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The origin of raw materials for sculpture is often obscure before the 17th century due to the scarcity of written sources. Identifying this origin provides hints to economic exchanges but also, potentially, allows for attributing sculptures to a specific context of creation (regional workshops, artists). Another challenge for art historians is the identification of restorations and their potential chronology. We present an example of a 14th century group of two statues, made of gypsum alabaster, representing an annunciation group, with the Virgin Mary and the angel Gabriel. Their original position was a near Troyes in the eastern Paris Basin, they are now separated being conserved at the Louvre Museum (Virgin Mary) and the Cleveland Museum of Art (Gabriel). Our multi-isotope study revealed the common origin of the material used for both sculptures, their isotope fingerprints being identical within the analytical error. These fingerprints are highly specific and point to an origin in a historical gypsum and alabaster quarry in the northern part of Provence, France, first mentioned at the end of the 13th century. We were also able to identify an unknown restoration of lower part of the Virgin Mary statue with an optically undistinguishable material, using Tuscan alabaster, most likely in the 19th century. Two other 14th century statues of the Virgin Mary originally situated in eastern and south-eastern France can also be linked to this quarry. This underlines the potential and usefulness of independent geochemical evidence to underpin stylistic hypotheses on grouping of individual artworks, historical economic relationships between regions and on past restoration activities.