"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001550410003-2

SHVEDOV, N.Ya.

Treatment with myelosan of chronic myeloid leukemia. Sov. med. 25 no.2:11-17 F '62. (MIRA 15:3)

1. Iz Glavnogo voyennogo gospitalya imeni akademika N.N. Burdenko (nachal'nik - general-mayor meditsinskoy sluzhby L.I. Lyalin).
(METHANESULFONIC ACID)
(LEUKEMIA)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001550410003-2"

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21(4) PHASE I BOOK EXPLOITATION SOV/2583

International Conference on the Peaceful Uses of Atomic Energy. 2nd, Geneva, 1958.

Doklady sovetskikh uchenykh; yadernyye reaktory i yadernaya energetika. (Reports of Soviet Scientists: Nuclear Reactors and Nuclear Power) Moscow, Atomizdat, 1959. 707 p. (Series: Its: Trudy, vol. 2) Errata slip inserted. 8,000 copies printed.

General Eds.: N.A. Dollezhal, Corresponding Member, USSR Academy of Sciences, A.K. Krasin, Doctor of Physical and Mathematical Sciences, A.I. Leypunskiy, Member, Ukrainian SSR Academy of Sciences, I.I. Novikov, Corresponding Member, USSR Academy of Sciences, and V.S. Fursov, Doctor of Physical and Mathematical Sciences; Ed.: A.P. Alyab'yev; Tech. Ed.: Ye. I. Mazel'.

PURPOSE: This book is intended for scientists and engineers engaged in reactor designing, as well as for professors and students of higher technical schools where reactor design is taught.

COVERAGE: This is the second volume of a six-volume collection on the peaceful use of atomic energy. The six volumes contain the reports presented by Soviet scientists at the Second International Conference on Peaceful Uses of Atomic Energy, held from September 1 to 13, 1958 in Geneva. Volume 2 consists of three parts. The first is devoted to atomic power plants under construction in the Soviet Union; the second to experimental and research reactors, the experiments carried out on them, and the work to improve them; and the third, which is predominantly theoretical, to problems of nuclear reactor physics and construction engineering. Yu. I. Moryakin is the science editor of this volume. See SOV/2081 for titles of all volumes of the set. References appear at the end of the articles.

Dollezhal', N. A., A.K. Krasin, N.A. Nikolayev, A.N. Grigor'yants, and G.N. Usakov. Experience of Operating the First Atomic Power Plant in the USSR and the Plant's Work Under Boiling Conditions (Report No. 2183) 15

Dollezhal', N.A., A. K. Krasin, F.I. Aleshchenkov, A.N. Grigor'yants, M.V. Florinskiy, N.Ye. Minashin, I.Ya. Yemel'yanov, N.M. Fuguashev, I.M. Sharapov, Yu. I. Mityayev, and A.N. Golanin. A Graphite-uranium Reactor With High Pressure Steam Superheat (Report No. 2139) 36

Aleksandrov, A.P., I.I. Afrikantov, A.I. Brandaus, A.I. Brandaus, G.A. Gladkov, B.Ya. Gnesin, V.I. Neganov, and N.S. Khlopkin. The Atomic Icebreaker "Lenin" (Report No. 2140) 60

Sivintsev, Yu. V. and B.G. Fologikh. Radiation Safety System of the Atomic Icebreaker (Report No. 2518) 87

Skvortsov, S.A. Water-water Power Reactors (VVER) in the USSR (Report No. 2184) [illegible]

Abartsumyan, R.S., A.N. Glukhov, V.V. Goncharov, A.I. Kovalev, and S.A. Skvortsov. Heat-producing Elements for Water-water Reactors of Atomic Power Plants (Report No. 2196) 119

Kruzhilin, G.N. and V.I. Subbotin. Cooling Water-water Reactors (Report No. 2144) 134

Yermakov, V.S. and I.V. Ivanov. A Study of Unsteady Heat Transfer in Heat-producing Elements of Nuclear Reactors (Report No. 2470) 153

Ivanovskiy, M.N., V.I. Subbotin, and F.A. Mahakov. High-speed Method of Measuring the Heat Transfer Coefficient in the Pipe (Report No. 2475) 166

Ustateladze, S.S., V.I. Subbotin, V.N. Borishanskiy, and P. L. Kirillov. Heat Exchange During the Flow of Liquid Metal in the Pipes (Report No. 2210) 176

Kaganskiy, G.R. Economics of Nuclear Fuel in Fast Power Reactors (Report No. 2028) 188

Malkin, V.M., P.A. Krawchitskiy, Yu.S. Sidorov, and O.V. Shvedov. Thermal Neutron Density Distribution Along the Radius of Assemblies of Rod-shaped Heat Producing Elements (Report No. 2034) 199

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001550410003-2"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001550410003-2

BELKIN, V.F.; SVEDOV, O.V. [Shvedov, O.V.]

Thermal neutron density distribution in channels of a heavy water reactor model with rod-type fuel elements. Jaderna energie 8 no.10:343-348 O '62.

1. Ustav teoreticke a experimentalni fyziky Akademie ved SSSR.

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001550410003-2"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001550410003-2

S/089/63/014/003/006/020
B102/B186

AUTHORS: Belkin, V. F., Shvedov, O. V., Kochurov, B. P.

TITLE: Determination of the external blocking effect in heavy-water moderated multiplying assemblies

PERIODICAL: Atomnaya energiya, v. 14, no. 3, 1963, 281 - 284

TEXT: The external blocking effect of a multiplying assembly was found by measuring the thermal and epithermal neutron density distributions in the moderator. Discs of 0.42 cm diameter, made of Dy (~3 mg/cm) and of In (~25 mg/cm^2) coated with Cd, served as detectors for the thermal and epithermal neutrons respectively. These detectors were arranged in radial sections around a 100/0.252 channel in a quadratic lattice (pitch 26 cm). The channel was 36.8 cm off the core axis. The blocking effect, characterized by $W = \overline{N}_{mod}/N_o$, was calculated also by the usual formulas (Galanin). $\overline{N}_{mod}$ is the mean neutron density in the moderator and N_o is the mean thermal neutron density at the outer surface of the caisson tube. The results were: $W_{exp} = 1.514$ and $W_{calc} = 1.504$. Measurements and calculations were made

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also for other channel types and other pitch values, but for these only the numerical results are given. The results agree with those published in J. Nucl. Energy, 6, 79, 1957, or Rapport CEA No. 740, Saclay 1957. For epithermal neutrons the blocking effect may become considerably noticeable. There are 2 figures and 2 tables.

SUBMITTED: April 9, 1962

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001550410003-2"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001550410003-2

BELKIN, V.F.; KOCHUROV, B.P.; SHVEDOV, O.V.

Measuring the density distribution of thermal neutrons along the radius of plug type fuel elements. Atom. energ. 15 no.5:377-381 N '63. (MIRA 16:12)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001550410003-2"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001550410003-2

SHVEDOV, P.A.

South Korobkovo mine is already in operation. Shakht. stroi. no.7: 28 '59. (MIRA 12:10)
(Kursk Magnetic Anomaly--Iron mines and mining)

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001550410003-2

SHVEDOV, P.M.

Through the Meshchera territory. Zdorov'e 1 no.7:22-24 Jl '55 (MLRA 9:5)

(MESHCHERA--DESCRIPTION AND TRAVEL)

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001550410003-2

SHVEDOV, P.M. (Moskva); AVSYUK, G.A., prof. (Moskva)

Hilly ranges on glaciers. Priroda 50 no.6:113 Je '61. (MIRA 14:5)

(Altai Territory--Glaciers)

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001550410003-2

SHVEDOV, P.N.

USSR/Engineering - Structure

Card 1/1 : Pub. 70 - 10/11

Authors : Ber, A. E., and Shvedov, P. N.

Title : Assembly of emblems and other decorative fixtures on the tall Moscow University building

Periodical : Mekh. stroi. 4, 29-31, Apr 1954

Abstract : The methods and devices used in lifting and assembly of dome sections and emblems on the 52-meter tall tower of the newly erected Moscow University building, are described. Illustrations; drawings.

Institution : .....

Submitted : .....

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001550410003-2

SHAPOVAL, N.A., gornyy inzh.; BELYAKOV, P.K., gornyy inzh.; SHVEDOV, T.M., gornyy inzh.; PAGISHNICHENKO, G.K., gornyy inzh.

Selecting a method of roof control in seams subject to rock bumps. Ugol' 39 no.7:60-63 Jl '64. (MIRA 17:10)

1. Kombinat Artemugol'.

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001550410003-2

SHVEDOV, V.

Drive for the durability and reliability of machines in enterprises of the Voronezh Economic Council. Mashinostroitel' no.9:2 S '62. (MIRA 15:9)

1. Nachal'nik tekhnicheskogo upravleniya Voronezhskogo sovnarkhoza.
(Voronezh Province--Machinery industry)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001550410003-2"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001550410003-2

SHVEDOV, V.I.

Syntheses with acrylonitrile. XXIV. Comparative reactivity of acrylonitrile with other α,β-unsaturated amines. V. G. Yashunskii, A. P. Terent'ev, and V. I. Shvedov. J. Gen. Chem. U.S.S.R. 25, 2345-50(1955)(English translation).—See C.A. 50, 9428d. B. M. R.

