"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001860620003-5

BEL'KOV, I.B.; VOLKOVA, M.I.

Chevkinite from pegmatite veins in the western part of the Keyvy Upland in the Kola Peninsula. Vop. geol. i min. Kol'. poluos. no.1:140-145 '58. (MIRA 11:10)
(Keyvy Upland--Mineralogy)

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001860620003-5"

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BEL'KOV, I.V.; VOLKOVA, M.I.

A rare-earth calcium phosphate-silicate. Izv. Kar. i Kol'. fil. AN SSSR no.2:90-93 '58. (MIRA 11:9)

1.Geologicheskiy institut Kol'skogo filiala AN SSSR.
(Kola Peninsula--Mineralogy)

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001860620003-5"

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Volkova, M. I.

5(2) PHASE I BOOK EXPLOITATION SOV/2402

Akademiya nauk SSSR. Institut geokhimii i analiticheskoy khimii

Redkozemel'nyye elementy; polucheniye, analiz, primeneniye (Rare Earth Elements; Production, Analysis, and Use) Moscow, Izd-vo AN SSSR, 1959. 331 p. 5,000 copies printed.

Resp. Ed.: D. I. Ryabchikov, Professor; Eds. of Publishing House: D. N. Trifanov and T.G. Levi; Tech. Ed.: S. G. Markevich; Editorial Board: I. P. Alimarin, Corresponding Member, USSR Academy of Sciences, I. N. Zaozerskiy, Doctor of Chemical Sciences, R. V. Kotlyarov, Candidate of Chemical Sciences, V. I. Kuznetsov, Doctor of Chemical Sciences, M. M. Senyavin, Candidate of Chemical Sciences, and Yu. S. Shlyarenko, Candidate of Chemical Sciences.

PURPOSE: This book is intended for chemists in general and for geochemists and analytical chemists in particular.

COVERAGE: This collection of articles consists of reports presented at the Rare Earth Elements Symposium held in June 1956 at the Institute of Geochemistry and Analytical Chemistry imeni V. I. Vernadskiy. The book may be divided into three sections: the characteristics, uses and production of rare earth elements (REE); the methods of analyzing REE; and the application of individual rare earth elements and REE mixtures in the glass and metallurgical industries, and their use as catalysts. Considerable space is devoted to the application of ion-exchange chromatography in the production of pure forms of all rare earth elements. The combination of this method with other methods in separating REE on an industrial scale are discussed by D. I. Ryabchikov, Yu. S. Shlyarenko, and M. M. Senyavin. Chemical methods of separating REE compounds are discussed by I. N. Zaozerskiy (who is said to be the first in the USSR to develop methods of processing REE), V. P. Kotlyarov, Z. F. Andreyeva, A. V. Nikolayev, and G. P. Aleksandrov. Quantitative X-ray spectral analytical methods are described by E. Ye. Yaynshteyn, and chemical methods of analysis by I. P. Alimarin and F. I. Pavlotskaya. The determination of REE impurities in pure products and atomic materials are discussed at length in three articles by A. B. Zaydel' and his associates. All articles are accompanied by photographs, diagrams, tables, and bibliographic references.

Volkova, M. I. Causes for the Variation in the Specific Gravity of Kibiny Apatites 42

Zaozerskiy, I. N., and P. N. Patkin. Separation of Cerium From Rare Earth Elements (REE) and Its Preparation in Pure Form 48

Kotlyarov, P. V., and G. P. Kozhemyako. Use of Binary Sulfate in Separating REE Into Sub-Groups and in the Production of High Content Concentrates of Certain Elements of the Ittrium Sub-Group 55

Kotlyarov, P. V., and G. P. Kozhemyako. Use of Complex Forming Substances in Separating REE by the Method of Fractional Precipitation of Binary Sulfates 62

Nikolayev, A. V., A. A. Serokina, and A. S. Maslennikova. Chemical Research and the Separation of REE (Production of Ce and La. Concentrates of Pr and Nd of the Heavy Rare Earth Elements) 68

Andreyeva, Z. F. Separation of the Elements of the Ittrium Sub-Group by Basicity 76

Andreyeva, Z. F., and P. N. Patkin. Production of Pure Ittrium 83

Aleksandrov, G. P. Nickel-Nitrite Complexes and Their Utilization in Separating the Total Mass of REE Into Sub-Groups 84

Senyavin, M. M., F. D. Josefovich. Large Scale Chromatographic Separation of REE Mixtures 91

Andreyeva, Z. F., T. V. Kishchenko, N. V. Bredenfel'd, and O. I. Rozhdestvenskaya. Trilon B in an Ion-Exchange Separation of the Rarer Earth Elements 100

Andreyeva, Z. F., and A. S. Kostygov. Characteristics of Trilon A and Trilon B in an Ion-Exchange Separation of Elements of the Cerium Sub-Group 108

Card 4/9

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001860620003-5"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001860620003-5

YELISEYEV, E.N.; VOLKOVA, M.I.; DENISOV, A.P.

Effect of isomorphous substitution on the size of the elementary cell of apatites. Vest.LGU 15 no.6:48-53 '60. (MIRA 13:3)
(Khibiny Mountains--Apatite crystals)

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001860620003-5"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001860620003-5

KUPRIYANOVA, I.I.; VOLKOVA, M.I.; GOROSHCHENKO, Z.I.

Rare earth minerals of a molybdenum deposit in the European part of the U.S.S.R. Trudy Min. muz. no.15:123-133 '64. (MIRA 17:11)

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001860620003-5"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001860620003-5

GOROSHCHENKO, Ya.G.; VOLKOVA, M.I.; BABKIN, A.G.; PYRYAYEV, N.K.

Gravimetric method for the quantitative determination of niobium and tantalum following extraction with cyclohexanone. Zhur.anal. khim. 18 no.6:739-742 Je '63. (MIRA 16:9)

1. Kola Branch of the Academy of Sciences, U.S.S.R.
(Niobium—Analysis) (Tantalum—Analysis) (Cyclohexanone)

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001860620003-5"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001860620003-5

MIRKIN, I.L., doktor tekhn.nauk; VOLKOVA, T.I., kand.tekhn.nauk; BLANTER, M.S., inzh.; Prinimala uchastiye: VOLKOVA, M.I., tekhnik

Effect of vacuum melting on the heat-resistance properties of iron alloys. [Trudy] TSNIITMASH 105:125-134 '62. (MIRA 15:8)

(Iron alloys--Thermal properties) (Vacuum metallurgy)

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001860620003-5"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001860620003-5

BEKAURI, N.V.; VOLKOVA, M.I.

Treatment of the severe form of iridocyclitis using alcohol-novocaine retrobulbar anesthesia of the eye. Sov.med. 25 no.12: 133-134 D '61. (MIRA 15:2)

1. Iz laboratorii nervnoy trofiki Instituta fiziologii imeni Pavlova AN SSSR (zav. laboratoriyey - zasluzhennyy deyatel' nauki prof. A.V.Tonkikh) i glaznoy kliniki I Leningradskogo meditsinskogo instituta imeni I.P.Pavrola (zav. - prof. E.E.Andreyev).
(IRITIS) (LOCAL ANESTHESIA)

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001860620003-5

ZAKHAROV, N.D.; BOGDANOVICH, N.A.; VOLKOVA, M.I.

Reclaimed rubber from butadiene-nitrile raw rubbers. Izv.vys. ucheb.zav.;khim. i khim.tekh. 3 no.3:527-533 '60. (MIRA 14:9)

1. Yaroslavskiy tekhnologicheskiy institut i yaroslavskiy zavod rezino-tekhnicheskikh izdeliy, kafedra tekhnologii reziny.
(Rubber, Reclaimed) (Butadiene)

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001860620003-5

VOLKOVA, M. I.

"The Systematic Significance of Pupae of Mosquitoes of the Family Culicidae."

Tenth Conference on Parsitological Problems and Diseases with Natural Reservoirs, 22-29 October 1959, Vol. II, Publishing House of Academy of Sciences, USSR, Moscow-Leningrad, 1959.

Kazan' State University

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001860620003-5

L 10697-63 EWP(q)/EWT(m)/BDS--AFFTC/ASD--JD
ACCESSION NR: AP3002536

S/0075/63/018/006/0739/0742

AUTHOR: Goroshchenko, Ya. G.; Volkova, M. I.; Babkin, A. G.; Pyryayev, N. K. 56

TITLE: Quantitative gravimetric determination of niobium and tantalum after their extraction with cyclohexane

27 27

SOURCE: Zhurnal analiticheskoy khimii, v. 18, no. 6, 1963, 739-742

TOPIC TAGS: tantalum gravimetric determination, niobium gravimetric determination, cyclohexane

ABSTRACT: A relatively rapid gravimetric method for the determination of niobium and tantalum has been developed. The method is based on the extraction of these metals with cyclohexane from an aqueous solution containing 400 g/l of H sub 2 SO sub 4, 200 g/l of (NH sub 4) sub 2 SO sub 4 and 100 g/l of HF. Cyclohexane is a specific extractant for niobium and tantalum and especially when ammonium sulfate is added to the solution. An aqueous solution containing about 100 g/l of H sub 2 SO sub 4 and 50 g/l (NH sub 4) sub 2 SO sub 4 will selectively extract niobium, thus gives the possibility of separating niobium from tantalum after their initial extraction with cyclohexane. According to the spectral analyses the elements Al, Y, Zr, Hf, Pb, Th, V, As, Bi, Cr, Mo, W, U, Mn sup +2 and Fe in fair amounts are

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ACCESSION NR: AP3002536

not extracted with cyclohexane and therefore do not interfere. Ti, Sn and Sb are partially extracted with cyclohexane. MnO_4^- extracts almost completely with cyclohexane and therefore it must be converted to the reduced state Mn^{+2} by addition of $Na_2S_2O_4 \cdot 2H_2O$ to render it inactive. The P_2O_5 in quantities larger than 50 mg also interferes. All experiments were checked against standard solutions. Orig. art. has: 3 tables.

