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UDC 542.61:661.73

LASKORIN, B. N., BUCHIKIN, YE. P., SHATALOV, V. V., and PONOMAREVA, S. I.**"Effect of the Structures of Aromatic Organophosphorus Acids on Their Extraction Properties"**

Leningrad, Radiokhimiya, Vol 13, No 6, 1971, pp 809-815

Abstract: Extraction constants of U(VI) were determined for a series of aromatic organo phosphorus acids (POA) and it has been established that their extraction properties can be described by the equation $\lg \widetilde{K}_{UO_2} = 3.40 - 2.06 \sum \sigma \phi$.

In contrast to aliphatic substituents, whose effect on the acid and extraction properties of POA is determined principally by their inductive effect, the aromatic radicals are capable of a direct conjugation with the phosphorus atom, i.e., the final effect is determined by inductive and mesomeric effects.

The substituents may be divided into two groups: 1) C_6H_5O- , $p-CH_3C_6H_4O-$, $o-CH_3C_6H_4O-$, $C_6H_5C_1C-$ -- strongly resembling alkoxy radicals in which a strong negative inductive effect is almost completely compensated by a counteracting mesomeric effect; and 2) C_6H_5- , $C_6H_5CH=CH-$, $C_6H_5CH_2-$ group, in which the mesomeric effect is dominant. All acids which have an unsaturated π -elec-
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LASKORIN, B. N., et al., Radiokhimiya, Vol 13, No 6, 1971, pp 809-815

tronic system in their structure -- C_6H_5- , $C_6H_5C=C-$, C_6H_5O- -- have a higher extractive capability toward $U^{(VI)}$ than corresponding dialkylphosphoric-phosphinic acids.

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CZECHOSLOVAKIA

UDC 615.334(PENICILLINUM).012.6.002.62

FUSKA, YA., YAKUBOVA, A., CALYAMA, D. V., and BUCHKO, M., Chair of Technical Microbiology and Biochemistry, Chemico-Technological Faculty, Slovak Technological Institute, Bratislava, and Biotika, Slovenska Lyupcha

"Production of 6-Aminopenicillanic Acid"

Moscow, Antibiotiki, Vol 17, No 9, Sep 72, pp 775-778

Abstract: The possibility of producing 6-aminopenicillanic acid (I) directly in connection with the production of penicillin was studied. A filtrate of a production culture synthesizing benzylpenicillin was extracted with butyl acetate. The butyl acetate extract was stirred with an aqueous suspension of cells of E. coli, strain ATCC 9637, at pH 7.2-7.4. As a result of enzymatic hydrolysis of benzylpenicillin, I formed. On separation of the E. coli cells by centrifuging and changing the pH to 2.0-2.2, unconverted penicillin (benzylpenicillin) and the phenylacetic acid that formed were transferred from the aqueous into the butyl acetate phase, while I remained in the aqueous phase. I crystallized from the aqueous solution after $(\text{NH}_4)_2\text{SO}_4$ had been added to it, the pH brought to 4.2-4.3, and the solution kept 1/2

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FUSKA, YA., et al., Antibiotiki, Vol 17, No 9, Sep 72, pp 775-778

at 0-5°. The yield of I in the two solvents system depended on the volume ratio of the solvents. A yield of 85% was reached at the optimum ratio after 6 hrs of conversion. I with a purity of 92-95% was obtained. The advantage of the method described is that I, which is used in the synthesis of new penicillins, is obtained directly from the production culture without isolating penicillin.

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Pharmacology and Toxicology

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UDC 615.285.7.099

BUCHKO, V. M., RABUKHINA, V. A., and CHISTYAKOVA, I. V., Chair of Internal Diseases, First Leningrad Medical Institute imeni I. P. Pavlov, Hospital Number Two, Zhdanovskiy Rayon

"Clinical Manifestations of Occupational Intoxications With Some Organophosphorus Compounds"

Moscow, Sovetskaya Meditsina, No 10, Oct 70, pp 143-145

Abstract: Clinical manifestations and methods of treatment are described for 106 cases of intoxication with chlorophos (Dipterex) or thiophos, organophosphorus compounds widely used in agriculture for the control of insects and rodents. The patients arrived at the hospital within 1 to 15 hours after intake of 30 to 500 g of the poisons. On the basis of clinical symptoms, intoxications with these compounds are divided into mild, moderately severe, and severe categories. Severity of intoxication varies according to the time lag between intake of the poison and medical treatment. No definite relationship between dose and severity was established. Symptoms of moderate intoxication include bradycardia, miosis, muscular fibrillation, and, in some cases, asthma induced by bronchospasms. In mild cases, these symptoms are less

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BUCHKO, V. M., et al, Sovetskaya Meditsina, No 10, Oct 70, pp 143-145

strongly expressed. Severe cases are usually accompanied by disturbances of the central nervous system, coma, disturbed respiration, low arterial pressure, and pulmonary edema, in addition to the above symptoms. Treatment usually consists of administration of atropine, ephedrine, cardiac preparations, glucose with vitamins, artificial respiration, and camphor and oxygen when necessary. Prompt gastric lavage is an important factor in prevention of the development of severe forms of this intoxication.

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UDC: 621.375.826+621.039.64

SIGEL, R., WITKOWSKI, S., BAUMHACKER, H., BÜCHL, K., ELDMANN, K.,
HORA, H., MENNICKE, H., MULSER, P., PFIRSCH, D., SALZMANN, H.

"Survey of Studies of Laser-Produced Plasmas at the Max Planck
Institute of Plasma Physics in Garching, West Germany"

Moscow, Kvantovaya Elektronika, Sbornik Statey, No 2(8), 1972,
pp 37-44

Abstract: The paper is a survey of experimental and theoretical
research on laser-produced plasmas done at the Max Planck Insti-
tute of Plasma Physics in Garching. Experiments are described
on heating of a plasma by emission from a neodymium laser with
energy of 30 J and pulse duration of approximately 30 ns. The
plasma temperature was measured by a filter method; the time of
flight and average kinetic energy of the ions were measured by
probes. A laser with a single pulse lasting a few picoseconds
is described. The results of theoretical studies done on com-
puters are presented. [The article is a brief version of a paper
presented to the editors by the organizational committee of the

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SIGEL, R. et al., Kvantovaya Elektronika, Sbornik Statey, No 2(8), 1972, pp 37-44

International Conference on Laser-Produced Plasmas, Moscow, 1970. Translation by A. S. Shikanov.] Nine illustrations, bibliography of seven titles.

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1/2 031 UNCLASSIFIED PROCESSING DATE--04DEC70
TITLE--IODINATED PERFLUOROCARBONS -U-

AUTHOR--(03)-ZIMIN, A.V., VAYNSHTEYN, V.I., BUCHNEVA, A.P.

COUNTRY OF INFO--USSR

SOURCE--U.S.S.R. 173,213

REFERENCE--OTKRYTIYA, IZJBRET., PROM. OBRAZTSY, TOVARNYE ZNAKIL970, 47(9),
DATE PUBLISHED--03MAR70

SUBJECT AREAS--CHEMISTRY, NUCLEAR SCIENCE AND TECHNOLOGY

TOPIC TAGS--IODINATED ORGANIC COMPOUND, IONIZING RADIATION, GAMMA
RADIATION, X RAY, FLUORINATED ORGANIC COMPOUND, CHEMICAL PATENT, ORGANIC
SYNTHESIS

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3007/0838

STEP NO--UR/0482/70/000/000/0000/0000

CIRC ACCESSION NO--AA0136272

UNCLASSIFIED

2/2 031

UNCLASSIFIED

PROCESSING DATE--04DEC70

CIRC ACCESSION NO--AA0136272

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. IODINATED PERFLUOROCARBONS ARE
PREPD. FROM CRYST. I AND LIQ. UNSATD. PERFLUOROCARBONS, IN A
PSEUDOBOILING CONDITION OR DURING INTENSIVE MIXING, WITH IONIZING
IRRADN., E.G. GAMMA NEGATIVE OR X RAYS.

UNCLASSIFIED

USSR

BUDAGOV, YU. A., VINOGRADOV, V. B., VOLOD'KO, A. G., DZHELEPOV, V. P.,
KLADNITSKIY, V. S., KUTSIDI, N. K., Tbilisi State University, LOMAKIN, YU. F.,
MAKSIMENKO, V. A., MARTINSKA, G., FLYAGIN, V. B., KHARZHEV, YU. N., and
SHANDOR, L.

"Possible Existence of $\pi^- \delta$ -Resonance With a Mass of 270 MeV"

Moscow, Pis'ma v Zhurnal Eksperimental'noy i Teoreticheskoy Fiziki, Vol 13,
No 12, 20 Jun 71, pp 665-668

Abstract: The preliminary results of this experiment were presented in 1970 at the Fifteenth International Conference on High-Energy Physics in Kiev. The authors find experimental signs of the possible existence of a new meson resonance. They observe a narrow peak when $M = 270$ MeV in the spectrum of effective masses of the system $\pi^- \delta$, which forms in the reaction $\pi^- p \rightarrow \pi^- p + (2.3)\delta$ at 5 GeV/c. The authors study events of the type $\pi^- p \rightarrow \pi^- p + (2.3)\delta$ which satisfy the following conditions: (1) the protons are identified by ionization and stopping in the camera, and the impulses of the protons do not exceed 900 MeV/c; (2) the length of the tracks of secondary charged particles from the star is no less than 2 cm, and the impulses of these particles are measured with an
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BUDAGOV, YU. A., et al., Pis'ma v Zhurnal Eksperimental'noy i Teoreticheskoy Fiziki, Vol 13, No 12, 20 Jun 71, pp 665-668

accuracy no worse than 30%; (3) the δ^+ -quanta have impulses greater than 30 MeV/c, measured with an accuracy no worse than 25%; (4) the scattering angles between the two δ^+ -quanta do not exceed 2° . As a result of the experiment, the authors find that the effect which they observed is caused by the existence of a new meson resonance. The figures depict the distribution by effective mass of quanta. The article contains 2 figures and a bibliography of 7 entries.

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1/2 014 UNCLASSIFIED PROCESSING DATE--13NOV70
TITLE--STUDY OF THE MASS SPECTRUM OF THE LAMBDA K SYSTEM IN PI PRIME
NEGATIVE P INTERACTIONS AT 4 AND 5.1 GEV-C -U-
AUTHOR--(05)-BUDAGOV, YU.A., VINOGRADOV, V.B., VOLODKO, A.G., DZHELEPOV,
V.P., KIRILLOVOSRYUMOV, V.G. **B**
COUNTRY OF INFO--USSR
SOURCE--JETP LETTERS (USA), VOL. 11, NO. 1, P.31-5 (JAN. 1970)
DATE PUBLISHED----JAN70
SUBJECT AREAS--PHYSICS
TOPIC TAGS--PROPANE BUBBLE CHAMBER, SYNCHROTRON, PROTON, MASS SPECTRUM,
PION PION INTERACTION
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--3005/1778 STEP NO--US/0000/70/011/001/0031/0035
CIRC ACCESSION NO--AP0133683
UNCLASSIFIED

2/2 014

UNCLASSIFIED

PROCESSING DATE--13NOV70

CIRC ACCESSION NO--AP0133683

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. REPORTS THE RESULTS OF THE STUDY OF THE EFFECTIVE MASS SPECTRUM OF THE LAMBDA K SYSTEM, OBTAINED IN AN INVESTIGATION OF PI PRIME NEGATIVE PI INTERACTIONS IN THE 24 LITER AND THE METER PROPANE BUBBLE CHAMBERS IRRADIATED BY 4 AND 5.1 GEV-C PION BEAMS, RESPECTIVELY, FROM THE JINR PROTON SYNCHROTRON. (10 REFS.).

UNCLASSIFIED

1/2 013 UNCLASSIFIED PROCESSING DATE--13NOV70
TITLE--PRODUCTION OF XI HYPERONS IN TAU P INTERACTIONS AT 5.1 GEV-C -U-

AUTHOR--(05)-BUDAGOV, YU.A., VINGRADOV, V.B., VLODKO, A.G., DZHELEPOV,
V.P., DUSHENKO, V.F.