Chem

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Shvedov, V. I.

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Chem

Reaction of acrylic acid with nitriles. XXIV. Comparative reactive ability of acrylonitrile and other α,β-unsaturated nitriles. V. G. Yashunskii, A. P. Terent'ev and V. I. Shvedov (Zh. obshch. Khim., 1955, 25, 2457—2463).—Acrylic, crotonic, methacrylic, dimethylacrylic and acetic nitriles and *cyclo*hexenyl cyanide and cinnamonitrile were reacted with glycine. Reactive ability was greatest for the first two nitriles. During reduction of these nitriles with Na in BuOH it was observed that acrylic, crotonic and methacrylic nitriles gave γ-butoxyalkylamines in addition to the saturated amines normally obtained. (12 references.) A. L. B.

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001550410003-2

SHVEDOV, V. I.

Quinones. X. Reaction of acetylacetone imine with p-benzoquinone. A. N. Grinev, V. I. Shvedov, and A. P. Terent'ev (State Univ., Moscow). Zhur. Obshchei Khim. 26, 1410-51(1956); cf. C.A. 50, 4903g.—Refluxing 3 g. p-

Chem

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oxindole (XII). XII (1.65 g.) and 0.88 g. HCO_2Et in 5 ml. abs. EtOH added to a warm soln. of 0.3 g. Na in 10 ml. abs. EtOH and the aq. layer acidified gave 900 mg. *1-methyl-3-formyl-5-methoxyoxindole* (XIII), m. 219°. XIII (5 g.) and 10 ml. pure $SOCl_2$ heated to 60° give after evapn. and crystn. from EtOH 3 g. *1-methyl-3-chloromethylene-5-methoxyindole* (XIV), m. 110°. *5-Methoxy-1-methyl-3-(1-carbethoxy-2-oxocyclohexylmethylene)oxindole* (XV), obtained by similar condensation to IV from XIV and II, m. 103°; *semicarbazone*, m. 183°. XV (0.2 g.) is cyclized by warming with 2 ml. 90% H_2SO_4 2 min. on steam bath. Evolution of CO_2 occurs. After treatment with ice and soln. in EtOAc 150 mg. yellow needles, m. 138-9°, of *1-methyl-4,5-tetramethylene-6-methoxynaphthostyril* (XVI) is obtained. XV was isomerized with 4 ml. 35% HBr soln. in AcOH to a compd., m. 126°; *semicarbazone*, m. 216-18°. XII (5 g.) in 70 ml. EtOH, 0.71 g. Na in 40 ml. EtOH, and 3.6 ml. $PhCH_2Cl$ refluxed 2 hrs. gave 2 g. *1-methyl-5-benzyloxyoxindole* (XVII), m. 115-17°. With excess $PhCH_2Cl$ *1-methyl-3-benzyl-5-benzyloxyoxindole* (XVIII), m. 155°, is formed. XII (5 g.) refluxed with 25 ml. Ac_2O and a few drops of $POCl_3$ and the soln. evapd. gives 2.8 g. *1-methyl-5-acetoxyoxindole* (XIX), m. 105°. XII (5 g.) refluxed with 25 ml. Ac_2O and 6.3 g. $HC(OEt)_3$ gives 1.2 g. *1-methyl-3-ethoxymethylene-5-acetoxyoxindole* (XX), m. 154°. XX (500 mg.) treated with HCl gives 100 mg. *1-methyl-3-ethoxymethylene-5-hydroxyoxindole* (XXI), m. 185°. Condensation of 2 g. XIV with 2.63 g. $AcNHCH(CO_2Et)_2$ and 0.4 g. K in 10 ml. *tert*-BuOH gives probably 3-(2,2-dicarbethoxy-2-acetamidoethylidene)-1-methyl-5-methoxyoxindole, m. 111°, and a

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GRINEV, A.N.; SHVEDOV, V.I.; TERENT'YEV, A.P.

Research in the field of quinones. Part 11. Synthesis of certain substituted indoles. Zhur.ob.khim.26 no.5:1452-1453 My '56. (MLRA 9:9)

1.Moskovskiy gosudarstvennyy universitet.
(Indole)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001550410003-2"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001550410003-2

SHVEDOV, V.I.

Quinones. X. Reaction of acetylacetone imine with p-benzoquinone. A. N. Grinev, V. I. Shvedov, and A. P. Terent'ev. *J. Gen. Chem. U.S.S.R.* 26, 1629-31(1956) (English translation). XI. Synthesis of some substituted indoles. *Ibid.* 1633-4.—See *C.A.* 50, 14710*i*.
B. M. R.

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001550410003-2

SHVEDOV, V. I.

AUTHORS: Grinev, A. N., Zaytsev, I. A., Shvedov, V. I., Terent'yev, A. P. 79-2-37/64

TITLE: Investigations in the Field of the Quinones (Issledovaniya v oblasti khinonov).
XXII. Synthesis of Substituted Indoles (XXII. Sintez zameshchennykh indolov).

PERIODICAL: Zhurnal Obshchey Khimii, 1958, Vol. 28, Nr 2, pp. 447-452 (USSR).

ABSTRACT: It was already found that from the reaction of the imines of the acetyl-acetone with p-benzoquinone either substituted indoles or benzofuranes are obtained. This reaction was increased and by the condensation of the ethylether of β-aminocrotonic acid and of some of its derivatives with p-benzoquinone, 2,3-dichloro-p-benzoquinone, 2,5-dichloro-p-benzoquinone, and α-naphthoquinone the ethylethers of: the 1-(o-tolyl)-2-methyl-5-oxyindol- -3-carboxylic acid, 1-cyclohexyl-2-methyl-5-oxyindol-3-carboxylic acid, 2-methyl-5-oxy-6,7-dichloro-indole-3-carboxylic acid, 2-methyl-4,7-dichloro-5-oxyindole-3-carboxylic acid, 1-ethyl-2-methyl-4,7-dichloro-5-oxyindole-3-carboxylic acid and 1-phenyl-2-methyl-5-oxybenzindole-3-carboxylic acid were obtained. The methylization and benzoylization of the oxyindoles were investigated in this and previous papers, as well as the reaction of the ethyl

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Investigations in the Field of the Quinones. 79-2-37/64
XXII. Synthesis of Substituted Indoles.

ether of 1,2-dimethyl-5-metoxyindole-3-carboxylic acid and magnesium bromoethyl. The latter takes place evenly if a mixture of ether-benzene is used as solvent and yields, 1,2-dimethyl-3-(pentene-2-il-3)-5-metoxyindole. Preparative and specific data are given.
There are 8 references, 5 of which are Slavic.

ASSOCIATION: Moscow State University (Moskovskiy gosudarstvennyy universitet).

SUBMITTED: December 28, 1956.

AVAILABLE: Library of Congress.

Card 2/2

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77584
SOV/79-30-2-35/78

AUTHORS: Goldfarb, Ya. L., Litvinov, V. P., Shvedov, V. I.

TITLE: Comparative Acylation of Some Aromatic Systems

PERIODICAL: Zhurnal obshchey khimii, 1960, Vol 30, Nr 2, pp 534-542 (USSR)

ABSTRACT: Acetylation of some aromatic systems of benzene and thiophene series, in the presence of stannic chloride was studied. The reactivity of individual products was determined in two-component mixtures of benzene and thiophene derivatives. The order of activity was found to be 1,3-dimethoxybenzene > 2,5-dimethylthiophene > 2-methylthiophene > 2,5-diethylthiophene > thiophene > anisol > 2-bromothiophene > m-xylene > o- and p-xylenes > toluene > benzene. There are 3 tables; 26 references, 3 Soviet, 2 Swedish, 6 German 14 U.S., 3 U.K. The 5 most recent U.S. and U.K. references are:

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Comparative Acylation of Some Aromatic Systems

SOV/79-30-2-35/74

F. R. Jensen, H. C. Brown, J. Am. Chem. Soc., 80, 3039 (1958); V. J. Shiner, C. J. Vesranic, Ibid., 79, 371 (1957); A. Burawoy, E. Spinner, J. Chem. Soc., [illegible]; N. C. Brown, B. A. Bolto, F. R. Jensen, J. Org. Chem., 73, 414 (1958); H. C. Brown, N. L. Young, J. Org. Chem., 32, 719, 724 (1957)

SUBMITTED: February 9, 1959

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APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001550410003-2"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001550410003-2

GRINEV, A.N.; FLORENT'YEV, V.L.; SHVEDOV, V.I.; TERENT'YEV, A.P.

Quinones. Part 34: Condensation of p-quinones with acetylacetone imines. Zhur.ob.khim. 30 no.7:2311-2315 Jl '60. (MIRA 13:7)

1. Moskovskiy gosudarstvennyy universitet.
(Pentanedione) (Benzoquinone)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001550410003-2"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001550410003-2

GRINEV, A.N.; SHVEDOV, V.I.; SUGROBOVA, I.P.

Quinones. Part 36: Condensation of acetylacetone imines with p-benzoquinone. Zhur.ob.khim. 31 no.7:2298-2303 Jl '61. (MIRA 14:7)

1. Moskovksiy gosudarstvennyy universitet imeni M.V. Lomonosova.
(Pentanedione) (Benzoquinone) (Imines)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001550410003-2"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001550410003-2

SHVEDOV, V.L.