ASSOCIATION: Kol'skiy filial AN SSSR, Apatity (Kola Branch, Academy of Sciences SSSR)

SUBMITTED: 03Aug62 DATE ACQ: 12Jul63 ENCL: 00

SUB CODE: CO NO REF SOV: 004 OTHER: 001

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30982. VOLKOVA, M. I.

I ssledovanie metodom pogrozh eniya aktivnosti myl'no-vodny kh emul'siy iz maslyanykh piretrinovy kh ekstraktov v otnoshenii bshey Pedistsltss vestimenti Nitzsch. Cbornik nauch. Trudov (Kazansk. in-t epidemiologii i mikrobiologii), uyp. 1, 1949 [Na obl: 1948] s. 135-44

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001860620003-5"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001860620003-5

VOLKOVA, M.I., dotsent.

The complex of bloodsucking Dipters under conditions of inundation and raised ground water level of the middle Volga Valley in the flood zone of Kyubyshev Reservoir. Uch.zap.Kaz.un. 113 no.1:195-202 '53. (MLRA 10:3)

(Volga Valley--Diptera)

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001860620003-5

VOLKOVA, M. I. (Kazan State University im. V. I. Ul'yanov-Lenin)

"Effectiveness of the Action of Organophosphorus Preparations on Blood-Sucking Diptera-- Mosquitoes and Horseflies" (Effektivnost' deystviya fosfororganicheskikh preparatov na krovososushchikh dvukrylylh -- komarov i slepney)

Chemistry and Uses of Organophosphorous Compounds
(Khimiya i primeneniye fosfororganicheskikh soyedneniy),
Trudy of First Conference, 8-10 December 1955, Kazan,
pp. Published by Kazan Affil. AS USSR, 1957
420-430

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001860620003-5

VOLKOVA, M.I.; DIALEKTOVA, M.A.

Testing the toxcity of benzene hexachloride and DDT with regard to horseflies (fam. Tabanidae). Uch.zap.Kas.un. 116 no.1:195-198 '55. (MLRA 10:5)

1.Kafedra zoologii bespozvonochnykh.
(Volga Valley--Horseflies)
(Benzene hexachloride)
(DDT)

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001860620003-5

VOLKOVA, M. I.

USSR/Chemical Technology - Chemical Products and Their Applications -- Pesticides I-7

Abs Jour : Ref Zhur - Khimiya, No 3, 1957, 8835

Author : Volkova, M.I. and Dialektova, M.A.
Inst : Kazan University
Title : Investigation of the Toxic Effect of BHC and DDT on Horseflies (Tabanidae Family)

Orig Pub : Uch. zap. Kazanskogo un-ta, 1956, 116, No 1, 195-198

Abstract : The toxic effect of 12% BHC dust and 5.5% DDT dust on horseflies of the genus Chrysozona, Tabanus, and Chrysops has been investigated. The sensitivity of Chrysozona appears greater than that of Tabanus and Chrysops. BHC is more effective than DDT by a factor of 3-4.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001860620003-5

VOLKOVA, M.I.

Bloodsucking mosquitoes (fam.Culicidae) of the middle Volga Valley within the Tatar A.S.S.R. Uch.zap.Kaz.un. 116 no.5: 153-156 '56. (MLRA 10:4)

1. Kafedra zoologii bespozvonochnykh.
(Tatar A.S.S.R.--Mosquitoes)

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001860620003-5

USSR / Zooparasitology - Mites and Insects as Disease Vectors. G-3

Abs Jour : Ref Zhur - Biol., No 18, 1958, No. 81743

Author : Volkova, M. I.
Inst : Not given
Title : Efficacy of Organic Phosphorus Preparations on Blood-sucking Diptera -- Mosquitoes and Horseflies

Orig Pub : V sb.: Khimiya i primeneniye fosforорgan. soyedineniy. M., AN SSSR, 1957, 420-430

Abstract : According to experiments at Kazan University, tetraethyl-, tetraethylmonothio-, and tetraethyldithio-pyrophosphates are highly toxic contact poisons to mosquitoes and horseflies. TEPP in concentration of 0.0008% and pyrophos. and dithio in concentration of 0.0014% caused 100% destruction of larvae and chrysales of mosquitoes. Pyrophos. at a like concentration with dithio (0.0028%) destroyed mosquitoes and horseflies faster. TEPP, decomposing quickly in

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USSR G

Abs Jour : Ref Zhur - Biologiya, No. 22, 1958 No 99632

Author : Volkova, M.I.
Inst : Kazan University
Title : Bloodsucking Flies of the Tatar and Chuvash Republics.

Orig Pub : Uch.zap.Kazansk.un-ta,1957,117,No.2,241-245

Abstract : No abstract

Card 1/1

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001860620003-5

USSR / Zooparasitology. Acarina and Insects. Vectors G
of Pathogenic Agents. Insects.

Abs Jour: Ref Zhur-Biol., No 6, 1959, 24305.

Author : Volkova, M. I., Dialektova, M. A., Khamitova, A. N., Cheronkova, V. A.
Inst : Kazan University.
Title : Testing of the Toxic Effect of Tetraethyldithiopyrophosphate on Synanthropic Flies. Report I.

Orig Pub: Uch. zap. Kazansk. un-ta, 1957, 117, No 9, 268-272.

Abstract: A study of the toxicity of tetraethyldithiopyrophosphate on five generations of the common fly and two generations of the spring carrion fly showed that with single treatment of flies of each generation with a sublethal dose (0.0012%

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Spectrum analysis of Dinas (silicate refractory brick) and quartzite. P. F. Lokhov, G. A. Klyushin, and M. K. Volkova (Met. Plant, Chelyabinsk). *Zavodskaya Lab.* 23, 631-4(1957).—The sample was volatilized from a depression in a C electrode of an a.-c. arc with magnetic arc-stabilization. MgO, Fe_2O_3, Al_2O_3, TiO_2, CaO, and SiO_2 results of 2 samples were in good agreement with the analytical detns. W. M. Steinberg.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001860620003-5

VOLKOVA, M. K.

LOKHOV, P.F.; KLYUSHIN, G.A.; VOLKOVA, M.K.

Spectrum analysis of dinas clay and quartzites. Zav. lab. 23 no.5: 581-584 '57. (MLRA 10:8)

1. Tsentral'naya zavodskaya laboratoriya Chelyabinskogo metallurgicheskogo zavoda.
(Spectrum analysis) (Fireclay--Spectra) (Quartzite--Spectra)

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001860620003-5

VOLKOVA, M. N., FISHER, M. N. and SERGACHEVA, L. P.

"The Characteristics of Penicillin Preparations in Antibacterial Action on Pathogenic Bacteral", Trudy Leningradskogo Dan-Gig Inst., Vol 5, pp 154-162, 1950.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001860620003-5

SHEMYAKIN, F.M.; BRUSENTSOV, A.N.; VOLKOVA, M.N.

Analysis of mixtures of certain cations by means of paper-strip chromatography. Sbor. nauch. rab. MFI 2:66-69 '59. (MIRA 14:1)

1. Kafedra analiticheskoy khimii (zav. - prof. F.M. Shemyakin) Moskovskogo farmatsevticheskogo instituta.
(CHROMATOGRAPHIC ANALYSIS) (COPPER SULFATE)
(IRON SULFATE) (COBALT SULFATE)

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001860620003-5

VOLKOVA, M. P., Cand of Agric Sci -- (diss) "Characteristcs of Salty Soils of the Kura-Araksinskaya Lowlands," Novocherkassk, 1959, 16 pp (Soil Institute im V. V. Dokuchev, Acad Sci USSR) (KL, 1-60, 124)

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001860620003-5"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001860620003-5

VOLKOVA, L. P., kand. med. nauk

Functional and histochemical changes in the pancreas in diseases and following surgery of the liver, gall bladder, stomach and pancreas (Survey of Soviet and foreign literature). Vest. khir. no.2:129-139 '62. (MIRA 15:2)

1. Iz kliniki obshchey khirurgii (zav. - prof. A. V. Smirnov) Leningradskogo sanitarno-gigiyenicheskogo meditsinskogo instituta.

(PANCREAS--DISEASES) (LIVER--DISEASES)
(STOMACH--DISEASES) (GALL BLADDER--DISEASES)

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001860620003-5

VOLKOVA, L.P., kand.med.nauk

Changes in pancreatic function following surgery on the gall bladder, bile ducts, stomach, and pancreas. Trudy LSGMI 59: 180-184 '60. (MIRA 14:9)

1. Gospital'naya khirurgicheskaya klinika Leningradskogo sanitarno-gigiyenicheskogo meditsinskogo instituta (zav. klinikoy - prof. A.V.Smirnov).

