"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102910013-4

BABKO, A.K.: VASILENKO, V.T.

Photometric determination of zirconium. Zav.lab. 27 no.6:640-644 '61. (MIRA 14:6)

1. Institut obshchey i neorganicheskoy khimii ANN USSR.
(Zirconium--Analysis)

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102910013-4"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102910013-4

BABKO, A.K.; LUKACHINA, V.V.

Study of the relative stability of some complex compounds of niobium and tantalum in solution. Ukr.khim.zhur. 27 no.6:794-796 '61. (MIRA 14:11)

1. Institut obshchey i neorganicheskoy khimii AN USSR.
(Niobium compounds)
(Tantalum compounds)

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102910013-4"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102910013-4

BABKO, A.K.; MARKOVA, L.V.

Mechanism of the iodine-azide catalytic reaction for sulfides.
Ukr.khim.zhur. 27 no.6:796-803 '61. (MIRA 14:11)

1. Institut obshchey i neorganicheskoy khimii AN USSR.
(Sulfides)
(Iodine)

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102910013-4"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102910013-4

BABKO, A.K.; GETMAN, T.Ye.

Reaction of molybdate with diphenylcarbazid [illegible] diphenylcarbazone. Ukr.khim.zhur. 27 no.6:80[illegible]. (M[illegible] 14:11)

1. Institut obshchey i neorganicheskoy khimii AN USSR.
(Molybdenum compounds)

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102910013-4"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102910013-4

BABKO, A. K.

Progress of analytical chemistry in 1960 (survey).
Zav.lab. 27 no.7:771-794 '61. (MIRA 14:7)
(Chemistry, Analytical)

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102910013-4"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102910013-4

ZAYDEL' A.N.; PILIPCHUK, B.I.; BABKO, A.K.; SHAYEVICH, A.B.; DOLINSKIY, Ye.F.

On the extablishment of standards in the methods of presenting experimental data. Zav.lab. 27 no.10:1273-1278 '61.
(MIRA 14:10)

1. Fiziko-tekhnicheskiy institut AN SSSR (for Zaydel'). 2. Vsesoyuznyy nauchno-issledovatel'skiy institut metrologii im D. I. Mendeleyeva (for Pilipchuk, Dolinskiy). 3. Institut obshchev i neorganicheskoy khimii AN USSR (for Babko). 4. Ural'skiy nauchno-issledovatel'skiy institut chernykh metallov (for Shayevich).
(Mathematical statistics)

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102910013-4"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102910013-4

BUSEV, Aleksey Ivanovich; VINOGRADOV, A.P., akademik, glav. red.; ALIMARIN, I.P., red.; BABKO, A.K., red.; VAYNSHTEYN, E.Ye., red.; YERMAKOV, A.N., red.; KUZNETSOV, V.I., red.; PALEY, P.N., red.; RYABCHIKOV, D.I., red.; TANANAYEV, I.V., red.; CHERNIKHOV, Yu.A., red.; VOLYNETS, M.P., red.; MAKUNI, Ye.V., tekhn. red.

[Analytical chemistry of molybdenum]Analiticheskaia khimiia molibdena. [By] A.I.Busev. Moskva, Izd-vo Akad. nauk SSSR, 1962. 300 p. (MIRA 16:1)

(Molybdenum--Analysis)

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102910013-4"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102910013-4

UDAL'TSOVA, N.I.; SAVVIN, S.B.; NEMODRUK, A.A.; NOVIKOV, Yu.P.; DOBROLYUBSKAYA, T.S.; SINYAKOVA, S.I.; BILIMOVICH, G.N.; SERDYUKOVA, A.S.; BELYAYEV, Yu.I.; YAKOVLEV, Yu.V.; NEMODRUK, A.A.; CHMUTOVA, M.K.; GUSEV, N.I.; PALEY, P.N.; VINOGRADOV, A.P., akademik, glav. red.; ALIMARIN, I.P., red.; ~~BABKO, A.K., red.~~; BUSEV, A.I., red.; VAYNSHTEYN, E.Ye., red.; YERMAKOV, A.N., red.; KUZNETSOV, V.I., red.; RYABCHIKOV, D.I., red. toma; TANANAYEV, I.V., red.; CHERNIKHOV, Yu.A., red.; SENYAVIN, M.M., red. toma; VOLYNETS, M.P., red.; NOVICHKOVA, N.D., tekhn. red.; GUS'KOVA, O.M., tekhn. red.

[Analytical chemistry of uranium] Analiticheskaia khimiia urana. Moskva, Izd-vo Akad.nauk SSSR, 1962. 430 p. (MIRA 15:7)

1. Akademiya nauk SSSR. Institut geokhimii i analiticheskoy khimii.

(Uranium--Analysis)

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102910013-4"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102910013-4

BABKO, Anatoliy Kirillovich; PYATNITSKIY, Igor' Vladimirovich; STUKOVNIN, N.D., red.; VORONINA, R.K., tekhn. red.

[Quantitative analysis]Kolichestvennyi analiz. Izd.2., perer. i dop. Moskva, Gos.izd-vo "Vysshaia shkola," 1962. 507 p. (MIRA 16:1)

(Chemistry, Analytical—Quantitative)

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102910013-4"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102910013-4

S/021/62/000/007/008/008
I017/217

AUTHORS: Babko, A.K. and Gridchina, G.I., Academicians AS UkrSSR

TITLE: Study of niobium and tantalum in solution, by dialysis

PERIODICAL: Akademiya nauk Ukrayns'koy RSR. Dopovidi, no. 7, 1962, 921-923

TEXT: The method of comparative dialysis was applied to study the state of niobium and tantalum in aqueous solutions. Co^{2+} ions for acid solutions, and CrO_4^{-2} ions for alkaline. Calculations based on the values of the relative coefficients of dialysis show that monomeric niobium ions exist only in 10-11 N HCl solutions. Polyions are formed below 10 N HCl solutions. Tantalum ion, under the same conditions, is always polymeric. In alkaline solutions, when the concentrations $[Nb(Ta)] = 2.5 \times 10^{-3}$ moles per liter, only polymeric ions of niobium and tantalum exist; their size increases

Card 1/2

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102910013-4"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102910013-4

S/021/62/000/007/008/008
I017/I217

Study of niobium and tantalum...

together with the decreasing of the concentration of the alkali from 1 to 0.01 N. The polymeric forms of tantalum and niobium, obtained in acidic solutions were much more stable then polymeric forms obtained in alkaline medium. A complete depolymerization occurs in presence of 6 g. F^- ions for 1g. niobium and 20g. F^- ions for 1g. tantalum in 1 - 1.1 N HCl aqueous solution. The difference in degrees of polymerization, permits the Nb/Ta separation.

ASSOCIATION: Instytut zagal'noy ta neoganichnoy chimiy AN URSR
(Institute of General and Inorganic Chemistry, AS UkrSSR)

SUBMITTED: January 18, 1962.

Card 2/2

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102910013-4"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102910013-4

BABKO, A.K.

On the article by P.N. Kovalenko and L.B. Reznik "Determination of pH of the beginning of dissolution and of the activity product of germanium (IV) hydroxide". First letter. Izv.vys.uch.zav.; khim.i khim.tekh. 5 no.4:679 '62. (MIRA 15:12)

(Germanium oxide)
(Hydrogen-ion concentration)
(Solubility)
(Kovalenko, P.N.) (Reznik, L.B.)