Absorption of radioactive iodine by the thyroid gland and disorders of its function in chronic experimental conditions. Med. rad. no.6:38-41 '61. (MIRA 15:1)
(IODINE--ISOTOPES) (THYROID GLAND--RADIOGRAPHY)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001550410003-2"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001550410003-2

GRINEV, A.N.; SHVEDOV, V.I.

Quinones. Part 39: Mechanism of the condensation of p-quinones with imines of 1,3-diketones. Zhur.ob.khim. 32 no.8:2614-2616 Ag '62. (MIRA 15:9)

1. Moskovskiy gosudarstvennyy universitet imeni M.V. Lomonsova.
(Benzoquinone imine)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001550410003-2"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001550410003-2

SHVEDOV, V.I.; GRINEV, A.N.

Study of enamines. Part 2. Dihydroxyarylation of enamines of aliphatic aldehydes and cyclic ketones. Zhur. org. khim. 1 no.6:1125-1128 Je '65. (MIRA 18:7)

1. Vsesoyuznyy nauchno-issledovatel'skiy khimiko-farmatsevticheskiy institut imeni Ordzhonikidze.

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001550410003-2"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001550410003-2

GRINEV, A.N.; SEVEDOV, V.L.; PANISHEVA, Ye.K.

Study of quinones. Part 40: Synthesis of 1-aryl-5-hydroxyindoles. Zhur. org. khim. 1 no.11:2051-2055 N '65. (MIRA 18:12)

1. Vsesoyuznyy nauchno-issledovatel'skiy khimiko-farmatsevticheskiy institut imeni S. Ordzhonikidze (VNIKhFI). Submitted November 11, 1964.

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001550410003-2"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001550410003-2

SHVEDOV, V.I.; GRINEV, A.N.

Enamines. Part 3: Substituted aminothiophenes. Zhur. org. khim. 1 no. 12:2228-2231 D '65 (MIRA 19:1)

1. Vsesoyuznyy nauchno-issledovatel'skiy khimiko-farmatsevticheskiy institut. Submitted September 25, 1964.

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001550410003-2"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001550410003-2

ACC NR: AP6023582 SOURCE CODE: UR/0409/66/000/003/0395/0397

AUTHOR: Grinev, A. N.; Shvedov, V. I.; Panisheva, Ye. K.

ORG: All-Union Chemical and Pharmaceutical Scientific Research Institute im. S. Ordzhonikidze, Moscow (Vsesoyuznyy nauchno-issledovatel'skiy khimiko-farmatsevticheskiy institut)

TITLE: Synthesis of alkylamine derivatives of 1-aryl-5-hydroxyindole

SOURCE: Khimiya geterotsiklicheskikh soyedineniy, no. 3, 1966, 395-397

TOPIC TAGS: arylhydroxyindole alkylamino derivative, phenylmethylaminoethylmethoxyindole, anisylmethylaminoethylmethoxyindole, nervous system drug, organic synthetic process, alkylamine, amine

ABSTRACT:

Some of the previously obtained alkylamine derivatives of 1-alkyl-5-hydroxyindoles have found application as central nervous system stimulants. In this connection, synthesis of alkylamine derivatives of 1-aryl-5-hydroxyindoles was studied. Condensation of substituted 1-aryl-5-hydroxyindoles with bis(dimethylamino)methane in dry dioxane on a steam bath, followed by treatment with HCl, yielded eight previously unreported 4-alkylamine

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001550410003-2

ACC NR: AP6023582

derivatives of 1-aryl-5-hydroxyindole hydrochlorides; reduction with Na in ethanol of the previously obtained oximes of 1-phenyl-2-methyl-3-acetyl-5-methoxyindole (IX) and 1-(n-anisyl)-2-methyl-3-acetyl-5-methoxyindole (X) yielded 1-phenyl-2-methyl-3-(1'-aminoethyl)-5-methoxyindole (XI) and 1-(n-anisyl)-2-methyl-3-(1'-aminoethyl)-5-methoxyindole (XII) which were isolated as hydrochlorides.

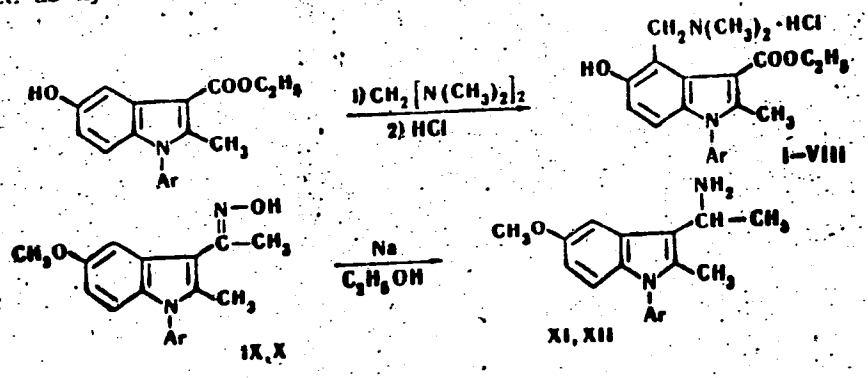

Table 1. 4-Alkylamine derivatives of 1-aryl-5-hydroxyindole hydrochlorides

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ACC NR: AP6023582

Table 1. 4-Alkylamine derivatives of 1-aryl-5-hydroxyindole hydrochlorides

No.	Ar	M. p., °C (solvent for crystallization)	Formula	Found %			Calculated %			Yield, %
				C	H	N	C	H	N	
I	C_6H_5	184—185 (1 : 1 : 3)	$C_{21}H_{24}N_2O_3 \cdot HCl$	64,45 64,77	6,59 6,52	7,37 7,41	64,85	6,48	7,20	71
II	o-CH_3—C_6H_4	156—157 (From acetone)	$C_{22}H_{26}N_2O_3 \cdot HCl$	65,54 65,41	6,74 6,86	6,93 7,12	65,55	6,75	6,95	68
III	p-CH_3—C_6H_4	147,5—148 (1 : 1 : 10)	$C_{22}H_{26}N_2O_3 \cdot HCl$	65,75 65,45	6,83 6,87	6,71 6,64	65,55	6,75	6,95	63
IV	m-Cl—C_6H_4	189—190 (From acetone)	$C_{21}H_{23}ClN_2O_3 \cdot HCl$	59,93 59,57	5,89 5,85	6,74 6,65	59,57	5,71	6,62	66
V	p-Cl—C_6H_4	192,5—193 (1 : 10 : 12)	$C_{21}H_{23}ClN_2O_3 \cdot HCl$	59,64 59,56	5,53 5,66	6,51 6,42	59,57	5,71	6,62	67
VI	m-CH_3O—C_6H_4	177—178 (1 : 10 : 15)	$C_{22}H_{26}N_2O_4 \cdot HCl$	62,94 63,28	6,34 6,34	6,55 6,74	63,07	6,49	6,68	74
VII	p-CH_3O—C_6H_4	180—181 (1 : 1 : 6)	$C_{22}H_{26}N_2O_4 \cdot HCl$	63,32 63,13	6,46 6,63	6,38 6,59	63,07	6,49	6,68	70
VIII	p-CH_3CONH—C_6H_4	203—204 (1 : 10 : 10)	$C_{23}H_{27}N_3O_4 \cdot HCl$	61,91 61,70	6,38 6,14	9,40 9,45	61,94	6,18	9,42	77

[W.A. 50; CBE No. 10]

Orig. art. has: 1 table.

SUB CODE: 07,06/ SUBM DATE: 13Feb65/ ORIG REF: 006/ OTH REF: 001

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001550410003-2

ACC NR: AP6035694 (A, N) SOURCE CODE: UR/0413/66/000/019/0034/0034

INVENTOR: Grinev, A. N.; Shvedov, V. I.; Altukhova, L. B.

ORG: none

TITLE: Preparation of 1-aryl-2-methyl-5-methoxyindoles. Class 12, No. 186487 [announced by All-Union Chemical and Pharmaceutical Scientific Research Institute im. S. Ordzhonikidze (Vsesoyuznyy nauchno-issledovatel'skiy khimiko-farmatsevticheskiy institut)]

SOURCE: Izobreteniya, promyshlennyye obraztsy tovarnyye znaki, no. 19, 1966, 34

TOPIC TAGS: aryl radical, indole, carboxylic acid

ABSTRACT: In the proposed method, 1-aryl-2-methyl-5-methoxyindoles are obtained by heating 1-aryl-2-methyl-5-methoxyindole-β-carboxylic acids at 210—245°C.

[WA-50; CBE No. 14] [PS]

SUB CODE: 07/ SUBM DATE 05Oct65

UDC: 547.751.07

Card 1/1

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001550410003-2

BESPYATOV, M.P., kand.tekhn.nauk; POLSTYANOY, V.I., inzh.; VITSENKO, I.S., inzh.; SUKHOBRUSOV, P.N., inzh.; SHVEDOV, V.K., inzh.; KULIK, Yu.A., inzh.

