# Padparadscha Sapphire & heat treatment

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In 2018 the Padparadscha engagement ring of Princess Eugenie (Figure 1), the niece of the king, gave a boost to the popularity of the gemstone in the UK. Its subtle colour makes it ideal for the independently minded looking for something different (Figure 2).

Figure 1 –Princess Eugenie's engagement ring. Photo: Hello Magazine.

Figure 2 – Padparadscha Sapphire. Photo: SSEF.

In gemmological circles the Padparadscha sapphire moved centre-stage with the discovery of beryllium diffusion in 2002 - treatment may have been occurring the year before (Emmett, J.L., et al 2003). There is much on the accepted colour of padparadscha and treatments (Notari, Franck, 1996). The present Laboratory Harmonisation Committee Information Sheet 4 (Version 10, February 2023) standardises the nomenclature they use to describe a 'padparadscha sapphire' (www.lmhc-gemmology.org) I wish to thank the individuals involved, who have provided these Information Sheets on many gemstones over the years. They are an excellent tool to explain the issues of report wording to both trade and public alike. In general I inform customers that I follow the World Jewellery Confederation (CIBJO) and LMHC guidelines. However I do not issue reports on heated 'padparadscha' sapphires', which is still acceptable according to LMHC wording. It is this I would like us to consider.

Many gem dealers in the UK have informed me that they do not trade in heated padparadscha sapphires. It may be due to the lack of availability of heated (not diffused) material, or maybe those seeking Padparadschas for commissioned jewellery are only interested in unheated gemstones. It may be a pragmatic decision in that the gem dealer or trader, in the UK or from abroad, may be asked to provide a laboratory gem report to prove it is only heated and not diffusion treated. The LA-ICP-MS spectroscopy to check for diffusion is not widely available and testing them might be expensive. So it is likely they will be traded as untested heated padparadschas. This temptation is removed if any heated pink/orange sapphire, along with diffused pink/orange sapphire, is not allowed to have the padparadscha label.

I understand the quandary of the LMHC. If padparadscha is a variety name then it has to follow the allowances for all variety names in that they can be heated or unheated. I would prefer the variety name to be pink/orange sapphire and the commercial name of padparadscha only applied to unheated gemstones. However the variety name of padparadscha is so well established in the trade it probably cannot be changed. Even if we keep the variety name as padparadscha a precedent has already been set that padparadscha cannot be applied to diffusion-treated pink/orange sapphire and it is therefore only a small step further to say it cannot be applied to heated pink/orange sapphires. I know padparadscha is arguably only a colour decription in Sinhalese but the term has taken on a meaning in its own right of a premium gemstone with a premium price. We have 'outlawed' padparadscha being applied to diffused orange/pink sapphires so let's take it a small step further and remove the premium padparadscha label being applied to heated orange/pink sapphires.

## References:


- Emmett, J.L., et al (2003), Beryllium Diffusion of Ruby and Sapphire, Gems & Gemology, Vol.39, No.2, p.84-135
- Notari, Franck (1996) The Padparadscha Sapphire, Diploma presentation at the Geology Department of the University of Nantes https://gemmologie-francophonie.com/wp-content/uploads/2021/10/Notari_1996-DUG_Padparadscha.pdf


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