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102910013-4"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102910013-4

BABKO, A.K.

On the article by I.I. Kalinichenko and A.A. Kniazeva "Photocolorimetric determination of nickel in alloyed copper without separating it." Izv.vys.uch.zav.; khim.i khim.tekh. 5 no.4:684-685 '62. (MIRA 15:12)

(Nickel—Analysis) (Copper alloys)
(Kalinichenko, I.I.) (Kniazeva, A.A.)

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102910013-4"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102910013-4

BABKO, A.K.; VOLKOVA, A.I.; GET'MAN, T.Ye.

Colored complexes of titanium with salicylate. Zhur.neorg.khim. 7 no.2:284-290 F '62. (MIRA 15:3)

1. Institut obshchey i neorganicheskoy khimii AN USSR.
(Titanium compounds) (Salicylic acid)

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102910013-4"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102910013-4

BABKO, A.K.

Physicochemical analysis of equilibrium of complex formation in solutions. Zhur.neorg.khim. 7 no.3:454-462 Mr '62. (MIRA 15:3)

(Complex compounds) (Phase rule and equilibrium)

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102910013-4"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102910013-4

BABKO, A.K.; TANANAYKO, M.M.

Complex formation in the system titanium (IV) - diantipyrylmethane - thiocyanate. Zhur.neorg.khim. 7 no.3:562-570 Mr '62. (MIRA 15:3)

1. Kiyevskiy gosudarstvennyy universitet imeni T.G.Shevchenko.
(Titanium compounds) (Thiocyanates)
(Systems (Chemistry))

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102910013-4"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102910013-4

BABKO, A.K.; TANANAYKO, M.M.

Equilibrium in the system titanium (IV) - diantipyrylmethane - thiocyanate - ethanol. Zhur.neorg.khim. 7 no.3:571-575 Mr '62. (MIRA 15:3)

1. Kiyevskiy gosudarstvennyy universitet imeni Shevchenko.
(Titanium compounds--Spectra)
(Systems (Chemistry)) (Thiocyanates)

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102910013-4"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102910013-4

S/078/62/007/004/012/016
B106/B101

AUTHORS: Babko, A. K., Gridchina, G. I.

TITLE: Effect of the state of zirconium in solution on its reaction with organic reagents

PERIODICAL: Zhurnal neorganicheskoy khimii, v. 7, no. 4, 1962, 889-895

TEXT: The effect of the state of zirconium in different solutions on the rate of formation of the colored complex compound of zirconium with xylenol orange was studied. Other reagents (methyl thymol blue, alizarin S, phenyl fluorone, arsenazo, stilbazo) give similar results. Studies of solutions with different concentrations of zirconium and hydrochloric acid showed that immediately after adding the reagent the maximum coloring of the complex developed only in solutions without zirconium polyions. In the presence of polyions, maximum coloring is attained only some time after adding the reagent. These polyions are hydrolysis products of zirconium which are formed when solutions of > 0.01 moles/liter Zr in 1 N HCl, or lower zirconium concentrations in less acid solutions, are left standing. The reactivity of polyions with xylenol orange is lower than that of Zr^{4+}

Card 1/3

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102910013-4"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102910013-4

S/078/62/007/004/012/016
B106/B101

ions and depends more on the acidity of the solution than on the zirconium concentration. At lower acidity, polyions of the type

-Zr-O-Zr-O- are probably formed which react with xylenol orange more slowly than polyions of the type

-Zr-O-Zr-O- which are formed in more acid media.

The reactivity of zirconium is considerably reduced by precipitation of zirconium with ammonia as hydroxide and subsequent dissolution in 1 N HCl before adding xylenol orange. The presence of aluminum ions during precipitation of the hydroxide, and the presence of sulfate ions during or after precipitation, increase the reactivity since they disintegrate the polyions. If the zirconium hydroxide is precipitated from hydrochloric acid solution in the cold, the addition of aluminum- or sulfate ions before precipitation suffices to maintain the reactivity with xylenol orange. But on precipitating the hydroxide from hot solutions, the precipitate has to be boiled with 5 N HCl to destroy completely the polyions and the re-enable

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102910013-4"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102910013-4

BABKO, A.K.; SHKARAVSKIY, Yu.F.

Phosphorus-niobium-molybdenum complex. Zhur.neorg.khim. 7 no.7: 1565-1569 Jl '62. (MIRA 16:3)

1. Institut obshchey i neorganicheskoy khimii AN UkrSSR.
(Niobium compounds) (Phosphorus compounds) (Molybdenum compounds)

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102910013-4"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102910013-4

BABKO, A.K.; VOLKOVA, A.I.; GET'MAN, T.Ye.

Colorless salicylate complexes of titanium. Zhur.neorg.khim. 7 no.9:2167-2172 S '62. (MIRA 15:9)

1. Institut obshchey i neorganicheskoy khimii AN UkrSSR.
(Titanium compounds) (Salicylic acid)

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102910013-4"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102910013-4

BABKO, A.K.; TANANAYKO, N.M.

Complex formation in the system titanium (IV) - diantipyrylmethane - pyrocatechol. Zhur. neorg.khim. 7 no.11:2549-2556 N '62. (MIRA 15:12)

1. Kiyevskiy gosudarstvennyy universitet imeni T.G. Shevchenko.

(Titanium compounds)
(Methane)
(Pyrocatechol)

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102910013-4"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102910013-4

BABKO, A.K.; LUKOVSKAYA, N.M.

Photographic chemiluminescence method for the determination of microquantities of copper and hydrogen peroxide. Zhur.anal.khim. 17 no.1:50-52 Ja-F '62. (MIRA 15:2)

1. Institute of General and Inorganic Chemistry, Academy of Sciences, Ukrainian S.S.R., Kiev.
(Copper--Analysis) (Hydrogen peroxide)

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102910013-4"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102910013-4

BABKO, A.K.; LUTOKHINA, N.V.

Colored magnesium adsorption compounds used in photometric analysis. Zhur.anal.khim. 17 no.4:416-421 Jl '62. (MIRA 15:8)

1. T.G.Shevchenko Kiev State University.
(Magnesium compounds--Spectra)

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102910013-4"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102910013-4

BABKO, A.K.; KISH, P.P.

Spectrometric study of reagents for the determination of indium. Zhur.anal.khim. 17 no.6:693-699 S '62. (MIRA 16:1)

1. Uzhgorodskiy gosudarstvennyy universitet.
(Indium--Analysis) (Chemical tests and reagents)

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102910013-4"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102910013-4

S/075/62/017/007/002/006
B119/B186

AUTHORS: Babko, A. K., and Vdovenko, M. Ye.