Continuous contact splitting of fats. Masl.-zhir. prom. 23 no.9:22-23 '57. (MIRA 10:12)

1.Khar'kovskiy politekhnicheskiy institut (for Bespyatov).
2.Khar'kovskiy mylovarennyy kombinat (for Polstyanoy, Vitsenko, Sukhobrusov, Shvedov, Kulik).
(Oils and fats)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001550410003-2"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001550410003-2

SHVEDOV, V. L., CAND MED SCI, "EFFECT OF RADIOACTIVE IODINE ON THE ORGANISM IN A CHRONIC EXPERIMENT." MOSCOW, 1960. (SECOND MOSCOW STATE MED INST IM N. I. PIROGOV). (KL, 3-61, 236).

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001550410003-2"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001550410003-2

SHVEDOV, V.L.

Protective action of potassium iodide during the chronic administration of radioactive iodine. Med.rad. 5 no.7:60-63 '60. (MIRA 13:12)

(POTASSIUM IODIDE) (IODINE--ISOTOPES) (RADIATION PROTECTION)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001550410003-2"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001550410003-2

SHVEDOV, V.L.

Thyroid gland function during various initial conditions of the nervous and neuroendocrine systems. Probl.endok.i gorm. 7 no.3:61-67 '61. (MIRA 14:9)

1. Rukovoditel' raboty prof. D.I. Zakutinskiy.
(THYROID GLAND) (NERVOUS SYSTEM) (ENDOCRINE GLANDS)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001550410003-2"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001550410003-2

SHVEDOV, V.L.; DERGACHEV, V.I. (Moskva)

Changes in the reactivity in mice during a chronic effect of Sr^{90}. (MIRA 18:7)
Med. rad. 10 no.1:30-33 Ja '65.

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001550410003-2"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001550410003-2

LIVEDOV, V.L.

Comparative sensitivity of genetically different strains of mice to strontium-90. Med. rad. 10 no.2:48-51 F '65. (MIRA 18:6)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001550410003-2"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001550410003-2

[illegible], [illegible]; [illegible], [illegible]

Furniture

New method of imitation finish for furniture. Der. Pelesokhim. Prom. 2, No. 4, 1953.

Monthly List of Russian Accessions, Library of Congress, June 1953. Unclassified.

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001550410003-2"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001550410003-2

SHVEDOV, V.N., inzhener.

Furniture polishing using nitrocellulose finishes. Der.prom. 4 no.1:26-28 Ja'55. (MLRA 8:3)

1. Glavmebel'prom.
(Furniture) (Polishes)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001550410003-2"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001550410003-2

SIMSON, Ivan Iosifovich; NOVOZHILOV, V.I., retsenzent; FAUSTOV, V.A., retsenzent; SHVEDOV, V.N., red.; SIDEL'NIKOVA, L.A., red. izd-va; REYZMAN, Ye.Ya., tekhn.red.

[Safety engineering and fire prevention techniques at sawmills and woodworking enterprises] Tekhnika bezopasnosti i protivopozharnaia tekhnika na lesopil'nykh i derevoobrabatyvaiushchikh predpriiatiiakh. Moskva, Goslesbumizdat, 1958. 316 p. (MIRA 12:7)

(Woodworking industries--Safety measures)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001550410003-2"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001550410003-2

MELAMED, Lipa Grigor'yevich; SHVEDOV, V.N., red.; PLESHANOVA, M.I., red. izd-va; GRECHISHCHEVA, V.I., tekhn. red.

[Technology of the manufacture of the basic assemblies of frame furniture] Tekhnologiia izgotovleniia osnovnykh uzlov korpusnoi mebeli. Moskva, Goslesbumizdat, 1961. 41 p. (MIRA 15:1)
(Furniture)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001550410003-2"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001550410003-2

L 48119-65 EWT(m)/EWP(t)/EWP(b) IJP(c) JD/JG

ACCESSION NR: AP5008485 S/0078/65/010/003/0693/0696

17
16
B

AUTHOR: Shvedov, V. P.; Orlov, Yu. F.

TITLE: Extraction of rare-earth elements by butyl phenyl phosphates

SOURCE: Zhurnal neorganicheskoy khimii, v. 10, no. 3, 1965, 693-696

TOPIC TAGS: cerium nitrate extraction, cerium, cerium nitrate, praseodymium, lanthenum, neodymium, extractant, triphenyl phosphate, butyl phenyl phosphate, dibutyl phenyl phosphate, diphenyl butyl phosphate, tributyl phosphate, partition, extraction, rare earth element, rare earth element extraction

ABSTRACT: Nitrates of Cr(III), Pr, La, and Nd have been extracted with dibutyl phenyl phosphate (DBPP) diphenyl butyl phosphate (DFBP), and the effect of substituting phenyl groups for butyl groups in tributyl phosphate (TBP) on the extraction and separation of the nitrates has been studied. The results show that: 1) the extraction of Ce(III) and Pr drastically decreases in the following order: TBP > DBPP > DFBP, while the separation factors practically remain constant; and 2) the separation factors of the La-Ce(III) and Pr-Nd pairs for extraction by DBPP have the same value of 2 obtained for the extraction by TBP. The results are given in Table 1 of the Enclosure. Orig. art. has: 1 table.

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L 48119-65

ACCESSION NR: AP5008485

ASSOCIATION: Leningradskiy tekhnologicheskiy institut im. Lenscveta (Leningrad Technological Institute)

SUBMITTED: 16Sep63 ENCL: 01 SUB CODE: IG

NO REF SOV: 006 OTHER: 007

Card 2/2

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001550410003-2

SHVEDOV, V.P.; ORLOV, Yu.F.

Extraction of nitric acid by phosphate and phosphonate derivatives. Zhur.neorg.khim. 10 no.12:2774-2779 D '65. (MIRA 19:1)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001550410003-2"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001550410003-2

Use of a photocell for the colorimetric determination of fluorides in drinking water. [illegible] *Applied Chem.* U. S. S. R. [illegible] 1937. The photocell [illegible] described was successfully used in detn. of fluorides in water. The [illegible] de Boer and Stinger Merwin method gave the best results. [illegible] references. A. A. Podgorny

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001550410003-2"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001550410003-2

A new method for the colorimetric determination of fluorides. V. P. Shvedov. *Lab. Prakt.* (U. S. S. R.) 1939, No. 2-3, 22-5.—The following indicators were used: Na alizarinsulfonate, purpurin, anthrapurpurin, flavopurpurin, anthragallol, alizarincyanine, cerulein. The 1,2,4,5,8-alizarincyanine was found to be the most sensitive indicator for the detn. of traces of F^- giving a max. sensitivity of 0.01 mg./l. F^-, and an av. of 0.02 mg./l. F^-. The reaction between F^- and alizarincyanine takes place in 2-3 hrs. at room temp. considerably reducing the 18 hrs. required with de Boer's indicator (cf. C. A. 20, 1042, 2120) under similar conditions. With a 100-mg. sample max. sensitivity is obtained by the addn. of 5 ml. of the indicator and 10 ml. of 1/10 N HCl. When the concn. of F^- is increased the color changes from the blue to the violet region of the spectrum. The described method can be used for the detn. of F^- in *natural waters*. The influence of K^+, Na^+, Ca^{++}, Mg^{++}, Cl^-, Br^-, NO_3^- is very slight, while Al^{+++}, SO_4^{--}, PO_4^{---}, AsO_3^{---} and AsO_4^{---} influence the color considerably.

W. R. Henn

Ten references.

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001550410003-2

2A

12

A method for the determination of arsenic in food products by means of a differential photocolorimeter. V. P. Shvedov. *Lab. Prakt.* (U. S. S. R.) 14, No. 11, 25-30 (1939). As_2O_3 is reduced to As by means of H_3PO_2. A curve was constructed by means of a differential photocolorimeter that shows a mathematical relation of the color and the turbidity of the soln. to the content of As. The accuracy of the detn. is greatest in the limits of 0.000 to 0.050 mg. of As in the sample; it decreases slowly and reaches a min. at about 0.150 mg. With amts. higher than 0.150 mg., pptn. of As is possible. The av. sensitivity of the As detn. is 0.002 mg. As. W. R. H.

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1ST AND 2ND ORDERS

PROCESSES AND PROPERTIES INDEX

6

Lead oxyhalides. V. P. Shvedov (Leningrad State Univ.). *J. Gen. Chem.* (U.S.S.R.) 16, 1561-6(1946) (in Russian). Ppts. obtained by slow addn. of soln. contg., in stoichiometric proportions, KBr + NH_4OH, KCl + NH_4OH, KI + NH_4OH, KBr + NaCl + NH_4OH, KI + NaCl + NH_4OH, KBr + KI + NH_4OH, to a soln. of $Pb(AcO)_2$, at 40-50°, did not in any case correspond to the simple formula PbX(OH). Under very close conditions of pptn., widely divergent ratios of halogen and OH were obtained, e.g.: $Pb_{14}Cl_2I_{12}(OH)_{16}$ and $Pb_{11}Cl_4I_7(OH)_{16}$; $Pb_7BrI(OH)_2$ and $Pb_6I_4Br(OH)_6$. Evidently, a partial interchange of halogen and OH takes place. Exchange of halogen for OH was observed directly in the reaction between solid $PbBr_2$ (about 0.5 g.) and 1 N NH_4OH soln. (50 ml.), the exchange is very fast in the first 10 min. and then progresses very slowly, e.g., at 15-16°, 10 min., 17.18% Br in soln., solid $Pb_{11}Br_{20}(OH)_2$; 100 hrs., Br 24.88 in soln., solid $Pb_{21}Br_{22}(OH)_2$; boiling, 5 and 10 min., Br 20.19 and 20.83, solid $Pb_{21}Br_{22}(OH)_2$ and $Pb_{14}Br_{15}(OH)_{22}$; boiling and standing at 15-16°, 18 hrs., Br 29.63, solid $Pb_{11}Br_{20}(OH)_{16}$. Exchange also takes place, but more slowly and to a smaller degree, between solid $2PbO.H_2O$ and a N KBr soln.; various compds. $nPbBr_2.mPb(OH)_2$ are obtained, with $m \gg n$ in this case. Crystallooptical study showed that $PbBr_2$ and $2PbO.H_2O$ are not isomorphic; $PbBr_2$ and $Pb(OH)Br$ crystals are of the same shape and might form isomorphic mixts.; on the other hand, $2PbO.H_2O$ and $Pb(OH)Br$ can only form mechanical mixts. V. Phan.

