

189

S/186/61/003/006/010/01
E040/E185

Separation of protactinium by the

The sample was further purified and the impurities (Na, Mg, Ca, Ba and Fe) were reduced to below 3%. Brief chemical properties and methods of preparation are given of protactinium oxide $\text{PaO}_2 \cdot 25\%$, hydroxide, iodate and phenylarsonate. Acknowledgments are expressed to S A Baranov, Yu F Rodionov and N M Yashin for assistance. There are 11 references (3 Russian translation from non-Soviet-bloc publications and 8 non-Soviet bloc). The four most recent English language references read as follows:

Ref 2 J. Golden A G Maddock J Inorg Nucl Chem v 2 p 1-4 (1956)
Ref 4 M I Salutsky R Shaver A Elmlinger M I Curtiss
J Inorg Nucl Chem v 5 p 289 (1956)
Ref 9 K A Kraus G E Moore
J Am Chem Soc v 77 p 1363 (1955)
Ref 10 A G Maddock W Pugh
J Inorg Nucl Chem v 2 p 114 (1956)

SUBMITTED July 19 1960

Card 2/2

X

BARANOV, S.A.; KULAKOV, V.M.; SAMOYLOV, P.S.; TELEKOV, A.G.;
RODIONOV, Yu.F.; PIROZHKOVA, S.V.

Fine structure of α -radiation from Pu^{231} and energy level scheme
of the Ac^{227} nucleus. Zhur. eksp. i teor. fiz. 41 no.5:1475-1483
(MIFI) 14:12
N '61.

(Rotactinium-- Decay)
(Actinium) (Quantum theory)

DIREZHKIV SV

3177
S CER 4-04-006 034 054
B10A B-1A

246300

AUTHORS

Baranov, S. A., Samoilov, P. S., Rudnichenko, Yu. F.,
Belen'kiy, S. N., Pirozhkov, S. V.

TITLE

The energy levels of the 232 U nucleus

PERIODICAL

Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 4,
no. 6(17), 1961, 1140-114

TEXT: To clear up contradictions in data on the 232 U levels the authors studied the decay of 232 Pa, which was obtained by irradiating 231 Nb with slow neutrons. The measurements were made with a magnetic double-focusing β -spectrometer and a γ -scintillation spectrometer. Four new gamma transitions with energies 147, 236, 280, and 1150 kev have been discovered. On the basis of the β -spectrum, conversion electron spectrum, and γ -spectrum, certain data on the gamma transitions in 232 U have been obtained (Table 3). It was not possible, however, to establish a complete level scheme. EO transitions were found between the levels $0^+ \rightarrow 0^+$ and

Card 1/8

Q27

S CEN 04 OCT 074 074
BIGH B-18

The energy levels of the...

$2^+_1 \rightarrow 2^+_2$. The experimental results agree with theoretical predictions. The prediction is made of A. S. Davydov, J. P. Filippov, V. S. Rostovskiy, and V. V. Chubar. ZhTF, 32, 220, 1962; Nuclear Physics, 42, 429, 1963. A. S. Davydov, A. A. Arutyunov, and Yu. A. Dmitrijev are thanked for their help. There are 4 figures, 3 tables, and 11 references. The report is in English and is non-Soviet. The two most recent references to English language publications read as follows: J. Perlman. Proc. Intern. Conf. on Nuclear Structure, Kingston, Canada, 1966, p. 47; S. Björnholm et al. Bull Am. Phys. Soc., 6, 239, 1961.

SUBMITTED June 21, 1966

Legend to Table 1: (1) energy of the γ -transitions, kev, (2) experiment, theory for, (3) theory, (4) multipolarity of the γ -transition, (5) theoretical values of the internal conversion coefficients on the K and L shells taken from Ref. 6 (L. A. Sliv, I. M. Band. Tabilitsa koefitsientov vnutrenney konversii (-iz-ucheniya, Part 2, Izd. AN SSSR, and part 1, Izd. AN SSSR, 1956). (6) theoretical values of the internal conversion coefficients on the M shells taken from Ref. 7 (M. E. Rose. Internal Conversion Coefficients, Amsterdam, 1958).

Card 2/2

S/186/62/004/003/009/022
E071/E433

AUTHORS: Lebedev, I.A., Pirozhkov, S.V., Razbitnoy, V.M.,
Yakovlev, G.N.

TITLE: An investigation of the decomposition of americium
oxalate under the influence of its own α -radiation

PERIODICAL: Radiokhimiya, v.4, no.3, 1962, 308-312

TEXT: Radiolysis of the oxalate group in solid compounds under
the influence of α -radiation has been studied on oxalate of
plutonium-239. However, the composition of the gas evolved during
the decomposition was not studied. In the present work the
authors investigated the decomposition of oxalate of americium-241
by studies of the change in weight of the residue with time,
accumulation of carbonate and the amount and composition of gas
evolved. It was found that oxalate of trivalent americium on
standing is decomposed under the influence of its own
 α -radiation, passing into carbonate. The decomposition is
completed after 15 to 20 days and after 50 to 60 days the
composition of the residue corresponds to $\text{Am}_2(\text{CO}_3)_3 \cdot 5\text{H}_2\text{O}$.
This decomposition is a first order reaction with a velocity

Card 1/2

FACT FILE. A.V.A. LEVKOVICH, L.A.I. FIROZHKOVA, S.V.; YAKOVLEV, G.N.

Extraction of boronellin by the derivatives of phosphoric acid and triethylamine from nitric acid solutions. Radiokhimiya 4-14 and triethylamine from nitric acid solutions. Radiokhimiya 5-14, 1964.

Extraction of boronellin by derivatives of pyridine or the derivatives of phosphoric acid and triethylamine from nitric acid solutions. Radiokhimiya 5-14, 1964.

ZAYTSEV, A.A.; LEVKOV, I.A.; PIROZHKOVA, S.V.; YAKOVLEV, G.N.

Extraction of plutonium and molybdenum with trioctylamine from
sulfuric acid solutions. Izv.ruorg.khim. 3 no. 2: 184-187
S-161.

LEBEDEV, I. A.; PIROZHKOY, S. V.; RAZRITNOY, V. M.; YANOVLEV, G. N.

Decomposition of americium oxalate under the action of its own
α -radiation. Radiokhimiia 4 no.3:308-312 '62.
(MIRA 15:10)

(Americium oxalates) (Alpha rays)

LEPEDEV, I.A.; PIROZHKOY, S.V.; SEMOCHKIN, V.M.; YAKOVLEV, G.N.

Separation of protactinium by the ion exchange method and properties
of some protactinium compounds. Radiokhimiia 3 no.6:760-761
(MIRA 14:12)

'61.

(Protactinium)
(Ion exchange)

PIROZHENKO, V.Kh.; LINCHEVSKIY, G.V.; NIKOLAYENKO, N.T.

Automatic mine traction substation equipped with semiconductors.
Avtom. i prib. no.4:10-13 O-D '63. (MIRA 16:12)

1. Krivorozhskiy gosudarstvennyy institut po proyektirovaniyu
oborudovaniya po dobyche i obogashcheniyu rud.

PIROZHKOV, V., major

Development of a scientific world outlook during the course of
combat training. Voen.vest. 42 no.9:61-62 S 1962. (MFA 17:5)
(Soldiers--Education, Nonmilitary)

PIROSHKOV, V.V. (Tbilisi)

Role of the physicians of the Tiflis Military Hospital in
the development of the Georgian health resorts. Vop.kur.,
fizioter. i lech. fiz. kul't. 27 no.5:445-447 S-C'62.
(MIA 10:9)
(GEORGIA—HEALTH RESORTS, WATERING PLACES, ETC.)

