**Corundum Var. Ruby** $[\text{Al}_2\text{O}_3:\text{Cr}]$

Red corundum is referred to as a ruby. The red color comes from trace amounts of chromium replacing some of the aluminum in its chemical structure. Ruby forms a continuous color succession with pink sapphire, the color deepening with an increase in chromium. Historically, the “blood-red” variety is one of the most expensive precious gems. To render the most attractive specimens, many rubies are heat-treated to improve their clarity or color. Rubies and sapphires are both color varieties of the mineral corundum. Corundum has a hardness of 9, exceeded only by diamond on the hardness scale. The hardness and lack of cleavage make rubies and sapphires excellent gemstones to cut and fashion into jewelry. \textsuperscript{G2} 

**Ruby in zoisite \textsuperscript{B5}**

Ruby and zoisite form a natural combination that results in a pink to red gemstone-quality corundum inclusions with a lime green epidote matrix. First discovered in Tanzania in 1954, ruby and zoisite form a unique combination of two minerals in that they have variable hardness. Zoisite is softer than ruby with a hardness of 5.5, yet the ruby inclusions have a hardness of 9. Such variable hardness becomes a challenge when shaping and cutting, especially in rounded masses like this specimen. \textsuperscript{B5} 

**Corundum \textsuperscript{G2}**