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001550410003-2

USSR/Medicine - Indicators Apr 1947
Chemistry - Analysis

"Radioactive Indicators and Their Application in Analytical Chemistry," V. P. Shvedov, 17 pp

"Vestnik Leningradskogo Universiteta" No 4

Discussion of radioactive indicators (Geiger counters) and chemical formula for their use in chemistry. Conclusions voice the opinion that the use of these radioactive indicators will increase as time goes on. Can be used in analytical chemistry for determining the periods of semi-disintegration of minute amounts of one element in the presence of another, for judging the completeness of disintegration of elements, determining the degree of solubility, and for calculations in new methods of radiometric micro-analysis.

16T94

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001550410003-2

1ST AND 2ND ORDERS

PROCESSES AND PROPERTIES INDEX

The mechanism of formation of lead oxyhalides. II. V. P. Shvedov (Leningrad State Inv.). *J. Gen. Chem.* (U.S.S.R.) 17, 27-32(1947)(in Russian).—Solid $PbBr_2$ was treated at boiling temp. with a soln. of KBr (0.5-1.0 mg./ml.) contg. radioactive Br^* (prepd. by the action of neutrons on $C_2H_4Br_2$ and extn. by aq. KBr), then treated with a definite quantity of 0.02 N NH_4OH, which gave a ppt. of Pb(OH)Br. The distribution of Br^* between the ppt. and the AgBr pptd. from the filtrate (NH_4Br + KBr) was detd. by measurements of the radioactivity, and the results were compared with those expected on the basis of a mechanism tentatively assumed in advance; thus, if the formation took place by way of $[PbBr]^+$, as suggested by Z. Karaoglanov and D. Chavdarov (*C.A.* 24, 3180), no exchange of Br^* between the soln. and the ppt. should take place; if the intermediate product is the complex K_2PbBr_4, and the original ratio Br in solid phase:Br^* in soln. = 1:1, the reaction equations are $2PbBr_2 + 4KBr^* = 2K_2PbBr_3Br_3^*$; $2\ K_2PbBr_3Br_3^* + 2\ NH_4OH = 2\ KBr + 2KBr^* + NH_4Br + NH_4Br^* + Pb(OH)Br + Pb(OH)Br^*$, i.e. the degree of exchange is 25% and the activities of the Pb(OH)Br and AgBr ppts. should be 1:3. The possibility of an exchange between the complex formed and the Br^* remaining in the KBr soln. is disregarded. From expts. with Br:Br^* = 2:1, 1:1, and 1:2, it follows that at 2:1 the main intermediate complex is $KPbBr_3$, sometimes also K_2PbBr_4, and that the latter forms mainly at 1:1 and 1:2. On the basis of this finding, the mechanism of the reaction of Karaoglanov and Chavdarov (l.c.) is interpreted as $Pb(AcO)_2 + 2KBr = K_2Pb(AcO)_2Br_2$; $K_2Pb(AcO)_2Br_2 + H_2O = Pb(OH)Br + KBr + KAcO + AcOH$. The exchange of $PbBr_2$ with KI, resulting in pptn. of PbI_2, is interpreted as proceeding through $K_2PbBr_2I_2$; the soln. of $PbSO_4$ in NH_4AcO occurs through the intermediate complex $(NH_4)_2Pb(AcO)_2SO_4$. Lead halides and oxyhalides also readily dissolve in NH_4AcO. N. Thon

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PROCESSES AND PROPERTIES INDEX

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Determination of lead in the presence of barium, strontium, calcium, and magnesium. III. V. P. Shvedov (Leningrad State Univ.). *J. Gen. Chem.* (U.S.S.R.) 17, 33-7(1947)(in Russian); cf. *C.A.* 41, 4731*b*.—The possibility of sepg. Pb^{++} from Ba^{++} by pptg. as Pb(OH)Cl was shown by expts. with the radioactive isotope of Pb and measuring the α- and β-radiation of the filtrates from the pptn. Attempts to weigh the ppt. were not successful and the best analytical results were obtained in sepg. Pb from alk. earths by pptg. as Pb(OH)Cl, dissolving the washed ppt. in hot, slightly acidic NH_4OAc and pptg. as $PbCrO_4$. In this way fairly accurate results were obtained.

G. M. Kosolapoff

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001550410003-2

517. The quantitative determination of lead in the presence of groupII cations. V.P. SHVEDOV, E.O. GOLDSHTEIN and N.I. SELETROVA (J Anal. Chem U.S.S.R. 3, 109, 1948.) The authors developed a method for the complete quantitative separation of Pb in the forms of oxybromide or oxyiodide from larger quantities of Ba, Sr, Ca and Mg. It was found possible to determine Pb quantitatively after dissolving lead oxybromide or oxyiodide in an ammonium acetate solution and then precipitating as lead chromate. The precipitation of lead in the form of oxybromide, oxyiodide or oxychloride is recommended as a convenient method ensuring complete separation. (2 Tables.)

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001550410003-2

PA 75T15

USSR/Chemistry - Magnesium, May/Jun 1948
Separation of
Chemistry - Calcium Oxalate

"The Separation of Calcium From Magnesium. I. Verification of the Oxalate Method With a Radioactive Indicator," V. P. Shvedov, Leningrad State Ord of Lenin, Chair of Analytical Chem, 5½ pp

"Zhur Analit Khimii" Vol III, No 3

Data obtained show that magnesium precipitated with calcium oxalate is directly proportional to concentration of magnesium found in solution. Results of experiments conducted with aid of radioactive isotope

75T15

[redacted]

USSR/Chemistry - Magnesium, (Contd) May/Jun 1948
Separation of

of calcium show that quantity of magnesium going into CaC_2O_4 precipitate, and quantity of calcium precipitable together with $MgNH_4PO_4$ are notable. Submitted Jun 1947.

75T15

SHVEDOV, V. P. [redacted]

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001550410003-2"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001550410003-2

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PROCESSES AND PROPERTIES INDEX

Separation of Calcium From Magnesium. II. The Sulfate Method. (In Russian.) V. P. Shyeduv. *Zhurnal Analiticheskoi Khimii* (Journal of Analytical Chemistry), v. 3, Sept.-Oct. 1948, p. 290-294.

Describes rapid and simple method involving precipitation of Ca by means of H_2SO_4 in an H_2O-acetone medium.

COMMON VARIABLES INDEX

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5(2); 21(5) PHASE I BOOK EXPLOITATION SOV/1900

Akademiya nauk SSSR. Komissiya po analiticheskoy khimii

Primeneniye radioaktivnykh izotopov v analiticheskoy khimii (Use of Radioactive Isotopes in Analytical Chemistry) Moscow Izd-vo An SSSR, 1958. 366 p. [Series: Its: Trudy, t. 9 (12)] Errata slip inserted. 3,000 copies printed.

Resp. Ed.: I.P. Alimarin, Corresponding Member, USSR Academy of Sciences; Ed. of Publishing House: A.N. Yermakov; Tech. Ed.: T.V. Polyakova.

PURPOSE: The book is intended for chemists and chemical engineers concerned with work in analytical chemistry.

COVERAGE: The book is a collection of the principal papers presented in Moscow at the Second Conference on the Use of Radioactive Isotopes. The problems discussed at the Conference included coprecipitation, aging, and solubility of precipitates, determination of the instability constants

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of complex compounds, separation of rare earth metals, and ion-exchange chromatography. No personalities are mentioned. There are 351 references, 175 of which are Soviet, 33 German, 19 French, 8 Swedish, 2 Hungarian, and 2 Czech.

TABLE OF CONTENTS:

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Lavrukhina, A.K. Some Characteristics of Radiochemical Analysis 5

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001550410003-2

21(3), 21(8) SOV/89-5-5-18/27

AUTHORS: Shvedov, V. P., Blinov, V. A., Gedeonov, L. I., Ankudinov, Ye. P.

