The Gemmological Association of Hong Kong Limited

Standard Methods for Testing **Fei Cui** for Hong Kong

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Contents

Foreword

This **Standard Methods for Testing Fei Cui for Hong Kong** presents the recommended standard methods for testing of Fei Cui for gemstone identification and verification purposes in Hong Kong. This Standard has been issued on 19 February 2016 and is published by The Gemmological Association of Hong Kong Limited (GAHK).

This Standard has been prepared by a working group consulting with gemmologists and academics who are experts in this field from Mainland China and around the world. To ensure its acceptance as a consensus document in Hong Kong, a draft version of this standard was widely circulated to relevant gemstone and jewellery trade associations and their opinions were sought. A number of useful comments were received, and these have been taken into account in finalizing this Standard. All such contributions are gratefully acknowledged.

Those working in the gemstone industry are encouraged to send their comments on the contents of this standard to GAHK, so that improvements may be made in future editions.

Introduction

Fei Cui (Chinese: 翡翠) is a family name that is applied to three related and often visually similar members – Jadeite Jade, Kosmochlor Jade and Omphacite Jade. Accredited Fei Cui test reports are in great demand especially during the auction season. In order to assist both the Fei Cui trading industry and gem testing laboratories to benefit from this increasing demand and to enhance the credibility of the local gemstone industry, this document has been developed and is issued by GAHK with a view to regularising the following:

[1] The practice and methodology of Fei Cui (green, black, white and colourless) testing,
[2] The technical specifications to be set and the formats and contents to be used when issuing Fei Cui test reports or test certificates, and
[3] The definition and nomenclature of Fei Cui.

A companion standard will cover the Fei Cui testing.

Language

In the text although both English and Chinese are used, the English language version remains the definitive version.

Fei Cui 翡翠

Definition of Fei Cui - Jadeite Jade/ Omphacite Jade/ Kosmochlor Jade

Fei Cui is a granular to fibrous polycrystalline aggregate, which is composed solely, or principally of any of the following or any combination of the following: Jadeite, Omphacite and Kosmochlor.

Fei Cui, Jadeite Jade is a granular to fibrous polycrystalline aggregate. Its major mineral component is Jadeite ($NaAlSi_2O_6$). Other minerals such as Omphacite and Kosmochlor may also be present.

Fei Cui, Omphacite Jade is a microgranular to microfibrous polycrystalline aggregate. Its major mineral component is Omphacite [$(Ca,Na)(Mg,Al)Si_2O_6$]. Other minerals such as Jadeite and Kosmochlor may also be present.

Fei Cui, Kosmochlor Jade is a granular to fibrous polycrystalline aggregate. Its major mineral component is Kosmochlor ($NaCrSi_2O_6$) . Other minerals such as Jadeite and Omphacite may also be present.

When there is a need to differentiate of the three Fei Cui members : Jadeite Jade, Omphacite Jade and Kosmochlor Jade. The Fei Cui Infrared Spectrum Fingerprint Identification Testing Method in Appendix 3 is considered diagnostic and is recommended as a means of distinguishing between the three Fei Cui members.

A diagrammatic flow chart of the testing procedures for the classification of the types of Fei Cui is provided in Appendix 1 for the use of laboratories.

Major Physical Properties of Fei Cui - Jadeite Jade / Omphacite Jade / Kosmochlor Jade

	Jadeite Jade	Omphacite Jade	Kosmochlor Jade
Texture:	Polycrystalline, uneven granular to fibrous interlocking texture	Polycrystalline, uneven, fibrous to granular interlocking texture	Polycrystalline, uneven, granular to fibrous interlocking texture
Common Colour:	Colourless, white and green, yellow, reddish orange, brown, grey, black, light purplish red, violet, blue and pink etc.	Green to black and bluish green in reflected light; Green to dark green and bluish green in transmitted light; usually even	Intense bright green to dark green to black; usually uneven
Transparency:	Transparent to opaque	Transparent to opaque	Translucent to opaque
[1]Lustre：	Vitreous to greasy The polycrystalline crystal aggregate may show some glistening on the surface (due to Jadeite's two directions of perfect cleavages)	Vitreous, due to fine-grained texture, and smooth polished surface	Vitreous to dull vitreous, due to coarse-grained texture and rough polished surface
[1]Mohs' Hardness:	6.5 – 7	7	5.5-6, brittle
[2,3]Specific Gravity:	3.25-3.40	3.30-3.45 (Usually slightly higher than Jadeite Jade)	3.35-3.50 (Usually higher than Jadeite Jade)
Optical Nature:	Anisotropic (polycrystalline aggregate)	Anisotropic (polycrystalline aggregate)	Anisotropic (polycrystalline aggregate)
Refractive Index:	1.65 – 1.67 (± 0.01), by spot reading method (distance vision method) normally read as 1.66	1.67 - 1.68 (± 0.01), by spot reading method (distance vision method) normally read as 1.67 (slightly higher than Jadeite Jade)	1.68 - 1.72 (± 0.01), by spot reading method (distance vision method) normally read as 1.72 (higher than Jadeite Jade and Omphacite Jade)
Ultraviolet Fluorescence:	None to faint	Inert	Inert
Absorption Spectrum:	Fe absorption band may appear at 437nm; Cr absorption line(s) approximately at 630 nm, 660nm and 690 nm may be observed on bright green Jadeite Jade.	Fe absorption band may appear at 437nm as Jadeite Jade; Cr absorption line(s) may be observed in the red at 630nm, 660nm and 690nm	Cr absorption lines may appear in the red at 630nm, 660nm and 690nm; Fe absorption band may appear at 437nm

Notes:

1. Tests for lustre and hardness are not within the scope of the Standard Methods for Testing Fei Cui for Hong Kong.
2. The standard testing method of Determination of Specific Gravity is not applicable for mounted Fei Cui.
3. The range of Specific Gravity results may vary because of the texture of Fei Cui and the presence of associated minerals.

Natural Fei Cui and Treatment Types

Type	Known as	Definition
Natural Fei Cui	Type A	Refers to natural Fei Cui which has not been subjected to any form of chemical treatment[1]
Chemically Treated and resin Impregnated Fei Cui	Type B	Refers to Fei Cui which has been chemically treated and resin impregnated.
Dyed Fei Cui	Type C	Refers to Fei Cui which has been treated with dye
Chemically Treated, Resin Impregnated and Dyed Fei Cui	Type B+C	Refers to Fei Cui which has been chemically treated, resin impregnated and dyed.

Notes:

1. To polish natural Fei Cui with colourless wax, which does not cause any damage to the crystalline structure of the Fei Cui, shall not be classified as a chemical treatment.

STANDARD TEST METHOD 1

SHAPE AND CUT IDENTIFICATION OF FEI CUI

1.1 SCOPE

This Standard describes the method of identifying the shape and cut of the Fei Cui item to be tested.

1.2 APPLICATION

The shape and cut apply to items made of Fei Cui as received by the laboratory for testing.

1.3 DEFINITIONS

There are various terms to describe the different shapes and cuts of the Fei Cui to be test.

1.4 APPARATUS

Not applicable

1.5 TEST ITEM

The identification of the shape and cut shall be a single test for each test item. Sampling of a number of items to represent a batch of Fei Cui products shall not be permitted.

1.6 PROCEDURES

1. The item of Fei Cui to be tested shall be cleaned scrupulously with a lint-free cloth.

2. The test Fei Cui shall be examined carefully with the unaided eye.

3. The shape and cut of the test Fei Cui shall be identified and recorded.

1.7 EXPRESSION OF RESULTS

Not Applicable

1.8 TEST REPORT / TEST CERTIFICATE

The test report / test certificate shall include the following information:

a) Description of the item including shape and cut, measurement of dimension, weight of the item.
b) Colour and transparency
c) Picture of the item
d) Certificate Number
e) Testing method
f) Date of testing
g) Date of issue
h) Conclusion
i) Name and signature of the approved signatory

STANDARD TEST METHOD 2

MEASUREMENT OF DIMENSIONS OF FEI CUI

1.1 SCOPE

This Standard describes the method of measuring the dimensions of the Fei Cui item to be tested.

1.2 APPLICATION

The measurement of dimensions applies to items made of Fei Cui as received by the laboratory for testing.

1.3 DEFINITIONS

Dimensions: The length, width and thickness of the test item.

