

USSR

UDC 536.722

SHPIL'RAYN, E. E., KAGAN, D. N., BARKHAMOV, L. S.

"Experimental Study of Thermodynamic Properties of Berillium Oxide in Liquid and Solid Phases"

Teplofizika Vysokikh Temperatur, Vol 9, No 5, 1971, pp 926-928.

Abstract: A mixing method using a calorimeter with an evaporating liquid is used to measure the enthalpy of berillium oxide in liquid and solid phases in the 2,000-3,200°K interval. The material studied was under its own vapor pressure in sealed ampules of tungsten and molybdenum. The results of measurements are used to produce the heat of melting and heat capacity of the liquid phase of berillium oxide, which have not been published previously in the literature.

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USSR

UDC 616.28-008.1-057:007.51

BARKHASH, G. I., Institute of Labor Hygiene and Occupational Diseases,
Academy of Medical Sciences USSR, Moscow

"Changes in Auditory Analysor Functions in Personnel Working at Control Desks
Involving Perception of Spoken Information"

Moscow, Gigiyena Truda i Professional'nyye Zabolevaniya, No 7, Jul 70, pp 32-
35

Abstract: Shifts with time in the level of auditory sensitivity of dispatchers and announcers working at airports and for the Moscow telephone system were studied during a workday. The greatest volume of auditory information was handled by dispatchers in the airport control tower; their work involved radio transmission and reception. For the other workers studied, information transfer was by telephone. The airport dispatcher must keep track of the movement of airplanes and may have to retain a great deal of information from radio transmissions and radar screens. It was found that in all of the groups tested, the differential capability of the auditory analysor was reduced during the workday. The qualitative and quantitative characteristics of these shifts were specifically related to the bulk of information and the transmission

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BARKHASH, G. I., Gigiyena Truda i Professional'nyye Zabolevaniya, No 7,
Jul 70, pp 32-35

channels. In radio reception, the change in auditory sensitivity was characterized by an increase in tonal thresholds over a wide frequency range (from 125 to 2000 cycles). In the reception of information over a telephone, a decrease in auditory sensitivity was observed within a narrow frequency range (around 2000 cycles). In persons occupied in intellectual work without any interference with the auditory analyser, a decrease in auditory sensitivity was likewise observed; in this case, the shifts were uniform over the entire audio range (from 125 to 10,000 cycles). These data indicate that shifts in auditory perception can be brought about either by specific loads (such as perception of spoken words through radio or telephone) or as a result of general fatigue produced by strenuous mental work. The frequency range affected will vary in the different cases.

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USSR

UDC 547.539+542.91

OSADCHIY, S. A., and BARKHASH, V. A., Novosibirsk Institute of Organic Chemistry, Siberian Division of the Academy of Sciences, USSR

"Synthesis and Some Conversions of Polyfluorinated Indandiones-1,3. II"

Leningrad, Zhurnal Organicheskoy Khimii, Vol 6, No 9, Sep 70, pp 1815-1820

Abstract: Condensation of tetrafluorophthalic anhydride with ethyl acetoacetate in acetic anhydride and triethylamine gives a 61% yield of triethylamine salt of 2-carboethoxy-4,5,6,7-tetrafluoroindandione-1,3 (I) which upon acidification yields the free (I), m.p. 130-132°. According to IR, FMR, and NMR-F¹⁹ spectra this compound exists entirely in enolic form. Heating (I) in acid medium yields 4,5,6,7-tetrafluoroindandione-1,3 (II), m.p. 183-184, which exists entirely in the diketo form both in solid state and in CCl₄ or CHCl₃ solutions. In alcohol and alcoholic base the tautomerism shifts towards the enolic form. Methylation of (II) by diazomethane in ether yields the methyl ether of the enolic form of (II), m.p. 118-119°. Under such conditions indandione-1,3 does not methylate. Oxidation of (II) by SeO₂ in benzene gave bis-4,5,6,7-tetrafluoroindandione-1,3, m.p. 320-323°. Nitration of (II) by a mixture of nitric acid and acetic acid gave 2-nitro-4,5,6,7-tetrafluoroindandione-1,3 (III), m.p. 143-144°. Bromination of (III) gave 2-bromo-2-
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OSADCHIY, S. A. and PARCHASH, V. A., Zhurnal Organicheskoy Khimii, Vol 6, No 9, Sep 70, pp 1815-1820

nitro-4,5,6,7-tetrafluoroindandione-1,3 (IV), m.p. 118-119°. Tetrafluoroindandione-1,2,3, m.p. 96-98° was obtained by reacting (IV) with nitrobenzene.

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USSR

UDC 547.539+542.91

OSADCHIY, S. A., and BARKHASH, V. A., Institute of Organic Chemistry, Novosibirsk, Siberian Dept. of the Academy of Sciences USSR

"Synthesis and Transformation of Polyfluorinated Indandiones-1,3. I"

Leningrad, Zhurnal Organicheskoy Khimii, Vol 6, No 8, Aug 70, pp 1636-1644

Abstract: The purpose of this work was to synthesize polyfluorinated cyclic β -ketones -- indandiones-1,3. It was found that both phthalic and nitrophthalic anhydrides react with phenylacetic acid in the presence of triethylamine in a solution of acetic anhydride to give high yields of the corresponding indandiones-1,3. Condensation of pentafluorophenylacetic acid with phthalic anhydride and with its fluorinated analog produces polyfluorophthalides which may be regrouped to give the desired polyfluorinated indandiones-1,3. The structure of the resultant substituted phthalides was confirmed by infrared and ultraviolet spectroscopy.

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Acc. Nr.

AP0053777

Abstracting Service:

CHEMICAL ABST.

Ref. Code

UR0366

B 5/30

110954h (Polyfluoroaryl)methanes and their derivatives. V.

Reaction of tris(polyfluoroaryl)methanols with sodium methylate.

Lubenets, E. G.; Gerasimova, T. N.; Furov, V. V.; Barkhash,

V. A. (Novosibirsk. Inst. Org. Khim., Novosibirsk, USSR).

Zh. Org. Khim. 1970, 6(2), 365-8 (Russ). The reaction of

MeONa with Ph₂C(OH)C₆F₃ in MeOH at 20-50° gave C₆F₃H

(I), Ph₂CO, and 2,3,5,6-tetrafluoroanisole. Similarly, (C₆F₃)₂-

C(OH)Ph or PhCOC₆F₃ reacted with MeONa to give PhCO-

C₆F₃OMe-4, I, and PhCO₂Me. (C₆F₃)₂COH or (C₆F₃)₂CO

reacted with MeONa to give a mixt. of 2,4-(MeO)₂C₆F₃COC₆F₃-

OMe-4, [2,4-(MeO)₂C₆F₃]₂CO, 4-MeOC₆F₃CO₂Me, and 2,4-

(MeO)₂C₆F₃CO₂Me. CPJR

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REEL/FRA
19830840

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Acc. Nr.

AP0041533

Abstracting Service: ^B

CHEMICAL ABST. 4170

Ref. Code

UR0366

89960v Reaction of polyfluoro-substituted aromatic ketones with potassium cyanide. Vasilevskaya, T. N.; Badashkeeva, A. G.; Gerasimova, T. N.; Barkhash, V. A.; Vorozhtsov, N. N., Jr. (Novosibirsk. Inst. Org. Khim., Novosibirsk, USSR). *Zh. Org. Khim.* 1970, 6(1), 126-32 (Russ). The vigorous reaction of $(C_6F_5)_2CO$ with KCN in abs. EtOH at 20° gave C_6F_5H , 2,3,5,6- $F_4C_6H_2CN$ (I), $C_6F_5CO_2Et$ (II), 2,3,5,6,4- $F_4(EtO)C_6CO_2Et$ (III), and 2,3,5,6,7- $F_4(EtO)C_6COC_6F_5$ (IV). The compds. were sepd. by gas chromatog. and identified by NMR. The reaction of II with EtONa gave III. Refluxing C_6F_5Br with EtONa in EtOH gave 2,3,5,6,4- $F_4(EtO)C_6Br$ (V) which was converted to its Grignard compd. and reacted with C_6F_5CHO to give 2,3,5,6,4- $F_4(EtO)C_6CH(OH)C_6F_5$, which on oxidn. with CrO_3 gave IV. The reaction of C_6F_5COPh with KCN in EtOH at 75° gave C_6F_5H , I, and 2,3,5,6,4- $F_4(EtO)C_6COPh$ (VI). Reacting V with Mg and PhCHO in abs. Et₂O gave 2,3,5,6,4- $F_4(EtO)C_6CH(OH)Ph$ which was oxidized to VI. The reaction of C_6F_5COMe with KCN in EtOH at 60-70° gave C_6F_5H , I, AcOEt, 2,3,5,6- $F_4C_6HC(:NH)OEt$ (VII), 3,5,6,2- $F_3(EtO)C_6HCN$, and 2,3,5,6,4- $F_4(EtO)C_6COMe$ (VIII). Treating V with Mg and Ac₂O gave VIII. The treatment of VII with HCl in Et₂O gave 2,3,5,6- $F_4C_6HCONH_2$. CPJR

REEL / FRAME
19751401

1/2 023 UNCLASSIFIED PROCESSING DATE--20NOV70
TITLE--N ALKYLATED 4,5,6,7 TETRAFLUORCINDOLES -U-
AUTHOR--(02)-PETROV, V.P., DARKHASH, V.A. **B**
COUNTRY OF INFO--LSSR
SOURCE--KHIM. GETERGTSIKL. SOEDIN. 1970, (3), 385-9
DATE PUBLISHED--70
SUBJECT AREAS--CHEMISTRY
TOPIC TAGS--INDOLE DERIVATIVE, ELECTROLYTIC REDUCTION, ORGANIC NITRO
COMPOUND, ALCOHOL, FLUORINATED ORGANIC COMPOUND, FLUORINE ISOTOPE, NMR
SPECTRUM, ORGANIC SYNTHESIS
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--3001/0222 STEP NO--UR/0409/70/000/003/0385/0389
CIRC ACCESSION NO--AP012600B

UNCLASSIFIED

2/2 023

UNCLASSIFIED

PROCESSING DATE--20NOV70

CIRC ACCESSION NO--AP0126008

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. NITRO ALCS. WERE REDUCED
ELECTROCHEM. AT MINUS 1.65 V ON HG CATHODE DURING 5 HR YIELD RNHCHR
PRIME1 C(OH)R PRIMEPH.HCL (I) (R, R PRIME1, R PRIME2, M.P., AND PERCENT
YIELD GIVEN); SHOWN ON MICROFICHE. FACILITY: NOVOSIBIRSK.
INST. ORG. KHIM., NOVOSIBIRSK, USSR.

1/2 019 UNCLASSIFIED PROCESSING DATE--13NOV70
TITLE--REACTION OF OMEGA BROMOACETOPHENONE AND OMEGA
BROMOPENTAFLUOROACETOPHENONE WITH SOME NUCLEOPHILIC REAGENTS -U-
AUTHOR-(05)-ANDREYEVSKAYA, O.I., BARKHASH, V.A., KOROBEYNICHEVA, I.K.,
KRIVOSOVA, YE.D., SOKOLENKO, V.A.
COUNTRY OF INFO--USSR
SOURCE--ZH. ORG. KHIM. 1970, 6(4), 711-17
DATE PUBLISHED-----70
SUBJECT AREAS--CHEMISTRY
TOPIC TAGS--BROMINATED ORGANIC COMPOUND, ACETOPHENONE, FLUORINATED ORGANIC
COMPOUND, ORGANIC OXIDE, CHEMICAL REACTION MECHANISM
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAHE--2000/1961 STEP NO--UR/0366/70/006/004/0711/0717
CIRC ACCESSION NO--AP0125550
UNCLASSIFIED

2/2 019
CIRC ACCESSION NO--AP0125550

UNCLASSIFIED

PROCESSING DATE--13NOV70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE REACTION OF BZCH SUB2 BR (I) WITH MEONA IN MEOH AT 35DEGREES GAVE ONLY BZCH SUB2 OME (II) AND BZCH SUB2 OH (III) (CONSIDERED FORMED THROUGH THE INTERMEDIATE 1, METHOXY, 1, PHENYLETHYLENE OXIDE, WHICH WAS NOT ISOLATED). AT 0-5DEGREES THIS REACTION GAVE THE ABOVE PRODUCTS AND ALSO 2 ISOMERS OF 1, BENZOYL, 2, BROMOMETHYL, 2, PHENYLETHYLENE OXIDE (IV). THE REACTION OF I WITH KF IN REFLUXING MEOH GAVE II, III, BZCH SUB2 F, AND 2 ISOMERS OF IV. THE REACTIONS OF C SUB6 F SUB5 COCH SUB2 BR (V) WITH MEONA IN MEOH GAVE COMPLEX MIXTS. CONTG. IN SOME CASES C SUB6 F SUB5 H, 1, BROMOMETHYL, 1, 2, BIS(PENTAFLUOROPHENYL)ETHYLENE OXIDE (VI), AND 1, BROMOMETHYL, 1, PENTAFLUOROPHENYL, 2, (P, METHOXYTETRAFLUOROBENZOYL)ETHYLENE OXIDE. THE REACTION OF V WITH KF-MEOH GAVE ALSO VI, C SUB6 F SUB5 H, AND TRANS, 1, 2, 3, TRIS(PENTAFLUOROPHENYL) CYCLOPROPANE (VII). HEATING VII WITH HI-ACOH ISOMERIZED IT TO 2, 5, BIS(PENTAFLUOROPHENYL), 3, PENTAFLUOROBENZOYLMETHYLFURMA. THE MECHANISMS OF THE ABOVE REACTIONS ARE DISCUSSED. FACILITY: NOVOSIBIRSK. INST. ORG. KHIM., NOVOSIBIRSK, USSR.