TITLE: Radioactive Fall-Out in the Neighborhood of Leningrad (Radioaktivnyye vypadeniya v okrestnostyakh Leningrada)

PERIODICAL: Atomnaya energiya, 1958, Vol 5, Nr 5, pp 577-582 (USSR)

ABSTRACT: The samples to be investigated were obtained in the following manner:
1) A piece of absorbent paper, on which the dust from the atmosphere and from precipitation collects, is placed upon the bottom of a cuvette with walls of 10 cm height and a ground surface of 1 m^2. The cuvette is posted in a free space for a period of 24 hours. Collective effectivity: 80 %.
2) The fall-out is collected in a porcelain vessel with high walls, the bottom of which is covered by acidified water. Collective effectiveness: 100 %.
The collected material (water, snow, absorbent paper) is evaporated and the ashes are dried at 500°C. The activity of the residues in a ground state is measured by means of a

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window-counter.
In order to be able to draw conclusions with respect to absolute activity from the impulses per minute measured by means of the counter used, comparative measurements were carried out. (A 4π counter developed by S. A. Baranov and R. M. Polevoy was used).
The density of fall-out is represented graphically in the logarithmic scale for the period of from April 1, 1954 to December 31, 1957 (daily measurements). The annual distribution is as follows:

	Density per day in mC/km^2			
	mean annual temperature	mean annual background	maximum value with date	number of "signal" fall-outs
1954	0,73	0,31	12,48(10,XI.)	36
1955	1,28	0,40	93,00(13,III.)	53
1956	0,70	0,45	16,41(26,XI.)	40
1957	[illegible]	0,50	43,42(19,IV.)	94
1958 (1. June)	[illegible]			42

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001550410003-2

SOV/89-5-5-18/27

Radioactive Fall-Out in the Neighborhood of Leningrad

Summated activities were calculated as amounting to:

	mC/km^2		mC/km^2
July 1, 1954	13	July 1, 1956	68
Jan. 1, 1955	56	Jan. 1, 1957	87
July 1, 1955	87	July 1, 1957	142
Jan. 1, 1956	72	Jan. 1, 1958	151

A more detailed graphical representation of these values is given in an affixed appendix. There are 5 figures, 2 tables, and 13 references, 3 of which are Soviet.

SUBMITTED: July 30, 1958

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001550410003-2

SHVEDOV, V.P. and L. T. SEMENOV

"Contamination of the Biosphere in the Environs of Leningrad by Products of Nuclear Explosions."

Soviet Scientists Concerning the Dangers of Nuclear-Weapon Tests, p. 40, Publishing House of the Main Adminstration for the Use of Atomic Power, Council of Ministers USSR, Moscow, 1959.

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001550410003-2"

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SHVEDOVA, V.P.; ZHILKINA, M.I.; ZINOV'YEVA, V.K.

New method for the quantitative separation of antimony. Radiokhimiia 1 no.1:109-111 '59. (MIRA 12:4)
(Antimony--Analysis) (Extraction (Chemistry))

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001550410003-2"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001550410003-2

SHVEDOV, V.P.; STEPANOV, A.V.

Separation of rare earth elements by continuous electrophoresis. Part 1: Separation by means of citric acid. Radiokhimiia 1 no.1: 112-115 '59. (MIRA 12:4)

(Rare earth metals--Analysis) (Electrophoresis)
(Citric acid)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001550410003-2"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001550410003-2

SHVEDOV, V.P.; STEPANOV, A.V.

Electrical migration method for the determination of the instability constants of complex compounds of elements present in microconcentrations. Part 1: Determination of the instability constant of complex compounds of some lanthanides with the anion of ethylenediaminetetraacetic acid. Radiokhimiia 1 no.2:162-167 '59. (MIRA 12:7)

(Rare earth compounds) (Acetic acid)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001550410003-2"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001550410003-2

SHVEDOV, V.P.; PAVLOVA, N.A.

Use of paper electrophoresis for determining the charge sign of zirconium ions in certain solutions. Radiokhimiia 1 no.4:400-401 '59. (MIRA 13:1)
(Paper electrophoresis) (Zirconium)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001550410003-2"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001550410003-2

SHVEDOV, V.P.; MUSAYEV, Sh.A.

Coprecipitation of La^{140}, Pm^{147}, and Y^{91} with iodates of quadrivalent cerium. Radiokhimiia 1 no.4:465-474 '59. (MIRA 13:1)

(Cerium iodate) (Lanthanum) (Promethium) (Yttrium)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001550410003-2"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001550410003-2

ZINOV'YEVA, V.K.; ZHILKINA, M.I.; SHVEDOV, V.P.; YAKOVLEVA, G.V.

Method of extracting strontium from the soil and the determination of Sr^{90}. Radiokhimiia 1 no.5:613-615 '59. (MIRA 13:2)
(Strontium--Analysis)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001550410003-2"

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SHVEDOV, V.P.; MAKAROVA, T.P.; IVANOVA, L.M.; PAVLOVA, N.A.

Determination of radioactive strontium in water samples. (MIRA 13:2)
Radiokhimiia 1 no.5:616-618 '59.
(Strontium--Analysis) (Water--Analysis)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001550410003-2"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001550410003-2

SHVEDOV, V.P.; STRIZHOV, S.G.; CHIN TSZE-KHOU [Ching TSe-hou]

Preparation and some properties of potassium lanthanum selenate. Radiokhimiia 1 no.5:622-623 '59. (MIRA 13:2)
(Potassium lanthanum selenate)

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001550410003-2

STEPANOV, A.V.; SHVEDOV, V.P.

Electromigration method of determining the instability constants of complex compounds of infinitely diluted elements. Part 2: Determination of constants for complex formation between some lanthanides and citric acid. Radiokhimiia 1 no.6:668-673 '59. (MIRA 13:4)
(Rare earth compounds) (Citric acid)

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001550410003-2

SOV/78-4-10-16/40

AUTHORS: Ryskin, Ya. I., Shvedov, V. P., Solov'yeva, A. A.

TITLE: Infrared Absorption Spectra of Solutions of Uranyl Nitrate in Ethers and Ketones

PERIODICAL: Zhurnal neorganicheskoy khimii, 1959, Vol 4, Nr 10, pp 2268-2275 (USSR)

ABSTRACT: In this paper the IR-spectrum region of the inner vibrations of the NO_3^--ion in nonaqueous solutions of hydrated uranyl nitrates is discussed. The analysis of the absorption bands of the crystal water in such solutions was dealt with in reference 10. The absorption spectra were taken by means of the D-209 spectrometer of the firm Hilger under assistance of N. D. Delektorskaya. The spectra of the concentrated solutions of $UO_2(NO_3)_2 \cdot nH_2O$ (n = 2,3,6) in diethyl ether, acetone and methyl-ethyl ketone are presented in figures 1-4, the frequencies of the absorption maxima in table 1. In the discussion of the results the authors point out the contradictory data in publications (Refs 11, 13-16, among them A. N. Sevchenko and B. I. Stepanov, Refs 14,15). The maxima lying between

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SOV/78-4-10-16/40

Infrared Absorption Spectra of Solutions of Uranyl Nitrate in Ethers and Ketones

1000 and 1515 cm^{-1} are interpreted as vibrations of the anion and this assumption is confirmed by comparison with the spectrum of the thorium nitrate (Table 3). From this the following characteristic features of the structure of nonaqueous solutions of uranyl nitrate are derived: Irrespective of the content of water of hydration the ions UO_2^{2+} and NO_3^- are in direct contact with one another whereat the anion is noticeably deformed. The stability of the bonding of NO_3^- to the cation was also found in other nitrates, e.g. by Ye. F. Gross and V. A. Kolesova (Ref 20) in calcium nitrate. In the inner coordination sphere of the UO_2^{2+} ion two water molecules are retained irrespective of the degree of hydration. The central uranium atom is combined with two molecules of the solvent by way of the oxygen atoms. The authors express their gratitude to Yu. S. Samoylova for assisting in the experiments and to V. I. Zemlyanukhin and N. A. Derbeneva for advice and production of the preparations. There are 6 figures, 3 tables, and 21 references, 4 of which are Soviet.

SUBMITTED: June 27, 1958

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5(2),5(3) SOV/75-14-4-28/30

AUTHORS: Shvedov, V. P., Rosyanov, S. P.

TITLE: Determination of Dibutyl Phosphoric, Monobutyl Phosphoric and Phosphoric Acids by Paper Chromatography

PERIODICAL: Zhurnal analiticheskoy khimii, 1959, Vol 14, Nr 4, pp 507-508 (USSR)

ABSTRACT: The separation of mixtures on chromatographic paper depends on several factors of which the most important is the distribution between the solvents. The proper choice of the solvent determines the success of chromatography. For the quantitative separation of dibutyl phosphoric acid (DBA) and monobutyl phosphoric acid (MBA) chloroform and alcohols are used. To ensure the constancy of the distribution coefficients the chromatography of acids is generally conducted in media which contain either an acid or a base (Ref 5). The authors used mixtures of bases with alcohols as both DBA and MBA hydrolyse less in alkaline solutions (Ref 6). To shorten the duration of chromatography the solving agent was brought to a height of 15-20 cm. The device and the working conditions of the chromatography are described in detail. The chromatographic paper is that of the factory imeni Volodarskiy (GOST 5621) and was washed with 0.1 N oxalic acid, water, and

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finally with alcohol. The chromatography was conducted for 3-4 hours in upward direction. The following 5 solvents were used for the separation: butanol - methanol - water (4:1:2); isoamyl alcohol - pyridine - 25% ammonia solution (6:14:20); chloroform - methanol - water (4:5:1); propyl alcohol - 25% ammonia solution - water (6:1:3). For the development of the spots they used a mixture of 5 ml of 60% perchloric acid, 10 ml of 1 N hydrochloric acid and 25 ml of a 4% ammonium molybdate solution which was diluted with water to 100 ml (Ref 4). After spraying the chromatogram with this mixture it was dried in warm air, heated to 85° for 7 minutes, then left in the air until it was saturated with humidity and finally it was kept for 5-10 minutes in an H_2S atmosphere. The developed spots were cut out and they were burned wet in a mixture of concentrated sulfuric acid and concentrated nitric acid (1:1). Subsequently, the formed orthophosphate was quantitatively determined (Refs 6, 7). The authors chromatographed a mixture of DBA, MBA and phosphoric acid, and solutions of each component. Identification of the components on the chromatogram was made by comparison with a pure substance sample which was simultaneously chromatographed.