1.4 APPARATUS

The following apparatus is required:

1. Caliper: A caliper with a millimeter scale, a resolution of 0.01 mm and an accuracy of at least 0.1mm.

2. Electronic gauge: An electronic gauge with a millimeter scale, a resolution of 0.01 mm and an accuracy of at least 0.1 mm.

3. Steel rule: A steel rule with a millimeter scale , a resolution of 0.5 mm and an accuracy of at least 1 mm.

1.5 TEST ITEM

The measurement of dimensions shall be a single test for each test item. Sampling of a number of items to represent a batch of Fei Cui products shall not be permitted.

1.6 PROCEDURES

1. The electronic gauge or Caliper shall be set to zero before the measurement is taken and should be tested before use.

2. The item of Fei Cui to be tested shall be cleaned scrupulously with a lint-free cloth.

3. The dimensions of the item of Fei Cui including the length, width, thickness and inner and outer diameter (if appropriate) shall be measured using an electronic gauge or caliper[1]. The dimensions measured shall be recorded to at least 1 decimal place.

   A steel rule shall only be used for test items with dimensions of 150mm or over. The dimensions measured shall be recorded to at least 1mm.

4. For test items that are hollow, the maximum outer diameter and the maximum inner diameter (if any) shall also be measured and recorded.

Note:
1. Thickness measurements may not be applied for mounted Fei Cui.

1.7 EXPRESSION OF RESULTS

The item of Fei Cui should be measured with the results recorded as: length (L), width (W) and thickness (T). Measurement of dimensions of Fei Cui items in appendix 2 for reference only..

1.8 TEST REPORT / TEST CERTIFICATE

The test report / test certificate shall include the following information:

a) Description of the item including shape and cut, measurement of dimension, weight of the item.
b) Colour and transparency
c) Picture of the item
d) Certificate Number
e) Testing method
f) Date of testing
g) Date of issue
h) Conclusion
i) Name and signature of the approved signatory

STANDARD TEST METHOD 3

MEASUREMENT OF WEIGHT OF FEI CUI

1.1 SCOPE

This Standard describes the method of measuring the weight of the Fei Cui item to be tested.

1.2 APPLICATION

The measurement of weight applies to items made of Fei Cui as received by the laboratory for testing.

1.3 DEFINITIONS

Weight: The vertical force exerted by a mass as a result of gravity.

Mounted Fei Cui: Fei Cui set singly, or in a group or cluster, on a piece of jewellery.

1.4 APPARATUS

The following apparatus is required:

1. An Electonic Balance: A balance with a unit in carats, a resolution of 0.001 carat and an accuracy of at least 0.01 carat.

2. An Electronic Balance (for items weighing 200 carats and over): A balance with a resolution of 0.01 carat and an accuracy of at least 0.1 carat.

1.5 TEST ITEM

The measurement of weight shall be a single test for each test item. Sampling of a number of items to represent a batch of Fei Cui products shall not be permitted.

1.6 PROCEDURES

1. The alignment of the balance shall be checked by confirming that the air bubble is in the centre of the level indicator.

2. The electronic balance shall be switched on and be tared to zero.

3. The item of Fei Cui to be tested shall be cleaned scrupulously with a lint-free cloth.

4. The test item of Fei Cui shall then be placed centrally on the pan of the electronic balance.

5. For items of Fei Cui weighing less than 200 carats, the weight measured shall be recorded to the nearest 0.01 carat, using a balance as defined in 1.4.1.

   For items of Fei Cui weighing 200 carats or above, the weight measured shall be recorded to the nearest 0.1 carat using a balance as defined in 1.4.2.

6. For mounted items of Fei Cui, the total weight of the whole setting shall be measured and recorded following the same procedures as described in 1-4.

1.7 EXPRESSION OF RESULTS

Not Applicable

1.8 TEST REPORT / TEST CERTIFICATE

The test report / test certificate shall include the following information:

a) Description of the item including shape and cut, measurement of dimension, weight of the item.
b) Colour and transparency
c) Picture of the item
d) Certificate Number
e) Testing method
f) Date of testing
g) Date of issue
h) Conclusion
i) Name and signature of the approved signatory

STANDARD TEST METHOD 4

IDENTIFICATION OF TRANSPARENCY OF FEI CUI

1.1 SCOPE

This Standard describes the method of identifying the degree of transparency of the Fei Cui item to be tested.

1.2 APPLICATION

The transparency identification applies to items made of Fei Cui as received by the laboratory for testing.

1.3 DEFINITIONS

Degrees of transparency:

Transparent	Capable of transmitting light with little or no blurring
Translucent	Capable of transmitting and diffusing light, but an object viewed through the test Fei Cui cannot be distinguished
Opaque	Incapable of transmitting light

Mounted Fei Cui: A piece or pieces of Fei Cui set singly, or in a group or cluster, on a piece of jewellery.

1.4 APPARATUS

The following apparatus is required:

A bright light source

1.5 TEST ITEM

The identification of transparency shall be a single test for each test item. Sampling of a number of items to represent a batch of Fei Cui products shall not be permitted.

1.6 PROCEDURE FOR IDENTIFICATION OF THE TRANSPARENCY OF FEI CUI

1. The item of Fei Cui to be tested shall be cleaned scrupulously with a lint-free cloth

2. A bright light source shall be used to shine light through the major portion of the test item.

3. The degree of transparency of the major portion of the test item of Fei Cui shall be identified and recorded.

1.7 EXPRESSION OF RESULTS

Not Applicable

1.8 TEST REPORT / TEST CERTIFICATE

The test report / test certificate shall include the following information:

a) Description of the item including shape and cut, measurement of dimension, weight of the item.
b) Colour and transparency
c) Picture of the item
d) Certificate Number
e) Testing method
f) Date of testing
g) Date of issue
h) Conclusion
i) Name and signature of the approved signatory

STANDARD TEST METHOD 5

IDENTIFICATION OF COLOUR OF FEI CUI

1.1 SCOPE

This Standard describes the method of identifying the colour of the Fei Cui item to be tested.

1.2 APPLICATION

The colour identification applies to items made of Fei Cui as received by the laboratory for testing.

1.3 DEFINITIONS

Hue: Hue is the basic impression of a colour.

Tone: The relative impression of lightness or darkness of the colour of an object.

Saturation: The strength, purity or intensity of the hue.

1.4 APPARATUS

The following apparatus is required:

A daylight equivalent reflected light source.

1.5 TEST ITEM

The identification of colour shall be a single test for each test item. Sampling of a number of items to represent a batch of Fei Cui products shall not be permitted.

1.6 PROCEDURES

1. The item of Fei Cui to be tested shall be cleaned scrupulously with a lint-free cloth.

2. The test item of Fei Cui shall be placed against a white background and illuminated with a daylight equivalent reflected light.

3. For an item of Fei Cui that is green in its entirety, the "tone" and "saturation" shall be identified and recorded first. The combination of the identified "saturation" and "tone" shall be expressed as the equivalent "Colour Prefix" according to Table 1. For instance, an item of Fei Cui that is "low" in "saturation" and "light" in "tone", shall be described as "pale".

4. The Colour Prefix and relationship table with Saturation & Tone for Fei Cui is summarized in Table 1.

5. The hue of the test item of Fei Cui shall then be identified and recorded. The wording must be selected from the Table of Hues for Fei Cui (Table 2) shown below.

6. The identification of colour shall be recorded as "Colour Prefix" plus "Hue".

7. For an item of Fei Cui that is black, grey, white or colourless in colour in its entirety, no "tone", "saturation" and "hue" shall be identified and recorded.

8. If the test item is multi-coloured, where green (or black, grey, white or colourless) is the dominant colour, the description of the item shall be recorded as "green (or black, grey, white or colourless)" with/ and "other colour(s)" also recorded.

9. The distribution of green (or black, grey, white or colourless) colour shall be described as:
    1. Even
    2. Uneven
    3. Patches
    4. Veins
    5. Spots

Note:

Colour Prefix	Saturation	Tone
Pale	Low	Light
Light	Moderate	Light
N/A	Moderate	Medium
Bright	Strong	Light to Medium
Intense	Strong	Medium to Dark
Deep	Moderate	Dark
Dark	Low	Dark

Table 1 – The Colour Prefix and relationship table with Saturation & Tone for Fei Cui

Hue
Yellowish Green
Green
Bluish Green

Table 2 –Table of Hues for Fei Cui

Black, grey, white and colourless are achromatic with no hue and saturation.

