

NIKOLAYEV, A.V.; SINITSYN, N.M.; SHUBINA, S.M.

Donor-acceptor concepts in their application to extraction. Zhur.
strukt. khim. 1 no.3:319-323 S-0 '60. (MIRA 14:1)

1. Institut neorganicheskoy khimii Sibirskogo otdeleniya AN SSSR.
(Extraction (Chemistry))

213200

S/186/60/002/001/001/022
A057/A129

AUTHORS: Nikolayev, A.V.; Shubina, S.M.; Sinitsyn, N.M.

TITLE: Extraction of the sum of radioactive isotopes with butyl phosphinic esters

PERIODICAL: Radiokhimiya, v. 2, no. 1, 1960, 3 - 5

TEXT: The present paper is a part of the research program on extraction characteristics of butyl phosphoric derivatives. The extraction of the sum of radioactive isotopes with two butyl phosphinic esters, namely $(C_4H_9O)_2(C_4H_9)PO$ and $(C_4H_9O)(C_4H_9)_2PO$ was studied. Extractability of rare elements and rare earth elements is important for the extraction technique of uranium and plutonium fission products. L.L. Burger [Ref. 1: J. Phys. Chem., 62, 5, 590 (1958)] observed already the dependence of extractability of uranium and plutonium on the nature of alkyl-phosphoric compounds used as extraction solvent. Investigations concerning the extraction of rare and rare earth elements were made only with tributyl phosphate [investigation of the American authors: I. Warf; D.F. Peppard; B. Waever et al; J.M. Fletcher et al; and the Soviet authors: A.V. Nikolayev et al, ZhNKh, 3, 1, 160 (1958)], or dialkyl-phosphoric acids [C.A. Blake, Report no. X

Card 1/4

22452

S/186/60/002/001/001/022
A057/A129

Extraction of the sum of radioactive isotopes....

1,550 of the 2nd conference on the peaceful use of atomic energy (Geneva)]. There are no publications in the literature on extraction properties of alkyl phosphinates for rare and rare earth elements. Extractions in the present experiments were carried out in separating funnels using a ratio aqueous : organic phase = 1 : 1 with 1 N HNO₃ solutions, and solutions of the investigated esters in high-boiling saturated hydrocarbons. The solutions contained: 6% Ru¹⁰⁶, 46% rare earths, 7% Zr⁹⁵, 2% Cs¹³⁷, 15% Sr⁹⁰. The distribution coefficient K_p was determined by activity measurements (using a scintillation counter) calculating K_p = specific gamma activity in the organic phase/specific gamma activity in aqueous phase. There was no great difference in K_p between extractions using (C₄H₉O)₂(C₄H₉)PO and tributylphosphate (see Table), but a considerable increase in K_p using (C₄H₉O)(C₄H₉)₂PO. This effect depends on the concentration of the extractant in the saturated hydrocarbon (Fig. 1). The decrease of the number of ester groups in the molecule increases the distribution coefficient, which agrees with the previous statement of the present authors [Ref. 13: DAN SSSR, 127, 1, 117 (1959); Ref. 14: DAN SSSR, 127, 3, 578 (1959)]. Thus the basic reaction between extractant and extractable substance seems to occur even in such a complex mixture like the sum of radioactive isotopes over the phosphorylic oxygen. There are: 1 figure, 1 table and 14 references: 4 Soviet and 10 American.

Card 2/4

S/830/62/000/002/001/002
D214/D308

AUTHORS: Nikolayev, A.V., Sinitsyn, N.M. and Shubina, S.M.

TITLE: Acceptor-donor concepts as applied to extraction

SOURCE: Ekstraktsiya; teoriya, primeneniye, apparatura, no. 2, Ed. by A.P.Zefirov and M.M. Senyavin. Moscow, Gosatomizdat, 1962, 63 - 70

TEXT: The influence of various groups present in an extracting agent on the extraction ability of the agent was studied. In the series of extracting agents $(C_4H_9O)_{3-n}(C_4H_9)_nPO$ (where $n = 0, 1, 2, 3$) the P-oxygen was found to be active and responsible for the formation of the complex $UO_2(NO_3)_2 \cdot 2A$ (where A = extracting agent) by donation of electrons to $(UO_2)^{2+}$. As the value of n rises the electron density on the P-oxygen increases

Card 1/2

Accepter-donor concepts ... S/830/62/000/002/001/002
D214/D308

and hence the extraction power of the agent increases. This was verified on U^{VI} , Th^{IV} , Pu^{IV} and Pu^{VI} . The introduction of an electronegative radical into the molecule of the agent will reduce the extraction power while the presence of highly branched chains will prevent the formation of the complex by steric hindrance. Similar arguments apply to the $R_{3-n}P(OR')_n$ type of extracting agent. An extracting agent must, therefore, be sufficiently polar to permit the formation of the complex but the polarity must not be such that the agent becomes water-soluble or that the resulting complex becomes insoluble in nonpolar solvents. It now remains to determine the permissible polarity limits. There are 2 figures and 4 tables.

Card 2/2

SINITSYN, N.M.; ZVIAGINTSEV, O.Ye.

Reciprocal effect of atoms and groups in complex nitroso
compounds of rhutenium. Dokl.AN SSSR 145 no.1:109-111 J1 '62.
(MIRA 15:7)

1. Institut obshchey i neorganicheskoy khimii imeni N.S.Kurnakova
AN SSSR. Predstavleno akademikom I.I.Chernyayevym.
(Rhutenium compounds) (Nitroso compounds)

SINITSYN, N.M.; ZVYAGINTSEV, O.Ye.

Bond strength of the nitroso group in ruthenium compounds. Zhur.
neorg. khim. 8 no.8:1988-1989 Ag '63. (MIRA 16:8)

1. Institut obshchey i neorganicheskoy khimii imeni N.S. Kurnakova
AN SSSR.

(Ruthenium compounds) (Nitroso group)

SINITSYN, N.M.; ZVYAGINTSEV, O.Ye.

Effect of outer-space cations on the stability of ligand bonds
in complex compounds. Zhur. neorg. khim. 8 no.10:2329-2333) '63.
(MIRA 16:10)

1. Institut obshchey i neorganicheskoy khimii im. N.S. Kurnakova
AN SSSR.

(Complex compounds) (Chemical bonds)

ZVYAGINTSEV, O. Ye.; SINITSYN, N. M.;

"On mutual influence of atoms and groups in complexes of nitrosyl ruthenium."

report submitted for 8th Intl Conf on Coordination Chemistry, Vienna, 7-11 Sep
64.

PICHKOV, V.N.; SINITSYN, N.M.; ZVIAGINTSEV, O.Ye.

Nitrosoruthenium compound $[\text{RuNO}(\text{NO}_2)_2(\text{NH}_3)\text{OH}]$. Dokl. AN
SSSR 156 no. 4:891-893 Je '64. (MIRA 17:6)

1. Institut obshchey i neorganicheskoy khimii im. N.S.
Kurnakova AN SSSR. Predstavleno akademikom I.I.Chernyayevym.

ZVYAGINTSEV, O.Ye.; SINITSYN, N.M.; PICHKOV, V.N.

Extraction of $\text{Na}_2[\text{RuNO}(\text{NO}_2)_4\text{OH}]\cdot 2\text{H}_2\text{O}$ by means of aliphatic amines.
Radiokhimiia 6 no. 5:619-621 '64. (MIRA 18:1)

SINITSYNA, S.M.; SINITSYN, N.M.

Effect of the nature of neutral ligands on certain properties
of uranyl complex compounds. Zhur.neorg.khim. 10 no.4:923-926
Ap '65. (MIRA 18:6)

L 22241-66 EWP(j)/EWT(m)/EWP(t) IJP(c) RM/JD/JG

ACCESSION NR: AP6005423 (A) SOURCE CODE: UR/0289/65/000/003/0087/0093

AUTHOR: Sinitsyn, N. M.

