

Hong Kong Standard Testing Methods for Fei Cui, Certification and ISO Quality Management System of Gem Laboratory

The Gemmological Association of Hong Kong Ltd

Vice Chairman

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BACKGROUND

- Jewellery & Jade Industry & Market Development
 - Manufacturing, trading, wholesale & retail

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Background

- In the 1980s -1990s, a lot of resin impregnates Fei Cui in the market (B Jade)
- Natural Fei Cui market business greatly affected
- Traders need natural Fei Cui identification certificate to improve consumer confidence

BACKGROUND

Hong Kong as a Testing and Certification Centre

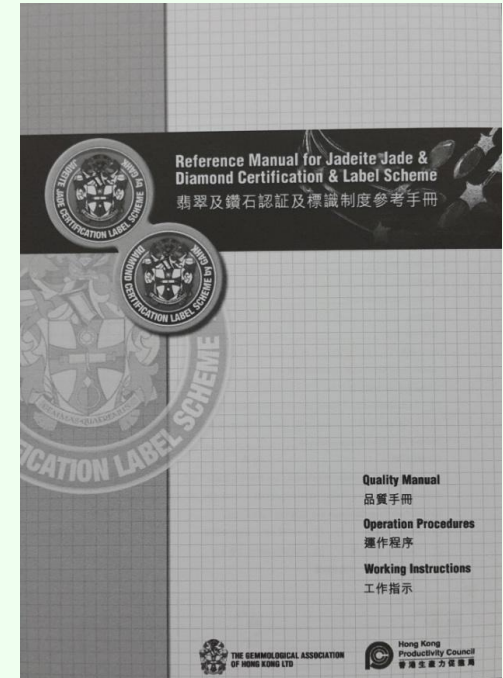
- Hong Kong's testing and certification industry has grown substantially since the 1980s
- T&C industry provides
 - (1) testing and inspection services for consumer products manufactured in the Pearl River Delta for buyers & consumers, and
 - (2) certification services for such products & the relevant quality management systems

BACKGROUND

- GAHK establish the “**Hong Kong Standard Testing Methods for Fei Cui**”, and registration system for the gemmologists to achieve the status as a **Certified Gemmologist (CG.)**
- Gem Laboratory are becoming a unique service provider :
 - Certificates
 - Gemmologists
 - Trade & consumer pursue the **Fei Cui certificates** issued by the laboratories adopting **ISO/IEC 17025 Quality Management System** in operations

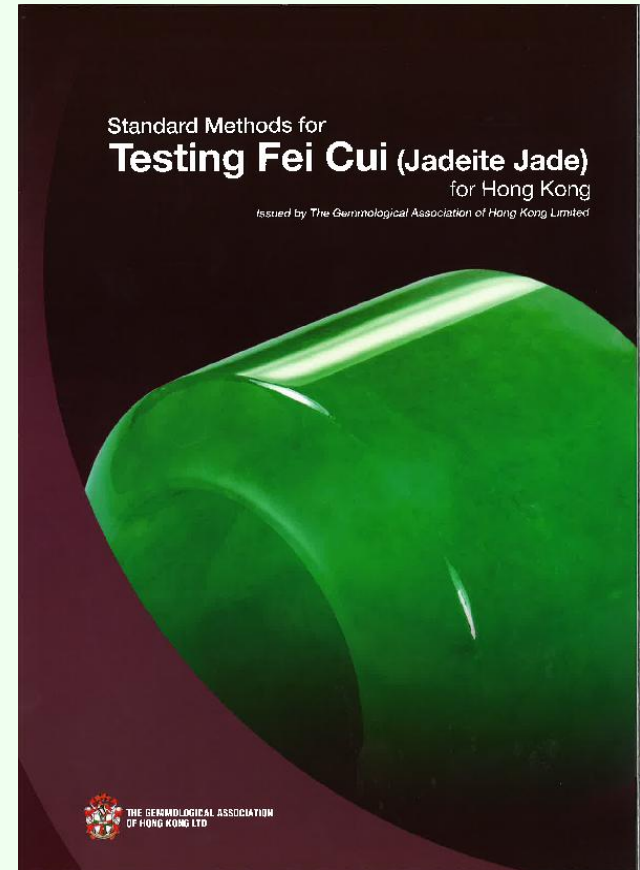
GAHK Certification and Label Scheme For Fei Cui (Jadeite) and Diamond

- In 2003, GAHK implemented Laboratory Label Scheme
- Aims to upgrade the standard of gems testing service
- To recognize the competence of laboratories in testing Fei Cui (Jadeite) and Diamond
- To strengthen Hong Kong as a Fei Cui and Diamond identification center
- **GAHK's Certification and Label Scheme logo** will be granted to the recognized laboratory



Established Fei Cui Testing Standards

- In 2004 with the support of **SME Development Fund**, GAHK published the “**Standard Methods for Testing Fei Cui (Jadeite Jade) for Hong Kong**”
- **Definition of Fei Cui :**
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.



