

1/2 025 UNCLASSIFIED PROCESSING DATE--16OCT70  
TITLE--CONTRACTION OF A POSITIVE DISCHARGE COLUMN -U-

AUTHOR--KOZLOV, YU.G.

COUNTRY OF INFO--USSR

SOURCE--OPT. SPEKTROSK. 1970, 28(4), 654-8

DATE PUBLISHED-----70

SUBJECT AREAS--PHYSICS

TOPIC TAGS--POSITIVE COLUMN, DISCHARGE TUBE, GAS IONIZATION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED  
PROXY REEL/FRAME--1996/1461

STEP NO--UR/0051/70/028/004/0654/0658

CIRC ACCESSION NO--AP0118450

UNCLASSIFIED

2/2 025

UNCLASSIFIED

PROCESSING DATE--16OCT70

CIRC ACCESSION NO--AP0118450

ABSTRACT/EXTRACT--(U) GP-O- ABSTRACT. THE ROLE OF A NONUNIFORM DISTRIBUTION OF NORMAL ATOMS ALONG THE CROSS SECTION OF THE DISCHARGE TUBE ON THE CONFIGURATION OF THE DISCHARGE COLUMN WAS INVESTIGATED. THE CALC. WAS PERFORMED IN TERMS OF THE ELECTRON TEMP. CONSIDERING THE STEP NATURE OF THE EXCITATION AND OF THE IONIZATION AND THE DEFORMATION OF THE TAIL OF THE DISTRIBUTION FUNCTION. OWING TO THE LARGE HEAT CAPACITY OF THE TUBE WALLS, THE GAS TEMP. NEAR THEM WAS ASSUMED TO BE LOWER THAN NEAR THE TUBE AXIS; THIS LED TO STRONGER IONIZATION IN THE CENTER CAUSING THERE A HIGHER ELECTRON CONC. AFTER AN AVALANCHE PROCESS OF COLUMN CONTRACTION, A DISCHARGE THREAD WAS FORMED. THE QUAL. INFLUENCE OF DIFFUSION, HEAT COND., AND RECOMBINATION WAS CONSIDERED.

UNCLASSIFIED

UDC 536.46:533.6

USSR

ITIN, V. I., NAYBORODENKO, Yu. S., KOZLOV, Yu. I., USHAROV, V. P.

"Gasless Combustion of a Mixture of Metal Powders"

V sb. Gorenive i vzryv (Combustion and Explosion -- Collection of Works),  
Moscow, "Nauka", 1972, pp 142-147 (from RZh-Mekhanika, No 3, Mar 73, Abstract  
No 3B962)

Translation: This paper is concerned with the study of the gasless combustion of mixtures of nickel-aluminum and copper-aluminum powders, the kinetics of reaction diffusion in these mixtures and the increase in volume of brickets due to the formation of new phases. Equations are obtained describing thermal and volume effects in a mixture of metal powders. Authors' abstract.

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USSR

UDC 620.183.48

ITIN, V. I., KOZLOV, Yu. I., PUGINA, L. I., YURCHENKO, A. G., SAVITSKIY, K. V. (Deceased), and FEDORCHENKO, I. M., Institute of Problems of Material Science, Academy of Sciences Ukrainian SSR

"Study of the Sintering, Structure and Phase Composition of Nickel Alloy-Base Metal-Graphite Materials. Report 1. Study of the Sintering Process of Nickel-Base Materials and Both the Structure and Phase Composition of Nickel-Copper-Graphite Alloys"

Kiev, Poroshkovaya metallurgiya, No 10, Oct 71, pp 26-31

Abstract: The study concerns the process of sintering as well as phase and structural changes occurring during sintering in Ni alloy-base metal-graphite materials. The experimental materials comprised 80% Ni and 20% Fe or 20% Cu with 30 and 50% (by vol.) graphite. The addition of graphite to Ni-Cu and Ni-Fe alloys markedly reduces both the amount of shrinkage and its rates during sintering. With 50% graphite the compression gives way to volumetric growth. Cu additions result in greater volumetric growth than Fe additions. The major cause of volumetric growth is believed to be the formation of inclusions isolated between particle surfaces, interaction with oxides to form gases, and desorption gases from the graphite resulting in a breakdown

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USSR

ITIN, V. I., et al., Poroshkovaya metallurgiya, No 10, Oct 71, pp 26-31

of contacts. Graphite additions cause the separation of Cu and Ni particles and reduce the alloy's homogeneity. In Cu-Ni alloy-base metal-graphite materials, graphite becomes an inert addition and spreads over the structure in the form of a separate inclusion in the metal matrix -- the solid solution of Cu in Ni. (5 illustrations, 5 bibliographic references)

2/2

1/2 020 UNCLASSIFIED PROCESSING DATE--23OCT70  
TITLE--STRUCTURE AND LUMINESCENT SPECTRA OF ARYLMETHYL RADICALS -U-

AUTHOR--(03)-KOZLOV, YU.I., SHIGORIN, D.N., VOZNYAK, V.M.

COUNTRY OF INFO--USSR

SOURCE--ZH. FIZ. KHIM. 1970, 44(3), 788-90

DATE PUBLISHED-----70

SUBJECT AREAS--CHEMISTRY, PHYSICS

TOPIC TAGS--PHOTOLYSIS, LUMINESCENCE SPECTRUM, FREE RADICAL, ELECTRON SPIN  
RESONANCE, BENZENE DERIVATIVE, METHYLENE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED  
PROXY REEL/FRAE--1997/0722

STEP NO--UR/0076/70/044/003/0788/0790

CIRC ACCESSION NO--AP0119629

UNCLASSIFIED

UNCLASSIFIED

PROCESSING DATE--23OCT70

2/2 020

CIRC ACCESSION NO--AP0119629  
ABSTRACT/EXTRACT--(U) GP-0-

ABSTRACT. PHCH SUB2 PH SUB2 CH AND PH SUB3  
C WERE PREPD. BY PHOTOLYSIS IN RIGID SOLNS. IN ETOH AT 77DEGREEEK AND  
THE LUMINESCENCE OF ESR SPECTRA STUDIED; LUMINESCENCE SPECTRA WERE NOT  
INFLUENCED BY CONC. OF RADICALS OF THE RIGID MATRIX; THE POSSIBILITY  
OF A "PROPELLER" STRUCTURE IS DISCUSSED. EXCITATION OF IRRADIATED SOLN.  
OF PH SUB2 CH SUB2 AT 313 M MU ALLOWED RECORDING OF LUMINESCENCE SPECTRA  
OF PHCH SUB2 TIMES, WHILE EXCITATION AT 334 M MU PROVIDED ONLY THE  
SPECTRUM OF BIPHENYL RADICAL. WAYS OF PREPG. PHCH SUB2 TIMES BY BOND  
RUPTURES ARE DISCUSSED. FACILITY: NAUCH.-ISSLED. FIZ.-KHM.  
INST. IM. KARPOVA, MOSCOW, USSR.

UNCLASSIFIED

USSR

UDC 62-55

KOZLOV, Yu. M., LESKOV, V. G., SHPAKOV, V. M.

"An Adaptive Linear System"

USSR Author's Certificate No 308417, filed 11 Aug 69, published 2 Aug 71  
(from RZh-Avtomatika, Telemekhanika i Vychislitel'naya Tekhnika, No 7,  
Jul 72, Abstract No 7A167 P)

Translation: This Author's Certificate introduces an adaptive automatic linear control system with stability-boundary output. The system contains a main loop and an adaptive loop whose output is connected to the input of the main loop unit with the parameter to be varied, while the input of the adaptive loop is connected to the output of the main loop of the system. To improve the accuracy and stability of the system when the parameters of the main loop vary over a wide range, the adaptive loop is made in the form of a series circuit comprised of a first filter, a frequency doubler, a second filter, and a phase shifter.

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USSR

UDC 577.3

FEDIN, VA. A., KOZLOV, YU. P., and TARUSOV, B. N., Chair of Biophysics,  
Moscow State University

"Superweak Light Emission During Thermal Muscle Contraction"

Moscow, Vestnik Moskovskogo Universiteta, Seriya 6, Biologiya, Pochvovedeniye,  
No 6, Nov/Dec 71, pp 108-110

Abstract: It has been demonstrated that when muscle tissue in a humid chamber is heated, the intensity of superweak emission (chemiluminescence) increases. The connection between a fixed level of superweak emission and the changes that occur in it during heat-induced irreversible loss of excitability in the sartorius muscles of *Rana temporaria* and *Rana ridibunda* (two species of frogs with different degrees of thermal sensitivity) was studied. When the prepared muscle tissue, which had been soaked in Ringer's solution, was heated from 20° to 35°C, the intensity of luminescence increased uniformly for both species. In the interval from 38°C to 50°C, it increased sharply for *Rana ridibunda* but leveled out for *Rana temporaria*. It was also established that greater intensities of luminescence occurred if the muscles were soaked for longer periods in Ringer's solution and if this solution itself were heated. Furthermore, an increase in intensity of luminescence occurred at lower temperatures for muscles which had been soaked in Ringer's solution than in freshly prepared muscle tissue.