UNCLASSIFIED

1/2 016 UNCLASSIFIED PROCESSING DATE--30OCT70
TITLE--REACTIONS OF THE KETONE GROUP OF ETHYL PENTAFLUOROBENZOYLACETATE
-U-
AUTHOR--(02)--PRUDCHENKO, A.T., BARKHASE, V.A.
COUNTRY OF INFO--USSR
SOURCE--ZH. ORG. KHIM. 1970, 6(4), 727-31
DATE PUBLISHED-----70
SUBJECT AREAS--CHEMISTRY
TOPIC TAGS--KETONE, FLUORINATED ORGANIC COMPOUND, BENZENE DERIVATIVE,
ACETATE, AMINE, ORGANIC AZOLE COMPOUND
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--2000/1965 STEP NO--UR/0366/70/006/004/0727/0731
CIRC ACCESSION NO--AP0125554
UNCLASSIFIED

B

2/2 016

UNCLASSIFIED

PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0125554

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE REACTION OF H SUB2 NCSNHNH
SUB2 .HCL WITH C SUB6 F SUB5 COCH SUB2 CO SUB2 ET (I) AT 20DEGREES GAVE
C SUB6 F SUB5 C(:NNHCSNH SUB2)CH SUB2 CO SUB2 ET, WHICH ON REFLUXING
WITH HCL, ETOH, WATER MIXT. GAVE C SUB6 F SUB5 CME:NNHCSNH SUB2 (II).
HEATING I WITH H SUB2 NCSNHNH SUB2. (III) GAVE DIRECTLY II. ALSO THE
CLEAVAGE OF I WITH AQ. ETOH GAVE C SUB6 F SUB5 COME WHICH WAS CONDENSED
WITH III TO GIVE II. THE REACTION OF I WITH H SUB2 NCONHNH SUB2 HCL
GAVE C SUB6 F SUB5 C(:NNHCONH SUB2)CH SUB2 CO SUB2 ET WHICH ON HEATING
IN ETOH, HCL, WATER MIXT. GAVE C SUB6 F SUB5 C(:NNHCONH SUB2)ME AND
3,PENTAFLUOROPHENYL,5,PYRAZOLONE. AT ROOM TEMP. I REACTED WITH NH SUB2
OH.HCL TO GIVE C SUB6 F SUB5 C(:NOH)ME AND
3,PENTAFLUOROPHENYL,5,ISOXAZOLONE. FACILITY: NOVOSIBIRSK. INST.
ORG. KHIM., NOVOSIBIRSK, USSR.

UNCLASSIFIED

B

USSR

UDC 534.221

BARKHATOV, A. N., GORSKAYA, N. V., and KACHKHOYEVA, N. A., Gor'kiy State University

"Model Sound Waves in a Wedge with the Aid of Moire Patterns"

Moscow, Akusticheskiy Zhurnal, Vol 16, No 1, 1970, pp 10-14

Abstract: Analogy modeling of the sound field in a wedge is examined with the aid of moire patterns formed by superimposing moire gratings. It is shown that moire patterns make it possible to graphically represent the vertical distribution of the field at different distances from the rib of the wedge. The question of the number of normal waves in the plane-parallel layer and the wedge which must be modeling in estimating losses accompanying the reflection of sound from the absorbing bottom was investigated.

The angle between the normal to the fronts of each of these waves and the boundary of the flat layer for the case of identical (soft or hard) absolutely reflecting boundaries is

$$\phi_n = \text{arch sin} \left(\frac{n\lambda}{2h} \right) \quad (1)$$

USSR

BARKHATOV, A. N., et al., Akusticheskiy Zhurnal, Vol 16, No 1, 1970, pp 10-14

where n = number of normal wave, λ = length of sound wave, and H = thickness of layer.

On the other hand, the period of the moire pattern H_M formed by superimposing two hatched gratings with the same period λ_M is determined by the formula:

$$H_M = \frac{\lambda_M}{2 \sin \alpha_M} \quad (2)$$

where $2\alpha_M$ = angle of intersection of grating hatchings.

1/2 018 UNCLASSIFIED PROCESSING DATE--23OCT70
TITLE--MODEL SOUND WAVES IN A WEDGE WITH THE AID OF MOIRE PATTERNS -U-

AUTHOR--(03)-BARKHATOV, A.N., GORSKAYA, N.V., KACHKHOYEVA, N.A.

COUNTRY OF INFO--USSR

SOURCE--MOSCOW, AKUSTICHESKIY ZHURNAL, VOL 16, NO 1, 1970, PP 10-14

DATE PUBLISHED-----70

SUBJECT AREAS--PHYSICS

TOPIC TAGS--GRAPHIC TECHNIQUE, ACOUSTIC FIELD, ACOUSTIC REFLECTION, BOTTOM
LOSS, MATHEMATIC MODEL, MATRIX FUNCTION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1988/1878

STEP NO--UR/0046/70/016/001/0010/0014

CIRC ACCESSION NO--AP0106544

UNCLASSIFIED

2/2 019

UNCLASSIFIED

PROCESSING DATE--23OCT70

CIRC ACCESSION NG--AP0106544

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. ANALOGY MODELING OF THE SOUND FIELD IN A WEDGE IS EXAMINED WITH THE AID OF MOIRE PATTERNS FORMED BY SUPERIMPOSING MOIRE GRATINGS. IT IS SHOWN THAT MOIRE PATTERNS MAKE IT POSSIBLE TO GRAPHICALLY REPRESENT THE VERTICAL DISTRIBUTION OF THE FIELD AT DIFFERENT DISTANCES FROM THE RIB OF THE WEDGE. THE QUESTION OF THE NUMBER OF NORMAL WAVES IN THE PLANE PARALLEL LAYER AND THE WEDGE WHICH MUST BE MODELING IN ESTIMATING LOSSES ACCOMPANYING THE REFLECTION OF SOUND FROM THE ABSORBING BOTTOM WAS INVESTIGATED. THE ANGLE BETWEEN THE NORMAL TO THE FRONTS OF EACH OF THESE WAVES AND THE BOUNDARY OF THE FLAT LAYER FOR THE CASE OF IDENTICAL (SOFT OR HARD) ABSOLUTELY REFLECTING BOUNDARIES IS AN EQUALS ARCH SIN (N LAMBDA OVER 2H) (1) WHERE N EQUALS NUMBER OF NORMAL WAVE, LAMBDA EQUALS LENGTH OF SOUND WAVE, AND H EQUALS THICKNESS OF LAYER. ON THE OTHER HAND, THE PERIOD OF THE MOIRE PATTERN H SUBM FORMED BY SUPERIMPOSING TWO HATCHED GRATINGS WITH THE SAME PERIOD LAMBDA SUBM IS DETERMINED BY THE FORMULA: H SUBM EQUALS LAMBDA M OVER S SIN A SUBM (2) HWERE S PRIMEA SUBM EQUALS ANGLE OF INTERSECTION OF GRATING HATCHINGS. FACILITY: GOR'KIY STATE UNIVERSITY.

UNCLASSIFIED

1/2 010 UNCLASSIFIED PROCESSING DATE--09OCT70
TITLE--THE MAIN STAGES OF TECTONIC DEVELOPMENT OF ARCHIPELAGO SPITSBERGEN
-U-
AUTHOR--BARKHATOV, B.P. *B*
COUNTRY OF INFO--USSR
SOURCE--VESTNIK LENINGRADSKOGO UNIVERSITETA, NO 6, GEOLOGIYA, GEOGRAFIYA,
1970, NR 1, PP 157-159
DATE PUBLISHED-----70

SUBJECT AREAS--EARTH SCIENCES AND OCEANOGRAPHY
TOPIC TAGS--TECTONICS, MOUNTAIN, GEOLOGY

CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1991/0750 STEP NO--UR/0307/70/000/000/0157/0159
CIRC ACCESSION NO--AP0110474

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UNCLASSIFIED

PROCESSING DATE--09OCT70

CIRC ACCESSION NO--AP0110474

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. 1. SPITSBERGEN ARCHIPELAGO WAS
SUBJECTED TO TWO PERIODS OF POST PLATFORMINOIDAL MOUNTAIN BUILDING;
ANMELY IN SILURIAN DEVONIAN AND NEOGRNIAN QUARTERNARY EPOCHS. 2. THE
WHOLE ARCHIPELAGE DURING THE COURSE OF THE CALEDONIAN PERIOD (CYCLE) OF
DEVELOPMENT STARTING APPROXIMATELY FROM THE BEGINNING OF WEND
EXPERIENCED PLATFORMINOIDAL TECTONIC REGIME. 3. SPITSBERGEN AND
PROBABLY THE EAST GREENLANDIAN FOLD SYSTEM CANNOT BE CONSIDERED AS
CALEDONIAN SYSTEM IN AGE. THEY DO NOT FORM A PART OF THE CALEDONIAN
FOLD STRUCTURES OF NORTH EUROPEAN FOLD BELT.

1/2 010 UNCLASSIFIED PROCESSING DATE--090CT70
TITLE--THE ROLE OF V. I. LENIN IN DEVELOPMENT OF GEOLOGICAL SERVICE AND
MINERAL AND RAW MATERIALS BASE IN THE FIRST YEARS OF SOVIET POWER -U-
AUTHOR-(02)-BARKHATOV, B.P., BARKHATOVA, N.N.

COUNTRY OF INFO--USSR

B

SOURCE--VESTNIK LENINGRADSKOGO UNIVERSITETA, NO 6, GEOLOGIYA, GEOGRAFIYA,
1970, NR 1, PP 9-18
DATE PUBLISHED-----70

SUBJECT AREAS--MATERIALS, EARTH SCIENCES AND OCEANOGRAPHY

TOPIC TAGS--GEOLOGY, MINERAL, PETROLEUM RAW MATERIAL

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1991/0869

STEP NO--UR/0307/70/000/001/0009/0018

CIRC ACCESSION NO--AP0110590

UNCLASSIFIED

2/2 010

UNCLASSIFIED

PROCESSING DATE--09OCT70

CIRC ACCESSION NO--AP0110590

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE ARTICLE DEALS WITH THE DATA WHICH THROW LIGHT UPON THE ROLE OF V. I. LENIN IN THE ORGANIZATION OF GEOLOGICAL SERVICE, IN DEVELOPMENT OF SCIENCE AND IN CREATING OF A MINERAL AND RAW MATERIALS BASE OF OUR COUNTRY AT THE FIRST YEARS OF SOVIET POWER.

UNCLASSIFIED

USSR

UDC: 669.295

BARKHATOV, G. A., FEDOROV, N. G.

"Automatic Control System for Chlorination of Titanium Slags Based on
'Center' Pneumatic Complex"

Moscow, Tsvetnyye Metally, No 7, Jul 73, pp 54-57.

Abstract: An automatic control system has been developed, based on the "Center" pneumatic complex. The specific features of the connections between sections, arrangement of components, hierarchical structure for assembly and processing of information and control structure are described. Information is output from the system only if the operator needs to interfere or if a disruption of the proper mode occurs. This eliminates the need for the operator to process "excess" information direct from the sensors when the apparatus is operating normally. This control complex, put on stream at the Ust'-Kamenogorsk Titanium-Magnesium Combine, is an intermediate stage on the path to total automation of the combine under electronic computer control. The pneumatic control system was selected partially because the older, non-automated control system was pneumatic.

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USSR

BARKHATOVA, I. V.