(PANCREAS) (STOMACH--SURGERY)
(BILE DUCTS--SURGERY) (GALL BLADDER--SURGERY)

VOLKOVA, L.P.

Use of nystatin in controlling meat mold. Mikrobiologiia 30 no.1: [illegible] (MIRA 14:5)

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001860620003-5"

1. Vsesoyuznyy nauchno-issledovatel'skiy institut myasnoy promyshlennosti, Moskva.

(MEAT--MICROBIOLOGY) (MYCOSTATIN)
(MOLDS (BOTANY))

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001860620003-5

VOLKOVA, L.P.

Decomposition of humic acid by micro-organisms. Izv. AN SSSR. Ser. biol. 26 no.1:101-106 Ja-F '61. (MIRA 14:3)

1. Institute of Microbiology, Academy of Sciences of the U.S.S.R., Moscow.
(HUMIC ACID) (SOILS--BACTERIOLOGY)

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001860620003-5"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001860620003-5

PAKHOMOVA, K.S.; VOLKOVA, L.P.

Polarographic determination of microgram quantities of rhenium. (MIRA 13:4)
Zav.lab. no.11:1291-1292 '59.

1.Vsesoyuznyy institut mineral'nogo syr'ya.
(Rhenium— Analysis)

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001860620003-5

VOLKOVA, K.P.; VOLKOV, S.Ya., mekhanik

Recent developments in the incubation of goose eggs. Ptitsevodstvo 9 no.10:27-28 O '59. (MIRA 13:2)

1. Direktor Rezeknenskoy inkubatorno-ptitsevodcheskoy stantsii (for Volkova).
(Incubation) (Geese)

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001860620003-5

VOLKOVA, L.P.

Bone marrow hemopoiesis following gastrectomy in peptic ulcer. Trudy LSGMI 39:286-293 '58. (MIRA 12:8)

1. Kafedra gospital'noy khirurgii Leningradskogo sanitarno-gigiyenicheskogo meditsinskogo instituta (zav.kafedroy - z.d.n., prof.A.V.Smirnov).
(GASTRECTOMY,
postop. hemopoiesis (Rus))
(HEMOPOIESIS,
post-gastrectomy (Rus))

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001860620003-5

VOLKOVA, L.P.

Functional state of the pancreas following cholecystectomy in cholelithiasis and cholecystitis. Trudy LSGMI 39:312-316 '58. (MIRA 12:8)

1. Kafedra gospital'noy khirurgii Leningradskogo sanitarno-gigiyenicheskogo meditsinskogo instituta (zav.kafedroy - z.d.n. prof.A.V.Smirnov).

(GALL BLADDER, surgery,
cholecystectomy in cholelithiasis & cholecystitis, postop. pancreatic funct. (Rus))

(PANCREAS, physiology,
postop. funct. changes in cholecystectomy in cholelithiasis & cholecystitis (Rus))

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001860620003-5"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001860620003-5

SOV/126-8-2-5/26

AUTHORS: Kornilov, I.I., Pylayeva, Ye.N. and Volkova, M.A.

TITLE: Investigation of the Properties of Titanium Alloys. IV. Properties of Alloys of the Ternary Ti-Al-Fe System

PERIODICAL: Fizika metallov i metallovedeniye, 1959, Vol 8, Nr 2, pp 182 - 186 (USSR)

ABSTRACT: The ternary-phase diagram at 550 °C is given in Figure 1. Samples containing up to 20% Al+Fe were prepared by powder metallurgical methods. The high temperature strength was tested by the centrifugal method using a stress of 15 kg/mm^2 at temperatures from 550 to 700 °C. The change in the degree of deformation up to 100 hours for various alloys is given in Figure 2. From this it can be seen that minimum high-temperature strength is shown by two-phase alloys (Curves 1 and 2). The microstructure of an alloy containing 3.75% Al and 11.25% Fe is given in Figure 3. The light constituent is α solution and the dark is a eutectoid of α+TiFe. The high-temperature strength of alloys containing Fe and Al in the ratio 1:1 is greater (Curves 3 and 4). The microstructure of an

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SOV/126-8-2-5/26

Investigation of the Properties of Titanium Alloys. IV. Properties of Alloys of the Ternary Ti-Al-Fe System

alloy containing 6.5% Al and 6.5% Fe is given in Figure 4. The high-temperature strength of ternary alloys containing 3.75% Al and 1.25% Fe is even greater. The microstructure of such an alloy is shown in Figure 5. It consists of solid solution with a small amount of eutectoid in the grain boundaries. The greatest high-temperature strength is shown by alloys containing 0.5% Fe and 1-8% Al (Curves 7 and 8). These alloys correspond to the limiting region of transition to a two-phase structure. Curves of high-temperature strength against time are given in Figure 6. These show that pure Ti has the least strength and an alloy containing 7.5-8% Al and 0.5% Fe has the greatest strength. Figure 7 shows the microstructure of this alloy after test. It consists of solid solution with a finely dispersed phase. As in binary Ti-Al alloys, increase in Al content leads to increase in strength but decrease in plasticity. Increasing the Fe content to greater than 0.5% causes a decrease in high-temperature strength.

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SOV/126-8-2-5/26

Investigation of the Properties of Titanium Alloys. IV. Properties of Alloys of the Ternary Ti-Al-Fe System

There are 8 figures and 13 Soviet references.

ASSOCIATION: Institut metallurgii im. Baykova (Insitute of Metallurgy imeni Baykov)

SUBMITTED: March 25, 1958

Card 3/3

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001860620003-5"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001860620003-5

SOV/24-58-4-9/39

AUTHORS: Volkova, L.P. and Yudelovich, M.Ya.

TITLE: Shock Losses in Step-shaped Pipes at Supersonic Pressure Ratios (Poteri na udar v stupenchatykh trubakh pri sverkhzvukovykh otnosheniyakh davleniya)

PERIODICAL: Izvestiya Akademii Nauk SSSR, Otdeleniye Tekhnicheskikh Nauk, 1958, Nr 4, pp 67 - 72 (USSR)

ABSTRACT: By a suitable schematisation of the flow picture an analytic relation for the calculation of the loss of the total pressure is obtained. In the first part of the article, the appropriate expressions for determining the loss of total pressure are derived. The experimental apparatus is then described and the results analysed. These are stated to be in good agreement with theoretical results. There are 11 figures.

SUBMITTED: January 7, 1958

Card 1/1

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001860620003-5"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001860620003-5

VOLKOVA, L.S., kand. med. nauk; YUKHNOVSKAYA, S.I., red.

[Life of the infant before birth] Zhizn' rebenka do rozhdeniia. Moskva, Meditsina, 1965. 67 p. (MIRA 18:12)

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001860620003-5"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001860620003-5

AKIMOVA, L.N.; VOLKOVA, L.S.

Using double (N-benzylcarbobenzoxy) protection for the synthesis of optically active peptides. Vest. Mosk. un. Ser. 2: Khim. 20 no.1:65-68 Ja-F '65. (MIRA 18:3)

1. Kafedra organicheskoy khimii Moskovskogo universiteta.

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001860620003-5"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001860620003-5

VOLKOVA, L.S.

"Secretors" and "nonsecretors" of group antigens. Biul. eksp. biol. i med. 57 no.1:71-74 Ja '64. (MIRA 17:10)

1. Laboratoriya immunologii embriogeneza (zav. - doktor med. nauk O.Ye. Vyazov) Instituta eksperimental'noy biologii (dir. - prof. I.N. Mayskiy) AMN SSSR, Moskva. Predstavlena deystvitel'nym chlenom AMN SSSR N.I. Zhukovym-Verezhnikovym).

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001860620003-5

L 22524-65 EWG(j)/EWG(r)/EWT(1)/FS(v)-3/EWG(v)/EWG(a)/EWG(c) Pe-5 DD

ACCESSION NR: AR4039971 S/0299/64/000/009/M015/M015

SOURCE: Ref. zh. Biol. Sv. t., Abs. 9M89

36
B

AUTHOR: Volkova, L. S.; Verbitskiy, M. Sh.; Asanov, N. A.

TITLE: Lower monkeys as subjects for transplant immunity investigation

CITED SOURCE: Sb. 3 Vses. konferentsiya po peresadke tkaney i organov, 1963. Yerevan, 1963, 16

TOPIC TAGS: monkey, transplantation, immunity, blood, antigen

TRANSLATION: The blood of 146 lower monkeys of different species was investigated to find interspecies differences by several antigen factors. Basic blood groups coincided with those of humans only in individual subjects, but in the majority of monkeys the blood antigen factors differed from those of humans. It is concluded that lower monkeys can be used as subjects for transplant immunity investigation. A. Eyngorn.

SUB CODE: LS ENCL: 00

Card 1/1

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001860620003-5

BELYAYEVA, Ye.S.; VOLKOVA, L.V.

Formation of the nucleolus in plant cells. Tsitologiia. 6 no.3: 286-290 My-Je '64. (MIRA 18:9)

1. Laboratoriya obshchey tsitologii Instituta tsitologii i genetiki Sibirskogo otdeleniya AN SSSR, Novosibirsk.

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001860620003-5"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001860620003-5

VOLKOVA, L.V.