1.7 EXPRESSION OF RESULTS

Not Applicable

1.8 TEST REPORT / TEST CERTIFICATE

The test report / test certificate shall include the following information:

a) Description of the item including shape and cut, measurement of dimension, weight of the item.
b) Colour and transparency
c) Picture of the item
d) Certificate Number
e) Testing method
f) Date of testing
g) Date of issue
h) Conclusion
i) Name and signature of the approved signatory

STANDARD TEST METHOD 6

FEI CUI POLARISCOPE EXAMINATION

1.1 SCOPE

This Standard describes how a polariscope should be used to detect whether the item of Fei Cui to be tested is isotropic, anisotropic or anisotropic and polycrystalline.

1.2 APPLICATION

The polariscope examination applies to items made of Fei Cui as received by the laboratory for testing.

The polariscope serves only as a reference for the identification of Fei Cui.

1.3 DEFINITIONS

Isotropic: Isotropic materials exhibit the same optical properties in all directions through the material. Crystals of cubic system and amorphous materials are optically isotropic.

Anisotropic: Optically anisotropic materials exhibit different directional optical properties (except the direction of optic axis). All crystal structures other than those in the cubic crystal system are optically anisotropic.

Polycrystalline: Substances that consist of many aggregated crystals. Polycrystalline materials posses no overall exterior crystal form.

1.4 APPARATUS

The following apparatus is required:

A polariscope.

1.5 TEST ITEM

The polariscope examination shall be a single test for each test item. Sampling of a number of items to represent a batch of Fei Cui products shall not be permitted.

1.6 PROCEDURES

1. The item of Fei Cui to be tested shall be cleaned scrupulously with a lint-free cloth.
2. The analyser and the polariser shall be set in the extinction position before the test commences.
3. The test item of Fei Cui shall be placed on the polariser.
4. The test item of Fei Cui shall be rotated by 360°.
5. The observer shall look through the upper polarising filter to observe the polarisation effects.

Note:

1. Polariscope examination is not applicable if the test item of Fei Cui is opaque or too thick.
2. Polariscope examination may be not applicable if the test item of Fei Cui is mounted in a close-back setting.

1.7 EXPRESSION OF RESULTS

Observations	Conclusions
Stone remains dark through 360°	Optically isotropic – amorphous or crystals of cubic system
Stone goes light and dark 4 times through 360°	Optically anisotropic - uniaxial or biaxial
Stone stays light through 360°	Optically anisotropic and polycrystalline material
Stone shows anomalous extinction effect	Strain anisotropy, often in otherwise isotropic material
Not measurable because stone is opaque or too thick.	
Not measurable because stone is mounted in a close-back setting.	

1.8 TEST REPORT / TEST CERTIFICATE

The test report / test certificate shall include the following information:

a) Description of the item including shape and cut, measurement of dimension, weight of the item.
b) Colour and transparency
c) Picture of the item
d) Certificate Number
e) Testing method
f) Date of testing
g) Date of issue
h) Conclusion
i) Name and signature of the approved signatory

STANDARD TEST METHOD 7

DETERMINATION OF REFRACTIVE INDEX OF FEI CUI

1.1 SCOPE

This Standard describes the method of determining the refractive index of the Fei Cui item to be tested.

1.2 APPLICATION

The determination of refractive index applies to items made of Fei Cui as received by the laboratory for testing.

The refractive index may be used for the identification of Fei Cui.

1.3 DEFINITIONS

Refractive Index (RI): It is the ratio of the velocity of propagation of an electromagnetic wave in vacuum to its velocity in the medium.

The absolute index of refraction for a given medium is defined as: $n = c/v$

where c is the speed of light in a vacuum and v is the speed of light in the medium.

1.4 APPARATUS

The following apparatus is required:

1. Refractometer: A total internal reflection refractometer with internal or external scale graduated as RI values (ranging from 1.40 to 1.80)

2. Contact liquid: Contact liquid with RI between 1.79 and 1.81. Its composition shall be methylene iodine saturated with sulphur and carbon di-iodide (or name as di-iodomethane)

1.5 TEST ITEM

The determination of refractive index shall be a single test for each test item. Sampling of a number of items to represent a batch of Fei Cui products shall not be permitted.

1.6 PROCEDURES

1. The item of Fei Cui to be tested shall be cleaned scrupulously with a lint-free cloth.

2. The best-polished side of the Fei Cui item shall be used.

3. A very small drop of contact liquid shall be applied to the top surface of the hemicylinder and the test item placed onto it so that it is in optical contact with the contact liquid.

4. The long direction with the length of the hemicylinder shall be aligned if the spot is elongated.

5. If the image of the test item of Fei Cui extends more than three to four scale divisions:

i. The item of Fei Cui should be lifted straight up and the hemicylinder should be wiped off;

ii. The amount of liquid on the test item could be reduced by touching it to the metal stage;

iii. The test item of Fei Cui shall be returned gently to the hemicylinder; and

iv. These steps shall be repeated until the spot covers only three to four scale divisions.

1.7 EXPRESSION OF RESULTS

One of the readings shall be observed:

- 50/50 Reading – This most accurate spot reading is generally found on well-polished surfaces. The reading at the point where the spot is exactly half light and half dark shall be taken.
- Blink Reading – This is the second most accurate spot reading. The reading at the point where the spot blinks abruptly from light to dark shall be taken.
- Average Reading – This least accurate spot reading is usually the result of poor polish, a slightly irregular surface, or too much contact liquid used. The spot lightens gradually over a wide range of the refractometer scale. The average reading of the last completely dark spot and the first completely light spot shall be taken.

The Refractive Index of Fei Cui : 1.65 – 1.72 (±0.01)

1.8 TEST REPORT / TEST CERTIFICATE

The test report / test certificate shall include the following information:

a) Description of the item including shape and cut, measurement of dimension, weight of the item.
b) Colour and transparency
c) Picture of the item
d) Certificate Number
e) Testing method
f) Date of testing
g) Date of issue
h) Conclusion
i) Name and signature of the approved signatory

STANDARD TEST METHOD 8

DETERMINATION OF SPECIFIC GRAVITY OF FEI CUI

1.1 SCOPE

This Standard describes the method of determining the specific gravity of the Fei Cui item to be tested.

1.2 APPLICATION

The specific gravity determination applies to items made of Fei Cui as received by the laboratory for testing.

The specific gravity may be used for the identification of Fei Cui.

1.3 DEFINITIONS

Specific Gravity (SG): It is the mass of a unit volume of Fei Cui compared with the mass of the water in the same volume of the Fei Cui under test expressed without any dimensional unit.

Specific gravity = $\frac{m_a}{m_a - m_l}$

where

m_a is the weight in air (in carat)
m_l is the average weight in water (in carat)

Mounted Fei Cui: A piece or pieces of Fei Cui set singly, or in a group or cluster, on a piece of jewellery.

1.4 APPARATUS

The following apparatus is required:

1. An Electronic Balance: A balance with a unit in carats, a resolution of 0.001 carat and an accuracy of 0.01 carat.

2. An Electronic Balance (for items with a weight of equal to or over 200 carat): A balance with a unit in carats, a resolution of 0.01 carat and an accuracy of 0.1 carat.

3. Hydrostatic attachment: An attachment from which the Fei Cui test item can be suspended.

4. Water container: A container or beaker made in glass or plastic for holding sufficient amount of distilled water.

1.5 TEST ITEM

The determination of specific gravity shall be a single test for each test item. Sampling of a number of items to represent a batch of Fei Cui products shall not be permitted.

1.6 PROCEDURES

1. The item of Fei Cui to be tested shall be cleaned scrupulously with a lint-free cloth

2. The Fei Cui item shall be weighed using an electronic balance. The weight measured shall be taken to 0.01 carat and recorded as "weight in air, m_a."

3. The hydrostatic attachment with sufficient distilled water shall be set up near the pan of the electronic balance.

4. The item shall then be placed on a wire basket and fully immersed in water. The basket shall not touch any part of the beaker and air bubbles must be prevented from forming on the surfaces of the item or the basket. The completely immersed item shall be weighed to 0.01 carat and its mass recorded as "weight in water".