COUNTRY OF INFO--USSR

B

SOURCE--JETP LETTERS (USA), VOL. 11, P. 28-31 (JAN. 1970)

DATE PUBLISHED----JAN 70

SUBJECT AREAS--PHYSICS

TOPIC TAGS--HYPERON, CASCADE, PROPANE BUBBLE CHAMBER, PARTICLE PRODUCTION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3005/1795

STEP NO--US/0000/70/011/001/0028/0031

CIRC ACCESSION NO--AP0133700

UNCLASSIFIED

2/2 013

UNCLASSIFIED

PROCESSING DATE--13NOV70

CIRC ACCESSION NO--AP0133700

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. REPORTS THE OBSERVATION OF THE DECAYS OF THE CASCADE HYPERON XI YIELDS ALPHA PLUS PI PRIME NEGATIVE AND A DETERMINATION OF ITS PRODUCTION CROSS SECTION IN PI P INTERACTIONS AT 5.1 GEV-C IN A METER PROPANE BUBLE CHAMBER.

UNCLASSIFIED

1/2 013 UNCLASSIFIED PROCESSING DATE--16OCT70
TITLE--PRODUCTION OF XI PRIME NEGATIVE HYPERONS IN PI PRIME NEGATIVE P
INTERACTIONS AT 5.1 GEV-C -U-
AUTHOR-(05)-~~BUDAGOV~~, YU.A., VINOGRADOV, V.B., VOLODKO, A.G., DZHELEPOV,
V.P., DUSHENKO, V.F. **B**
COUNTRY OF INFO--USSR

SOURCE--PIS'MA ZH. EKSP. TEOR. FIZ. 1970, 11(1), 28-31

DATE PUBLISHED-----70

SUBJECT AREAS--PHYSICS, NUCLEAR SCIENCE AND TECHNOLOGY

TOPIC TAGS--HYPERON, PION PROTON INTERACTION, RADIOACTIVE DECAY, PARTICLE
PRODUCTION, PARTICLE CROSS SECTION, BUBBLE CHAMBER

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1988/0678

STEP NO--UR/0386/70/011/001/0028/0031

CIRC ACCESSION NO--AP0105654

UNCLASSIFIED

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UNCLASSIFIED

PROCESSING DATE--16OCT70

CIRC ACCESSION NO--AP0105654

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. ANAL. OF 230,000 PHOTOGRAPHS TAKEN IN A C SUB3 H SUB8 BUBBLE CHAMBER OF PI PRIME NEGATIVE P INTERACTIONS AT 5.1 GEV-C SHOWED 28 NUCLEAR EVENTS WHOSE SECONDARY NEG. TRACKS COMING OUT THE INTERACTION STARS HAD THE CHARACTER OF THE XI PRIME NEGATIVE YIELDS O PLUS PI PRIME NEGATIVE DECAY. ONLY 6 OF THEM SATISFIED THE CRITERION FOR A XI HYPERON DECAY, I. E., IONIZATION OF EACH TRACK NOT CONTRADICTING THE XI DECAY HYPOTHESIS AND EFFECTIVE MASS (O PLUS PI PRIME NEGATIVE) NOT DIFFERING FROM M EQUALS 1321 MEV-C PRIME2 MORE THAN 50 MEV-C PRIME2. ALL 6 EVENTS IN THE NUCLEAR STAR WERE UNEQUIVOCALLY IDENTIFIED AS THE FOLLOWING: (SHOWN ON MICROFICHE). THE TOTAL CROSS SECTION FOR XI PRIME NEGATIVE HYPERON PRODUCTION IN THE PI PRIME NEGATIVE-P INTERACTION WAS (2.9 NEGATIVE SUB1.0 POSITIVE PRIME1.8)MU B. THE CROSS SECTION INCREASED ON INCREASING THE INTERACTION ENERGY. FACILITY: OB'EDIN, INST. YAD. ISSLED., DUBNA, USSR.

UNCLASSIFIED

1/2 015" UNCLASSIFIED PROCESSING DATE--16OCT70
TITLE--MEASUREMENT OF TOTAL AND PARTIAL CROSS SECTIONS OF THE 5.1 GEV-C PI
PRIME NEGATIVE MESON INTERACTION IN A PROPANE BUBBLE CHAMBER -U-
AUTHOR--(05)-BUDAGOV, YU.A., VINOGRADOV, V.B., VOLODKO, A.G., DZHELEPOV,
B.P., MARTINSKA, G. B
COUNTRY OF INFO--USSR
SOURCE--YAD. FIZ. 1970, 11(2), 395-8
DATE PUBLISHED-----70
SUBJECT AREAS--PHYSICS
TOPIC TAGS--MESON INTERACTION, PION, PROTON, NEUTRON, CARBON, BUBBLE
CHAMBER, PROPANE, INTEGRAL CROSS SECTION
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1991/1033 STEP NO--UR/0367/70/011/002/0395/0398
CIRC ACCESSION NO--AP0110723
UNCLASSIFIED

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UNCLASSIFIED

PROCESSING DATE--16OCT70

CIRC ACCESSION NO--AP0110723

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE TOTAL CROSS SECTION OF THE 5.1 GEV-C PI PRIME NEGATIVE MESON INTERACTION WAS MEASURED IN A C SUB3 H SUB8 BUBBLE CHAMBER. YIELDS OF REACTIONS WITH DIFFERENT MULTIPLICITIES OF CHARGED PARTICLES WERE DETD. FOR THE INTERACTION OF PI PRIME NEGATIVE MESONS WITH P, N, AND C ATOMS, AND THE CROSS SECTIONS FOR GENERATIONS OF 0-10 PRONG EVENTS IN COLLISIONS WITH P WERE OBTAINED. FACILITY: OB'EDIN, INST. YAD. ISSLED., DUBNA, USSR.

UNCLASSIFIED

1/2 014 UNCLASSIFIED PROCESSING DATE--16OCT70
TITLE--MASS SPECTRUM OF A LAMBDA K SYSTEM IN PI PRIME NEGATIVE P
INTERACTIONS AND 4 AND 5.1 GEV-SEC -U-
AUTHOR--BUDAGOV, YU.A.

COUNTRY OF INFO--USSR

B

SOURCE--PIS'MA ZH. EKSP. TEOR. FIZ. 1970, 11(1), 31-5

DATE PUBLISHED-----70

SUBJECT AREAS--PHYSICS, NUCLEAR SCIENCE AND TECHNOLOGY

TOPIC TAGS--HYPERON, K MESON, MASS SPECTRUM, PION, MESON BOMBARDMENT,
BUBBLE CHAMBER, RADIOACTIVE DECAY

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAHE--1983/1700

STEP NO--UR/0386/70/011/001/0031/0035

CIRC ACCESSION NO--AP0054542

UNCLASSIFIED

2/2 014 UNCLASSIFIED PROCESSING DATE--16OCT70
CIRC ACCESSION NO--AP0054542
ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. EFFECTIVE MASS SPECTRA WERE DETD.
BY MEANS OF A PROPANE BUBBLE CHAMBER OF LAMBDA K DEGREES SYSTEMS.
SIMULTANEOUS LAMBDA HYPERON AND K DEGREES MESON DECAY WAS RECORDED UPON
IRRADN. WITH PI MESON BEAMS WITH IMPULSES OF 4 AND 5.1 GEV-SEC.
CONSIDERABLE EXCESS OF NUCLEAR EVENTS ABOVE THE BACKGROUND WAS FOUND IN
THE MASS RANGE 1.61-1.96 SEV-C PRIME2. SUCH AN ANOMALY COULD BE
EXPLAINED EITHER ON THE BASIS OF ISOBARIC DECAY S SUB11 (1710), P SUB11
(1750) (AND WITH LESS PROBABILITY D SUB13 (1730)) IN THE CHANNEL N DEGREES
YIELDS SAMBDA PLUS K OR ON THE EXISTENCE OF A NEW RESONANCE
CORRESPONDING TO 1685 MEV-C PRIME2 UNITS OF MASS. THE TOTAL EFFECTIVE
MASS SPECTRUM OF LAMBDA K PRIME POSITIVE AND LAMBDA K DEGREES WAS ALSO
DETD.; THE EXCESS OF EVENTS ABOVE THE BACKGROUND WITHIN 1.61-1.96 GEV-C
PRIME2 WAS 114 PLUS OR MINUS 13. FACILITY: OB'EDIN. INST. YAD.
ISSLED., USSR.

UNCLASSIFIED

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USSR

BUDAGOV, YU. A., VINGRAOV, V. B., VOLOD'KO, A. G., DZHELEPOV, V. P., KIRILLOV-UGRYUMOV, V. G., KLDNITSKIY, V. S., KUZNETSOV, A. A., LOMAKIN, YU. F., MEL'NIKOVA, N. N., PONOSOV, A. K., FLYAGIN, V. B., SHLYAPNIKOV, P. V., MARTINSKA, G. (1), BOLDEA, V. (2), MIKHUL, A. (2), MUMUYANU, D. (2), PONTA, T. (2), FELEA, S. (2), and CHADRAA, B. (3), Joint Institute of Nuclear Research; (1) University imeni P. I. Shafarik, Koshitse, Czechoslovak SSR; (2) Institute of Atomic Physics, Bucharest, Romania; (3) Physics Institute of the Academy of Sciences Mongolian People's Republic, Ulan-Bator

"Study of the Mass Spectrum of a ΛK -System in $\pi^- p$ -Interactions at 4 and 5.1 Gev/c"

Moscow, Pis'ma v Zhurnal Eksperimental'noy i Teoreticheskoy Fiziki, Vol. 11, No. 1, 5 Jan 70, pp 31-35

Abstract: The results of a study of the spectrum of the effective masses of a ΛK -system are reported. The spectrum was obtained in investigating $\pi^- p$ -interactions in a 24-liter and a 1-meter propane bubble chamber irradiated in π -meson beams of the proton synchrotron of the Joint Institute of Nuclear Research with pulses of 4 and 5.1 Gev/c, respectively. An investigation of the structure of the effective mass spectrum of a ΛK -system was of interest from the viewpoint of observing new

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BUDAGOV, YU. A., et al, Pis'ma v Zhurnal Eksperimental'noy i Teoreticheskoy Fiziki, Vol. 11, No. 1, 5 Jan 70, pp 31-35

resonances with zero strangeness and the decays of different isobars via the channel $N^* \rightarrow \Lambda + K$, to determine the relative probabilities of these decays. Approximately 230,000 photographs were analyzed for each bubble chamber. The effective mass spectra of ΛK^0 combinations for events in which the decays of a Λ -hyperon and a K^0 -meson were simultaneously recorded in the chamber are graphed. The graphs show a considerable excess in the number of events above the background in the mass region 1.61-1.96 Gev/c². It is shown that this anomaly is not associated with the reflection of known resonances Y^* (1385) and X^* (890) in the ΛK^0 -spectrum. The total excess in the number of events over the background in the mass interval 1.61-1.96 Gev/c² was 114 ± 13 . The experimental data verify the existence of two resonances with masses about 1685 and 1935 Mev/c² and widths of the order of 150 Mev/c². It is concluded that the anomaly observed in the effective mass spectrum of ΛK can be explained only by the decay of the isobar S_{11} (1710), P_{11} (1750) via the channel $N^* \rightarrow \Lambda + K$ or by the existence of a new resonance with mass about 1685 Mev/c², as the data of R. Erbe et al indicate.

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BUDAGOVSKI Y, M. T.

medicine

VOSTOCHNO-APRETSIYENSKIY ZHURNAL, No. 4, 1970, pp. 44-47
DIRECT BLOOD TRANSFUSIONS IN THE COMPLEX THERAPY
OF ULCER DISEASE OF THE STOMACH AND THE DUODENUM

A. S. T. Budagovskiy, Honored practitioner of the USSR S.S.R.,
Colonel of Med. Serv.,
M. A. Vashchenko, Colonel of Med. Serv.,
L. I. Huzman, Lt. Col. of Med. Serv.

In the complex therapy of ulcer disease and the direct use of direct blood transfusions in the treatment of ulcer disease, the use of direct blood transfusions is one of the most effective pathogenetic methods of treatment of many ailments of internal organs.

Clinical observations and experimental research of recent years indicate that the therapeutic effect of blood transfusion by the direct transfusion method is more effective than transfusion of preserved blood (A.S. Ipatov et al., 1966; H.V. Jetrovskiy, 1967; Yu. V. Klov, 1968; Yu. M. Novikov, 1966, and others). In the first case it preserves its biological properties to the maximum (S.I. Spisokovskiy, 1975), and it has a marked stimulating and hemostatic effect (Z. Yu. Klov, 1966). Complex therapy with the use of direct transfusions was the most effective in ulcer patients (A.S. Ipatov et al., 1966; S.H. Geytin and P.O. Vyzitskiy, 1966; G.I. Aleksandrov and S.I. Vashchenko, 1966; Ya. Khodolnyy, 1966). In the available literature we did not find indications for using direct blood transfusions in the treatment of ulcer disease.