TITLE: Effect of the composition of solvent mixtures on the paper chromatographic separation of some rare earths

PERIODICAL: Zhurnal analiticheskoy khimii, v. 17, no. 7, 1962, 820 - 824

TEXT: A physicochemical analysis was made to discover how the paper chromatographic separation of La, Nd, and Y is affected by different compositions of mixtures of diethyl ether (E) with methanol (I), ethanol (II), propanol (III), butanol (IV), acetone (V), methyl ethyl ketone (VI), or cyclohexanone (VII). The following mixtures were found to be optimum: E:I =3:1 (R_f values in the order La, Nd, Y: 0.25, 0.41, 0.60); E:II = 1:1 (R_f: 0.19, 0.35, 0.59); E:III = 1:9 (R_f: 0.06, 0.16, 0.36); E:V = 1:2 (R_f: 0.06, 0.22, 0.61); E:VII = 1:9 (R_f: 0.03, 0.10, 0.30); pure VI (R_f: 0.08, 0.27, 0.51). The differentiating action of the solvent increases with its solubility in water. There are 7 figures and 1 table.

Card 1/2

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102910013-4"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102910013-4

Effect of the composition of... S/075/62/017/007/002/006
B119/B186

The most important English-language reference is: F. Pollard, J. Mc. Omie, H. Stevens, J. Chem. Soc. 12, 4730 (1952).

ASSOCIATION: Institut obshchey i neorganicheskoy khimii AN USSR, Kiyev (Institute of General and Inorganic Chemistry AS UkrSSR, Kiyev)

SUBMITTED: October 31, 1961

Card 2/2

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102910013-4"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102910013-4

BABKO, A.K.; LUTOKHINA, N.V.

Conditions for the photometric determination of magnesium as adsorption colored compounds. Zhur.anal.khim. 17 no.8:922-925 N '62. (MIRA 15:12)

1. T.G.Shevchenko Kiev State University and A.I.Pirogov Vinnitsa Medical Institute.

(Magnesium—Analysis) (Photometry)

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102910013-4"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102910013-4

S/075/62/017/009/002/006
E071/E436

AUTHORS: Babko, A.K., Shtokalo, M.I.

TITLE: Photometric determination of niobium by means of zylenol orange

PERIODICAL: Zhurnal analiticheskoy khimii, v.17, no.9, 1962, 1068-1071

TEXT: When studying the action of metallochromate indicators on salts of highly covalent metals, the authors noticed that xylenol orange ([3:3'-bis N:N-di-(carboxymethyl)-aminomethyl]-o-cresolsulphonaphthalein), further designated XO, in an acid medium gives a weak reaction with niobium. Oxalic acid, tartaric acid and other similar substances intensify the ability of niobium to react with xylenol orange forming intensely coloured (red) complexes. On the above basis the authors developed a photometric method of determining niobium in the presence of tartaric acid. The optimum conditions are: pH 2 to 3, the ratio of niobium totartaric acid = 1:30. The composition of niobium xylenol orange complex was determined by the method of isomolar series as $Nb(XO)_2$. The molar extinction coefficient of

Card 1/2

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102910013-4"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102910013-4

the compound is 20000. Solutions of the complex in the presence of tartaric acid agree with Beer's law in the range of concentrations from 5 to 20 μg in 25 ml. Niobium can be determined in the presence of titanium (up to 2.5 μg of titanium in 25 ml) and tantalum (up to 1.8 μg in 25 ml). The interference of iron can be prevented with ascorbic acid. Aluminium in large amounts forms coloured substances with XO, therefore it should be removed before determining niobium. For this reason when determining niobium in a silicate, the authors separated niobium with tannin in an acid medium. There are 4 figures and 1 table.

ASSOCIATION: Institut obshchey i neorganicheskoy khimii AN USSR, Kiyev (The Institute of General and Inorganic Chemistry AS UkrSSR, Kiyev)

SUBMITTED: February 28, 1962

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102910013-4"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102910013-4

BABKO, A.K.

In reference to an article by M.B. Shchigol' and N.B. Burchinskaia "Some properties of aluminum borates." Zhur.neorg.khim. 7 no.11:2642 N '62. (MIRA 15:12)

(Aluminum borate)

(Shchigol, M.B.) -(Burchinskaia, N.B.)

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102910013-4"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102910013-4

BABKO, A. K.; SHTOKALO, M. I.

Application of the method of isomolar series and the method of equilibrium displacement using metal indicators for determining the composition of complexes. Ukr. khim. zhur. 28 no.3:293-301 '62. (MIRA 15:10)

1. Institut obshchey i neorganicheskoy khimii AN UkrSSR.

(Complex compounds)

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102910013-4"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102910013-4

BABKO, A. K.; LUKACHINA, V. V.

Spectrophotometric study of pyrogallate complexes of niobium.
Ukr. khim. zhur. 28 no.3:371-377 '62. (MIRA 15:10)

1. Institut obshchey i neorganicheskoy khimii AN UkrSSR.

(Niobium compound) (Pyrogallol)

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102910013-4"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102910013-4

BABKO, A. K.; LUTOKHINA, N. V.

Photometric determination of magnesium in the presence of iron. Ukr. khim. zhur. 28 no.3:389-393 '62.

(MIRA 15:10)

1. Institut obshchey i neorganicheskoy khimii AN UkrSSR.

(Magnesium—Analysis) (Iron—Analysis)

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102910013-4"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102910013-4

BABKO, A.K.; LUKACHINA, V.V.

Spectrophotometric study of pyrogallate complexes of tantalum. Ukr.khim.zhur. 28 no.7:779-785 '62. (MIRA 15:12)

1. Institut obshchey i neorganicheskoy khimii AN UkrSSSR.
(Tantalum compounds) (Pyrogallol) (Spectrophotometry)

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102910013-4"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102910013-4

BABKO, A.K.

Development of analytical chemistry in 1961 (survey). Zav.lab. 28 no.7:773-791 '62 (MIRA 15:6)
(Chemistry, Analytical)

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102910013-4"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102910013-4

S/073/62/028/007/004/004
E075/E136

AUTHORS: Babko, A.K., and Lukovskaya, N.M.

TITLE: Investigation of chemiluminescent catalytic reaction in the system luminol-copper-hydrogen peroxide. Part II. Photoelectric method for the study of the influence of copper concentration

PERIODICAL: Ukrainskiy khimicheskiy zhurnal, v.28, no.7, 1962, 861-865.

TEXT: To obtain data on the glow-time distribution and maximum glow intensity (I_{max}) in the system luminol-Cu-H_2O_2, containing different concentrations of Cu and H_2O_2, an automatic apparatus was constructed using a photomultiplier and a recorder. The chemical reaction was conducted at a constant pH = 11.2 with various amounts of 0.001 M $CuSO_4$. The glow begins immediately after addition of H_2O_2 to the solution and the initial glow does not shift with time for different concentrations of Cu (1.43×10^{-5} to 14.3×10^{-5} M). I_{max} passes through a maximum for each Cu concentration, the latter being proportional to I_{max}

Card 1/2

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102910013-4"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102910013-4

for [Cu] < [H_2O_2] (2.3×10^{-5} M). If [Cu] is 2 to 3 times greater than [H_2O_2], the chemiluminescent effect begins to decrease. The dependence of I_{max} and the total intensity of light emitted $\sum$ on the general concentration of Cu for different H_2O_2 concentrations was also investigated. The chemiluminescent determination of H_2O_2 can be achieved for the [Cu] concentration not greater than 2.3×10^{-5} M. At [Cu] of the order of 10^{-4} M the determination is not possible. The determination of Cu can be achieved with a considerably improved sensitivity (up to 2×10^{-8} g Cu per ml) by increasing the concentration of H_2O_2 from 2×10^{-5} to 7.5×10^{-4} M. There are 6 figures.

