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XRF elemental analysis of ancient manuscripts inks of Regional Archive of Cusco

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Recently we began studies about inks in ancient documents using non-destructive elemental analysis. It is very important because there were no studies of this kind in Peru. This works had the objective of analysing six manuscripts related to Peruvian history, looking for information about the inks manufacture development in Peru. We used a hand-handled X-ray fluorescence spectrophotometer Olympus Delta Premium in soil mode, in situ, with two repetitions in each analysis point. The results show S and Fe's presence related to iron gall ink.
Nevertheless, we also found the minor elements Pb, Cd, Cr, Ti, As, Zn, Cu, and Ag. Lead, Cadmium, Zinc, Copper and Silver proportions are not usual in European inks of the same period; for this reason, we hypothesised that the original writers used regional raw materials for making it. Moreover, it implies that people in century XVIII Peruvians could produce their own ink following the European recipes.

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