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USSR

UDC 577.3

KOZLOV, YU. P., and MIKHAYLOVSKIY, G. YE., Moscow State University imeni M. V. Lomonosov

"Electrochemiluminescence of Carcinogenic Polycyclic Hydrocarbons"

Moscow, Doklady Akademii Nauk SSSR, Vol 193, No 5, 1970, pp 1174-1176

Abstract: The effect of various polycyclic hydrocarbons on the electrochemiluminescence (ECL) of a system consisting of tetraethylammonium bromide and dimethylformamide was studied. All of the polycyclic compounds sensitized the ECL of the system, and the extent of the sensitization correlated well with the carcinogenic activity of the compounds. Since the luminescence was considered to be due to recombination of anion radicals of the hydrocarbons, their lifetime was determined by the EPR method. It was concluded that the lifetime of the anion radicals and the electron acceptor properties of the polycyclic hydrocarbons correlate to a high degree with carcinogenic activity. It is therefore assumed that the anion radical forms of polycyclic hydrocarbons participate in the chemical processes of carcinogenesis.

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1/2 036 UNCLASSIFIED PROCESSING DATE--13NOV70  
TITLE--ROLE OF LYSOSOMES IN CARCINOGENESIS AND RADIATION INJURY OF CELLS

-U-  
AUTHOR--(03)-DANILOV, V.S., KUZLOV, YU. B., TARUSOV, B.N.

COUNTRY OF INFO--USSR

SOURCE--DOKL. AKAD. NAUK SSSR 1970, 190161, 1474-5

DATE PUBLISHED-----70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--RADIATION CELLULAR EFFECT, CHEMILUMINESCENCE, CARCINOGEN,  
LIVER, SARCOMA, ANTHRACENE, GAMMA IRRADIATION, LYMPHATIC SYSTEM,  
PEROXIDE, KETONE, ALDEHYDE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED  
PROXY REEL/FRAE--1994/1098

STEP NO--UR/0020/70/190/006/1474/1475

CIRC ACCESSION NO--AT0115117

UNCLASSIFIED

2/2 036

UNCLASSIFIED

PROCESSING DATE--13NOV70

CIRC ACCESSION NO--ATO115117

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. CHEMILUMINESCENCE ACCOMPANIES THE INTERACTION OF LYSOSOMES WITH VARIOUS CARCINOGENS, INDICATING THAT THE LATTER PROVOKE FREE RADICAL REACTIONS IN THE LYSOSOME MEMBRANE. STRONG CARCINOGENS SUCH AS 3,4 BENZOPYRENE AND 20 METHYLCHOLANTHRENE (1) EXCITE STRONG LUMINESCENCE IN NORMAL LYSOSOMES, WHEREAS WEAK CARCINOGENS SUCH AS ANTHRACENE AND 1,2 BENZOPYRENE EXCITE LITTLE. HOWEVER, I DID NOT CAUSE LUMINESCENCE IN SARCOMA 45 LYSOSOMES. LIVER LYSOSOMES TAKEN AT INTERVALS FROM ANIMALS TREATED WITH I SHOWED LUMINESCENCE INCREASES FOR UP TO 3 MONTHS AFTER TREATMENT. EXPOSING MIXTS. OF LYSOSOMES AND ANTHRACENE, 3,4 BENZOPYRENE, OR I TO 2 TIMES 10 PRIME4 LUX VISIBLE LIGHT CAUSED LUMINESCENCE IN PROPORTION TO THE TIME OF EXPOSURE AND THE CARCINOGENICITY OF THE COMPD. LYSOSOMES FROM ANIMALS EXPOSED TO 200, 650, OR 1500 R GAMMA RAYS SHOWED LUMINESCENCE IN PROPORTION TO THE AMT. OF EXPOSURE. PEROXIDES, HYDRUPEROXIDES, EPOXIDES, ALDEHYDES, AND KETONES WERE OBSD. IN LYSOSOMES FROM CERTAIN HEPATOMAS AND LYMPHOSARCOMAS. APPARENTLY OXIDN. REACTIONS CAUSED BY FREE RADICALS ARE INVOLVED IN CARCINOGENESIS. FACILITY: MOSK. GOS. UNIV. IM. LOMONOSOVA, MOSCOW, USSR.

UNCLASSIFIED

172 018 UNCLASSIFIED PROCESSING DATE--13NOV70  
 TITLE--INFRARED SPECTROSCOPY OF PHOSPHOLIPIDS IN ANIMAL TISSUES DURING  
 MALIGNANT GROWTH -U-  
 AUTHDR--(04)-TAFELSHEYN, E.E., PUKHOV, V.A., KOZLOV, YU.P., VLADIMIROV,  
 YU.A.  
 COUNTRY OF INFO--USSR

SOURCE--BIOL. NAUKI 1970, (2), 47-52

DATE PUBLISHED-----70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--SARCOMA, PHOSPHOLIPID, IR SPECTRUM, AMIDE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED  
 PROXY REEL/FRAME--1996/0622

STEP NO--UR/0325/70/000/002/0047/0052

CIRC ACCESSION NO--AP0117848

UNCLASSIFIED

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2/2 018

UNCLASSIFIED

PROCESSING DATE--13NOV70

CIRC ACCESSION NO--AP0117848

ABSTRACT/EXTRACT--(U) GP-0- ASSTRACT. PHOSPHOLIPIDS EXTD. FROM RAT SARCOMA SHOWED A DOUBLING OF THE 1550 CM PRIME NEGATIVE IR PEAK HEIGHT AS THE TUMOR REACHED MAX. GROWTH, AFTER WHICH THE PEAK RETURNED ALMOST TO ITS ORIGINAL HEIGHT. PHOSPHOLIPIDS FROM THE LIVER OF THE SAME RATS SHOWED A CORRESPONDING MIN. AT THE SAME STAGE OF TUMOR GROWTH. APPARENTLY AMIDES AND IMIDES ACCUMULATE IN THE SARCOMA PHOSPHOLIPIDS DURING MALIGNANT GRWOTH. FACILITY: MOSK, GOS. UNIV. IN. LOMONOSOVA, MOSCOW, USSR.

UNCLASSIFIED

USSR

UDC 620.179.16

VORONOV, A. I., KOZLOV, Yu. V., MALYSHEV, V. I., and MOROZOV, V. M., Tomsk Polytechnical Institute imeni S. M. Kirov

"Attachment to a UKB-1 Defectoscope for Inspection of Concrete at Negative Temperatures"

Sverdlovsk, Defektoskopiya, No 4, Jul-Aug 72, pp 59-63

Abstract: A shock-excited thyristor with increased output voltage amplitude (up to 6 kv) is proposed as an attachment for a UKB-1 defectoscope for use in the non-destructive testing of concrete at negative temperatures. Since it is not possible to use ultrasonic instruments equipped with Seignette salt heads in unheated locations, the authors employed ceramic piezoelements such as TsTS-19 which require a higher voltage and produce a higher voltage. The modified defectoscope with TsTS-19 radiation elements was tested on a standard concrete sample at -20 C. The tests showed reliability in the +60 to -20 C interval. 3 figures, 1 table, 1 bibliographical reference.

1/1

KOZLOVA, A.N.

PKS 56, 499  
14 JULY 72

DIET DURING A YEARLONG MEDICAL-REHABILITATION EXPERIMENT

Article by A. N. Kozlova and G. E. Serej, *Soviet Space, Actual Hygiene Problems in Space Biology and Medicine*, (Current Problems in Space Biology and Medicine), Moscow, 1971, pp 147-149.

In accordance with current concepts on the human diet during prolonged flights, in formulating the diet for the crew of a ground laboratory complex we took into account the following basic requirements: 1) a constancy of good taste qualities and the external appearance of the foods, 2) adequacy of the foods for the anticipated physiological requirements with retention of performance and human health, 3) a high assimilability of food products, 4) minimum weight and volume of the ration, 5) prolonged (not less than a year) preservability of the foods.

The experimental ration consisted of dishes and products completely ready for consumption, with their subsequent dehydration by sublimation from a frozen state, with adherence to the technological sublimation procedures, the resulting products usually have good organoleptic qualities, completely retain their food value and have a quite high assimilability. In addition, dehydration serves as a quite good method for preserving foods. The selection of dehydrated products was rational as well because the experiment provided for the resumption of water from urine and condensate. The rehydration of dishes and individual foods during the course of the experiment did not require great expenditures of energy and time.