"Exponential P-Stability of Solutions of Stochastic Differential Equations with Constant Delay"

Teoriya sluchayn. protsessov [Theory of Random Processes], No 1, Kiev, Nauk. Dumka Press, 1973, pp 18-21 (Translated from Referativnyy Zhurnal - Kibernetika, No 8, 1973, Abstract No 8 V92 by the author)

Translation: A system of quasilinear stochastic differential equations with constant delay

$$d\xi(t) = A(t, \xi(t-\tau))\xi(t)dt + \sum_{l=1}^m B_l(t, \xi(t-\tau))\xi(t)w_l(dt),$$

is studied, where $A(t, x, y)$ is an n -dimensional vector, $B(t, x, y)$ is a matrix of dimensionality $n \times m$, $w(t)$ is an m -dimensional Wienerian process. Sufficient conditions are found for exponential p -stability of a trivial solution of this system.

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USSR

UDC 519.2

BARKHATOVA, I. V.

"Finding the Distributions of the Solutions of Stochastic Differential Equations with a Delaying Argument"

Teoriya veroyatnostey i mat. stat. Mezhd. nauch. sb. (Probability Theory and Mathematical Statistics, Interdepartmental Scientific Collection), 1972, vyp. 6, pp 14-17 (from RZh-Kibernetika, No 9, Sep 72, Abstract No 9V70)

Translation: It is proved that the provisional mathematical expectations of functionals of the solutions of a stochastic differential equation with a delaying argument can be found as the solutions of differential equations of the parabolic type.

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USSR

UDC 631.547.04:633.11

LIKHACHEV, B. S., and BARKHATOVA, L. I., [VIR -- unknown abbreviation]

"The Effect of Chlorocholine Chloride on the Quality of Winter-crop Wheat Seeds"

Moscow, Khimiya v Sel'skom Khozyaystve, Vol. 11, No 10 (120), 1973, pp 60-61

Abstract: It has been shown that application of tur in the optimal dose of 4 kg/hectare improved the planting quality of the seeds of winter-crop wheat. This was especially effective in case of the strains subject to tumbling. Treating the plants with chlorocholine chloride lowered the mass of seeds of the new crop, but their energy of germination and vitreousness was increased.

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1/2 010 UNCLASSIFIED PROCESSING DATE--09OCT70
TITLE--THE ROLE OF V. I. LENIN IN DEVELOPMENT OF GEOLOGICAL SERVICE AND
MINERAL AND RAW MATERIALS BASE IN THE FIRST YEARS OF SOVIET POWER -U-
AUTHOR-(02)-BARKHATOV, B.P., BARKHATOVA, N.N.

COUNTRY OF INFO--USSR

SOURCE--VESTNIK LENINGRADSKOGO UNIVERSITETA, NO 6, GEOLOGIYA, GEOGRAFIYA,
1970, NR 1, PP 9-18

DATE PUBLISHED-----70

SUBJECT AREAS--MATERIALS, EARTH SCIENCES AND OCEANOGRAPHY

TOPIC TAGS--GEOLOGY, MINERAL, PETROLEUM RAW MATERIAL

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1991/0869

STEP NO--UR/0307/70/000/001/0009/0018

CIRC ACCESSION NO--AP0110590

UNCLASSIFIED

2/2 010

UNCLASSIFIED

PROCESSING DATE--09OCT70

CIRC ACCESSION NO--AP0110590

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE ARTICLE DEALS WITH THE DATA WHICH THROW LIGHT UPON THE ROLE OF V. I. LENIN IN THE ORGANIZATION OF GEOLOGICAL SERVICE, IN DEVELOPMENT OF SCIENCE AND IN CREATING OF A MINERAL AND RAW MATERIALS BASE OF OUR COUNTRY AT THE FIRST YEARS OF SOVIET POWER.

UNCLASSIFIED

USSR

UDC 612.273.2-019:616.37-008.6-086.9

BARKHINA, T. G., Laboratory of Electron Microscopy, Scientific Research
Institute of Human Morphology, Academy of Medical Sciences USSR, Moscow

"Ultrastructure of the Pancreas After Hypoxic Hypoxia"

Leningrad, Arkhiv Anatomii Gistologii i Embriologii, Vol 60, No 4, Apr 71,
pp 28-32

Abstract: Hypoxic hypoxia was induced in 27 male Wistar rats in an altitude chamber where they were kept of 5 hours at an atmospheric pressure of 307 mm Hg. Significant changes were observed in the parenchymal cells and in blood capillaries of the pancreas. Immediately after the animals were removed from the altitude chamber, the perinuclear space and nuclear pores of acinar cells were markedly enlarged; their mitochondria were swollen and had single cristae. The granular endoplasmic reticulum acquired the form of round bacules with invaginations, while the Golgi complex was markedly reduced. In blood capillaries, the basal layer was thin, the endothelial cells were flattened, and their nuclei had blade-like processes with uneven outlines. Six hours to 3 days after exposure to hypoxia, the granular endoplasmic reticulum assumed the form of elongated, dilated cysts with a large number of ribosomes. The cyto-
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USSR

BARKHINA, T. G., Arkhiv Anatomii Gistologii i Embriologii, Vol 60, No 4, Apr 71, pp 28-32

plasm of both the parenchymal and the endothelial cells contained numerous scattered ribosomes and polysomes; the mitochondria were small and had many cristae, while the matrix took up a large amount of osmic acid. The cytoplasm of acinar cells contained many zymogen granules as well as their precursors and clear granules. Thus, ultramicroscopic changes observed immediately after exposure to hypoxia were indicative of pancreatic hypofunction with disturbed protein metabolism, while changes which developed 6 hours later and persisted for 3 days suggested pancreatic hyperfunction.

2/2

1/2 026 UNCLASSIFIED PROCESSING DATE--09OCT70
TITLE--RELATION BETWEEN OBSERVED AND TRUE ABSORPTION SPECTRA OF MOLECULES
IN A CONDENSED MEDIUM. VIII. CASE OF ANISOTROPICALLY POLARIZABLE
AUTHOR--(03)-GIRIN, U.P., LIBOV, V.S., BAKHSHYEV, N.C.

COUNTRY OF INFO--USSR

SOURCE--OPT. SPEKTROSK. 1970, 28(2), 273-7

DATE PUBLISHED-----70

SUBJECT AREAS---PHYSICS

TOPIC TAGS--ABSORPTION SPECTRUM, LIGHT ABSORPTION, MOLECULAR SPECTROSCOPY,
ANISOTROPY, CHARGED PARTICLE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS---UNCLASSIFIED
PROXY REEL/FRAE--1984/0370

STEP NO--UR/0051/70/028/002/0273/0277

CIRC ACCESSION NO--AP0055155

UNCLASSIFIED

B

2/2 026

UNCLASSIFIED

PROCESSING DATE--09OCT70

CIRC ACCESSION NU--AP0055155

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. EQUATIONS FOR THE EVALUATION OF CORRECTION FACTORS FOR THE INDIVIDUAL ABSORPTION BANDS IN THE SPECTRA OF ANISOTROPICALLY POLARIZED MOLES. IN A CONDENSED MEDIUM (FROM THE EXPTL. DETD. OPTICAL CONSTS. OF THE LIQ.) HAVE BEEN DERIVED. THESE CORRECTIONS ARE NECESSARY FOR THE DETN. OF THE SPECTRA OF EINSTEIN COEFF. FROM THE EXPTL. FOUND SPECTRA.

89

UNCLASSIFIED

Acc. Nr.: **AP0029510**

Ref. Code: UR 0240

PRIMARY SOURCE: *B* Gigiyena i Sanitariya, 1970, Nr 1, pp 61-66

FEATURES TO PECULIAR GLOBAL CESIUM-137
AND STRONTIUM-90 REACHING THE POPULATION
OF POLECIA BY DIFFERENT FOOD SUPPLY ROUTES

A. N. Marey, R. M. Barkhudarov, V. K. Chumak, E. V. Petukhova,
E. B. Tyuryukanova, G. A. Kuznetsova, N. Ya. Novikova,
S. B. Pozhivilova, G. A. Bogdanovich

The paper presents investigation data on the order of passage of abovementioned isotopes from the soil into food products with due regard for the soil nature and the accumulation of isotopes in the human body. The finding was that the extent of the passage of cesium-137 from the soil into food products fluctuated considerably and depended on the type of soil. Thus, in a soil consisting mainly of a sand fraction the passage of cesium-137 was more pronounced. Similar observation were made in respect to all of the objects examined. However, no differences in the migration of strontium-90 could be detected. Due to the high passage of cesium-137 into food products its content in the human body was high as well.

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REEL/FRAME

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Pharmacology and Toxicology

USSR

UDC 591.1.15

MOVSEYAN, M. A., BARKHUDARYAN, L. Kh., ARUTYUNYAN, D. Ye., and MELIK-MKRTCHYAN, L. N.

"Glycogen Concentration Changes in the Heart Muscle of Irradiated Rats"

V sb. Materialy 3 Zakavkaz. nauch. konf. patofiziologov, 1972 (Collection of Papers Presented at Third Transcaucasian Scientific Conference of Pathophysiologicals, 1972), Tbilisi, 1972, pp 151-152 (from Referativnyy Zhurnal -- Biologicheskaya Khimiya, Otdel'nyy Vypusk, No 2, 1973, Abstract No 2F1335 by V. M. Podval'naya)

Translation: Comparatively small doses of ionizing radiation cause a stress reaction, along with its specific effect. When radiation sickness is very light or light, the glycogen concentration in the heart muscle is the protective reaction of the animal organism and constitutes a part of the general adaptation syndrome. Adrenergic structures in the hypothalamus hypophysis-adrenal cortex system represent the necessary link without which the activation of this system is impossible.

1/1

USSR

UDC 6.12.1/8.173.1:612.1/8-014.426

MOVSESYAN, M. A., ZAKHARYAN, A. B., SARUKHANOV, A. G., BARKHUDARYAN, J. and
ISHKHANYAN, A. S., Yerevan Physics Institute, Ministry of Health Armenian SSR

"Effect of a Permanent Magnetic Field on the Rat Myocardium Content of Na,
K, Ca, and Glycogen in the Process of Acclimatization to the High Mountain
Conditions of Aragats"

Yerevan, Biologicheskii Zhurnal Armenii, Vol 24, No 2, Feb 71, pp 95-97

Translation: Considerable importance has been attached during the past few years to investigation of the effects of a magnetic field on the human and animal organisms. This is explained first by the fact that the intensity of magnetic fields utilized in industry and scientific research has been considerably magnified, and second --- by the fact that a connection has been established between the increase in the frequency of sudden deaths caused by cardiovascular failure and the formation of solar magnetic storms. At present the intensity of the permanent and temporary fields in free play attains a magnitude of 100,000 oersted, while impulsive magnetic structures can create a magnetic field with an intensity of up to 2,500,000 oersted.

Data obtained in investigations of the effect of a permanent magnetic field on the electrolyte (Na, K, Ca) and glycogen and content in the myocardium
1/6

USSR

KOVSESYAN, M. A., et al., *Biologicheskij Zhurnal Armenii*, Vol 24, No 2, Feb 71, pp 95-97

of rats during the process of acclimatization to high altitude conditions are cited in this report.

The investigations were carried out on 166 white nonbred rats 150-200 grams in weight transferred from Yerevan (900 meters above sea level) to Mount Aragats (3,250 meters above sea level).

At different periods of their habitation on the high mountain (24, hours, 7 and 40 days) a part of the rats were placed in a magnetic field with a magnitude of 7,800 oersted where they were kept for two hours. Together with the controls (rats not placed in the magnetic field) they were then sacrificed for the purpose of determining the myocardium content of the indexes mentioned. The electrolyte content was determined with the help of a DPF-58 type of flame photometer and expressed in millicquivalents per liter; the glycogen content was determined by the Mendel-Khuglas method.

The same indexes were studied in intact rats under Yerevan conditions. A comparison of the data obtained in the investigation of the intact rats under Yerevan conditions with the data obtained at different periods of habitation of the rats at the high altitude enabled us to arrive at a representation of the changes which take place in the myocardium content of Na, K, Ca, and

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USSR

MOVSESYAN, M. A., et al., *Biologicheskii Zhurnal Armenii*, Vol 24, No 2, Feb 71, pp 95-97

glycogen during the process of acclimatization. At the same time the data obtained in the study of these two groups served as a control for study of the influence of the magnetic field.

The results of the above-described investigations are presented in the table.

It is obvious from the data obtained that during the process of acclimatization changes in the rat myocardium content of Na, K, Ca, and glycogen take place.

In the course of the 40-day habitation of the rats on Mount Aragats the myocardium content of glycogen gradually diminished, with the largest diminution noted on the seventh day. In the same animals the myocardium content of Ca gradually and only slightly increased, while changes in the quantity of Na and K were wave-like in character: the heart tissue's content of Na and K increased within 24 hours, decreased by the seventh day, and again increased by the 40th day.

