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To Whom It May Concern:

This letter provides information on the results of advanced testing that was requested for the tourmaline described in GIA Gem Trade Laboratory report number [REDACTED].

We performed qualitative energy-dispersive x-ray fluorescence (EDXRF) chemical analysis to determine the chemistry of this tourmaline. In addition to the elements commonly found in elbaite tourmalines, we also found the following elements to be present: copper, manganese, gallium, bismuth, calcium and zinc.

We compared the chemical analysis of this tourmaline with the data that was published in the following two articles: "Gem-quality cuprian elbaite tourmalines from São José da Batalha, Paraíba, Brazil," (Fall 1990 issue of *Gems & Gemology*, Vol. 26, No. 3, pp. 189-205) and "An update on 'Paraíba' tourmaline from Brazil" (Winter 2001 issue of *Gems & Gemology*, Vol. 37, No. 4, pp. 260-276). Elbaite tourmalines with similar chemistry have also recently been found in Nigeria (Fall 2001 issue of *Gems & Gemology*, Vol. 37, No. 3, pp. 239-240) and Mozambique (Summer 2005 issue of *Gems & Gemology*, Vol. 41, No. 2, pp. 173-175).

In our opinion, the chemistry of this tourmaline is consistent with data we have recorded on other copper-bearing elbaite tourmalines.

Sincerely,

GIA Gem Trade Laboratory

Christopher P. Smith
Director, Identification Services