In formulating the experimental ration we applied the accepted norms for consumption of foods with the maximum approach to the nearest age and occupational groups in the population. Proceeding on this basis, the mean daily content of the principal nutrients in the ration was as follows: protein



Acc. Nr: AP0034714

Ref. Code: UR 0241

PRIMARY SOURCE: Meditsinskaya Radiologiya, 1970, Vol 15,  
Nr 2, pp 7-12

THE CLINICAL PICTURE AND DIAGNOSIS OF RADIATION INJURY  
OF THE SPINAL CORD IN THE TREATMENT OF MALIGNANT TUMORS

A. V. Kozlova, M. A. Merkova

Summary

The article describes ten cases of radiation injury of the spinal cord after the irradiation of tumors of the pharyngolarynx, larynx, tonsils, mediastinum and lung. In 5 patients there was "electric paresthesia", developing several months after radiation therapy, without objective symptoms of spinal pathology. In seven years in one patient there appeared a focal affection of the spinal cord with a slowly progressing symptomatology. In five patients with cancer of the laryngopharynx progressing affection of the spinal cord resulted in a lethal outcome. In four of them the focus of spinal affection was first revealed 3-6 segments below the irradiated level and only gradually there appeared symptoms of affection of irradiated segments of the spinal

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cord. An analysis has demonstrated that in contrast to metastatic affection, radiation injury develops more slowly with gradual spread of the process lengthwise and crosswise in the spinal cord; for metastases more characteristic is extramedullary localization, whereas radiation injury always runs a course of an intramedullary process. The prevention of late radiation injuries consists in the choice of conditions of irradiation of malignant tumors, in which the spinal cord is excluded from the zone of large doses.

D.N.

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19711420

1/2 010 UNCLASSIFIED PROCESSING DATE--20NOV70  
 TITLE--KINETICS OF THE DISSOLUTION OF CALCIUM TUNGSTATE IN OXALATE ACID  
 SOLUTIONS -U-  
 AUTHOR-(04)-PGTASHNIKOV, YU.M., GAMOLSKIY, A.M., MOKHOSOVYEV, N.V.,  
 KOZLOVA, F.M.  
 COUNTRY OF INFO--USSR

*K*

SOURCE--Zf. NEORG. KHIM. 1970, 15(2), 502-8

DATE PUBLISHED-----70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--CHEMICAL REACTION KINETICS, AQUEOUS SOLUTION, CALCIUM  
 CHLORIDE, SOLUBILITY, TUNGSTATE, OXALATE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED  
 PROXY REEL/FRAE--1994/1706

STEP NO--UR/0078/10/015/002/0502/0503

CIRC ACCESSION NO--AP0115535

UNCLASSIFIED

2/2 010

UNCLASSIFIED

PROCESSING DATE--20NOV70

CIRC ACCESSION NO--AP0115535

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. CAC SUB2 O SUB4.H SUB2 O FORMED WHEN CA WC SUB4.H SUB2 O WAS DISSOLVED IN AN AQ. SOLN. OF H SUB3 C SUB2 C SUB4 AT 20-60DEGREES. RATE OF CAWO SUB4.H SUB2 O DISSOLN. IS INDEPENDENT OF MIXING RATE AND IS LINEARLY PROPORTIONAL TO H SUB2 C SUB2 O SUB4 CONCN. IN THIS PROCESS, H SUB2 C SUB2 O SUB4 PERFORMS 2 FUNCTIONS, 1ST IT CAUSES SEPN. OF 2 SOLIDS, CAC SUB2 O SUB4 AND H SUB2 WO SUB4, AND 2ND IT REACTS WITH H SUB2 WO SUB4 TO GIVE H SUB2 (WO SUB3 (C SUB2 C SUB4)). IN THE PRESENCE OF HCL, CACL SUB2 FORMS ALONG WITH H SUB2 (WO SUB3 (C SUB2 O SUB4)). FACILITY: DONETS. GOS. UNIV., DONETSK, USSR.

UNCLASSIFIED

USSR

UDC 621.791.856.3:669.245

YELAGIN, V. M., MARTYUSHOV, B. I., and KOZLOVA, G. G., Moscow

"Statistical Analysis of the Effect of the Conditions of Argon-Arc Welding on the Mechanical Properties of Joints"

Kiev, Avtomaticheskaya Svarka, No 7, Jul 72, pp 13-17

Abstract: An analysis was made of the effect of the welding method on the strength of samples of welded joints tested for static strength by tension. The results are discussed by reference to tabulated data and diagrams showing the effects of welding current, welding rate, and welding arc voltage on the mechanical properties of joints of Kh18N9T steel and Kh18N9T steel joints with Kovar (Fe-Ni-Co-Mn alloy). The strength of Kovar joints welded by the argon-arc method was found to be lower and the relative elongation higher in comparison with the deformed initial metal. Some characteristics of welded joints of Kh18N9T steel with Kovar are indicated. A method is suggested for determining the optimum parameters of the argon-arc welding method and the acceptable deviations from these parameters. It is shown that the mean square deviation of the investigated properties from their average value is the most important characteristic of quality and reliability of argon-arc-welded joints. The variation coefficient of the properties can serve as a criterion for weld quality. Six illustrations, six formulas, three tables, three bibliographic references. 1/1

UDC 621.752.001(088.8)

USSR

YEVGRAFOV, A. V., KOPSAKOV, V. V., SKALDIN, B. A., ALEXSEYEV, G. I., ~~KOZLOVA, G. N.~~, and LEVANT, B. G.

"Instrument for Determining Concentration of Magnetic Powder in Suspension"

USSR Author's Certificate No 265554, Cl. 42 1, 13/04, (G01 n), filed 8 Aug 68, published 26 Jun 70 (from *Elektrometallurgiya*, No 3, Mar 71, Abstract No 3G351P by A. Epik)

Translation of the abstract is presented and a description given of the working principle and construction of an instrument for determining the magnetic powder content of a suspension. The instrument contains a power unit, generator, bridge amplifier, measuring element, detector, a-c amplifier, and indicator. To increase measurement accuracy, assure liberality of readings, and simplify the scheme of the instrument, it is supplied with a magnetizer in the form of two coaxially situated annular permanent magnets. Two ferroprobe half-cells, connected via the bridge amplifier to the indicator, are installed in the magnet gap perpendicular to the axis of the magnets, with a vessel containing the medium under study mounted in the angular gap of the upper magnet. Two illustrations.

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1/2 011 UNCLASSIFIED PROCESSING DATE--09OCT70  
TITLE--SEPARATION AND PURIFICATION OF D,PANTOTHENIC ACID BY AN ION  
EXCHANGE METHOD -U-  
AUTHOR-(03)-ZHDANOVICH, YE.S., KOZLOVA, G.S., KIBALOVA, N.YU.  
COUNTRY OF INFO--USSR  
SOURCE--KHIM. FARM. ZH. 1970, 4(2), 27-9 *K*  
DATE PUBLISHED-----70  
SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES, CHEMISTRY  
TOPIC TAGS--VITAMIN, CHEMICAL PURIFICATION, ION EXCHANGE  
CONTROL MARKING--NO RESTRICTIONS  
DOCUMENT CLASS--UNCLASSIFIED  
PROXY REEL/FRAME--1993/0535 STRIP NO--037045071070067002700270029  
CIRC ACCESSION NO--AP0113426  
UNCLASSIFIED

2/2 011

UNCLASSIFIED

PROCESSING DATE--070170

CIRC ACCESSION NO--AP0113429

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. SEPN. OF D PANTOTHENIC ACID (I) FROM A TECH. PRODUCT CONTG. I AS THE ET SUB2 NH SALT AND 15PERCENT BETA ALANINE (II) WAS EXAMD. TESTS WERE CARRIED OUT USING KU 23 CATION EXCHANGER (A COPOLYM. PRODUCT OF POLYSTYRENE WITH DIVINYLBENZENE) (H PRIME POSITIVE FORM). SORPTION ISOTHERMS OF ET SUB2 NH AND II WERE FIRST EXAMD. UNDER DYNAMIC AND STATIC CONDITIONS. MOREOVER, THE EFFECT OF GRAIN SIZE OF THE CATIONITE ON THE SORPTION OF II WAS INVESTIGATED, THE YIELD OF II AT 20, 40, AND 60DEGREES, AND THE SORPTION OF II AS THE FUNCTION OF ITS CONC. OVER THE PH RANGE 1.0-6.4. THE SORPTION OF II INCREASED WITH INCREASING PH. THE SEPN. OF I WAS CARRIED OUT IN A 17 TIMES 290 MM COLUMN AT THE ELUTION RATE 5 ML-MIN. THE CONC. OF I SALT AND II IN THE SOLN. WAS 0.3-0.4 AND 0.17 EQUIVS.-L., RESP. AT 40 AND 60DEGREES CONCD. ELUATES WERE OBTAINED. THERMAL STABILITY TESTS SHOWED THAT AT 37 AND 60DEGREES A 5PERCENT I SOLN. BEGAN TO DECOMP. AFTER 32 AND 2 HR, RESP. AT 20DEGREES THE OPTIMUM CONDITIONS WERE AS FOLLOWS: 10 G OF THE DRY CATIONITE, 95 ML 10PERCENT I SALT SOLN., AND VOL. OF THE ELUATE 170 ML (PH 4.5). THE I AND II CONTENT OF THE ELUATE WAS 0.0378 (88PERCENT YIELD BASED ON I SALT) AND 8.5 TIMES 10 PRIME NEGATIVES G-ML., RESP. FACILITY: VSES. NAUCH. ISSLED. VITAMIN. INST., MOSCOW, USSR.