It was found that placing the animals in a magnetic field for two hours affects the course of the indicated changes, particularly if the rats are placed in the magnetic field on the first day of their transfer from Yerevan to Mount Aragats. For instance, it was noted that when rats 22 hours after

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USSR

MOVSESYAN, M. A., et al., Biologicheskii Zhurnal Arasni, Vol 24, No 2, Feb 71, pp 95-97

their arrival on Mount Aragats were placed and kept for a period of 2 hours in a magnetic field and then sacrificed to determine the myocardium content of Na, K, Ca, and glycogen, the results obtained differed from the results obtained in investigation of the intact animals.

Differing from the intact animals, no wave-like changes in the content of Na, K, and Ca occur in the experimental rats. Under the influence of the magnetic field the heart muscle's content of Na and K is considerably diminished. In the same animals the effect of the magnetic field tends to induce a still greater decrease of the myocardium content of glycogen. When the rats, however, were placed in the magnetic field on the 7th and 40th days on Mount Aragats no particular changes were noted.

Thus the animals were found to be most sensitive to the influence of a magnetic field when they had not become adapted to high altitude conditions. As adaptation progresses the sensitivity of the organism to the influence of the magnetic field decreases.

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Myocardium Content of Sodium, Potassium, Calcium, and Glycogen Table 1

Place where animals were kept	Period of time at high altitudes	Manipulation	Sodium			Potassium		
			M ± m	*P ₁	*P ₂	M ± m	*P ₁	*P ₂
Yerevan	—	Intact	33.6±1.5	—	—	67.6±2.0	—	—
Aragats	24 Hours	Intact	43.3±1.8	0.001	—	78.4±1.5	0.05	—
		Under influence of magnetic field	27.7±0.5	0.05	0.001	54.5±3.3	0.01	0.001
	7 Days	Intact	28.0±0.3	0.01	—	61.7±2.1	0.1	—
		Under influence of magnetic field	26.6±1.9	0.01	0.5	63.3±1.6	0.5	0.5
	40 Days	Intact	39.7±1.0	0.01	—	74.3±1.5	0.05	—
		Under influence of magnetic field	36.6±0.9	0.5	0.05	73.5±1.7	0.05	0.5

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(Table continued below)

(Table continued from above)

Place where animals were kept	Period of time at high altitudes	Manipulation	Calcium			Glycogen		
			M ± m	* P ₁	* P ₂	M ± m	* P ₁	* P ₂
Yerevan	—	Intact	3.3±0.04	—	—	690.0±19.0	—	—
Aragats	24 Hours	Intact	3.8±0.05	0.01	—	510.0±71.0	0.05	—
	7 Days	Under influence of magnetic field	3.3±0.15	0.5	0.05	258.0±17.7	0.02	0.01
		Intact	3.2±0.10	0.5	—	220.0±20.0	0.001	—
	40 Days	Under influence of magnetic field	3.7±0.17	0.05	—	250.0±17.7	0.01	0.2
		Intact	3.9±0.08	0.01	—	305.0±11.6	0.01	—
		Under influence of magnetic field	4.0±0.1	0.001	0.05	260.0±35.6	0.001	0.5

* R₁ -- Reliability coefficient of the difference in comparison with data ^m and data obtained in rats under Yerevan conditions.

* R₂ -- Reliability coefficient of the difference in data obtained under Aragats conditions, under the influence of a magnetic field, and without it.

6/6

1/2 010 UNCLASSIFIED PROCESSING DATE--2306170
TITLE--VINYLACETYLENE CHEMISTRY. LXXXVII. ACETYLENE, ALLENE, CUMULENE
REARRANGEMENT DURING THE REPLACEMENT OF CHLORINE BY AMINES IN
AUTHOR--(03)-VARTANYAN, S.A., BARKHUDARYAN, M.R., BADANYAN, SH.O.
COUNTRY OF INFO--USSR
SOURCE--ARM. KHIM. ZH. 1970, 23(1), 31-7 *B*
DATE PUBLISHED-----70
SUBJECT AREAS--CHEMISTRY
TOPIC TAGS--ACETYLENE, ALLENE, CHLORINE, AMINE, HALOGENATED ORGANIC
COMPOUND
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--1995/1446 STEP NO--UR/0426/70/023/001/0031/0037
CIRC ACCESSION NO--AP0116897
UNCLASSIFIED

2/2 010 UNCLASSIFIED PROCESSING DATE--23OCT70
CIRC ACCESSION NO--AP0116887
ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. (COMPD. PREPD. BY VARIOUS
TREATMENTS SHOWN ON MICROFICHE). FACILITY: INST. ORG. KHIM.,
EREVAN, USSR.

UNCLASSIFIED

USSR

BARKIN, A. I., Moscow, *Avtomatika i Telemekhanika*, No 6, 1970, pp 88-92

integral non-negative $1 \leq [M/2]$ there is no $\alpha \geq 0$ such that

$$\operatorname{Re} W^*(j\omega l) [1 + \alpha(1 - e^{-j\omega l})] + \frac{1}{k} \geq 0,$$

or there is an $\alpha < 0$ such that

$$\operatorname{Re} W^*(j\omega l) [1 - \alpha(e^{j\omega l} - 1)] + \frac{1}{k} \geq 0,$$

and for one l , the left sides of these two formulas are strictly positive.
The theorems are proven.

2/2

Acc. Nr.

AA0034523

Abstracting Service:
CHEMICAL ABST. 4-70

Ref. Code
UR 0482

3

70210d Mixture for a semiacid refractory. Shcheglov, S. I.;
Karasik, V. L.; Barkolova, T. K. (Dnepropetrovsk Metal-
lurgical Institute) U.S.S.R. 230,714 (Cl. C 04b); 12 Aug 1969,
Appl. 27 Oct 1967; From *Открытия, Изобрет., Prom. Obratsy,*
Tovarnye Znaki 1969, 48(26), 163. The title charge consists of
a fireclay 30-40, a semiacid clay 30-40, and quartz sand ≥ 30 wt.
%.

MGCL

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REEL/FRAME

19711219

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USSR

UDC 615.285.7.025.1.099.036.11.036.88

BARKOV, A. M., and GLUKHOVETS, B. I., Central Regional Hospital, Konakovo

"A Case of Acute Chlorophos Poisoning With A Fatal Outcome"

Moscow, Terapevticheskiy Arkhiv, No 4, 1971, pp 118-119

Abstract: A 42-year-old man was brought unconscious to the hospital where he died within six hours despite heroic treatment for suspected poisoning by an unknown agent. The clinical course of the intoxication was similar to that described in the literature, except for the absence of convulsions. The diagnosis was established at autopsy, when chemical analysis of tissues revealed the presence of phosphorus and a chlorine-containing substance thought to be the organophosphorus compound chlorophos. It was subsequently learned that chlorophos had recently been used in the dead man's home as an insecticide.

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USSR

VLASKIN, YE. F., and BARKOV, A. S.

"Utilization of Polymer Materials and the Progress in Agriculture"

Moscow, *Plasticheskiye Massy*, No 11, 1973, pp 3-6

Abstract: The authors analyze the developments in polymer materials and their application to various agricultural problems. The most widely used application is that of the plastic films, which in many cases was found to replace effectively glass. The second important development was in the area of plastic pipes, construction materials and even in machinery parts. The remainder of this paper is aimed at the needs for future developments, which principally revolved around greater range of applicability, by aiming at more precisely designed products adaptable to the conditions prevailing in the area of utilization.

1/1

Acc. Nr:

AP0049799

Abstracting Service:

CHEMICAL ABST. 5-76

Ref. Code:

UR0138

B

101593n Determining the gas permeability of rubber goods.
 Gaziev, G. A.; Barkov, A. S.; Sotnikov, E. E.; Faustova, D. G.;
 Gus'kova, N. J.; Reiflinger, S. A. (Inst. Biofiz., Moscow, USSR).
 Kauch. Rezina 1970, 29(1), 50-2 (Russ). Gas chromatog. was
 used to det. the permeability to N, H, and CO₂ of polychloro-
 prene (I), natural rubber (II), or containers made of I or II bond-
 ed with adhesive SV-1. The method is suggested for testing the
 quality of bonded joints between plastics. CPJR

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REEL/FRAME
19801721

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USSR

UDC: 621.798.4:621.396.69

BARKOV, I. P.

"A Device for Packing Radio Components in Thermoplastic Film"

Moscow, Otkrytiya, Izobreteniya, Promyshlennyye Obraztsy, Tovarnyye Znaki, No 32, 1970, Soviet Patent No 284074, Class 21, 81, filed 23 Jun 69, p 32

Abstract: This Author's Certificate introduces a device for packing radio components in thermoplastic film. The device contains two bobbins for the film sheets, reverbaratory furnaces, tappets with spring-return rods, a tape-transport mechanism and a holder with a chute. As a distinguishing feature of the patent, the expenditure of packing film is reduced by fitting the device with a guide element, parallel to which are cover plates with rectangular openings, while the tape-transport mechanism is equipped with nippers. On one of the sections of these nippers are heaters made in the form of wires stretched in two mutually perpendicular directions between spring-braced stands.

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USSR

UDC 669.295.004.2

SOLOV'YEV, Yu. V., BARKOV, L. S., SHCHETKIN, Ye. A., KORNIYENKO, L. A., SEMEN'KOV, A. V.

"Continuous Installation for Decontamination of Titanium-Magnesium Production Gas Purification Waste Water"

Tr. Vses. N.-i. i Proekt. In-ta Alyumin., Magn. i Elektrod. Prom-sti [Works of All-Union Scientific Research and Planning Institute for the Aluminum, Magnesium and Electrode Industry], No 79, 1971, pp 95-99, (Translated from Referativnyy Zhurnal, Metallurgiya, No 5, 1972, Abstract No 5 G269 by G. Svodtseva).

Translation: An installation with a planned productivity of 2.5 m³/hr chlorinated lime milk has been constructed and tested at the Bereznikovskiy titanium-magnesium combine. Tests were performed using the waste water from gas purification in the electrolysis shops and acid waste waters from gas purification from the section where carnallite is dehydrated in fluidized bed furnaces. Extraction of Cl₂ from the wastes is 28%; the main losses (66%) result from the formation of CaCl₂. The extraction of Cl₂ can be increased by increasing the concentration of Ca(ClO)₂ and decreasing the concentration of Ca(OH)₂ and

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USSR

UDC 669.295.004.2

SOLOV'YEV, Yu. V., BARKOV, L. S., SHCHETKIN, Ye. A., KORNIYENKO, L. A.,
SEMEN'KOV, A. V., Tr. Vses. N.-i. i Proekt. In-ta Alyumin., Magn. i Elektrod.
Prom-sti, No 79, 1971, pp 95-99.

CaCO₃ in the chlorinated lime milk. The annual economic effect of introduction
of this method of the combine was 250,000 rubles.

2/2

Pharmacology and Toxicology

USSR

UDC 615.214.2.03:616.89-008.444.9

BARKOV, N. K., Laboratory of the Pharmacology of the Nervous System, Institute of Pharmacology, Academy of Medical Sciences USSR, Moscow

"The Effects of Neuroleptic Drugs on Aggressive Behavior"

Moscow, Zhurnal Nevropatologii i Psikhatrii, Vol 72, Vyp 1, pp 108-111

Abstract: Four neuroleptic drugs were tested on mice and rats in whom aggressive behavior was induced by Tedeschi's method and on cats and monkeys with a naturally aggressive disposition. Aminazine and ethaperazine exerted a strong tranquilizing effect. However, a threat still provoked an aggressive response, despite the otherwise apathetic and semidormant condition of the animals. Karbidin and triftazin, in appropriate doses, caused no psychomotor depression but completely eliminated aggressive behavior, which was most evident on monkeys. The findings correlate well with clinical observations made on patients treated with these drugs.

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USSR

UDC 615.214.22:547.869 (Florphenazinum)

LYUBIMOV, B. I., RAYEVSKIY, K. S., OSTROVSKAYA, R. U., BARKOV, N. K., and KROLEVETS, G. N., Laboratory of the Pharmacology of Nervous System, Pharmacology Institute, Academy of Medical Science USSR, Moscow

"Neurotropic Properties of Fluzophenazine"

Moscow, Farmakologiya i Toksikologiya, Vol 34, No 3, May-Jun 71, pp 287-290

Abstract: Neurotropic properties of fluzophenazine -- 10-(γ -[4-(β -hydroxyethyl)-pipersinyl-1]-propyl)-2-trifluoromethylphenothiazine dihydrochloride were investigated. The drug was found to be a highly potent neuroleptic. It produced catalepsy, inhibited conditioned reflexes of avoidance, spontaneous motor activity, averted phenamine-induced hyperactivity, prolonged and potentiated the anesthetizing effect of sodium thiopental and hexobarbital, synchronized EEG, and blocked EEG-activation provoked by an acoustic stimulant and phenamine. Fluphenazine is an extremely potent antiemetic. Compared with triftazin, fluphenazine is less toxic and exceeds trifluoperazine in neurotropic activity.