PIROZHKOY, V.V., zasluzhennyj vrach Gruzinskoy SSR (Tbilisi)

Physicians in the memoirs of Decembrists banished to the Caucasus.
Kaz.med.zhur. no.4:92-94 Jl-Ag '62. (MIRA 15:8)
(DECEMBERISTS) (PHYSICIANS)

PIROZHKOY, V.V., zasluzhennyj vrach Gruzinskoy SSR (Tbilisi)

Problems of preventive medicine in the activities of leading physicians
in the Caucasus during the 19th century. Gig. i san. 26 no.41..5-49
Ap '61. (MI A 15:5)

(CAUCASUS—MEDICINE)

KUL'NIK V., M., may; SUDOV V., A., chelyabink; ORLOV, Yu., avrardit podpolkovnik; polkovnik; SIVOVENOK V., L., avrardit podpolkovnik; KUDIN, Z., polkovnik; PRUSILAVSKIY, V., major tekhn.aluzhby; YEVSEIEV, V., chelyabink; PIROZHEV, V., kapitan; PETROV, N., polkovnik; PETR V., L., kapitan 1 rangi; MATROCHIYAN, A., polkovnik; ZINCHENKO, F., aluzhnik; RODIN, V., podpolkovnik; SVIDERSKIY, V., polkovnik; KUDIN V., V., podpolkovnik; YASUIN, S., mayor; OZEREN V., N., podpolkovnik; ZUBK V., L., podpolkovnik; ANDRIYANOV V., N., podpolkovnik

* discuss projects of new general Army regulations. Voen. vest.
19 no.10:23-75 0 158. (MTR 11:10)
(Russia--Army--Regulations)

PIROZHKOV, V. V., CAND MED SCI, "THE TIFLIS MILITARY
HOSPITAL AND ITS ROLE IN THE DEVELOPMENT OF PUBLIC ME-
DICINE OF THE 19TH AND BEGINNING OF THE 20TH CENTURIES
IN GEORGIA." TBILISI, 1961. (TBILISI STATE MED INST).
(KL, 3-61, 234).

PIROZHKOV, V.I., agronom-sadovod

How to care for roadside plantings. Avt. dor. 24 no.7:30-31
(MIR 14:7)
Jl '61.
(Roadside improvement)

PIROZHKOV, V.I., agronom-sadovod

Every road-operating section should have a fruit-crop nursery.
Avt.dor. 25 no.7:23-24 Jl '62. (MLKA 1518,
(Nurseries (Horticulture)) (Roadside improvement)

PIROZHKOY, V.I., agronom-sadovod.

~~Roadside planting~~ of fruit-trees on highways in the Moscow area.
Avt.dor. 20 no.3:15 Mr '57. (MLRA 10:5)

1. ~~DSU~~-1.

(Moscow Province--Roadside improvement)

80-39
Sov/112-60-2-3.820

18.7200
Translation from Referativnyy zhurnal Elektrotehnika, 1958, Nr 2, pp. 46-
143 (URSS)

AUTHOR Pirozhkov, V. F.
TITLE An Experience in Automatic Welding of Thin Sheets
PERIODICAL Prom.-ekon. typ. Sovnarkhoz Dneproiskog ekon adm r-na, 1958,
Nr 10, pp 9 - 84

ABSTRACT The automatic welding of thin sheets is executed for the most part one-sidedly on a flux or a flux-copper backing with a simultaneous seam formation on both sides. The butt welding of sheets 3 mm thick and 4,000 mm long is executed on a pneumatic stand. Along its axis there are 11 air cylinders with pistons, or whose rods a steel plate is laid with a groove for a copper strip. The welding is performed by a TS-1M tractor moving along guiding girders. The optimum sizes of the copper backing breadth 70 mm, thickness 12 mm, breadth of the groove: 12 mm, depth of the groove: 5 ± 0.5 mm. To obtain a welded joint without external defects, the groove in the copper plate must be

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30V/112-60-2-3.826

An Experience in Automatic Welding of Thin Sheets

tightly filled in with flux. In the gap of butt-welded sheets flux of a fine or medium granulation is poured and condensed by light knocks of a hammer. The welding of sheets 3 mm thick is performed with 3_v 0.8 rod of 2 mm in diameter under AN-348 A flux. Welding conditions current 375 - 400 a, arc voltage 28 - 30 v, welding speed 29 m/hour, wire feed 1.5 m/hour. Electrode rod overhang from the nozzle \leq 15 - 20 mm. To reduce the wear of the tip of the welding nozzle, which was previously made of brass or bronze, a steel bush is pressed now in its body, which prolongs the service of the tip by 2 - 3 times.

[N.]

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Card 2/2

PIROZHKOY, V.I., agronom-sadovod

Planting fruit trees along highways. Avt. dor. 27 no. 5:29 My 'C.
(MIRA 13:10)
(Fruit trees) (Roadside improvement)

PIROZHKOVA, V.V., kand.med.nauk

Aleksandra Nikiforovna Kandalaki, Med.sestra 22.no.4:60 Ap '63.
(MIRA 10:7)
(KANDALAKI, ALEKSANDRA NIKIFOROVNA, 1912-)

SPANDAR'YAN, V.B., red.; KUTSIENKOV, A.A.; YERSHOV, Yu.A.; PIROZHKOVA, A.G.;
ZIMOV'YEV, N.V.; GOLOVIN, Yu.M.; BLOSHAP'IN, D.K.; KOROVINA, A.N.;
MOISEYEV, P.P.; GASHEV, B.M.; YERHOV, L.S.; MAKHNOV, A.I.; ROGOV, V.V.;
GORYUNOV, V.P., red.; INOZEMTSOV, N.N., red.; SHLENSKAYA, V.A., red.
izd-va; BORISOVA, L.M., red. izd-va; VOLKOVA, Ye.D., tekhn. red.

[Foreign commerce of the U.S.S.R. with countries of Asia, Africa
and Latin America] Vneshniaia torgovlia SSSR so stranami Azii,
Afriki i Latinskoi Ameriki. Moskva, Vneshtorgizdat, 1958. 194 p.
(MIRA 11:7)

1. Moscow. Nauchno-issledovatel'skiy kon'yunktturnyy institut.
(Russia--Commerce)

NUNER, T.E., dotsent; IZOTOVA, knad. med. nauk; ZHENETI', D. Kh.; PIROZHKOVA, L.A.; SHKAZ PELOV, A.A.; SHMAT'KO, I.T.; YAKHNIKOVA, G.P.

Echinococcosis of the liver. Uzh. zap. Stavr. gos. med. inst.
8: 30-48 '63 (MIR 17:7)

1. Kafedra obshchey khirurgii (zav. Kafedra - prof. Yu.S. Gilevich) Stavropol'skogo meditsinskogo instituta (rektor - zasluzhennyy deyatel' nauki, prof. V.V. Budylin, chefredaktor - chek-ye otdeleniya Stavropol'skoy krayevoy klinicheskoy bol'nitsy (glavnyy vrach Yu.P. Zotov) i khirurgicheskoye otdeleniye Pyatigorskoy bol'nitsy (zav. otdel. zasluzhennyy vrach L.S. Tishinskyy).

PYROZHEVA, I.A.; CHEKHOV, V.N.

Sobstvennoj idei o formirovaniye filialov v SSSR
Uch. zap. Stavropol'skogo nauchno-issledovatel'skogo
instituta po voprosam gosudarstvennoj bezopasnosti
i gosudarstvennoj tselostnosti SSSR (Sverdlovsk)

1. Rezul'tativnye issledovaniya po voprosam gosudarstvennoj
bezopasnosti i gosudarstvennoj tselostnosti SSSR (Sverdlovsk)
za sluzhbenyy deyatel'nost' sotsialisticheskogo chislennosti
gicheskogo chislennosti gosudarstvennoj bezopasnosti SSSR
bol'shiny 'g' vyyvoda v Y... .

PIROZHKOVA, L.A., ordinator

Multiple hydatids in the organs of the abdominal cavity.
Uch. zap. Stavr. gos. med. inst. 12:194-195 '63.

(MIFI A 17:4)

1. Kafedra obshchey khirurgii (zav. prof. Yu.S. Gilevich)
Stavropol'skoy krayevoy klinicheskoy bol'nitsy (glavnyy
vrach Yu.P. Zotov).