ASSOCIATION: Institut obshchey i neorganicheskoy khimii AN USSR (Institute of General and Inorganic Chemistry, AS Ukr SSR)

SUBMITTED: June 5, 1961.

Card 2/2

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102910013-4"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102910013-4

BABKO, A.K.; MIKHEL'SON, P.B.; KIRPA, I.M.

Photometric determination of tin as a tin-iron-dimethylglyoxime ternary compound. Ukr.khim.zhur. 28 no.8:963-967 '62. (MIRA 15:11)

1. Kiyevskiy gosudarstvennyy universitet im. T.G. Shevchenko. (Tin--Analysis) (Tin compounds)

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102910013-4"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102910013-4

BABKO, A.K.; LUKOVSKAYA, N.M.

Chemiluminescent catalytic reaction in the system luminol - copper - hydrogen peroxide. Part 3: Photoelectric method of studying the effect of pH and ammonia concentration. Ukr.khim.zhur. 28 no.8:968-972 '62. (MIRA 15:11)

1. Institut obshchey i neorganicheskoy khimii AN UkrSSR.
(Luminescence)
(Hydrogen-ion concentration)
(Systems (Chemistry))

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102910013-4"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102910013-4

BABKO, A.K.; ZHAROVSKIY, F.G.

Extraction in analytical chemistry (survey). Zav.lab. 28 no.11:1287-1305 '62. (MIRA 15:11)
(Extraction (Chemistry)) (Chemistry, Analytical)

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102910013-4"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102910013-4

BABKO, A.K., akademik; VOLKOVA, A.I.; GET'MAN, T.Ye. [Het'man, T.O.]

Formation of a quaternary complex in the system vanadium (V) - fluoride-salicylate - quinine. Dop. AN URSR no.5:610-613 '63. (MIRA 17:9)

1. AN UkrSSR (for Babko).

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102910013-4"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102910013-4

BABKO, A.K.; SHEVCHUK, I.A.; DEGTYARENKO, L.I.

Extraction of halide complexes of bismuth. Trudy Kom.anal.khim. 14:148-153 '63. (MIRA 16:11)

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102910013-4"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102910013-4

BABKO, A.K.; ZHAROVSKIY, F.G.

Extraction in photometric analysis. Trudy Kom.anal.khim. 14: 218-270 '63. (MIRA 16:11)

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102910013-4"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102910013-4

S/078/63/008/001/005/026
B101/B186

AUTHORS: Babko, A. K., Gridchina, G. I.

TITLE: The state of tantalum in alkaline and hydrochloric acid solutions

PERIODICAL: Zhurnal neorganicheskoy khimii, v. 8, no. 1, 1963, 52-55

TEXT: The problem whether tantalum forms polyions in alkaline and hydrochloric acid solutions was investigated by dialysis. Solutions of the following concentration were tested: $[Ta^V] = [CrO_4^{2-}] = 2.5 \cdot 10^{-3}$ mole/l and $[KOH] = 1 - 0.01$ N; $[Ta^V] = [Co^{2+}] = 2.5 \cdot 10^{-3}$ mole/l and $[HCl] = 11.4-0.5$ N; $[Ta^V] = [Co^{2+}] = 2.5 \cdot 10^{-3}$ mole/l, $[HF] = 2.5 \cdot 10^{-3} - 6.25 \cdot 10^{-2}$ mole/l, $[HCl] = 1 - 0.1$ N. The chromate- and cobalt ion served as comparison ions during dialysis through cellophane membrane. The dialysis coefficient, D_{Ta}, in relative units, was ~0.3 in 1.0 N KOH, ~0.1 in 10 N HCl. Accordingly, tantalum forms polyions in alkaline as well as in hydrochloric acid solutions. However, with increasing HF concentration, D_{Ta} increases

Card 1/2

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102910013-4"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102910013-4

and reaches the value 1.1 for [HF] : [Ta^V] = 20; depolymerization sets in. The color reaction of Ta with pyrocatechol and ammonium oxalate is quicker in alkaline solution than in acidic one, from which it is concluded that the polyions of Ta are more stable in acidic solutions. Since experiments with niobium (Zh. neorgan. khimii, in printing) produced that, in concentrated HCl, Nb diffuses more quickly than Ta, the hydroxides were precipitated from an [Nb] : [Ta] = 94.6 solution, suspended in 12 N HCl and dissolved with gaseous HCl at 0°C, and the solution was brought to pH 10 - 10.5. The dialysate contained barely 0.2% Ta. In sulfuric acid solution, D_{Ta} and D_{Nb} were equally low, so that separation failed. However, since Nb^V at low concentration ($5 \cdot 10^{-3}$ - $1 \cdot 10^{-3}$ mole/l) in sulfuric acid solution is in a monomeric state, the properties of the sulfate solutions are further investigated. There is 1 figure.

ASSOCIATION: Institut obshchey i neorganicheskoy khimii Akademii nauk Ukrainskoy SSR (Institute of General and Inorganic Chemistry of the Academy of Sciences Ukrainskaya SSR)

SUBMITTED: February 20, 1962

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102910013-4"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102910013-4

BABKO, A.K.; LITVINENKO, V.A.

Rhodizonate complexes of barium and their use in the photometric determination of sulfates. Zhur. anal. khim. 18 no.2:237-244 F '63. (MIRA 17:10)

1. Shevchenko State University, Kiev.

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102910013-4"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102910013-4

BABKO, A.K.; SHKARAVSKIY, Yu.F.

On two types of molybdenum heteropolycomplexes. Zhur.neorg.khim. 8 no.4:934-938 Ap '63. (MIRA 16:3)

1. Institut obshchey i neorganicheskoy khimii AN UkrSSR.
(Molybdenum compounds)

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102910013-4"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102910013-4

L 17006-63 EWT(m)/BDS ESD-3 RM

S/078/63/008/005/006/021

54

AUTHOR: [redacted] Babko, A. K. and Shtokalo, M. I.

TITLE: Complexing in a zirconium-diantipyrylmethane system

PERIODICAL: Zhurnal neorganicheskoy khimii, v. VIII, No. 5, May 1963, 1088-1092

TEXT: Using the metal-indicator method, the authors study the formation of amino-type complexes in the system zirconium-diantipyrylmethane in a m dium of 1 N HCl and 0.1 N HCl. Attenuation of dye in the zirconium-xylene orange by fluorine ions and also by molecules of diantipyrylmethane makes possible a quantitative comparison of the stability of these complexes. Under the conditions involved in the experiments, a mixture of the complexes $Zr(Diant)_2^{4+}$ and $Zr(Diant)_3^{4+}$ was formed. For the first, the instability constant was computed:

Card 1/2

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102910013-4"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102910013-4

L 17006-63

S/078/63/008/005/006/021

Complexing in a zirconium- .....

$$K_{Zr(Diant)_2^{4+}} = \frac{[Zr^4]\,[Diant]^2}{[Zr(Diant)_2^4]} = 3.1 \cdot 10^{-12}$$

There are 3 figures and 2 tables.