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BARKOV, N.

JPRS 066019
17 May 1972
UMC: 615.015:001.8

METHODOLOGICAL ISSUES IN PHARMACOLOGY

Article by N.V. Barkov, N.K. Barkov, V.I. Bulyk (Moscow); Moscow, Vestnik Akademii Meditsinskikh Nauk SSSR, Russian, No 3, 1972, pp 76-82

In modern times, the only effective methodology of science is materialistic dialectics. Since dialectical materialism discloses the overall patterns of the world, these patterns also extend over medical science.

Specific, special laws are a manifestation of generalities under concrete conditions, and generally, in turn, in manifested via specific patterns. The thesis of dialectical materialism on the universal relationship between phenomena must necessarily be taken into consideration when analyzing medical problems. Of course, when considering specific phenomena, one has to artificially abstract them from certain links. But ultimately, an overall [complex] analysis is required to avoid unilateral judgments. For example, if the causes of pharmacological investigation of new chemical compounds, the researcher obtains information about their different types of activity, the type of activity, individually, would permit different (and often contradictory) in relation to other properties) determination of the specifics in the series of the preparation. However, the set of data obtained permits more precise evaluation of the nature of action of a substance and identification thereof as being in a specific group of pharmacological agents. V.I. Lenin indicated that as he moves up from the concrete to the abstract, the investigator does not "digress from facts" (if the abstract is correct), he comes closer to it, since all serious abstractions reflect nature more deeply.

A fact is the reflection of some aspect of a subject (object) or phenomenon in man's consciousness. This means that the fact has a subjective component too, and that one should avoid a simple pursuit of the "logic of facts." Very often, investigators evince differently the same fact (for example, the same investigative method or set of properties of a drug). Dialectical materialism, however, is the method that allows the investigator to be properly oriented in different, even contradictory, facts, and to find the true link between them.

The principle of complementarity introduced by Bohr is very important in gaining knowledge of basically new phenomena; i.e., the use of mutually

USSR

UDC 615.12+616.99

BARKOV, N. K., Candidate of Medical Sciences, RAYEVSKIY, G. S.,
Candidate of Medical Sciences and SKOLDINOV, A. P., Candidate of
Chemical Sciences

"Psychopharmacological Substances"

Moscow, Zhurnal Vsesoyuznogo Khimicheskogo Obshchestva imeni D. I.
Mendeleyeva, Vol 15, No 2, 1970, pp 156-164

Abstract: WHO recommends that the group of psychopharmacological
substances include only those products which effect the psychic
functions and the experience of life. The group includes innumer-
able neuropsychiatric drugs. Neuroleptics, acting on the auto-
nomic nervous system, defers the autonomic functions in schizo-
phrenia and maniacal states by disturbing the extrapyramidal system,
they may induce lack of muscular coordination. Derivatives of
phenothiazine, thioxanthene, reserpine and benzoquinoline are re-
presentative of this group. Tranquilizers, the anti-anxiety drugs,
include anticonvulsants, barbiturates, meprofan, some phenothia-
zines, and hundreds of allied products. Antidepressants, used in
manic-depressive reactions include hydrazine and some inhibitors.
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USSR

BARKOV, N. K., et al., Zhurnal Vsesoyuznogo Khimichskogo Obshchestva, imeni D. I. Mendeleeva, Vol 51, No 2, 1970, pp 156-164

Psychostimulants such as coffee, theophylline and theobromine stimulate body and mind, but the ephedrine and amphetamine analogues act on the CNS as psychic stimulants. Psychotomimetics are without therapeutic value. But with all these drugs, side effect, allergic reactions and many untoward paradoxical syndromes are likely to occur.

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1/2 015 UNCLASSIFIED PROCESSING DATE--27NOV70
TITLE--PSYCHOPHARMACOLOGICAL AGENTS -U-
AUTHOR-(03)-BARKOV, N.K., RAYEVSKIY, K.S., SKOLDINOV, A.P.
COUNTRY OF INFO--USSR
SOURCE--ZH. VSES. KHIM. OBSHCHEST. 1970, 15(2), 156-64
DATE PUBLISHED-----70
SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES
TOPIC TAGS--TRANQUILIZER, HALLUCINOGEN, PHARMACOLOGY
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--3009/0146 STEP NO--UR/0063/70/015/002/0156/0164
CIRC ACCESSION NO--AP0139011
UNCLASSIFIED

2/2 015

UNCLASSIFIED

PROCESSING DATE--27NOV70

CIRC ACCESSION NO--AP0139011

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. A REVIEW IS GIVEN ON THE STRUCTURE OF NEUROLEPTICS, TRANQUILIZERS, ANTIDEPRESSANTS, PSYCHOSTIMULANTS, AND HALLUCINOGENS.

UNCLASSIFIED

Inorganic Compounds

USSR

UDC 541.49

KRUMINA, V. T., ASTAKHOV, K. V., and BARKOV, S. A., Order of Labor
Red Banner State Pedagogic Institute imeni V. I. Lenin, Moscow,
Ministry of Education RSFSR

"Complex Compounds of Titanium-IV and Vanadium-III with Diethylene-
triaminepentaacetic Acid"

Moscow, Zhurnal Fizicheskoy Khimii, Vol 44, No 7, Jul 70, pp 1609-
1613

Abstract: Formation of complexes of Ti^{4+} and V^{3+} with diethylene-
triaminepentaacetic acid (H_5P) in aqueous solutions was studied
by the spectrophotometric method. Only complexes with a 1:1
molar ratio of the two components (metal ion and H_5P) were formed.
The following complexes formed in the pH ranges indicated: $TiHP$
(pH 1.3-1.7), TiP^- (pH 1.7-2.0), VP^{2-} (pH 0.4-0.9). The negative
logarithms of the acidolysis and dissociation constants of the
three complexes were calculated.

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1/2 010 UNCLASSIFIED PROCESSING DATE--18SEP70
TITLE--COMPLEXING OF PRASEODYMIUM WITH DIETHYLENTRIAMINEPENTAACETIC ACID
-U-
AUTHOR--(03)-KRUMINA, V.T., ASTAKHOV, K.V., BARKOV, S.A.
COUNTRY OF INFO--USSR
SOURCE--ZH. FIZ. KHIM. 1970, 44(2), 422-5
DATE PUBLISHED-----70
SUBJECT AREAS--CHEMISTRY
TOPIC TAGS--PRASEODYMIUM COMPOUND, COMPLEX COMPOUND, ACETIC ACID,
SPECTROPHOTOMETRIC ANALYSIS
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--1987/0325 STEP NO--UR/0076/70/044/002/0422/0426
CIRC ACCESSION NO--AP0103980
UNCLASSIFIED

B

2/2 010

UNCLASSIFIED

PROCESSING DATE--18SEP70

CIRC ACCESSION NO--AP0103980

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE COMPLEX FORMATION OF PR PRIME3 PLUS WITH H SUB5 L (DIETHYLENETRIAMINEPENTAACETIC ACID) IN AQ. SOLNS. IS STUDIED BY SPECTROPHOTOMETRIC METHODS. TWO COMPLEXES ARE FORMED: PRL PRIME2 NEGATIVE AT PH OF 2.2 AND PR SUB2 L PLUS AT PH GREATER THAN 6. THE INSTABILITY CONSTS. OF THE COMPLEXES WERE DETD.; THE PK SUBH ARE 21.79-22.27 AND 27.89-27.92, RESP.

UNCLASSIFIED

1/2 015 UNCLASSIFIED PROCESSING DATE--20NOV70
TITLE--SPECTROPHOTOMETRIC STUDY OF NICKEL AMMONIA COMPLEXES -U-

AUTHOR--(03)-MYLNIKOVA, V.M., ASTAKHOV, K.V., BARKOV, S.A.

COUNTRY OF INFO--USSR

SOURCE--ZH. FIZ. KHIM. 1970, 44(3), 560-3

DATE PUBLISHED-----70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--SPECTROPHOTOMETRIC ANALYSIS, NICKEL COMPLEX, AMMONIA,
SPECTROPHOTOMETER/(U)SF4A SPECTROPHOTOMETER

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--3002/1195

STEP NO--UR/0076/70/044/003/0560/0563

CIRC ACCESSION NO--AP0128613

UNCLASSIFIED

B

2/2 G15

UNCLASSIFIED

PROCESSING DATE--20NOV70

CIRC ACCESSION NO--AP0128613

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. SPECTROPHOTOMETRIC METHOD IS USED TO STUDY THE FORMATION OF NI,NH SUB3 COMPLEXES IN AQ. SOLN. THE COMPLEXING PROCESS PROCEEDS STEPWISE. THE ABSORBANCE OF THE SOLNS. WAS DETD. CN SF,4A SPECTROPHOTOMETER AT 500-730 NM. THE COMPNS. OF THE COMPLEXES FORMED AND THE 1ST 3 INSTABILITY CONSTS. WERE DETD. THE PK SUB1, PK SUB2, AND PK SUB3 VALUES FOR NINH SUB3 PRIME2 POSITIVE WERE 2.953 PLUS OR MINUS 0.136, 2.14, AND 1.60, RESP. FACILITY: MOSK. GOROD. PEDAGOG. INST.IM. LENINA, MOSCOW, USSR.

UNCLASSIFIED

Acc. Nr:

AP0054190

Abstracting Service:

NUCLEAR SCI. ABST. 57C

Ref. Code:

4R 0089

18620 HETEROGENEOUS REACTORS FLATTENING BY
FUEL RODS ARRANGEMENT. Ponomarev-Stepnoi, N. N.;
Glushkov, E. S.; Nosov, V. I.; Barkov, S. N. At. Energ. (USSR);
28: 58-60(Jan 1970). (In Russian).

Tabulated data show variations of fuel element distributions and
effective coefficient of breeding during flattening as functions of
the number of heat transfer areas along the gradient. (8 refer-
ences) (R.V.J.)

— 77C

REEL/FRA
19831306

2

1/2 018 UNCLASSIFIED PROCESSING DATE--23OCT70
TITLE--ESTROGENIC ACTIVITY OF SOME STEROIDS OF THE C SUB18 SERIES -U-
AUTHOR-(04)-TORGOV, I.V., CHERNYAVSKAYA, N.A., SEDAL, G.M., BARKOV, T.I.
COUNTRY OF INFO--USSR
SOURCE--IZVESTIYA AKADEMII NAUK SSSR, SERIYA BIOLOGICHESKAYA, 1970, NR 2,
PP 208-213
DATE PUBLISHED-----70
SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES
TOPIC TAGS--ESTROGEN, ESTRADIOL, ESTER, MOLECULAR STRUCTURE, HYDROGEN
BONDING
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--1997/0124 STEP NO--UR/0216/70/000/002/0208/0213
CIRC ACCESSION NO--AP0119120
UNCLASSIFIED

2/2 018

UNCLASSIFIED

PROCESSING DATE--23OCT70

CIRC ACCESSION NO--AP0119120

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. ESTROGENIC ACTIVITY OF SOME ESTRADIOL DERIVATIVES POSSESSING ELECTROPHILIC SUBSTITUENTS IN THE RING A, ESTRENDIOLS WITH THE DOUBLE BOND IN DIFFERENT POSITIONS, ESTRADIOL ESTERS AND 15,16,DEHYDROESTRONE HAS BEEN STUDIED ACCORDING ALLEN DOISY METHOD. IT HAS BEEN SHOWN THAT IN SOME CASES EVEN INSIGNIFICANT CHANGES IN THE MOLECULE OF A NATURAL ESTROGEN (FOR INSTANCE FLATTENING OF THE D RING OR THE CHANGE OF THE HYDROXYL POSITION IN THE RING A) CAUSES A DECREASE OF ESTROGENIC ACTIVITY. ONLY A STRICTLY DEFINITE DISTRIBUTION OF ELECTRON DENSITIES IN THE HORMONE MOLECULE AS WELL AS ITS CONFORMATIONAL PROPERTIES GUARANTIES HIGH AFFINITY TOWARDS THE RECEPTOR. INTRODUCTION OF SUBSTITUENTS INTO THE 2 AND THE 4 POSITION CAUSES A COMPLETE LOSS OF ESTROGENIC ACTIVITY OF THE MODIFIED MOLECULE DUE TO A STERIC HINDRANCE OR OWING TO A POSSIBLE FORMATION OF INTRAMOLECULAR HYDROGEN BONDS WITH THE PHENOL HYDROXY GROUP.
FACILITY: INSTITUTE FOR CHEMISTRY OF NATURAL PRODUCTS, ACADEMY OF SCIENCES USSR.