UNCLASSIFIED



USSR

UDC 576.358.43

BEREZINA, O. N., SKLYANSKAYA, Ye. I., KOZLOVA, I. A., PETERSON, O. P., and ZHDANOV, V. M., Academician, Academy of Medical Sciences USSR

"Electrophoretic Separation of the Principal Proteins from Cells Infected with Different Viruses"

Moscow, Doklady AN SSSR, Vol 190, No 5, 1970, pp 1225-1228

Abstract: Changes in the synthesis of total histones and their fractions in nuclei of infected cells and in desoxyribonucleic acid complex were studied. The dynamics of accumulation and of changes in principal cytoplasm protein was studied also. One hour after infection the number of protein bands increases, most with moderate electrophoretic mobility. After 3 hrs, additional slow-moving bands appear, and this increase continues for 5 hrs. After 7 hrs, the protein bands begin to disappear, but various minor bands appear. Analogous results were observed 24 hrs after infection with pox vaccine, some increase with influenza virus, and no change in protein bands with Herpes virus. After 48 hrs, no increase in the protein bands was noted. The results obtained correspond to the dynamics of accumulation of viruses in chick embryo tissue. Four histone fractions were isolated from infected tissues: lysine-rich histones -  $f_1$ , relatively lysine-rich fractions  $f_{2a}$ ,  $f_{2b}$ , and a fraction rich in arginine -  $f_3$ . Electrophoretic analysis of individual fractions showed that a continuous disappearance of lysine-rich fractions

USSR

BEREZINA, O. N., et al., Doklady AN SSSR, Vol 190, No 5, 1970, pp 1225-1228

( $f_1$ ) occurs in cells infected with the pox virus and influenza vaccine, while in fractions  $f_{2a}$  and  $f_{2b}$ , additional principal and minor bands appear. The arginine-rich fraction in the infected material does not differ from that in controls.

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1/2 012 UNCLASSIFIED PROCESSING DATE--18SEP70  
TITLE--ON STUDIES OF THE INDUCTOR OF DEPROTEINIZATION ENZYME OF VACCINIA  
VIRUS NUCLEOCAPSID -U-  
AUTHOR-(02)-PETERSON, O.P., KOZLOVA, I.A.  
COUNTRY OF INFO--USSR  
SOURCE--VOPROSY VIRUSOLOGII, 1970, NR 2, PP 156-161  
DATE PUBLISHED-----70  
SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES  
TOPIC TAGS--VIRUS, ENZYME ACTIVITY, NUCLEIC ACID, PROTEIN, TRYPSIN  
CONTROL MARKING--NO RESTRICTIONS  
DOCUMENT CLASS--UNCLASSIFIED  
PROXY REEL/FRAME--1990/0744 STEP NO--UR/0402/70/000/002/0156/0161  
CIRC ACCESSION NO--AP0108950  
UNCLASSIFIED

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UNCLASSIFIED

PROCESSING DATE--18SEP70

CIRC ACCESSION NO--AP0108950

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE EFFECT OF DIFFERENT PROTEOLYTIC ENZYMES ON THE INFECTIVE PROPERTIES OF VACCINIA VIRUS AND SOME FEATURES OF INDUCTION OF DEPROTEINIZATION FACTOR WAS STUDIED. ENZYMES SUCH AS TRYPSIN, CHEMOTRYPSIN, CARBOPEPTIDASE WERE SHOWN TO CAUSE DIGESTION OF SOME QUANTITY OF VIRUS PROTEIN WITHOUT, HOWEVER, ANY LOSS OF THE INFECTIVE PROPERTIES AND WITHOUT DESTRUCTION OF THE CAPACITY OF VIRIONS TO INDUCE IN CELLS A FACTOR HELPING RELEASE OF VIRUS NUCLEIC ACID. PRONASE CAUSED MORE INTENSIVE DESTRUCTION OF VIRUS PROTEIN WHICH RESULTED IN A MARKED REDUCTION OF INFECTIVE PROPERTIES AS WELL AS THE CAPACITY TO INDUCE THE ENZYME OF DEPROTEINIZATION IN CELLS. USE OF LARGE DOSES OF THE ENZYME RESULTED IN A REDUCTION OF REACTIVABILITY OF THE TREATED VIRUS. THE REPRODUCTIVE CAPACITY OF THE VIRUS APPEARED TO BE ASSOCIATED WITH DEEPLY LOCATED PROTEIN STRUCTURES OF THE VIRION. IT CANNOT BE EXCLUDED THAT THE PROTEIN INDUCING THE "UNDRESSING" ENZYME IS LOCATED NOT IN THE EXTERNAL MEMBRANE OF THE VIRION BUT IN NUCLEOID MEMBRANE.

UNCLASSIFIED

1/2 021 UNCLASSIFIED PROCESSING DATE--23 OCT 70  
TITLE--ELECTROPHORETIC SEPARATION OF BASIC PROTEINS OF CELLS INFECTED WITH  
DIFFERENT VIRUSES -U-  
AUTHOR--(05)-BEREZINA, O.N., SKLYANSKAYA, YE.I., KOLLOVA, I., PETERSON,  
O.P., ZHDANOV, V.M.  
COUNTRY OF INFO--USSR  
SOURCE--DOKL. AKAD. NAUK SSSR 1970, 190(5), 1225-8 VIROL  
DATE PUBLISHED-----70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--ELECTROPHORESIS, SMALLPOX, VACCINE, INFLUENZA VIRUS, HERPES  
SIMPLEX VIRUS, TISSUE CULTURE, PROTEIN

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED  
PROXY REEL/FRAME--1999/0704

STEP NO--UR/0020/70/190/005/1225/1228

CIRC ACCESSION NO--AT0122790

UNCLASSIFIED

2/2 021

UNCLASSIFIED

PROCESSING DATE--23OCT70

CIRC ACCESSION NO--AT0122790

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. ELECTROPHORESIS IN POLYACRYLAMIDE GEL WAS USED TO FRACTIONATE CHICK FIBROBLAST CULTURES GROWN ON MATRICES WITH ADON. OF BULL SERA OR ON TISSUES FROM 11 DAY CHICK EMBRYOS. THE INFECTION WAS INTRODUCED INTO ALLANTOIDAL SPACE AND EMPLOYED THE VIRUS MATERIAL OF SMALLPOX VACCINE, INFLUENZA, OR HERPES. THE TYPICAL ELECTROPHOREGRAMS WERE SHOWN FOR THE TREATED CULTURES; THE CHANGES IN THE ACCUMULATION OF BASIC PROTEINS VARY WITH DURATION OF THE EXPT. WITHIN 1 HR OF INFECTION TO NO. OF SEPD. PROTEINS INCREASES MAINLY IN THE GROUP OF MEDIUM ELECTROPHORETIC MOBILITY; WITHIN 3 HR, PROTEINS WITH SLOW MOBILITY APPEAR AND BY 5 HR THE BASIC PROTEIN FRACTIONS EXCEED THOSE OF THE CONTROLS BY A FACTOR OF 4 OR MORE; BY 709 HR THE NO. OF DISTINCT PROTEIN ZONES DECLINES, BUT MINOR ZONES APPEAR AT THE SAME TIME. THE INCREASED TOTAL AMOUNT OF BASIC PROTEINS IS CAUSED BY INCREASED FRACTIONS OF HISTONES WITH MODERATE LEVELS OF LYSINE; IT IS PROBABLY THIS PROTEIN FRACTION THAT IS CONNECTED WITH THE INHIBITING ACTIVITY OF BASIC CYTOPLASM PROTEINS.

UNCLASSIFIED

USSR

UDC: 632.95

NOVIK, R. M., KOZLOVA, I. V.

"Polarographic Study of the Insecticide Nemagon ( 1,2-Dibromo-5-chloropopane)

Probl. analit. khimii [Problems of Analytic Chemistry -- Collection of Works],  
Vol 2, Moscow, Nauka Press, 1972, pp 90-95 (Translated from Referativnyy  
Zhurnal Khimiya, No 24(II), 1972, Abstract No 24N577, by T. A. Belyayeva)

Translation: Alternating current polarography was performed on the KAP-225u  
polarograph to study the polarographic behavior of  $\text{BrCH}_2\text{BrCHCH}_2\text{Cl}$  (I) and  
determine the possibility of application of polarographic methods to the analysis  
of pesticidal preparations based on I. In order to determine nemagon in tap  
water, ten ml of the water to be analyzed is added to 1.5 g  $\text{Na}_2\text{SO}_3$ , mixed,  
transferred to an electrolyzer (polarographic cell with mercury bottom); a  
polarogram is measured in the potential interval from 0.0 to 1.0 v.