PIROZHNAYA, L N

Listed and numbered articles	607 / 51.51	
Molecular Spectroscopy [Liquid] [Russian] [Leningrad]		
Editor: V. I. Slepov. Issued by: V. V. Buchinskaya and V. D. Plastirov.		
Sect. No.: 1. S. D. Volokolina.		
Notes: This collection of articles is intended for scientific workers, engineers and students of physics and chemistry. It may also be used by engineers and technicians employed in molecular spectroscopy.		
CONTENTS: The collection of articles describes spectroscopic studies of liquids and solutions, and includes data on applied molecular spectroscopy. Individual articles deal with the molecular interaction in solutions, and especially with the hydrogen bond problem. Notes on the optical utilization of spectral apparatus and on the analytical application of molecular spectroscopy are also included.		
Abstracts of the structure of high and low molecular compounds and of molecular complexes are also covered. The collection was published in honor of the birthday of Professor Vladimir Nikolaevich Chukharev, Soviet specialist in molecular spectroscopy and spectral analysis. There are no references.		
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Chukharev, V.N. Spectroscopy of the Liquid State		5
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Slepov, V.I., and I. G. Matishchikov. Effect of the External Field on Optical Characteristics of Polymeric Organic Molecules in Solutions		35
Kolodkin, A. O. (deceased), V. S. Sereinik, and S. M. Goryainov. Application of Raman Spectra to the Study of Intermolecular Interaction in Heterolytic Solutions		52
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Slepov, V.I. Study of the Absorption Spectra of Some Alkyl Ethers		90
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Slepov, V. I. Spectroscopic Study of Intermolecular Interaction in Heterolytic Derivatives of Acetylene		108
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Nikulin, V. M., and D. N. Sudarova. Investigation of the Formation of Complexes in Organic Liquid State Solutions by the Method of Infrared Absorption Spectra		145
Slepov, V. I. Effect of the Optic System of a Monochromator on the Results of Spectrophotometric Measurements		152
Prostok, V. P. On the Content of the Electronic Absorption Bands of Some Heterocyclic Compounds		160
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Trifonov, V. B. Photo-Absorption in Polymers		174
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PIROZHNAVA, L.N.

Study of the hardening of epoxide resin in the presence of maleic
anhydride. Plast.massy no.6:56-60 '61. (MIRA 14:5)
(Epoxy resins) (Maleic anhydride)

CHULANOVSKIY, V.M.; GOL'DENBERG, A.L.; PIROZHNAIA, L.N.; POPOVA, G.S.;
TARUTINA, L.I.; PRATKINA, G.P.

Spectral investigation of polymer aging process. Izv. AN SSSR.Ser.
fiz. 26 no.10:1316-1317 '62. (MIRA 15:10)
(Polymers—Spectra)

S/048/62/026/01C/013/013
B117/B186

AUTHORS: Chulanovskiy, V. M., Gol'denberg, A. L., Iirozhnaya, L. N.,
Popova, G. S., Tarutina, L. I., and Fratkina, G. P.

TITLE: Spectral examination of the aging processes of polymers

PERIODICAL: Akademiya nauk SSSR. Izvestiya. Seriya fizicheskaya,
v. 26, no. 10, 1962, 1316-1317

TEXT. Infrared spectroscopy was examined for its applicability to investigating the aging and stabilization of polymers (e.g., high-density and low-density polyethylene, ethylene - propylene copolymer, fluorine polymers, PVC, polyvinyl alcohol and its acetals, copolymers on the basis of styrene). Conclusions: For the purpose of investigating the oxidation of polymers, infrared spectroscopy is more suitable than chemical analysis as it can be used to determine carbonyl groups in various types of compounds (e.g., in acids, aldehydes, ketones, and ether compounds), to establish the point of saturation of OH and CO groups, to observe the decomposition of the main groups, and to analyze the products of decomposition. Results of work in this field will be published later.

Card 1/1

PIROZHNIKOV, K., dots.

Corn in the southern trans-Ural region. Nauka i pered. op. v sel'-
khoz. 18 no.2:40-44 p '58. (MIRA 11:3)

1. Kafedra rasteniyevodstva Troitskogo zooveterinarnogo instituta.
(Siberia, Western--Corn (Maize))

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341010020-9

PIROZHENKOV, L.

PIROZHENKOV, L.

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APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341010020-9"

PIROZHNIKOV, L., inzhener.

Testing plain and reinforced concrete products. S'roi.mat.izdel. i
konstr. 1 no.12:33 D '55. (MLRA 9:7)
(Concrete--Testing)

PIROZHNIKOV, L., inzhener

Achievements of atomic physics in the building materials industry.
Stroi.mat., izdel. i konstr. i no.8:4-6 Ag'55. (MLRA 8:11)
(Building materials--Testing) (Gamma rays)

... W. 2000 ft. V. 1000 ft. I. 1000 ft.

"Determination of air moisture by infrared detection, stability, etc." (1950)

"Infrared spectrometer VH-1. Description, calibration, and use of infrared spectrometer VH-1. This instrument uses only one detector for recording. Its function is to make the relation of the absorption constant of carbon dioxide to water content. (1951, 1952, 1953)

S. 1. . 614. T. 1. 11

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1808. 4216. 1003. 2607

S/194/61/000/001/024/038
D216/D304

AUTHOR: Pirozhnikov, I. B.

TITLE: The use of ultrasonics for removal of corrosion and
for passivation of a metal surface

PERIODICAL: Referativnyy zhurnal. Avtomatika i radioelektronika,
no. 1, 1961, 17, abstract 1-150 (V Sb. Primeneniye
ul'trakustik issled veshchestva, no. 10, E.,
1960, 131-137)

TEXT: The experiments carried out at the Scientific Research Institute of Construction Physics and of Safety Constructions of the Academy of Construction and Architecture of USSR have shown that under certain conditions it is possible to remove rust from metal with ultrasonics, and that prolonged action of ultrasonics (up to 90 mm) makes the surface of the metal passivated. The removal of rust (experiments were carried out with types of steel from CT-3 (ST-3) to CT-10 (ST-10)) is best carried out in water, heated to

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1427

S/194/61/000/001/024/038
D216 D304

The use of ultrasonics.

30° - 50° The amplitude of oscillations of magnetostriction generators was varied between 2 - 85 microns. The experiments were carried out at frequencies 20, 35, 50 and 75 kc/s 4 references.

Card 2 2

TAMANIN, A.A., kand. nauk. Prinimali uchastiye: VOLLEVIT, A.I.,
mlad. nauchnyy sotr.; POLOVA, N.A., mlad. nauchnyy sotr.;
MASLOBOYSHCHIKOV, A.N., inzh.; KUDINOV, A.I.; PIROZHNIKOV,
L.B.; SHITOVA, L.N., red. izd-va; SIESENNEVA, N.V., tekhn. ruk.

[Instructions for production testing of large prestressed
concrete elements] Uzakaniia po poizvodstvennym ispytaniiam
krupnorazmernykh predvaritel'no napriazhennykh zhelezobeton-
nykh konstruktsii. Moskva, Gosstroizdat, 1962. 118 p.

1. Akademiya stroitel'stva i arkhitektury SSSR. Institut of -
ganizatsii, mekhanizatsii i tekhnicheskoy poroshchi stroitel'stva.
2. Rukovoditel' gruppy ispytaniy Nauchno-issledovatel'skogo institu-
ta organizatsii, mekhanizatsii i tekhnicheskoy poroshchi stroitel'-
stvu Akademii stroitel'stva i arkhitektury SSSR (for Tararin).

(Prestressed concrete—Testing)

PRESNYAKOV, Aleksandr Grigor'yevich; IL'ICHIKOV, L.B., red.;
SHEKOKOVA, M.M., tekhn. red.