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PHASE I BOOK EXPLOITATION SOV/5404

Murin, A. N., V. D. Nefedov, and V. P. Shvedov, eds.

Radiokhimiya i khimiya yadernykh protsessov (Radiochemistry and the Chemistry of Nuclear Processes) Leningrad, Goskhimizdat, 1960. 784 p. Errata slip inserted. 13,000 copies printed.

Ed.: F. Yu. Rachinskiy; Tech. Ed.: Ye. Ya. Erlikh.

PURPOSE : This textbook is intended for students of physical chemistry or radiochemistry at universities and schools of higher education. It may also serve as a handbook for scientific workers and technical personnel in the radiochemical industries and other related branches.

COVERAGE: The textbook deals with problems in modern radiochemistry, including adsorption, cocrystallization, isotope exchange in radioactive elements, the chemistry of nuclear processes, and methods of preparing radioactive isotopes and labeled compounds. Special attention has been given to chemical processes caused by radioactive transformations and radiation. In the main the book was compiled by person-

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nel of the Radiochemistry Department, Leningradskiy gosudarstvennyy universitet imeni A. A. Zhdanova (Leningrad State University imeni A. A. Zhdanov), and the Department of the Technology of Artificial Radioactive Isotopes, Leningradskiy tekhnologicheskiy institut imeni Lensoveta (Leningrad Technological Institute imeni Lensovet). No personalities are mentioned. References accompany individual chapters.

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001550410003-2

S/081/61/000/022/003/076
B102/B108

AUTHORS: Shvedov, V. P., Petrzhak, K. A., Sedletskiy, R. V., Stepanov, A. V.

TITLE: Extraction of the rare-earth group from U^{238} photofission fragments by continuous electrophoresis

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 22, 1961, 36, abstract 22B248 (Tr. Tashkentsk. konferentsii po mirn. ispol'zovaniyu atomn. energii. Tashkent, AN UzSSR, v. 2, 1960, 325-326)

TEXT: Electrophoretic separation of rare-earth fission products is preceded by the extraction of their sum. Recipe: dissolve 1 g of irradiated U_3O_8 in 2 ml of concentrated HNO_3, add $Pb(NO_3)_2$ (20 mg with respect to Pb) and $Ce(NO_3)_3$ (15 mg with respect to Ce) as carriers to 15 ml HNO_3 (spec. wt. 1.5), and twice precipitate $Pb(NO_3)_2$ to remove the Ba and Sr isotopes. Isolate the precipitates, boil down the solution to 2 ml, dilute with water to 15 ml and precipitate CeF_3 after adding $Zr(NO_3)_4$

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carrier (20 mg with respect to Zr) and a mixture of HF and NH_4F. The precipitates are rinsed with water and dissolved in a mixture of H_3BO_3 and HNO_3. Then Ce^{3+} is oxidized to Ce^{4+} by bromate, 3 mg of Fe^{3+} are introduced into the solution, and $Ce(IO_3)_4$ is precipitated by means of 15-17 ml of an 0.35N HIO_3 solution. The solution containing Fe^{3+}, K, IO_3^{3-}, BrO_3^-, and rare-earth elements (REE) is heated, and $Fe(OH)_3$ is precipitated by a solution of concentrated NH_4OH. The $Fe(OH)_3$ precipitates with the REE are rinsed with hot water and dissolved in 4 ml of concentrated HCl. After cooling the obtained solution, Fe^{3+} is removed by fourfold extraction with amyl acetate. The aqueous phase is evaporated, the dry remainder is calcined and treated with HNO_3 and 30% H_2O_2. After having removed the acids have been extracted by heating, dissolve the remainder in 0.7 ml of 0.01% Trilon B solution, Ce^{3+} (0.001 mg/ml) carrier introduced, and subject the obtained solution to electrophoresis in an 0.01% Trilon B solution (pH 1.94) as an electrolyte. Separation is to take place at a potential gradient of ~10 v/cm. The flow rate into the

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cell of the mixture to be separated is 1.5 ml/hr. By this method $La^{141, 140}$, Pr^{145}, $Nd^{149, 147}$, $Pm^{140, 150}$, and $Y^{91, 93}$ have been extracted. The separation time of the total of REE was ~2.5 hr, the time of electrophoresis was 2 hr 26 min. [Abstracter's note: Complete translation.]

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A057/A129

21.3200

AUTHORS: Shvedov, V.P.; Fu I-Pei

TITLE: Separation of radioactive isotopes on a mercury cathode. I. Study of the electrochemical behavior of europium

PERIODICAL: Radiokhimiya, v. 2, no. 1, 1960, 57 - 64

TEXT: The effect of various factors (concentration of substances, type of complexes formed, nature of the added alkali metal, form of the deposit, pH, temperature, etc.) on the process of separation of europium on a Hg cathode was investigated using the isotopes $Eu^{152-154}$ and Cs^{137}. Separation of Eu by electrolysis had already been investigated by H.N. McCoy [Ref. 1: J. Am. Chem. Soc., 63, 1622, 3432 (1941)], J.K. Marsh [Ref. 2: J. Chem. Soc., 398, 523 (1942), 8, 531 (1943)], E.J. Onstott [Ref. 3: J. Am. Chem. Soc., 77 (8), 2129 (1955)], and D.I. Ryabchikov et al. [Ref. 4: ZhNKh, 1, 9, 1954 (1956)]. Nevertheless the nature of the separation of rare earths is not yet definitely explained. The main problem is the negative potential of separation and the formation of non-soluble hydroxides on the cathode. In the present experiments europium acetate solutions were used and the europium content in the electrolyte was controlled with a butt- X

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Separation of radioactive isotopes on a....

window counter [T-25 БФЛ (T-25 BFL) type]. A Pt-wire anode and a Hg-cathode (mechanically stirred) was used and the electrolyzer was thermostated. It is seen from tabulated data that almost no separation of europium occurs without alkali admixtures. Considering data obtained by McCoy (Ref. 1) this indicates that separation of rare earths is essentially influenced by the nature of the alkali metal in the solution. Using Cs_2CO_3 (labelled with Cs^{137}) the effect of various electrolytes on europium separation was studied. Much better separation of Eu from acetate than from nitrate solutions was observed. Electrolysis carried out with admixtures of Li-, K-, Na-, and Cs-salts proves that the yields correspond to standard potentials, while the best yield is obtained with Li_2CO_3 addition. The efficiency is correlated apparently with the potential difference between alkali metal and the separated element. According to an assumption of the present authors in the case of formation of rare earth element complexes these dissociate and thus the electrolyte contains free ions of rare earths. Having a more positive potential these ions substitute the alkali metal in the amalgam forming rare earth amalgam. This assumption is confirmed by the experimental results obtained with the alkali metal Cs labelled with Cs^{137}. In solutions not containing Eu already 10 min after the beginning of the electrolysis an equilibrium distribution of Cs between solution and amalgam is reached, while in the presence of Eu

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Separation of radioactive isotopes on a....

the content of Cs in solution gradually increases with a decrease of Eu content in solution. Thus Cs is substituted by Eu in the amalgam. The authors assume that separation of Eu, Sm and Yb is due to a stable divalent state of these elements. Besides, on an amalgam with a more negative potential other rare earths could be separated by electrolysis. Experiments in connection with the effect of pH indicate that the stability of amalgam grows with increasing pH. Europium yield increases from pH 4.25 to pH 10 and drops with a further increase in pH. According to the above-mentioned mechanism of europium separation, the change in europium yield depends on the concentration of the alkali metal in amalgam. This is experimentally veryfied. Different from data on ytterbium separation (Ref. 4) [Abstracter's note: erroneously printed yttrium in the original paper] no effect of europium concentration (between $5 \cdot 10^{-5} - 3 \cdot 10^{-3}$ M) on the yield was observed. This was veryfied in experiments without Eu carrier. The difference between the present observations and those in Reference 4 is explained by the simultaneous decrease of Yb_2O_3 concentration and increase in volume of the electrolyte, resulting in lowering of the deposition rate, i.e., in yield. The effect of the concentration of the complex-forming agent on the concentration of Cs in amalgam and on europium separation demonstrates the dependence of europium separation on cesium concentration in the amalgam. An increase in citrate-ion

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concentration primarily increases the europium yield, but with a further increase in the citrate-concentration the yield decreases. The effect of various complex-forming agents on Eu separation was investigated in dependence on the pH, on the molar ratio between europium and the agent (Fig. 2) and on the nature of the complex-forming agent (Fig. 3). According to the results obtained it can be stated that for separation of europium and other rare earths by electrolysis on Hg cathode succinic or tartaric acid instead of citric acid and under certain conditions trilon B can be used. There are 3 figures, 8 tables and 6 references: 1 Soviet-bloc and 5 non-Soviet-bloc.

