



Gemstone Report



No.	12010074
Date	19 January 2012
Item	One faceted gemstone
Weight	2.79 ct
Shape	pear-shape
Cut	modified brilliant cut
Measurements	12.11 x 7.98 x 4.57 mm
Transparency	transparent
Colour	blue
Species	Natural tourmaline
Variety	Paraiba
Origin	Gemmological testing revealed characteristics consistent with those of paraibas originating from: Brazil Important notes and limitations on the reverse.



Dr. Lore Kiefert



Dr. Dietmar Schwarz



Notes and limitations

In keeping with the tradition and high standards of the Gübelin Gem Lab (Gübelin), each Report reflects the findings and independent opinion of Gübelin. Gem testing is carried out by qualified gemmologists applying approved analytical methods and instrumentation. The description given in the Report is limited to a selection of identifying characteristics observed in the gemstone. The findings mentioned in this Report reflect the state of the gemstone at the time of examination. The unaltered laminated original of the Report is the only valid document. The colour photograph attached serves merely as an illustration of the item under examination. The appearance of the item may differ from its photographic image.

Origin. An opinion as to the probable geographic origin of gemstone may be given if requested. Deductions as to geographic origin are based on comparisons with the internal characteristics, physical and chemical properties recorded for reference stones of known identity, the results of continuing research undertaken by Gübelin, and gemmological knowledge published to date. Gemstones from different geological sources may reveal a tell-tale combination of characteristic inclusion patterns, absorption spectra and trace-element compositions that allows for the determination of their origin. Designations of geographic origin are expressions of opinion based on known facts and scientific observation. Indications of origin provided by Gübelin are not a warranty as to the quality or value of the gemstones. They are statements of qualified opinion, and do not guarantee the provenance of particular gemstones. Rather, such statements indicate the most probable origin, based on the data determined for the gemstones tested. Several sources around the world may produce individual gemstones that share very similar characteristics and properties.

The combination of data may not, in all instances, provide the necessary basis for a determination of a single origin. When such cases arise, Gübelin does not comment as to the origin of the gemstone. In addition, a determination of the origin of a gemstone reflects the level of knowledge and expertise about the respective type of gemstone at the time of the analysis. Gübelin owns a comprehensive collection of authentic and fully analysed samples from all commercially relevant mines worldwide. This is an indispensable prerequisite for providing credible and reliable origin determination services. However, mines in new areas and countries are coming on stream, and Gübelin regularly travels to collect sample material from new sources and thoroughly study its characteristics. The gemstones from such new mines can possibly show gemmological characteristics which might overlap with the characteristics of stones from earlier known localities. In such a case, the previously defined criteria must be reviewed to ensure the basis for the determination of the origin as described above.

Enhancement. Historically, many coloured gemstones have been enhanced to improve their appearance. Enhanced is a term used in the trade to describe any process additional to cutting and polishing that improves the appearance or durability of gemstones. Today, a variety of traditional and advanced enhancements (also known as treatments) are routinely applied to many natural gem materials. Heat treatment (also known as thermal enhancement) is commonly applied to gemstones such as rubies and sapphires, but also to tourmaline to improve colour and/or transparency (clarity). Thermal enhancement of most gemstones is considered stable and permanent under normal wear and handling conditions, and it is generally accepted by the international gem and jewellery trade.

Enhancement disclosure. Generally, the wording used in Gübelin Reports is fully compliant with the nomenclature standards defined by the Laboratory Manual Harmonization Committee (LMHC). In keeping with international trade practices, Gübelin does not make a separate comment for every type of enhancement that is commonly applied to any of a wide range of gemstones in today's marketplace. For example, thermal enhancement is commonly applied to most tanzanite, zoisite, Paraíba tourmaline, aquamarine, citrine, topaz, zircon, and others. For these and other types of gemstones, thermal enhancement is considered the norm and is generally accepted in the trade, and the presence or absence of such treatment is not usually mentioned in Gübelin Reports. Colour stability tests on gemstone varieties known to possibly fade are generally not undertaken. Thus, Gübelin will disclose enhancements mentioned herein if it detects any. Note, though, that certain enhancements cannot be detected or can be detected only under special conditions. Any comments made regarding the presence or absence of enhancements will therefore only reflect Gübelin's findings; thus, the fact that no enhancement is disclosed or that certain enhancements are not disclosed in the Report does not necessarily mean that such enhancement is absent.

Paraíba tourmaline. 'Paraíba' tourmalines entered the international gem market towards the end of the 1980s. They immediately became prized and coveted for their vivid colouration, which ranges from rare purple to violet-blue, from blue to green and yellowish-green (including blue-green, turquoise-blue and emerald-green). The colours of these tourmalines (some of the colours sometimes referred to as '*electric blue*' or '*neon green*' in the trade) are caused by varying amounts of the elements copper and manganese. The bright vivid blue and green 'Paraíba' colours have not been seen in any other gemstone variety.

The first Paraíba tourmalines originated from a deposit near the village of São José de Batalha in the north of Paraíba State, Brazil. Later, by the mid-1990s, other occurrences were discovered in the northernmost part of Paraíba State and in the adjacent southernmost corner of Rio Grande do Norte State, near the town of Parelhas. In 2000, another source of this colour variety of tourmalines was discovered in Nigeria. More recently, the Alto Ligonha region in Mozambique joined the small and exclusive group of mining areas where Paraíba tourmalines are found. In all these areas, particular geochemical surroundings cause the formation of exceptional tourmalines in pegmatite host rocks. These surroundings are also responsible for the unique colours of the Paraíba tourmalines.

As mentioned above, the wording used in Gübelin Reports is fully compliant with the nomenclature standards defined by the LMHC. Accordingly, any elbaite tourmaline containing copper and manganese with a blue (electric blue, neon blue, violet blue), bluish green to greenish blue or green colour of medium to high saturation and tone, independent of its origin, is identified as a Paraíba tourmaline.

The Report does not constitute a guarantee for, or appraisal of, the gemstones described herein. Gübelin assumes no responsibility for any damage or loss, or claims by third parties, which may arise from the issuance, use or misuse of this Report. It is recommended to carefully read the document "General Terms & Conditions" available on our website www.gubelinalgemlab.ch.



Note

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Lucerne, 19 January 2012