Since 1969 we have been using direct blood transfusions in the complex therapy of GUDU. This article gives the results of treatment of 106 patients (102 males and 4 females). Among them, 7 persons were below 20 years of age, 67 between 20 and 25, 16 between 26 and 30, 9 between 31 and 40, 7 over 40. In the majority of patients the duration of illness was not long. Thus, 42 persons considered themselves sick for about one year, 39 between one and three years, 13 between four and five years, 12 between six and ten years, and 10 over ten years.

All patients entered the primary with method clinical symptoms of exacerbation of ulcer disease. In 91 patients the niche symptom was noted predominantly. In others indirect radiological signs (bulb deformity, periduodenitis, elongation of the pyloric antrum, and so on). The size of the ulcer was localized in the duodenal area in 79, in the stomach in 27. In 106 cases ulcer of the pyloric sector of the stomach was combined with ulcer of the duodenal bulb.

All patients observed on a regimen in the first ten days of treatment, and received Diet No. 1 (after treatment) for the next 10 days, Diet No. 1b and meal-food regimen, and then Diet No. 1 and general regime, simultaneously for the first 10-15 days of treatment.

drops in the usual doses (53 portions) of vitamin (91) were prescribed. All patients received alkalizing agents and physiotherapeutic procedures. In this period, after every 6-7 days, direct blood transfusion was given to 38 patients twice, to 47 three times, and to 24 four times. At one intake, usually 150 to 250 ml blood of identical group was transfused. Only four patients received a foreign-group blood (first group). At evaluation of the effectiveness of the performed therapy, attention was paid to the general condition of the patients, the character of the pathological syndrome, the intensity of dyspeptic disorders, the evolution of x-ray findings and of the patients weight, the amount of total protein and of protein fractions in the blood, and to the indices of the coagulogram.

In the majority of patients, already after the first transfusion, the general feeling improved considerably, the rashes and dyspeptic disturbances ceased entirely or they diminished. Thus, by the 10th-13th day of treatment, after 2-3 direct blood transfusions, in 70 patients the pains and dyspeptic disturbances were stopped, and by the 25th day in 98 patients full subjective comfort was noted. Only in 8 who had associated perivisceritis and pathological changes in the liver and biliary pathways did the dyspeptic symptoms remain for a longer time. Z.A. Bondart and co-authors A.I. Gurskaya and others at the All-Union Gastroenterological Conference (Moscow, 1966) reported that approximately in one third of the patients with chronic ulcer disease, the liver, pancreas, and other organs are involved in the process, on account of which the period of recovery is considerably stretched out.

It is well known that at the evaluation of the effectiveness of some therapeutic method of ulcer disease one of the most objective criteria is the time of ulcer healing. According to the findings of S.M. Rys (1956), in half of the cases chronic ulcers of the stomach and duodenum are inclined to heal in 28-42 days. G.I. Borodulsky (1963) thinks that reparation of an acute ulcer lasts from a few weeks to a few months. S.S. Smirnov (1948) established with a gastroscope that initial signs of ulcer healing are already found after 10 days of treatment, and approximately after 30 days it is fully healed. P.I. Sobolev (1964) analyzed the findings of repeated radioscopies of the ulcer tract of young men who had the generally approved methods of treatment and he found that re-epithelization of the ulcer starts on the 24th to 25th day and lasts until the 40th to 45th day.

For objective evaluation of the time of reparation, we compared the findings of repeated roentgenological examinations of two groups of patients. In all patients the ulcer symptom was detected at the first radioscopy. Persons of the first group (91 men) received direct blood transfusion, those of the second (72 men) did not have hemotransfusion. The patients' age, the clinical symptoms of the disease and also the performed other treatment was identical in both groups. The second roentgenological examinations were on the 21st - 23th day of treatment. The obtained results are shown in Table 1.

Table 1

Group of patients	Number of patients	Results of the second roentgenological examination	
		no evident niche (full repair)	niche considerably smaller in size
First	91	76	13
Second	72	36	36

Diagnosis

USSR

BUDAGYAN, F., Professor

"Differential Diagnosis of Botulism"

Moscow, Meditsinskaya Gazeta, 28 May 71, p 3

Abstract: It will soon be summer. The first vegetables, berries, fruits, and fresh fish will appear in the shops and markets. People will begin canning produce. This is precisely the time when botulism should be particularly kept in mind.

The occurrence of this sickness, as a rule, is associated with the use of home-canned food products which were not subjected to the proper heat processing, such as: pickled, dried and smoked fish; fresh smoked hams; home-made sausages; canned mushrooms and vegetables. The same products commercially processed have ceased to be the cause of the fatally dangerous sickness. This is explained by the vast difference in the sanitary and technical capabilities of the domestic and commercial situations.

The mortality rate from botulism in our country has been cut in half in comparison with what it was ten years ago, but it still remains high (20 to 25%). The constant perfecting of the forms and methods of the medical disease-prevention service is very significant in the fight against this disease. Lowering the mortality rate is connected with the production and

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USSR"

BUDAGYAN, F., Meditsinskaya Gazeta, 28 May 71, p 3

application of four types of medical antitoxic sera (A. B. E. and C).

At the same time, practice shows that many doctors are poorly acquainted with the syndrome characteristic of botulism and often make diagnostic mistakes.

The sickness begins with indisposition, general lethargy, muscular weakness, loss of appetite and sleep, and headache.

In botulism, bulbar palsy is observed with gradual worsening of symptoms over a period of 3 to 5 days, or the symptoms may even become intense during the first day or two.

An affliction of the motor nerves of the eye produces diminished vision. Patients complain of double vision, of a fog and a screen in front of their eyes. They show a dilation of the pupils of the eye, disturbed visual accommodation, disturbed convergence of the eyes are sometimes cross-eyed, or have blepharoptosis, more often on one side of the face.

The patient finds it difficult to speak (paresis of the tongue muscles), his voice grows weaker, he speaks through the nose, and his swallowing is impeded. Dryness of the oral cavity induces thirst (rarely an increase in salivation), and often water and vomited matter are discharged through the nose.

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BUDAGYAN, F., Meditsinskaya Gazeta, 28 May 71, p 3

Body temperature is usually normal or low, but the pulse is fast. Very rarely are bradycardia and subnormal fever observed.

Vomiting occurs in the early hours of sickness and sometimes continues repeatedly for one to two days. Constipation is observed, sometimes accompanied by flatulence and severe pain in the stomach region. It is rare for the disease to subside during the first or second day. The liver and spleen are normal.. Difficulty in urination and overflowing of the bladder are characteristic,

Paresis of the intercostal muscles and diaphragm makes breathing difficult, which, with weakened heart action, not infrequently brings on cyanosis. Usually death occurs from respiratory arrest

All such symptoms in these or various combinations can be encountered in a number of other ailments, and ignorance on the part of the doctors about the botulism syndrome can lead to severe complications for the patient.

Botulism is mistakenly diagnosed as bulbar poliomyelitis, diphtheric polyneuritis, and even a heart attack.

To save the patient's life, it is recommended that polyvalent anti-toxin serum be administered as soon as possible, instead of waiting for
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BUDAGYAN, F., Meditsinskaya Gazeta, 28 May 71, p 3

comprehensive manifestation of symptoms. In the early phase of the sickness, if botulism is suspected, it must be ascertained whether the patient in the last few hours or days had eaten canned goods which were not heated. It is extremely important to establish whether the symptoms of the sickness appeared in other persons who had eaten the same products.

In the incipient stage, a decisive factor in formulating the diagnosis is provided by a blood analysis to detect the toxin and its type with the aid of a biological test on mice. Blood must be taken from the patient before administering antitoxic serum. It is advisable to conduct a thorough test of the product and of the vomited matter of the patient. Their extracts are injected into mice and confirmation is obtained in one or two days.

Botulism should be differentiated from infectious diseases in which bulbar disorders and certain toxic effects are manifested.

Intoxication with wild plants containing atropine (henbane, stramonium, belladonna) is usually manifested at first by severe agitation, sometimes with loss of a consciousness, and by an elevated temperature, uncharacteristic of botulism. Visual disorders are not found with blepharoptosis. In poisoning from a type of colorless toadstool, exhausting gastroenteritis appears suddenly, and often toxic hepatitis, which are not characteristic of botulism. Methyl alcohol causes a disease of the optic nerve which is

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BUDAGYAN, F., Meditsinskaya Gazeta, 28 May 71, p 3

also not observed in botulism. It must be noted that muscular spasms, profuse salivation, and hydrophobia are usually observed in the bulbar form of rabies. This is why it is important to establish whether the patient came into contact with an animal (bite, saliva), in order to rule out the suspicion of rabies.

In the bulbar form of poliomyelitis, symptoms also appear which are not characteristic of botulism such as: elevated temperature for four to five days in repeated waves, pains in the nerve trunks and spine, and a combination of lymphocyte neutrophil pleocytosis in the cerebrospinal fluid.

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BUDAGYAN, F. Ye., Professor

"Botulism"

Moscow, Sovetskiy Krasnyy Krest, No 6, Jun 71, p 28

Abstract: Botulism is the most dangerous type of food poisoning. Its cause, *Cl. botulinum*, is often found in the soil, contaminated bodies of water, and manure. Mixed in with fodder, *Cl. botulinum* get into the intestines of fish, animals, and birds. Dust containing this microorganism is deposited on vegetables and fruit. However, *Cl. botulinum* bacteria do not propagate in living tissues with the formation of toxin; they are capable of propagating only in dead plant or animal tissue in the absence of air. Under conditions unfavorable for propagation, the bacteria are transformed into very resistant spores. Among foodstuffs preserved at home, mushrooms are the most dangerous source of botulism, because they are difficult to wash by reason of their spongy structure. It is best to store mushroom preserves in open containers rather than hermetically sealed glass jars, in which *Cl. botulinum* bacteria propagate readily. Vegetables and fruit that have been preserved are less dangerous, because they are easy to clean. Canned preserves are safer than those made at home, because they

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BUDAGYAN, F. Ye., Sovetskiy Krasnyy Krest, No 6, Jun 71, p 28

are properly sterilized. At plants manufacturing canned preserves, sterilization of cans containing food products is carried out in autoclaves at 112-120°C rather than in boiling water at 100°C. Swelling of cans is a sign of infection of the contents with *Cl. botulinum*, but cans that are not swollen frequently contain the botulinus toxin. Preserves that have been prepared at home should be fried or boiled before consumption, this kills *Cl. botulinum* bacteria (but not the spores of *Cl. botulinum*) and inactivates the toxin. To prevent botulism, fish products that are not heated before eating (salted, dried, or smoked fish) should be prepared properly. Fish caught during the warm season should be immediately cooled by icing and only then salted. Upon addition of salt, fish should be kept at a low temperature until salting is completed. Under these conditions spores that may be present in the fish cannot develop into *Cl. botulinum* bacteria. Once the fish has been salted, *Cl. botulinum* bacteria cannot propagate in it even during storage without refrigeration. Home-made raw smoked ham is a possible source of botulism; it should be boiled or baked unless it is consumed on the day of preparation. Botulism is a very dangerous condition. When its symptoms appear, medical treatment should be applied

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USSR

BUDAGYAN, F. Ye., Sovetskiy Krasnyy Krest, No 6, Jun 71, p 28

promptly. If this treatment is applied in due time and a special antitoxic serum administered, the patient will recover.

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BUDAK, B. M. and MARKOV, YU. B.

"Some Problems of Optimal Control for Differential Equations with Random Parameters"

Prikl. Mat. i Programmir. [Applied Mathematics and Programming -- Collection of Works], No 9, Kishinev, Shtiintsa Press, 1973, pp 3-20 (Translated from Referativnyy Zhurnal Kibernetika, No 9, 1973, Abstract No 9V32)

Translation: Certain classes of optimal control problems are studied when there are random perturbations for linear systems of ordinary differential equations. The criterion of replacement of these problems with deterministic problems and sufficient conditions for existence of an optimal control for stochastic problems are found.

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USSR

UDC: 519.2

BERKOVICH, Ye. M., BUDAK, B. M.