5. Step 4 shall be repeated three times and the average m_l shall be calculated.

Note:

SG examination shall not be carried out on mounted Fei Cui.

For an item with a weight of equal to or over 200 carats, all the records shall be expressed to the nearest 1 decimal place using the balance as defined in 1.4.2.

1.7 EXPRESSION OF RESULTS

The specific gravity of the item shall be calculated using the weight in air (m_a) and average weight in water (m_l) using the following equation:

$$\text{Specific gravity} = \frac{m_a}{m_a - m_l}$$

The Specific Gravity of Fei Cui : 3.25 – 3.50

1.8 TEST REPORT / TEST CERTIFICATE

The test report / test certificate shall include the following information:

a) Description of the item including shape and cut, measurement of dimension, weight of the item.
b) Colour and transparency
c) Picture of the item
d) Certificate Number
e) Testing method
f) Date of testing
g) Date of issue
h) Conclusion
i) Name and signature of the approved signatory

STANDARD TEST METHOD 9

EXAMINATION OF FLUORESCENCE OF FEI CUI

1.1 SCOPE

This Standard describes the method of examining the fluorescence of the Fei Cui item to be tested.

1.2 APPLICATION

The fluorescence examination applies to items made of Fei Cui as received by the laboratory for testing.

1.3 DEFINITIONS

Fluorescence: Fluorescence is the general term used to describe the emission of visible light by a substance while it is being excited by radiation of shorter wavelengths and higher energy.

1.4 APPARATUS

The following apparatus is required:

Ultraviolet radiation lamp: An ultraviolet radiation lamp with the wavelength of approximately 365 nm (Long Wave) and 254 nm (Short Wave).

1.5 TEST ITEM

The determination of fluorescence shall be a single test for each test item. Sampling of a number of items to represent a batch of Fei Cui products shall not be permitted.

1.6 PROCEDURES

1. The Fei Cui item to be tested shall be cleaned scrupulously with a lint-free cloth.

2. The test item of Fei Cui shall be placed in a black box with a non-reflective black background.

3. The observer shall wait for a few second to let the eyes adapt to the dark environment of the black box before observation.

4. The test item of Fei Cui shall be placed as close to the ultraviolet radiation source as possible.

5. The long-wave ultraviolet radiation shall be switched on. The strength of fluorescence shall then be observed and recorded.

6. If the strength of fluorescence is classified as medium or strong, the colour observed shall also be recorded.

7. When the strength of fluorescence is in between that of two reference stones, it should be classified as the weaker one.

8. Step 4 to 7 shall be repeated by using short-wave ultraviolet radiation.

1.7 EXPRESSION OF RESULTS

The strength of fluorescence shall be classified into 4 grades:

1. Strong
2. Medium
3. Faint
4. None/ Inert

1.8 TEST REPORT / TEST CERTIFICATE

The test report / test certificate shall include the following information:

a) Description of the item including shape and cut, measurement of dimension, weight of the item.
b) Colour and transparency;
c) Picture of the item
d) Certificate Number
e) Testing method
f) Date of testing
g) Date of issue
h) Conclusion
i) Name and signature of the approved signatory

STANDARD TEST METHOD 10

CHELSEA COLOUR FILTER EXAMINATION

1.1 SCOPE

This Standard describes the method of using a Chelsea Colour Filter to detect whether the Fei Cui item to be tested shows indications of dyeing.

1.2 APPLICATION

The Chelsea Colour Filter examination applies to items made of Fei Cui as received by the laboratory for testing.

The Chelsea Colour Filter test shall be used only as an indication for the identification of whether the colour of the test Fei Cui is natural or dyed.

1.3 DEFINITIONS

Not applicable

1.4 APPARATUS

The following apparatus is required:

1. A Chelsea Colour Filter.
2. An intense light source: Tungsten light or equivalent.

1.5 TEST ITEM

The Chelsea Colour Filter examination shall be a single test for each test item. Sampling of a number of items to represent a batch of Fei Cui products shall not be permitted.

1.6 PROCEDURES

1. The item of Fei Cui to be tested shall be cleaned scrupulously with a lint-free cloth

2. The Fei Cui item shall be placed against a white background and illuminated with an intense white light source.

3. The intensity of the light shall be adjusted based on the depth of colour of the test item of Fei Cui. Darker coloured Fei Cui shall be illuminated with a high-intensity light source.

4. The Chelsea Colour Filter shall be positioned between the observer and the test Fei Cui.

5. If the test Fei Cui appears to change colour when viewed through the Chelsea Colour Filter, it should be recorded.

6. If no colour change observed through the Chelsea Colour Filter, it should be recorded the colour remained unchanged.

Note:

Any colour change observed could be influenced by the size, shape and transparency of the test item of Fei Cui, as small or opaque samples will show a weaker reaction.

Should more than one colouring element be present in the test Fei Cui, the results will also depend upon the relative concentration of these elements

Reactions will vary in test samples according to the type and amount of colouring agent the test item contains.

1.7 EXPRESSION OF RESULTS

Not Applicable

1.8 TEST REPORT / TEST CERTIFICATE

The test report / test certificate shall include the following information:

a) Description of the item including shape and cut, measurement of dimension, weight of the item.
b) Colour and transparency
c) Picture of the item
d) Certificate Number
e) Testing method
f) Date of testing
g) Date of issue
h) Conclusion
i) Name and signature of the approved signator

STANDARD TEST METHOD 11

FEI CUI SPECTROSCOPIC EXAMINATION

1.1 SCOPE

This Standard describes the method of using a spectroscope to identify whether the colour of the Fei Cui item to be tested is natural or dyed.

1.2 APPLICATION

The spectroscopic examination applies to items made of Fei Cui as received by the laboratory for testing.

1.3 DEFINITIONS

Not applicable

1.4 APPARATUS

The following apparatus is required:

A diffraction grating spectroscope or a prism spectroscope with an observable range of 400 nm – 700 nm.

1.5 TEST ITEM

The spectroscopic examination shall be a single test for each test item. Sampling of a number of items to represent a batch of Fei Cui products shall not be permitted.

1.6 PROCEDURES

Transmission method:

1. The test item of Fei Cui shall first be cleaned scrupulously with a lint-free cloth.
2. The test item of Fei Cui shall be fixed in such a position in relation to the spectroscope that a light beam is able to pass through it.
3. The intensity of the light source shall be adjusted with regard to the transparency and the colour intensity of the test item of Fei Cui. For light-coloured or transparent Fei Cui, a lower-intensity light shall be used, while for dark-coloured or translucent Fei Cui, a higher intensity light shall be used.
4. The height of the spectroscope shall be adjusted where necessary to position the test Fei Cui as close as 1cm or as far as 5 cm from the spectroscope.
5. For a spectroscope with slit, the slit shall be closed completely at first, and then opened just enough to make the full spectrum visible. This will eliminate any horizontal lines caused by dust.
6. The slide tube shall be used to adjust the focus of the spectrum.
7. The spectrum shall be observed in different positions on the test item of Fei Cui until the maximum absorption is found.
8. The observed spectrum should be sketched or described on the worksheet.

Reflection method:

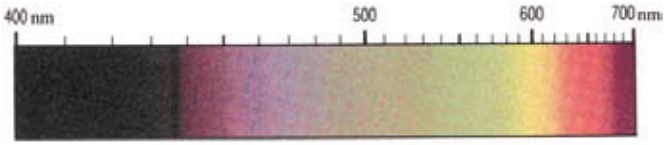
1. The item of Fei Cui to be tested shall be cleaned scrupulously with a lint-free cloth.
2. The light source shall be positioned so that the light shines at such an angle that it is reflected off the surface of the test item.
3. The position of the spectroscope shall be adjusted so that the reflected light can enter the spectroscope.
4. For a spectroscope with a slit, the slit shall be closed completely at first, and then opened just enough to make the full spectrum visible. This eliminates any horizontal lines caused by dust.
5. The slide tube shall be used to adjust the focus of the spectrum.
6. The spectrum shall be observed in different positions on the test item of Fei Cui until the maximum absorption is found
7. The observed spectrum should be sketched or described on the worksheet.

Note:
The quality of the spectrum could be affected by the cut, shape, size and transparency of the test item of Fei Cui, the light source used and any dust or dirt in the slit of the spectroscope.