35
33
8

ORG: Institute of General and Inorganic Chemistry im. N. S. Kurnakov, AN SSSR,
Moscow (Institut obshchey i neorganicheskoy khimii AN SSSR)

TITLE: Investigation of the sorption of ruthenium¹ by natural sorbents

SOURCE: AN SSSR. Sibirskoye otdeleniye. Izvestiya. Seriya khimicheskikh nauk,
no. 3, 1965, 87-93

TOPIC TAGS: ruthenium, sorption, fission product, chemical absorption, absorption
coefficient, clay, sand, radioisotope

ABSTRACT: The author studied the effect of the chemical state of radioruthenium
in solution on its sorption by various natural sorbents. The procedure and the
equipment used in the experiments are described. Data presented show that the
percentage of sorption of radioruthenium depends primarily on the properties of
the sorbent. Irrespective of the chemical form of radioruthenium in solution, the
lowest sorption coefficient is shown by sand and clay, and the highest by peat and
silt containing a maximum amount of humus and exchange calcium. The chemical state
of ruthenium in solution has a considerable effect on the percentage of sorption.
Card 1/2 UDC: 541.15 546.96

L 22241-66

ACCESSION NR: AP6005423

2

Irrespective of the nature of the sorbent, the highest sorption coefficient is shown by radioruthenium in solution in the form of nitroso nitrate complexes, and the lowest by the nitrosonitro-, nitrosochloro-, and chlorocomplexes of ruthenium. The effect of hydrolysis of compounds in solution on the percentage of sorption is noted. The percentage of sorption also depends, to a considerable degree, on the time of contact of the sorbent with the ruthenium solution. An increase in the pH solution from 2 to 9 for clay as well as for soil causes an increase of the percentage of sorption. It is concluded that the behavior of radioruthenium during sorption by natural sorbents is extremely complicated, unique, and is fundamentally different from that of other long-lived fission products. The characteristic of the coordination chemistry of ruthenium and the chemical forms of finding it in solutions substantially affect the sorption of radioruthenium by natural sorbents. Author expresses gratitude to F. Ya. Rovinskiy for consultations and assistance in this work. Orig. art. has: 3 figures and 2 tables.

SUB CODE: 07 / SUBM DATE: none / ORIG REF: 009 / CTH REF: 011

Card 2/2 nst

СИНТЕЗИ, ВИДИ: ЗВ'ЯЗАННЯ, ЧИСТИТИ, ...

Extraction of complex ruthenium nitrosopentahalides with aliphatic amines. Dokl. AN SSSR 160 no.2:370-372 Ja '65. (MIRA 12:2)

I. Institut obshchey i neorganicheskoy khimii im. N.S. Kurnakova AN SSSR. Submitted July 2, 1964.

L 00034-66 EWT(m)/EWP(j)/T/EWP(t)/EWP(b) IJP(c)
ACCESSION NR: AP5020302

JD/RM
UR/0186/65/007/004/0394/0460
541.183.5:546.9

AUTHOR: Sinitsyn, N. M.; Rovinskiy, F. Ya.

TITLE: Adsorption of ruthenium by natural adsorbents. Adsorption of nitrosni-
trato-, nitrosochloro-, and chloro-complexes of ruthenium-106.

SOURCE: Radiokhimiya, v. 7, no. 4, 1965, 394-400

TOPIC TAGS: ruthenium compounds, adsorption, complex compound

ABSTRACT: The purpose of this investigation was to determine the effect of the
chemical state of radioactive ruthenium in solutions on its adsorption by various
natural adsorbents. The effect of the nature of the adsorbent on the adsorption of
ruthenium was investigated. Adsorption of nitrosnitrate complexes of ruthenium
increases in the following order: sand < clay < soil (chernozem) < peat < sludge.
The effect of the chemical nature of radioactive ruthenium compounds is shown in
Fig. 2 (Enclosure 01). Regardless of the nature of the adsorbent, nitrosnitrate
complexes are adsorbed better than nitrosochloro or chloro complexes. On the basis
of adsorption curves it was established that in almost all cases radioactive ruthe-
nium is adsorbed better from solutions containing it in the form of hydrolyzed

Card 1/3

L 00034-66

ACCESSION NR: AP5020302

complexes. It was found that the percent of adsorption is significantly related to the length of time of contact of adsorbent with radioactive ruthenium solution. The nature of the adsorbent and the chemical state of the radioactive ruthenium in solution markedly changes the time of maximum adsorption on the adsorption curves. Change of the pH of the solution from 2 to 11 leads to increase of the adsorption of radioactive ruthenium in the form of nitroschloro- and chloro complexes. Nitrosonitrate complexes are adsorbed most intensely at about pH=9. Orig. art. has: 3 figures and 1 table.

ASSOCIATION: none

SUBMITTED: 09Dec64

ENCL: 01

SUB CODE: GC, NP

NO REF SOV: 010

OTHER: 010

Card 2/3

L 00034-66
ACCESSION NR: AP5020302

ENCLOSURE: 01

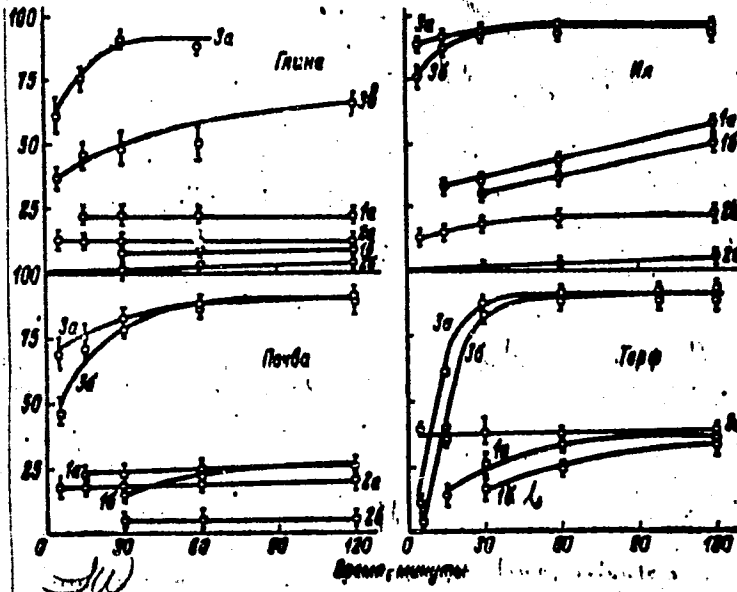


Fig. 1. The effect of the chemical structure of ruthenium-106 in solution on its adsorption by natural adsorbents (at pH=2).

Nitrosnitrate complexes: 1a-- hydrolyzed; 1b-- not hydrolyzed. Nitrosochloro complexes: 2a-- hydrolyzed; 2b-- not hydrolyzed. Chloro complexes: 3a-- hydrolyzed; 3b-- not hydrolyzed

Card 3/3

L 8084-66 EWT(m)/EPF(c)/EWP(j)/T/EWP(t)/EWP(b) IJP(c) JD/RM

ACC NR: AP5027210

SOURCE CODE: UR/0078/65/010/011/2571/2573

AUTHOR: Sinitsyn, N. M.; Zvyagintsev, O. Ye.

ORG: None

TITLE: The thermal stability of complex compounds of ruthenium containing an NO group

SOURCE: Zhurnal neorganicheskoy khimii, v. 10, no. 11, 1965, 2571-2573

TOPIC TAGS: ruthenium compound, thermal stability, nitrogen compound

ABSTRACT: A thermographic study was made of a series of nitroso compounds of ruthenium in a vertical pyrometer with simultaneous automatic recording of the change in weight during heating in air. Temperature measurements were made with a platinum-platinum rhodium thermocouple with a diameter of 0.3 mm. A table shows the formulas of the nitroso ruthenium compounds, the temperature of the start of the endothermic effect, and the temperatures of the initial and maximum exothermic effects. For all the compounds, the dissociation of the RuNO

Card 1/2

UDC: 546.96:541.49+546.172-31

L 8084-66

ACC NR: AP5027210

groups is accompanied by a strong exothermic effect; in most cases, this is preceded by an endothermic effect, which goes over suddenly to the exothermic effect. The first endothermic effect at 300 C reflects the elimination of two molecules of NH_4Cl (calculated weight loss 31.10%, found experimentally 32.00%). For all compounds investigated, the final dissociation product was ruthenium dioxide. The final products of thermal dissociation were analyzed for ruthenium content, which varied from 74.8 to 76.7%; no nitrogen or chlorine was found. To confirm the conclusion that the RuNO group exists up to the temperature of the following endothermic effect, the products obtained by heating the salts to a point somewhat lower than this temperature (by 20-30C) were analyzed for nitrogen. Nitrogen was found in all the products. The data indicates that the dissociation temperature of the RuNO group varies over a wide interval, from 220 to 410 C. Orig. art. has: 1 figure and 1 table

SUB CODE: GC,IC/ SUBM DATE: 07Jan65/ ORIG REF: 003/ OTH REF: 003

Card

2/2 (w)

L 1778-66 EWT(m)/EPF(n)-2/EWP(j)/T/EWP(t)/EWP(b) IJP(c) ES/JD/WW/JG/RM
ACCESSION NR: AP5024003 UR/0020/65/164/002/0351/0353

AUTHOR: Sinitsyna, S. M.; Sinitsyn, N. M.

