



**Description and Terminology of Procedures:**

After microscopy classical chemical verification of the composition of the deposit formations and the composition of the mineral, metal, or other materials is carried out with streak testing, flame testing, displacement measurements, spark configuration, and when applicable, hardness, toughness, and tensile strength measurements. Only milligrams samples are removed without intrusiveness to the object. UV light series tests are carried out when it is appropriate.

All objects and samples from objects are compared to a data base of samples. These milligram or fragmentary samples are kept in sterile glass vials. Occasionally whole objects are available for comparison. All these data base samples have not been cleaned or treated with any modern chemicals or compounds. These samples are from known archeological sites with provenance supplied offering comparison to known types from known periods. The variables are numerous but most of the possibilities are found within predictable parameters of compositional stability, instability, reactivity, and the altered compounds changed and changing composition.

A forgery is a modern copy of a known authentic artifact. A fake is an object manufactured in modern times approximating known iconography of known artifacts but the makers may contrive unknown iconography mixed with known iconography or they may create completely fantastic elements unknown in the authentic examples. Reproductions may be mistaken for authentic artifacts but no attempt was made at the initial point of manufacturing to defraud anyone therefore no attempt was made to disguise modern manufacturing. Problematic objects may be forgeries, fakes, reproductions, over cleaned authentic artifacts, or objects for which a conclusive assessment cannot be made. Although ancient casting techniques can be employed involving model making and molding; no modern fakes or forgeries replicate all ancient manufacturing techniques. More often than not modern tools and modern ovens and kilns are employed and then an attempt is made to disguise the modern tool signatures. At this time no fake or forgery seen by Orenda in thirty years and other conservators contacted through the AIC had seen any fakes or forgeries made utilizing replicated ancient tools exclusively. Most of the ancient tools are not well known, are not manufactured easily, and furthermore, there are very few people capable of any high level of finessed use. What is seen, relatively frequently, is the use of authentic fragments reworked with modern tools. In addition to areas revealed as having been worked with modern tools are areas with residue of chemicals used to induce surface patination. If low-tech bio environments were used to alter the surface, traces of the organic debris will be found as well. Objects tumbled using various types of abrasives will retain traces of these abrasives. No fake or forgery seen thus far by Orenda has had all traces of modern tool signatures removed.