"Concerning a Class of Stochastic Extremum Problems"

Moscow, Priblizh. metody resheniya zadach optimal'n. upr. i nekorrek. obratn. zadach--sbornik (Approximate Methods of Solving Optimum Control Problems and Certain Incorrect Inverse Problems--collection of works), Moscow University, 1972, pp 3-16 (from RZh-Kibernetika, No 7, Jul 73, abstract No 7V87 by B. Rozovskiy)

Translation: The paper deals with the problem of minimizing the functional $f(u) = M_k(u)$ (M is the symbol for mathematical expectation), where $K(u) \equiv K(u, \omega)$ is a functional on the direct product of spaces $E \times \Omega$. With broad assumptions relative to the structure of space F and the functional $K(u, \omega)$ the authors prove the existence of an element $u^* \in E$ on which the minimum of $f(u)$ is reached. This general result is then used to prove the existence of an optimum control of solution of the equation

$$\begin{aligned} \dot{x}[t; u; \omega] &= f(x[t; u; \omega], u(t), t, \mu(\omega)), \\ x(T_0; u; \omega) &= x_0(\mu(\omega)), \quad t \in [T_0, T_1], \end{aligned}$$

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BERKOVICH, Ye. M., BUDAK, B. M., Priblizh. metody resheniya zadach optimal'n. upr. i mekotor. nekorrekt. obratn. zadach, Moscow University, 1972, pp 3-16

$\mu(\omega)$ is a random vector.

In the given instance, the functional to be minimized has the following form:

$$I(u) = A \int_{T_0}^{T_1} g(x(t; u; \omega), u(t), t, \mu(\omega); x(T_1; u; \omega)) dt + g_0(\mu(\omega), x(T_1, u, \omega)).$$

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USSR

UDC 518:519.3:62-50

BUDAK, B. M., BERKOVICH, Ye. M., Moscow

"On the Approximation of Extremal Problems. I"

Moscow, Zhurnal Vychislitel'noy Matematiki i Matematicheskoy Fiziki, No. 3,
May/Jun 71, pp 580-596

Abstract: Problems of constructing a sequence of extremal problems that approximate the initial extremal problem, both in the sense of optimal values of the functional and in the sense of a set of elements producing this value, are discussed, and associated problems of the stability of extremal problems are considered in addition. Necessary and sufficient conditions are given for approximating the initial problem in terms of the functional, and then these results are applied to a study of the conversions of certain methods of solution of the extremal problems in the presence of constraints. The Ritz method and difference approximations for optimal control problems are discussed. The construction of elements close to a set on which the optimal value of the functional in the initial problem is achieved is discussed on the basis of the regularization notion of A. N. Tikhonov.

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USSR

UDC 539.3.01

TUL'CHIY, V. I., BUDAK, V. D., GRIBICH, N. G., SYPKO, V. P.

"On Determining the Stress Concentration at Danger Points of Plate-Bands With Rounding Off"

V sb. Kratk. tezisy dokl. k Konf. po povrezhdeniyam i ekspluat. nadzhnosti sudovykh konstruktsiy, 1972 (Brief Summaries of Papers at the Conference on Damages and the Operational Reliability of Ship Designs, 1972 -- Collection of Works), Vladivostok, 1972, pp 93-97 (from RZh-Mekhanika, No 3, Mar 73, Abstract No 3V55)

Translation: Experimental graphs showing the relationship between the stress concentration coefficient and the geometric parameters of the weakening elements are shown for three elongated bands weakened by an opening and various types of punchings. The photoelasticity method was used to conduct the study on the coordinate-synchronous polarimeter KSP-7. The models were made of epoxy resin ED-5 and were subjected to uniaxial uniformly distributed stress. N. T. Glazunova.

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USSR

UDC 539.319:539.219.2

TUL'CHIY, V. I., KICHIGIN, V. G., and BUDAK, V. D., Nikolayev Shipbuilding
Institute

"A Plate With Periodically Situated Groups of Arbitrary Reinforced Openings"

Kiev, Prikladnaya Mekhanika, No 6, Jun 72, pp 122-127

Abstract: There is presented the solution of a two-dimensional problem for plates with periodically situated groups of arbitrary openings without angular points, the edges of which are reinforced by complex elastic elements. The problem is solved by a combination of the method of a small parameter and the method of series, and is reduced to the solution of problems similar to those of a problem for a plate with circular openings. For a specific case, it is proved that the obtained system of equations is quasi-regular. Numerical examples are presented. 4 figures. 6 references.

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Acc. Nr.: **AP0031632**

B

Ref. Code: UR 0219

PRIMARY SOURCE: Byulleten' Eksperimental'noy Biologii i Meditsiny, 1970, Vol 69, Nr 1, pp7-11

EFFECT PRODUCED BY STIMULATION OF THE BRAIN STEM REGION
EVOKING LOCOMOTION ON THE ASCENDING REFLEXES
IN MESENCEPHALIC CATS

N. N. Budanova, M. L. Shik

Interfaculty Laboratory of Mathematical Methods in Biology of the Moscow University
and Institute of Information Transmission Problems of the Academy of Sciences of
the USSR, Moscow

Responses of the deep radial nerve to the stimulation of afferent fibers in the hind extremity were registered in curarized mesencephalic cats. The ascending reflexes (AR) had habitually a latent period of 10-17 msec. Stimulation of the brain stem region, which prior to curarization evoked forth stepping movements, led to intensification of the AR and shortening of its latency. Intensification of the AR might not be accompanied by the segmental reflex. Consequently, stimulation of the "locomotor" region of the brain stem produced a coordinated change in the state of interneuron systems and not just simple facilitation of motor neurons. Intensification of the AR and shortening of its latency was also observed when changing over from the frequency of the afferent stimulation of once in 2 sec to twice in 1 sec.

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UDC 681.2.087.92+62-83

BUDANOV, A. S., GRIGORYAN, V. G., NAYMARK, A. M.

"Elements of a System for Regulation of the Instantaneous Speed of a Synchronous Micromotor"

Elementy Tsifr. Sistem upr. [Elements of Digital Control Systems], Leningrad, Nauka Press, 1971, pp 104-108, (Translated from Referativnyy Zhurnal Avtomatika, Telemekhanika i Vychislitel'naya Tekhnika, No 11, 1971, Abstract No 11 A137 from the Resume).

Translation: The operation of a phase detector and Kipp oscillators with adjustable delay is studied. These elements are used in a system for stabilization of the instantaneous velocity of a synchronous micromotor. 3 Figures; 1 Biblio. Ref.

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USSR

UDC 621.357.1:66/.847(088.8)

BUDANOV, V. V., KIBENKO, V. D., BUKIN, S. M., PANOV, V. P.

"Electrochemical Procedure for Obtaining Rongalite"

USSR Author's Certificate No 303317, filed 11 Oct 69, published 14 Jul 71 (from RZh-Khimiya, No 12, Jun 72, Abstract No 12L286P)

Translation: An electrochemical method of obtaining rongalite using cathode reduction has been patented. It is distinguished by the fact that in order to improve the process, increase the yield and improve the quality of the product, zinc formaldehydebisulfite is reduced at a pH of the electrolyte of 5-6, D_c 5-10 a/dm², a raw materials concentration 2 g-mole/liter in SO₂ at a temperature of 85-100°, and the zinc formaldehydesulfoxylate formed is converted to the product by known procedures.

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1/2 013 UNCLASSIFIED PROCESSING DATE--04DEC70
TITLE--RHEOLOGICAL PROPERTIES OF A RONGALITE MELT -U-

AUTHOR--(04)-BUDANOV, V.V., LYUSKIN, V.K., MAYOROVA, S.A., BOLES LAVSKAYA,
N.F.

COUNTRY OF INFO--USSR

B

SOURCE--IZV. VYSSH. UCHEB. ZAVED., KHIM. KHIM. TEKHNOL. 1970, 13(2), 233-6

DATE PUBLISHED-----70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--FORMALDEHYDE, SODIUM COMPOUND, THIXOTROPE, VISCOMETER, FLUID
VISCOSITY

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRA ME--3005/0175

STEP NO--UR/0153/70/013/002/0233/0236

CIRC ACCESSION NO--AT0132452

UNCLASSIFIED

2/2 013

UNCLASSIFIED

PROCESSING DATE--04DEC70

CIRC ACCESSION NO--AT0132452

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

ABSTRACT. RHEOLOGICAL DATA AT 70-90DEGREES ARE GIVEN FOR RONGALITE MELTS CONTG. VARYING RATIOS OF NAHSO SUB2 .CH SUB2 O TO NAHSO SUB2 CH SUB2 O.2H SUB2 O AS DETD. IN A ROTATING CYLINDER VISCOMETER. HYSTERESIS LOOPS ARE OBSD. IN LOAD RMP PLOTS AND ARE INTERPRETED AS INDICATING A THIXOTROPIC CHARACTER. THE LOG OF THE BINGHAM VISCOSITY AND THE YIELD VALUE OF THE MOLTEN PRODUCTS ARE LINEARLY DEPENDENT ON THE CONCN. OF NAHSO SUB2 .CH SUB2 O IN THE MELT. EMPIRICAL EQUATIONS ARE DEVELOPED FOR THIS RELATION, WHICH MAY BE USED IN A VISCOMETRIC METHOD FOR DETG. THE H SUB2 9 CONTENT OF A MELT. FACILITY: IVANOV. KHIM.-TEKHNOL. INST., IVANOVO, USSR.

UNCLASSIFIED

Plant Pathology

USSR

UDC 632.938

DUNIN, M. S., GRIGOR'YEV, M. F., and BUDANOV, V. Ye., Moscow Branch of the All-Union Scientific Research Institute of Plant Growing Mikhnevo Moscow Region

"Change in the Immunological Characteristics of Plants Under the Influence of a Multiple Infection"

Moscow, Sel'skokhozyaystvennaya Biologiya, No 3, May/Jun 73, pp 425-430

Abstract: A study was made of the effect of the simultaneous infection of two strains of wheat by the root rot *Fusarium culmorum* and the brown rust *Puccinia recondita*. Five groups were studied: a) control, b) one exposed to the rust, c) one exposed to the rot, d) one having the rot exposed to the rust, and e) one having the rust exposed to the rot. Group d) had a significantly lower resistant to rust than group b). Group e) showed a slightly greater susceptibility to rot than group c).

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USSR

UDC 633.11+582.285.2

DUNIN, M. S., academician Moscow Order of Lenin Agricultural Academy imeni K. A. Timiryazev and BUDANOV, V. YE., Moscow Department of VIR All-Union Scientific Research Institute of Plant Growing

"Comparative Investigation of Antigenically Active Substances in all Kinds of Wheat and Races of Brown Rust"

Moscow, Vestnik Sel'skokhozyaystvennoy Nauki, No 10, 1972, pp 9-18

Abstract: With increasing number of chromosomes from diploid to hexaploid, the resistance of all types of wheat to brown rust pathogen decreases. One notable exception is the T. timopheevi Zhuk wheat strain, which is tetraploid and yet displays a high immunity to that pathogen. The serological and immunoelectrophoretic properties of experimentally inoculated wheat are the same as those of naturally infected wheat. The similarity of these properties displayed by globulins obtained from *P. recondita* Rob. ex Desm. uredospores and by globulins obtained from leaves of wheat susceptible to this pathogen makes it possible to utilize serodiagnosis, electrophoresis, and immunoelectrophoresis for a quick evaluation of the resistance of any wheat strain to brown rust. T. timopheevi Zhuk is most resistant and T. vavilovi Jakubz ($2n=42$) most susceptible to brown rust fungus races 20, 52, and 143.

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1/2 020 UNCLASSIFIED PROCESSING DATE--27NOV70
TITLE--EFFECT OF ETHYL ACETATE ON THE POLYMERIZATION OF VINYL CHLORIDE
WITH THE TETRABUTOXYTITANIUM, DIISOBUTYLALUMINUM CHLORIDE CATALYST SYSTEM
AUTHOR--(02)-BUDANOVA, G.P., MAZUREK, V.V.

COUNTRY OF INFO--USSR

SOURCE--VYSOKOMOL. SOEDIN., SER. A 1970, 12(5), 1062-77

DATE PUBLISHED-----70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--ACETATE, POLYMERIZATION KINETICS, VINYL CHLORIDE, CHEMICAL
REACTION MECHANISM, ORGANOTITANIUM COMPOUND, ORGANoALUMINUM COMPOUND

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--3007/1015

STEP NO--UR/0459/70/012/005/1062/1077

CIRC ACCESSION NO--AP0136442

UNCLASSIFIED

2/2 020

UNCLASSIFIED

PROCESSING DATE--27NOV70

CIRC ACCESSION NO--AP0136442

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE POLYMN. KINETICS OF CH
SUB2:CHCL IN C SUB7 H SUB16, INITIATED BY THE TITLE CATALYTIC SYSTEM
(I), WAS STUDIED IN THE PRESENCE OF ETOAC, WHICH MARKEDLY INCREASED THE
EFFECTIVENESS OF I. A REACTION MECHANISM THAT ACCOUNTED FOR THE
INCREASED EFFECTIVENESS WAS PROPOSED. THE KINETICS OF THE TI(OBU) SUB4
REACTION WITH ISO-BU SUB2 ALCL WITH OR WITHOUT ETOAC IS DISCUSSED AND A
FREE RADICAL POLYMN. MECHANISM IS SUGGESTED. FACILITY: INST.
VYSOKOMOL. SOEDIN., LENINGRAD, USSR.