Standard Fei Cui Testing Procedures

1. Shape and Cut identification of Fei Cui
2. Measurement of Dimensions of Fei Cui
3. Measurement of Weight of Fei Cui
4. Identification of Transparency of Fei Cui
5. Identification of Colour of Fei Cui
6. Fei Cui Polariscope Examination
7. Determination of Refractive Index of Fei Cui
8. Determination of Specific Gravity of Fei Cui
9. Examination of Fluorescence of Fei Cui
10. Chelsea Colour Filter Examination
11. Fei Cui Spectroscopic Examination
12. Fei Cui Magnification Examination
13. Fei Cui Infrared Spectrum Examination: Detection of Resin Impregnation

Established Fei Cui Testing Standards

- Summary all test data
- Testing Certificate Conclusion as

Type	Known as	Definition
Natural Fei Cui	Type A	Refers to natural Fei Cui which is not subject to any form of chemical treatment ¹
Chemically Treated and resin Impregnated Fei Cui	Type B	Refers to Fei Cui which is chemically treated and resin impregnated.
Dyed Coloured Fei Cui	Type C	Refers to Fei Cui which is dyed with colour.
Chemically Treated, Resin Impregnated and Dyed Coloured Fei Cui	Type B+C	Refers to Fei Cui which is chemically treated, resin impregnated and dyed with colour.

Established Fei Cui Testing Standards

- HK SAR Government has adopted the testing standard and Fei Cui definition in the Trade Descriptions Ordinance.(Chapter 362)
- Jewellery industry, consumers are accept the testing standards and widespread implementation.
- Trading of natural Fei Cui grows and strengthens the customer confidence

ISO Quality Management

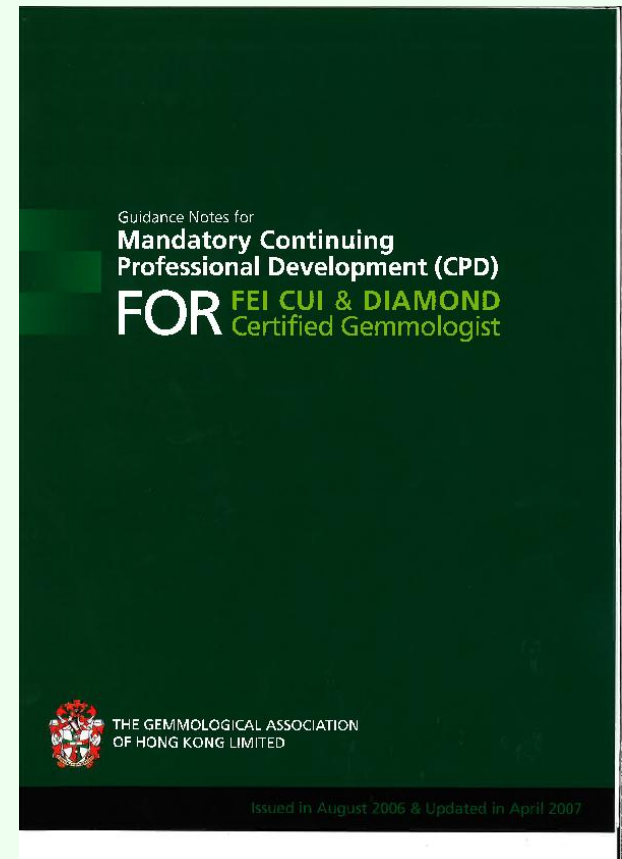
- In 2005, GAHK cooperated with HKPC established ISO/IEC 17025 Laboratory management system
- The system contains :
 - 1. Quality manual**
 - 2. Operation Procedures**
 - 3. Working Instructions**

ISO Quality Management

- Applied Laboratory should have the proper equipment for testing
- Qualified Gemmologists should have good competence in testing Fei Cui and Diamond
- Reference samples, Color Master Stones, Reference Books
- Hong Kong have 7 Fei Cui laboratories, 2 diamond laboratories fulfill the requirements of ISO/IEC 17025

