

Abstract. The article reports the research conducted to enhance the readability of Khirbet Qeiyafa ostrakon using the spectral image analysis combined with image processing. The spectral imaging carried out in the visible and IR range facilitated the detection, improvement in readability of characters, and better interpretation of the history. Analysis of the spectral data using principal component analysis and independent component analysis showed better ink visibility and gave further support to archaeologists and historians. The proposed techniques resulted in an improvement compared to earlier interpretations.