1/1

USSR

UDC: 652.95

SYPIN, G. S., SISTER, Yu. D., KOZLOVA, I. V.

"Polarographic Methods of Analysis of Pesticides"

Probl. analit. khimii [Problems of Analytic Chemistry -- Collection of Works], Vol 2, Moscow, Nauka Press, 1972, pp 145-155 (Translated from Referativnyy Zhurnal Khimiya, No 24(II), 1972, Abstract No 24N574, by T. A. Belyayeva)

Translation: A review of literature data on the use of classical (differential and indirect) polarography, oscillating and alternating current polarography in the analysis of pesticides. The advantages of the use of oscillating polarography over classical polarography for the determination of residues of various pesticides are demonstrated. A summary table is presented on the application of polarography analysis of 70 pesticides. The possibility is demonstrated of using polarographic methods for the study of the mechanism of action and metabolism of pesticides.

1/1

- 28 -



Pharmacology and Toxicology

USSR

UDC 577.1.612.8.015

KOZLOVA, L. A., and POGODAYEV, K. I., Second Moscow Medical Institute imeni N. I. Pirogov, Moscow Scientific Research Institute of Psychiatry

"Aldolase and Lactate Dehydrogenase Activity and Lactic and Pyruvic Acid Content of Various Rat Brain Areas Under Corazole-induced Convulsions"

Kiev, Ukrayins'kyy Biokhimichnyy Zhurnal, Vol 42, No 6, 1970, pp 692-696

Abstract: The article describes results of a study of the activity of glycolytic enzymes (fructose-1,6-diphosphate aldolase, fructose-1-monophosphate aldolase, lactate dehydrogenase) and the lactic and pyruvic acid content of rat brain tissues under repeated corazole-induced convulsions. Male albino rats weighing 200-250 g were used for the experiments. The repeated convulsions were induced by the subcutaneous injection of a 10-percent corazole solution at 40-60 mg per kg of weight. The results indicate that repeated corazole-induced convulsions are accompanied by a significant increase in aldolase and lactate

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USSR

KOZLOVA, L. A., and POGODAYEV, K. I., 'Ukrayins'kyy Biokhimiichnyy Zhurnal, Vol 42, No 6, 1970, pp 692-696

dehydrogenase activity and lactic and pyruvic acid build-up in brain tissue. These indices may characterize the rate of aerobic processes in the brain tissue. There is a rise in the lactate:pyruvate coefficient with repeated fits, after single and four convulsive states. The maximum shifts in the rate of glycolytic processes under repeated convulsions occur in the upper areas of the brain (cortex, interbrain).

2/2

Acc. Nr: **AP0047324**

Ref. Code: UR 0300

PRIMARY SOURCE: **Ukrayns'kiy Biokhimichnyi Zhurnal, 1970,**  
**Vol 42, Nr 1, pp 60-65**

**ALDOLASE ACTIVITY, PYRUVATE AND LACTATE CONTENT  
IN THE RAT BRAIN DIFFERENT DIVISIONS WITH OVERSTRAIN  
OF THE CENTRAL NERVOUS SYSTEM**

K. I. Pogodaev, L. A. Kozlova, I. V. Cheping

The N. I. Pirogov II Medical Institute, Moscow

**Summary**

It the rat brain tissues the activity of aldolase of fructose-1-monophosphate and aldolase of fructose-1,6-diphosphate increases under the effect of repeating one-four times electroconvulsive attacks. The fatigue, which comes after the animal run with the rotating drum, is characterized by the increase in the lactate and pyruvate content and the rise of the coefficient value of lactate: pyruvate. It is established that with fatigue the intensity decrease in the aerobic processes of oxidation is compensated to some extent by the intensification of anaerobic glycolytic processes.

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REEL/FRA  
19790845

PH 2

USSR

UDC 582.507

EPIK, E. Ya. and KOZLOVA, L. G.

"Possibility of Change of the Microstructure of a Turbulent Stream During Research on Convective Heat Exchange"

Teplofiz. i Teplotekhnika. Resp. Mezhd. Sb. (Thermophysics and Thermal Engineering. Republic Interdepartmental Collection of Works), No 2, 1972, pp 73-78 (from Referativnyy Zhurnal--Turbostroyeniya, No 1, 1973, Abstract No 1.49.116)

Translation: The case discussed involves the directional change of the turbulence characteristics of a stream (the levels and scales computed from the spectral distribution of the longitudinal-pulsation velocity component) by means of a turbulizing device (perforated disk) installed in front of a Vitushinskiy nozzle, with a ramming degree of 9 at the wind-tunnel entrance. A procedure is presented for measuring the turbulence characteristics of the stream with the use of thermoanemometric equipment. Three figures, nine references.

1/1

- 3 -

USSR

UDC 536.24:532.526

DYBAN, Ye. P., EPIK, E. Ya., KUROSH, V. D., KOZLOVA, E. G.

"Heat Transfer and the Boundary Layer on a Curved Surface Under Increased Turbulence of the Free Flow"

V sb. Vopr. obshch. i prikl. fiz. (Problems in General and Applied Physics -- Collection of Works), Alma-Ata, "Nauka", 1972, pp 159-164 (from RZh-Mekhanika, No 6, Jun 72, Abstract No 6B800)

Translation: Results of experiments on the local and average heat exchange at the surface of a cylinder in a transverse air flow under a constant density of the formal flow over its perimeter are presented. If the turbulence of the incident layer is low (less than 0.5%), the results of experiments on heat exchange in the frontal point satisfactorily agree with the theoretical solution. An attempt is made to analyze the characteristics of the development of the boundary layer and heat transfer under increased turbulence of the flow. The feasibility of introducing the Reynolds number determined on the basis of turbulent pulsation of the velocity into the criterial equation is established. 13 ref. Authors abstract.

1/1

Acc. Nr: AP0040324

Ref. Code: UR 0481

PRIMARY SOURCE: Eksperimental'naya Khirurgiya i Anesteziologiya,  
1970, Nr 1, pp 67-71

ON THE INFLUENCE OF LYSTHENON  
ON THE CARDIO-VASCULAR SYSTEM

V. V. Tavevskiy, L. I. Kostova, A. S. Nibilanova

In 89 experiments on dogs the authors studied side effects of the relaxant on the cardio-vascular system using plethysmography and sphygmography. A marked vasodilatory action of lysthenon on the peripheral blood vessels and considerable stimulating effect on the heart were recorded. Effects are constant, transient and depend on the dose and the rate of intravenous administration.

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REEL/FRA  
19741755

021c

USSR

UDC 632.954:631.445.2

BLIYEV, YU. K., KOZLOVA, L. M., Candidate of Biological Sciences, Leningrad Scientific Research Institute of Forestry

"Effect of Various Doses of Herbicides on Soil Fertility"

Moscow, Khimiya v sel'skom Khozyaystve, No 11, 1972, pp 50-53

Abstract: Results are presented from laboratory tests in 1958-1970 conducted to study the effect of ordinary and increased doses of herbicides recommended for application in forest nurseries on the nutritive regime of the soil. Tabulated data are presented for simazine, dalapone, and sodium trichloroacetate indicating their effect on the nitrate and ammoniacal nitrogen content in the soil, the humus and total nitrogen content in the soil and the  $P_2O_5$  and  $K_2O$  content. The soil mechanisms giving rise to the results are discussed. When used in the recommended doses, the herbicides resulted in increased accumulation of nitrates after a month with maximum nitrate content in the version with a mixture of dalapone and 2,4-D. Twenty days after injection of the herbicides the ammoniacal nitrogen content increased somewhat. In increased doses the herbicides inhibited the nitrate accumulation process in the soil for the first month. The strongest inhibiting effect resulted from a mixture of sodium trichloroacetate and 2,4-D. Intensifica-  
1/2

USSR

BLIYEV, YU. K., and KOZLOVA, L. M., *Khimiya v sel'skom khozyaystve*, No 11, 1972, pp 50-53

tion of the processes of mineralization of nitrogen-containing compounds was reflected deeply in the humus and total nitrogen content in the soil for both ordinary and increased doses of the herbicides. With increased doses of the herbicides a tendency toward an increase in the total nitrogen content was noted. Under the effect of all the herbicides in ordinary and increased doses the content of available phosphorus increased and the exchangeable potassium decreased. Mixtures of dalapone or sodium trichloroacetate with 2,4-D and the simazine preparation in the recommended and increased doses did no harm to the nutritive regime of the soddy podzolic weakly loamy soil used in the tests.