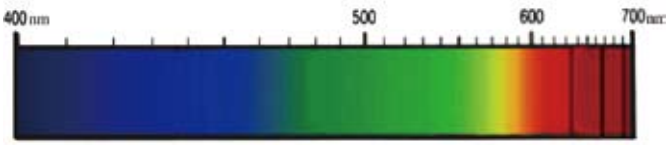
1.7 EXPRESSION OF RESULTS

The following spectra show some examples of the absorption spectrum of natural green Fei Cui,dyed green Fei Cui, resin impregnated & dyed green Fei Cui.

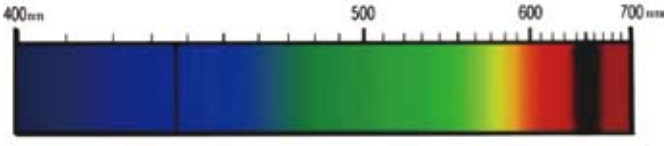
An absorption band is seen in the blue part of the visible spectrum. Absorption line(s) is/ are observed in the red part of the spectrum. Absorption bands may be seen in the green to orange-red part of the spectrum.



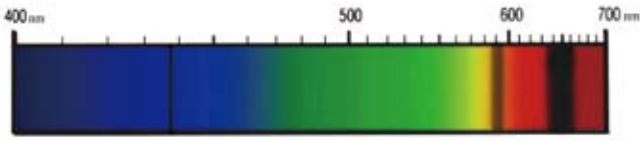
Natural Colour Fei Cui spectrum



Natural Green Fei Cui spectrum



Dyed Green Fei Cui spectrum



Resin Impregnated &
Dyed Green Fei Cui spectrum

1.8 TEST REPORT / TEST CERTIFICATE

The test report / test certificate shall include the following information:

a) Description of the item including shape and cut, measurement of dimension, weight of the item.
b) Colour and transparency
c) Picture of the item
d) Certificate Number
e) Testing method
f) Date of testing
g) Date of issue
h) Conclusion
i) Name and signature of the approved signatory

STANDARD TEST METHOD 12

FEI CUI MAGNIFICATION EXAMINATION

1.1 SCOPE

This Standard describes the method of magnification examination to be used to examine the surface and internal characteristics of the item of Fei Cui to be tested.

1.2 APPLICATION

The magnification examination applies to items made of Fei Cui as received by the laboratory for testing.

1.3 DEFINITIONS

Internal and External Characteristics:

1. Texture:

Type	Texture	Description
Very Fine Grain	Interlocking Microgranular & Microfibrous	Difficult to see grains under loupe/ microscope (10x magnification)
Fine Grain	Interlocking Granular & Fibrous	Difficult to see grains with the naked eye; can be seen with 10x magnification
Medium Grain	Interlocking Granular & Fibrous	Visible with the naked eye (on most of the item)
Coarse Grain	Interlocking Granular	Very obvious grains visible with the naked eye

2. Surface:
   - Iron-staining
   - Glistening
   - Pits
   - “Orange peel” effect
   - Micro cracks
   - Grooves

1.4 APPARATUS

The following apparatus is required:

A binocular microscope with a magnification of at least 10X.

1.5 TEST ITEM

The magnification examination shall be a single test for each test item. Sampling of a number of items to represent a batch of Fei Cui products shall not be permitted.

1.6 PROCEDURES

1. The item of Fei Cui to be tested shall be cleaned scrupulously with a lint-free cloth.
2. The Fei Cui item shall be placed on the stone-holder under the microscope lenses.
3. The test item of Fei Cui shall be illuminated from the side.
4. The test item of Fei Cui shall be observed in all directions under a low magnification.
5. The observer shall look for signs of fracture, reflections on internal fractures and cleavage under a higher magnification.
6. The surface and internal characteristics of the test item of Fei Cui shall then be recorded for further analysis.

1.7 EXPRESSION OF RESULTS

Not applicable

1.8 TEST REPORT / TEST CERTIFICATE

The test report / test certificate shall include the following information:

a) Description of the item including shape and cut, measurement of dimension, weight of the item.
b) Colour and transparency
c) Picture of the item
d) Certificate Number
e) Testing method
f) Date of testing
g) Date of issue
h) Conclusion
i) Name and signature of the approved signatory.

STANDARD TEST METHOD 13

FEI CUI INFRARED SPECTRUM EXAMINATION: Detection of Resin Impregnation

1.1 SCOPE

This Standard describes the method of using an infrared spectrometer to detect resin impregnation of the item of Fei Cui to be tested.

1.2 APPLICATION

The infrared spectrum examination applies to items made of Fei Cui as received by the laboratory for testing.

The infrared spectrum examination shall be used for the identification of Fei Cui

1.3 DEFINITIONS

Resin Impregnation: A carbon-hydrogen bonded organic solid substance generally called resin is impregnated in liquid form into a gemstone and solidified inside to improve the gemstone's transparency, clarity, colour distribution and saturation; but the gemstone's lustre is diminished.

1.4 APPARATUS

The following apparatus is required:

A Fourier Transform Infrared Spectrometer (FTIR).

1.5 TEST ITEM

The infrared spectrum examination shall be a single test for each test item. Sampling of a number of items to represent a batch of Fei Cui products shall not be permitted.

1.6 PROCEDURES

For detecting resin impregnation

1. Any previous sample shall be removed from the sample holder of the spectrometer so that the beam is clear.
2. A sample spectrum profile against a background spectrum profile that measures the response of the spectrometer without any sample placed shall be collected first.
3. The Fei Cui to be tested shall be cleaned scrupulously with a lint-free cloth before it is placed into the spectrometer.
4. For an item of Fei Cui that is relatively thick, has low transparency, is mounted, or wherever the transmittance method is not applicable, the reflectance method of infrared spectrum examination shall be used. Fei Cui shall be detected by using the FTIR spectrometer, using the probe for reflectance measurements.
5. For an item of Fei Cui that is relatively thin, either the transmittance or reflectance method of infrared spectrum examination can be used. The test item of Fei Cui shall be inserted through the sliding door of the spectrometer when using the transmittance method.
6. After placing the test item of Fei Cui in the appropriate place and orientation, at least three points shall be checked randomly. The spectrum profile shall then be collected.

Note:

For the surface of an item of Fei Cui that is less than 25mm in all dimensions, a 1-point random check shall be considered adequate.

The background spectrum shall be used to remove counter effects caused by the instrument and atmospheric conditions, so that the peaks and troughs in the final spectrum profile shall be due solely to the sample divided by the sample spectrum profile.

1.7 CALCULATION AND EXPRESSION OF RESULTS

DETECTION OF RESIN IMPREGNATION

Interpretation of the spectrum:
Transmittance Method:

The presence of a very intense group of peaks (strong absorption) between 2850 cm^{-1} and 3100 cm^{-1}, with apparent absorption maxima at approximately 2869 cm^{-1}, 2924 cm^{-1}, 2962 cm^{-1}, 3036 cm^{-1} and 3053 cm^{-1}, is the indication of resin impregnation. (See Figure A)

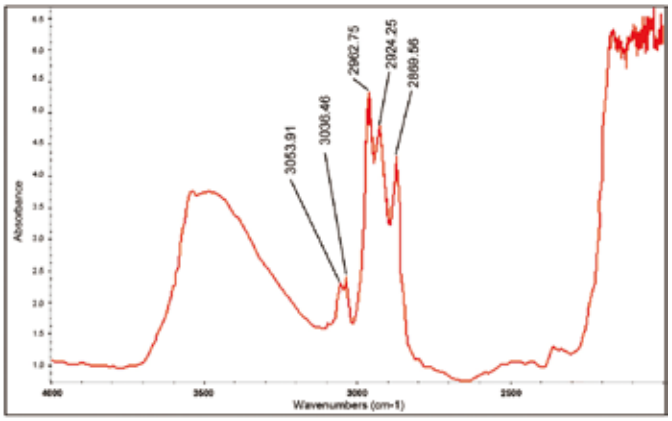


Figure A: Spectrum of a typical resin impregnated Fei Cui using transmittance method.

Reflectance Method (Specular Reflection Technique):

The presence of a group of absorption peaks at either around 5900 cm^{-1} or 4680 cm^{-1} regions, with apparent peak maxima at approximately 5985 cm^{-1}, 5918 cm^{-1} or 4681 cm^{-1} and 4618 cm^{-1}, is the indication of resin impregnation. (See Figure B).

