Stable Isotope Geochemistry

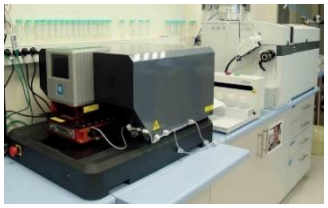
Preface

Stable isotope geochemistry investigations primaly intend to reveal past climate conditions along with other research areas. The main research directions are reconstruction of palaeoenvironmental processes by analysis of lacustrine sediment and peat sequences, carbonate formations from caves, cave ice deposits, polar ice cores, studying upper mantle rocks, clumped isotope thermometry on freshwater carbonate deposits and volcanological, sedimentological and economical studies.

Infrastructure

Neptune MC-ICP-MS

VG-5400



LA-ICP-MS

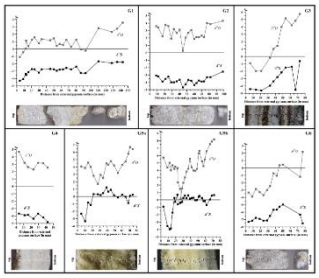
Delta PLUS XP

MAT253 Plus

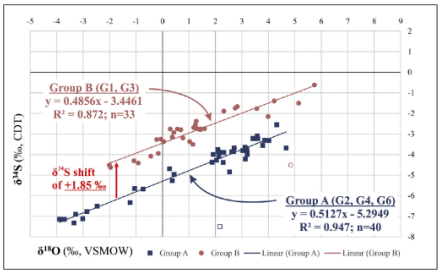
Example

Sulfur and oxygen isotopes in the gypsum deposits of the Provalata sulfuric acid cave (Macedonia)

Sulfur and oxygen stable isotope ratios were measured by a Thermo Finnigan Delta PLUS XP Isotope Ratio Mass Spectrometer using Thermal Combustion/Elemental Analyzer interface for the oxygen measurements and NA 1500 NCS Fisons Elemental Analyzer for the sulfur measurements.



$\delta^{18}O$ and $\delta^{34}S$ variation along the sampling lines



co-variation of $\delta^{34}S$ with $\delta^{18}O$ values with linear regression

Contact: biri@atomki.hu