[How an idea was born and carried out; an inventor's notes]
Rozhdenie i voploschchenie zamysla; zapiski izobretatelia.
Moskva, Gosenergoizdat, 1962. 110 p. (MIRA 15:0)
(Electric apparatus and appliances)
(Inventions)

10-11

SOV/112-57-5-11537

Translation from Ref. 1. Sov. J. Elektronika Med. No. 5, p 288 (USSR)

AUTHOR P. S. Zhdanov

TITLE Method of Ultrasonic Testing of Medical Equipment Quality
(Metody kontrolya kachestva meditsinskogo oborudovaniya ultrazvukom)

PERIODICAL Vestn. Radiotekhniki i elektroniki, No. 5
M. MOPI, 1956, pp. 287-290

ABSTRACT Dynamic methods of testing the quality of medical equipment have recently received wide use in checking the quality of medical instruments. One method of testing the quality of medical instruments consists in measuring the velocity of ultrasonic oscillations in the measured instrument. This method makes it possible to measure the velocity of sound. A scheme with two piezometric pickups is used; one of the pickups is a sender and the other receiver. The ultrasonic oscillations are

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SOV/112-57-5-11537

Method of Ultrasonic Checking of Concrete Structure Quality

transmitted through the concrete body. The concrete quality can be evaluated from the data of velocity measurements and the table below:

Velocity of ultrasonic propagation, m/sec	Concrete quality
Over 4,500	excellent
4,000-4,500	good
3,300-4,000	satisfactory
2,300-3,300	poor
Under 2,300	very poor

The possibility of constructing an instrument with a memorizing circuit of the electron microsecond-meter type is indicated

Yu V B

Card 2/2

PIROZHNIKOV, L. B.

"The Elimination of the Corrosion of Metals."

report presented at the 6th Sci. Conference on the Application of Ultrasound
in the investigation of Matter, 3-7 Feb 1958, organized by Min. of Education
RSFSR and Moscow Oblast Pedagogic Inst. im N. K. Krupskaya.

PIROZHNIKOV, L.B.

33. Drilling glass and ceramics by means of ultrasonics. V. V. Pirozhnikov and I. S. 15
Yakushkin. (Glass & Ceramics, Moscow, 12, No. 6, 7, 1958). Holes 0.1-10 mm. dia. can be drilled ultrasonically in specimens 0.1-3 mm. thick. The drilling of one hole tool from 1 sec. to 2 min. Holes can be made square, rhombic, star-shaped, etc., to an accuracy of 0.015 mm. (4 figs.)

Mark

PM PK
SK

PIROZHNIKOV, I.B.,; VAYNSHTOK, I.S.

Ultrasonic detection of defects of concrete and reinforced
concrete products. Zav.lab. 21 no.2:201-203 '55. (MLR 8:6)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut zhelezobetonykh detaley i konstruktsiy.
(Concrete--Testing)

FOOTNOTES

ANNUAL PRECIPITATION — JULY 1943

1. The first step in the process of creating a new product is to identify a market need or opportunity.

For example, the following statement is true: $\forall x \exists y \forall z \exists w \forall v \exists u \forall t \exists s \forall r \exists q \forall p \exists n \forall m \exists l \forall k \exists j \forall h \exists g \forall f \exists e \forall d \exists c \forall b \exists a \forall t \exists s \forall r \exists q \forall p \exists n \forall m \exists l \forall k \exists j \forall h \exists g \forall f \exists e \forall d \exists c \forall b \exists a$ $\neg (x = y \wedge z = w \wedge v = u \wedge t = s \wedge r = q \wedge n = p \wedge m = l \wedge k = j \wedge h = g \wedge f = e \wedge d = c \wedge b = a)$.

D. G. Gorbunov and B. B. Kudryavtsev, Professor

¹⁶ See, e.g., *U.S. v. New Mexico*, 345 U.S. 579, 586 (1953) (quoting *Ex parte Tamm*, 273 U.S. 289, 296 (1927)).

personnel. This is a good way to keep students and engineers interested in your company.

REFERENCES. The literature of all subjects is so great that no research in the
present field can be adequately accounted for in this paper. References are given
in the following fields: petroleum and natural gas engineering, deflected pipe,
natural gas pipelines, and gas transmission. Other publications and
representatives are mentioned. References at company individual articles

(1574)

SOV / 5644

Utilization of Ultrasonics (Cont.)

[17]

1. Ultrasound

Kukoz, E. S., and I. A. Kukoz [Novocherkassk Polytechnical Institute]. "The Effect of Ultrasound on the Properties of Disperse Galvanic Deposits of Platinum" [121]

Pirozhnikov, L. B. [NII stroyt. fiziki i ogranich. konstruktsiy Akademii stroytel'stva i architektury SSSR - Scientific Research Institute for Constructional Physics and Protective Structures of the Academy for Building and Architecture, USSR]. "The Use of Ultrasound in Removing Corrosion and Passivating the Surface of Metal" [131]

Lebedev, I. F. [Taganrogsk. radiotekhn. in. - Taganrog Radio Engineering Institute]. "The Possibility of Using Ultrasound to Improve the Structure of Submerged Welded Joints" [136]

Car. 13-10

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341010020-9"

The Age of the Alkaline Oligotasic Volcanic Formations of the North of the Urals

of alkaline ultrabasalts, Java. The Arjy-Lemandekaya is the author's observed name for a series of alkaline ultrabasalts and basalt tuffs. This includes the compositionally similar Sengkova and Yau I Basalts, and a third, unnamed, series. The Arjy-Lemandekaya and Kaya-Lemandekaya are names given by Wittenberg. Arjy-Lemandekaya refers to the alkaline ultrabasalts; Kaya-Lemandekaya refers to the basalts. The latter are tuff-rich, feldspathic basalts, and the former are alkali basalts. They are very similar to the basalts of the Lopada I and Kaya I series, the basalts of the Sengkova being distinctive because of the presence of olivine phenocrysts as large as 2 mm. in diameter. Thus, the formation of the alkaline ultrabasalts, the Sengkova-Kaya I, is the Sengkova group of basalts of the Sengkova-Lopada I Lower Permian, it was in the time of Upper Permian, and probably Triassic. There are no volcanic products.

ASSOCIATION: National Institute of Child Health and Human Development
RESEARCH INSTITUTE: National Institute of Child Health and Human Development
PRESENTED: April 1988, by L. V. Klinefelter, A.M.D., M.A.
SUBMITTED: April 1988
Card No.:

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341010020-9

PIROZHNIKOV, L.P.

Remains of Cycloidea from the Kazan stage of the Kozhim River
(Pechora coal basin). Sbor.st.po paleont.i biostrat. no.17:
A.-87 '59.
(Kozhim Valley--Crustacea, Fossil)

AUTHOR: Pirozhnikov, L. P. S. V. Geol. & Min.

TITLE: The Upper Jurassic of the Franz Josef Land archipelago (Vorkhnyaya Yura arkhipelaga Zemliya Frantsa-Josefa).