CA

7

Use of spectroscopic analysis at the "Sickle and Hammer" plant. L. V. Volkova. *Bull. acad. sci. U. R. S. S., Sér. phys.* 4, 216-17(1940).—A method for analyzing steels for small concns. of Cr (0.02-0.13%) by means of the *steelometer* is based on the visual observation of homologous pairs. For detg. 0.1% or more of Cr the homologous pair Cr λ = 5208 A. and Fe λ = 5227 A. was used. For less Cr the Cr lines at 4254 A., 4274 A. and 4280 A. were compared with Fe lines at 4247 A., 4262 A. and 4271 A. Mikhailova Gallow

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001860620003-5"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001860620003-5

VOLKOVA, L. V.

Dissertation: "Synthesis of Esters of Bis-benzyl-tetra-hydro-iso-quinolinic Base (Analogs of the Alkaloid Curarine.)" Cand Chem Sci, Moscow Inst of Fine Chemical Technology, Moscow 1953.

SO: Referativnyy Zhurnal, No. 5, Dec 1953, Moscow, AN USSR (W-30928)

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001860620003-5"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001860620003-5

VOLKOVA L. V.

USSR/ Chemistry - Inorganic chemistry

Card 1/1 Pub. 22 - 27/62

Authors : Volkova, L. V.; Tolkachev, O. N.; and Preobrazhenskiy, N. A.

Title : Synthesis of bisbenzyltetrahydroisoquinoline esters

Periodical : Dok. AN SSSR 102/3, 521 - 524, May 21, 1955

Abstract : The synthesis of bisbenzyltetrahydroisoquinoline esters (medicinal compounds) from Beta-[3-methoxy-4-oxy-5-(4-carboethoxyphenoxy)phenyl] ethylamine, melting point 77-83°, and from beta-[3-methoxy-4(2'-methoxy-5'-carbomethoxymethylphenoxy)phenyl] ethylamide of formic acid, melting point 132-138° is described.

Institution : The M. V. Lomonosov Inst. of Prec. Chem. Technol., Moscow

Presented by: Academician I. L. Knunyants, January 7, 1955

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001860620003-5

SOV/56-35-2-48/60

21(7)

AUTHORS: Volkova, L. V., Denisov, F. P.

TITLE: The Ranges of the Recoil Nuclei Na^{24} and the Mechanism of the Reactions Al^{27} (p, 3pn), Si^{28} (p, 4pn) and P^{31} (p, 5p 3n) for the Proton Energy 660 MeV (Probegi yader otdachi Na^{24} i mekhanizm yadernykh reaktsiy Al^{27} (p, 3pn), Si^{28} (p, 4pn) i P^{31} (p, 5p 3n) pri energii protonov 660 MeV)

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, 1958, Vol 35, Nr 2(8), pp 538-539 (USSR)

ABSTRACT: According to Serber's model of the nuclear reactions at high energies, the products of the "deep disintegrations of the nuclei" are the result of 2 successive processes, viz. a nucleon cascade and an evaporation. In order to verify this model, the authors measured the average ranges of the recoil nuclei Na^{24} which are generated by the irradiation of Al, Si, and P by 660 MeV-protons. The experiment was carried out on the external proton beam of the synchrocyclotron of the OIYaI (=Ob"yedinennyy institut yadernykh issledovaniy =

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001860620003-5

SOV/56-35-2-48/60

The Ranges of the Recoil Nuclei Na^{24} and the Mechanism of the Reactions Al^{27} (p, 3pn), Si^{28} (p, 4pn) and P^{31} (p, 5p 3n) for the Proton Energy 660 MeV

United Institute of Nuclear Research). The scheme of the experiment and of the processing of the experimental data was described in detail in a previous paper (Ref 3). The average ranges of the recoil nuclei Na^{24} are given in a table. For the interpretation of the results obtained, it is necessary to know the relation between range and energy for Na^{24}. The authors determined this relation by comparing the experimental data concerning the relation between range and velocity for a large number of ions from light nuclei up to the fission fragments. In a diagram, the experimental values of the range are plotted against the velocity and the energy (in Al) for some nuclei. Also the corresponding curves for Na^{24} are given in this diagram. A table gives the theoretically calculated effective thicknesses for the recoil nuclei which fly away from the specimen parallel to the proton beam. There is a rather high difference between the experimental and the theoretical values of these thicknesses. This difference may be eliminated by assuming that the incident high-energy nucleon interacts with nucleon groups (contained in the nucleus), the momenta of which are correlated. It is hitherto not known

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001860620003-5

SOV/56-35-2-48/60

The Ranges of the Recoil Nuclei Na^{24} and the Mechanism of the Reactions Al^{27} (p, 3pn), Si^{28} (p, 4pn) and P^{31} (p, 5p 3n) for the Proton Energy 660 MeV

whether the interaction of the incident nucleon with a group of such nucleons may be reduced to a pair interaction or the interaction with this group as a whole plays an essential part. The authors thank Professor P. A. Cherenkov for his interest in this paper, Professor V. P. Dzhelepov for arranging the experiments on the synchrophasotron of the OIYaI, and they also thank G. A. Leksin for a useful discussion. There are 1 figure, 1 table, and 10 references, 2 of which are Soviet.

ASSOCIATION: Fizicheskiy institut im. P. N. Lebedeva Akademii nauk SSSR (Physics Institute imeni P. N. Lebedev, AS USSR)

SUBMITTED: May 21, 1958

Card 3/3

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001860620003-5"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001860620003-5

DOROFEYEVA, L.T.; ZHAROVA, T.V.; VOIKOVA, L.V.; TOLKACHEV, O.N.; PREOBRAZHENSKIY, N.A.

Complex lipids. Synthesis of D-(--) -α-kephalins containing residues of stearic and linoleic acids. Zhur. ob. khim. 34 no.9:2935-2939 S '64. (MIRA 17:11)

1. Moskovskiy institut tonkoy khimicheskoy tekhnologii imeni M.V. Lomonosova.

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001860620003-5"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001860620003-5

SHVETS, V.I.; DOROFEYEVA, L.T.; VOLKOVA, L.V.; GRUM-GRZHIMAYLO, M.A.; SHMIDT, I.S.; PREOBRAZHENSKIY, N.A.

Study of complex lipids. Paths in the synthesis of the starting substances of phospholipids. Zhur. ob. khim. 34 no.10:3303-3308 O '64. (MIRA 17:11)

1. Moskovskiy institut tonkoy khimicheskoy tekhnologii imeni M.V. Lomonosova.

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001860620003-5"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001860620003-5

SOV/79-29-5-47/75

5(3)

AUTHORS: Tsizin, Yu. S., Tolkachev, O. N., Volkova, L. V., Preobrazhenskiy, N. A.

TITLE: Research in the Synthesis of Curare Alkaloids. (Sinteticheskiye issledovaniya v oblasti kurarealkaloidov). Synthesis of 2-Oxy-3-Methoxy-5-(β -Nitrovinyl)-4'-Carboxy Diphenyl Ether (Sintez 2-oksi-3-metoksi-5-(β-nitrovinil)-4'-karboksidifenilovogo efira)

PERIODICAL: Zhurnal obshchey khimii, 1959, Vol 29, Nr 5, pp 1631-1635 (USSR)

ABSTRACT: The compound was obtained in two ways: a) condensation of 5-bromo vanillin with methyl- or ethyl ester of 4-oxy-benzoic acid or b) condensation of 3-methyl-"gallus" aldehyde with the methyl ester of 4-bromo benzoic acid. In the reaction according to a) the ethyl ester is preferable as methyl ester leads to an impure product by the formation of anisic acid and its ester. In order to obtain better yields, a new course of synthesis was worked out:

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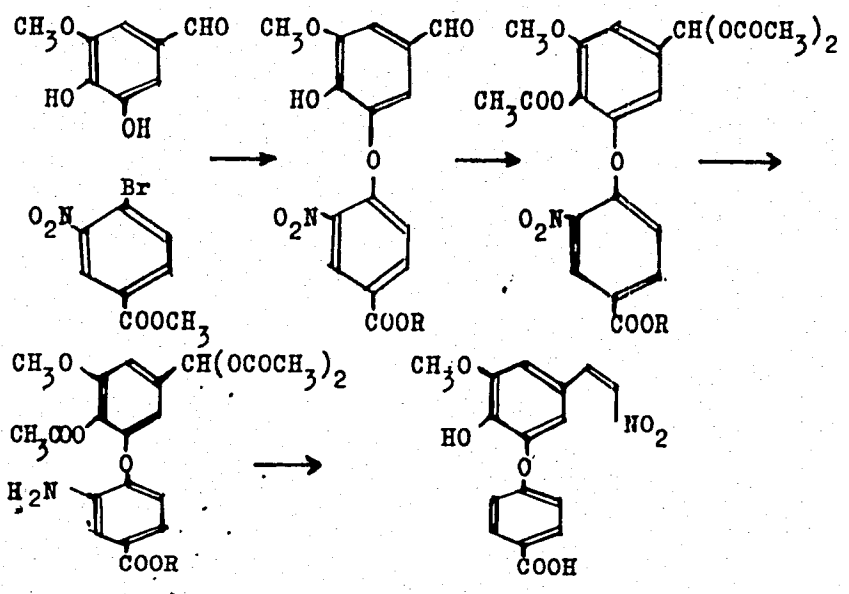
"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001860620003-5

Research in the Synthesis of Curare Alkaloids. Synthesis of 2-Oxy-3-Methoxy-5-(β-Nitrovinyl)-4'-Carboxy Diphenyl Ether SOV/79-29-5-47/75



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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001860620003-5

Research in the Synthesis of Curare SOV/79-29-5-47/75
Alkaloids. Synthesis of 2-Oxy-3-Methoxy-5-(β-Nitrovinyl)-4'-Carboxy Diphenyl Ether

The nitro group was reduced with nickel by catalysis, whereas the amino group was removed by reduction of diazonium salt with hypophosphoric acid. By reaction with nitro methane the compound mentioned in the title is obtained. The experimental part describes the reactions and gives the data concerning the compounds obtained. There are 4 references.