UNCLASSIFIED

USSR

UDC 578.088.6

TSADKINA, YE. G., BUDANTSEV, A. YU., and VASILOY, YU. V., Institute of Biological Physics, Academy of Sciences USSR, Pushchino

"Lyophilization of Histological Material. I. Investigation of the Length of Time of Drying"

Leningrad, Tsitologiya, Vol 13, No 3, Mar 71, pp 398-401

Abstract: Lyophilization was studied on an apparatus designed and constructed at the Laboratory of Physiological and Physicochemical Bases of Memory, Institute of Biological Physics, Academy of Sciences USSR. Drying by lyophilization of samples of porolon-water (water content 83.4%), porolon-gelatin-water (porolon treated with a 14-17% solution of gelatin; water content 76.7%), and of various rabbit tissues (hippocampus, lungs, intestine, liver, adrenals, heart) was carried out. The time that was necessary for drying was determined from temperature-time curves. The quantitative relations pertaining to drying by lyophilization could be expressed by the Knudsen-Langmuir equation in the form $m = Stk\rho\sqrt{h/2} \gamma \kappa t$, where m is the amount of water vaporized during time t from the surface S , γ the coefficient of vaporization (the ratio of observed vaporization in vacuo to the maximum 1/2

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TSADKINA, YE. G., et al., Tsitologiya, Vol 13, No 3, Mar 71, pp 398-401

value of vaporization), p the vapor pressure, and $k - l - q$, where q is the coefficient of resistance to vaporization produced by the dried layer at the surface. The value of k was in the range of $0.14 - 0.9$, $3.9 \times 10^{-3} - 8.4 \times 10^{-2}$, and $1.8 \times 10^{-3} - 1.2 \times 10^{-2}$ for porolon-water, porolon-gelatin-water, and hippocampus tissue, respectively - i.e., the resistance of the dried layer increased in the order porolon water, porolon-gelatin-water, biological tissue.

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Cytology

USSR

UDC 578.63

BUDANTSEV, A. YU., TSADKINA, YE. G., and VASILOY, YU. V., Department of Memory Problems, Institute of Biophysics, Academy of Sciences USSR, Pushchinona-Cke

"Lyophilization of Histological Material. II. A Vacuum Lyophilizer of Histological Specimens"

Leningrad, Tsitologiya, no 4, 1971, pp 532-535

Abstract: The apparatus designed by the authors consists of a preliminary vacuum pump with a vacuum rubber hose and 3-way vacuum valve connected to a diffusion pump. The valve is used to inject air into the preliminary vacuum pump. The diffusion pump is connected to a drying chamber through a nitrogen entrainment separator, which serves to prevent oil from the diffusion pump from entering the drying chamber. A vacuum valve between the drying chamber and the entrainment separator disconnects the drying chamber from the pumps. A feature of the device is the use of thermocouples to measure the temperature of a specimen at any time, thereby permitting objective determination of the end of lyophilization. The final vacuum in the drying chamber is 10^{-5} mm. The temperature of the lyophilized specimens averages -40 to -50°C . Some 10 to 15 specimens can be dried simultaneously. Lyophilization of 10 specimens of brain tissue weighing as much as 1 g takes 12 to 14 hours.

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BUDARAGIN, V.

Econ

RELATIONSHIP BETWEEN PRODUCER GOODS TURNOVER AND PRICE OVERHEATING

Article by V. Budaragin, candidate of the economic sciences; "Producer Goods Turnover and the Price Inflationary Process," Problems of the Soviet Economy, No. 11, 1971, pp. 37-46.

The Directorate of the 24th CPSU Congress in the five-year plan for the development of the USSR national economy points to the necessity for further improving the state-wide system of material-technical supply and wholesale prices on industrial goods.

The main task in this field lies on the one hand in ensuring the uninterrupted, complete, and smooth supply of materials and resources to enterprises in accordance with established plans and at minimum costs and on the other in effectively selling goods at planned prices.

The rationalization of material-technical supply and the improvement of prices are inseparable, interconnected elements of the economic system, which is a complex and dynamic process. In examining these two elements, we may divide them into four factors: a) the improvement of material-technical supply and its effect on price formation; b) the role of wholesale prices in the production and turnover of producer goods; c) the laws and dynamics of production and turnover of producer goods; d) the development of scientifically substantiated measures for the reform of supply and sales organizations.

It must be pointed out that the development of production in relation both to its scale and intensification and to its social form, in turn, engenders, like other factors of reproduction, a direct pressure on and determines the evolution of the price system. As Marx wrote, "With the advent of the epoch of commodity exchange, production increasingly and its differentiation becomes necessary."

With the development of production and the expansion of exchange, the latter becomes under specific historical conditions a continuous

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D.V.S. STARS
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(10)

process of commodity circulation that is effected with the use of money as the universal equivalent. The commodity form of economic ties is also retained, as we are all aware, under socialism, where it functions in accordance with the essence of its production relations, based on the public ownership of the means and results of production.

The socialist producer goods market is the sphere of operations for systematic economic ties between producers and consumers, where economic relations are direct supply and demand relationships and are realized in the acts of purchasing and selling producer goods at planned prices. We may judge the scale of the producer goods market by the fact that in 1969 the value of producer goods turnover was 270.9 billion rubles, including 150 billion rubles in the commodity circulation system of the consumer goods, 66.1 billion rubles in the commodity circulation system of agriculture, and 55 billion rubles in the all-Union Agricultural Equipment Corporation. The producer goods market accounts for two thirds of the country's total commodity circulation.

Supply and demand are, as we are all aware, the basic components of every market. The problem lies in ensuring the harmony of commodity supply with demand as a concrete form of the realization of demands on the market in systematically coordinated supply and demand as a most important provision of socialist production development.

The attainment of this goal entails establishing and maintaining the planned proportionality of the reproduction process, maintaining connections, mechanisms, and resources and having the requisite material and financial-economic reserves. Improving the determination of national economic requirements for producer goods on the basis of the widespread introduction of electronic computers is of ever-increasing theoretical and practical significance. A special niche also belongs to the study of market dynamics.

With a high degree of socialization and the predominance of direct ties between production and consumption (what we have in mind is the basic producer and consumer of fuel, iron ore, steel, and so forth) and centralized capital investments to ensure technical progress, the direct role of the supply and demand mechanism in planned price formation is minimal. However, for producer goods sold by a large number of customers and sold through the wholesale trade network, the consideration of supply and demand remains ever-increasingly significant as the market of supply and products have their sources reduced." (Trakhtenrovt).

The constancy of the elasticity of consumption (demand) in relation to price may become an important factor in price formation. It is almost necessary to bear in mind that frequently such elasticity is absent in its totality at all. For example, the consumption of iron ore, coal, and so forth by ferrous metallurgy enterprises or the consumption of aluminum and electric power by aluminum plants is completely inelastic.

USSR

UDC 619:616.981.551-084.47:638.17

KIVALINA, V. P., Professor, and BUDARKOVA, E. L., Aspirant, Kazan Veterinary Institute

"The Adjuvant Effect of Propolis in Immunization With Tetanus Toxoid"

Moscow, Veterinariya, No 11, 1971, pp 45-46

Abstract: The effect of propolis on the formation of antitoxin and complement activity was studied in rabbits hyperimmunized with sorbed and refined tetanus toxoid. The appearance of antitoxin was noted 2 weeks after the first administration of toxoid, its level increasing thereafter and reaching a maximum on the 42nd day. The antitoxin content was higher in rabbits immunized with a smaller total dose of toxoid than in those injected with the same dose of antigen without propolis. The effect of propolis on the production of antibodies is more pronounced only in combination with a smaller total dose of toxoid. This is explained by the increased reaction of the body to an increased total dose of toxoid without propolis, as compared to a smaller dose. The preventive properties of rabbit sera (tested on mice) increased with accumulation of antibodies in the blood and did not decrease after the level of antibodies had attained its maximum. The sera of animals immunized with toxoid plus propolis proved more protective than the sera of those immunized without propolis. Thus, propolis stimulates the nonspecific factors of immunity in vaccination with tetanus toxoid.

USSR

UDC: 621.373+621.397.331.222+621.386.2/7

BAYKOV, A. P., BELAGO, V. A., RUDARNYKH, V. I., DOTSENKO, V. I.,
KURASHOV, E. M., LYUBIN, V. M., NALIVAYKO, V. I., FEDOROVA, Ye. I.,
TSUKERMAN, V. G., and SHESTAK, A. F.

"Methods of Recording X-Ray Images in a Science Research Automation System"

Novosibirsk, Avtometriya, No 6, 1971, pp 67-80

Abstract: A description is given of a complex of pulsed x-ray sources with memory elements for recording fast processes, along with highly sensitive systems for visualizing two-dimensional x-ray images of threshold intensity. The radiation required has a duration of 10^{-8} to 10^{-7} sec with a hardness of several hundred kev. For the recording equipment, photographic film and television systems were used, in which the memory cells were the semi-conducting targets of sensor tubes. In such a system, the image is impressed directly on the target of the x-ray vidicon with a controllable memory, or is fixed by re-recording the video signal on a vidicon with optical memory, thus allowing connection of the recording equipment to the input of an electronic computer. The purpose of a complex of this type is to gather scientific data as part of a system for automation of the research procedure. Descriptions of the equipment are given, together with photographs

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USSR

UDC: 621.373+621.397.331.222+621.386.2/7

BAYKOV, A. P., et al, Avtometriya, No 6, 1971, pp 67-80

of the x-ray and recording equipment as well as sample oscillograms of various equipment items. The authors express their gratitude to Yu. Ye. Nesterikhin and A. M. Iskol'dskiy for their delincation of the problem and their supervision of the work. For his assistance with the experiments made using this equipment, the authors thank E. V. Yanshin.

2/2

USSR

UDC: 537.533.3

BONDARENKO, Yu. V., ~~BUDARNYKH, V. I.~~, IL'IN, V. P., ISKOL'DSKIY, A. M., NESTERIKHIN, Yu. Ye., POPOVA, G. S., and SHESTAK, A. F.

"Electronic-Optical Converters in Forced Light Load Operation"

Novosibirsk, Avtometriya, No 6, 1971, pp 7-14

Abstract: Forced light load operation is defined as that mode of operation of the photocathode of an electronic-optical converter in which a photocurrent of high density is picked up in recording processes 10^{-9} - 10^{-11} s in duration. In this kind of operation the obtained images are markedly distorted. The function of this paper is to take a closer look at the basic effects tending to deteriorate the image quality through experiments, the purpose of which is to investigate the effect of the electric field near the photocathode and the space charge in causing this distortion. A diagram of the experimental equipment is given and the experimental procedure explained. Photographic samples of the image distortion are shown and the reasons for the defects clarified. The authors express their gratitude to B. A. Baryshev for his assistance in preparing the equipment, and to L. M. Diamant and I. N. Zaydel' for their comments.

1/1

- 70 -

S/019/62/000/014/052/054
I007/I207

11.9200

AUTHOR: Budarov, I.P.

TITLE: Method for obtaining special, winter and high-frost resistant (arctic) aircraft lube-oils

PERIODICAL: Byulleten' izobreteniy, no.14, 1962, 66 (Soviet patent, class 23c, 1, no.73783, 383102, August 18, 1948, published now for the first time)

TEXT: According to this method winter and high-frost resistant aircraft lube-oils are obtained on the basis of low-viscosity distillates of winter oil blended with 2-5% oppanol. ✓B

[Abstracter's note: Complete translation.]

Card 1/1

(

SOV/19-59-1-187/291

AUTHOR: Budarov, I.P.

TITLE: An Instrument for Determining Resins in Fuel

PERIODICAL: Byulleten' izobreteniy, 1959, Nr 1, p 46 (USSR)

ABSTRACT: Class 421, 3⁵⁵. Nr 117058 (601993 of 16 June 1958).
An instrument for speeded up determining of resins
content in fuels, provided with a heater with blind
pockets for holding the fuel under investigation,
and water.

Card 1/1

123.. USSR BUDASHEVSKIY, B.G.