PERIODICAL: Dokladi Akademii nauk SSSR, 1956, V 110, #1, p. 1-4 (USSR)

ABSTRACT: Until recently, the Upper Jurassic of the Franz Josef Land archipelago was considered to represent only by the Oxfordian Stage (refs 1, 2-4). The author succeeded, during the years 1956 and 1957, in discovering strata of the Kimmeridgian Stage at the "Ofer" ("Offer") Cape of Orylyk Vilcheka Island (Franz Josef Land). This stage contains a marine fauna, partly identified by Mrs. N. S. Voronets, found in oval concretions in low-limestone. Strata of the Kimmeridgian Stage were found not far from the southwest tip of the Ganza (Hansau) Cape. The fauna found in weakly cemented "aleuroliths" of rock structure (identified by M. I. Shul'sina) indicates the lowest stage of the Kimmeridgian Stage. Concretions in the upper part of this "aleurolith" contain rare fossils of the upper stage of the Kimmeridgian Stage. Here lies the largest intrusive sill of the entire archipelago (~6 m thick). The author assumes

Card 1, *

The Upper Jurassic of the Franz J. seafloor. Aripelago Sverdlovsk.

thinly-bedded "arenaceous" of the Upper Calcareous Volzhskiy, Volga Stage. Here beds contain numerous Dorsoplanites sp. and are considered by the author to be stratigraphically higher than the concretionary dolomite bearing the Upper Oxfordian fauna. The strata of the Volga Stage rest in a dolomite sill. The total thickness of Upper Jurassic strata in the archipelago is approximately . The Jurassic rocks, including Middle Jurassic, in the archipelago consist only of marine deposits and occur in a narrow east-west band (about 60 - 70 km wide). The section thickens from west to east. This distribution of Jurassic sediments refutes the conclusion of Dibner (Ref. 1), that there were three marine transgressions in the archipelago during Jurassic time. This distribution strongly suggests a regression which occurred in Callovian time and in which the sea retreated from west to east. Further evidence for this regression is the occurrence of belemnite fauna in the sediments of Pliss, Praga and Maan-Klintok islands (from information from N. V. Martynenko, A. A. Pavlov and N. V. Perminov). Marine Jurassic sediments were tentatively recognized in 1973 on the island of Al'chikh (Ref. 1). There are 1 figure and 9 references, 4 of which are Soviet.

Card 2/3

The "Upper Jurassi" of the Franz Josef Land Archipelago

ASSOCIATION: Nauchno-issledovatel'skiy institut geologii Arktiki
(Scientific Research Institute for the Geology of the Arctic)

PRESENTED: May 1, 1958, by D. I. Shcherbakov, Member, Academy of Sciences, USSR

SUBMITTED: May 1, 1958

Card 3, 3

AUTHOR

С. А. Тимофеев

С. Тимофеев
The Upper horizon of the Wilczek Land
Island Group
Joseph Land Archipelago, Western Arctic, Soviet Union
Arkhangel'sk Zemlya Province - Izhma

PERIODICAL:
Природы Арктики СССР, 1959, Vol. 1, p. 1-4, 10 pp.
SSSR

ABSTRACT:
The Triassic deposits of the islands of the Joseph Land Archipelago in the Soviet Arctic were hardly known. The first detailed study of the Triassic deposits are known from the Bear Island (Bjornoya) by S. A. Timofeev, from Svitlovoe Shchita erzer (Pechora), from the Greenland (Grenlandiya) (Pechora, 1957). In 1957 the author found Triassic sediments in the south-western part of the Wilczek Land Archipelago which are characterized by fauna. Figure 1 shows the location of the section which was studied. It shows a Kamskaya dolina, a rocky, gray, soft, with a general mass, which is composed of sandstone from 1-2 to 3-4 m in depth with white, light-colored, yellowish, brownish, elongated, irregularly shaped, thin, sharp, angular fragments of various sizes. The thickness of the dolina is about 10 m. The dolina is bounded by two ridges, which are covered with a thick layer of talus material.

REFERENCES

Chlorite Iridium
Wilczek Land Island
Kamchatka

In the village of Chukotka, Kamchatka, Russia, a small amount of chlorite was found. In the upper and outer portion of each vein of chlorite there was a thin layer of blackish-green mineral, which was later determined to be Iridium. The thickness of the layer of Iridium varied from 0.1 mm. to 0.8 mm. The amount of Iridium in the vein was determined to be approximately 0.0001% by weight. The Iridium was found to be in the form of small, irregularly shaped, yellowish-brown, metallic particles. These particles were identified as Iridium by Dr. V. V. Kozhevnikov, who determined that it was typical of the elements of the Iridium group. The total weight of Iridium was 0.0001 g. The chlorite was composed of varying combinations of iron, magnesium, calcium, aluminum, and potassium. The chlorite contained a small amount of Iridium, which was determined to be approximately 0.0001% by weight. The Iridium was found to be in the form of small, irregularly shaped, yellowish-brown, metallic particles.

The Upper Triassic of the **Wilczek Land Island**
Archipelago¹

SOV 21-14-10
The Preprint Series

ASSOCIATION: Nauchno-issledovatel'skiy institut zoologii Arkтики, Leningrad
(Leningrad Scientific Research Institute of Arctic Zoology)

PRESENTED: February 11, 1959, by D. V. Malivkin, Member, Academy of Sciences, USSR

SUBMITTED: February 19, 1959

1. Geology 2. Geological time—determination 3. Paleontology

Card 2, 3

PIROZHNIKOV, L.P.

Burrit rocks from the middle Lower Volga stage of Bergkhaus Island
'Franz Josef Land'. Sov. Akad. Nauk SSSR Publ. No. 161.

(MIRA 14:9)

I. Nauchno-issledovatel'skiy institut geologii Arkтики, g. Leningrad.
Predstavleno akademikom N.Y. Strakhovym.
(Bergkhaus Island-Rocks, Sedimentary)
(Coal geology)

PIROZHNIKOV, L.P.

Marine lower Volga stage of Bergkhaуз Island (Franz Josef Land).
Dokl. AN SSSR 140 no.4:212-915 3 '41. (MIR 1..2)

1. Nauchno-issledovatel'skiy institut geologii Arktiki. Predstavlen'
akademikom D.V.Nalivkinym.
(Bergkhaуз Island--Geology, Stratigraphy)

PIROZHNIKOV, L.P.

Upper Triassic of Wilczek Land Island(Franz Josef Land Archipelago).
Dokl. AN SSSR 120 no. 4:873-874 Je '58.
(MIRA 11:8)

1. Nauchno-issledovatel'skiy institut geologii Arktiki, Leningrad.
Predstavleno akademikom D.V.Nalivkinym.
(Wilczek Land--Geology, Stratigraphic)

PIROZHNIKOV, L.P.

Remains of eurypterids from the Matarak series; Devonian of the Northern Minusinsk depression. Ezhegod. Vses. paleont. ob-va 1957.
(Shunet Region--Eurypterida) (MIRA 11:4)

PIROZHNIKOV, L.P.

Quartz crystals on the chalcedony pseudomorph after wood from Mak-Klintoka Island (Franz Josef Land). Zap. Vses. min. ob-shva 89 no.3:
338-343 '59. (MIRA 12:11)

1. Nauchno-issledovatel'skiy institut geologii Arktiki, Leningrad.
2. Deystvitel'nyy chlen Vsesoyuznogo mineralogicheskogo obshchestva.
(Mak-Klintoka Island--Quartz crystals)

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341010020-9

"General [redacted] F. [redacted] D. A. [redacted] [redacted]"

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341010020-9"

PROCHNIKOV, . . L.

Alphonse, . . L. - "Soviet Agent of Foreign Intelligence," T-100-1000-10
Doklady na Izenny leto, 1940-1941, Vol. 4, pp. 33, 34, 35, 36, 37, 38, 39, 40, 41, 42