ASSOCIATION: Moskovskiy institut tonkoy khimicheskoy tekhnologii imeni Lomonosova (Moscow Institute of Fine Chemical Technology imeni Lomonosov)

SUBMITTED: May 5, 1958

Card 3/3

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001860620003-5"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001860620003-5

SHVETS, V.I.; MOROZOVA, S.F.; VOLKOVA, L.V.; PREOBRAZHENSKIY, N.A.

Complex lipids. Synthesis of α-(α'-linderoyl-β-linoleoyl) glycerylphosphorylethanolamine, a cephalin. Zhur. ob. khim. 35 no.3:554-556 Mr '65. (MIRA 18:4)

1. Moskovskiy institut tonkoy khimicheskoy tekhnologii imeni M.V. Lomonosova.

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001860620003-5"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001860620003-5

SHVETS, V.I.; VOLKOVA, L.V.; VASIL'YEVA, V.V.; FILONOVA, L.M.; PREOBRAZHENSKIY, N.A.

Lipides. Part 18: Synthesis of mixed unsaturated α,β-diglycerides. Zhur.ob.khim. 33 no.6:1843-1847 Je '63. (MIRA 16:7)

1. Moskovskiy institut tonkoy khimicheskoy tekhnologii imeni M.V.Lomonosova.

(Glycerides)

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001860620003-5"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001860620003-5

L 28878-66

ACC NR: AP6018838 SOURCE CODE: UR/0079/65/035/003/0554/0556

AUTHOR: Shvets, V. I.; Morozova, S. F.; Volkova, L. V.; Preobrazhenskiy, N. A.

ORG: Moscow Institute of Fine Chemical Technology im. M. V. Lomonosov (Moskovskiy institut tonkoy khimicheskoy tekhnologii)

TITLE: Investigations in the field of complex lipids. Synthesis of alpha-(alpha'-linolenoyl-beta-linoleoyl)glycerylphosphorylethanolamine, Cephalin)

SOURCE: Zhurnal obshchey khimii, v. 35, no. 3, 1965, 554-556

TOPIC TAGS: organic synthetic process, organic phosphorus compound

ABSTRACT: A highly unsaturated alpha-cephalin: alpha-(alpha'-linolenoyl-beta-linoleoyl)glycerylphosphorylethanolamine -- was synthesized through a series of steps. The basic starting materials were beta-monoglycerides, produced by acylation of alpha, alpha'-benzylideneglycerin, followed by removal of the benzylidene group by hydrolysis with boric acid. The benzylidene method prevented saturation of the cis-C=C bonds of the acyl radicals, while avoiding subsequent catalytic hydrogenolysis. [JPRS]

SUB CODE: 07 / SUBM DATE: 27Jan64 / ORIG REF: 003 / OTH REF: 003

UDC: 547.426:548.915

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001860620003-5

L 28877-66

ACC NR: AP6018837 SOURCE CODE: UR/0079/65/035/003/0550/0554

36
B

AUTHOR: Volkova, L. V.; Shvets, V. I.; Dorofeyeva, L. T.; Lobanova, S. I.; Konstantinova, N. V.; Preobrazhenskiy, N. A.

ORG: Moscow Institute of Fine Chemical Technology im. M. V. Lomonosov (Moskovskiy institut tonkoy khimicheskoy tekhnologii)

TITLE: Investigations in the field of complex lipids. Synthesis of L- and DL-alpha-phosphatidyl-N,N-(dimethyl)ethanolamines (L- and DL-alpha-N,N-dimethylcephalins)

SOURCE: Zhurnal obshchey khimii, v. 35, no. 3, 1965, 550-554

TOPIC TAGS: IR spectrum, organic synthetic process, organic phosphorus compound

ABSTRACT: L-(+)-and DL-alpha-palmitoyl-beta-oleoyl-alpha'-glycerylphosphoryl-N,N-(dimethyl)ethanolamines and DL-alpha,beta-distearoyl- and dipalmitoyl-alpha'-glycerylphosphoryl-N,N-(dimethyl) ethanolamines were synthesized according to the scheme developed earlier by the authors and associates for lecithins, cephalins, and phosphatidyl serines. During the synthesis, D-(+)- and DL-alpha-palmitoyl-alpha'-benzylglycerines, D-(+)- and DL-alpha-palmitoyl-beta-oleoyl-alpha'-benzylglycerines, D-(+)- and DL-alpha-palmitoyl-beta-9,10-dibromostearoyl-alpha'-benzylglycerines, D-(+)- and DL-alpha palmitoyl-beta-9,10-dibromostearylglycerines, and D-(-)- and DL-alpha-palmitoyl-beta-oleoylglycerines were produced

Card 1/2 UDC: 547.426:547.915

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L 28877-66

ACC NR: AP6018837

and characterized. The infrared spectra of the N,N-dimethylcephalines obtained exhibited the band characteristic of glycerin phosphatides, with pronounced frequencies for the covalent POC group (960-980 cm^{-1}), the C=O group in esters (1725-1745 cm^{-1}), and the CH, CH_2, and CH_3 groups in acid radicals (720-740, 1250-1260, 1450-1460, 2850-2950 cm^{-1}). Orig. art. has: 1 formula. [JPRS]

SUB CODE: 07 / SUBM DATE: 20Jan64 / ORIG REF: 003 / OTH REF: 006

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APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001860620003-5"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001860620003-5

L 34012-66 EWT(m)/EWP(j) RM

ACC NR: AP6025523 SOURCE CODE: UR/0079/66/036/001/0049/0054

AUTHOR: Shvets, V. I.; Volkova, L. V.; Miroshnikov, A. I.; Morozova, S. F.; Grinova, V. G.; Polyanskaya, V. A.; Preobrazhenskiy, N. A. 46 B

ORG: Moscow Institute of Fine Chemical Technology im. M. V. Lomonosov (Moskovskiy institut tonkoy khimicheskoy tekhnologii)

TITLE: Investigations in the field of complex lipids. Synthesis of phosphatidylserines with residues of unsaturated acids

SOURCE: Zhurnal obshchey khimii, v. 36, no. 1, 1966, 49-54

TOPIC TAGS: chemical synthesis, oleic acid, phosphorus compound, IR spectrum

ABSTRACT: The synthesis of highly unsaturated alpha-phosphatidylserines with oleic and linoleic acid residues is described. Starting materials were alpha,beta-diglycerides and the ter-butyl ester of N-phthaloylserine, produced by two methods: from the methyl acrylate and from serine, with the hydroxyl group protected with an acetyl group. Alpha(alpha'-linoleoyl-beta-oleoyl)- and alpha'-(alpha',beta-dilinoleoyl) glycerylphosphorylserines were synthesized. Alpha-(alpha'-linoleoyl-beta-oleoyl)- and alpha-(alpha', beta-dilinoleoyl) glycerylphosphoryl-N-phthaloylserines were synthesized from alpha,beta-diglycerides and the ter-butyl ester of N-phthaloylserine. The tert-butyl ester of alpha-bromo-beta-benzyloxy-propionic acid,

Card 1/2 UDC: 547.915.4+547.392.4

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ACC NR: AP6025528

O

O-benzyl-N-phthaloylserine, the ter-butyl ester of O-benzyl-N-phthaloylserine, O-acetyl-N-phthaloylserine, and the ter-butyl ester of O-acetyl-N-phthaloylserine were produced and characterized. The structures of the alpha-phosphatidylserines were confirmed by their infrared spectra. Orig. art. has: 1 figure. [JPRS: 35,998]

SUB CODE: 07, 20 / SUBB DATE: 05Sep64 / ORIG REF: 004 / OTH REF: 007

Card 2/2

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001860620003-5"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001860620003-5

VOLKOVA, L.V.; ZATSEPIN, G.T.

Energy spectra of muon and electron neutrinos in the atmosphere. Izv. AN SSSR. Ser. fiz. 29 no.9:1740-1742 S '65.

Muon generation in the atmosphere as dependent on a positive excess of energy. Ibid.:1765-1768 (MIRA 18:9)

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001860620003-5"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001860620003-5

L 4488-66 EWT(1)/FCC/EWA(h) GW

ACC NR: AP5024616 SOURCE CODE: UR/0048/65/029/009/1765/1768

17
B

AUTHOR: Volkova, L.V.; Zatsepin, G.T.