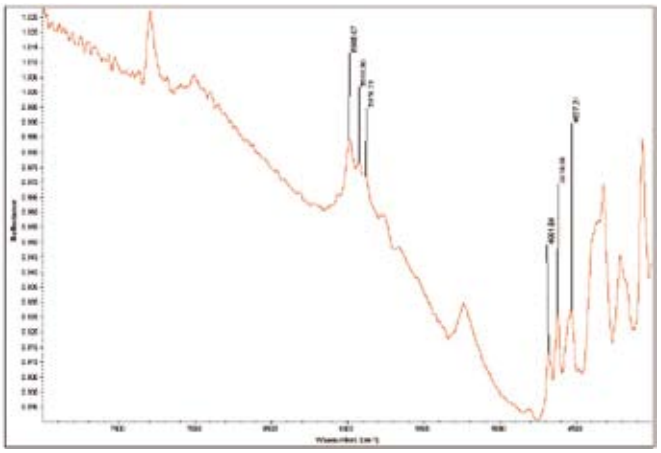


Figure B: Specular reflectance FTIR spectrum of a typical resin impregnated Fei Cui, showing groups of peaks at around 5900 cm^{-1} or 4680 cm^{-1}.

The test Fei Cui shall be identified as no resin detected only if all the checking(s) do not show any indication of resin impregnation.

Note:

For identification of the three members of the Fei Cui group, Jadeite Jade, Omphacite Jade and Kosmochlor Jade, an optional additional test using specular reflectance FTIR fingerprint technique, one of the viable technique is recommended. This can be found in Appendix 3.

1.8 TEST REPORT / TEST CERTIFICATE

The test report / test certificate shall include the following information:

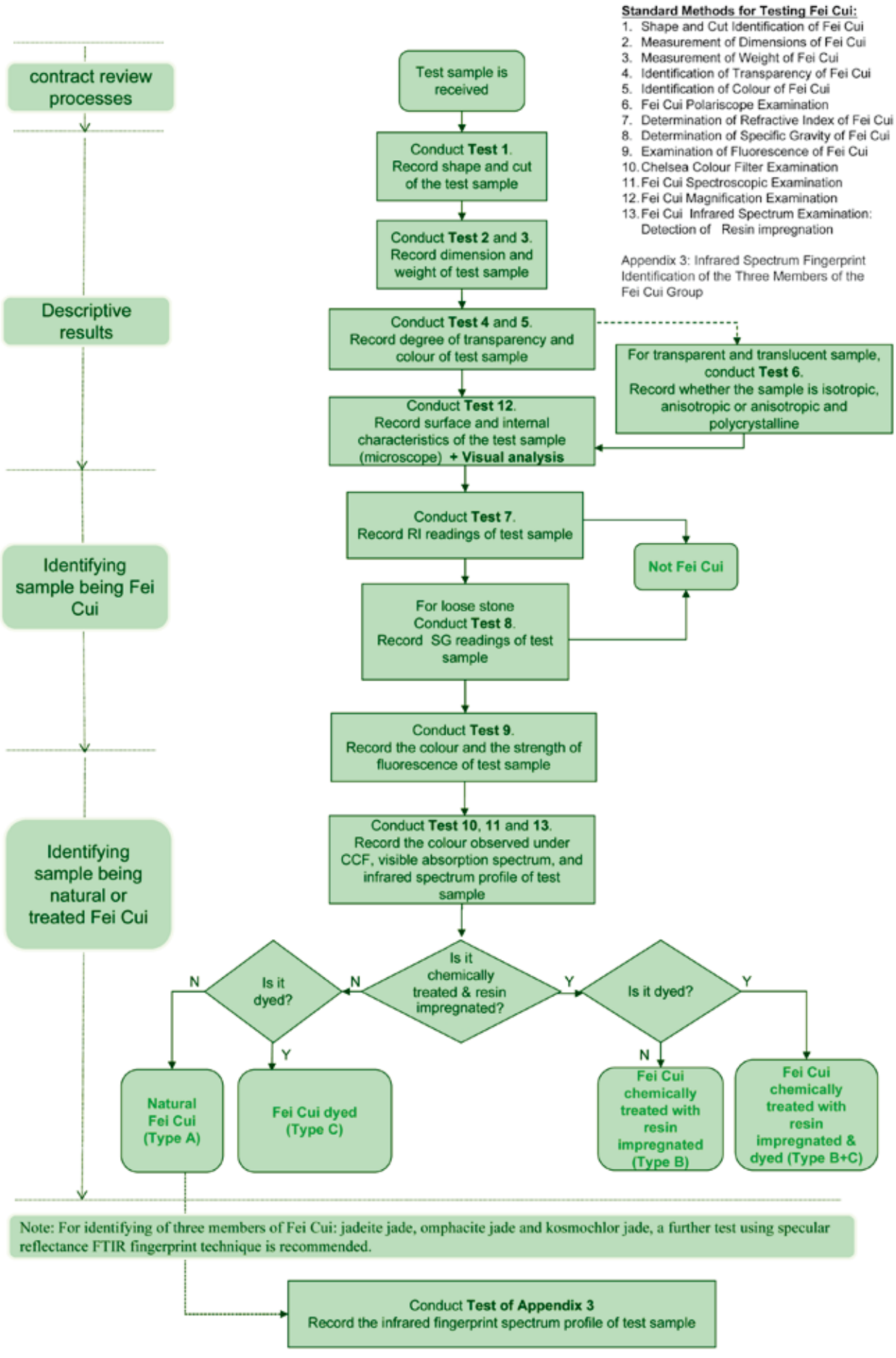
a) Description of the item including shape and cut, measurement of dimension, weight of the item.
b) Colour and transparency
c) Picture of the item
d) Certificate Number
e) Testing method
f) Date of testing
g) Date of issue
h) Conclusion
i) Name and signature of the approved signatory

Glossary

Anisotropic 各向異性	Micro Crack 微小裂紋
Anomalous Extinction 異常消光	Mounted 鑲嵌
Bright 鮮	Opaque 不透明
Dark 暗	“Orange Peel” 橙皮紋
Deep深	Pale 淡
Even 均勻	Patches塊狀
Fibrous (texture) 纖維狀 (結構)	Polycrystalline 多晶質
Granular (texture) 粒狀 (結構)	Pit 小坑洞
Glistening 翠性	Spots 點狀
Groove 溝槽	Transparent 全透明
Isotropic各向同性	Transparency 透明度
Iron-Staining 鐵染	Translucent 半透明
Intense 濃	Uneven 不均勻
Light 淺	Vein 脈狀

APPENDIX 1

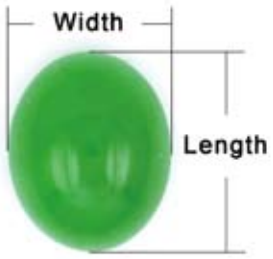
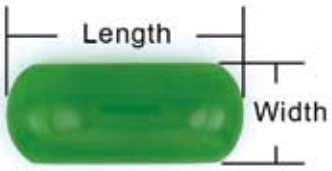
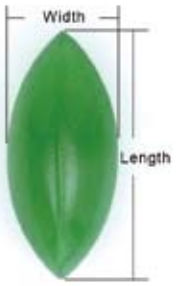
DIAGRAMMATIC FLOW CHART SHOWING TESTING PROCEDURES FOR ITEM OF FEI CUI



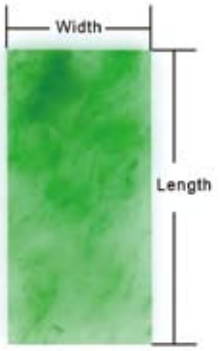
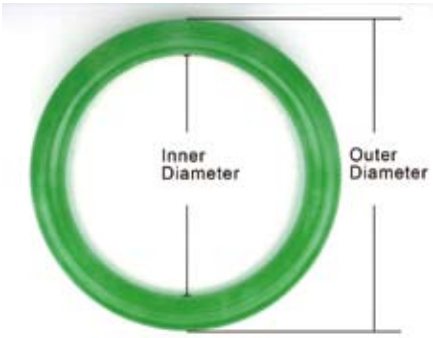
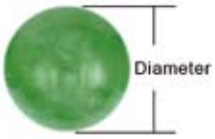
APPENDIX 2