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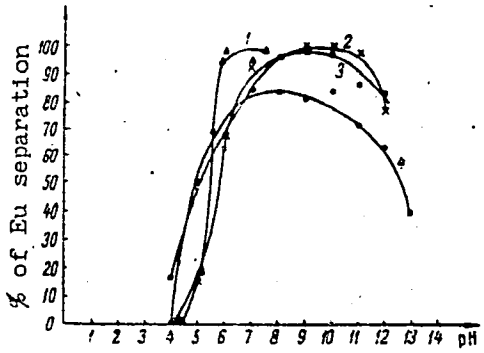

Figure 1: Dependence of europium yield on pH. 1 - citric acid; 2 - succinic acid; 3 - tartaric acid; 4 - trilon B.

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A057/A129

5 2300 1087, 1228 1273

AUTHORS: Shvedov, V.P.; Stepanov, A.V.

TITLE: Separation of rare earth elements by the method of continuous electrophoresis. II. Separation by means of ethylenediaminetetraacetic acid

PERIODICAL: Radiokhimiya, v. 2, no. 1, 1960, 65 - 67

TEXT: Using trilon B (Na salt of ethylenediaminetetraacetic acid) as complex-forming agent, a separation method for rare earths (La, Ce, Pm, Eu and Y) by continuous electrophoresis was developed. This is a continuation of previous investigations concerning lanthanide separation by means of complex-forming agents. The principle of separation is based on the different stability of rare earth complexes. In the previous work citric acid was used as complex-forming agent. However, the instability constants of the K_M cit^{3-} citrate complexes of rare earths are less different than those of EDTA $^{4-}$ complexes (see Table). Thus trilon B is more efficient in separation by electrophoresis. The present experiments were carried out in an apparatus for continuous electrophoresis described in a previous paper [Ref. 1: Radiokhimiya, 1, 1, 112 (1959)]. Because of the low

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Separation of rare earth elements by the method of....

solubility, 0.01% trilon B solutions were used. pH was measured by a quinhydrone electrode, the temperature was kept at 20°C and the ionic strength of the solutions at 0.017. Curves representing the shift of equilibrium of the reversible reaction $H^+ + [M\ enta]^- \rightleftarrows M^{3+} + H\ enta^{3-}$ (1) are given in Figure 1. The mobilities of the $[M\ enta]^-$ and M^{3+} ions of the investigated rare earths are very similar, therefore, the observed effect of zone separation of the rare earths can be explained only by the difference in the instability constants of each rare earth element. Hence the correlation between the separation effect and the instability constant is evident. The most efficient separation is limited to a narrow pH range. From Figure 1 the optimum separation conditions for any combination of the cerium group of rare earths can be determined. As a typical example conditions for the separation of Nd^{147} - Pm^{147} - $Eu^{152-154}$ with the following specific data are given: 0.01% trilon B, ionic strength 0.017, temperature 20°C, pH 1.88, potential gradient 9.2 v/cm, rate of supply into the cell 2.5 ml/h, separation time 86 min. Nd^{147} and $Eu^{152-154}$ were not free of the carrier. The authors remark that with citric acid, even at considerably higher potential gradients, this mixture of rare earths could not be separated. There are 2 figures, 1 table and 3 Soviet references.

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24395
S/186/60/002/002/014/022
E071/E433

21.4200

AUTHORS: Shvedov, V.P. and Fu I-Pei

TITLE: The separation of radioactive isotopes on a mercury cathode. II. A study of the possibility of separating rare earth elements not possessing a stable divalent state

PERIODICAL: Radiokhimiya, 1960, Vol.2, No.2, pp.231-233

TEXT: The object of the work was to study the possibility of separating trivalent rare earth elements under conditions preventing the precipitation of their hydroxides and to investigate the applicability of the mechanism of the separation of europium, samarium and ytterbium, presented in Part I (Ref.6: Radiokhimiya, 2, 1, 57 (1960)) to the separation of trivalent rare earth elements. The experimental method was described in Part I. The experimental conditions were as follows: bath voltage 9V; current density 3.98 mA/cm^2; quantity of mercury 177 g; temperature 30°C; volume of the solution investigated 15 ml; pH for lanthanum 7.85 - for other elements 7.0; citric ion concentration 1.33 x 10^{-3} M; concentration of carbonate of the alkali metal 6.95 x 10^{-2}; duration of an experiment for europium

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The separation of radioactive ...

30 min - for other elements 60 min. To compare the conditions of separation on the mercury cathode of various rare earth elements, amalgams of lithium, potassium, cesium and sodium were used. It was established that under certain conditions rare earth elements (lanthanum, cerium, neodymium, prometium, yttrium, erbium and lutecium) which do not possess a stable divalent state can be separated on a mercury cathode. It is assumed that the separation during the electrolysis process takes place due to the reduction of a rare earth element to the divalent state and then to metal with a subsequent exchange between the alkali metal of the mercury amalgam and the rare earth element. A supposition is expressed that the yield is influenced by the potential difference between the alkali metal and rare earth element entering into the composition of the corresponding amalgams. Part III (Study of the separation of cerium) is published in the same issue, pp.234-238. There are 2 tables and 6 references: 1 Soviet-bloc and 5 non-Soviet-bloc. The four references to English language publications read as follows:
H.N.McCoy, J.Am.Ch.Soc., 63, 1622, 3423 (1941);
J.Marsh, J.Chem.Soc., 523 (1942);
W.Noddak, A.Brukl, Angew. Chem., 50, 362 (1937);

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R.H.Leach, H.Terrey. Trans.Faraday Soc., 33,480 (1937); W.R.Sherman, G.Glockler, J.Am.Chem.Soc., 70, 1342 (1948); C.R.Estee, G.Glockler, J.Am.Chem.Soc., 70, 1344 (1948); A.W.Swensen, G.Glockler, J.Am. Chem.Soc., 71, 1641 (1949).

SUBMITTED: June 3, 1959

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001550410003-2

24396

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E071/E433

24.4200

AUTHORS: Shvedov, V.P. and Fu I-Pei

TITLE: The separation of radioactive isotopes on a mercury cathode. III. A study of the separation of cerium

PERIODICAL: Radiokhimiya, 1960, Vol.2, No.2, pp.234-238

TEXT: Part II, dealing with the possibility of separating rare earth elements not possessing a stable divalent state, is published in the same issue, pp.231-233. In the present work optimum conditions for the separation of cerium on a lithium amalgam were studied. Radioactive isotope Ce^{144} was used for the experiments. The measurements of the radioactivity of the solutions were carried out after attaining equilibrium of Ce^{144} with its decomposition product $praseodymium^{144}$. The following optimum conditions for the separation of cerium were established: current density 7 mA/cm^2; quantity of mercury 13 ml; temperature of the medium 30°C; volume of the solution investigated 10 ml; pH of the solution 7.0; concentration of lithium carbonate 3.5×10^{-2} M and molar ratio of Ce^{3+} to cit^{3-} = 1:4. By means of electrolysis under these conditions and a concentration of $Ce^{3+} = 2.42 \times 10^{-3}$ M, 99% of cerium can be separated in 70 min.

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The separation of radioactive isotopes on a mercury cathode. III.. S/186/60/002/002/015/022 E071/E433

There are 8 tables, 1 figure and 7 references: 3 Soviet-bloc and 4 non-Soviet-bloc. The two references to English language publications read as follows:

E.Jukkola, L.Audrieth, B.Hopkins, J.Am.Chem.Soc., 56, 303 (1934);
E.Jukkola, L.Audrieth, B.Hopkins, Inorganic Syntheses, 1, 15, (1959).

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001550410003-2

SHVEDOV, V.P.; STEPANOV, A.V.

More accurate values of the instability constants of certain complex compounds formed between lanthanides and the ethylenediaminetetraacetate ion. Radiokhimiia 2 no.6:261-262 '60. (MIRA 14:4)
(Rare earth compounds)
(Acetic acid)

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A051/A129

21,4200

AUTHORS: Shvedov, V. P.; Petrzhak, K. A., Sedletskiy, R. V., Stepanov, A.V.

TITLE: The application of continuous electrophoresis for the separation of the rare earth group U^{238} photoseparation fragments

PERIODICAL: Radiokhimiya, v. 2, no. 6, 1960, 711 - 714

TEXT: The authors have investigated the possibility of applying the electrophoresis method to the separation and subsequent determination of the yields of the U^{238} separation fragments having masses in the region of the rare earth elements. A description is given of the method of the radiochemical separation of a sum of rare earth fragments without a carrier from the products of the photoseparation of U^{238}. It is possible to use continuous electrophoresis for separating short-lived rare earth fragments. The radiochemical separation of the sum of the rare earth group without a carrier was developed for measuring the beta-activities of the obtained samples on a 4π-counter. The procedure is as follows: About 1 gram of irradiated uranous-uranic oxide is dissolved in 2 ml of concentrated HNO_3 while being heated. 20 mg of Pb^{2+} carrier is added to the solution and 15 mg of Ce(III) in the form of nitrates. The solution is cooled. $Pb(NO_3)_2$

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