ORG: none

TITLE: Muon production in the atmosphere and the energy dependence of the positive excess /Report, All-Union Conference on Cosmic Ray Physics held at Apatity 24-31 August 1964/

SOURCE: AN SSSR. Izvestiya. Seriya fizicheskaya, v. 29, no. 9, 1965, 1765-1768

TOPIC TAGS: secondary cosmic ray, muon, pion, particle production, primary cosmic ray

ABSTRACT: The muon positive excess and its energy dependence are very sensitive to the meson production mechanism. These quantities have therefore been calculated on the basis of the isobar model of π- and K-meson production of G T. Zatsepin (Tr. Mezhdunarodnoy konferentsii po kosmicheskim lucham. M., 1960). For the calculation it was assumed that the number of primary neutrons is 13 % of the number of primary protons, nuclear nucleons interact as free nucleons, the numbers of protons and neutrons at sea level are approximately equal, the nucleon absorption free path is 120 g/cm^2, pions are produced with a power law spectrum (the exponent in which was determined by comparing calculated and experimental muon spectra at sea level), the ratio of the number of positive to the number of negative pions produced by protons is equal to the ratio

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L 4[illegible]-65

ACC NR: AP5024656

of the number of negative to the number of positive pions produced by neutrons (this ratio was determined from the experimental value of the positive excess of 3 BeV muons at sea level), 16 % as many K^+ mesons are produced as positive pions, and 5 % as many K^- mesons are produced as negative pions. The theoretical muon positive excess at sea level was found to increase with increasing muon energy and to reach values (for 4 BeV muons) between 1.35 and 1.6, depending on the assumed fraction of primary nucleon interactions that involve charge exchange. The muon positive excess decreases slightly with increasing zenith angle of muon incidence. Orig. art. has: 6 formulas, and 4 figures.

SUB CODE: NP/ SUBM DATE: 00/ ORIG REF: 003/ OTH REF: 002

Card 2/2

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001860620003-5

L 4468-66 EWT(m)/T/EWA(m)-2

ACC NR: AP5024648 SOURCE CODE: UR/0048/65/029/009/1740/1742

AUTHOR: Volkova, L.V.; Zatsepin, G.T.

ORG: none

TITLE: Energy spectra of muonic and electronic neutrinos in the atmosphere /Report, All-Union Conference on Cosmic Ray Physics held at Apatity 24-31 August 1964/

SOURCE: AN SSSR, Izvestiya, Seriya fizicheskaya, v. 29, no. 9, 1965, 1740-1742

TOPIC TAGS: secondary cosmic ray, neutrino, spectral energy distribution, angular distribution

ABSTRACT: The energy spectra and angular distributions of electronic and muonic neutrinos and antineutrinos in the atmosphere were calculated and the results are presented graphically and in tabular form. For the calculations it was assumed that the muonic neutrinos arise from π-μ, K-μ, and μ-e decay, the electronic neutrinos arise from μ-e, $K^{\pm}$-eπ, and K_2^0-eπ decay, the ratio of the number of positive pions to the number of negative pions produced in the interaction of a proton with a nucleus is 1.56, there are produced 15 % as many K^+ mesons as positive pions and 5 % as many K^- mesons as negative pions, and that the production of K_0 and $\bar{K}_0$ mesons is analogous to that of K^+ and K^- mesons. Differences between the neutrino spectra presented here and those calculated by R.Cowsik, Yash Pal, T.N.Rengarajan, and S.N.Tandon (International Conference on Cosmic Rays, Faipur, 1963) are due to differences between the assump-

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001860620003-5

L 4468-66

ACC NR: AP5024048

tions underlying the two calculations. Orig. art. has: 1 formula, 5 figures, and 1 table.

SUB CODE: MP/ SUBM DATE: 00/ ORIG REF: 001/ OTH REF: 001

Card 2/2

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001860620003-5

L 54846-65 EPA(s)-2/EWT(m)/EPF(n)-2/EPF(c)/EWP(t)/EWP(b) Pr-4/Pt-7/Pu-4 IJP(c)

JD/JG

ACCESSION NR: AP5014486 UR/0032/65/031/006/0656/0657

546.81/.56:543.253.06

40 B

AUTHORS: Berezina, K. G.; Volkova, L. V.; Gun'ko, Ye. I.

TITLE: The determination of lead and copper microimpurities in sodium chloride by the use of micropolarographic analysis

SOURCE: Zavodskaya laboratoriya, v. 31, no. 6, 1965, 656-657

TOPIC TAGS: microchemical analysis, microchemical analysis equipment, polarographic analysis, salt, impurity content, copper, lead / Orion 7/77 4b Hungarian polarograph

ABSTRACT: A new micropolarographic method was developed for determining the lead and copper microimpurities in common salt. The impurities were first concentrated with sodium diethyldithiocarbamate. The lead and copper complexes were extracted by carbon tetrachloride, and the extracts were concentrated with hydrochloric acid. Nitrogen was bubbled through the solution to remove the oxygen. The polarogram was made on a Hungarian polarograph "Orion -7-77-4b" with a galvanometer sensitivity of $3 \cdot 10^{-9}$ a/mm. In a 100-g sample the minimum quantities were

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L 54846-65

ACCESSION NR: AP5014486

0.1 micrograms of lead and 0.3 of copper. By adding known amounts of lead and tin impurities to salt, it was established that the determination error was <20%. The method can be used for determining lead and tin impurities in calcium chloride, lithium chloride, and others. Orig. art. has: 1 figure and 1 table.

ASSOCIATION: none

SUBMITTED: 00 ENCL: 00 SUB CODE: GC

NO REF SOV: 001 OTHER: 001

Card 2/2

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001860620003-5"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001860620003-5

VOLKOVA, L.V.; SHVETS, V.I.; DOROFEYEVA, L.T.; LOBANOVA, S.I.; KONSTANTINOVA, N.V.; PREOBRAZHENSKIY, N.A.

Complex lipids. Synthesis of L and DL α phosphatidyl-N,N (dimethyl) ethanolamines (L and DL α -N,N-dimethylcephalins). Zhur. ob. khim. 35 no.3:550-554 Mr '65. (MIRA 18:4)

1. Moskovskiy institut tonkoy khimicheskoy tekhnologii im. M.V. Lomonosova.

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001860620003-5"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001860620003-5

SHVETS, V.I.; DOROFEYEVA, L.T.; GRUM-GRZHIMAYLO, N.A.; SHMIDT, I.S.; VOLKOVA, L.V.; PREOBRAZHENSKIY, N.A.

Complex lipids. Synthesis of lecorotatory and dextro-levorotatory Alpha-phosphatidylcholines (lecithins) with equal and different acid residues. Zhur. ob. khim. 34 no.12:3983-3986 D '64 (MIRA 18:1)

1. Moskovskiy institut tonkoy khimicheskoy tekhnologii imeni M.V. Lomonosova.

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001860620003-5"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001860620003-5

VOLKOVA, L.V.; MOROZOVA, S.F.; PREOBRAZHENSKIY, N.A.

Complex lipids. Synthesis of optically active L-(+)-α-oleoyl-β-linoleoyl-α-cephalin. Zhur. ob. khim. 35 no.1:8.-25 Ja '65. (MIRA 18:2)

1. Moskovskiy institut tonkoy khimicheskoy tekhnologii im. M.V. Lomonosova.

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001860620003-5"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001860620003-5

VOLKOVA, L.V.

Significance of the stage of mixed feeding on the development of the larvae of whitefish. Dokl. AN BSSR 7 no.4:274-276 Ap '63. (MIRA 16:11)

1. Otdel zoologii i parazitologii AN BSSR. Predstavleno akademikom AN BSSR V.A. Leonovym.

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001860620003-5"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001860620003-5

VOLKOVA, L.V.; SHVETS, V.I.; KHANDKAROVA, V.S.; RYZHENKOVA, S.F.; PREOBRAZHENSKIY, N.A.

Lipides. Part 19: Synthesis of optically active D-(—)-α-oleoyl-β- linoleoyl-glycerol. Zhur.ob.khim. 33 no.6: 1348-1851 Je '63. (MIRA 16:7)

1. Moskovskiy institut tonkoy khimicheskoy tekhnologii imeni M.V.Lomonosova.

(Glycerides)

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001860620003-5"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001860620003-5

SHVETS, V.I.; VOLKOVA, L.V.; LUKASHENKO, E.Ye.; PREOBRAZHENSKIY, N.A.

Lipides. Part 13: Synthesis of unsaturated α,β-diglycerides of same or different acids. Zhur.ob.khim. 32 no.8:2479-2482 Ag '62. (MIRA 15:9)

1. Moskovskiy institut tonkoy khimicheskoy tekhnologii imeni M.V. Lomonosova.

(Glycerides)

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001860620003-5"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001860620003-5

SHVETS, V.I.; VOLKOVA, L.V.; PREOBRAZHENSKIY, N.A.

Lipides. Part 12: Synthesis of unsaturated and saturated α,β-diglycerides of different acids. Zhur.ob.khim. 32 no.8:2474-2479 Ag '62. (MIRA 15:9)

1. Moskovskiy institut tonkoy khimicheskoy tekhnologii imeni M.V. Lomonosova.
(Glycerides)

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001860620003-5"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001860620003-5

SHVETS, V.I.; VOLKOVA, L.V.; TOLKACHEV, O.N.

Synthetic investigations in the field of curare alkaloids. Part 9: Synthesis of a dimethyl ether of racemic chondrodendrine. Izv.vys.ucheb.zav.;khim.i khim.tekh. 5 no.3:445-448 '62. (MIRA 15:7)

1. Moskovskiy institut tonkoy khimicheskoy tekhnologii imeni Lomonosova, kafedra khimii i tekhnologii tonkikh organicheskikh soyedineniy.

