

A method and means for identifying the authenticity and the genuine nature of a solid or liquid bulk material, by incorporating a marking composition containing at least one trace ion into the said bulk material, whereby the total concentration of the incorporated trace ions in the market bulk material is chosen to be lower than the corresponding concentration of the same ions in standard sea water. The authenticity and the genuine nature or the adulteration level of the marked bulk material can be tested in-the-field using electrochemical sensors, and confirmed in the laboratory using a method such as atomic absorption spectroscopy, ion chromatography or mass spectrometry.