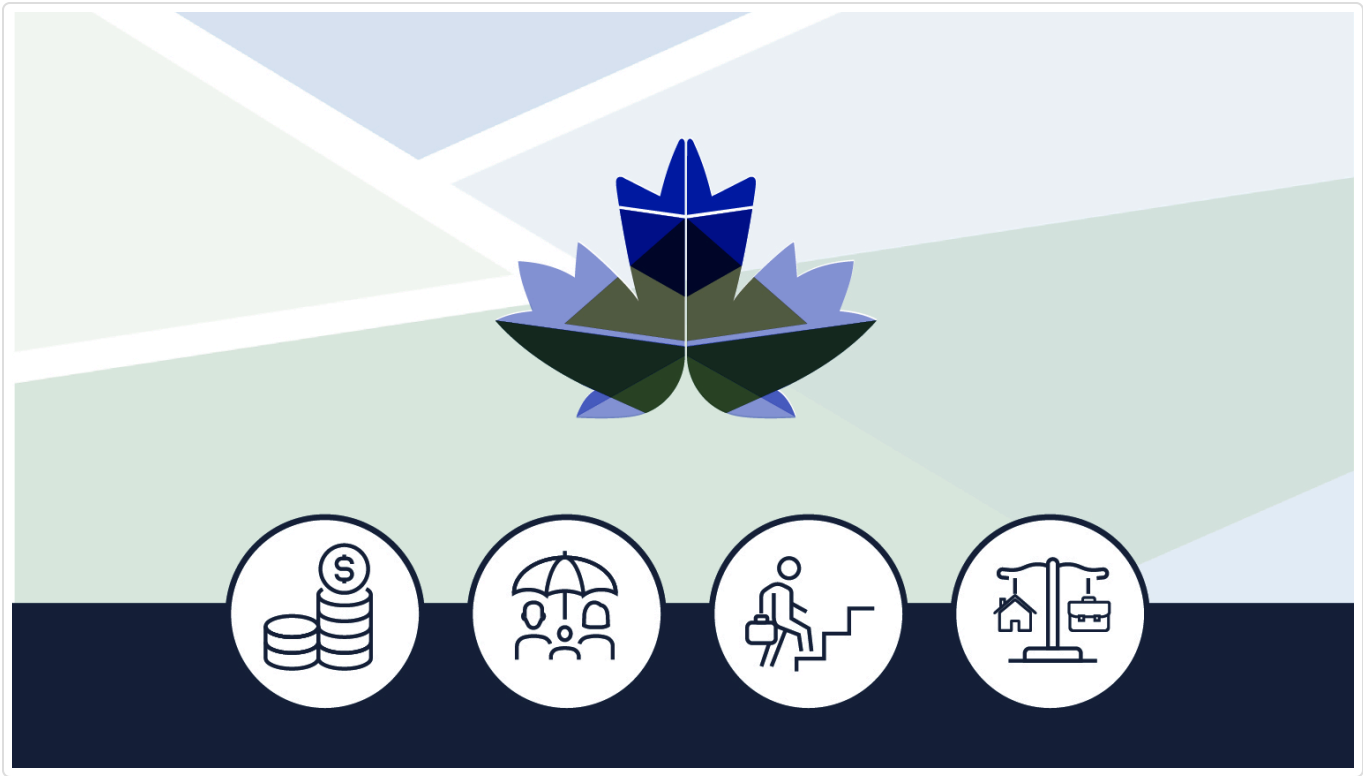
Plate #	Normal	R-G	Patient O.D	Patient O.S
1	12	12		
2	8	3		
3	6	5		
4	29	70		
5	57	35		
6	5	2		
7	3	5		
8	15	17		
9	74	21		
10	2	X		
11	6	X		
12	97	XX		
13	45	XX		
14	5	X		
15	7	X		
16	16	XX		
17	73	XX		
Total Errors:				

*Note: If patient has 3 or more errors in plates 1-17 proceed to D-15 Standard*

Plate #	Normal	Patient O.D	Patient O.S
F2 Plate	Top Square Green/	Yes / No	Yes / No
	Bottom Square Blue	Yes / No	Yes / No
	Green Most prominent		

## Departmental priorities

The CAF Offer



**Sexual misconduct**



**Total Health and Wellness Strategy.**



## Conduct, culture, diversity and inclusion



**Date modified:**

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