

Gem Trader's Perception on Treatment of Low Gem Quality Minerals, Ratnapura, Sri Lanka

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Enhance the quality of low-quality gem minerals and materials have become vital to fulfill the current market demand in the world. Gem traders in Sri Lanka are mainly focus their treatment on *Geuda* varieties. Nevertheless, different types of low gem quality minerals are remaining as untapped gem resources in Sri Lanka and have a potential to enhance the quality using various methods like waxing, oiling, bleaching, fracture or cavity filling. Thus, initiation of new research on treatment of low gem quality minerals is a paramount importance in Sri Lankan gem industry. The main objective of the study was to identify the availability of low gem quality minerals and the gem traders' perception on that. Information on gem traders' role, awareness on gem treatment, information of low-quality gem minerals and abundance of different gem types in the market, were gathered by interviewing hundred gem traders in Rathnapura area, through a structured questionnaire survey. Results clearly showed that 77% of the gem traders in the area vend their gemstones without any value addition process while 15% of respondents were directed heat treatment to enhance gemstones before retail. Although 79% of the respondents were given positive responses about awareness on heat treatment, they were only aware on *Geuda* heat treatment. Frequently found most valuable gem types belonged to corundum family and they have high demand. 60% of respondent's declared spinel as a low gem quality gem type in the market while topaz also available in significant quantities. Subsequently, results clearly revealed that even though traders have awareness on heat treatment of gemstones, only a few of them perform heat treatment. Since, heat treatable low gem quality gemstones like spinel and topaz are frequently found in the area research on treatment of spinel and topaz are very important to maximize the profits in the gem industry.

Keywords: *Geuda*, Spinel and topaz, Heat treatment, Gem trade