hydrobromic acid is passed through a column containing suspension of polytetrafluoroethylene powder with 0.5 M trioctylamine in xylene, equilibrated with the same acid. Nickel is not extracted and passed through column. Cobalt is retained and finally eluted with 3 M HBr in the one free column volume. The cobalt fraction is percolated through a column filled with suspension of pure polytetrafluoroethylene powder to purify from the admixture of extractant. The obtained solution is evaporated to dryness and the dry residue is treated by evaporation with aqua regia. After treatment the damp residue is dissolved in electrolyte and the obtained solution is used to study of ^{58}Co electrochemical deposition procedure.

The yield of cobalt-58 was higher than 93% and the radiochemical purity was more than 99%. This method will be used for separation and purification of cobalt-57 to make of sealed sources for X-ray fluorescence analysis.

EXTRACTION OF ^{198}Au BY PHOSPHORILIZED DERIVATIVES OF BISMUTHION-1

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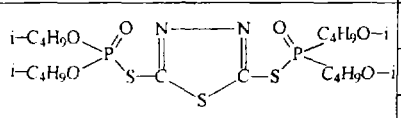
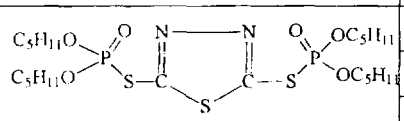
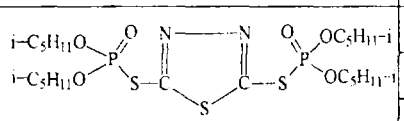
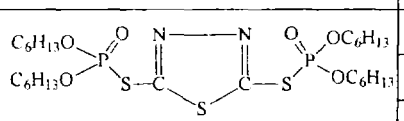
Apart from dithiophosphates, which are quite widely investigated as extragents of noble metals, only a few compounds with thiophosphorile group (P=O and P=S) are tested as metal extragents, although among them selective extragents of noble metals have also been found. So to find effective extragents of gold ions we synthesized phosphorilized derivatives of 2,5-dimercapto-1,3,4-thiadiasole (vismuthon-1).Structure of compounds agrees with spectral data.

In the PMR spectrum of 2,5-dimercapto-di-bis-(O,O-hexylphosphato)-1,3,4-thiadazole at 3,96 p.m. quartet of protons of oxymethylene group(O-CH_2) with spin-spin interaction constant of $J_{P\text{-}O\text{-}CH}=J_{HC\text{-}CH}$-6,9 Hz.

In region 1,9-1,1 m.g. eight protons of CH_2-group make up a multiplet and at 0,95 p.m. triplet - of metyl -group.

Extraction of gold ions by obtained compound is investigated using ^{198}Au radionuclide. Structure of compounds (R=C_2H_5-C_8H_{17}, i-C_3H_7,i-C_4H_9), affect the effectivity of extraction nature (HCl, H_2SO_4, HNO_3) and concentration of acid (see table 1).

Effectively of extraction depending on structure of compound nature and concentration of the acids.

№ n/n	Structure of compounds	C acids	Au					
			HCl		H_2SO_4		HNO_3	
			D	E, %	D	E, %	D	E, %
1		0,1	0,47	31,97	0,46	31,50	0,23	18,70
		1,0	1,21	54,75	0,60	37,50	0,17	14,53
		3,0	0,16	13,79	0,46	31,50	0,16	13,79
2		0,1	2,78	73,54	2,21	68,84	2,48	71,26
		1,0	3,68	78,63	2,15	68,25	4,25	80,95
		3,0	4,12	80,46	3,37	77,11	5,27	84,05
3		0,1	0,48	32,43	0,51	33,77	0,28	21,87
		1,0	1,11	52,60	1,17	53,91	0,27	21,25
		3,0	0,80	44,44	0,88	46,80	0,87	46,52
4		0,1	3,44	77,47	2,34	70,05	5,42	84,42
		1,0	4,42	81,55	2,00	66,66	2,45	71,01
		3,0	4,34	81,27	3,23	76,36	4,46	81,68

Obtained data for extraction of ions of gold by some of the obtained compounds show that, elongation of alkyl radical (both norval and isostructure) and increase of acidity of the medium leads to increase in effectiveness of extraction of ^{198}Au. Among the investigated 2,5-dimercapto-bis-(O,O-diamylphosphato)-1,3,4-thiadiasol turned on to be a more effective extragent of ions from salt-nitrogen-sulfur acidic media.

COMPLEXING MAKING PROPERTIES OF ALKYLIZED DERIVATIVES OF BISMUTHON-1

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The objects of the analysis containing noble metals differ by wide range of concentration of the elements being determined, which are in various states, by diversity of their ratios and concentrations. In analytical chemistry of these metals a wide set of organic compounds, the used as reagent, most of which of lack selectivity.

It is known, that presence of two or more donor atoms in its molecule, their nature and mutual disposition can have strong influence on extractional ability of reagents. The