2/2

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1/2 023 UNCLASSIFIED PROCESSING DATE--09OCT70  
TITLE--ON PROBLEM OF INTERRELATION OF CORTEX EXCITABILITY AND THE  
INTENSITY OF INNER INHIBITION IN DOGS DURING ONTOGENY -U-  
AUTHOR--KOZLOVA, L.M. K  
COUNTRY OF INFO--USSR  
SOURCE--FIZIOLOGICHNIY ZHURNAL, 1970, VOL 16, NR 3, PP 303-311  
DATE PUBLISHED-----70  
SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES  
TOPIC TAGS--CEREBRAL CORTEX, DOG, INHIBITION  
CONTROL MARKING--NO RESTRICTIONS  
DOCUMENT CLASS--UNCLASSIFIED  
PROXY REEL/FRAE--1994/1123 STEP NO--UK/0238/70/016/003/0303/0311  
CIRC ACCESSION NO--AP0115142  
UNCLASSIFIED

2/2 023

UNCLASSIFIED

PROCESSING DATE--09OCT70

CIRC ACCESSION NO--AP0115142

ABSTRACT/EXTRACT--(U) GP-Q- ABSTRACT. IN TWO SERIES OF EXPERIMENTS THE CORRELATION OF THE INHIBITION PROCESS INTENSITY WAS STUDIED AT DIFFERENT METHODS OF ITS ESTIMATION WITH EXCITABILITY OF CEREBRAL HEMISPHERES CORTEX. 104 DOGS WERE INVESTIGATED AT THE AGE FROM 1 MONTH TO 1.5-5 YEARS, USING MOTOR FOOD METHODS. IT IS FOUND OUT THAT THE VALUE OF SUCCESSIVE INHIBITION IS STATISTICALLY TRUSTWORTHY IN CORRELATION WITH THE CORTEX EXCITABILITY AND CANNOT BE A CRITERION OF THE MOTOR PROCESS INTENSITY IN THE ONTOGENY. RATE OF INNER INHIBITION RESPONSE ALSO DEPENDS TO A CONSIDERABLY GREATER EXTENT ON THE CORTEX EXCITABILITY, THAN ON THE INHIBITION PROCESS INTENSITY. INHIBITION PROCESS INTENSITY IN ONE MONTH PUPPIES IS SMALL AND SHARPLY INCREASES BY 2 MONTHS. AT AN OLDER AGE THE INCREASE IN THE INHIBITION PROCESS INTENSITY CONSIDERABLY FALLS. AS THE CORTEX ACTIVITY DECREASES, THE INNER INHIBITION ALSO DROPS. FACILITY: DEPARTMENT OF NORMAL PHYSIOLOGY, MEDICAL INSTITUTE, BLAGOVESHCHENSK.

UNCLASSIFIED

USSR

UDC 547.26'118

MIZRAKH, L. I., BABUSHKINA, T. A., YAKOVLEV, V. G., KOZLOVA, L. N., YUKHNO, Ye. M., STAROSTINA, L. N., and YANOCHKINA, G. A.

"Phosphorus-Containing Derivatives of Isothiuronium. III. Alkylation of Thiourea with Diethyl Chlorophosphate and the Diethyl Ester of 2-Bromoethylphosphonic Acid"

Leningrad, Zhurnal Obshchey Khimii, Vol 43, No 11, Nov 73, pp 2364-2367

Abstract: It was established that the metaphosphate of S-ethylisothiuronium formed upon the reaction of diethyl chlorophosphate with thiourea. A study of the reaction of O, O-diethyl 2-bromethylphosphonate with thiourea showed that in this reaction, as distinguished from that with alpha-halophosphonates (MizraKh et al, Zh. Obshch. Khim., Vol 41, 2654, 1971), which proceeded in the opposite order, alkylation of thiourea with the haloalkyl group took place initially, while participation of the ester group of the alkylation occurred only under more severe conditions. On further heating of the product  $(EtO)_2 P(O)CH_2CH_2 \cdot SC(NH_2)_2 Br^-$  that formed initially, EtBr evolved and the product  $O_2\bar{P}(OEt) \cdot CH_2CH_2SC(NH_2)_2$  was obtained.

1/1

Pathology

USSR

UDC 617.7-.681.092.4.001.57:519.24

AVETISOV, E. S., BUNIN, A. Ya., LUGOVSKOY, V. M., and KOZLOVA, I. P.,  
Moscow Scientific Research Institute of Eye Diseases imeni Gel'mgol'ts

"Possibility of Mathematical Modeling of the Process of Change in Intraocular Pressure in Primary Glaucoma"

Moscow, Vestnik Oftal'mologii, No 5, 1971, pp 10-16

Abstract: The proposed mathematical model of change in intraocular pressure (IOP) in different phases of primary glaucoma is based on two assumptions: (a) the central factor in the pathogenesis of the disease is the progressive death of functional elements of the optic nerve and retina caused by metabolic change combined with high IOP; (b) the metabolic rate in eye tissues and level of IOP are related in such a way that the former may increase when the latter rises slightly but decrease with further rise in IOP. Hence a rise in IOP may, with respect to the metabolic rate, be either compensatory or aggravating in nature. The dynamics of change in the average level of IOP over a fairly long period is useful for the early detection of glaucoma and objective evaluation of the course of the disease. For example, if tonograms obtained over a period of 1 to 1 1/2 years reflect a progressive rise in the average level of IOP, the presence of glaucoma can be considered confirmed. If the 1/2

USSR

AVETISOV, E. S., et al., Vestnik Oftal'mologii, No 5, 1971, pp 10-16

diagnosis of glaucoma was established previously, the continued rise is an indication that the course of the disease is unfavorable.

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1/2 022 UNCLASSIFIED PROCESSING DATE--02JCT70  
TITLE--THE ROLE OF TONOMETRY IN EARLY DIAGNOSIS OF GLAUCOMA -U-  
AUTHOR--(03)-AVETISOV, E.S., KOZLOVA, L.P., LUGOVSKOY, V.M.  
COUNTRY OF INFO--USSR  
SOURCE--VESTNIK OFTAL'MOLOGII, 1970, NR 2, PP 41-44  
DATE PUBLISHED-----70  
SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES  
TOPIC TAGS--EYE DISEASE, DIAGNOSTIC MEDICINE  
CONTROL MARKING--NO RESTRICTIONS  
DOCUMENT CLASS--UNCLASSIFIED  
PROXY FILE/FNAME--1986/0834 STEP NO--UR/0357/70/000/002/0041/0043  
CIRC ACCESSION NO--APO102796  
UNCLASSIFIED

2/2 022

UNCLASSIFIED

PROCESSING DATE--020CT70

CIRC ACCESSION NO--AP0102795

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. TONOGRAMS TAKEN IN PERSONS WHO HAD BEEN UNDER OBSERVATION FOR 2-8 YEARS IN CONNECTION WITH SUSPECTED GLAUCOMA WERE USED IN EVALUATING THE ROLE OF TONOMETRIC INVESTIGATIONS FOR AN EARLY DIAGNOSIS OF GLAUCOMA. ONE GROUP INCLUDED 20 SUBJECTS WITH THE DIAGNOSIS OF GLAUCOMA VERIFIED IN THE COURSE OF OBSERVATION, THE OTHER ONE EMBRACING 20 PERSONS IN REGARD TO WHOM THE DIAGNOSIS OF GLAUCOMA DID NOT FIND CONFIRMATION. TO STATISTICAL ANALYSIS WERE SUBJECTED TONOGRAMS OBTAINED IN PRIMARY DIURNAL TONOMETRY COVERING A PERIOD OF 5 DAYS. THE LEVEL OF INTRAOCULAR TENSION AND ITS DAILY AND WEEKLY RANGE WERE STUDIED. A TOTAL OF 400 TONOGRAMS, 200 FOR EACH GROUP, WERE SCRUTINIZED. THESE INVESTIGATIONS DEMONSTRATED THAT IN BORDER LINE CASES DIURNAL TONOMETRY ALONE CANNOT BE REGARDED A SUFFICIENTLY RELIABLE CRITERION FOR AN EARLY DIAGNOSIS OF GLAUCOMA.

UNCLASSIFIED

1/2 016 UNCLASSIFIED PROCESSING DATE--23OCT70  
TITLE--PYRIDAZINE RING SIZE REDUCTION OF  
1,PHENYL,3,ETHOXYCARBONYL,5,6,7,8,TETRAFLUORO,4,1H,CINNOLINONE -U-  
AUTHOR-(02)-PRUDCHENKO, A.T., KOZLOVA, I.P.