SC: T-400, 14 August 41, (Bukhara, Uman, Kirovograd, . . .), 1941

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341010020-9

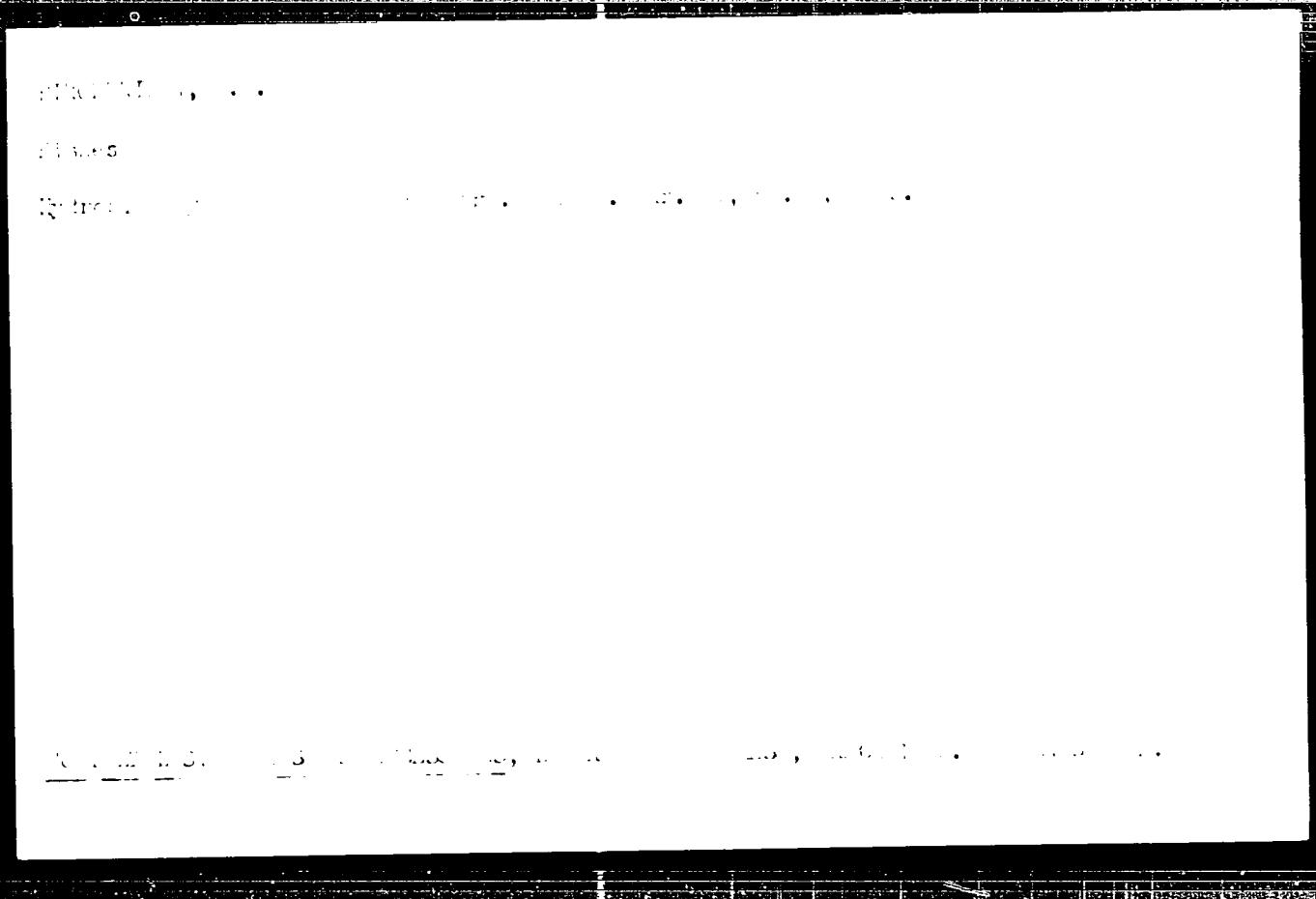
1. NAME, ADDRESS:

2. DATE OF BIRTH: "1940-01-01" (or similar date), ADDRESS: "12345 W. 123rd Street, Chicago, IL 60643", CITY: "Chicago", STATE: "IL", ZIP CODE: "60643".

3. PLACE OF BIRTH: "12345 W. 123rd Street, Chicago, IL 60643", CITY: "Chicago", STATE: "IL", ZIP CODE: "60643".

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APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341010020-9"

PIROZHNIKOV, P.L

Some data on the biology of the muksun (*Coregonus muksun* Pallas).
Trudy Gidrobiol. ob-va 5:339-348 '53. (MLRA 7:5)
(Siberia--Whitefishes) (Whitefishes--Siberia)

PIROZHNIKOV, P. L.

Nutrition and feed relations of fish in estuaries along the Laptev
Sea. Vop. ikht. no. 3:140-185 '55. (MIRA 8:11)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut osernogo i redkino-
go rybnogo khozyaystva
(Laptev Sea--Fishes--Food)

PIROZHINKOV, P.L.

Enrichment of food fauna of lakes and reservoirs. Zool.zhur. 34.
no.2:267-278 Mr-Ap '55. (MIRA 8:6)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut ozernogo i
technologo rybnogo khozyaystva.
(Fresh-water fauna)

PIROZHNIKOV, P.L.

"Trudy" of the N.A. Morozov "Borok" Biological Station of the
Academy of Sciences of the U.S.S.R. no.2, 1955. Reviewed by
P.L. Pirozhnikov. Zool.zhur.35 no.11:1744-1746 D '56.

(MLRA 10:1)

(Rybinsk Reservoir—Fisheries)

PIROZHNIKOV, P.L.; RYABIVINA, N.V.

Experimental study of the effect of inundated lands on the zooplankton of the Volga. Trudy prob. i tem. sov. no. 7:133-139 '57.
(Stalingrad Reservoir--Zooplankton) (MLRA 10:4)

PIROZHNIKOV, P.L.; SHUL'GA, Ye.L.

Basic features of zooplankton in the lower reaches of the Lena River,
Trudy Gidrobiol. ob-va 8:219-230 '57. (MIRA 11:?)

1. Vsesoyusnyy nauchno-issledovatel'skiy institut osernogo i rechnogo
rybnogo khozyaystva i Irkutskiy meditsinskiy institut.
(Lena River--Zooplankton)

PIROZHNIKOV, P.L.

Conference on the biological principles of the fishing industry. Zool.
zhur. 36 no.4:636-638 Ap '57. (MIRA 10:6)
(Fishes)

1 DEC.

Union Scientific
Sov. zhur. 36
(MLRA 10:2)

PIROZHNIKOV

Area: Distribution and ecology of the pirozhnikov
Jid: A summary in English. Z. M. V. S. I. N. T. R. I. C.
I. V. nauchno-issledovatel'skiy in-t po
r. v. gosudarstva, Lenin grad.
(Copies)

PAVLOVSKIY, Ye.N., akademik, glav. red.; KOZHIN, N.I., prof.,
red.; PIROZHNİKOV, F.L., kand. biol. nauk, red.;
ISAYEV, A.I., red.; REZNICHENKO, O.G., red.;
GIDALEVICH, A.M., red.izd-va; MAKUNI, Ye.V., tekhn.red.

[Fishing industry of inland bodies of water of the U.S....]
rybnoe khozaiystvo vnutrennikh vodoemov SSSR; osnovnye dokladы.
Moskva, Izd-vo AN SSSR, 1963. 227 p. (MIRA 16:17)

1. Vsesoyuznyj nauchno-issledovatel'skiy in-titut ozernogo i rechnogo
rybnoego khozaystva na vnutrennikh vodoplyasakh SSSR. . . . Gosudar-
stvennyj nauchno-issledovatel'skiy in-titut ozernogo i rechnogo
rybnoego khozaystva, Lenigrad (for Pirozhnikov).

FIROZHNIKOV, P.L.

Commercial fishes of the large rivers in northern Siberia, their stocks and possible catches. Probl. Sev. no.6:222-228 '62.
(MIRA 16:8)
1. Vsesoyuznyy nauchno-issledovatel'skiy institut ozernogo i
rechnogo khozyaystva.
(Siberia—Fisheries)

PIROZHNIKOV, P.L.

Ecologic studies on reservoirs, rivers and estuarial regions. Vop.
ekol. 4:68-70 '62. (MIRA 15:11)

1. Gosudarstvennyy naudhno-issledovatel'skiy institut ozernogo i
technogo rybnogo khozyaystva Vserossiyskogo soveta narodnogo
khozyaystva.

(Freshwater biology)

ACC NR. AP6029095

SOURCE CODE: UR/0118/66/000/000, 0007/00, 1

AUTHOR. Pirozhnikov, V. Ye. (Engineer). Koichanov, V. A. (Engineer).
Maznenko, M. A. (Engineer)

ORG. none

TITLE: Program control of electroslag metal remelting process

SOURCE: Mechanizatsiya i avtomatizatsiya proizvodstva, no. 6, 1966, 7-14

TOPIC TAGS: electroslag melting; program control; industrial automation

ABSTRACT: The article describes the design of a system of automatic control of the workers of an electroslag melting plant. This is the new production equipment of the plant, which uses a plasma arc for heating and a vacuum chamber for protection against oxidation. The system of control of the current, voltage, and temperature of the plasma arc, current pulse frequency, and current (with a tolerance of 10 percent) is described. An electronic switch mechanism is used to switch operating mechanisms (DOMs) and a function of limit pulses (LIPs). The principle of the program control is explained and a simplified electrical circuit is presented.

