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FOR IMMEDIATE RELEASE

AGL Clarifies Its Policy On Color Stability Testing Of Sapphires

25 April 2019: NEW YORK – Recent publications have brought a renewed focus on certain sapphire varieties whose color has faded (Krzemnicki et al., 2018; Krzemnicki and Cartier, 2019). These sapphires possess an unstable color center and can have distinctly different color appearances. Subsequently, gemological labs and the trade have had to contend with how to properly present and represent such stones in the market.

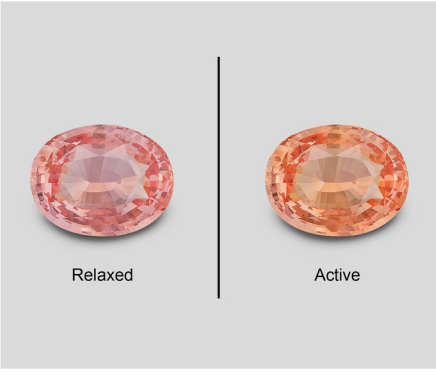
Over the past year, American Gemological Laboratories (AGL) has been collecting data relating to sapphire varieties with unstable colors, specifically Pink, Padparadscha, Orange and Yellow Sapphires. As a result, certain disclosure policies on AGL reports are being modified.

"*Our report wording has been specifically chosen to try and highlight these intriguing stones.*" Christopher Smith, President of AGL explained. *"We didn't want to use language that some may find as alarming.*" He added, "*We wanted to also inform that this is a natural phenomenon, not due to any form of treatment. Further, we chose to include two photographs on the report for such stones so that people can recognize that both colors can actually be quite attractive.*"

The potentially unstable color-center is known as a *trapped-hole center*. This is a naturally occurring phenomenon and is generally stable. However, in certain circumstances trapped-hole centers are not stable for reasons that are not yet fully understood.

When these color centers are stable, the trapped-hole center is active and responsible for the yellow color in the vast majority of yellow sapphires. Subsequently, it is also an essential contributing chromophore in orange sapphires, and the orangy color component in padparadscha sapphires.

When such color centers are not stable, there are two states: 1) the trapped-hole center is inactive and therefore not contributing to a stone's color appearance and 2) the color center is activated by exposure to UV light and contributing to a stone's color appearance. The trapped-hole color center can be returned to its relaxed (inactive) state by exposing the stone to the heat of a lamp for a period of time or by warming it.



To date, data has shown that such color shifts can occur in both unheated sapphires, as well as stones that have been heated at relatively lower temperatures. This phenomenon is not exclusive to any particular source.

This color shift has thus far not been observed in stones heated at relatively higher temperatures.

Based on the data collected, the following protocols will be put in place and the following terminology will be incorporated into laboratory reports.

1) For the above mentioned color varieties where trapped-hole centers may be involved, a color stability test will be performed.

   *Note that during on-site testing of stones at trade shows, a color stability test may not be performed. In these instances a comment stating such will be made and stones may be resubmitted in New York to carry out the stability test.

2) A statement will be made under the *Identification Comments* section as to whether the color was determined to be stable or if a shift in color was observed.

   2A) For instances where no change in color is observed, the following statement will be made: *Color Stability Test: Stable color identified.*

   2B) For instances where a shift in color is noted, two images showing both colors will be displayed on the report, and the following statement will be made:
   This gemstone exhibits color shift. As a result the color appearance may vary. Refer to General Report Comments below.

   Further information will be referenced under the *General Report Comments* section stating:
   This gemstone possesses an intriguing natural phenomenon where a color-center can become active or relaxed (inactive) based on prolonged exposure to various sources of light and/or heat.

   *Note: Any stone submitted for a Gembrief™ exhibiting a color shift, will automatically be upgraded to a Prestige Identification and Enhancement report.

   For instances where a color shift has been identified, an evaluation of the color variety will be assessed for each color. If both colors fall within the accepted range for one particular color variety, that color variety will be indicated on the report. For example, if both colors fall within the accepted range of orangy pink to pinkish orange, the color variety of *Padparadscha* will be indicated on the AGL report.

   If the color shift involves two adjacent color varieties, such as Pink Sapphire and Padparadscha Sapphire or Padparadscha and Orange Sapphire, the color variety *Fancy Sapphire* will be indicated on the AGL report.

PROTOCOLS FOR TESTING COLOR STABILITY: Three color references are made utilizing the ColorCodex™ system (refer to www.color-codex.com). The first is to establish the color of the stone as it arrived in the laboratory. The second is taken after exposing the stone to short wave ultraviolet light for 10 minutes, thereby activating potentially inactive color centers. A third color reference is taken after the stone is placed under a tungsten lamp for an average of three hours to relax (de-activate) these color-centers. During this time, the stone is checked periodically for any changes in color.

References:
Krzemnicki M.S., Klumb A., and Braun J., 2018 Unstable Colouration of Padparadcha-like Sapphires. The Journal of Gemmology, 36(4), 346--354.

Krzemnicki M.S., and Cartier L.E., 2019. Padparadcha-Like Fancy Sapphires with Unstable Colors: Coloration Mechanisms and Disclosure. *InColor*, 41, 92-94.

American Gemological Laboratories (AGL) is the United States' most widely known and respected colored stone gem identification and quality grading laboratory. It was founded in 1977 and became the first gemological laboratory in the US to provide quality grading as well as country-of-origin determinations for colored stones. AGL has become an iconic brand for uncompromised standards and excellence in gemstone reporting and is regularly featured by the auction houses of Christie's and Sotheby's for important colored stones they are offering for sale.

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