COUNTRY OF INFO--USSR

SOURCE--ZH. OBSHCH. KHIM. 1970, 40(3), 680-2

DATE PUBLISHED-----70

SUBJECT AREAS--CHEMISTRY

OPIC TAGS--FLUORINATED ORGANIC COMPOUND, HETEROCYCLIC NITROGEN COMPOUND,  
ZINC, INDOLE, CARBOXYL RADICAL, CHEMICAL REDUCTION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--2000/0937

STEP NO--UR/0079/70/040/003/0680/0682

IRC ACCESSION NO--AP0124597

UNCLASSIFIED



272 016

UNCLASSIFIED

PROCESSING DATE--23OCT70

IRC ACCESSION NO--AP0124597

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. HEATING THE TITLE COMPO. (I) WITH  
Zn DUST IN ACOH TRACE HCL 1.5 HR GAVE 48PERCENT ET  
1-PHENYL-3-HYDROXY-4,5,6,7-TETRAFLUOROINDOLE 2-CARBOXYLATE (II), M.  
135-6DEGREES, WHICH WITH AC SUB2 O-KOAC 4 HR GAVE 52PERCENT 3-ACETOXY  
ANALOG, M. 94.5-6DEGREES, WHILE REDN. OF II WITH NAGH SUB4-MEON 24 HR  
GAVE ME 1-PHENYL-3-HYDROXY-4,5,6,7-TETRAFLUOROINDOLE-2-CARBOXYLATE, M.  
186-8DEGREES. FACILITY: NOVOSIBIRSK. INST. ORG. KHIM.,  
NOVOSIBIRSK, USSR.

FILED

1/2 008 UNCLASSIFIED PROCESSING DATE--23OCT70  
TITLE--NEW SYNTHESSES INVOLVING ORGANOZINC COMPOUNDS, VII, SYNTHESIS OF  
ALPHA ALKOXYMETHYL SUBSTITUTED DICARBOXYLIC ACID ESTERS -U-  
AUTHOR-(02)-LAPKIN, I.I., KOZLOVA, L.S.  
COUNTRY OF INFO--USSR  
SOURCE--ZH. DRG. KHIM. 1970, 6(3), 453-4  
DATE PUBLISHED-----70  
SUBJECT AREAS--CHEMISTRY  
TOPIC TAGS--ORGANOZINC COMPOUND, CHEMICAL SYNTHESIS, DICARBOXYLIC ACID,  
ESTER, BROMINATED ORGANIC COMPOUND, CHLORINATED ORGANIC COMPOUND  
CONTROL MARKING--NO RESTRICTIONS  
DOCUMENT CLASS--UNCLASSIFIED  
PROXY REEL/FRAE--1992/1668 STEP NO--UR/0366/70/006/003/0453/0454  
CIRC ACCESSION NO--AP0112662  
UNCLASSIFIED

K

2/2 008

UNCLASSIFIED

PROCESSING DATE--23OCT70

CIRC ACCESSION NO--AP0112662

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE REACTION OF RD SUB2 CCH SUB2  
CHBRCO SUB2 R WITH POWD. ZN GAVE RD SUB2 CCH SUB2 CH(ZNBR)CO SUB2 R,  
WHICH WITHOUT ISOLATION WAS REACTED WITH CLCH SUB2 OR PRIME1 TO GIVE  
49-77PERCENT RD SUB2 CCH SUB2 CH(CH SUB2 OR PRIME1)CO SUB2 R.  
SIMILARLY, BUO SUB2 CCH SUB2 CH(CH(OH)ME)CO SUB2 BU AND BUO SUB2 CCH  
SUB2 CH(CH(OH)CHME SUB2)CO SUB2 BU WERE PREPD. FACILITY: PERM.  
GOS. UNIV., PERM. USSR.

UNCLASSIFIED

USSR

UDC 615.849.2+616-073.916:546.79

BOCHKAREV, V. V., LEVIN, V. I., STANKO, V. I., SEDOV, V. V., KHARLAMOV, V. T.,  
KOZLOVA, M. D., and TARASOV, N. F., Institute of Biophysics, Ministry of  
Health USSR

"New Radiopharmaceuticals and Prospects for Their Clinical Use"

Moscow, Meditsinskaya Radiologiya, No 1, 1972, pp 4-12

Abstract: Description of the methods of preparation and most important properties of some recent Soviet-developed radioactive drugs based on relatively short-lived isotopes: (a) In<sup>111</sup> preparations for liver (colloidal solution) and kidney (citrate complex) scanning; (b) iodobenzoic acid with I<sup>131</sup> to study liver detoxification function; (c) colloidal solution of Pd<sup>103</sup> for prolonged and uniform preoperative irradiation of tumors of different sites and sizes; (d) combined oleophilic preparations with different isotopes (Y<sup>90</sup>, I<sup>131</sup>, Pd<sup>103</sup>, Au<sup>198</sup>) for local irradiation of lymph nodes; (e) X-ray contrast media, iodethiol and iodolinethol, to visualize lymph nodes; (f) resorptive beta applicator with Y<sup>90</sup> for the treatment of eye tumors (clinical trials of the applicator in a group of patients with melanoblastomas showed complete or partial resorption of the tumor and no recurrences during the observation period (6 months to 2 years). Improvement in the technology of preparing the important

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USSR

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BOCHKAREV, V. V., et al., Meditsinskaya Radiologiya, No 1, 1972, pp 4-12

diagnostic agents containing I<sup>131</sup> albumin macroaggregates (used for scanning in many lung diseases) and polyvinylpyrrolidone (used in the diagnosis of exudative enteropathy and other diseases) has resulted in marked enhancement of their quality.

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- 30 -

Analysis and Testing

USSR

UDC 669.1.541.015

LASHKO, N. F., SASLAVSKAYA, L. V., KOZLOVA, M. N., MOROKOVA, G. I., SORCKINA, K. P., KHAKHLOVA, N. V., and YAKOVIEVA, YE. F.

"Physical and Chemical Methods of Phase Analysis of Steels and Alloys"

Fiziko-Khimicheskiye Metody Fazovogo Analiza Staley i Splavov (English version above), Moscow, Metallurgiya Press, 1970, 476 pages

Translation of Annotation: Methods of combined physical and chemical phase analysis are systematized and summarized, including methods of phase separation and their chemical and x-ray structural analysis.

Problems of the theory of electrochemical separation of phases, the principles of selection of electrolytes, and methods of phase analysis are analyzed as applicable to various steels and alloys.

The book is designed for scientific workers of scientific research institutes and plant laboratories involved in the development of steels and alloys, as well as the study of their properties depending on their phase composition. 99 figs, 100 tables, 708 biblio refs.

1/6

USSR

LASJKO, N. F., et al., Fiziko-Khimicheskiye Metody Fazovogo Analiza Staley i Splavov, Metallurgiya Press, 1970, 476 pages.

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Galvanostatic and Potentiostatic Methods of Measuring Anode Polarization Curves	64
Differentiation (Selective Etching) of Phases of Multiphase Alloys	68
Methods of Separation of Phases and Phase Analysis of Steels without Weighing of Specimens (Parts) and Isolated Upsetting	78

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USSR

LASHKO, N. F., et al., Fiziko-Khimicheskiye Metody Fazovogo Analiza Staley i Splavov, Metallurgiya Press, 1970, 476 pages.

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	Methods of Testing Reliability and Accuracy of Physical and Chemical Phase Analysis . . . . .	92
Chapter 4.	Diffraction Methods of Phase Analysis . . . . .	100
Chapter 5.	Primary Types of Chemical Compounds in Alloys Based on Various Metals . . . . .	112
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USSR

LASHKO, N. F., et al., Fiziko-Khimicheskiye Metody Fazovogo Analiza Staley i Splavov, Metallurgiya Press, 1970, 476 pages.

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LASHKO, N. F., et al., Fiziko-Khimicheskiye Metody Fazovogo Analiza Staley i Splavov, Metallurgiya Press, 1970, 476 pages

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LASHKO, N. F., et al., Fiziko-Khimicheskiye Metody Fazovogo Analiza Staley i Splavov, Metallurgiya Press, 1970, 476 pages

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KOZLOVA, M. N.

JPRS 56001  
16 May 72

UDC 699.245.669.018.4

DISTRIBUTION OF TRANSITION ELEMENTS FROM THE IV-VI AND VIII-X GROUPS  
BETWEEN  $\gamma$ - AND  $\gamma'$ -PHASES OF HEAT-RESISTANT NICKEL ALLOYS

[Article by S.I. Kishkin, M.N. Kozlova, H.I. Lashko, Moscow, *Izvestiya Akademiya Nauk SSSR, Metallurgiya*, No 1, 1972, cited to press 18 August 1970, pp 170-176.]

In the theory of heat-resistant and heatproof nickel alloys, of the greatest significance is the establishment of the distribution of the doping elements between the basic phases: solid solution ( $\gamma$ ) and the strengthening intermetallic phases ( $\gamma'$ ) on a base of Ni3Al or Ni3Ti (1, 2). Certain data on the region of uniform transition elements have been obtained by using x-ray structural [3] and metallographic [7] methods of analysis. Direct determination of the composition of the  $\gamma$ - and  $\gamma'$ -phases of certain heat-resistant alloys has been done by the method of x-ray spectral local analysis [4]. In real nickel heat-resistant alloys, other than  $\gamma$ - and  $\gamma'$ -phases there exist  $\alpha$ -phase, carbide and boride phases, and by prolonged heating at high temperatures or under operational conditions certain intermetallic phases may be formed (the  $\alpha$ - and  $\beta$ -phases, the  $\delta$ -phase, etcetera), which may substantially influence the distribution between the  $\gamma$ - and the  $\gamma'$ -phases.