SUBMITTED: Sept. 8, 1962

Card 2/2

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102910013-4"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102910013-4

L 17426-63 EWP(q)/EWT(m)/BDS AFFTC/ASD JD/JG

ACCESSION NR: AP3004345 S/0078/63/008/008/1839/1845

AUTHORS: Babko, A. K.; Lukachina, V. V.; Nabivanets, B. I. 60 58

TITLE: Solubility and acid-base properties of the hydrates of tantalum and niobium oxides 27

SOURCE: Zhurnal neorganicheskoy khimii, v. 8, no. 8, 1963, 1839-1845

TOPIC TAGS: tantalum, niobium, tantalum hydroxide, niobium hydroxide, nitric acid, tantalic acid, niobic acid

ABSTRACT: The solubility of freshly-precipitated tantalum and niobium hydroxides in nitric acid media was studied. It was established that the "isoelectric region" of the tantalic acid is in the pH interval from 9 to 2. This region is in a pH interval of 7-0 for niobic acid. The above shows that the metallic properties of tantalum are more pronounced than those of niobium. The effect of the degree of concentration of H^+ and OH^- on the solubility of tantalic and ciobic acids has been calculated. It

Card 1/2

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102910013-4"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102910013-4

L 17426-63

ACCESSION NR: AP3004345

2

was established that, in acidic as well as in basic media, the monomeric ions of tantalum and niobium are formed in the initial stage of solubility. The constants of basic and acidic dissociation of tantalum and niobium hydroxides were calculated when the solubility was doubled. The instability constants of the hydroxy complexes of tantalum and niobium were calculated from the results of the basic dissociation constants and with application of electrostatic characteristics. Effect of the rate and duration of centrifuging for completeness of the separation of the precipitate has also been studied. Orig. art. has: 3 tables, 5 graphs and 8 equations.

ASSOCIATION: Institut obshchey i neorganicheskoy khimii AN UkrSSR (Institute of general and inorganic chemistry, AN, UkrSSR)

SUBMITTED: 11Oct62 DATE ACQ: 21Aug63 ENCL: 00

SUB CODE: PH, CH NO REF SOV: 009 OTHER: 000

Card 2/2

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102910013-4"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102910013-4

BABKO, A.K.; VASILENKO, V.T.

Comparative study of absorption spectra of zirconium complexes and ionic forms of reagents. Zhur. anal. khim. 18 no.1:71-78 Ja '63. (MIRA 16:4)

1. Institute of General and Inorganic Chemistry, Academy of Sciences, Ukrainian S.S.R., Kiev.
(Zirconium compounds—Spectra)
(Chemical tests and reagents—Spectra)

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102910013-4"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102910013-4

L 10619-63
EWT(m)/BDS--ESD-3--RM

ACCESSION NR: AP3001018 S/0075/63/018/005/0570/0574

AUTHOR: Babko, A. K.; Chalaya, Z. I. 53

TITLE: The study of rhodamine C as a fluorescent reagent for indium

SOURCE: Zhurnal analiticheskoy khimii, v. 18, no. 5, 1963, 570-574

TOPIC TAGS: rhodamine C, determination of indium, fluorescence of benzene extracts

ABSTRACT: Rhodamine C is the best reagent for the extraction-luminescent determination of indium in the form of a bromide complex. For the determinations of indium by the fluorescence of benzene extracts the optimum conditions are as follows: sulfuric acid 3 to 6N and 2N potassium bromide. The use of hydrochloric acid is not suitable. Addition of acetone and some other solvents to the aqueous solution before the extraction of rhodamine C brominidate increase the solubility of the indium complex and does not appreciably effect the solubility of the indium complex and does not appreciably effect the solubility of rhodamine bromide. Under this optimum condition the sensitivity of the determination is 5 times higher and the results are more reproducible. Orig. art. has: 1 table and 9 graphs.

Card 1/2

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102910013-4"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102910013-4

BABKO, A.K.; DANILOVA, V.N.

Methods for obtaining analytical uranium concentrates.
Zhur. anal. khim. 18 no.9:1036-1041 S '63. (MIRA 16:11)

1. Institut obshchey i neorganicheskoy khimii AN UkrSSR, Kiyev.

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102910013-4"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102910013-4

BABKO, A.K.; DUBOVENKO, L.I.

Solubility and acidic properties of luminol. Ukr.khim.zhur. 29 no.3: 479-484 '63. (MIRA 16:9)

1. Institut obshchey i neorganicheskoy chimii AN UkrSSR.

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102910013-4"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102910013-4

BABKO, A.K.; LUKOVSKAYA, N.M.

Chemiluminescent determination of trace amounts of cobalt. Zav.lab. 29 no.4:404-407 '63. (MIRA 16:5)

1. Institut obshchey i neorganicheskoy khimii AN UkrSSR.
(Cobalt—Analysis) (Luminescence)

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102910013-4"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102910013-4

L 12885-63

ACCESSION NR: AP3001450 S/0073/63/029/005/0479/0484

AUTHOR: Babko, A. K.; Dubovenko, L. I.

44

TITLE: Solubility and acid properties of luminol

SOURCE: Ukrainskiy khimicheskiy zhurnal, v. 29, no. 5, 1963, 479-484

TOPIC TAGS: solubility, acid properties, luminol, dissociation constants

ABSTRACT: The solubility of luminol (3-aminophthalhydrazide) in water and in acid solutions was investigated. Luminol, in dissolving in weak alkali up to 1N KOH, forms the mono-substituted salt KHL; in strong alkali, more than 1N KOH, the divalent luminol anion L sup 2- is formed; and in very acid media, pH = 1 or less, the cation H sub 3 L sup + is formed. These were identified by their absorption spectra: 1 band at 350 millimicrons for the divalent anion; 1 band at 300 for the acid cation; and 2 bands, at 300 and at 350, for pH 2-14 range. The dissociation constants for luminol were calculated: K prime sub acid = 1.8 x 10 sup -7; K double prime sub acid = 6.3 x 10 sup -15; K sub b = 2 x 10 sup -13. Orig. art. has: 1 formula, 6 equations, 2 tables, and 5 figures.

Card 1/2

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102910013-4"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102910013-4

L 12885-63

ACCESSION NR: AP3001450

ASSOCIATION: Institut obshchey i neorganicheskoy khimii AN UkrSSR (Institute of General and Inorganic Chemistry. Academy of Sciences Ukrainian SSR)

SUBMITTED: 13Jun62 DATE ACQ: 12Jun63 ENCL: 00

SUB CODE: 00 NO REF SOV: 003 OTHER: 003

Card 2/2

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102910013-4"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102910013-4

L 11410-63 BDS S/032/63/029/005/001/022

AUTHOR: Babko, A.K.

TITLE: The determination of trace impurities in inorganic materials

PERIODICAL: Zavodskaya laboratoriya, v. 29, no. 5, 1963, 518-521

TEXT: Distinctive features of work in determining trace quantities of substances by analytical chemistry methods are discussed including: assuring the purity of reagents, preparing analytical concentrates, increasing the sensitivity of reagents and using group methods in controlling the production of pure materials. Other methods (photometry, emission spectrum analysis, catalytic phenomena on a mercury cathode in polarography, the action of inhibitors during catalytic processes, chemiluminescent catalytic reactions, etc.) can raise the sensitivity of analysis, on the principle of forcing the test material to repeatedly enter into reaction or go into an excited state and observing the total effect.