UNCLASSIFIED

Acc. Nr.: **AP0029324**

Ref. Code: UR 0297

PRIMARY SOURCE: Antibiotiki, 1970, Vol 15, Nr 1, pp67-71

**DISTRIBUTION OF MONOMYCIN IN ORGANS AND TISSUES OF LABORATORY
ANIMALS AFTER ITS ADMINISTRATION BY VARIOUS ROUTES**

Neuymin, N.I.; Barkov, V.N.

E. I. Martsinovsky Institute for Medical Parasitology and Tropical Medicine, Moscow

The dynamics of monomycin distribution in the skin and organs of animals on parenteral administration and local application of the antibiotic was studied. The highest levels of monomycin on its local application to the skin in a dose of 10 000 Units/kg were observed in the blood and the skin in 1-3 and 3-8 hours respectively. When monomycin ointment was applied to a restricted skin area of animals not fixed in cages in a single dose of 2 g/kg, the highest concentration of the antibiotic was recorded in 24 hours at the site of application. On application of the ointment in the same dosage to fixed animals the monomycin skin levels were twice as higher. After repeated applications no significant accumulation of the ointment in the skin and the organs was observed. On local application to the skin the maximum levels of monomycin in the internal organs were lower than those after parenteral administration which may be of use in prophylaxis of complications.

REEL/FRAME

19680896

6 gm

1/2 008 UNCLASSIFIED PROCESSING DATE--13NOV70
TITLE--ON THE INTERACTION OF LITHIUM HYDROMETASILIKATE WITH CALCIUM
HYDROXIDE UNDER HIDROTHERMAL CONDITIONS -U-
AUTHOR--BARKOVA, F.F.
COUNTRY OF INFO--USSR **B**
SOURCE--IZVESTIYA SIBIRSKOGO OTOLENIYA AKADEMII NAUK SSSR, NO 4, SERIYA
KHIMICHESKIKH NAUK, 1970, NR 2, PP 153-156
DATE PUBLISHED-----70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--LITHIUM COMPOUND, SILICATE, CALCIUM HYDROXIDE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--1993/0588

STEP NO--UR/0289/70/000/000/0153/0156

CIRC ACCESSION NO--AP0113479

UNCLASSIFIED

2/2 008

UNCLASSIFIED

PROCESSING DATE—13NOV70

CIRC ACCESSION NO--AP0113479

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE INTERACTION BETWEEN LI SUB2
SID SUB3 NH SUB2 O AND CA(OH) SUB2 UNDER HIDROTHERMAL CONDITIONS WAS
STUDIED. IN THE TEMPERATURE RANGE OF 20 TO 200DEGREESC THE REACTION
PROCEEDS WITH THE FORMATION OF CALCIUM HYDROMONOSILICATE CASIO SUB3
TIMES NH SUB2 O AT 270DEGREESC, IN ADDITION TO CALCIUM
HYDROMONOSILIKATE, THE FORMATION OF DICALCIUM HYDROSILICATE,
HILLEBRANDITE, TAKES PLACE. FACILITY: INSTITUT
FIZIKO-KHIMICHESKIKH OSNOV PERERATOTKI MINERAL'NOGO SYR'YA SO AN SSSR,
NOVOSIBIRSK.

UNCLASSIFIED

Acc. Nr.

AP 0045165

Abstracting Service:
CHEMICAL ABST.

5-70
B

Ref. Code

UR0191

91060v Thermal properties of glass-fiber reinforced plastics studied by a torsion method. Akimov, S. V.; Barkova, M. V. (USSR). *Plast. Massy* 1970, (1), 70-2 (Russ). A single glass fiber, impregnated with a binder was subjected to free torsional vibrations. From the vibration period and damping the rigidity (G) (proportional to the shear modulus; J. K. Gillham *et al.*, 1963) and $\tan \delta$ were obtained. Changes of G and $\tan \delta$ with time and temp. in the 20-320° range were detd. for the following binders: P-2-3 (epoxy-polyester resin), EM (epoxy-amine resin), AG-4 (phenolic resin), P-2-7 (epoxy-phenolic resin), P-2-1 (epoxy-thiokol resin), 27-63 (epoxy-PhNH₂-phenolic resin), 25-34B (epoxy-novolak-phenolic resin), GM-75 [poly(diene imide)]. The decrease of the bending strength of P-2-7 with the time and heating temp. were detd. CPJR

L.D

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REEL/FRAME
19780065

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"APPROVED FOR RELEASE: 09/17/2001

CIA-RDP86-00513R002200310010-2



APPROVED FOR RELEASE: 09/17/2001

CIA-RDP86-00513R002200310010-2"

"Reprocessing Waste Titanium and its Alloys in a Chloride Melt"

Moscow, Metallurgiya i Khimiya Titana (Institut Titana), Metallurgiya Publishing House, Vol 6, 1970, pp 135-140

Translation: Results are given of experimental-industrial research on the reprocessing of ungraded waste mixtures of chips from different titanium alloys by chlorinating in a chloride melt. An experimental batch of marketable titanium sponge was obtained. The characteristics of the raw material used, the chlorine gas, the coke, and the working fusion are given, along with a description of the technological conditions, the chart for preparing chips for chlorination, and the technological equipment charts for the chlorination and cleaning conversions. An analysis is made of the distribution of alloying elements in the products of chlorination. Basic expenditure coefficients, calculated per ton of industrial titanium tetrachloride, are deduced, and data are given on the quality of the TiCl₄ and the sponge titanium obtained. Three illustrations and one table.

1/1

USSR

UDC 911.3.616.928.6(47+57)

ARIYEVICH, A. M., STEPANISHCHEVA, Z. G., LYSENKO, A. Ya., MALKINA, A. Ya.,
AGARUNOVA, Yu. S., DARCHENKOVA, N. N., BARKOV, V. N., and MINSKER, O. B.

"Three-Year Study of Histoplasmosis in the USSR"

V. sb. Materialy Nauchn. konferentsii, posvyashch. 50-letiyu In-ta med.
parazitol. i trop. med. (Proceedings of the Scientific Conference Com-
memorating the 50th Anniversary of the Institute of Medical Parasitology
and Tropical Medicine -- collection of works), Moscow, 1970, pp 61-63
(from RZh-36. Meditsinskaya Geografiya, No 1, Jan 71, Abstract No 1.36.124)

Translation: A total of 31 cases of histoplasmosis were recorded in the
USSR by the beginning of 1970. Of these, 24 were in Western Siberia. A
total of 690 soil specimens were examined, gathered from sites where histo-
plasmosis was recorded (Tyumenskaya oblast, Turkmen SSR and others) and from
sites having no cases (Armenian SSR and the environs of Moscow). The agent
of histoplasmosis was isolated from soil of the Turkmen SSR. In one out of
50 house mice (in Turkmen SSR) signs were found of histoplasmosis. Skin
tests (176 in Tyumen oblast and 591 in Turkmenia) were made yielding posi-
tive results in 2% and 5.6% of the cases studied, respectively.

1/1

Acc. Nr.: **AP0029324**

Ref. Code: UR 0297

PRIMARY SOURCE: Antibiotiki, 1970, Vol 15, Nr 1, pp67-71

DISTRIBUTION OF MONOMYCIN IN ORGANS AND TISSUES OF LABORATORY ANIMALS AFTER ITS ADMINISTRATION BY VARIOUS ROUTES

Neuymin, N.I.; Barkov, V.N.

E. I. Martsinovskiy Institute for Medical Parasitology and Tropical Medicine, Moscow

The dynamics of monomycin distribution in the skin and organs of animals on parenteral administration and local application of the antibiotic was studied. The highest levels of monomycin in the blood and the skin in 1-3 and 3-8 hours respectively. When monomycin ointment was applied to a restricted skin area of animals not fixed in cages in a single dose of 2 g/kg, the highest concentration of the antibiotic was recorded in 24 hours at the site of application. On application of the ointment in the same dosage to fixed animals the monomycin skin levels were twice as higher. After repeated applications no significant accumulation of the ointment in the skin and the organs was observed. On local application to the skin the maximum levels of monomycin in the internal organs were lower than those after parenteral administration which may be of use in prophylaxis of complications.

REEL/FRAME

19680896

6 gm

1/2 008 UNCLASSIFIED PROCESSING DATE--13NOV70
TITLE--ON THE INTERACTION OF LITHIUM HYDROMETASILKATE WITH CALCIUM
HYDROXIDE UNDER HIDROTHERMAL CONDITIONS -U-
AUTHOR--BARKOVA, F.F. **B**
COUNTRY OF INFO--USSR
SOURCE--IZVESTIYA SIBIRSKOGO OTDELENIYA AKADEMII NAUK SSSR, NO 4, SERIYA
KHIMICHESKIKH NAUK, 1970, NR 2, PP 153-156
DATE PUBLISHED--70
SUBJECT AREAS--CHEMISTRY
TOPIC TAGS--LITHIUM COMPOUND, SILICATE, CALCIUM HYDROXIDE
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--1993/0588 STEP NO--UR/0289/70/000/000/0153/0156
CIRC ACCESSION NO--AP0113479
UNCLASSIFIED

2/2 008

UNCLASSIFIED

PROCESSING DATE--13NOV70

CIRC ACCESSION NO--AP0113479

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE INTERACTION BETWEEN LI SUB2
SIO SUB3 NH SUB2 O AND CA(OH) SUB2 UNDER HIDROTHERMAL CONDITIONS WAS
STUDIED. IN THE TEMPERATURE RANGE OF 20 TO 200DEGREESC THE REACTION
PROCEEDS WITH THE FORMATION OF CALCIUM HYDROMONOSILICATE CASIO SUB3
TIMES NH SUB2 O AT 270DEGREESC, IN ADDITION TO CALCIUM
HYDROMONOSILIKATE, THE FORMATION OF DICALCIUM HYDROSILICATE,
HILLEBRANDITE, TAKES PLACE. FACILITY: INSTITUT
FIZIKO-KHIMICHESKIKH OSNOV PERERATOTKI MINERAL'NOGO SYR'YA SO AN SSSR,
NOVOSIBIRSK.

AP9053087

B

UR 0289

PRIMARY SOURCE: Izvestiya Sibirskogo Otdeleniya, AN SSSR,
Seriya Khimicheskikh Nauk, Nr 12(162), Nr 5,
pp 137-140

F. E. Barkova

SPODUMENE ALTERATION UNDER THE ACTION
OF Li HYDROPIDE SOLUTIONS

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12

Spodumene alteration is observed in 5N and 1,67N solution of lithium hydropide at 100°C. The process is characterised by large uptake of lithium from the solution by mineral. 18 hours contact of spodumene with a 5N lithium hydropide solution results in the formation of a single phase product consisting of lithium hydroalumosilicate having the composition $3.6Li_2O \cdot Al_2O_3 \cdot 3.9SiO_2 \cdot 2.4H_2O$. In 1,67N solution the crystallisation of the same hydroalumosilicate takes place, but there is a small admixture of lithium hydroalumosilicate of the composition $Li_2O \cdot Al_2O_3 \cdot 2SiO_2 \cdot nH_2O$.

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Acc. Nr.

AP0045165

Abstracting Service:
CHEMICAL ABST.

5-70
B

Ref. Code

UR0191

91060v Thermal properties of glass-fiber reinforced plastics studied by a torsion method. Akimov, S. V.; Baslova, M. V. (USSR). *Plast. Massy* 1970, (1), 70-2 (Russ). A single glass fiber, impregnated with a binder was subjected to free torsional vibrations. From the vibration period and damping the rigidity (G) (proportional to the shear modulus, J. K. Gillham et al., 1963) and $\tan \delta$ were obtained. Changes of G and $\tan \delta$ with time and temp. in the 20-320° range were detd. for the following binders: P-2-3 (epoxy-polyester resin), EM (epoxy-amine resin), AG-4 (phenolic resin), P-2-7 (epoxy-phenolic resin), P-2-1 (epoxy-thiokol resin), 27-63 (epoxy-PhNH₂-phenolic resin), 25-34B (epoxy-novolak-phenolic resin), GM-75 [poly(diene, imide)]. The decrease of the bending strength of P-2-7 with the time and heating temp. were detd.

CPJR

LD

4

REEL/FRAME
19780065

7

USSR

UDC 669.295.054.79

5

GALITSKIY, N. V., BAYBEKOV, M. K., DROZHZEY, V. I., CHEPRASOV, I. M.,
MEDVEDCHIKOV, E. P., BARKOVA, N. P., ZAVADOVSAYA, V. N., SELEDTSOV, D. K.,
and KORENDYASEV, M. I.

