CASE STUDY

SourceCertain

Diamond Source Verification

PROVENANCE SCIENCE SERVICE

Source Certain provides their provenance verification testing as a critical pillar of the SCS Global Services' (SCS 007) Sustainable Rated Diamond Standard.

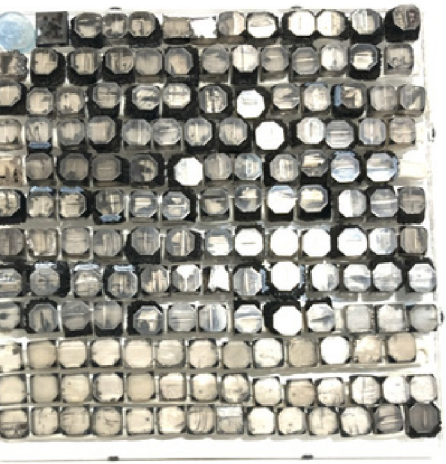

Fig. 1 Diamonds mounted in the laser system ready for laboratory analysis.

Origin testing of diamonds using laser technology

Source Certain has successfully produced and made commercially available a solution to scientifically verify the origin of diamonds. The solution uses the same methods the company employs in gold origin verification, which has been developed and used for over 40 years. Source Certain's diamond provenance solution employs the latest advancements in Laser Ablation Inductively Coupled Plasma Mass Spectrometry (LA-ICP-MS).

This technique can analyse both natural and lab-grown diamonds, including polished diamonds. To perform the analysis, a laser is used to take a spot sample (sub-100 micron spot size) – a size that is virtually invisible to the naked eye.

Statistical algorithms are used to compare the data taken from a diamond to data from other diamonds present in the database. These algorithms then assign diamonds to their origin based on the signature of trace elements already in the database.

> Our standard utilises Source Certain's scientific provenance verification techniques and chemical profiling to document a natural diamond's or lab-grown diamond's mine or lab of origin.
>
> **STANLEY MATHURAM**
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Source Certain's forensic science was used to identify diamonds that were stolen in the 1980s.

The multi-million dollar theft at the Argyle Pink Diamond mine in the 1980s was the subject of four investigations and a Royal Commission. Many of the diamonds were never recovered until recently, when Source Certain's Chief Scientist, Professor John Watling, worked with Western Australian Police to test whether the seized diamonds were from Argyle.

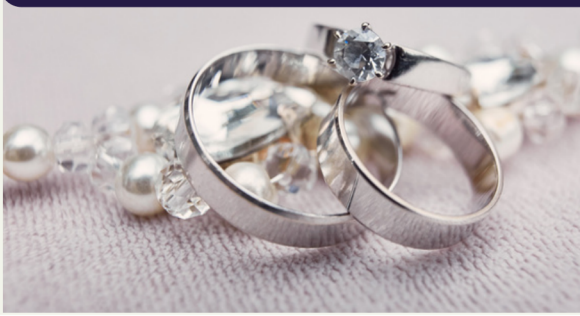
The elemental fingerprint of diamonds lasts forever, which is an integral part of SCS-007. Trace metals within diamonds act like unique fingerprints, indicating where the diamond came from.

Listen to the ABC radio interview https://ab.co/3ZTWFWt

Benefits of the program

- It provides the consumer with assurance that their diamond comes from a sustainable source.
- Builds integrity and transparency in the supply chain.
- Supports accreditation under the SCS Sustainability Rated Diamonds program
- Independent laboratory testing can be performed at any point and supports auditing.
- Verifies provenance back to the mine, kimberlite pipe of origin or lab grown diamond producer facility of origin.

Do your clients care where the diamonds in their engagement rings come from?



SCS-007 Sustainability Rated Diamonds. First comprehensive, multi-stakeholder sustainability standard serving the entire gemstone diamond and jewelry market, backed by third-party certification.

SCSglobal SERVICES
Setting the standard for sustainability

To find out more please contact us. Scan the QR code to find more case studies.

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