ASSOCIATION: Institut obshchey i neorganicheskoy khimii Ak. nauk UkrSSR (Institute of General and Inorganic Chemistry, Academy of Sciences Ukrainian SSR)

lm/ga

Card 1/1

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102910013-4"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102910013-4

BABKO, A.K.; KALINICHENKO, I.Ye.

Chemiluminescent method for the quantitative determination of ferricyanides. Ukr. Khim. zhur. 29 no.5:527-532 '63. (MIRA 16:9)

1. Institut obshchey i neorganicheskoy khimii AN UkrSSR.

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102910013-4"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102910013-4

BABKO, A.K.; LITVINENKO, V.A.

Catalytic effect of titanium (IV) on the reaction of oxidation of thiosulfate by hydrogen peroxide. Part 1. Effect of concentration. Ukr.khim.zhur. 29 no.6:618-623 '63. (MIRA 16:9)

1. Kiyevskiy gosudarstvennyy universitet im. T.G.Shevchenko.
(Thiosulfates) (Hydrogen peroxide) (Titanium catalysts)

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102910013-4"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102910013-4

L 12774-63 EWP(q)/BDS/EWT(m) AFFTC/ASD JD/JG
ACCESSION NR: AP3001521 S/0032/63/029/006/0645/0649

56
55

AUTHOR: Babko, A. K.; Vdovenko, M.Ye.; Kopa, M. V.

TITLE: Direct photometric determination of rare earth elements by paper chromatography

27

SOURCE: Zavodskaya laboratoriya, v. 29, no. 6, 1963, 645-649

TOPIC TAGS: rare-earth chromatogram, rare-earth chromatography, lanthanum, neodymium, yttrium, reflection coefficient, chromatographic spot, rare-earth element, paper chromatography, reflected light

ABSTRACT: The authors determined the color intensity of spots from rare earth chromatograms in reflected light, using a universal photometer with a light filter of 574 millimicron wave length. Using various concentrations of lanthanum-, neodymium-, and yttrium-nitrate, they found the reflection coefficient K to be inversely proportional to the amount of substance in the chromatographic spot. Thus, the problem was reduced to obtaining spots of the same size and shape. The experimental technique consisted in placing 0.001 ml of the rare metal nitrate solution on a chromatographic paper strip, allowing it to stand for 30 minutes in a humidifying chamber, followed by 5 hours of ascending chromatography

Card 1/2

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102910013-4"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102910013-4

L 12774-63

ACCESSION NR: AP3001521

in cylinders containing 50 ml of a 1:2 ether-acetone mixture with 0.4 gm thiocyanic acid. After drying, the chromatogram was developed by spraying with a 0.4% alizarin solution containing 3% urotropin. The authors found that the spots were of a round shape when the drop of the experimental solution was placed 15 cm from the lower edge of the chromatographic paper strip, also when the ascendant flow was slowed down either by rendering the solution more viscous by dissolving photographic film in it or by narrowing its access with transverse cuts in the paper strip. The technique proved accurate within 10% on samples of Loparite, Monazite, and Parisite, as compared with the x-ray spectral and trilon microtitration procedures. Orig. art. has: 4 figures and 1 table.

ASSOCIATION: Institut obshchey i neorganicheskoy khimii AN USSR (Institute of General and Inorganic Chemistry, Academy of Sciences, USSR)

SUBMITTED: 00 DATE ACQ: 17Jun63 ENCL: 00

SUB CODE: 00 NO REF SOV: 005 OTHER: 001

Card 2/2

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102910013-4"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102910013-4

BABKO, A.K.

Development of analytical chemistry in 1962 (survey). Zav.lab. 29 no.8:901-919 '63. (MIRA 16:9)
(Chemistry, Analytical)

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102910013-4"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102910013-4

BABKO, A.K.; SHTOKALO, M.I.

Study of reagents for the colorimetric determination of tantalum. Ukr. khim.zhur. 29 no.9:963-967 '63. (MIRA 17:4)

1. Institut obshchey i neorganicheskoy khimii AN UkrSSR.

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102910013-4"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102910013-4

BABKO, A.K.; SHTOKALO, M.I.

Determination of the relative stability of certain niobium complexes by the metal-indicator method. Ukr. khim. zhur. 29 no.10:1079-1082 '63. (MIRA 17:1)

1. Institut obshchey i neorganicheskoy khimii AN UkrSSR.

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102910013-4"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102910013-4

BABKO, A.K.; DUBOVENKO, L.I.

Complex formation in the copper (II) - luminol system.
Ukr. khim. zhur. 29 no.10:1083-1088 '63. (MIRA 17:1)

1. Institut obshchey i neorganicheskoy khimii AN UkrSSR.

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102910013-4"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102910013-4

BABKO, A.K.; VOLKOVA, A.I.; GET'MAN, T.Ye.; PAVLOVA, M.Kh.

Complex formation in the system vanadyl(4) - salicylate. Ukr.khim. zhur. 29 no.12:1235-1240 '63. (MIRA 17:2)

1. Institut obshchey i neorganicheskoy khimii AN UkrSSR i Institut khimii Bolgarskoy Akademii nauk.

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102910013-4"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102910013-4

BABKO, A.K.; LITVINENKO, V.A.

Catalytic effect of titanium (IV) on the oxidation of thiosulfate by hydrogen peroxide. Part 2: Effect of complex-forming agents. Ukr.khim.zhur. 29 no.12:1300-1306 '63. (MIRA 17:2)

1. Kiyevskiy gosudarstvennyy universitet im. T.G.Shevchenko.

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102910013-4"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102910013-4

BABKO, A.K.; GRIDCHINA, G.I.

Separation of ions on the basis of their different ability to polymerize in solution. Zhur. prikl. khim. 36 no.8:1722-1725 Ag '63. (MIRA 16:11)

1. Institut obshchey i neorganicheskoy khimii AN UkrSSR.

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102910013-4"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102910013-4

BABKO, A.K., akademik; SHTOKALO, M.I.

Formation of the ternary complex in the system iron - xylenol orange - fluoride. Dop. AN URSR no.8:1077-1080 '64. (MIRA 17:8)

1. Institut obshchey i neorganicheskoy khimii AN UkrSSR.
2. AN UkrSSR (for Babko).

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102910013-4"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102910013-4

BABKO, A.K.; SHEVCHENKO, L.L.

Infrared absorption spectra of the compounds of salicylic acid with metals. Zhur.neorg.khim. 9 no.1:42-47 Ja '64. (MIRA 17:2)

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102910013-4"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102910013-4

BABKO, A.K., akademik

Present-day state and prospects for the development of analytical chemistry. Zhur. VKHO 9 no. 2:122-129 '64. (MIRA 17:9)

1. Akademiya nauk UkrSSR.

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102910013-4"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102910013-4

ACCESSION NR: AP4021983 S/0073/64/030/002/0220/0223

AUTHOR: Babko, A. K.; Shtokalo, M. I.