VISUAL GUIDELINES OF THE MEASURING METHODS OF DIFFERENT SHAPES AND FORMS OF TEST ITEMS

Measurement of Dimension of Fei Cui item

Shape & Cut 形狀	Chinese/English Name 中文/英文名稱	Measurement 尺寸
	Oval Shape Cabochon 旦形卜面	Length x Width x Thickness 長度 x闊度 x 厚度
	Saddle Top 馬鞍面	Length x Width x Thickness 長度 x 闊度 x 厚度
	Round Disc 圓扣	The Longest Outer Diameter x Thickness 最長直徑 x 厚度
	Marquise Shape Cabochon 欖尖形卜面	Length x Width x Thickness 長度 x 闊度 x 厚度

Measurement of Dimension of Fei Cui item

Shape & Cut **形狀**	**Chinese/English Name** **中文/英文名稱**	**Measurements** **尺寸**
	Rectangular Shape Plaque 長方形平面塊	Length x Width x Thickness 長度 x 闊度 x 厚度
	Round Bangle 圓手鐲	The Longest Outer Diameter x The Longest Inner Diameter x Width 最大外圈 x 最大內圈 x 闊度
	Bead 圓珠	The Longest Diameter 最長直徑
	Buddha 佛公	Length x Width x Thickness 長度 x 闊度 x 厚度

APPENDIX 3 (INFORMATIVE)

INFRARED SPECTRUM FINGERPRINT IDENTIFICATION OF THE THREE MEMBERS OF THE FEI CUI GROUP (JADEITE JADE, OMPHACITE JADE AND KOSMOCHLOR JADE)

1.1 DEFINITIONS

Infrared spectrum fingerprint identification: All molecules have a unique vibrational spectrum in the infrared, which may be called its "fingerprint". The vibrational peaks which are used to identify the molecular structure of a material are located below ~1600 cm^{-1}. Recording a FTIR spectrum of the members of Fei Cui in the range from 400-1600 cm^{-1} is a direct method for identification.

1.2 PROCEDURE

1. The reflectance method of infrared spectrum examination shall be used to test the fingerprint spectra of the test item of Fei Cui. The test item shall be examined using the probe of the spectrometer.

2. The infrared fingerprint spectroscopic test shall be performed only after the uniformity of the mineral aggregate of the test item has been determined (whether it is uniform or not). The uniformity can be determined by R.I. testing and microscopic examination of colour distribution and texture variation.

3. After placing the test item in the appropriate position and orientation, one of the following test approaches should be chosen:

i) For a test item of uniform colour, refractive index and/or texture, a 2-point random check shall be considered adequate.

ii) For a test item with non-uniform colour, refractive index and/or texture, at least two points shall be checked at the areas of the major mineral component determined by the R.I. test and microscopic studies.

A conclusive result is recorded when the results of the fingerprint tests at the area of the major mineral component record the spectra of only one member of the Fei Cui group.

iii) For a test item with non-uniform colour, refractive index and/or texture and composed of two minerals components of similar proportions, two points shall be checked on different parts determined by the R.I. test and microscopic studies.

A conclusive result would be recorded when more than half the fingerprint testing points confirmed a single member of the Fei Cui group.

Should one testing point confirm Fei Cui (Jadeite Jade) and the other testing point confirm another member of the Fei Cui group (either Omphacite Jade or Kosmochlor Jade), a conclusive result would be recorded as Fei Cui (Jadeite Jade and Omphacite Jade) or Fei Cui (Jadeite Jade and Kosmochlor Jade)[1]. In order to confirm the name of the members of the Fei Cui group present, further testing at different points is recommended.

Note:

[1] The names of the members of the Fei Cui group are not listed in any particular order.

1.3 CALCULATION AND EXPRESSION OF RESULTS

FTIR fingerprint reflectance spectra of the three members of the Fei Cui group

1. Fei Cui, Jadeite Jade

The presence of peaks between 400 cm^{-1} and 1200 cm^{-1} at approximately 1168, 1082, 1050, 961, 850, 744, 665, 587, 530, 474 and 432 cm^{-1} indicate the molecular vibrations of the structure of Jadeite Jade. They are the specular reflectance FTIR fingerprint peaks of Fei Cui, Jadeite Jade. (See Figure A)

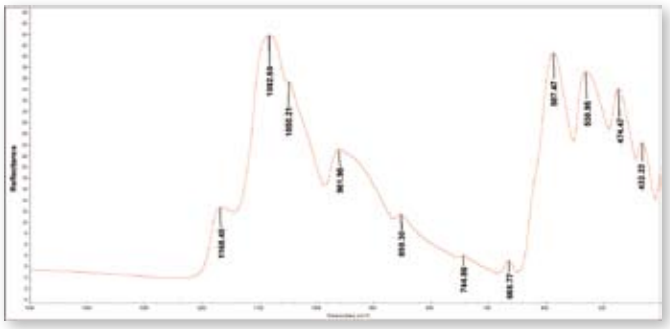


Figure A: Typical Specular reflectance FTIR fingerprint spectrum of Fei Cui, Jadeite Jade.

2. Fei Cui, Omphacite Jade

The presence of peaks between 400 cm^{-1} and 1200 cm^{-1} at approximately 1102, 1064, 957, 887, 710, 648, 563, 521, 442 and 411 cm^{-1} indicate the molecular vibrations of the structure of Omphacite. They are the specular reflectance FTIR fingerprint peaks of Fei Cui, Omphacite Jade. (See Figure B).

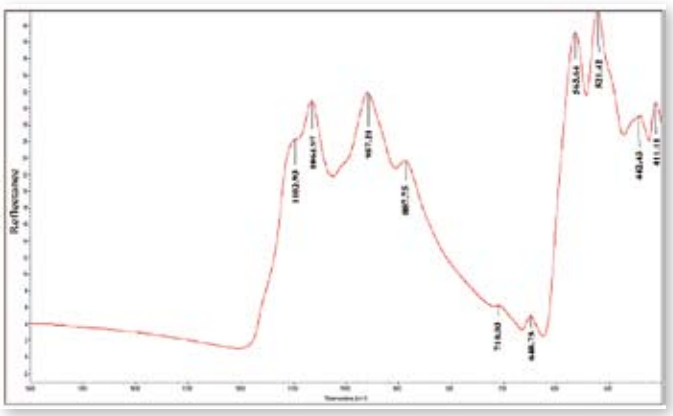


Figure B: Typical Specular reflectance FTIR fingerprint spectrum of Fei Cui, Omphacite Jade.

3. Fei Cui, Kosmochlor Jade

The presence of peaks between 400 cm^{-1} and 1200 cm^{-1} at approximately 1153, 1063, 1035, 926, 855, 737, 651, 579, 512 and 419 cm^{-1} indicate the molecular vibrations of the structure of Kosmochlor Jade. They are the specular reflectance FTIR fingerprint peaks of Fei Cui, Kosmochlor Jade. (See Figure C)

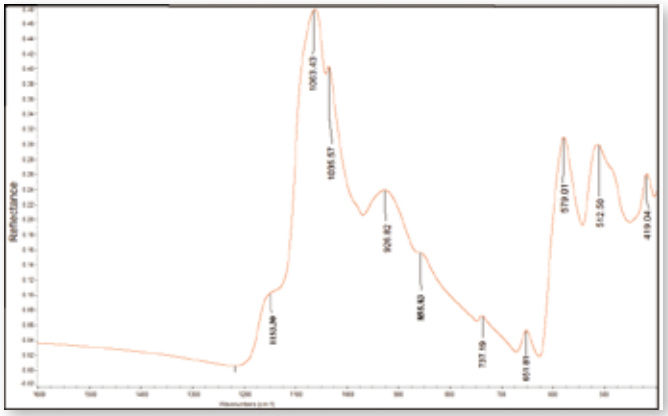


Figure C: Typical Specular reflectance FTIR fingerprint spectrum of Fei Cui, Kosmochlor Jade.

