



रत्न परीक्षण प्रयोगशाला

रत्न तथा आभूषण निर्यात संवर्धन परिषद
वाणिज्य मंत्रालय, भारत सरकार द्वारा प्रायोजित, जयपुर

Gem Testing Laboratory

THE GEM & JEWELLERY EXPORT PROMOTION COUNCIL
Sponsored by Ministry of Commerce, Government of India, JAIPUR

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संदर्भ संख्या/Ref. No. : GTL/GJC/JPR/

दिनांक/Date.....

LAB INFORMATION CIRCULAR NO. 17

February & March '96

1. Syn. Diamond: In the last month we have tested a number of Diamonds at G.T.L. Since Jaipur is basically a coloured stone market, this was an unusual feature. Colourless to brown coloured diamonds were certified and standard tests indicated that they were natural stones. One diamond which was yellowish brown in colour, round brilliant cut, weight around 2.00 cts. exhibited properties typical for SYNTHETIC DIAMOND.

Microscopy: Metallic solid inclusions and some form of brown coloured graining or colour zoning in one direction was also seen. U.V. luminescence of this sample was a chalky yellow green. Luminescence to visible light: When the stone was placed over a strong fiber optic light it shows intense yellow-green luminescence to visible light with minute reflecting eye visible inclusions.

The gemmological properties of this synthetic diamond was characteristic of Russian synthetics (Ref. Gems & Gemmology, Winter 1993, Vol.29). The basic criteria for identifying as synthetic diamond are the typical metallic inclusions, U.V. luminescence, uneven colour or graining pattern related to the arrangement of internal growth.

2. Syn. Emerald: There is a gradual increase in the number of synthetic emeralds being certified. Both flux and hydrothermal are being met with.

BE AWARE: A certificate was issued on 25-3-96 for a 1.35 ct. Nat. Emerald. A week later this certificate was produced as proof for a synthetic emerald cut to the same proportions as the natural. The broker sold a similarly cut synthetic emerald against the natural emerald certificate.

3. Felspar: Transparent faceted and star felspar were examined.

Star Felspar: Grey coloured stone, with well formed six rayed star. The properties were as follows: R.I. 1.53, S.G: 2.61 (Hydrostatic) under U.V. stone appears pinkish and under magnification full of parallel blackish needle like inclusions were seen.

Facetted Orthoclase Felspar: Most of the stones were a gray-yellow to gray brown colour with an overall dull surface luster. Typical iridescent eye visible two directional lathe like inclusions were present; R.I. 1.531 - 1.539, U.V. pink.

4. Chrysoberyl: Transparent yellow, yellow-green, green, and brown coloured specimens. Properties were characteristic for chrysoberyl and under magnification growth zoning and fingerprints were seen. Some of the brown chrysoberyls appeared slightly reddish brown in lamplight due to the enhancement of the red pleochroic colour in lamplight.

For Gem Testing Laboratory.

NOTE: All Courses being conducted at G.T.L., Jaipur have been temporarily suspended due to renovations. The next Diploma course in Gem Identification will commence from the first week of June and has been reduced to 3 1/2 months with a longer daily schedule. Basic 12 day Courses are being reduced to a 5 day schedule.