TITLE: The reaction of uranyl halides with tri-n-butylphosphine oxide

SOURCE: AN SSSR. Doklady, v. 164, no. 2, 1965, 351-353

TOPIC TAGS: extraction, uranium ²¹complex, nuclear fuel

ABSTRACT: In this work a number of complexes were formed between uranyl dihalides and tri-n-butylphosphine oxide (TBPO). Freshly prepared uranium trioxide was dissolved in stoichiometric amounts of the appropriate hydrohalic acid, followed by addition of TBPO in n-heptane (U:TBPO = 1:2). The following complexes were obtained: $[(UO_2)_6F_{12}(TBPO)_8]$, $[UO_2Cl_2(TBPO)_2]$, $[UO_2Br_2(TBPO)_2]$, and $[UO_2I_2(TBPO)_4]$, as indicated by elemental analysis. Cryoscopic molecular-weight determinations in benzene indicate that the fluoride complex exists in benzene in the form of a hexamer, the chloride complex as a tetramer, and the bromide and iodide complexes as monomers. There is evidence for the existence of bridging halogen bonds between individual complex molecules. [VS]

ASSOCIATION: Institut obshchey i neorganicheskoy khimii im. N. S. Kurnakova Akademii nauk SSSR (Institute of General and Inorganic Chemistry, Academy of Sciences, SSSR)
Card 1/1

L 1778-66

ACCESSION NR: AP5024003

SUBMITTED: 26Dec64

ENCL: 00

SUB CODE: IC,GC

NO REF SOV: 005

OTHER: 002

ATD PRESS: 412

mlb
Card 2/2

ZVYAGINTSEV, O.Ye.; SINITSYN, N.M.; FICHKOV, V.N.

Effect of the nature of the acid on the extraction of
ruthenium in the $[\text{RuNo}(\text{NO}_2)_4\text{OH}]^{2-}$ form. Zhur.neorg.khim.

11 no.1.198-200 Ja '66.

(MIRA 19:1)

1. Submitted December 10, 1964.

SINITSYN, N.M.; ZVYAGINTSEV, O.Ye.

Hydrolysis of $(\text{NH}_4)_2[\text{Ru}(\text{NOCl})_5]$. Zhur.neorg.khim. 11
no.1:200-202 Ja '66. (MIRA 19:1)

1. Submitted December 14, 1964.

ACC NR: AP6015091

(A)

SOURCE CODE: UR/0020/66/168/001/0110/0112

AUTHOR: Sinitsyna, S. M.; Sinitsyn, N. M.

34

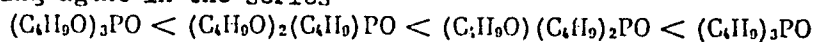
ORG: none

TITLE: Effect of the nature of acid-ligands on the formation of uranyl complexes with tri-n-butylphosphine oxide

SOURCE: AN SSSR. Doklady, v. 166, no. 1, 1966, 110-112

TOPIC TAGS: uranium compound, melting point, refractive index

ABSTRACT: Tri-n-butylphosphine oxide (TBPO), according to the literature, is an active extracting agent in the series



where it forms a strong donor-acceptor bond with the uranyl group in complex uranyl compounds. The reactions of complex uranyl salts with TBPO were investigated by the synthesis of uranyl salts with a 20% solution of TBPO in heptane. All compounds were taken in stoichiometric amounts with the addition of H₂O (1/4 the amount of TBPO) at the end of the synthesis for a better separation of the phases. The UO₂SO₄(TPBO)₃ in the form of light yellow crystals was obtained from UO₂SO₄[CO(NH₂)₂]₃. It had a molecular weight of 937.18, a melting point of 137C, and a decomposition temperature of 280C. The (UO₂)₄(SO₄)₄(TBPO)₁₀ in the form of yellow crystalline powder was formed from

Card 1/2

UDC: 546.791.6

L 08658-67

ACC NR: AP6015091

$\text{UO}_2\text{SO}_4 \cdot 3\text{H}_2\text{O}$ and from $\text{K}_2[\text{UO}_2(\text{SO}_4)_2 \cdot 2\text{H}_2\text{O}]$. It had refractive index numbers α 1.512, β 1.520, and γ 1.532; a molecular weight of 3220; a melting point of 130-140C; and a decomposition temperature of 295C. The $\text{UO}_2\text{C}_2\text{O}_4(\text{TBPO})$ in the form of a light yellow sediment was formed from $(\text{NH}_4)_2[\text{UO}_2(\text{C}_2\text{O}_4)_2(\text{H}_2\text{O})_2]$. It had refractive index numbers α 1.535, β 1.539, and γ 1.575; and a decomposition temperature of 285C. The following phosphine oxide compounds were synthesized from complex uranyl compounds with single-charge acid-ligands. The $(\text{UO}_2)_2(\text{CH}_3\text{COO})_4(\text{TBPO})_3$ in the form of colorless crystals was synthesized from $\text{UO}_2(\text{CH}_3\text{COO})_2 \cdot 2\text{H}_2\text{O}$. It had a decomposition temperature of 265C and a molecular weight changing with time from 1160 to 875. The $\text{UO}_2(\text{ClO}_4)_2(\text{TBPO})_2$ was obtained by dissolving freshly prepared UO_3 in concentrated HClO_4 and subsequent reaction of the solution with the TBPO. It had a decomposition temperature of 180C. The $\text{UO}_2(\text{NO}_3)_2(\text{TPBO})_2$ was formed from $\text{UO}_2(\text{NO}_3)_2 \cdot 6\text{H}_2\text{O}$, $\text{UO}_2(\text{NO}_3)_2[\text{CO}(\text{NH}_2)_2]_2$ and from freshly prepared UO_3 dissolved in concentrated HNO_3 . It had refractive index numbers α 1.546, β 1.533, and γ 1.561; a decomposition temperature of 265C; a melting point of 74C; and a molecular weight of 842. The $\text{UO}_2(\text{CNS})_2(\text{TBPO})_3$ was obtained from $\text{UO}_2(\text{CNS})_2(\text{H}_2\text{O}_3)$. It had a molecular weight of 1054 and a decomposition temperature of 325C. It was shown that the coordination number of the UO_2^{++} -group in complex compounds with TBPO does not depend on the nature of the acid-ligands and that reactions of the formation of complex compounds with TBPO cannot be described by the general formula even if it occurred with uranyl salts of the same type. The paper was presented by Academician I. I. Chernyayev 28 Aug 65.

SUB CODE: 07/ SUBM DATE: 16Jun65/ ORG REF: 005/ OTH REF: 001

Card 2/2

SINITSYN, N. P.

PA 20/49T32

USSR/Electricity
Telephone - Circuits
Telephones - Apparatus

Oct 48

"Using AC to Determine the Location of Breaks in Telephone Circuits," N. P. Sinitsyn, Engr, 3 pp

"Vest Svyazi - Elektrosvyaz'" No 10

Treats subject under measurement of input resistance, of attenuation disagreement, and of asymmetry. Includes two tables, and five diagrams.

20/49T32

SINITSIN, N. P.