FEI CUI TESTING REPORT TEMPLATE
COVER PAGE LAYOUT

IMPORTANT NOTES

cover page part 3

Accreditation Symbol

Natural Fei Cui & Treatment Types

Type	Known as	Definition
Natural Fei Cui	Type A	Refers to natural Fei Cui which has not been subjected to any form of chemical treatment.
Chemically Treated and Resin Impregnated Fei Cui	Type B	Refers to Fei Cui which has been chemically treated and resin impregnated.
Dyed Fei Cui	Type C	Refers to Fei Cui which has been treated with dye
Chemically Treated, Resin Impregnated and Dyed Fei Cui	Type B+C	Refers to Fei Cui which has been chemically treated, resin impregnated and dyed.

Notes: To polish natural Fei Cui with colourless wax, which does not cause any damage to the crystalline structure of the Fei Cui, shall not be classified as a chemical treatment.

cover page part 2

Accreditation Symbol

LAB NAME
& LOGO

FEI CUI TESTING REPORT

cover page part 1

FEI CUI TESTING REPORT TEMPLATE
BACK PAGE LAYOUT

Accreditation Symbol

FEI CUI TESTING REPORT

Address

Tel:
Fax:

Test Standard : HKSM/FCT-2016
Description of Test Item :

Report No. :
Date of test : DD/MM/YYYY
Date of issue : DD/MM/YYYY

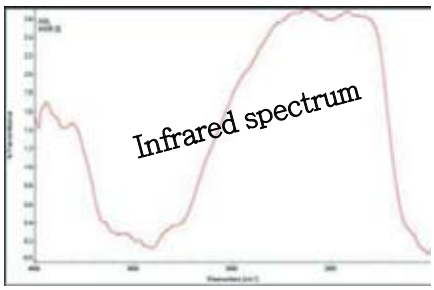
Instruments used

Electronic Balance	Ultra-violet Lamp
Polariscope	Chelsea Colour Filter
Spectroscope	Gemmological Microscope
Refractometer	Electronic Caliper

Fourier Transform Infrared Spectrometer

Test Results

Shape & Cut
Dimensions (mm)
Weight (Carat)
Transparency
Colour
Polariscope
Refractive Index
Specific Gravity
Infrared Spectrum
Fluorescence
UV-LW
UV-SW
Chelsea Colour Filter
Visible Spectrum
Magnification



Conclusion

Signatory approved by Accreditation Body

Colour photo shows the shape of test item only.

Name
CG(Fei Cui), FGAHK

Form No.

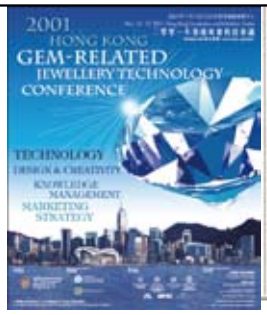
---- End ----

Development and Key Milestones of GAHK Project of "Standard Methods for Testing Fei Cui for Hong Kong"

November

2001

二零零一年香港珠寶科技會議 (項目撥款機構：創新及科技基金)
2001 Hong Kong Gem-Related Technology Conference



2002-2004

「透過為翡翠及鑽石建立認可寶石認證及標識制度，加強香港作為亞洲寶石貿易及服務中心的地位」 (項目撥款機構：工業貿易署中小型企業支援發展基金)

July

2003

建立寶石鑑定所認證系統及參考手冊，包括：品質手冊(Quality Manual)、運作程序(Operation Procedures)、工作指示(Working Instructions)

2005-2008

「通過建立符合國際標準ISO/IEC 17025認可的寶石測試實驗室、鑽石及翡翠鑑證師的認可系統，把香港打造成"信任標誌品牌"的國際翡翠鑽石珠寶貿易中心」 (項目撥款機構：工業貿易署中小型企業支援發展基金)

March

2011-2013

【開發一套綜合的翡翠標準測試方法，進一步鞏固"翡翠- 香港檢測·香港認證"的品牌形象】(項目撥款機構：香港檢測和認證局)

2013

「翡翠 - 香港檢測、香港認證」：翡翠標準測試方法及認證最新發展研討會

講者： 中國地質大學

September

2014

2014年9月香港寶石學協會研討會：翡翠傳承-科學研究和專業教育

講者：國土資源部珠寶玉石首飾管理中心北京研究所首席研究員陸太進博士

March

2015

2015年3月香港寶石學協會研討會：珠寶估值與寶石標準的根本基礎：誠信、原真性和消費者信心

講者：中國地質大學（武漢）珠寶學院盧靭教授、香港寶石學協會司庫周家強先生

June

2017

2017年6月《香港翡翠標準測試方法》和採用"天然翡翠"為鑒定證書結論新聞發佈會

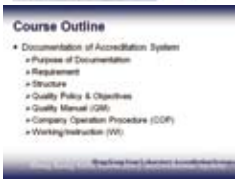
March

2018

2018年3月
香港翡翠鑑定標準及珠寶零售業服務標準的最新發展研討會

香港寶石學協會翡翠及
鑽石認證及標識制度計劃

參加此計劃的寶石鑑定所從翡翠及鑽石認證及標識制度參考手冊，建立自己的運作程序和質量管理系統。鑑定所的鑑證師需要通過ISO知識的培訓課程及嚴格的審核，測試其對ISO/IEC 17025系統的了解及掌握，培訓課程的內容包括：ISO制度的認知、內部審核、寶石鑑證所認可制度ISO文件編寫、儀器校正及實習。



一套規範實驗室運作的標準系統，確保每一張鑑定證書的每項測試過程、所使用的儀器、負責測試的人員、寶石鑑定所的環境及測試方法都符合國際標準要求，每項產品測試的程序、使用的設備的能力及精準度要求、環境控制的要求標準化，統一校正及檢測儀器的標準物料，統一測試證書所用的標準詞彙，確保測試結果的質素。

2006

香港寶石學協會推行寶石鑒鑑定師專業持續進修計劃和認可寶石鑑定師(Certified Gemmologist)的每年更新登記的制度

（武漢）珠寶學院袁心強教授

講者：國土資源部珠寶玉石首飾管理中心副主任/國家珠寶玉石質量監督檢驗中心主任柯捷女士

September

2016

2016年9月「翡翠珠寶產業的檢測認証、專業化和國際化的商業實務」研討會

March

2017

2017年3月《香港翡翠標準測試方法》新聞發佈會

講者：中國地質大學（武漢）珠寶學院院長 楊明星教授、國際珠寶業聯盟(CIBJO)主席Gaetano Cavalieri博士

講者：香港珠石玉器金銀首飾業商會理事長黃紹基先生、九龍珠石玉器金銀首飾業商會理事長 劉克斌先生

November - December

2019 香港寶石學協會《香港翡翠標準測試方法》的國際化最新發展：

2019年11月18日至20日 國際珠寶業聯盟大會 (CIBJO Congress) 在中東巴林舉行，大會主席Caetano Cavalieri博士安排一個焦點會議討論怎樣建立翡翠的國際標準。廖尚宜博士和黃紹基先生(香港珠石玉器金銀首飾業商會理事長，周大福珠寶集團董事總經理)代表香港寶石學協會作了詳細的報告，表達了香港珠寶及翡翠業界的聲音和訴求。CIBJO主席及參與大會人仕對報告內容給予高度的評價與肯定，並接納香港寶石學協會的提案，考慮將 "Fei Cui" (翡翠) 加入CIBJO Blue Books中。CIBJO Blue Books是一套廣泛為全球珠寶行業接受的寶石分級標準和術語的重要刊物。這 是翡翠進入國際珠寶及寶石業界舞臺的里程碑。

CIBJO Congress 2019 conducts a Fei Cui special session, looking to create international standards for trade in jade products.

香港寶石學協會代表團的四位成員。
廖尚宜博士代表歐陽秋眉教授(香港寶石學協會榮譽主席)發言，報告翡翠命名的緣起，提供了詳盡的解釋，及報告了最新研究和翡翠測試標準的發展及其科學研究成果 。

廖尚宜博士，CIBJO主席Caetano Cavalieri博士和黃紹基先生

黃紹基先生的發言以市場及消費者對翡翠珠寶的需求為視點，題為"珠寶市場的新動力--翡翠珠寶如何配搭鑽石和彩色寶石" 。

2019年11月至12月香港寶石學協會向海關提供量 身定制的翡翠和鑽石基礎寶石學培訓課程。
GAHK provides a Tailor-made Basic Gemmology Training Course of Fei Cui and Diamond to the Customs and Excise Department.

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The Gemmological Association of Hong Kong Limited
香港寶石學協會有限公司
www.gahk.org info@gahk.org