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magnification approx. 1.5x

Gemstone Report No. 118840

Weight: 25.172 ct

Shape & cut: antique cushion, brilliant / step cut

Measurements: 15.82 x 14.24 x 12.22 mm

Colour: blue of medium strong saturation

Identification: **SAPPHIRE**
(variety of natural corundum)

Comments: The analysed properties confirm the authenticity
of this transparent sapphire.

No indications of heating.

Origin: Ceylon (Sri Lanka)

Age dating was performed on the described sapphire
(see associated special letter).

Important Note: The conclusions on this Gemstone Report reflect our findings at the time it is issued. A gemstone could be modified and/or enhanced at any time. Therefore, the SSEF can at any time reassess if a stone is in accordance with the Gemstone Report. Once verified on www.myssef.ch, only the report with the valid original signatures, embossed stamps and Proof Tag™ label affixed on to the surface of the laminated report is a valid document. PDF scans and copies of a Gemstone Report are not legally binding. See terms and conditions on reverse side and www.ssef.ch/terms-conditions. © This Gemstone Report is copyright of SSEF.

SWISS GEMMOLOGICAL INSTITUTE – SSEF

Basel, 29 September 2021 tg

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P. Lefèvre, MSc, DUG

Dr. M. S. Krzemnicki, FGA

Basel, 29 September 2021

Special Letter

Concerning:

Sapphire described in SSEF Gemstone Report No. 118840

In favourable circumstances, SSEF experts may determine the geologic age of a gemstone, usually based on the presence of tiny inclusions (such as zircon) present at the surface of the gemstone or based on finely dispersed nano-inclusions within the gemstone. Radiometric age dating is using the decay of small amounts of radioactive isotopes (e.g. U, Th) into stable isotopes (e.g. Pb) over geological times. Applied in geosciences since decades, this method has only recently been applied in gemmology, with SSEF at the forefront of research in this area.

The **sapphire of 25.172 ct** described in **SSEF Gemstone Report No. 118840** from the Swiss Gemmological Institute contains a tiny zircon inclusion at the surface on which we were able to carry out radiometric age dating.

The analyses of the zircon inclusion within this sapphire reveal an **approximate age of 520 million years**. This calculated age is well in agreement with the age of sapphire formation in metamorphic rocks found in Sri Lanka (at that time part of the supercontinent *Gondwana*), and as such this age further supports our opinion of the origin of this sapphire.


Dr. M.S. Krzemnicki, FGA
Director SSEF

Appendix letter No. 118840

Exceptional Sapphire

The natural sapphire described in Gemstone Report No. 118840 from the Swiss Gemmological Institute SSEF possesses extraordinary characteristics and merits special mention and appreciation.

The described sapphire exhibits a remarkable size and weight of 25.172 ct, combined with an attractive colour and a very fine purity. Its colour is further pronounced by its well-proportioned cutting style, resulting in vivid blue hues due to multiple internal reflections.

The tiny inclusions found by microscopic examination and the analysed properties are consistent with those found in sapphires from the classical mines in Ceylon (Sri Lanka) - also known as the '*Island of Gems*'. The beautifully saturated blue colour of this sapphire is due to a combination of well-balanced trace elements, which are typical and characteristic of sapphires from Ceylon.

As a further proof of its geographic provenance, we were able to carry out radiometric age dating on this sapphire, revealing a formation age of approximately 520 million years. This calculated age is well in agreement with the age of sapphire formation in metamorphic rocks found in Sri Lanka (at that time part of the supercontinent *Gondwana*).

In addition to these qualities, this sapphire has been spared exposure to heat treatment and its clarity and colour are thus entirely natural.

A natural sapphire from Ceylon of this size and quality can be considered rare.

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