Cybernetics

10/19/70

BUDASHEVSKIY, B. G., Neurocybernetics Laboratory, Institute of Experimental Medicine of the Academy of Medical Sciences USSR, Leningrad

"The Manifestation of the Weber-Fechner Law in Decision Making and Probability Learning"

Sov. Psychol. Rev. Digest

Moscow, Voprosy Psikhologii, Vol 6, Nov-Dec 70, pp 128-133

51 000 711

Abstract: The experiments involved presented the subjects with a series of stimuli in a binary pattern, i.e., at two second intervals one of two signals would be given. In some cases the sequences of signals followed patterns of varying complexity; in other cases the sequences were random. The subjects were rewarded for correctly predicting the signal. After each sequence of 100 signals the subjects were asked to evaluate the distribution of events between the two signals. From these evaluations four quantities were derived: 1) The frequency with which the subject selected the more likely signal; 2) The subject's estimate of the frequency with which he selected this signal; 3) The subject's estimate of the relative probabilities of success with each of his two choices; 4) The discrimination by the subjects as to which signal appeared most frequently in the program. The last quantity represents the difference between the two probabilities, as evaluated by the subjects. Three possible formulas were then applied to relate the fourth quantity to the actual frequency of the signals
1/3

1/2 015 UNCLASSIFIED PROCESSING DATE--18SEP70
TITLE--WELDING OF STEEL OKH23S2YU -U-

AUTHOR--(03)-ZUBCHENKO, A.S., TIMOFEYEV, M.M., BUDAYEV, G.P.

COUNTRY OF INFO--USSR

SOURCE--KHIM. NEFT. MASHINOSTR. 1970, (1) 23-4

DATE PUBLISHED-----70

SUBJECT AREAS--MATERIALS, MECH., IND., CIVIL AND MARINE ENGR

TOPIC TAGS--CORROSION RESISTANT ALLOY, ALLOY DESIGNATION, SLAG, MECHANICAL
PROPERTY/(U)OKH23S2YU CHROMIUM STEEL

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1986/0005

STEP NO--UR/0314/70/000/001/0023/0024

CIRC ACCESSION NO--AP0102105

UNCLASSIFIED

Hydraulic and Pneumatic

USSR

UDC: 532+533/533.6

BAZARON, U. B., DERYAGIN, B. V., BUDAYEV, O. R.

"Mechanical Properties of Liquids"

Poverkhnost. Sily v Tonkikh Plenkakh i Dispers. Sistemakh [Surface Forces in Thin Films and Dispersed Systems], Moscow, Nauka Press, 1972, pp 279-301 (Translated from Referativnyy Zhurnal Mekhanika, No 12, 1972, Abstract No 12B1029, by O. K. Rozanov)

Translation: Results are presented from an experimental study of the mechanical properties of liquids, including determination of the angle of mechanical losses. The dynamic measurement method was used, in which the liquid being studied is applied onto piezoquartz and covered with another quartz plate, thus forming a thin film. In contrast to earlier works, the authors determined the complex shear modulus by additional determination of the imaginary portion of the com-
~~plex shear modulus by additional determination of the imaginary portion of the com-
plex shear modulus by additional determination of the imaginary portion of the com-~~

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UNCLASSIFIED

PROCESSING DATE--18SEP70

CIRC ACCESSION NO--AP0102105

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. OKH23S2YU, A FERRITIC, OXIDN. RESISTANT STEEL OF THE FE-SI-CR-AL TYPE (CR 23, SI 1.8, AL 1.3PERCENT) CAN BE ARC WELDED, AFTER HEATING TO 200 TO 250DEGREES, WITH COATED ELECTRODES OF OKH27YU5A ALLOY, USUALLY USED FOR RESISTANCE HEATING ELEMENTS. THE ELECTRODE COATING CONTAINS AN INCREASED AMT. OF MARBLE (70PERCENT) AND A LOWER CONTENT OF FLUORSPAR, THUS DECREASING THE FLUIDITY OF THE SLAG. TI POWDER 2PERCENT IS ADDED TO REFINE THE WELD GRAIN AND 2PERCENT FERROSILICON SI4S TO FACILITATE THE SLAG REMOVAL. MECH. PROPERTIES OF THE WELD ARE EQUAL TO THOSE OF THE WELDED ALLOY; THE CORROSION RESISTANCE IS HIGHER DUE TO AN INCREASED CR CONTENT.

APPROVED FOR RELEASE: 08/09/2001

CIA-RDP86-00513R002200510007-4"

UNCLASSIFIED

USSR

Bazaron, U. B., Deryagin, B. V., Budayev, O. R., Poverkhnost. Sily v Tonkikh Plenkakh i Dispers. Sistemakh, Moscow, Nauka Press, 1972, pp 279-301.

. It is determined that in the case of triethylene glycol, polymethyl siloxane and vaseline and castor oils, the mechanical loss angle tangent is not dependent on film thickness within the limits of measurements error. This is explained by the absence of a boundary film with singular properties in these liquids, or the low thickness of this film if it is present. In the case of water and hexyl alcohol, it was found that there is a dependence of mechanical loss angle tangent on film thickness: as the thickness decreases, the tangent decreases. The results of measurements of mechanical parameters are presented in a table. An estimate is given of the effective viscosity manifested in oscillations of the piezoquartz for five liquids (all except water and hexyl alcohol), under the assumption of addition of elastic and viscous stresses (Kelvin body) or when elastic and viscous deformations are added (Maxwell body). The viscosity for the Maxwell body is about 15% higher than values for the Kelvin body. One exception is polymethyl siloxane, where significant divergences are explained by low values of mechanical loss angle tangent.

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USSR

UDC 620.193.013:669.295

TOMASHOV, N. D., CHUKALOVSKAYA, T. V., CHERNOVA, G. P., BUDBERG, P. B., and GAVZE, A. L., Institute of Physical Chemistry, Academy of Sciences USSR

"Study of the Corrosion Resistance of Alloys of the Titanium-Tantalum--Niobium System"

Moscow, Zashchita metallov, Vol 8, No 1, Jan-Feb 72, pp 3-7

Abstract: Tantalum effectively raises the corrosion resistance of titanium-base alloys; its use, however, is limited due to cost factors and scarcity. The study of the ternary Ti-Ta-Nb system is essential for determining the feasibility of partial replacement of tantalum with the more readily available niobium. The corrosion and electrochemical behavior of the alloys was studied as annealed and quenched in a 5% HCl solution at 100°C. Analysis of the phase transformation and microstructure of the alloy indicates an isothermal section at 600°C which is characterized by a narrow region of α -solid solution, a wide two-phase ($\alpha+\beta$) region, and a wide region of α -solid solution. At about the same average compositions, Ti-Ta-Nb alloys with single-phase structures exhibit corrosion resistance values which are one or two orders of magnitude higher than those shown by two-phase alloys. The higher resistance is characteristic of annealed Ti-Ta-Nb alloys with
1/2

USSR

TOMASHOV, N. D., et al., Zashchita metallov, Vol 8, No 1, Jan-Feb 72, pp 3-7

a more stable β -phase. Alloying of Ti with Nb and, specifically, with Ta results in a considerable increase in corrosion resistance, the total content of alloying elements, ranging from 20-40% for annealed and 10% for quenched alloys. The study demonstrates the feasibility of replacing tantalum with niobium without reducing markedly the corrosion resistance of the above alloys. (3 illustrations, 1 table, 9 bibliographic references).

2/2

Corrosion

1

USSR

UDC 669.14.018.8

TOMASHOV, N. D., CHERNOVA, G. P., KALNINA, G. S., ~~BUDBERG, P. B.,~~
and GAVZE, A. L., Institute of Physical Chemistry, Academy of
Sciences USSR

"Investigation of the Structure and Corrosion Behavior of
Alloys of the System Ti - Ta - Cr "

Moscow, Zashchita Metallov, Vol 7, No. 4, Jul-Aug 71, pp 387 -391

Abstract : The structure and corrosion behavior of alloys of the
system Ti - Ta - Cr , containing Cr from 2.5 -20 % and Ta up to
30 %, were investigated, using for the analysis of the phase equi-
librium the microstructure, roentgenophase, differential-thermal,
and dilatometry methods and characteristic diagrams of the alloys
subjected to hot plastic deformations in the temperature interval
of 1,000 -600 deg. and subsequent hardening (1,200 -600 deg.).
Depending on the temperature of heat treatment, these alloys can

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TOMASHOV, N. D., et al., Zashchita Metallov, Vol 7, No 4, Jul-Aug 71, pp 387-391

have a homogeneous structure of a β -solid solution or a heterogeneous structure $\alpha + \beta + \gamma$. The investigation results are discussed by reference to the shown microstructure and diagrams of polythermal cuts of the alloys by different correlation of their components and effects of the alloying components on the corrosion rate. It was found that the stability region of the β -phase on the state diagram increases and the beginning eutectoid transformation $\beta \rightarrow \alpha + \gamma$ shifts into the region of higher contents of alloying elements and lower temperatures by increasing the relative content of Ta to Cr relations of 1:3, 1:1, and 3:1. The corrosion rate of alloys with homogeneous structure is lower than that of alloys with heterogeneous structure by 2-10 times and more. The Ti - Ta - Cr alloys with Ta:Cr=3:1 and the Ti - Ta alloys with a Ta-content of 20% and higher are corrosion-resistant in 5% HCl at 100 deg. The Cr-alloying of Ti decreases its corrosion properties in the HCl-solution and the corrosion rate increases with increasing Cr-content, particularly for alloys with heterogeneous structure. Four illustr., eight biblio. refs.

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- 10 -

Acc. Nr:

A0043739

Abstracting Service: 5/70
INTERNAT. AEROSPACE ABST.

Ref. Code:
UR 0370

B

A70-23787 # Study of phase equilibria in the Ti-Ta-Cr system (Issledovanie fazovykh ravnovesii v sisteme Ti-Ta-Cr). A. I. Gavze and P. B. Rudberg. Akademiia Nauk SSSR, Izvestiia, Metally, Jan.-Feb. 1970, p. 184-188. In Russian.

Study of the phase diagram of the Ti-Ta-Cr system in the region bounded by the Ti-Ta side and the section passing through the compounds TiCr₂-TaCr₂. Isothermal sections of the Ti-Ta-Cr system at 700 and 600 C are constructed by the methods of microstructural and X-ray phase analysis. From the results of a study of the phase structure of alloys of the system, from the findings of differential thermal and local X-ray spectral analyses, and from a determination of the melting point of the alloys by means of optical pyrometry, including certain general premises of physicochemical analysis, four polythermal sections are plotted which contain titanium and tantalum in the ratios 4:1, 3:2, 2:3, and 1:4.

A.B.K.

ALS

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USSR

UDC 669.295.5'294'26

GAVZE, A. L., and BUDBERG, P. E., Moscow

"Investigation of Phase Equilibria of the System Ti-Ta-Cr"

Moscow, Izvestiya Akademii Nauk SSSR, Metally, No 1, Jan-Feb 1970, pp 184-188

Abstract: Microstructural and x-ray phase analysis was used in constructing isothermal sections of the system Ti-Ta-Cr at 700 and 800° C. Four polythermal sections (titanium/tantalum ratios of 4:1, 3:2, 2:3, and 1:4) were constructed on the basis of an investigation of the phase structure of alloys of the system, data from differential thermal local x-ray spectral analyses, and determinations of temperature at the beginning of alloy melting.

1/1

USSR

UDC 621.315.592.3:669.782

LOZOVSKIY, V. N., KALINYUK, A. I., and BUDDO, V. I.

"Zone Melting With a Temperature Gradient in the System Silicon-Tin"

Tr. Novocherk. politekhn. in-ta (Works of the Novocherkassk Polytechnical Institute), 1970, 208, pp. 50-54 (from RZH-Metallurgiya, No 11, Nov 70, Abstract No 11G387)

Translation: Results are presented of an experimental investigation of the patterns of motion of Sn-Si melted zone in Si single crystals. Sn with 99.999% purity and Si KEF with a resistivity 20-30 ohm·cm were used. The specimens had the shape of rectangular parallelepipeds 0.5-1 mm thick with a 4 x 8 mm area, and were cut out along the facet (111). The tin zones, in the form of foil, were placed between two specimens, one of which in the process of zone melting with temperature gradient was melted, while the second served as a seed charger. The obtained composition was first placed into a vacuum furnace for doping. The zone melting was conducted in a special vacuum gradient furnace under conditions when convection in the liquid phase could not be developed. The results coincided with the Tiller theory. 2 ill., 9 bibl, entries.

O. Myakisheva

1/1

USSR

UDC 621.9.658.5

BUDENKOV, B. A., POLUKHIN, V. P., and AVERBUKH, I. I.