"Homotransplantation of the Frog Heart" (p. 277) by Sinitsin, N. P. (Borki)

SO: Advances in Modern Biology (Uspekhi Sovremennoi Biologii) Vol. XLX, No. 2, 1945.

USSR/Medicine - Literature
Medicine - Surgery

Feb 49

"New Books on Surgery in 1948" 2 pp

"Vest Khirurgii" Vol LXXIX, No 2

Reviews 31 books, among them "Penicillin and Its Use in Medicine," by E. G. Afrikyan, "Traumatic Shock," by S. I. Baniytsis, "Combat Trauma and Its Complications," "Skin Graft in the Treatment of Inflammation of Stumps," by A. I. Oska, "Outline of the Scientific Activity of the Office of General Surgery of the Molotov Medical Institute in the Years of the Great Patriotic War," by B. V. Pains, "First Moscow Order of Lenin Medical Institute," "Traumata of the Nervous System and Their Consequences," "Sanitation Service in the Great Patriotic War," "Penicillin (Its Use in Surgical Practice)," by P. L. Sel'tsovskiy, "Transplantation of the Heart, a New Technique in Experimental Biology and Medicine," by N. P. Sinitayn, "Activities of the Army Medical Academy Imeni S. M. Kirov," Vol 55, "Handbook on Surgical Works," "Encyclopedic Dictionary of Army Medicine," and "Penicillin in Surgery" by V. Ya. Shlapoverskiy.

PA 50/49T75

USSR/Medicine - Transplantation of
Organs

Jul 53

"Transplantation of the Heart," M. P. Sinit'syn,
Chair of Pharmacology, Gorkiy Med Inst in S. M.
Kirov

Klin Med, Vol 31, No 7, pp 5-14

Describes progress in isotransplantation of organs to
warm-blooded animals. Developed technique of pre-
serving donor hearts in nutrient medium. Recent
expts show a transplanted second heart functioning up
to 30 days in a dog's body. Expts on complete re-
placement of the heart of dogs are under way.

270753

Observation of the coronary action is made through a
plexiglass plate "ingrown" into the tissues over a
subdermally transplanted heart. Further expts are
scheduled for a visual observation of the effects of
various pharmacological agents on the functioning of
the cardiovascular system with a transplanted heart.

270753

SINITSYN, N.P., professor, doktor meditsinskikh nauk.

In vivo study of the heart under glass. Nauka i zhizn' 21 no.11:
10 N '54. (MIRA 7:12)

(Heart)

USSR/Medicine

FD-2268

Card 1/1 Pub 17-19/20

Author : Sinitsyn, N. P.

Title : Method for inserting a cannula into the thorax for visual observation of coronary circulation

Periodical : Byul. eksp. biol. i med. 3, 74-76, Mar 1955

Abstract : Describes operative procedure and method for inserting and fixing in place a cannula in the thorax of a dog for visual observation of coronary circulation. Diagram; electrocardiogram; photographs. No references.

Institution: Chair of Pharmacology (Head-Prof. N. P. Sinitsyn) of the Gor'kiy Medical Institute

Submitted : July 6, 1954 by S. V. Anichkov, Member of the Academy of Medical Sciences USSR

SINITSYN, N.P.

USER/Medicine--Heart ailments

Card 1/1 Pub. 86--25/39

Authors : Sinitsyn, N. P., Prof

Title : ~~Living heart under glass~~
Living heart under glass

Periodical : Priroda 44/1, 112-113, Jan 1955

Abstract : An account is given of studies made for the purpose of learning more about thrombosis of the coronary vessels of the heart. After successful substitution of transparent plastic for a part of the skull of a dog in order to watch changes in blood flow in the brain, a similar window was made in the breast for observing heart action. This also contained a device which registered changes in the size of the heart. Illustrations.

Institution : Gor'kov Medical Institute

Submitted :

SINITSYM, N.P., professor (g. Gor'kiy)

Transplantation of organs. *Zdorov'e* 2 no.1:19-20 Ja '56. (MLRA 9:3)
(TRANSPLANTATION (PHYSIOLOGY))

COUNTRY : USSR
 CATEGORY : General Biology. Individual Development. B
 Transplantation and Union.
 ABS. JOUR. : RZhBiol., No. 2, 1959, No. 5113
 AUTHOR : Sinitsyn, N. P.
 INST. :
 TITLE : The Method of Transplanting a Second Head to
 a Frog.
 ORIG. PUB. : Bul. eksperim. biol. i meditsiny, 1956, 42, No.9,
 79-80
 ABSTRACT : After removing the breastbone in the recipient
 frog, the pericardium is excised, the frenulum
 of the heart is clipped, the left arcus aortae
 cut and ligated at its ramification point and
 a cannula is inserted into the right superior
 vena cava and into the central stump of the
 aorta. In the donor frog the vessels of the
 pectoral girdle are ligated to the right and

CARD:

1/3 *Chair of Pharmacology, Dostoyevskiy Inst.*
 -26-

COUNTRY : USSR
 CATEGORY :
 ABS. JOUR. : RZhBiol., No. 1959, No.
 AUTHOR :
 INST. :
 TITLE :
 ORIG. PUB. :
 ABSTRACT : left, the inferior vena cava is separated and
 is ligated at the level of the liver, the
 descending aorta arches are ligated and severed
 as high as possible to the head. The head and
 the heart of the donor are severed completely.
 Then the arterial cone is ligated and cut from
 the heart. A celluloid cannula is inserted
 into the inferior vena cava. After being ligated
 the atrial cords are cut off. The severed head
 is placed upon the breast of the recipient, the

CARD:

2/3

COUNTRY : USSR
 CATEGORY :
 ABS. JOUR. : RZhBiol., No. 1959, No.

SINITSYN, N.P., professor

Experimental transplantation of the heart [with summary in English,
p.158] Vest.khir. 77 no.7:28-37 J1 '56. (MLRA 9:10)

(HEART, surg. transplantation
exper., in dogs, physiol. aspects)

(TRANSPLANTATION, exper.
heart in dogs, physiol. aspects)

COUNTRY : USSR T
CATEGORY : Human and Animal Physiology, Circulation
ABS. JOUR. : Ekhbiol., No. 5 1959, No. 22075
AUTHOR : Sinitsyn, N.P.
INST. :
TITLE : Transplantation of the Heart.
ORIG. PUB. : Patol. fiziologiya i eksperim. terapiya, 1957, No. 5, 26--35
ABSTRACT : A review devoted to homotransplantation of the heart. According to the author's data, 8 to 15% survival has been attained in frogs following transplantation of the heart (replacement of the frog's own heart with the heart of another frog). Included are results of dynamic observations of EKG, arterial pressure, cardiac rhythm and examination of the histological structure of the muscles and nerve elements of the transplanted frog heart. In warm-blooded animals, according to the author's data, the homotransplanted heart can function from 30 to 40 minutes up to 30 days. Bibliography of 40 titles.--L.S.Nakhutin
Card: 1/1

SINIENY, N.P.

Homotransplantation of the heart in turtle. Eksper.khir. 2
no.2:16-23 Mr-Ap '57. (MIRA 12:8)

1. Iz Instituta fiziologii (dir. -prof.Lyudvig Nikolai) Berlin-
skogo universiteta imeni Gumbol'dta.
(HEART, transpl.
homotranspl. in turtle technic (Rus))

SINIT SIN, N.P.

"Resection, restauration, reparation et regeneration des ventricules
cardiaques chez le chien."

report presented at the 18th Congress of the Intl Society of Surgery, Munich, 13-20 Sep '59.

SINITSYN, N.P. (Gor'kiy, ul.Minina,d.3-a,kv.22)

Resection and plastic surgery of the cardiac ventricles in
an experiment. Report No.2. Grud. khir. 1 no.4:15-18 Ag
'59. (MIRA 15:3)

1. Iz Gor'kovskogo meditsinskogo instituta imeni Kirova.
(HEART—SURGERY)

SINITSYN, N.P.

