



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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G.T.L. LAB INFORMATION CIRCULAR -1

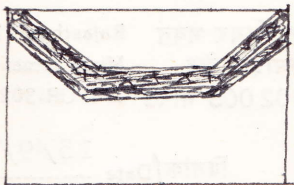
In August 1994, a number of different stones were examined and certified. A few interesting stones were

1. Dyed Quartz and Beryl beads:- Both drilled and undrilled with a number of surface reaching fractures which are obviously filled with green colour. The body colour of these stones was colourless and the green colour concentrations clearly visible.
2. Natural Yellow/Brown Chrysoberyl: Transparent well cut stones - greenish yellow and yellow-brown coloured stones. The properties typical for Chrysoberyl with R.I. 1.745 - 1.752 S.G. : 3.73 to 3.76, Spectrum 44-450, 49, 55 and under magnification fine needle like inclusions, fingerprints and twin planes. Some parti-coloured yellow and brown stones also seen.
3. Ruby - Natural and Synthetic: This month saw a fairly large percentage of rubies which were brought in for testing. The sizes ranged from 0.10cts. to over a few carats. The flame fusion synthetics were easily identifiable but the major problem was the stones below 0.50cts. with an excellent purple red colour.

Most of these rubies were a chalky pink under S.W. U.V. light with an overstrong ruby spectrum. The classic differences arose under magnification which confirmed the natural and the flux synthetics. A few diagrams are enclosed in this connection with respect to the Synthetics

- a) Growth Zoning of a fairly distinctive nature observed in M.I. liquid.

- b) Partial hexagonal zones with a silk like material which could not be resolved **as** needles at very high magnification also.



- c) Fingerprints and globules reveal a clear pattern of a Gas bubbles, most of them giving high patterned reflections with oblique illumination. Clear flux globules also seen with strong DR nature visible between X Polars in M.I. liquid.
- d) Dust like particles at low magnification appear as diffused two directional dotted silk but did not resolve as needles or platelets at high power. But instead fairly clear 'hair pin' effects of flux seen.

Hope this circular will be of use. If we receive your letter of acknowledgement of receipt we will be putting you on our future mailing list.

Yours sincerely,

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