APPLICATION OF VIS/NIR SPECTRAL REFLECTANCE IN SOURCING AND RECOGNITION OF HEAT-TREATMENT IN CHERTS

Introduction
Lithic material is ubiquitous and durable, serving as the mainstay of archaeological sites. The provenance of this lithic material has been critical to many archaeological questions. Traditional lithic sourcing methods have been used to determine the provenance of samples by matching unknown sample spectra to lithic sourcing studies. This knowledge enhances the probability of identifying the provenance of the most complex ceramic and stone artifact remains.

Absorption Features in Conklin Jasper
Our knowledge this method has not been utilized in the visible and near-infrared portions of the spectrum. These features hold the key to many archaeological questions. The provenance of this material can be characterized by many jaspers. The measured features (400-1000 nm) characteristic of many jaspers are also seen in the Conklin (Limerock) Jasper, Conklin, RI.

What is DSR?
DSR (Diffuse Spectral Reflectance) was developed as an alternative to traditional methods for material sourcing. These methods are less labor-intensive and require minimal sample preparation. They provide specific elements and compounds in the material directly and are relatively rapid to identify.