Experimental resection and plastic surgery of the ventricles of
the heart [with summary in English]. Eksper.khir. 4 no.1:30-35
Ja-F '59. (MIRA 12:2)

1. Iz Gor'kovskogo meditsinskogo instituta imeni S.M. Kirova.
(HEART, surg.
ventricles, resection & plastic surg. in dogs
(Rus))

SINITSYN, N.P. (Gor'kiy, ul. Minina, d.3-a, kv. 22)

New method for forming a cardiac aneurysm in a dog. Grud. khir.
2 no.6:31-33 N-D '60. (MIRA 14:1)

1. Iz Gor'kovskogo meditsinskogo instituta imeni S.M.Kirova.
(ANEURYSMS) (HEART)

SINITSYN, N.P.

Resection and plastic surgery of the cardiac ventricles under
experimental conditions. Report No.2: Analysis of the
histogenesis of regenerating heart muscle in dogs. Eksper.
khir. 5 no. 5:22-24 '60. (MIRA 14:1)

(HEAR)

SINITSYN, N.P. (Gor'kiy, ul. Minina, d. 3-a. kv. 22)

Resection and plastic surgery of the cardiac ventricles in an experiment.
Report no. 1: Autoplastic operations on the heart. Grud. khir. 3
no. 1: 43-47. Ja-F 1961. (MIRA 16:5)

1. Iz Gor'kovskogo meditsinskogo instituta imeni S.M. Kirova.
(HEART--SURGERY)

SINITSYN, N. P.

New method of registering the blood pressure in the ventricle of
the heart of dogs. Grud. khir. no.5:119 '61. (MIRA 15:2)

1. Iz Gor'kovskogo meditsinskogo instituta imeni S. M. Kirova.

(BLOOD PRESSURE) (HEART--SURGERY)

SINITSYN, N.P. (Gor'kiy, ul.Minina i Pozharskogo, 3a, kv.22)

Free transplantation of the heart muscle in dogs in an experiment.
Arkh. anat. gist. i embr. 40 no.6:41-45 Je '61. (MIRA 15:2)

1. Kafedra farmakologii (zav. - zasluzhenny deyatel' nauki N.P.
Sinit syn) Gor'kovskogo meditsinskogo instituta imeni S.M.Kirova.
(HEART_MUSCLE) (TRANSPLANTATION OF ORGANS, TISSUES, ETC.)

SINITSYN, N.P.

Homotransplantation of the heart of a tortoise. Report No.2.
Eksper. khir. i anest. 8 no.3:20-22 My-Je '63 (MIRA 17:1)

1. Iz Gor'kovskogo meditsinskogo instituta imeni S.M.Kirova

S/0247/63/013/006/1108/1110

SMITLYN, N. I.

ACCESSION NR: AP4002550

AUTHOR: Smetankin, G. N.

TITLE: Third Volga Area Conference of physiologists, biochemists, and pharmacologists

SOURCE: Zhurnal vysshey nervnoy deyatel'nosti, v. 13, no. 6, 1963, 1108-1110

TOPIC TAGS: bionics, closed cybernetic system, neuron modeling, pharmacological stimulant, regeneration process, dibazol, thyroidine, pentoxyl, neuron, cybernetics, central nervous system, biological modeling

S
SU

ABSTRACT: The Third Volga-Area Conference of physiologists, biochemists, and pharmacologists was held in Gorky in June 1963. One hundred and thirty papers were presented. Experimental results and clinical data were reported on various problems in the physiology, biochemistry, and pharmacology of the central nervous system. Problems concerning the cardiovascular system, respiration, endocrine system, and the digestive system were also discussed. A. N. Malakhov and M. Yu. Ul'yamov

Card 1/2

Card 2/

SINITSYN, N.P. (Gor'kiy, ul. Minina, d.3a, kv.22)

Experimental resection and plastic surgery on cardiac ventricles.
Report No.4: Bifurcation of cardiac ventricles along the septum.
Grud. khir. 6 no.2:53-55 Mr-Ap '64. (MIRA 18:4)

1. Gor'kovskiy meditsinskiy institut.

-SINITSYN, N.V. (Leningrad, D-104, ul. Chekhova, d.11/13, kv.48)

Role of X-ray cinematography in the diagnosis of neoplastic and non-neoplastic stomach lesions. Vop. onk. 10 no.6:20-25, '64. (MIRA 18:3)

1. Iz rentgenologicheskogo otdeleniya (ispolnyayushchiy obyazannosti zaveduyushchego otdeleniyem - doktor med. nauk A.P.Lazareva) Instituta onkologii AMN SSSR (dir. - deystvitel'nyy chlen AMN SSSR prof. A.I.Serebrov, nauchnyy rukovoditel' doktor med.nauk A.G.Baranova).

SINITSYN, N.V., inzh.

Flow distribution between the water conduits of joint hydro-
electric power stations. Izv. vys. ucheb. zav.; energ. 8
no.8:106-111 Ag '65. (MIRA 18:9)

1. Belorusskiy politekhnicheskiy institut. Predstavlena kafedroy
gidrotekhnicheskogo stroitel'stva.

SINITSYN, O. A.

"Basic Problems of the Theory and Design of Reversing Gears with Forced Transitional Processes." Sub 5 Feb 51, All-Union Correspondence Polytechnic Inst, Ministry of Higher Education USSR

Dissertations presented for science and engineering degrees in Moscow during 1951.

SO: Sur. No. 480, 9 May 55

Candidate of Technical Sciences

SINITSYN, O. A.

AID P - 1593

Subject : USSR/Electricity

Card 1/2 Pub. 27 - 2/27

Author : Sinitsyn, O. A., Kand. of Tech. Sci., Dotsent

Title : Calculation of starting characteristics of a generator-motor system

Periodical : Elektrichestvo, 3, 5-10, Mr 1955

Abstract : The author investigates a starting arrangement with a one-step control of the generator field. Difficult computations are required to find the maximum starting current, and also to determine the starting time. The author suggests evaluating the starting process on the basis of the ratio between the starting time with shunted generator field resistance, and the ideal starting time with a constant maximum torque. This ratio is always more than a unit. The formula presented by the author to express this relationship makes it possible to bind together the forcing generator field current, the

AL'TMAN, S.Ya., kandidat tekhnicheskikh nauk, dotsent; ~~SINITSYN, O.A., kandidat~~
tekhnicheskikh nauk, dotsent; SILAYEV, E.F., inzhener.

M.M.Sokelev's book "Electric drives and power supply for industrial plants."
Reviewed by S.IA.Al'tman, O.A.Sinitsyn, E.F.Silaev. Elektrichestvo no.8:
95 Ag '56. (MLRA 9:10)

1.Moskovskoye vysshoye tekhnicheskoye uchilishche imeni Baumana.
(Electric meters) (Electric power)

SIMITSYN, O.A., kand.tekhn.nauk, dotsent

Choice of parameters for the control windings of amplidyne
and magnetic amplifiers. Elektrichestvo no.10:70-71 0 '60.
(MIRA 14:9)

(Rotating amplifiers) (Magnetic amplifiers)

SINITSYN, O.A., kand.tekhn.nauk, dotsent

"Automatic control of electric drives on ~~continuous~~ hot rolling mills" by IA.IU. Solodukho. Reviewed by O.A. Sinitsyn. Stal' 21 no.9:828-829 S '61. (MIRA 14:9)

(Rolling mills--Electric driving)
(Automatic control) (Solodukho, IA.IU.)

ANASTASIYEV, F.I.; BROSTREN, A.A.; VESHENEVSKIY, S.N.; GEL'MAN, G.A.;
GORNISHTSEYN, L.A.; ZIMENKOV, M.G.; KARVOVSKIY, G.A.;
KIBLITSKIY, V.A.; KLEYN, P.N.; KLIMIKSEYEV, V.M.; KLYUYEV,
S.A.; KNORRING, G.M.; KORENEVSKIY, A.N.; LEYBZON, Ya.I.;
LIVSHITS, D.S.; LIGERMAN, I.I.; LOGINOV, O.I.; MILICH, M.B.;
NAYFEL'D, M.R.; OKOROKOV, S.P.; POLYAK, A.B.; ROYZEN, S.S.;
RYABOV, M.S.; SINITSYN, O.A.; SOLODUKHO, Ya.Yu.; SOSKIN, E.A.;
STASYUK, V.N.; BOL'SHAM, Ya.M., red.; GRACHEV, V.A., red.;
SAMOVER, M.L., red.; BORICHEV, I. Ye., red.; DANILENKO, A.I.,
red.; KHRAMUSHIN, A.M., red.; YAKUBOVSKIY, F.B., red.;
BRENDENBURGSKAYA, E.Ya., red.; KOMAR, M.A., red.; BORUNOV,
N.I., tekhn. red.