"Reprocessing Waste Titanium and Its Alloys in a Chloride Melt"

Moscow, Metallurgiya i Khimiya Titana (Institut Titana), Metallurgiya
Publishing House, Vol 6, 1970, pp 135-140

Translation: Results are given of experimental-industrial research on the reprocessing of ungraded waste mixtures of chips from different titanium alloys by chlorinating in a chloride melt. An experimental batch of marketable titanium sponge was obtained. The characteristics of the raw material used, the chlorine gas, the coke, and the working fusion are given, along with a description of the technological conditions, the chart for preparing chips for chlorination, and the technological equipment charts for the chlorination and cleaning conversions. An analysis is made of the distribution of alloying elements in the products of chlorination. Basic expenditure coefficients, calculated per ton of industrial titanium tetrachloride, are deduced, and data are given on the quality of the $TiCl_4$ and the sponge titanium obtained. Three illustrations and one table.

1/1

USSR

UDC: 517.948:513.88

BARKOVSKAYA, N. V.

"Existence and Uniqueness of Solutions of Differential-Functional Equations in Banach Space"

Mat. fizika. Resp. mezhved. sb. (Mathematical Physics. Republic Interdepartmental Collection), 1970, vyp. 8, pp 30-35 (from RZh-Matematika, No 5, May 71, Abstract No 5B951)

Translation: The author considers the problem $\frac{dx(t)}{dt} = [\Phi(x)](t), x(t_0) = x_0$. Here Φ is the mapping of $E(t_0, \infty)$ in $E(t_0, \infty)$, where $E(t_0, \infty)$ is a space of vector functions continuous on $[t_0, \infty)$ with a domain belonging to a complex Banach space; i. e., Φ , generally speaking, is a nonlinear operator. The expression $[\Phi(x)](t)$ is understood to mean the value of the vector function $\Phi(x)$ at point t . The existence and uniqueness of the solution of the problem under the condition

$$\|\Phi(x)\| (t) - \|\Phi(y)\| (t) < q(t) \max_{t_0 < \tau < t} \|x(\tau) - y(\tau)\|$$

is proved, where $q(t)$ does not depend on x, y and is a locally summable function when $t > t_0$. Examples are cited of operators which satisfy the given condition. Author's abstract.

1/1

UDC 621.314.61

USSR

BABICH, V. M., and BARKOVSKIY, B. S.

"Method for Experimental Determination of the Electrotechnical Factors of the Switching Effect on the Rectifiers of a Converter with an Investigation of the Electromagnetic Processes"

Nauch. tr. Omsk. in-t inzh. zh.-d. transp. (Scientific Works of the Omsk Institute of Railroad Transportation Engineers), 1970, 117, pp 11-21 (from RZh--Elektronika i yeye primeneniye, No 5, May 1971, Abstract No 5B421)

Translation: The paper discussed a method for determination of the electrotechnical factors of the switching effect for rectifiers during experimental investigations of converters for a-c electric locomotive and traction substations. The proposed method can be useful for experiments during investigation of processes in power converters. 3 ill. 1 tab.

1/1

- 10 -

L/2 009 UNCLASSIFIED PROCESSING DATE--27NOV70
TITLE--COVARIANT FORM OF FOURTH ORDER TENSORS IN CRYSTALS -U-
AUTHOR--(02)-FEDOROV, F.I., BARKOVSKIY, L.M. *B*
COUNTRY OF INFO--USSR
SOURCE--ZH. PRIKLAD. SPEKTROSK (USSR), VOL. 12, NO. 4, P. 726-34, APRIL
1970
DATE PUBLISHED----APR 70
SUBJECT AREAS--PHYSICS
TOPIC TAGS--CRYSTAL SYMMETRY, VECTOR, TENSOR
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--3007/1113 STEP NO--UR/0368/70/012/004/0726/0734
CIRC ACCESSION NO--AP0136533
UNCLASSIFIED

UNCLASSIFIED

PROCESSING DATE--27NOV70

2/2 009

CIRC ACCESSION NO--AP0136533

ABSTRACT/EXTRACT--(U) GP-0-

ABSTRACT. CONSIDERATION OF POLAR TENSOR IN THE HIGHER RANK BY ANALYSIS OF INDIVIDUAL COMPONENTS BECOMES TOO CUMBERSOME, AS FOR EXAMPLE IN CRYSTALS WITH 32 SYMMETRY CLASSES. THE APPLICATION OF MATRICES ALSO HAS DRAWBACKS, AND THE PROPOSED METHOD IS BASED ON PRESENTATION OF TENSORS OF RANK ABOVE THE SECOND ORDER BY A COMBINATION OF PRODUCTS. THESE INCLUDE TENSOR OF THE SECOND RANK UNIT VECTORS ORIENTED ALONG THE CRYSTAL SYMMETRY ELEMENTS. THE SECOND RANK TENSORS ARE DERIVED FROM THE CONDITION OF INVARIANCE OF TENSOR AS FAR AS THE SYMMETRY GROUP TRANSFORMATIONS. THE PROCEDURE CAN BE EXTENDED TO HIGHER RANK TENSORS.

Acc. Nr. **AP0048918** - Abstracting Service:
CHEMICAL ABST. 5-70

Ref. Code:
UR 0075

B

104571q Solubility products of 8-mercaptoquinolines of certain metals. Kharkover, M. Z.; Barkovskii, V. F.; Vdovina, V. M.; Gurova, L. P. (Ural State Univ., Sverdlovsk, USSR). *Zh. Anal. Khim.* 1970, 25(1), 30-3 (Russ). Soly. products of Co, Pb, Zn, V, Bi, and Mn 8-mercaptoquinolines were detd. by an extn.-photometric method. Their neg. log. are 29.60, 26.02, 29.44, 25.10, 46.81, and 15.91, resp. Soly. products of Fe, Mn, Ni, and Bi thiooxinates in CHCl₃ were detd. The following soly. scale was composed: Mn > V > Pb > Ni ~ Fe > Co ~ Zn > Bi. Conditions for sepg. those elements with thiooxine were calcd.
Chaim Weiner

1/1

REEL/FRA
19800690

7nt

1/2 009
 TITLE--PHOSPHORUS CERIU MOLYBDENUM HETEROPOLY COMPLEX -U-
 UNCLASSIFIED
 AUTHDR--(02)-BARKOVSKIY, V.F., VELIKANOVA, T.V.
 COUNTRY OF INFO--USSR
 SOURCE--ZH. NEORG. KHIM. 1970, 15(3), 749-52
 DATE PUBLISHED-----70
 PROCESSING DATE--16OCT70
 SUBJECT AREAS--CHEMISTRY
 TOPIC TAGS--SPECTROPHOTOMETRIC ANALYSIS, CERIU COMPOUND, MOLYBDENUM
 COMPLEX COMPOUND, PHOSPHORUS COMPOUND
 CONTROL MARKING--NO RESTRICTIONS
 DOCUMENT CLASS--UNCLASSIFIED
 PROXY REEL/FRAE--1993/0679
 STEP NO--UR/0038/70/015/003/0749/0752
 ACCSSION NO--AP0113550
 UNCLASSIFIED

B

2/2 009 UNCLASSIFIED PROCESSING DATE--1600110

CIRC ACCESSION NO--AP0113550 ABSTRACT. FORMATION OF P-CE-MO COMPLEX (I)

ABSTRACT/EXTRACT--(U) GP-0- IN HNO₃ SUB₃ SOLN. WAS STUDIED SPECTROPHOTOMETRICALLY. I FORMED IN

0.2-0.4N HNO₃ SUB₃. AT SMALLER THAN 0.2N HNO₃ SUB₃ CONCEN., A DOUBLE SALT

OF CE-MO PPT. AND AT GREATER THAN 0.6N HNO₃ SUB₃ CONCEN., THE INTENSITY FO

THE EXPTL. AND BLANK SOLNS. INCREASED DRASTICALLY. WHEN SNCL SUB₂ WAS

ADDED TO I SOLN. IN 0.6N H SUB₂ SO SUB₄ A BLUE PRODUCT FORMED. I HAS A

2:1 CE:P RATIO. FACILITY: URAL. GOS. UNIV. IM. GOR'KOGO,

SVERDLOVSK, USSR.

1/2 009 UNCLASSIFIED
 TITLE--FORMATION OF BLUE MOLYBDOPHOSPHORIC ACID IN THE ABSENCE OF A
 REDUCING AGENT -U-
 AUTHOR-(03)-BARKOVSKIY, V.F., ALIKINA, N.A., SHVAREV, V.S.
 COUNTRY OF INFO--USSR
 SOURCE--ZH. ANAL. KHIM. 1970, 25(2), 341-5
 DATE PUBLISHED--70
 SUBJECT AREAS--CHEMISTRY
 TOPIC TAGS--PHOSPHORIC ACID, MOLYBDENUM COMPOUND, METAL COMPLEX COMPOUND
 CONTROL MARKING--NO RESTRICTIONS
 DOCUMENT CLASS--UNCLASSIFIED
 PROXY REEL/FRAE--1994/1944
 STEP NO--UR/0075/70/025/002/0341/0345
 NO--AP0115752 UNCLASSIFIED

PROCESSING DATE--13NOV70

UNCLASSIFIED

2/2 009

CIRC ACCESSION NO--AP0115752

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. DURING THE REACTION OF NA
 PHOSPHATE, AMMONIUM MOLYBDATE, AND MO(V) AT A TOTAL COMPD. CONC. OF N
 TIMES 10 PRIME NEGATIVE3 M A BLUE MOLYBDOPHOSPHORIC ACID (I) IS FORMED
 AT A VARIABLE MO(VI):MO(V) RATIO. AT A MOLYBDATE CONC. OF N TIMES 10
 PRIME NEGATIVE4 M THE REGION OF MAX. COLOR DEVELOPMENT IS AT PH 1.6-2.3
 AND AT A CONC. OF MOLYBDATE N TIMES PRIME NEGATIVE3 M THE RANGE IS PH
 0.65-0.9. IN THE LATTER CASE MOLYBDATE CONC. IS INSUFFICIENT TO FORM A
 HETEROPOLY COMPLEX. THREE TYPES OF I ARE FORMED: THE 1ST WITH A P
 TOTAL MO RATIO OF 1:6 AT THE TOTAL SUM OF COMPONENTS OF 2 TIMES 10 PRIME
 NEGATIVE3 M, THE 2ND WITH A 1:9 RATIO AND COMPONENT CONC. 4.0 TIMES 10
 PRIME NEGATIVE3 M, AND THE 3RD WITH A 1:13 RATIO AND THE TOTAL COMPONENT
 CONC. OF 4.8 TIMES 10 PRIME NEGATIVE3 M. THE AV. VALENCE OF MO DURING
 I FORMATION IS 5.84 WHICH REPRESENTS A MO(VI)-MO(V) RATIO OF 10:2. ALL
 SOLNS. HAVE MAX. ABSORBANCE IN THE 830 NM REGION. FACILITY:
 URAL STATE UNIV., SVERDLOVSK, USSR.

UNCLASSIFIED

1/2 029 UNCLASSIFIED PROCESSING DATE--20NOV70
 TITLE--ANALYSIS OF FERROMAGNETIC MATERIALS. USE OF 8-MERCAPTOQUINOLINE
 FOR THE EXTRACTION AND PHOTOMETRIC ANALYSIS OF AN IRON, COBALT, NICKEL
 AUTHOR--(05)-GANPOLSKIY, V.I., KHARKOVER, M.Z., BARKOVSKIY, V.F.,
 SHARAPOVA, V.S., KOSTYUKKULGAVCHUK, L.P.
 COUNTRY OF INFO--USSR

B

SOURCE--VESTSI AKAD. NAVUK BELARUS. SSR, SER. KHIM. NAVUK 1970, (1), 58-63
 DATE PUBLISHED--70

SUBJECT AREAS--CHEMISTRY, MATERIALS, PHYSICS

TOPIC TAGS--MERCAPTAN, QUINOLINE, PHOTOMETRIC ANALYSIS, IRON, COBALT,
 NICKEL, FERROMAGNETIC FILM, SOLVENT EXTRACTION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
 PROXY REEL/FRA--2000/2105

STEP NO--UR/0419/70/000/001/0058/0063

CIRC ACCESSION NO--AP0125689

UNCLASSIFIED

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PROCESSING DATE--20NOV70

CIRC ACCESSION NO--AP0125689

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE USE OF 8 MERCAPTOQUINOLINE (I) IN THE EXTN. AND PHOTOMETRIC ANAL. OF 2, AND 3, COMPONENT FERROMAGNETIC FILMS (FE,CO,NI, FE,NI, FE,CO, AND CO,NI) WAS STUDIED BY USING SYNTHETIC SAMPLES. I CAN BE USED SUCCESSFULLY IN THE ANAL. OF FERROMAGNETIC MATERIALS. THE SAMPLE OF THE FERROMAGNETIC MATERIAL IS DISSOLVED IN H SUB2 SO SUB4 OR HCL, TREATED WITH AQ. SOLN. OF I, NH SUB4 OH, AND CHCL SUB3. THE CHCL SUB3 EXT. IS TREATED WITH AQ. 6-8N H SUB2 SO SUB4 TO REMOVE FE, THEN WITH AQ. HCL TO REMOVE NI. THE AQ. SOLNS. ARE REEXTD. WITH CHCL SUB3. THE ABSORBANCES OF THE CHCL SUB3 EXTS. OF FE, CO, AND NI 8 MERCAPTOQUINOLINATES ARE MEASURED AT 450, 470, AND 540 NM, RESP. FACILITY: INST. FIZ. TVERD. TELA POLUPROV., MINSK, USSR.

