

**COMPARATIVE STUDY OF URANIUM ISOTOPES BY ALPHA
SPECTROMETRY AND SECONDARY ION MASS
SPECTROMETRY. PRELIMINARY RESULTS**

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ABSTRACT

The paper presents the first comparative measurements of uranium isotopes by two techniques – alpha spectrometry and secondary ion mass spectroscopy – SIMS. Samples with specific activity were prepared by electrodeposition from aqueous solution of $\text{UO}_2(\text{NO}_3)_2 \cdot 6\text{H}_2\text{O}$, not from environment. We tried to apply SIMS to quantitative analysis and to search correlation between intensity obtained from SIMS and activity of uranium in dependence on the surface's weight. The obtained results are presented in this article.

Key words: alpha spectrometry, secondary ion mass spectrometry, uranium isotopes, electrodeposition, correlations, regression analysis, radiochemical analysis, radiometric analysis