(Bebeerine)

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001860620003-5"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001860620003-5

VOLKOVA, L.V.; SHVETS, V.I.; RYZHENKOVA, S.F.; VARVARINA, N.B.; SMOLOVIK, I.V.; PREOBRAZHENSKIY, N.A.

Lipides. Part 10: Synthesis of mixed α,β-diglycerides containing residues of higher acids of the aliphatic series. Zhur.ob.khim. 32 no.6:1764-1768 Je '62. (MIRA 15:6)

1. Moskovskiy institut tonkoy khimicheskoy tekhnologii im. M.V. Lomonosova.

(Glycerides) (Acids, Fatty)

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001860620003-5"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001860620003-5

SHVETS, V.I.; BOGOSLOVSKIY, N.A.; POLYACHENKO, V.M.; VOLKOVA, L.V.; SAMOKHVALOV, G.I.; PREOBRAZHENSKIY, N.A.

Synthesis of phospholipides containing residues of higher aliphatic polyene acids. Dokl. AN SSSR 140 no.4:851-854 O '61. (MIRA 14:9)

1. Moskovskiy institut tonkoy khimicheskoy tekhnologii im. M.V. Lomonosova i Vsesoyuznyy nauchno-issledovatel'skiy vitaminnyy institut. Predstavleno akademikom A.N.Nesmeyanovym.
(Phosphatides) (Olefins)

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001860620003-5"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001860620003-5

SHVETS, V.I.; VOLKOVA, L.V.; PREOBRAZHENSKIY, N.A.

Lipides. Part 8: Synthesis of α,β-dilinoleoin. Zhur.ob.khim. 31 no.7:2181-2183 Jl '61. (MIRA 14:7)

1. Moskovskiy institut tonkoy khimicheskoy tekhnologii imeni M.V. Lomonosova.

(Lipide)

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001860620003-5"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001860620003-5

SHVETS, V.I.; VOLKOVA, L.V.; PREOBRAZHENSKIY, N.A.

Complex lipides. Part 2: Synthesis of unsaturated and saturated α-cephalins. Zhur.ob.khim. 31 no.7:2184-2186 Jl '61. (MIRA 14:7)

1. Moskovskiy institut tonkoy khimicheskoy tekhnologii imeni M.V. Lomonosova.

(Cephalins)

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001860620003-5"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001860620003-5

VOLKOVA, M.; DONSKAYA, Ye.

Eighth Province Conference on Tuberculosis Control in Irkutsk.
Probl.tub. 34 no.6:74 N-D '56. (MLRA 10:2)
(TUBERCULOSIS--PREVENTION)

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001860620003-5"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001860620003-5

VOLKOVA, M., inzh.

Once they were famous... Mest.prom.i khud.promys. 3 no.12:37 D '62. (MIRA 16:2)

(Buryat-Mongolia—Art industries)

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001860620003-5"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001860620003-5

VOLKOVA, M.A.

1893

CONSTITUTIONAL DIAGRAM OF BINARY TITANIUM–ALUMINUM ALLOYS. I. I. Kornilov, E. N. Pylaeva, and M. A. Volkova (Baikov Inst. of Metallurgy). Izvest. Akad. Nauk S.S.S.R. Otdel. Khim. Nauk 771-6(1956) July. (In Russian)

The Ti–Al constitution diagram was studied to determine the microstructure, microhardness, and the thermal resistance of the alloy. A pyrotechnic reaction β + melt $\rightleftharpoons$ γ took place at 1520° with 29.9 and 37.5% Al; γ + melt $\rightleftharpoons$ $TiAl_3$ at 1400° with 60 to 64% Al; and, $\beta + \gamma \rightleftharpoons \gamma$ at 1300° with 26 to 35% Al. The temperature of α-phase transformation into β phase increased from 87% with 0% Al to 1300° with 21.6% Al. The Ti–Al alloy hardness increased with larger amount of Al fused into the Ti α phase. In the γ phase the hardness of the alloy was considerably weaker than in the α-hard solution. The alloy heat resistance improved with a higher concentration of Al in the α-hard solution of Ti. (R.V.J.)

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001860620003-5

VOLKOVA, M., inzhener; KRISTI, S., inzhener.

In defence of decorative ceramics. Prom.koop.no.9:30-31 S '56. (MLRA 9:10)
(Pottery)

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001860620003-5"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001860620003-5

VOLKOVA, MARIYA ALEKSANDROVNA,

DILANYAN, Zaven Khristoforovich; VOLKOVA, Mariya Aleksandrovna; BARABASH, S.T., spetsredaktor; AKIMOVA, L.D., red.; KISINA, Ye.I., tekhn.red.

[Brine cheese] Rassol'nye syry. Moskva, Pishchepromizdat, 1957. 170 p. (MIRA 11:1)

(Cheese)

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001860620003-5"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001860620003-5

VOLKOVA, M.A.; PEL'MAN, S.G.

Use of radioactive cesium (Cs^{137}) in gamma ray therapy. Med.rad. no.3:3-5 '62. (MIRA 15:3)

1. Iz Gosudarstvennogo onkologicheskogo instituta imeni P.A. Gertsena (zav. radiologicheskim otdeleniyem - kand.med.nauk M.A. Volkova).
(CESIUM—ISOTOPES) (CANCER)

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001860620003-5"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001860620003-5

NOVIKOV, A.N., prof.; GARIN, N.D., doktor med.nauk; GOL'BERT, Z.V., kand.med.nauk; VOLKOVA, M.A., kand.med.nauk; KISELEVA, Ye.S., kand.med.nauk; MATVEYEVA, T.N., kand.med.nauk; VAVAKIN, A.D., kand.med.nauk

Initial experience in the combined treatment of pulmonary cancer. Khirurgiia no.8:22-28 Ag '62. (MIRA 15:8)

1. Iz Gosudarstvennogo nauchno-issledovatel'skogo onkologicheskogo instituta imeni P.A. Gertsena (dir. - prof. A.N. Novikov) Ministerstva zdravookhraneniya RSFSR.
(LUNGS—CANCER)

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001860620003-5"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001860620003-5

VOLKOVA, M.A.

18 18 27 4E2U

Phase diagram for the binary system titanium-aluminum. I. I. Kornilov, E. M. Pylaeva, and M. A. Volkova. Bull. Acad. Sci. U.S.S.R., Div. Chem. Sci. 1956, 787-95 (English translation). See A 51 4113 B.M.R.

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001860620003-5"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001860620003-5

VOLKOVA, M.A.

Category: USSR / Physical Chemistry B-8
Thermodynamics. Thermochemistry. Equilibrium. Physico-chemical analysis. Phase transitions.

Abs Jour: Referat. Zhur-Khimiya, No 9, 1957, 29931

Author : Kornilov I. I., Pylayeva Ye. N., Volkova M. A.
Inst : Academy of Sciences USSR
Title : Diagram of State of Binary System Titanium - Aluminum

Orig Pub: Izv. AN SSSR, Otd. khim, n., 1956, No 7, 771-778

Abstract: Investigation of the diagram of state of Ti - Al system, by thermal, microstructure and x-ray diffraction methods, and also by means of analysis of hardness and heat-resistance. Occurence of peritectic transformations has been ascertained at 1520° (beta) + melt $\rightleftarrows$ gamma and at 1400° (gamma + melt $\rightleftarrows$ Ti Al_3) and also that of a peritectoidal reaction at 1300° (beta + gamma $\rightleftarrows$ alpha). Solubility of Al in Ti at 1200° and 800° is, respectively, of 26 and 21.6%. Solid solutions of Al in Ti, located near the boundary of maximum solubility of Al in Ti, have highest durability at high temperature (at 550° and 15 kg/mm²).

-47-

Card : 1/1

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001860620003-5

MITROFANOV, A.A., kandidat tekhnicheskikh nauk; CHERKASHINA, N.P., inzhener.
VOLKOVA, M.A., inzhener.

Quality of the 08kp basic open-hearth steel smelted with use of oxygen at the "Zaporozhstal'" plant. Sbor.trud.TSNIICHM no.13: 171-181 '56. (MLRA 9:11)

(Zaporzh'ye--Steel--Metallurgy)
(Oxygen--Industrial applications)

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001860620003-5"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001860620003-5

137-58-4-8440

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 4, p 303 (USSR)

AUTHORS: Kornilov, I.M., Pylayeva, Ye.N., Volkova, M.A.

