BOOK OF ABSTRACTS

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Characterization and discrimination of salt samples of different geographical areas and kind by Neutron Activation Analysis and chemometric methods.

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AIM

Salt is essential for human health, when eaten in the appropriate amount. It is considered one of the most common seasoning as salt is used in many cuisines around the world, but the numerous kinds with special colours and tastes available on the market make it a food speciality for fine cuisine. From a chemical point of view, refined sea salt and peculiar mine salts present characteristic elemental composition which influences the taste and the commercial value.

In this study, Neutron Activation Analysis (NAA) was applied on rock and sea salt samples of different origin and kind for the determination of major and trace elements. This technique allows to determine more than 30 elemental concentrations, guaranteeing results traceable to the SI. The elemental concentration were obtained to characterize the salts and point out possible nutrient or hazardous elements, as well as to figure out the elemental fingerprint of different mine salts for their authentication. Data were analysed by multivariate statistics, including in the chemometric modelling, with the aim of discriminate the samples by geographical origin and salt kind.