[Handbook on electrical systems of industrial enterprises
in four volumes] Spravochnik po elektroustanovkam promyshlenn-
nykh predpriatiy v chetyrekh tomakh. Pod obshech red. I.E.
Boricheva i dr. Moskva, Gosenergoizdat. Vol.1. [Design of
electrical systems of industrial enterprises in two parts]
Proektirovaniye elektroustanovok promyshlennykh predpriatiy
v dvukh chastiakh. Pt.2. Pod red. I.A.M.Bol'shama i dr.
1963. 598 p. (MIRA 17:3)

AFANAS'YEV, Vasilii Danilovich; BORISOV, Yuriy Matveyevich; GUREVICH, Azriyel' Yefimovich; LEVITANSKIY, Boris Aronovich; MAKEYEV, Ivan Fedorovich; STEFANOVICH, Nikolay Nikolayevich; KHALIZEV, Georgiy Petrovich, kand. tekhn. nauk; SINITSYN, O.A., kand. tekhn. nauk, retsenzent; NEMIROVSKIY, M.I., преподаvatel', retsenzent; YAKOVENKO, N.N., red. izd-va; ISLENT'YEVA, P.G., tekhn. red.

[Electrical equipment of ferrous metallurgy enterprises] Elektro-oborudovanie predpriatii chernoi metallurgii. [By] V.D.Afnas'yev i dr. Moskva, Metallurgizdat, 1963. 606 p. (MIRA 16:9)

1. Dnepropetrovskiy metallurgicheskiiy tekhnikum (for Nemirovskiy). (Iron and steel plants--Electric equipment)

SINITSYN, P.

Construction of school workshops by students. Politekh. obuch. no.1:
56-58 Ja '58. (MIRA 10:12)

(Workshops) (Technical education)

SINITSYN, P., predsedatel'.

Mobilizing power of the collective agreement. Sov.profsoiuzy 1 no.3:
71-76 N '53. (MLRA 6:12)

1. Komitet professional'nogo soveta Kolomenskogo parovozostroitel'nogo
zavoda imeni V.V.Knybysheva.
(Collective labor agreements) (Locomotives)

BUNIN, K.V.; SINITSYN, P.D.

Results of the treatment of hypertension with induced sleep.
Sovet. med. no.10:20-22 Oct 1951. (CML 21:1)

1. Of the Clinic of Hospital Therapy, Chelyabinsk Medical
Institute, attached to the Amalgamated Railroad Hospital
YuUZhd.

SINITSYN, P. D., CAND MED SCI, ^{data for} "~~MATERIAL ON~~ THE PROBLEM
OF THE ACTION MECHANISM AND COMPARATIVE EVALUATION OF ^{the} SE-
DATIVE THERAPY OF HYPERTONIC DISEASE BY VARIOUS METHODS."
CHELYABINSK, 1961. (SVERDLOVSK STATE MED INST). (KL, 3-61,
235).

462

CA SINITSYN, P. G.

Exchange of Ba⁺⁺ and H⁺ ions on permuto. P. G. Sinitsyn (Fish Ind. Tech. Inst., Moscow), *Zhur. Fiz. Khim.* 35, 82-4 (1959).—The adsorption of Ba ions is studied on a permuto of the following compn.: NaCl 4.50, Al₂O₃ 5.70, Fe₂O₃ 1.30, SiO₂ 77.50, H₂O 12.50%. It takes two months to reach the adsorption equm. Buffered solns. of pH between 4 and 10 are used. The quantity adsorbed S (milliequiv. Ba/100 g. dry permuto) depends linearly on pH, in agreement with $S = a + k(pH)$ (cf. Lange and Burger, *C.A.* 30, 4301), but 2 straight lines are obtained, intersecting at pH = 8.5 and the slope is larger in the alk. than in the acid range. This is due to the adsorption of Ba⁺⁺ on the excess silica gel present in the permuto, as shown by its compn. This view agrees with the known absorptive behavior of silica gel at pH above 8 (cf. Hecostova, *et al.*, *C.A.* 31, 18; Brun, *et al.*, *C.A.* 32, 2327).

Michel Boudart

5(4)

AUTHOR:

Sinitsyn, P. G.

SOV/76-33-3-13/41

TITLE:

Exchange of Barium and Hydrogen Ions on Permutites (Obmen ionov bariya i vodoroda na permutitakh)

PERIODICAL:

Zhurnal fizicheskoy khimii, 1959, Vol 33, Nr 3, pp589 - 592 (USSR)

ABSTRACT:

B. P. Nikol'skiy (Ref 2) pointed out that in the case of adsorption of metal from solutions on permutites and similar materials it is necessary to take also the concentration of the metal cations into account apart from the H^+ -ion concentration. An equation modified by Ye. N. Gapon (Ref 3) should therefore have the following form :

$$G_K = \alpha + \beta \left(pH - \frac{1}{n} p Me \right) \quad (3) \quad (\alpha, \beta = \text{constants, } n = \text{valence of the metal cations}).$$

In the present paper the applicability of (3) is investigated in connection with the exchange of barium ions on permutits at pH-values of between 5 and 12 and different barium concentrations. The sodium permutite used was prepared according to a certain scheme (Ref 7) and had the following composition: Na_2O - 7.78%, Al_2O_3 - 28.25%,

Card 1/2

Exchange of Barium and Hydrogen Ions on Permutites

SOV/76-33-3-13/41

SiO_2 - 40.77%, H_2O - 24.29%. Two experiments were carried out; in the first case the ionic strength of the solution amounted to $\mu = 0.1$ and in the second case to $\mu = 0.5$. The experimental results show (Fig) that equation (3) is satisfactory (at pH 5-12 and barium concentrations of 0.031 and 0.160 mol/l). The observation of a reduced sorption of the metallic ions at higher pH-values may be explained on the one hand by a "competition" between H^+ - ions and barium ions, on the other hand by the fact that at pH = 4 part of the permutite decomposes. The sorption of the Ba-ions as function of pH and the barium concentration varies greatly in Permutites of different composition. There are 1 figure and 10 references, 8 of which are Soviet.

ASSOCIATION: Moskovskiy tekhnicheskii institut rybnoy promyshlennosti i khozyaystva im. A. I. Mikoyana (Moscow Technical Institute of the Industry and Economy of Fisheries imeni A.I.Mikoyan)

SUBMITTED: June 27, 1957

Card 2/2

SINITSYN, V. N.

Sunflowers

Check-rowing sunflowers in the area of the Khvalynsk Oil Factory. Masl. -zhir. prom.
18, No. 2, 1953.

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

SINITSYN, P.N., agronom.

Harvest and procurement of sunflower seeds. Masl.-zhir.prom. 18 no.7:8-9
Jl '53. (MLRA 6:8)

1. Khvalynskiy maslozavod.

(Sunflowers)

SINITSYN, P.M.

P.N. Sinitsyn, Vysokiye urozhai serven lyutserny / High Yields of Alfalfa Seed /, Sel'khozgiz, 2 sheets.

The brochure discusses the organization of the work and the advanced management of growing alfalfa for seed.

SO: U-6472, 15 Nov 1954

SINITSYN, P.N., agronom.

State purchase of sunflowers. Masl.-shir.prom. 19 no.3:6-7 '54.
(MIRA 7:6)

1. Khvalynskiy maslosavod. (Sunflowers)

SINITSYN, P.N., agronom.