"Using Ultrasound to Automatically Control Strip Thickness"

Plasticheskaya Deformatsiya Metallov i Splavov, Moscow, No 64, "Metallurgiya,"
1970, pp 271-274

Translation: A description is given of the diagrams and operating principle of an electromagnetic acoustic transformer and contactless resonance thickness measurer which makes it possible to control the thickness of strip with a precision up to 1.5 percent at a rolling speed of 20 meters per second and ensures locality of measurement within several centimeters. Four figures.

1/1

- 35 -

1/2 022 UNCLASSIFIED PROCESSING DATE--20NOV7C
TITLE--SEPARATE COMBINED HEAD FOR ULTRASONIC DEFECTOSCOPES -U-

AUTHOR--(03)--BUDENKOV, B.A., KOPANSKIY, A.G., SAZHIN, V.V.

COUNTRY OF INFO--USSR

SOURCE--U.S.S.R. 245429

REFERENCE--CTKRYTIYA, IZOBRET., PROM. GBRAZTSY, TOVARNYE ZNAKI NR 19

DATE PUBLISHED--23OCT70

B

SUBJECT AREAS--METHODS AND EQUIPMENT

TOPIC TAGS--DEFECTSCOPE, ULTRASONIC EMITTER, SIGNAL INTERFERENCE, ERROR
MINIMIZATION, PATENT

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAE--1994/0734

STEP NO--UR/C482/69/000/000/0000/0000

CIRC ACCESSION NO--AA0114886

UNCLASSIFIED

2/2 022 UNCLASSIFIED PROCESSING DATE--20NOV70
CIRC ACCESSION NO--AA0114886
ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. SEPARATE COMBINED HEAD FOR
ULTRASONIC DEFECT SCOPES OVERCOMES THE DISADVANTAGE OF CONVENTIONAL
HEADS, WHICH HAVE A DEAD ZONE NEAR THE INSPECTED SURFACE CAUSED BY
ECHOES DUE TO IMPERFECTIONS OF THE SCREENING BETWEEN HEADS AND ECHOES IN
NEARBY DEFECTS IN A ZONE OF LOW SENSITIVITY. IN THE PROPOSAL, ONE PRISM
IS MADE SHORTER THAN THE OTHER BY A LENGTH EQUAL TO THE PRODUCT OF THE
PICK UP PULSE AND THE VELOCITY OF PROPAGATION OF THE WAVE IN THE PRISM
MATERIAL. THIS CUTS DOWN THE DEAD ZONE, SINCE THE ECHO SIGNAL OF THE
SHORTER PRISM IS CLEAR OF THE INSPECTED ZONE, AND THAT FROM THE LONGER
ONE IS DISPLACED INTO A ZONE OF HIGH SENSITIVITY, THUS AVOIDING
HINDERING THE RECEPTION OF THE DEFECT SIGNAL. FACILITY:
VSESOYUZHNY NAUCHNO-ISSLEDOVATEL'SKIY INSTITUT PO RAZRABOTKE
NERAZRUSHAYUSHCHIKH METODOV I SREDSTV KONTROLYA KACHESTVA MATERIALOV.

UNCLASSIFIED

USSR

UDC: 620.179.16

BUDENKOV, G. A., and MASKAYEV, A. F., Chelyabinsk Polytechnic Institute imeni Leninskiy Komсомol

"Mechanism of Excitation and Registration of Ultrasonic Waves in Iron and in an Iron-Nickel Alloy in the Curie Temperature Range"

Sverdlovsk, Defektoskopiya, No 1, 1973, pp 109-115

Abstract: The authors study the effect of temperature on the excitation and registration of ultrasonic waves in an invar iron-nickel alloy (36 percent Ni) and in iron (0.025 percent C) in order to investigate the possibilities of realizing ultrasonic control. The results show that excitation and registration of longitudinal ultrasonic waves are possible by the electromagneto-acoustic method in materials with large volume magnetostriction and magnetoelastic effect by means of the para-process at temperature falling within the Curie range. Both in invar and in iron, excitation and registration of ultrasound is accomplished due to the volume magnetostriction and the magnetoelastic effect in the para-process zone. The described effects can also be used for the ultrasonic, high temperature, contactless method of controlling materials with large volume magnetostriction. Original article has: six figures and eight bibliographic entries.

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USSR

UDC: 621.373:029.52

BUDENNYY, A. P.

"A Null Device of the Self-Excited Oscillator Type With High Input Impedance and With a Parallel Resonant Tank in the Base Circuit"

V sb. Poluprovodn. pribory v tekhn. elektrosvyazi (Semiconductor Devices in Electrical Communications Technology--collection of works), vyp. 7, Moscow, "Svyaz'", 1971, pp 71-79 (from RZh-Radiotekhnika, No 6, Jun 71, Abstract No 6D362)

Translation: A null device circuit is analyzed by the matrix method, and computational formulas are derived for determining the operating threshold and the emission frequency. An investigation is made of the effect which a change in the parameters of the transistor and the tank has on threshold drift. A null device of this type can be used in automation, in analog-to-code converters, in time relays with long delays, and in low-frequency and very low-frequency oscillators. Two illustrations, bibliography of three titles. Resumé.

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USSR

UDC: 681.327.12:371.69

~~BUDEINYY, A. P.~~

"A Neuristor"

Moscow, Otkrytiya, izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, 1970, No 33, Soviet Patent No 285114, class 21, filed 29 Jun 67, published 29 Oct 70, p 58

Translation: This Author's Certificate introduces a neuristor which uses a semiconductor structure with S-shaped voltage-current curve with positive feedback between adjacent elements, e. g. by diffusion of current carriers. The proposed neuristor is a solid-state device. As a distinguishing feature of the patent, the device is designed for improved reliability, reduced overall dimensions, and simplified manufacturing technology. Each element of the neuristor is an active semiconductor structure with a series-connected capacitor, each such element being connected to a source of variable voltage.

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AA0051861

UR 0482

Soviet Inventions Illustrated, Section II Electrical, Derwent, *MD*

B

242497 BINARY SUMMATOR suitable for a digital computer has been designed and contains two resistors 1 and 2, the emitters of which are connected through a common resistor 3 to the displacement source - E2. The transistor base 2 is earthed and base of transistor 1 through resistor 4 is connected to the displacement source and through diode 5 to the entry of circuit 6 (through resistor 7).

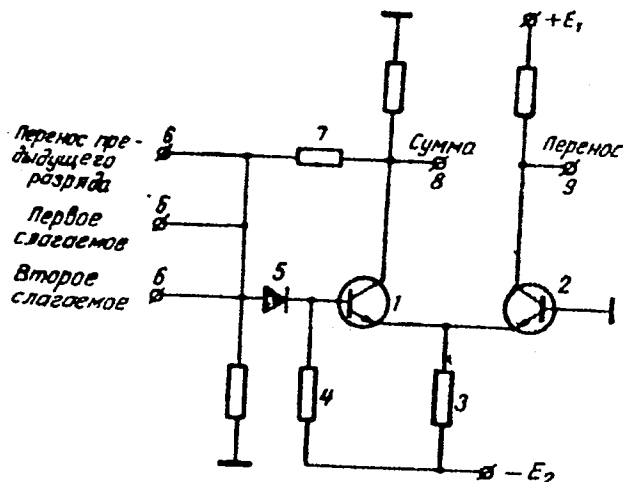
21.12.67 as 1205608/18-24.A.P.BUDENNYI et al.
(5.9.59) Bul 15/25.4.69. Class 42m³. Int.Cl.G 06f. *4*

AUTHORS: Budennyi, A. P.; Lutskiy, V. A.; Kontarev, V. Ya.;
Nazarov, S. I.; Kramarenko, O. L.; Shishkevich, A.A.

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19820296

AA0051861



19820297

USSR

UDC 691.32

BUDESHTESKIY, R. I.

"Elements of theory of the Strength of Granular Composite Materials"

Tbilisi, Elementy Teorii Prochnosti Zernistykh Kompozitsionnykh Materialov, Izd-vo Metsniereba, 1972, 81 pp

Translation of Introduction: Questions of the mechanics of composite materials in recent years have been developed at an accelerated rate basically for filamentary structures. Substantial interest is being given to composite materials of granular structure since if the external forces are random functions of the coordinates these composites may possess to some degree an optimal structure.

Concretes are characteristic examples of granular composite materials.

In the mechanics of granular composites it is feasible to operate with the statistical characteristics of their structural elements -- grains, matrices, and their adhesion. With such an approach it is possible to advance from unified positions to all basic types of concrete.

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USSR

BUDESHTSKIY, R. I., *Elementy Teorii Prochnosti Zernistykh Kompozitsionnykh Materialov*, Izd-vo Metsniereba, 1972, 81 pp

In the statistical theories of the strength of brittle bodies we usually proceed from the hypothesis of the weakest unit, that is, the factually successive joining of structural elements. In the theory of the strength of granular composites based on their real features, it follows to take into account both the sequential and the parallel joining of structural elements. The latter gives the possibility theoretically of taking into account also the redistribution of stresses, and consequently describing the plastic properties of the material. All this permits naturally describing the scale effects of strength as a function of the grain dimensions, uniformity of the characteristics of the structural elements, etcetera. This effect is being investigated for cubic and prismatic samples; the question

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USSR

BUDESHTSKIY, R. I., Elementy Teorii Prochnosti Zernistykh Kompozitsionnykh Materialov, Izd-vo Metsniereba, 1972, 81 pp

is also being investigated of the relationship of the strengths of prismatic and cubic samples which is also treated as the scale effect.

In all these investigations the concept of "structural diagram" is being used. This latter as a working apparatus is finding broad usage in the theory of coupling, in the theory of automatic control, etcetera.

By the term "structural diagram" we mean the conventional graphic representation of elements of the system and the relationships among them.

Construction of a structural diagram in the form of a graph and investigation of it by the methods of the theory of reliability permits giving a mathematical model of the composite material of a granular structure. Solutions to the structural formulas of strength are found on computers.

If for regular structures, but by allowing for the statistical character of the properties of the structural elements,

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USSR

BUDESHTSKIY, R. I., Elementy Teorii Prochnosti Zernistykh Kompozitsionnykh Materialov, Izd-vo Metsniereba, 1972, 81 pp

the solution is reduced to a system of parallel-sequential elements, then for structures of stochastic types several artificial means are effective that are based on representing the geometry of the regular structures as limiting cases for stochastic structures. Their formation can be described also by the Monte-Carlo method, by graphs of stochastic configuration, etcetera.

From these positions we also examine the fracture of the composites by describing the growth in the main cracks as a random stationary process. It becomes possible to evaluate its parameters as a function, particularly, of the degree of uniformity of the structural elements and the degree of irregularity of the structure. The question of the relationship of tensile strength to compressive strength is investigated in the statistical aspect.

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USSR

BUDESHTSKIY, R. I., Elementy Teorii Prochnosti Zernistykh Kompositsionnykh Materialov, Izd-vo Metsniereba, 1972, 81 pp

Structural analysis of the composite materials permits solving the question of predicting the uniformity of the composite from the statistical characteristics of the structural elements as well, and to investigate the question of the scale effect of the indicators of uniformity and also to construct a mathematical theory of the structural effect of exceeding the scatter in the test results for tension over the scatter during compression.

In solutions to the technological problems based on the formula of strength of concrete we find the formula for the uniformity in the strength of concrete. The question of predicting uniformity of concrete is solved also by the method of statistical tests.

Since oftentimes the requirements for a material have a contradictory character, the solutions to the optimal compositions are formulated in terms of the theory of games.

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USSR

BUDESHTSKIY, R. I., Elementy Teorii Prochnosti Zernistykh Kompositsionnykh Materialov, Izd-vo Metsniereba, 1972, 81 pp

In conclusion, let us mention that the construction of mathematical models of , composites , just as always in such instances, leads to a certain simplification and schematization of the physical essence of the phenomenon. Nevertheless such a model makes it possible to approach from a quantitative theoretical evaluation such questions which usually are solved empirically. Further complication and refinement of the mathematical models will permit developing the quantitative side of the problem of producing granular composite materials with a priori given properties.

