

nuclides of metals (^{110}Ag). The synthesized connections have appeared by weak extra gents of ions of argentum irrespective of the nature and density of inorganic acids. As the results of the lengthening of alkyl radicals in a molecule there is a rise of efficiency of extraction of metals. By rather more effective extra gent of metal has appeared in phosphorylated derivative of anabasine ($E = 52\%$).



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PHOSPHORYLATED DERIVATIVES OF ANABASINE: SYNTHESIS, CONSTITUTION AND COMPLEXFORMING PROPERTIES

Babaev B.N.

Institute of Bioorganic Chemistry, Tashkent, Uzbekistan

With the purpose of detection of new effective extragents of metals from number of sulphurcontaining derivatives of acids of phosphorus with different functional groups, analysis of effect of the different factors on selectivity of allocation of metals, installation of optimum conditions of an extraction, the detections of effective extragents of noble metals from industrial sewage waters, are synthesized phosphorylated derivatives of the anabasine - O-alkyl-O-(anabasinopropyl)- and O-alkyl-O-(anabasinobutyn-2-yl)phenylphosphonates and O-(anabasinopropyl)- and O-(anabasinobutyn-2-yl)diphenylphosphonates

In an IR-spectrum about O-pentyl-O-[anabasinopropyl]phenylphosphonate

There are absorption band of the following functional groups (ν , cm^{-1}): (P-O-C₅H₁₁) 990-1000, (P = O) 1250, (P-C₆H₅)1450, (C-N in cycle) 1550.

In a spectrum PMR O-(anabasinobutyn-2-yl)phenylphosphonate in the field of a weak field apart from signals of two phenylic radicals the signals of a b-displaced pyridine, reference for a molecula anabasine are observed: H_{αα}-8,46 p.m., H_α-8,41 p.m., H_γ-7,60 p.m. And H_β-7,15 p.m. A double triplet at 4,70 p.m. And triplet at 3,05 p.m. Belong to signals OCH₂ and N-CH₂ of groups, accordingly, separated by acetylene bond.

The signals of piperidine cycle of anabasine have the following chemical shifts: H_{2a}-3,27 p.m., H_{6e}-2,78 p.m., H_{6a}-2,45 p.m., and remaining protons (6H, m, CH₂) are in resonance in the field of 1,1-1,9 p.m.

The analysis of mass-spectrometer decay of the synthesized connections has shown, that the mass-spectrometer fragmentation M* about - O-alkyl-O- (anabasinopropyl) phenylphosphonates flows past in different directions and is characterized, as against about O-alkyl-O-(anabasinobutyn-2-yl)phenyl-phosphonates, large number of phosphor containing ions; the availability of the second phenylic radical in molecules anabasincontaining derivatives of a diphenylphosphinic acid essentially changes fragmentation of a molecular ion.

Usage of connections as extra gents of gold and argentum from technological solutions has shown, that some of them allow in 80 times more effective to extract ions Au, than Ag.