Card 1/2

UDC: 66.005.5:02-501.55

ACC-NR: AIP001716

The diagram illustrates the arrangement of genes along a DNA double helix. The DNA is represented by two parallel strands forming a ladder-like structure. Several genes are shown as arrows pointing in different directions:

- tRNA genes (T):** Located at various positions, some pointing upwards and some downwards.
- rRNA genes (R):** Located in distinct clusters, with arrows pointing in different directions.
- Protein-coding genes (P):** Located in clusters, with arrows pointing in different directions.
- DEK gene:** Located near the bottom center, with an arrow pointing upwards.

For the V-1000, the operating cost per hour is estimated to be 1.5 times the present productivity of 0.7 m³/h and the power consumption by 0.8 kW/h. In Oregon, two 2 megawatt

SUB CODE: 13, 09 / SUBM DATE: none

Card 2/2

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341010020-9"

YEFROYMOVICH, Yu.Ye.; VINOGRADOV, V.M.; PIROZHNIKOV, V.Ye.; DANISHEVSKIY, S.K.

Using refractory tips in controlling the temperature of the lining of
steel smelting arc furnaces with thermocouples. Ogneupory 26
no. 4:181-184 '61. (MIRA 14:5)

1. TSentral'naya laboratoriya avtomatiki Glavproyektmontashavtomatiki.
(Smelting furnaces) (Thermocouples)

The effect of salts and pH on the solubility of sericin
M. V. Korchagin and A. P. Pirozhnikova Tektild'noye
Prom. No 4/5, 29 (1979) - The purpose of this investigation was to det. the peptizing action of NaCl, NaBr, and NaI on sericin, to det. the effect of pH and the rate of degumming of silk depends on the pH but not on the concen. of salts in the medium. One g. of raw silk was introduced in 100 ml. of boiling 0.033 M salt soln., and boiling was continued under a reflux condenser for approx. 45 min. The flask was cooled, the liquid filtered, and in the filtrate N was detd. microchemically. Sericin was calcd. from the N content by using a factor 6. The quantity of sericin dissolved increased with the concen. of the salts. There was a definite optimum concen. of salts beyond which the solv. of sericin did not increase. For NaCl, this concen. was 0.25 N, and for NaBr and NaI 0.01 N. The effectiveness of the anions taken at the same concen. follows the Hofmeister series, i.e. Cl < Br < I. Generally the peptizing action of the salts was small. The max. for NaCl was 3.8%, for NaBr 3.6%, and for NaI 7.31% of sericin dissolved, based on the wt. of raw silk. The effect of pH was tested with 0.025 M 0.033 N phosphate solns. (pH 5.89-7.81). An increase in either concen. or pH increased the solv. of sericin. The effectiveness of PO₄³⁻ ion was greater than that of Cl⁻ ion. It is concluded that both the pH and the concen. of reagents, salts, in fluene the solv. of sericin. M. Horsch

NIKOL'SKIY, G.V.; PIROZHNIKOV, P.L.; BORUTSKIY, Ye.V.

Seventh Plenum of the Commission on the Exploration of Fisheries
in the western part of the Pacific Ocean. Vop.ikht. 3 no.1:203-
205 '63. (MIRA 16:2)

(Pacific Ocean--Fisheries--Congresses)

PIROZHKEV, S.

Dispatcher control panel at a drying and cleaning tower. Muk.-elev.
prom. 29 no.3:8-9 Mr '63. (MIRA 16:4)

1. Glavnnyy inzh. Kurgatskogo elevators Novosibirskoy oblasti.

LEBEDEV, I.A.; FIROZHKOVA, S.V.; YANOVLEV, G.N.

[Determination of the composition and instability constants of the oxalate, nitrate, and sulfate complexes of Am (III) and Cm (III) by the ion exchange method] Opredelenie sostava i konstant nesterikosti oksalatnykh, nitratnykh i sul'fatnykh kompleksov Am (III) i Cm(III) metodom ionnogo obmena. Moskva, Inst. atomnoi energii, 1960. 20 : .
(MI.A 17:1)

LEBEDEV, I.A.; FIROZHKOVA, S.V.; RAZBITNOY V.N.; YAKOVLEV, G.N.

[Complexing of Am^{+3} with oxalate ions] Izuchenie komplekso-
obrazovaniia Am^{+3} s oksalat-ionami. Moskva, Inst. atomnoi
energii AN SSSR, 1960. 14 p. (MIRA 17:1)

ZAYTSEV, A.A.; LEBEDEV, I.A.; PIROZHKOVA, S.V.; YAKOVLEV, G.N.

Extraction of rhenium by pyridine bases. Zhur. neorg. khim.
8 no.10:2407-2411 O '63. (MIRA 16:10)

1. Institut atomnoy energii im I.V. Kurchatova.
(Rhenium) (Pyridine bases)

206-1

21.3100

Soviet Sci. & Ind. Info.
A111/47

AUTHORS: Lebedev, I. A.; Pirozhkov, S. V.; Yakovlev, I. N.

TITLE: Determination of the composition and instability constants of oxalate, nitrate and sulfate Am²⁴¹ and Cm²⁴² complexes by the ion-exchange method.

PERIODICAL: Radiokhimiya, v., n., 1, 1968, 44-50 pp.

TEXT: The article deals with a study of complex-formation of Am²⁴¹ and Cm²⁴² with oxalate-, nitrate- and sulfate- ions, using the ion-exchange method on the sulfonate. The complex-formation of Pu²⁴² in similar solutions was investigated in particular. Ref. 1: A.D. Gelman, N.N. Mironina, A.I. Myskin, Atomnaya energiya, 14, 1, 1966. It is pointed out that the method in question has received wide application in recent years for determining the composition and instability constants of the complexes of radioactive elements. Mention is made of Ref. 2: V. V. Pashin, Tspl. Khim. 14, 4, 1966, as utilizing the ion-exchange method in various cases. The experiments were carried out in citrate, oxalate, Am²⁴¹ and Cm²⁴² isotopes, the concentration of which was about 10⁻⁴ g./l.

Card 1, 14

2861

Determination of the composition of Am and Cm

in the solution

AC-A15

X

minal in the initial solution. A Ky K-100 column was used as the sorbent against which the concentration ratio of the metal to the total concentration of the metal, the weighted resin/pore ratio between the solution and solution, was brought to equilibrium with a certain volume of the solution containing known concentrations of Am and Cm and ammonium ions. Corresponding acid experiments were carried out at 0.1 M² (nitrate ion concentration). The effect was determined of the pH on Φ , distribution coefficient of Am in the absence of a complexing agent Ψ_0 . Since the experiments were carried out at various pH of the solution (Table I), it is of interest to note these determinations, indicating that with a change of the pH from 1.0 to 4.4, Φ_0 does not actually change. Certain experiments showed that: 1) the change of the resin/initial solution ratio b does not affect Φ_0 ; 2) the effect of the resin swelling on the solution volume does not exist; 3) the equilibrium in the system nitrate solution + cation exchanger + dilution strength $\mu = 0.2$ (1.1, pH 1.0-4.4) is reached in 10 minutes. Figures 8 and graphs 1-4 give the experimental data on the relation $\Phi_0 = \Phi_0$ (Am/III) and Cm/III to the concentration of the nitrate, carbonate and oxalate ions. Φ was calculated from results of the analytical experiment.

Card 2/14

Determination of the composition and ...