TITLE: Investigation of reagents for the colorimetric determination of tantalum

SOURCE: Ukrainskiy khimicheskiy zhurnal, v. 30, no. 2, 1964, 220-223

TOPIC TAGS: tantalum, niobium, titanium, colorimetric analysis, color reagent, hematoxylin, pyrocatechol violet, phenylfluorin, arsenazo I, eriochromcyanin, acid chrome blue, morin, colorimetric determination, reagent specificity

ABSTRACT: A group of color reagents found earlier (Ukr. khim. zh 29, 963 (1963)) to be suitable for identifying tantalum according to their spectrophotometric characteristics are now further investigated to determine their specificity for Ta and Nb, and to determine the optimum pH. The color intensity of Ta, Nb, and Ti complexes with hematoxylin (I), pyrocatechol violet (II), phenylfluorin (III), arsenazo I (IV), eriochromcyanin (V), acid chrome blue (VI) and morin (VII) at pH 0-5, and of I, IV and VII in 5-10 NHCl solutions was determined. Hematoxylin, pyrocatechol violet and morin are the most valuable reagents for determining Ta and Nb in the presence of Ti. Hematoxylin and morin may be used to

Card 1/2

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102910013-4"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102910013-4

ACCESSION NR: AP4021983

determine total Ta and Nb. Additional work with pyrocatechol violet (PKV) shows that it may be used for the colorimetric determination of Ta in the presence of Nb. In the presence of ethylenediaminetetraacetic acid its coloration is intensified, distinguishing Ta from Nb; the optimum density of the Ta-PKV complex follows Beer's law in a wide concentration range. Orig. art. has: 4 figures and 1 table.

ASSOCIATION: Institut obshchey i neorganicheskoy khimii Akademii nauk UkrSSR (Institute of General and Inorganic Chemistry, Academy of Sciences, UkrSSR)

SUBMITTED: 06May63 DATE ACQ: 09Apr64 ENCL: 00

SUB CODE: CH NO REF SOV: 003 OTHER: 000

Card 2/2

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102910013-4"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102910013-4

BABKO, A.K.; CHALAYA, Z.I.

Dyes of the rhodamine group as luminescent reagents for boron. Ukr. khim. zhur. 30 no.3:268-274 '64.

(MIRA 17:10)

1. Kiyevskiy gosudarstvennyy universitet im. T.G. Shevchenko.

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102910013-4"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102910013-4

BABKO, A.K.; MIKHEL'SON, P.B.; VASILENKO, V.T.; KONONENKO, A.G.

Composition of the rhenium complex with dimethylglyoxime in the presence of tin dichloride. Ukr. khim. zhur. 30 no.3: 309-310 '64. (MIRA 17:10)

1. Kiyevskiy gosudarstvennyy universitet im. T.G. Shevchenko.

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102910013-4"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102910013-4

ACCESSION NR: AP4033701 S/0073/64/030/004/0388/0390

AUTHOR: Babko, A. K.; Lukovskaya, N. M.

TITLE: Chemiluminescent determination of cobalt in high purity zinc.

SOURCE: Ukrainskiy khimicheskiy zhurnal, v. 30, no. 4, 1964, 388-390

TOPIC TAGS: cobalt, chemiluminescent determination, high purity zinc, phenolphthalein, photographic chemiluminescent analysis

ABSTRACT: A method was worked out for determining 10^{-6}-10^{-7}% cobalt in high purity zinc. 3×10^{-4}% and more cobalt in $ZnSO_4$ may be determined without separating the zinc. In this case sodium salicylate is added to mask the Fe and Cu in the solution to be analysed, luminol is added, and an isoorthochromatic photographic plate is exposed to cells of the solution in the dark. The plate is developed and read with a photometer, and visually compared with standards. With smaller amounts of cobalt an analytical concentrate must be prepared. This is effected by precipitation with α-nitroso-β-naphthol, with phenolphthalein as additional carrier, and combustion of the precipitate in the presence of a small amount of zinc salt. This cobalt concentrate is then determined by the photographic

Card 1/2

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102910013-4"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102910013-4

ACCESSION NR: AP4033701

chemiluminescent method. Orig. art. has: 1 figure and 1 table.

ASSOCIATION: Institut obshchey i neorganicheskoy khimii AN UkrSSR (Institute of General and Inorganic Chemistry AN UkrSSR)

SUBMITTED: 15May63 ENCL: 00

SUB CODE: OP, MM NO REF SOV: 002 OTHER: 002

Card 2/2

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102910013-4"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102910013-4

BABKO, A.K.; LUKOVSKAYA, N.M.

Catalytic activity of cobalt of cobalt in chemiluminescence.
Ukr.khim.zhur. 30 no.5:508-514 '64. (MIRA 18:4)

1. Institut obshchey i neorganicheskoy khimii AN UkrSSR.

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102910013-4"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102910013-4

BABKO, A.K.; MARKOVA, L.V.; TSYBINA, T.S.

Luminescent determination of microquantities of sulfur in nonaqueous media. Zav. lab. 30 no.6:648-650 '64 (MIRA 17:8)

1. Institut obshchey i neorganicheskoy khimii AN UkrSSR.

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102910013-4"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102910013-4

BABKO, A.K.; GRIDCHINA, G.I.

Effect of the state of ions in solution on their reactivity (survey). Zav. lab. 30 no.7:773-779 '64. (MIRA 18:3)

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102910013-4"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102910013-4

ACCESSION NR: AP4043301 S/0032/64/030/008/0910/0930

AUTHOR: Babko, A. K.

TITLE: Progress in analytical chemistry during 1963 (A Review)

SOURCE: Zavodskaya laboratoriya, v. 30, no. 8, 1964, 910-930

TOPIC TAGS: inorganic substance, inorganic analysis, inorganic reagent, organic reagent, analytical method, element determination, element separation, colored complex, photometric technique, chromatographic technique, luminescence technique

ABSTRACT: The author states that only a fraction of the available world literature on analytical chemistry of inorganic substances has been reviewed in the 232 articles cited by him. The review includes 8 pages of tabular material (citing the element, the reagent, and the characteristics of the methods used), 9 pages of discussion, and 3 pages of bibliography. The principles of analytical techniques for the determination of over 50 elements are reported. It is pointed out that while there was a profusion of papers on the determination of palladium, rare earth elements, niobium, and tantalum, the new reports contributed little to the existing analytical techniques. The author devotes much space to the use of organic reagents, to complex formation, and to analytical procedures involving luminescence. The

Card 1/2

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102910013-4"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102910013-4

ACCESSION NR: AP4043301

methods of phase separation are discussed at length, and the three-layer technique of extraction is singled out. Much space is devoted to the oxidation-reduction reactions and to catalytic processes and their application in microanalytical procedures. In the field of general problems of analytical methodology the "analysis of variance" is commended and so is the statistical treatment of the results obtained by international verification of various analytical techniques. Attention is called to the potentialities of photonometric titration, and the need for developing group reaction procedures is stressed. In conclusion, attention is called to a review of methods for determining microimpurities by various physical and chemical techniques, written by I. P. Alimarin (Zhurnal analiticheskoy khimii, 18, 1412, 1963), and on luminescent spectroscopy, reported by F. Dörre (Z. anal. Chem., 197, 241, 1963). Orig. art. has: 2 tables.