Mandatory Continuing Professional Development

- In 2006, established Mandatory Continuing Professional Development (CPD) system
- Graduate gemmologist have continuing professional development in Fei Cui and Diamond

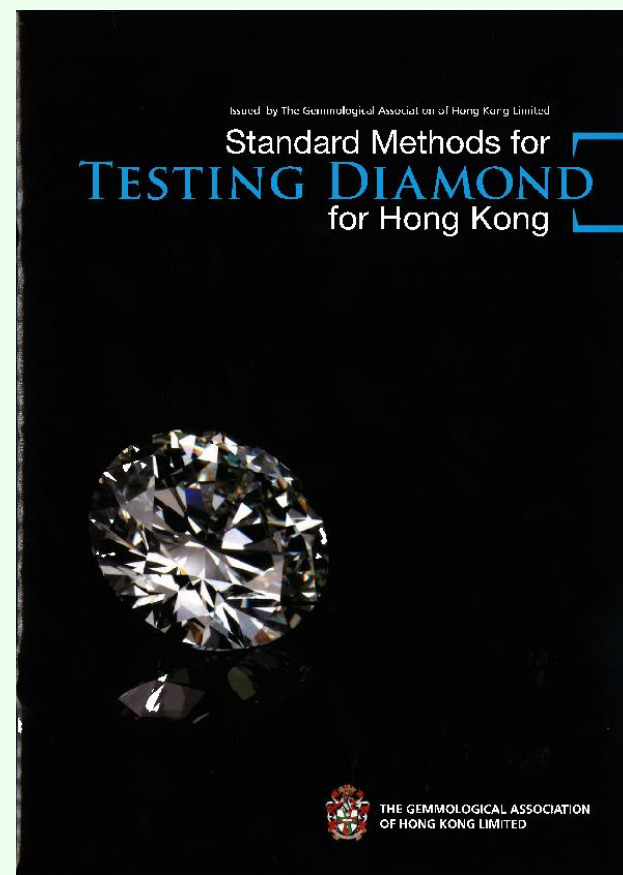


Mandatory Continuing Professional Development

- CPD programmes are categorized into the following areas
 - i) Knowledge Update Modules,
 - ii) Advance Testing Instrument Update
 - iii) Understanding on ISO/IEC 17025
Laboratory Management System
- Now we have about 100 certified Gemmologist

Standard Methods for Testing Diamond for Hong Kong

- In 2008 with the support of SME Development Fund, GAHK published the **“Standard Methods for Testing Diamond for Hong Kong”**



Standard Methods for Testing Diamond for Hong Kong

- **8 Diamond Testing Procedure :**
 1. Authenticity identification of diamonds
 2. Shape & cutting style
 3. Weight measurement of diamond
 4. Colour grading of diamond
 5. Fluorescence of diamond
 6. Clarity grading of diamond
 7. Proportion and finish grading of diamond
 8. Cut grading of round brilliant diamond

New “Standard Methods for Testing Fei Cui for Hong Kong”

- In recent years, a lot of minerals and scientific research, advanced instrument applications, we can accurately identify the species of Fei Cui
- In 2012, **Certification and Testing Council** proposes to extend the scope of Accredited Fei Cui Testing included **Jadeite Jade , Omphacite Jade and Kosmochlor Jade**, to meet “Hong Kong Trade Descriptions Ordinance”

New “Standard Methods for Testing Fei Cui for Hong Kong”

- **GAHK** consultation with Trade Association, China and overseas Gem Laboratory, Gemmologist, Fei Cui expert.
- Summarizes the different comments, edited a new version “Standard Methods for Testing Fei Cui for Hong Kong”
- **2015, new version** “Standard Methods for Testing Fei Cui” Standard editing is completed and submitted to the HKCTC, and they confirmed and adopted as the new standard

New “Standard Methods for Testing Fei Cui for Hong Kong”

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New “Standard Methods for Testing Fei Cui for Hong Kong”

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Dr Jack Odgen	Former CEO, Gemmological Association of Great Britain (Gem-A), UK.
Dr Lore Kiefert	Chief Gemmologist, Gübelin Gem Lab
Dr Hanco Zwaan	Researcher, Netherlands Gemmological Laboratory

New “Standard Methods for Testing Fei Cui for Hong Kong”

- “**Natural Fei Cui**” will be the conclusion of a new version of certificate.
- Testing certificate bearing **Hong Kong Accreditation Service (HKAS) logo** as a symbol of confidence in Fei Cui and Diamond



Thank You