20651
S/1967/0/234/101, 10020-9
AC 1/K*3

the following formula:

$$\phi = \frac{c_0 - x}{b_{1m}}$$

The activity of the oxalate ions was eliminated from the formula:

$$\frac{x_1 c_1}{x_2 c_2} = \frac{B}{\gamma_1 K' + \frac{\gamma_2 K''}{K' K''}}$$

where B is the concentration of the ammonium oxalate, γ_1 activity of the hydrogen ions, K' and K'' = I and II constants of dissociation of oxalic acid, equalling 5.4×10^{-5} (ref. 7; P.S. Darden, J. Am. Chem. Soc., 57, 177, 1935) and 1.4×10^{-3} (ref. 8; L. D. Landini, R. J. Bates, J. Am. Chem. Soc., 46, 43, 1924), respectively. The values of the activity coefficients of the initial and two-stage ions (γ_1 and γ_2) for the dilute solutions were taken by the authors from ref. 9 (see Grotthuss, F. S. M., Card 7, 14).

20841

S/1867 X33/337/10, 17
AC/1/A7/3

Determination of the complexation index.

J. Am. Chem. Soc., 74, 1071 (1952). The functions Ψ_1, Ψ_2, Ψ_3 , etc., obtained from experimental data according to formula (1), showing the relationship between the distribution coefficient of the metal during separation of the salt, due to the concentration of the complex-forming agent, are connected with the stability constants of the complexes:

$$\frac{\Psi_1}{\Psi_1 + \sum_{i=2}^n \Psi_i} = \frac{K_1}{K_1 + K_2 + \dots + K_n}$$

where K_i are the general stability constants of the complex ions; $[A]^i$ is the concentration (activity) of the addend; n - maximum number of addend molecules bound to one ion of metal; K_1 - the constants for the first step of the equilibrium; α - constant ionic strength and constant concentration of the salt; β - constant connected with the separation of the complex cations; γ - valence; ζ - charge of the addend. By introducing the functions:

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Determination of the equilibrium and ...

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$$\frac{f}{f} = \frac{P_0}{P} = \frac{\psi_0}{\psi} = \frac{\psi_0}{[A]} \quad \text{and} \quad \frac{\psi}{[A]} = \frac{\psi_0}{[A]}$$

the full rate expression is provided:

$$\dot{\psi} = \frac{(\beta_1 - 1) + (\beta_2 - 1)[A] + \beta_3[A]^2 +}{1 + 1,[A] + 1/[A]^2}$$

Since the complex formation of tri-valent cations is still negligible, then the equilibrium will be given by:

$$\dot{\psi} = \frac{\beta_1 - 1 + (\beta_2 - 1)[A] + \beta_3[A]^2}{1 + 1,[A] + 1/[A]^2}$$

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X

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Determination of the τ_{max} of the Fe^{2+} - P_2O_7 system

2. *Urtica dioica* L. (Urticaceae) - Common Nettle
A tall, erect, hairy plant with large, serrated leaves and clusters of small, reddish flowers at the leaf axils.

$$\frac{\frac{d}{dt} \left(\frac{1}{A} \right)}{\frac{d}{dt} A} = \frac{1}{A^2} \cdot \frac{d}{dt} A + \left(\frac{1}{A^2} \right) \frac{d}{dt} A = \frac{1}{A} \cdot \frac{d}{dt} A + \left(\frac{1}{A^2} - \frac{1}{A} \right) \frac{d}{dt} A = \left(\frac{1}{A} + \frac{1}{A^2} - \frac{1}{A} \right) \frac{d}{dt} A = \frac{1}{A^2} \frac{d}{dt} A$$

$$y = \frac{r_1 - r_2}{r_1 + r_2}$$

Taking into account the low values of k_1 and k_2 , it is seen that in the case of complex-formation with one addend, the slope of the straight-line relationship is equal to 1, with two about 2, with three more than 3. Further, the stability constants of these complexes can be calculated.

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J. AM. CHEM. SOC. 1931, 53, 1777

AC²1, A¹C

Determination of the composition and

from the successive calculation of the values of ψ_1^0 (by extrapolating $k[A] = C$, the relationship of ψ_1^0 to $[A]$). The authors state that if the description of the complex is disregarded as compared to the description of the free ion of metal, then in formula (3) - (13), the value of β_1 must be left out, and then

$$\psi_1^0 = \beta_1 \quad (13) \quad \psi_1^0 = \frac{\beta}{[A]} \quad (14)$$

If the description of the complex cation is not disregarded, then the value of β , can be computed in the following manner: the function is calculated for several points:

$$\Phi = \frac{\frac{\Psi_1^0}{\Psi} (\Psi_1^0 [A] - 1, + 1)}{[A]} \quad (14)$$

After having found the value of Φ^0 by extrapolating the dependence Φ from $[A]$ to $[A] = C$ a graph indicating the dependence of

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Determination of the composition and ...

$\frac{S}{A} = \frac{1}{\lambda^2}$ \Rightarrow $S = \lambda^2 A$

$$\frac{\phi - \phi_0}{[A]} = T_{\Gamma, \text{eff}} \cdot \frac{\Psi_+ - \Psi_0}{[A']}$$

is plotted and its slope equaling β_1 is found. Figures 1, 2, 7 and 8 show the establishment of the composition of complex ions, indicating the dependence of logarithm Ψ of americium and curium in different ratios. For the calculation of the instability constants of complex ions formulae (8) and (10) were used, rendering the following expressions:

$$\psi_+ = \psi_1 + i\psi_2 = \psi_{\perp}^{(0)}$$

and

$$\Psi_+ = \frac{\psi_+ - 1}{\psi_0} = \Psi_+^0 \quad (16)$$

thus, ψ , and Ψ were dealt with as the average values of ψ , and Ψ , at points where they were constant. The constancy of the values of ψ , and Ψ

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Determination of the composition and

are also considered an indication of the fact that the sorption of the complex ion can be disregarded as compared to the sorption of the free cation, i.e., the values of β_1 and β_2 can be disregarded in formulae (7) and (8). Table 1C is a list of the determined values of general instability constants of the oxalate, nitrate and sulfate complexes of Am^{III} and Cm^{III} and the values of the step instability constants of the Am^{III} and Cm^{III} complexes.

$$K_1 = \frac{1}{\beta_1} \quad \text{and} \quad K_2 = \frac{\beta_1}{\beta_2}$$

recalculated for zero ionic strength, using the activity coefficients for the oxalate ions, (ref. 3) and the Davis equation. In this assessment the experimental results the authors state that a fair amount of error, which results was obtained experimentally of the instability constants of the Am(C₂O₄)³⁻ in h, using the insolubility method (Ref. 4: I. A. Letnikov, S. I. Pechikov, B. M. Kazhulin, J. N. Yakovlev, Radiokhimiya, 1961, 3, 10) and ion-exchange (in both cases 1.2×10^{-3}). The instability constant of the first complex (AmC₂O₄) determined by the above method is different.

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ACF, ACF

Determination of the composition and ...

factor of two (1.0×10^{-7} and 1.0×10^{-6}) explained by the error introduced in determining the product of solubility of the americium oxalate and β^- , the values of which are part of this constant. A comparison of the literature values and those obtained by the authors for the instability constants of nitrate complexes of tri-valent lanthanides and actinides, indicates a regular decrease of the complex stability with a drop in the radius of the central ions (Table 11). This comes from the addend (nitrate-ion) having large dimensions. The comparison of the instability constants of the oxo-complex ions of Am^{3+} and Cm^{3+} shows an obvious tendency to a weakening of the complex stability in curie, as compared to americium. It is thought that the screening effect of the "f"-electrons is present here. There are two tables, "Tables and References" in the article. The four recent English-language publications referred to in the article are: M. J. C. G. A. Bell, J. Inorg. Nucl. Chem., 37, 1975; J. D. L. B. H. Martin, J. Inorg. Nucl. Chem., 36, 1974; J. D. L. B. H. Martin, J. Inorg. Nucl. Chem., 37, 1975; F. H. Spedding, J. Inorg. Nucl. Chem., 36, 1974.

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