ASSOCIATION: none

SUBMITTED: 00 ENCL: 00

SUB CODE: GC NO REF SOV: 092 OTHER: 140

Card 2/2

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102910013-4"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102910013-4

BABKO, A.K.; [illegible], L.V.

Stability of sulfur-containing catalysts in the iodine-azide reaction. Ukr. khim. zhur. 30 no.9:967-971 '64.

(MIRA 17:10)

1. Institut obshchey i neorganicheskoy khimii AN UkrSSR.

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102910013-4"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102910013-4

BABKO, A.K.; SHTOKALO, M.I.

Study of the relative stability of some tantalum complexes by means of the metal indicator method. Ukr. khim. zhur. 30 no.9:972-979 '64. (MIRA 17:10)

1. Institut obshchey i neorganicheskoy khimii AN UkrSSR.

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102910013-4"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102910013-4

BABKO, A.K., akademik

Symposium on the structure and properties of complex compounds.
Vest. AN SSSR 34 no.12:69 D '64 (MIRA 18:1)

1. AN UkrSSR.

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102910013-4"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102910013-4

BABKO, A.K., akademik; PILIPENKO, A.T. [Pylypenko, A.T.]; ROZENFEL'D, A.L. [Rozenfel'd, H.L.]

Determination of microquantities of arsenic. Dop. AN URSR no.8:1069-1071 '62. (MIRA 18:2)

1. Kiyevskiy gosudarstvennyy universitet.

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102910013-4"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102910013-4

BABKO, A.K.; PILIPENKO, A.T.; ROZENFEL'D, A.L.

Determination of the microquantities of arsenic in alkaline solutions. Zav. lab. 30 no.9:1060-1061 '64. (MIRA 18:3)

1. Kiyevskiy gosudarstvennyy universitet imeni Shevchenko.

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102910013-4"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102910013-4

RASKO, A.K.; DANILOVA, V.N.

Concentration and determination of cobalt in metallic nickel. Zav. lab. 30 no.10:1198-1200 '64. (MIRA 18:4)

1. Institut obshchey i neorganicheskoy khimii AN UkrSSR.

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102910013-4"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102910013-4

BABKO, A.K.; SHTOKALO, M.I.

Use of the metal-indicator method for the study of oxalate complexes of iron. Ukr.khim.zhur. 30 no.11:1204-1213 '64. (MIRA 18:2)

1. Institut obshchey i neorganicheskoy khimii AN UkrSSR.

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102910013-4"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102910013-4

[illegible]

[illegible]

[illegible]

SOURCE: Zhurnal analiticheskoy khimii, v. [illegible], [illegible], [illegible]

TOPIC TAGS: titrimetry, niobium, peroxide, hydrogen peroxide, titanium, molybdenum, vanadium, ammonium sulfate

ABSTRACT: It was found that niobium, by forming 1 : 1 complexes with hydrogen peroxide, deactivates the latter to the extent of reducing considerably its [illegible] permanganate and also excesses of ammonium sulfate, do not disturb the titration of niobium. Fluorides have to be neutralized by ammonium salts. A method has been worked out for determining niobium in [illegible] by alkaline melts of [illegible] peroxide is oxidized by permanganate in 1 N sulfuric acid medium. This is followed by introducing concentrated sulfuric acid and titrating the peroxide bound to

Card 1/2

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102910013-4"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102910013-4

ACCESSION NR: AP5004432

[illegible] 0.01 M permanganate. Orig. art. has: 1 graph and 4 tables.

[illegible]

[illegible]

Card 2/2

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102910013-4"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102910013-4

BABKO, A.K.; LUKACHINA, V.V.; NABIVANETS, B.I.

Tantalum oxalate complexes. Zhur.neorg.khim. 10 no.4:865-876 Ap '65. (MIRA 18:6)

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102910013-4"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102910013-4

BABKO, A.K.; CHALAYA, Z.I.; VORONOVA, E.D.

Luminescence method of determining boron in alkaline media using ion-exchange resins. Zav. lab. 31 no.2:157-159 '65. (MIRA 18:7)

1. Institut obshchey i neorganicheskoy khimii AN UkrSSR.

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102910013-4"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102910013-4

BABKO, A.K.; LUKIANETS, I.G.; NABIVANETS, B.I.

Titrimetric determination of niobium as a peroxide complex.
Zhur. anal. khim. 20 no.1:72-75 '65. (MIRA 18:3)

1. Institut obshchey i neorganicheskoy khimii AN UkrSSR, Kiyev.

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102910013-4"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102910013-4

BABKO, A.K.

Development of analytical chemistry in 1964; a survey. Zav. lab. 31 no.8:917-936 '65. (MIRA 18:9)

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102910013-4"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102910013-4

L 2002-66 EWT(1)/EWT(m)/EPF(c)/EWP(j)/EWP(t)/EWP(b)/EWA(c) IJP(c) JD/RM

ACCESSION NR: AP5023968 UR/0073/65/031/009/0948/0953
543+535.379

44
41
B

AUTHOR: Babko, A. K.; Kalinichenko, I. Ye.

TITLE: Chemiluminescence of the hydrazide of 3-aminophthalic acid during interaction of hydrogen peroxide with triethylenetetramine in presence of iron or manganese salts

SOURCE: Ukrainskiy khimicheskiy zhurnal, v. 31, no. 9, 1965, 948-953

TOPIC TAGS: chemiluminescence, hydrogen peroxide, chemical reaction kinetics, photoluminescence, luminescence

ABSTRACT: The authors investigated a new phenomenon: intensification by several orders of magnitude of chemiluminescence of triethylenetetramine-H_2O_2 in the presence of iron or manganese salts due to addition of the hydrazide of 3-aminophathatic acid. The luminescence intensities were measured using a FEU-19M photomultiplier. The initial intensities of chemiluminescence duration were examined at various pH's and individual component concentrations. The optimum pH is 8-10. For 10^{7}-10^{3} mole concentration of 3-aminophthatic acid and 10^{-8}-10^{-5} mole concentra-

Card 1/2

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102910013-4"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102910013-4

L 2002-66

ACCESSION NR: AP5023968

3

tion of metal salts, the initial intensity of chemiluminescence is proportional to 3-aminophthalic acid concentration. The influence of hydrogen peroxide concentration reaches a plateau at $[H_2O_2] > 10^{-3}$-10^{-2} mol. The concentration of trithylenetetramine has little effect on the initial intensity, but at low levels it determines the chemiluminescence duration. It was found that this chemiluminescence phenomenon occurs under unsteady conditions. For example, the chemiluminescence intensity declines with time much faster than the concentration of any of the system components. Occasionally, at lower intensities, there occurs a second maximum. The order of mixing of system components affects the chemiluminescence intensity. Salts of iron and manganese serve as catalysts of oxidation of triethylenetetramine by hydrogen peroxide. The intermediate products of this oxidation reaction promote the inductive decomposition of hydrogen peroxide and the oxidation of 3-aminophthatic acid. Orig. art. has: 9 figures, 2 tables.

ASSOCIATION: Institut obshchey i neorganicheskoy khimii AN UkrSSR (Institute of General and Inorganic Chemistry, AN UkrSSR)

SUBMITTED: 24Dec64 ENCL: 00 SUB CODE: GC, OP

NO. REF SOV: 001 OTHER: 011

Card 2/2 DP

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102910013-4"