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Introduction.....	Page
Chapter One. Concrete as a Composite Material of Granular Structure.....	5
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USSR

BUDESHTSKIY, R. I., Elementy Teorii Prochnosti Zernistykh Kompozitsionnykh Materialov, Izd-vo Metsniereba, 1972, 81 pp

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1/2 017 UNCLASSIFIED PROCESSING DATE--13NOV70
TITLE--POLYADDUCTS OF DIFURAN COMPOUNDS -U-
AUTHOR-(04)-BERLIN, A.A., BUDEVSKA, KH., MIKHAYLOV, M., ZABUNOVA, O.
COUNTRY OF INFO--USSR **B**
SOURCE--VYSOKOMOL. SOEDIN., SER. B 1970, 12(4), 277-80
DATE PUBLISHED-----70
SUBJECT AREAS--CHEMISTRY, MATERIALS
TOPIC TAGS--HEAT RESISTANT PLASTIC, FURAN, PHTHALATE, AZINE
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--3006/1245 STEP NO--UR/0460/70/012/004/0277/0280
CIRC ACCESSION NO--AP0134919
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2/2 017

UNCLASSIFIED

PROCESSING DATE--13NOV70

CIRC ACCESSION NO--AP0134919

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. REACTIVE POLYADDUCTS WERE PREPD. FROM DIFURFURYL TEREPHTHALATE OR FURFURAL AZINE AND BISDIENOPHILES, SUCH AS N,NPRIME,HEXAMETHYLENEDIMALEIMIDE (DIELS-ALDER REACTION). THE POLYADDUCTS WERE HEATED IN VACUO (10 PRIMENEGATIVE3 -10 PRIMENEGATIVE4 MM) WITH OR WITHOUT HYDROQUINONE AT 150DEGREES TO GIVE CROSSLINKED, HEAT RESISTANT POLYMERS.

FACILITY: INST. KHIM. FIZ., MOSCOW, USSR.

UNCLASSIFIED

USSR

UDC 621.385.632

BUDEY, A.G., LAVRSKOVICH, V.I., PIKULIK, V.G., SHAS', A.V.

"Experimental Study Of Some Methods Of Modulation Of TWT"

Vestn. Belorus. un-ta (Bulletin Of Belorussian University), 1971, Ser.1, No 3, pp 61-66 (from RZh:Elektronika i yeye primeneniye, No 2, Feb 72, Abstract No 2A154)

Translation: Problems are considered of AM and FM low-noise traveling-wave tubes. The block diagram is presented of a unit for determination of the amplitudes, phase characteristics, and the characteristics of frequency conversion. The circuit is described of a sawtooth voltage generator based on drift transistors operating in an avalanche regime. Experimental and calculated data are compared. 8 ref. Summary.

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1/2 021

UNCLASSIFIED

PROCESSING DATE--27NOV70

TITLE--PLASTICIZATION OF POLY(VINYL CHLORIDE) BY SULFOLANE ESTERS AND
ETHERS -U-

AUTHOR--(05)-MOSHCHINSKAYA, N.K., BUDINSKAYA, N.N., BURYAK, I.P.,
BEZMENOVA, T.E., DOROFYEVA, R.A.
COUNTRY OF INFO--USSR

B

SOURCE--PLAST. MASSY 1970, (2), 43-4

DATE PUBLISHED-----70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--PLASTICIZER, POLYVINYL CHLORIDE, ETHER, HETEROCYCLIC SULFUR
COMPOUND, ACETATE, OPTIC PROPERTY, FROST RESISTANCE, ESTER/(U)S2
POLYVINYL CHLORIDE RESIN

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1992/1703

STEP NO--UR/0191/70/000/002/0043/0044

CIRC ACCESSION NO--AP0112697

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2/2 021

UNCLASSIFIED

PROCESSING DATE--27NOV70

CIRC ACCESSION NU--AP0112697

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. POLY(VINYL CHLORIDE) RESIN S-2 (I) WAS PLASTICIZED WITH A NO. OF SULFOLANE ETHERS, E.G., 3,(NONYLOXY)SULFOLANE (II), 3,(DECYLOXY)SULFOLANE (III), SULFOLANE ETHERS PREPD. FROM A MIXT. OF C SUB9-18 ALCS., AND AN ESTER, OCTYL SULFOLANYLACETATE (IV), AT 80-90DEGREES AND AT 130-50DEGREES. I WAS BEST PLASTICIZED WITH 50 PARTS II OR III, WHEREAS OTHER SULFOLANE ETHERS AND IV WERE ONLY SLIGHTLY COMPATIBLE WITH I. THE PLASTICIZED I EXHIBITED SUPERIOR LIGHT AGING RESISTANCE, WEATHERABILITY, AND FREEZE RESISTANCE.

UNCLASSIFIED

1/2 014

UNCLASSIFIED

PROCESSING DATE--27NOV70

TITLE--MECHANISM OF PRIMARY PROCESSES DURING THE PHOTOLYSIS OF
TRIS,ETHYLENEDIAMINE,COBALT ,III, CHLORIDE -U-
AUTHOR-(03)-POZNYAK, A.L., BUDKEVICH, B.A., SHAGISULTANOVA, G.A.

COUNTRY OF INFO--USSR

SOURCE--KHIM. VYS. ENERG. 1970, 4(3), 286-7

DATE PUBLISHED-----70

SUBJECT AREAS--CHEMISTRY, NUCLEAR SCIENCE AND TECHNOLOGY

TOPIC TAGS--COBALT COMPLEX, ETHYLENEDIAMINE, PHOTOLYSIS, DEUTERIUM
COMPOUND

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3008/0864

STEP NO--UR/0456/70/004/003/0286/0287

CIRC ACCESSION NO--AP0137892

UNCLASSIFIED

2/2 014

UNCLASSIFIED

PROCESSING DATE--27NOV70

CIRC ACCESSION NO--AP0137892

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE PHOTOLYSIS OF (COEN SUB3)CL
SUB3 AND ITS DEUTERATED ANALOGS AT 77DEGREEK IN A H SUB2 SO SUB4, H
SUB3 PO SUB4, OR D SUB3 PO SUB4 MATRIX LEADS TO THE FORMATION OF CH
SUB2 NH SUB3 PRIME POSITIVE BIRADICAL IONS, H OR D ATOMS, HYDRATED CO
PRIME2 POSITIVE, AND HYDRATED ELECTRONS. ABS. CONCNS. OF PRODUCTS ARE
GIVEN AS A FUNCTION OF IRRADN. TIME. FACILITY: BELORUSS. GOS.
UNIV. IM. LENINA, MINSK, USSR.

UNCLASSIFIED

USSR

UDC 628.543:663.631.8

BUDKEVICH, G. B., MOMOT, V. YA., SIRENKO, I. I., TARASENKO, YU. A., and SHEKA, I. A.

"Removal of Mercury From Polluted Water by Silicon Oxyhydride"

Kiev, Khimicheskaya Tekhnologiya, No 6, Nov/Dec 73, pp 50-52

Abstract: The compound $(H_2Si_2O_3)_N$ is proposed as an absorbent. The Hg ion in solution is reduced to the metal on the surface of the $(H_2Si_2O_3)_N$ where it is fixed. A table gives the amount of Hg removed under various conditions. The amount of Hg removed is 99% for every case except the high Hg concentration (4000 mg). In another set of experiments the concentration of Hg was reduced 40 to 85 times at a pumping rate of 4 to 6 l/hr over 1 kg of absorbent.

1/1

- 16 -

B

Acc. Nr: AP0036523

Ref. Code: UR 0069

PRIMARY SOURCE: Kolloidnyy Zhurnal, 1970, Vol 32, Nr 1,
pp 17-23

ADSORPTION OF VARIOUS SUBSTANCES FROM THEIR SOLUTIONS IN HEXANE
AND CARBON TETRACHLORIDE ON HYDRIDE-POLYSILOXANE XEROGEL AND
SILICA GEL

Budkevich, G. B.; Slinyakova, I. B.; Neymark, I. Ye.

Summary

The adsorption on silica gel and hydride-polysiloxane xerogel has been studied in the following two-component liquid systems: benzene-hexane, acetone-hexane, dioxane-hexane, benzene-CCl₄, dioxane-CCl₄, nitrobenzene-CCl₄, chlorobenzene-CCl₄, phenol-CCl₄ and benzaldehyde-CCl₄, as well as in the system benzene-CCl₄ on partially hydrated hydride-polysiloxane xerogel. The excessive adsorption maximum of all the substances studied on hydride-polysiloxane xerogel is almost by an order of magnitude less than on silica gel. The adsorption extent of various substances on hydride-polysiloxane from their solutions in CCl₄ and hexane is determined by the donor-acceptor properties of xerogel surface and of the molecules being adsorbed.

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REEL/FRAME

7 D. n.

BUDKEVICH, G.B.

J 685 6/14/50
8 Nov. 1974

(17)

REMOVAL OF MERCURY FROM WASTE WATER BY SILICON OXYHYDRIDE
UDC 628.503.663.601.6

Article by G. B. Budkevich, V. Ya. Demut, L. I. Shvachko, Ye. A. Tuzovskaya, and I. A. Lyudskaya. Izv. Vsesoyuzn. nauchno-issledovatel'sk. inst. khim. tekhnol. i inzh. stroytva, No 6, 1973, pp 62-67.

In producing chlorine and alkalis by the mercury method, the waste water contains a considerable amount of mercury in mercuric form, in the form of low-solubility compounds, and in ion form.

The only method of removing mercury from waste water that is presently used in the technology of producing chlorine and alkalis is sulfate treatment based on the interaction of bivalent mercury and the sulfate ion (II). The finely-dispersed colloid sediment of the sulfate of mercury is difficult to remove by filtration or clarification, in addition, where there is insufficient sodium sulfide, there is incomplete binding of the ion mercury; other methods of cleansing waste water (2 - 7) is restricted by the capability of extracting only the ion form of mercury. For this reason, search for new and more efficient methods of extracting mercury from waste water represent an important and urgent scientific-technical problem.

(One promising method for cleansing waste water of mercury appears to be the use of a silicic water-containing adsorbent (B), a silicon oxyhydrate (H₂O)₂. When the silicon oxyhydrate comes in contact with solutions that contain ion mercury, there occurs on its surface a production of the ions of the metallic state. The reduced metallic mercury settles on the surface of the adsorbent and enters to its pores because of dispersion forces.

The study gives experimental data concerning the removal of mercury from waste water that comes from the production of sodium hydrate using the mercury method; the experiments utilize the adsorption-precipitation method by means of silicon oxyhydrate. For the investigation, the fraction 3+0.5 mm silicon oxyhydrate was used, obtained by procedures described in [9]. The total volume content of the pores of the silicon oxyhydrate that was obtained,

1/2 019 UNCLASSIFIED PROCESSING DATE--13NOV70
TITLE--THE USE OF TC PRIME99M PERTECHNETATE FOR THE STUDY OF CHANGES OF
THE IRON CAPTURING FUNCTION OF THE THYROID GLAND UNDER THE INFLUENCE OF
AUTHOR--(02)-KOTLYAROV, E.V., BUDKEVICH, YU.B.

COUNTRY OF INFO--USSR

B

SOURCE--MEDITSINSKAYA RADIOLOGIYA, 1970, VOL 15, NR 6, PP 55-58

DATE PUBLISHED-----70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--TECHNETIUM ISOTOPE, IRON, THYROID GLAND, GOITER, AMMONIUM
PERCHLORATE

CONTROL MARKING--NO RESTRICTIONS

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PROXY REEL/FRAME--3002/1385

STEP NO--UR/0241/70/015/006/0055/0058

CIRC ACCESSION NO--AP0128785

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2/2 019

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PROCESSING DATE--13NOV70

CIRC ACCESSION NO--AP0128785

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE AUTHORS COMMIT TO PAPER THE RESULTS OF DYNAMIC OBSERVATIONS OVER THE ACCUMULATION OF TC PRIME99M PERTECHNETATE IN THE THYROID GLAND IN 41 PATIENTS WITH TOXIC GOITER UNDER THE EFFECT OF INTAKE OF A SINGLE DOSE OF AMMONIUM PERCHLORATE AND MERCAZOLYL THERAPY. IN 15-20 MINUTES AMMONIUM PERCHLORATE CASES A DECREASED ACCUMULATION OF PERTECHNETATE. BLOCK REMAINS FOR 1-3 DAYS DEPENDING ON THE SEVERITY OF TOXIC GOITER. UNDER THE EFFECT OF MERCAZOLYL THERE IS SEEN A SIGNIFICANT RISE OF THE ACCUMULATION IN THE THYROID GLAND. A TENDENCY TO A REDUCTION OF THE ACCUMULATION IS NOTED IN 25 DAYS. FACILITY: KAFEDRA RENTGENOLOGII I RADIOLOGII I MOSKOVSKOGO MEDITSINSKOGO INSTITUTA IM. I. M. SECHENOVA.

UNCLASSIFIED