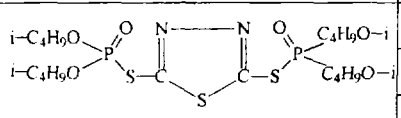
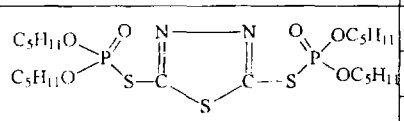
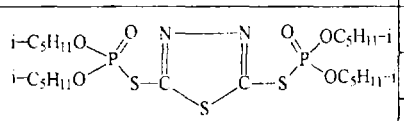
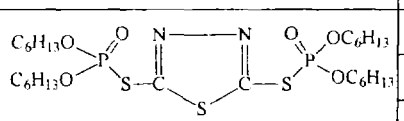
Effectively of extraction depending on structure of compound nature and concentration of the acids.

№ 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

mentioned factors determine the way of coordination, dentateness of the reagent, possibility of making up chelate, site and stability of the cycle.

With the aim of finding effective extragents of gold ions alkylized derivatives of 2,5-dimercapto-1,3,4-thiadiazole (vismuthion-1) were synthesized.

Structure of compounds was in agreement with data from IR-, PMR- and mass-spectrometry.

Extraction of gold ions by the obtained compounds is investigated using radionuclide ^{198}Au. The obtained data show that compound structure (R=C_2H_5,C_8H_{17}, i-C_3H_7, i-C_4H_9), nature (HCl, H_2SO_4, HNO_3) and concentration (0,1-3,0 M) of acid affects effectiveness of extraction.

Effectiveness of ^{198}Au extraction. in dependence on compound structure, nature and concentration of acids

№ n/n	C acids	Au					
		HCl		H_2SO_4		HNO_3	
		D	E, %	D	E, %	D	E, %
1	0,1	15,02	93,75	21,84	95,62	15,01	93,75
	1,0	524,62	99,80	7,69	88,49	10,36	91,19
	3,0	23,09	95,84	12,04	92,33	3,40	77,27
2	0,1	1,17	53,91	1,07	51,69	0,37	27,00
	1,0	0,50	33,33	1,02	50,49	0,15	13,04
	3,0	0,32	24,24	1,06	51,45	0,30	23,06
3	0,1	2,41	70,67	14,00	93,33	3,30	76,74
	1,0	48,00	97,95	2,40	70,58	1,71	63,09
	3,0	59,00	98,33	34,20	97,15	2,95	74,68
4	0,1	19,17	95,04	34,15	97,15	40,67	97,60
	1,0	21,08	95,47	34,80	97,20	48,65	97,98
	3,0	49,25	98,00	26,20	96,32	16,76	94,36

Elongation of alkyl radical in the molecule of compound, increasing the acidity of the medium positively affected effectiveness of extraction of gold ions (E=93-98%). In nitric acidic medium extraction of gold was worse than that in salt and sulfuric acid media.