

News



NEWS

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New generation of diffusion-treated sapphire appear in large numbers on the market

A large number of diffusion-treated stones are detected in the laboratory. The diffusion-treatment includes the well-known method of adding Titanium in the surface. Some of the material has been additionally Beryllium-treated. The new aspect of this treatment is that the treaters obviously select already heat-treated sapphire with internal blue color-zoning. Than the stones are diffusion-treated and recut. This allows the stone to be enhanced by 1-2 color grades. When such stones are recut by the end consumer, the color becomes lighter mostly back to the color grade previously to the diffusion-treatment. GRS uses immersion and ED-XRF chemical testing and LIBS-testing to identify the new method. More details will follow later.

By Dr. A. Peretti, Director GRS Laboratories

Buyer be aware of using color-zoning in any heat-treated sapphire as a criteria to distinguish between diffusion-treated and non-diffusion-treated sapphires. Such stones may well be diffusion-treated. Furthermore, the blue edge effect may have been made less obvious by an additional Beryllium-treatment process. This would make the identification with the loupe even more difficult.

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