Several problems relative to the economics of sunflower production.
Masl.-shir. prom. 23 no.2. '57. (MIRA 10:4)

1. Khvalynskiy maslozavod.
(Sunflowers)

LESOKHIN, Artemiy Fedorovich; SINITSYN, P.P., retsenzent; KOROTKOV, V.P.,
kandidat tekhnicheskikh nauk, redaktor; MODEL', B.I., tekhnicheskiy
redaktor

[Tolerances, fits and technical measurements] Dopuski, posadki i te-
khnicheskie izmereniia. Moskva, Gos. nauchno-tekhn. izd-vo mashino-
stroit. lit-ry, 1956. 339 p. (MLBA 10:4)
(Machine-shop practice)

25(1)

PHASE I BOOK EXPLOITATION

Sinitsyn, Pavel Prokof'yevich

SOV/2343

Osnovy vzaimozamenyayemosti i tekhnicheskikh izmereniy (Fundamentals of Interchangeability and Technical Measurements) Moscow, Oborongiz, 1959. 246 p.
Errata slip inserted. Number of copies printed not given.

Reviewer: A.Ye. Bezmenov, Candidate of Technical Sciences, Docent; Ed.: I. A. Grigor'yev, Candidate of Technical Sciences; Ed. of Publishing House: L. I. Sheynfayn; Tech. Ed.: V.P. Rozhin; Managing Ed.: A. I. Sokolov, Engineer.

PURPOSE: This is a textbook for students in machine-building vuzes.

COVERAGE: The book covers fundamental problems of interchangeability in machine-building production. Tolerances and fits in smooth cylindrical joints, tolerances in threaded and splined joints, and tolerances in dimensional chains and in spur gearing are discussed. The author presents methods of measuring lengths, angles, cones and elements of spur gears. Numerical examples of calculations are provided. The author thanks A.Ye. Bezmenov for reviewing the manuscript and offering suggestions. There are 10 references, all Soviet.

TABLE OF CONTENTS:

Card 1/7

Fundamentals of Interchangeability (Cont.)

90V/2343

Ch. IV. Selection of System For Tolerances; Class of Precision and Fits	48
1. Selection of system for tolerances	48
2. Selection of precision class	49
3. Selection of fits for interference (press fit)	51
4. Selection of transition fits	54
5. Selection of clearance fits (loose fits)	55
6. Method for selective assembly	59
7. Tolerances and fits in ball and roller bearings	62
Ch. V. Smooth Gages	68
1. Purpose and design of smooth limit gages	68
2. Tolerances in smooth limit gages	71
3. Marking gages and rules for using them	78
Ch. VI. Tolerances For Threaded Cylindrical Joints	80
1. Basic elements of a thread	80
2. Metric and inch-type fastening threads	81
3. Effects of errors in individual elements of thread on screwability of parts	83

Card 3/7

Fundamentals of Interchangeability (Cont.)

SOV/2343

4. System of tolerances and fits in fastening threads	90
5. Tight threaded connections	96
Ch. VII. Thread Gages	100
1. Purpose and design of threaded gages	100
2. Allowable tolerances in thread gages	103
Ch. VIII. Tolerances and Fits in Splined Connections	110
1. Basic elements in splined connections with straightsided tooth profile	110
2. Designing tolerances and fits in splined connections	112
3. Control gages for splined component parts	118
Ch. IX. Tolerances in Dimensional Chains	123
1. Basic concepts and definitions	123
2. Linear dimensional chains	123
3. Methods for determination of dimensional chains	134
Ch. X. Tolerances in Spur Gears	137
1. General concepts	137

Card 4/7

Fundamentals of Interchangeability (Cont.)

SOV/2343

2. Concepts of kinematic and cyclic errors in gears	137
3. The GOST 1643-56 tolerances in spur gears	141
4. Precision standards for gears and gearings	150
5. Kinds of conjugations	152
6. Precision marking in gears and gearing	155
Ch. XI. Basic Technical Measurements	156
1. Origination and development of length measurement	156
2. Metric system	157
3. Maintaining standard measures in machine-building and method for transfer of dimensions from standard to work piece	159
4. Classification of measuring devices and methods	161
5. Basic metrological features of measuring devices	163
6. Errors in measurements	164
Ch. XII. Measuring Instruments and Devices For Length Measurements	169
1. Gage blocks	169
2. Graduated measuring instruments with vernier (callipers)	174
3. Measuring instruments with micrometer screw	180

Card 5/7

Fundamentals of Interchangeability (Cont.)

SOV/2343

4. Mechanical dial-type measuring instruments	185
5. Lever-type optical measuring instruments	195
6. Measuring machines	199
7. Pneumatic measuring apparatus	201
Ch. XIII. Methods And Devices For Measuring Angles	206
1. Angular-gage blocks	206
2. Rigid squares	208
3. Universal bevel protractor	210
4. Sine bar	213
Ch. XIV. Methods And Devices For Thread Control	216
1. Screw thread micrometer	216
2. Three wire method	217
3. Toolmakers' microscope	219
4. Measuring threading elements with a toolmaker's microscope	221
Ch. XV. Gear Inspection	225
1. Measuring displacement of initial contour	225
2. Measurement of tooth chordal thickness	227

Card 6/7

Fundamentals of Interchangeability (Cont.)

SOV/2343

- | | |
|---|-----|
| 3. Measuring tooth spacing by block gaging | 230 |
| 4. Measuring circular and base pitches and determination of accumulated error of the circular pitch | 233 |
| 5. Tooth profile inspection | 237 |
| 6. Pitch circle runout inspection | 238 |
| 7. Measuring cyclical [smooth run] errors | 239 |
| 8. Composite gear test | 240 |
| 9. Measuring kinematic errors [uniformity of ratio] | 242 |

Bibliography

243

AVAILABLE: Library of Congress

GO/fal
10-19-59

Card 7/7

SINITSYN, P.V., inzhener.

Simplified calculation of the distance to the point of damaged
insulation of electric cables. Vest.sviazi 16 no.5:12 My '56.
(MLRA 9:8)

1. Rukovoditel' izmeritel'noy gruppy rayona kobel'noy magistrali.
(Electric cables)

SINITSYN, P.V.

Some characteristics of measuring difference of potential between
cable coverings and the ground. Vest. sviazi 17 no.12:19-20 D '57.
(MIRA 10:12)

1. Nachal'nik izmeritel'noy gruppy RKM-1 UEM-4.
(Electric cables)

SINITSYN, P.V.

Measurement of the ground temperature around underground cables.
Vest. sviazi 19 no.11:26 N '59. (MIRA 13:8)

1. Rukovoditel' izmeritel'noy gruppy REM.
(Electric lines--Underground)
(Temperature--Measurement)

SINITSYN, P.V., inzh.

Increase the quality of cable laying operations. Avtom., telem.
i sviaz' 4 no. 12:31 D '60. (MIRA 14:1)

1. Laboratoriya signalizatsii i svyazi Kalininskoy dorogi.
(Electric lines--Underground)

SINITSYN, P.V. (Smolensk)

Sealing cable ends. Stroi.truboprov. 10 no.10:23-24 0 '65.
(MIRA 18:10)

I. 10684-63
ACCESSION NR: AP3002276

EWT(m)/BDS/ES(w)-2---AFFTC/ASD/ESD-3/SSD--Pab-1
8/0089/63/014/006/0596/0597

AUTHOR: Nikeshichev, V. N.; Sinitsyn, P. V.

75
74

TITLE: Colloquium on construction and application of betatrons,¹⁹ held in Bucharest, Roumania, November 1962

SOURCE: Atomnaya energiya, v. 14, no. 6, 1963, 596-597

TOPIC TAGS: clinical use of betatrons, conferences

ABSTRACT: Report on colloquium held in Bucharest in November 1962 on the initiative of the Roumanian Academy of Sciences. Thirty scientists from East Germany, Roumania, Soviet Union, Poland, Hungary, and Yugoslavia participated. Papers from the first three countries were the most interesting as these countries had greater experience in construction and operation of these accelerators. Academician Kh. Khulubi of the AN RPR opened the colloquium. Papers were presented by Prof. A. A. Vorob'yev (SSSR) on work done in the Tomskiy politekhnicheskii institut (Tomsk Polytechnical Institute); Prof. A. Eckart (East Germany) of the Physico-Technical Institute of Jena University; M. Vaksel', A. Brinshek of Lubliana, Institute for nuclear physics (Yugoslavia); K. Iliescu and others of the Betatron laboratory, Institute for atomic physics AN RPR; R. V. Sinitsyn and V. N. Nikeshichev (SSSR); E. Burger and V. Stern (East Germany). Among application

Card 1/2

L 10684-63

ACCESSION NR: AP3002276

discussed was the use of betatrons in clinical treatment of malignant growths. It was pointed out that the betatrons produced by the Moscow Elektroavod are not inferior to those constructed by research institutes or commercial firms.