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UDC 621.314.61

BABICH, V. M., and BARKOVSKIY, B. S.

"Method for Experimental Determination of the Electrotechnical Factors of the Switching Effect on the Rectifiers of a Converter with an Investigation of the Electromagnetic Processes"

Nauch. tr. Omsk. in-t inzh. zh.-d. transp. (Scientific Works of the Omsk Institute of Railroad Transportation Engineers), 1970, 117, pp. 11-21 (from RZh—Elektronika i yeye primeneniye, No 5, May 1971, Abstract No SB421)

Translation: The paper discussed a method for determination of electrotechnical factors of the

1/2 009 UNCLASSIFIED PROCESSING DATE--27NOV70
 TITLE--COVARIANT FORM OF FOURTH ORDER TENSORS IN CRYSTALS -U-
 AUTHJR--(02)-FEDOROV, F.I., BARKOVSKIY, L.M. *B*
 COUNTRY OF INFO--USSR

1970 DATE PUBLISHED---APR70
 JOURNAL OF PHYSICS, VOL. 12, NO. 4, P. 726-34, APRIL

SUBJECT AREAS--PHYSICS
 TOPIC TAGS--CRYSTAL SYMMETRY, VECTOR, TENSOR

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
 PROXY REEL/FRAE--3007/1113

STEP NO--08/0368/70/0127004/0726/0736

CIRC ACCESSION NO--AP0136533

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PROCESSING DATE--27NOV70

CIRC ACCESSION NO--AP0136533

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. CONSIDERATION OF POLAR TENSOR IN THE HIGHER RANK BY ANALYSIS OF INDIVIDUAL COMPONENTS BECOMES TOO CUMBERSOME, AS FOR EXAMPLE IN CRYSTALS WITH 32 SYMMETRY CLASSES. THE APPLICATION OF MATRICES ALSO HAS DRAWBACKS, AND THE PROPOSED METHOD IS BASED ON PRESENTATION OF TENSORS OF RANK ABOVE THE SECOND ORDER BY A COMBINATION OF PRODUCTS. THESE INCLUDE TENSOR OF THE SECOND RANK UNIT VECTORS ORIENTED ALONG THE CRYSTAL SYMMETRY ELEMENTS. THE SECOND RANK TENSORS ARE DERIVED FROM THE CONDITION OF INVARIANCE OF TENSOR AS FAR AS THE SYMMETRY GROUP TRANSFORMATIONS. THE PROCEDURE CAN BE EXTENDED TO HIGHER RANK TENSORS.

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Acc. Nr: **AP0048918** - Abstracting Service:
CHEMICAL ABST. 5-70

Ref. Code:
UR 0035

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104571q Solubility products of 8-mercaptoquinolines of certain metals. Kharkover, M. Z.; Barkovskii, V. F.; Vdovina, V. M.; Gurova, L. P. (Ural State University, Sverdlovsk, USSR). Zh. Anal. Khim. 1970, 25(1), 30-3 (Russ). Soly. products of Co, Pb, Zn, V, Bi, and Mn 8-mercaptoquinolines were detd. by an extrn-photometric method. Their neg. logs are 29.60, 25.02, 29.44, 25.10, 46.81, and 15.94, resp. Soly. products of Fe, Mn, Ni, and Bi thiooxinates in CHCl₃ were detd. The following soly. scale was composed: Mn > V > Pb > Ni ~ Fe > Co ~ Zn > Bi. Conditions for sepg. those elements with thiooxine were calcd.
Chaim Weiner

1/1

REEL/FRA
19800690

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1/2 009 UNCLASSIFIED PROCESSING DATE--16OCT70
TITLE--PHOSPHORUS CERIUM MOLYBDENUM HETEROPOLY COMPLEX -U-
AUTHOR--(02)-BARKOVSKIY, V.F., VELIKANOVA, T.V. *B*
COUNTRY OF INFO--USSR
SOURCE--ZH. NEORG. KHIM. 1970, 15(3), 749-52
DATE PUBLISHED-----70

SUBJECT AREAS--CHEMISTRY
TOPIC TAGS--SPECTROPHOTOMETRIC ANALYSIS, CERIUM COMPOUND, MOLYBDENUM
COMPLEX COMPOUND, PHOSPHORUS COMPOUND

CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--1993/0679 STEP NO--UR/0038/70/015/003/0749/0752
CIRC ACCESSION NO--AP0113550
UNCLASSIFIED

2/2 009

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PROCESSING DATE--16OCT70

CIRC ACCESSION NO--AP0113550

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. FORMATION OF P-CE-MO COMPLEX (I) IN HNO SUB3 SOLN. WAS STUDIED SPECTROPHOTOMETRICALLY. I FORMED IN 0.2-0.4N HNO SUB3. AT SMALLER THAN 0.2N HNO SUB3 CONC., A DOUBLE SALT OF CE-MO PPT. AND AT GREATER THAN 0.6N HNO SUB3 CONC., THE INTENSITY FO THE EXPTL. AND BLANK SOLNS. INCREASED DRASTICALLY. WHEN SNCL SUB2 WAS ADDED TO I SOLN. IN 0.6N H SUB2 SO SUB4 A BLUE PRODUCT FORMED. I HAS A 2:1 CE:P RATIO. FACILITY: URAL. GDS. UNIV. IM. GOR'KOGO, SVERDLOVSK, USSR.

UNCLASSIFIED

172 009 UNCLASSIFIED PROCESSING DATE--13NOV70
TITLE--FORMATION OF BLUE MOLYBDOPHOSPHORIC ACID IN THE ABSENCE OF A
REDUCING AGENT -U-
AUTHOR-(03)-BARKOVSKIY, V.F., ALIKINA, N.A., SHVAREV, V.S.
COUNTRY OF INFO--USSR
SOURCE--ZH. ANAL. KHIM. 1970, 25(2), 341-5
DATE PUBLISHED--70
SUBJECT AREAS--CHEMISTRY
TOPIC TAGS--PHOSPHORIC ACID, MOLYBDENUM COMPOUND, METAL COMPLEX COMPOUND
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--1994/1944 STEP NO--UR/0075/70/025/002/0341/0345
CIRC ACCESSION NO--AP0115752
UNCLASSIFIED

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PROCESSING DATE--13NOV70

CIRC ACCESSION NO--AP0115752

ABSTRACT/EXTRACT--(U) GP-O- ABSTRACT. DURING THE REACTION OF NA PHOSPHATE, AMMONIUM MOLYBDATE, AND MO(V) AT A TOTAL COMPD. CONCN. OF N TIMES 10 PRIME NEGATIVE3 M A BLUE MOLYBDOPHOSPHORIC ACID (I) IS FORMED AT A VARIABLE MO(VI):MO(V) RATIO. AT A MOLYBDATE CONCN. OF N TIMES 10 PRIME NEGATIVE4 M THE REGION OF MAX. COLOR DEVELOPMENT IS AT PH 1.6-2.3 AND AT A CONCN. OF MOLYBDATE N TIMES PRIME NEGATIVE3 M THE RANGE IS PH 0.65-0.9. IN THE LATTER CASE MOLYBDATE CONCN. IS INSUFFICIENT TO FORM A HETEROPOLY COMPLEX. THREE TYPES OF I ARE FORMED: THE 1ST WITH A P TOTAL MO RATIO OF 1:6 AT THE TOTAL SUM OF COMPONENTS OF 2 TIMES 10 PRIME NEGATIVE3 M, THE 2ND WITH A 1:9 RATIO AND COMPONENT CONCN. 4.0 TIMES 10 PRIME NEGATIVE3 M, AND THE 3RD WITH A 1:13 RATIO AND THE TOTAL COMPONENT CONCN. OF 4.8 TIMES 10 PRIME NEGATIVE3 M. THE AV. VALENCE OF MO DURING I FORMATION IS 5.84 WHICH REPRESENTS A MO(VI)-MO(V) RATIO OF 10:2. ALL SOLNS. HAVE MAX. ABSORBANCE IN THE 830 NM REGION. FACILITY: URAL STATE UNIV., SVERDLOVSK, USSR.

UNCLASSIFIED

1/2 029 UNCLASSIFIED PROCESSING DATE--20NOV70
TITLE--ANALYSIS OF FERROMAGNETIC MATERIALS. USE OF 8 MERCAPTOQUINOLINE
FOR THE EXTRACTION AND PHOTOMETRIC ANALYSIS OF AN IRON, COBALT, NICKEL
AUTHOR--(05)--GANOPOLSKIY, V.I., KHARKOVER, M.Z., BARKOVSKIY, V.F.,
SHARAPOVA, V.S., KOSTYUKKULGAVCHUK, L.P. B
COUNTRY OF INFO--USSR

SOURCE--VESTSI AKAD. NAVUK BELARUS. SSR, SER. KHIM. NAVUK 1970, (1), 58-63
DATE PUBLISHED--70

SUBJECT AREAS--CHEMISTRY, MATERIALS, PHYSICS

TOPIC TAGS--MERCAPTAN, QUINOLINE, PHOTOMETRIC ANALYSIS, IRON, COBALT,
NICKEL, FERROMAGNETIC FILM, SOLVENT EXTRACTION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--2000/2105

STEP NO--UR/0419/70/000/001/0058/0063

CIRC ACCESSION NO--AP0125689

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PROCESSING DATE--20NOV70

CIRC ACCESSION NO--A0125689

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE USE OF 8 MERCAPTOQUINOLINE (I) IN THE EXTIN. AND PHOTOMETRIC ANAL. OF 2, AND 3, COMPONENT FERROMAGNETIC FILMS (FE,CO,NI, FE,NI, FE,CO, AND CO,NI) WAS STUDIED BY USING SYNTHETIC SAMPLES. I CAN BE USED SUCCESSFULLY IN THE ANAL. OF FERROMAGNETIC MATERIALS. THE SAMPLE OF THE FERROMAGNETIC MATERIAL IS DISSOLVED IN H SUB2 SO SUB4 OR HCL, TREATED WITH AQ. SOLN. OF I, NH SUB4 OH, AND CHCL SUB3. THE CHCL SUB3 EXT. IS TREATED WITH AQ. 6-8N H SUB2 SO SUB4 TO REMOVE FE, THEN WITH AQ. HCL TO REMOVE NI. THE AQ. SOLNS. ARE REEXTD. WITH CHCL SUB3. THE ABSORBANCES OF THE CHCL SUB3 EXT. OF FE, CO, AND NI 8 MERCAPTOQUINOLINATES ARE MEASURED AT 450, 470, AND 540 NM, RESP. FACILITY: INST. FIZ. TVERD. TELA POLUPROV., MINSK, USSR.

UNCLASSIFIED

1/2 009 UNCLASSIFIED PROCESSING DATE--30OCT70
TITLE--SELF CONTINGENCY OF OPERATORS PRODUCED BY THE SCHRODINGER EQUATION
WITH INHOMOGENEOUS BOUNDARY CONDITIONS ON A PORTION OF THE BOUNDARY -U-
AUTHOR--BARKOVSKIY, V.U.

COUNTRY OF INFO--USSR

SOURCE--DIFFERENTIAL'NYE URAVENIIA, VOL. 6, MAR. 1970, P. 513-524

DATE PUBLISHED----MAR70

SUBJECT AREAS--MATHEMATICAL SCIENCES

TOPIC TAGS--MATHEMATIC OPERATOR, SCHROEDINGER EQUATION, HILBERT SPACE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1996/1473

STEP NO--UR/0376/70/006/000/0513/0524

CIRC ACCESSION NO--AP0118462

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