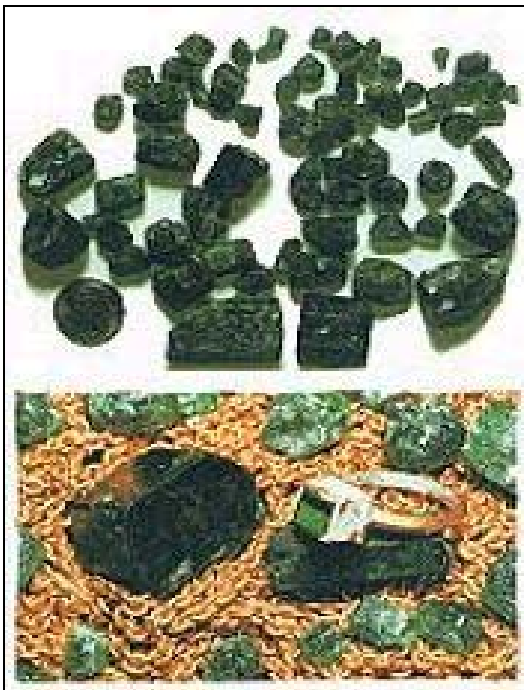


## ***Atocha* Emeralds Help to Shed New Light on History of Gem Trade**

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The emeralds recovered from the wreck of *Nuestra Señora de Atocha* have recently played a decisive role in determining the origins for many renowned jewels around the world. A team of French and Colombian geologists worked to determine the specific markers revealing the source of emeralds. They found the levels of oxygen isotopes in the crystals were excellent source point indicators - often traceable to an individual mine. By blasting each gem with an cesium ion beam which dislodges the oxygen ions. These are collected and analyzed for specific values. The measurements allowed the researchers to examine emeralds from collections around the world, and re-evaluate their supposed origins. An *Atocha* emerald was utilized as a test subject in the analysis, and confirmed the oxygen isotope value for a Colombian origin.



Various Emeralds Recovered from the *Atocha*

The standard theory has been that all gem-quality emeralds in the ancient world came from two sources - in Austria and Egypt. The analysis changed this. Some of the gems came from previously unrecognized sources in Pakistan and

Afghanistan. Most surprisingly, many emeralds - long thought to have been “ancient”- were actually mined in Colombia, and brought to the Old World via the Spanish fleets.

When Colombian emeralds were discovered by the Spanish in 1536, during conquest of South America, they were highly prized. The mines quickly came under Spanish authority, adding to an almost unbelievable array of New World treasures controlled by that nation. The gems from this region have long been considered the finest in the world; a quality that was recognized early on, as evidenced by their rapid spread across the globe. The emeralds recovered from the *Atocha* provide solid archaeological evidence for the existence of the early trade. To date, just under 6,000 uncut, “raw” Colombian gems have been recovered from the wreck, as well as those already cut, polished, and mounted into gold settings. Perhaps if these *Atocha* jewels had not been lost, and reached their intended destination, they would have simply been traded across Europe and Asia, and then assumed by gemologists of today to have been much older.