TITLE: Phase and Heat Resistance Diagram of Alloys of the Ti-Al Binary System (Diagramma sostava - zharoprochnost' splavov dvoynoy sistemy Ti-Al)

PERIODICAL: Tr. In-ta metallurgii AN SSSR, 1957, Nr 2, pp 164-166

ABSTRACT: The heat resistance and change in lattice spacing of Ti in Ti-Al alloys having up to 27.5% Al is studied. The curves of the relationship between Ti lattice spacings and Al content differ in the single-phase and double-phase regions, and the values of the a and c spacings diminish as Al content rises. The centrifugal method was employed to investigate the heat resistance, tests being run at 550°C and stresses of $\sigma = 15$ kg/mm^2 for 250 hours and then at 600° and the same σ for 50 hours. The specimens were made by sintering Ti powders. The criterion of heat resistance employed was the time required to attain a given bending deflection, namely, 2 and 4 mm (the latter in the case of pure Ti). The bending deflection of alloys from the region of solid Al solutions under analysis and of alloys in the heterogen-

Card 1/2

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001860620003-5

137-58-4-8440

Phase and Heat Resistance Diagram of Alloys of the Ti-Al Binary System

eous region ($\alpha+\gamma$) rises rapidly in the process of deformation. As the concentration of Al in the solid solution rises, the bending deflection diminishes sharply (alloys with 2.5-5% Al bend 6 mm after 250 hours, while those with 7.5-20% Al bend 2-3 mm). Alloys in the biphasic region are brittle and less heat resistant than Ti and alloys from the region of solid solutions. Comparison of the curves of bending deflection for various alloys with the phase diagram and with the change in the lattice spacing shows that in the Ti-Al binary system a definite relationship exists at 550-600° between the heat resistance, the composition, and the structure of the alloys: heat resistance exists within the bounds of a limited solid-solution range of Al content. Maximum heat resistance is observed in high-content solid Ti solutions. The compositions of alloys in the transition zone from solid solutions to the biphasic region show higher heat resistance than pure Ti, the solid solutions studied, or alloys unmistakably in the biphasic region.

V.G.

1. Aluminum-titanium alloys--Phase studies 2. Aluminum-titanium alloys --Temperature factors

Card 2/2

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001860620003-5"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001860620003-5

VOLKOVA, M.A.

133-10-6/26

AUTHOR: Mitrofanov, A. A., Candidate of Technical Sciences, Cherkashina, N.P., and Volkova, M.A., Engineers

TITLE: The Quality of Steel 08кп, Produced With the Use of Oxygen. (Kachestvo Stali 08кп, Vyplavlyayemoy s Primeneniyem Kisloroda).

PERIODICAL: Stal', 1957, No.10, pp. 888-892 (USSR).

ABSTRACT: Five different practices in the application of oxygen in the open hearth furnace process are used in the Zaporozhstal' Works: A). A 25% oxygen enrichment of air supplied to flame (current production in 1956); B). The same, but up to 30%. V. Oxygen supplied to flame and to the bath at a low carbon content (blowing oxygen during refining). G. The same, but at a high carbon content (blowing during melting period). D. Blowing oxygen-water mixture into the bath. Practices A, V and G passed industrial tests during long periods. Long duration industrial tests of practices B and D will be carried out in the near future. In this paper the evaluation of metal quality produced by all five modifications of using oxygen is described. The evaluation was carried out according to ГОСТ 914-49 and ГОСТ 914-56. In addition the following factors were studied: the yield of good metal on the main manufacturing plants

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133-10-6/26

The Quality of Steel 08кп, Produced (Cont.)

and the proportion of various defects, gas content (O_2, H_2 and N_2) in ladle samples and samples from slabs, the influence of the degree of oxidation of final slag on steel quality, macro and microstructure of metal, proportion of non-metallic inclusions, mechanical properties and the tendency of metal to mechanical ageing on the basis of tensile and impact tests, the tendency of metal to overheating and stamping ability of sheets (for motorcars, for complicated shapes). The following participated in the work: D. I. Shirinskiy, V. N. Lola, L. A. Zagadchenko (Engineers), V. M. Yudina, T. I. Zarya, G. K. Zamytskaya (Technicians from Zaporozhstal' Works), L. S. Kirik (laborant from TsNIIChM), Mochalov, Engr., (ZIL) and N. S. Zverev, Engr., (GAZ). The yield of good metal according to causes - Table 1. Defective sheets caused by metal quality and their distribution according to causes - Table 2. Gas content in ladle and slab samples - Table 3. The relationship between the degree of oxidation of slag before deoxidation, proportion of non-metallic inclusions and defects due to lamination (melts of practice V) - Table 4.

Card 2/5

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001860620003-5

133-10-6/26

The Quality of Steel 08кп, Produced (Cont.)

Results of the control of the macrostructure of metal Table 5. Size distribution of ferrite grains and precipitates of structurally free cementite in cold rolled sheets - Table 6. The dependence of the composition and quantity of non-metallic inclusions in metal on the smelting practice- Table 7. Results of stamping of cold rolled sheets (from heats made by different practices) on automobile works - Table 8. On the basis of the results obtained the following conclusions are drawn: 1. The yield of good metal from experimental heats of steel 08кп in the open hearth melting shop and in slabing and sheet rolling mills remained practically on the same level as for the current production. In the cold rolling shop the yield of good sheets from heats in which oxygen was blown during refining and melting as well as in which oxygen water mixture was used, remained on the same level as for current production (93.3 - 95.1%). 2. The content of gases (oxygen, hydrogen and nitrogen) in the metal from ladle samples of all experimental melts of steel 08кп is approximately on the same level, not exceeding the usual values for this steel. The gas content in samples of rolled products is practically independent from the smelting

Card 3/5

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133-10-6/26

The Quality of Steel 08кп, Produced (Cont.)

practice but is higher than in ladle samples. 3. In melts with combined method of using oxygen during refining (method V) increasing concentration of FeO in the final slag is accompanied by increasing contamination of the metal by complex oxide inclusions. 4. In respect of sensitivity to ageing the experimental method did not differ from that of current production. 5. According to defects on stamping on automobile works ZIL' and GAZ experimental sheets differed little from those of current production, somewhat poorer results of stamping experimental sheets could be related to the teeming conditions of steel. The results for stamping ability of sheets from metal produced with the use of oxygen-water mixture require an additional checking. 6. The influence of the method of application of oxygen during smelting of steel on the mechanical properties of sheets, hardness, proportion of non-metallic inclusions, sensitivity to overheating, depth of stamping according to Erixon's method is practically absent. There are 8 tables and 2 Slavic references.

Card 4/5

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The Quality of Steel 08кп, Produced (Cont.) 133-10-6/26

ASSOCIATION: TsNIIChM i zavod "Zaporozhstal'" (TsNIIChM and "Zaporozhstal' Plant")

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AUTHORS: Kornilov, I. I., Pylayeva, Ye. N., Volkova, M. A. 78-3-6-17/30

TITLE: II. Investigations of Equilibrium in the Ternary System Ti-Al-Fe (II. Issledovaniye ravnovesiya v troynoy sisteme Ti-Al-Fe)

PERIODICAL: Zhurnal Neorganicheskoy Khimii, 1958, Vol. 3, Nr 6, pp. 1391-1397 (USSR)

ABSTRACT: The ternary system Ti-Al-Fe, especially in the angle of titanium of up to 30 % of the sum Al+Fe, was investigated by means of thermal, micro-structural - and X-ray analysis.

The alloys produced were investigated with respect to their hardness and temperature-stability. The solid solution of aluminum and iron covers a vast range in β-titanium at 1100°C.
The phase-compositions were investigated at temperatures of 1100, 1000, 800 and 550°C. A large part of the alloys undergoes eutectoid transition into solid solutions like in the systems Ti-Fe: β → α + TiFe.
The occurence of the β-phase in the biphase-range α+TiFe

Card 1/2

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II. Investigations of Equilibrium in the Ternary System Ti-Al-Fe 78-3-6-17/30

increases according to the increase in temperatures of from 680°C to 850°C, according to the increase of the aluminumcontent in the alloys.
In the ternary system Ti-Al-Fe the γ-phase dissipates at 1100°C of from 40 % to 47 % Al. The maximum solubility of iron in this phase amounts to approximately 1,5 %.
A decrease in the hardness of the alloys takes place in the range of the γ-solid solution in the ternary system Ti-Al-Fe. The alloys with γ-phase retain their hardness when heated up to a temperature of 700°C, whereas at temperatures of from 700 to 950°C the hardness of the alloys decreases to a smaller extent than in titanium alloys on the basis of the α-phase.
There are 17 figures, and 13 references, 4 of which are Soviet.

SUBMITTED: June 26, 1957

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Card 2/2 1. Aluminum-iron-titanium alloys--Phase studies 2. Aluminum-iron-titanium alloys--Production

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L 14307-65 EPF(n)-2/EPP/EWT(m)/EWP(b)/EWP(t) Pe-4/Pu-4 ASD(m)-3/
AFTC(p) WM/JD/JG/MLK
ACCESSION NR: AT4048049 S/0000/64/000/000/0038/0042

AUTHOR: Pylayeva, Ye. N., Volkova, M. A.

TITLE: A study of the alloys of the ternary Ti-Al-Zr system

SOURCE: Soveshchaniye po metallurgii, metallovedeniyu i primeneniyu titana i yego splavov. 5th, Moscow, 1963. Metallovedeniye titana (Metallography of titanium); trudy* soveshchaniya. Moscow, Izd-vo Nauka, 1964, 38-42

TOPIC TAGS: alloy structure, alloy phase composition, titanium alloy, aluminum alloy, zirconium alloy, alloy hardness

ABSTRACT: Although the Ti-Al-Zr system should produce a broad cross section of solid solutions which could be the bases for high-temperature alloys, data on this subject are totally lacking. For the preparation of samples, sponge titanium, aluminum and zirconium of the highest purity were used. The Ti-Al ratio was kept at 6:1 to facilitate the formation of Ti_6Al. The amount of Ti_6Al was varied from 100% by weight to 0, while the amount of zirconium was increased from 0 to 100%. Samples were heated to temperatures ranging from 1200 to 500C and held there for periods ranging from 6 to 750 hours, respectively. Heating was done by an arc furnace in an argon atmosphere. Since the

Card 1/2

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