

## **SURE 2025**

### **Evaluating the Viability of Carboniferous Conodont and Brachiopod $^{87}\text{Sr}/^{86}\text{Sr}$ Values from the Santa Fe Mountains, New Mexico**

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#### **Abstract:**

The present study aims to assess the viability of conodont and brachiopod samples for use in strontium (Sr) geochemical analysis. The preassessment involved both the creation of thin sections from potentially unaltered brachiopods and the extraction of conodont elements from the host rock. As both specimens were preserved within the same matrix, the brachiopods were removed first with a tile saw before the remaining material was subjected to an acid bath to begin the process of removing the conodont elements. The remaining insoluble residue was then picked by hand under a stereomicroscope to collect any ideal samples. Once procured, we observed the completed thin sections of our brachiopod samples under a petrographic microscope utilizing cathodoluminescence capabilities and took photomicrographs of the conodont element's texture using a scanning electron microscope.