

Gemmological and chemical characterization of Simebite (Sicilian amber)

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Simebite was characterized by chemical and gemmological studies. The seven analysed samples of simebite amber, are selected from the mineralogical collection of the University of Palermo. The analyses were carried out at University of Turin. Chemical characterization was performed with a scanning electron microscope (SEM) with energy dispersion detector (EDS). The colour of simebite (yellow, orange, light red, dark red and black) tends to vary in relation to its quantity of sulphur and oxygen. As sulphur increases and as oxygen decreases, the colour becomes darker (light red: S = 0.67 wt.%, O = 10.47 wt.%; dark red: S = 2.46 wt.%, O = 6.16 wt.%). The gemmological characterization was done through the refractive index (n= 1.52 1.55) and infrared photographic documentation. The last one, reveals the transparency of amber to infrared radiation. This novel aspect lets to see the presence of inclusions not visible in natural light, consenting to attribute the nature of the gem.