STUDY OF OSMIUM -191 ION EXTRACTION WITH DERIVATIVES OF 5-S-ALKIL-3-FENIL-1,3,4 TIADIAZOLINTION-2

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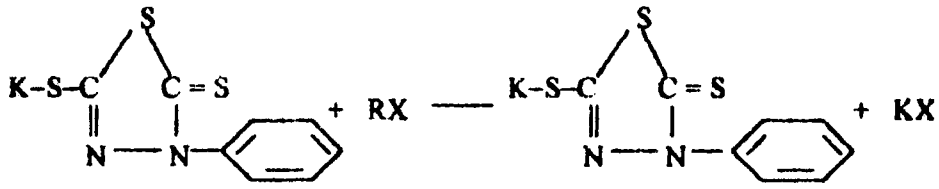
Search for high-effective and selective extractors for determination and extraction of platinum metals in various objects is an important problem of analytical chemistry.

With the purpose of revealing effective extractors of Osmium ion a number of derivatives of 5-S-alkil-3-fenil-1, 3, 4-tiadiazolintion-2 was synthesized by us:



R = C_3H_7, C_4H_9, I – C_4H_9, C_5H_{11}, C_6H_{13}, C_7H_{15}.

Physical and chemical characteristics of the obtained compounds were determined and validity of their structure was confirmed with spectral analysis.

The process of Osmium extraction from chlorine sulfuric and nitric acids were studied by neutron-activation analysis using radioactive Os-191 isotope obtained by irradiation of metallic osmium in the VVR-SM reactor.

The dependence of the efficiency of Osmium extraction on a solution acidity and the reagent structure was determined. The optimal conditions were found for metal extraction from mineral acid solutions.

Several derivatives of 5-S-R-3-fenil-1, 3, 4-tiadiazolintion-2 were found to make it possible to extract also silver and gold ions.

The conditions for a selective separation of Osmium from gold, silver, platinum, palladium, iridium ions with the help of the obtained compounds were determined.

SORPTION EXTRACTION OF GOLD FROM AMMONIUM SOLUTIONS

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The possibility of sorption concentrating trace amount of gold with use of ^{198}Au radionuclide was studied. In publications there are not information on possibility of sorption of gold from ammonium solution by anionites. In this work, the results of a gold sorption from ammonium solution by anionite AM-2B are presented. There was studied dependence of