ASSOCIATION: none

SUBMITTED: 00

DATE ACQ: 12Jul63

ENCL: 00

SUB CODE: 00

NO REF SOV: 000

OTHER: 000

ja/lu

Card 2/2

SINITSYN, R.

The shoe store. Sov. torg 33 no.10:49-54 U '59. (MIRA 13:1)

1. Direktor Doma obuvi, -Moskva.
(Moscow--Stores, Retail)
(Boots and shoes)

SINITSYN, R.

Let's supply the stores with modern equipment. Sov.torg. 35
no.4:14-15 Ap '62. (MIRA 15:4)

1. Direktor moskovskogo Doma obuvi.
(Store fixtures)

SINITSYN, R.G. (Odessa)

Frequency of paradentosis and gingivitis in older school children.
Probl.stom. 6:86-91 '62. (MIRA 16:3)
(GUMS--DISEASES) (CHILDREN--DISEASES)

SINITSYN, R.G.; PILIPENKO, L.I.

Caries infection of temporary (milk) teeth. Stomatologiya 42
no.3:10-14 My-Je '63 (MIRA 17:1)

1. Iz detskogo otdela Odesskogo nauchno-issledovatel'skogo
instituta stomatologii (dir. - dotsent A.I.Marchenko). Nauch-
nyy rukovoditel' raboty - prof. I.A. Begel'man.

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Solubility of the enamel of milk teeth and permanent teeth.
Stomatologiya 42 no.4:11-15 J1-Ag'63 (MIRA 17:4)

1. Iz detskogo otdela, otdela plastmass i materialovedeniya
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prof. I.A. Begel'man).

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TITLE: Determination of the Relative Intensities and Conversion Co-
efficients of Transitions Produced During the Decay of Se^{75}
(Opredeleniye otnositel'nykh intensivnostey i koeffitsiyentov
konversii perekhodov, vznikayushchikh pri raspade Se^{75})

PERIODICAL: Izvestiya Akademii nauk SSSR. Seriya fizicheskaya, 1959,
Vol 23, Nr 2, pp 159-184 (USSR)

ABSTRACT: At the beginning, the authors report on data obtained up to
now on the $Ce^{75} \rightarrow As^{75} \leftarrow Se^{75}$ decay, and the spectrometers,
sources and conditions of measurement of the investigations
explained in this paper are described as follows: the magnetic
spectrometer used for measurement had a double focusing, and
the half width of electron lines in the spectrometer conditioned
by the apparatus amounted to 0.4%. The conversion spectrum was
measured in the presence of radiation sources of different
thickness: 0.05, 0.25, 5 mg/cm². For the purpose of determining
the spectral lines of photoelectrons thin targets of silver,
lead, bismuth and other elements were used. The determinations
covered 1) the relative intensities L_{γ} of the spectral lines

Card 1/5

SOV/48-23-2-2/20

Determination of the Relative Intensities and Conversion Coefficients of Transitions Produced During the Decay of Se^{75}

of photoelectrons of Se^{75} ; the authors recorded the whole spectrum with Bi-target $\sigma = 0.1 \text{ mg/cm}^2$, the energy range up to $\sim 100 \text{ keV}$ with Ag-targets $\sigma = 0.25\text{-}0.03 \text{ mg/cm}^2$, the range up to 401 keV inclusive with As-target, $\sigma = 0.25 \text{ mg/cm}^2$, the line 572 keV with particularly thick Ta, Pb, and Bi-targets up to $\sigma = 80 \text{ mg/cm}^2$ (Figs 2-6). The energies obtained and the corresponding I_γ are listed in table 1. The intensity of the transition $h\nu = 265 \text{ keV}$ was assumed as a reference quantity equal to 100. For comparison, tables 1 and 2 contain also data obtained by other authors. For the purpose of checking the spectral sensitivity of the apparatus the relative intensities of γ -lines of Sb^{124} were compared with the values mentioned in paper (Ref 47), in which investigations were carried out by means of the calibrated standard γ -spectrometer "Elotron" (Tables 4, 5 and table 6 give a comparison with Tb^{160}). A possible error in the determination of $I_\gamma \leq 15\%$ results from the comparisons. 2) The authors measured the electron spins of internal conversions of Se^{75} . They obtained 26 conversion lines produced by 12 transitions in As^{75} (Figs 7-12),

Card 2/5

SOV/48-23-2-2/20

Determination of the Relative Intensities and Conversion Coefficients of Transitions Produced During the Decay of Se^{75}

among which there are also the lines of Auger electrons K-LL, K-LM, K-MM. Their energies, intensities I_γ and origin are listed in table 7. According to a comparison with data obtained by other authors the best accordance was found with Schardt and Welker (Ref 10). For the purpose of determining the conversion coefficients from I_γ and I_K two methods were applied:

a) from a comparison of the experimental values I_K/I_γ with the conversion coefficients of transitions 265, 280, 305, 401 keV according to Bashilov and Il'in (Ref 45)(Table 8); the mean value $\alpha_K/(I_K/I_\gamma)$ was used for determining the conversion coefficients of the other transitions; b) from the E1 transition of the transitions 121, 235, 401 keV the conversion coefficients of the other transitions were determined in the above-mentioned way. The values obtained in both ways agree well with one another. On the basis of a comparison between the theoretical and experimental values α_K the authors determined the multipole order of all transitions obtained (Table 9). According to the analysis of the scheme of As^{75} decay by means of Coulomb excitation and inelastic neutron

Card 3/5

SOV/48-23-2-2/20

Determination of the Relative Intensities and Conversion Coefficients of Transitions Produced During the Decay of Se^{75}

scattering the authors determined the existence of the excitation states $\sim 200, 281, 574, 780, 814, 1020, 1250, 1633$ keV. The spectrum of Ge^{75} was studied by the method of $\beta^- - \gamma^-$ coincidence and the levels 199, 265, 477, 628 keV were obtained (Table 10). The γ -spectrum and γ - γ -coincidence from papers (Refs 10 and 25) are given in table 11. Furthermore, the quantum characteristics of the ground state $As^{75}, Se^{75}, Ge^{75}$ were determined to be $3/2^-, 5/2^-, 1/2^-$. The quantum characteristics of the levels 265, 280 and 401 keV were determined as well. The intensity equilibrium in the Se^{75} decay is mentioned in tables 13, 14. The quantities $lg \pi$ are in accordance with selection rules. According to these results the scheme of the $Ge^{75} \rightarrow As^{75} \leftarrow Se^{75}$ decay is established (Fig 13). Similarities of parity with neighboring nuclei are contained in table 15. On the basis of the one-particle model the authors give two possible explanations of the ground state of the nuclei ${}_{34}^{75}Se$ and ${}_{33}^{75}As$ as well as of the levels of As^{75} at 199, 256, 280, 305 and 401 keV in table 17. There are 13 figures, 17 tables, and 55 references, 19 of which are Soviet.

Card 4/5

SOV/48-23-2-2/20

Determination of the Relative Intensities and Conversion Coefficients of
Transitions Produced During the Decay of Se^{75}

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Card 5/5

VOLKOV, A.A.; MURATKHODZHAYEV, N.K.; ZEN'KOVICH, S.G.; SINITSYN, R.V.;
BELYAYEV, V.V.

Radiation load of medical personnel working with Au¹³⁹ granules
in a neuro-oncological clinic. Med. rad. 8 no.5:39-43 My '63.
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N.K. (Leningrad);

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Vop. voin khir. 27 1973-1974 10-12 1973. (1973)

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sterstva zdavookhraneniya SSSR.