In the present paper we have investigated the  $\gamma$ - and  $\gamma'$ -phases in real heat-resistant alloys containing, in addition to the dispersed particles of the  $\gamma'$ -phase, other phases as well.

USSR

UDC: 669.245:669.018.1

KISHKIN, S. T., KOZLOVA, M. N. and LASHKO, K. F., Moscow

"Distribution of Transition Elements of Groups IV-VI and VIII Between  $\gamma$ - and  $\gamma'$ -Phases of High-Temperature Nickel Alloys"

Moscow, Izvestiya Akademii nauk SSSR, Metally, No 1, Jan-Feb 72, pp 170-172

Abstract: In the theory of alloying high-temperature and refractory nickel-base alloys, primary importance is attached to determining the distribution of alloying elements between the principal phases: the solid nickel solution  $\gamma$  and the strengthening intermetallide phases  $\gamma'$ . This study deals with the composition of  $\gamma$ - and  $\gamma'$ -phases in real metastable high-temperature alloys containing, in addition to the disperse  $\gamma'$ -phase particles, also other phases ( $\sigma$ -,  $\mu$ - and Laves phases). The composition of the  $\text{Ni}_3\text{Al}$ -base  $\gamma'$ -phase in high-temperature nickel-chrome alloys is specific of each alloy. The Al:Ti ratio in the  $\gamma'$ -phase of these alloys is close to that in the alloy itself. The capacity of the elements of the transition groups to form the  $\gamma'$ -phase, determined from the ratio of their content in both  $\gamma$ - and  $\gamma'$ -phases, diminishes with the rising number of the group in the periodic system (with the exception of cobalt). Within the limits

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USSR

KISHKIN, S. T., et al, Izvestiya Akademii nauk SSSR, Metally, No 1, Jan-Feb 72, pp 170-172

of a given group the  $\gamma'$ -forming capacity of the elements increases with the period (V and VI groups). Substituting titanium for some of the aluminum reduces the element content of the VIa group in the  $\gamma'$ -phase and accordingly increases their content in the  $\gamma$ -phase. (3 tables, 9 bibliographic references).

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USSR

UDC: 557.312.62

SAVITSKIY, Ye. M., BARON, V. V., PROLOV, V. A., KOZLOVA, N. D.

"Effect of Aluminum on the Superconducting and Mechanical Properties of Niobium and Titanium Alloys"

Moscow, Sverkhprovodyashchiye splavy i sovedin.--sbornik (Superconductive Alloys and Compounds--collection of works), "Nauka", 1972, pp 111-115 (from RZh-Radiotekhnika, No 12, Dec 72, abstract No 12D553 [r6sum4])

Translation: An investigation was made of alloys in the niobium-titanium-aluminum system in the  $\beta$ -solid solution region adjacent to the niobium-titanium side with a constant ratio  $Ti/Nb = 45/55$  and aluminum concentration up to 7.2% by weight. The introduction of aluminum reduces the superconductive transition point in the alloys in both the cast and annealed state. The critical current of the alloys is also reduced. The density of the alloys increases with introduction of aluminum, and there is little change in ductility. Three illustrations, one table, bibliography of seven titles.

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USSR

UDC 669.293.5.295.018.58

BYCHKOVA, M. I., KOZLOVA, N. D., LYSENKO, Ye. N., BARON V. V., SAVITSKIY, Ye. M., TUREVSKY, V. M.

"Screening Properties of Alloys in the Niobium-Titanium System"

Probl. Sverkhprovodyashch. Materialov [Problems of Superconducting Materials -- Collection of Works], Moscow, Nauka Press, 1970, pp. 166-172. (Translated from Referativnyy Zhurnal Metallurgiya, No. 5, 1971, Abstract No. 5 1783 by the authors).

Translation: The distribution of the magnetic field in superconducting magnets for quantum paramagnetic amplifiers using screening plates of Nb-Ti alloys is studied. It is demonstrated that screens of NT-1 alloy can partially screen the field and significantly improve its homogeneity. With a magnetic field intensity of 4,000 oe, a homogeneity of  $10^{-3}$  was produced in a volume of  $5 \times 8 \times 120$  mm. 5 figs; 1 table; 13 biblio refs.

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USSR

UDC: 537.312.62

BYCHKOVA, M. I., KOZLOVA, N. D., LYSENKO, Ye. N., BARON, V. V., SAVITSKIY, Ye. M., TUREVSKIY, V. M.

"Shielding Properties of Alloys in the Niobium-Titanium System"

V sb. Probl. sverkhprovodnyashch. materialov (Problems of Superconducting Materials—collection of works), Moscow, "Nauka", 1970, pp 166-172 (from RZh-Radiotekhnika, No 5, May 71, Abstract No 5D569)

Translation: The authors study the distribution of the magnetic field in superconducting magnets for quantum paramagnetic amplifiers with the use of shielding plates made from niobium-titanium alloy. It is shown that shields of NT-1 alloy can partially screen the field and appreciably improve field homogeneity. At a magnetic field strength of 4,000 oersteds, a uniformity of  $10^{-3}$  is obtained in a volume of  $5 \times 8 \times 120$  mm. Five illustrations, one table, bibliography of thirteen titles. Resumé.

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USSR

UDC 537.312.62:669.293

BYCHKOVA, M. I., KOZLOVA, N. D., LYSENKO, Ye. N., BARON, V. V., SAVITSKIY, Ye, M., and TUREVSKIY, V. N.

"Screening Properties of Alloys in the Niobium-Titanium System"

Problemy Sverkhprovodyashchikh Materialov [Problems of Superconducting Materials -- Collection of Works], Moscow, Nauka Press, 1970, pp 166-172

Translation: The distribution of the magnetic field in superconducting magnets was studied for quantum paramagnetic amplifiers using screening plates of niobium-titanium alloy. It was shown that shields of NT-1 alloy can partially screen a field and significantly improve its homogeneity. With a magnetic field intensity of 4,000 oe, a homogeneity of  $10^{-3}$  was produced in a volume of 5 x 8 x 120 mm.

5 figures, 1 table, 13 biblio. refs.

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USSR

UDC 621.515:628.517.2

KUDRYAVTSEV, F. S., Engineer, LAGUNOV, L. F., Candidate of Technical Sciences, SOLOV'YEV, R. V., Engineer, and KOZLOVA, N. G., Engineer

"Exhaust-Noise Muffler for a Compressor Station"

Moscow, Vestnik Mashinostroyeniya, No 7, June 1972, pp 31-32

Abstract: The compressor station of the Gor'kiy Motor Vehicle Plant has three turbine compressors, each with a capacity of 500 m<sup>3</sup>/min and one with a capacity of 250 m<sup>3</sup>/min; the air exhaust ducts leading out of the compressor-station building are directed toward the office building of the plant management, situated in the immediate vicinity. The frequency spectrum of the exhaust noise of a 500 m<sup>3</sup>/min compressor, measured at a distance of 2 m from the wall of this office building, was above the permissible maximum; it was necessary to reduce the noise level at 1,000, 2,000, 4,000, and 8,000 Hz by 57, 59, 60, and 57 db, respectively. A muffler of simple design was constructed, the exhaust air being passed through layers of rubble and crushed stone. The muffler was designed for suppression of the noise created by a single compressor, since the air was exhausted by each compressor in turn. The calculations involved in designing the muffler are presented, and the

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USSR

KUDRYAVTSEV, F. S., et al., Vestnik Mashinostroyeniya, No 7, June 1972, pp 31-32

muffler is described. It was impossible to conduct tests on the efficiency of the muffler near the office building, i.e., at the point for which all the calculations had been made, due to noise created by the air intake ducts, for which the appropriate mufflers had yet been installed. However, results of measurements conducted near the muffler, and calculations based on these measurements, show that this exhaust-noise muffler provides the required noise reduction over the entire frequency range. 3 figures, 2 references.

2/2

USSR

UDC 620.193.5

MIGAY, L. L., KOZLOVA, N. N., LYAPUNOV, A. I., MAL'CHEVSKIY, YE. G., BERETOV, B. I., State Scientific Institute of the Rare Metal Industry

"Oxidation of Heat-Resistant Steels and Alloys"

Moscow, Zashchita Metallov, Vol 8, No 6, 1972, pp 722-723

Abstract: A study was made of the oxidation rate of several standard and experimental steels and alloys in a current of technical oxygen and in a calm air atmosphere at 1000°. Sheet specimens 2 mm thick were used to determine the oxidation resistance by the increase in mass after oxidation and its loss after removal of the scale.

The difference in oxidation resistance of the investigated materials in a calm air atmosphere is not so great as in technical oxygen. The Kh25N20S2 chromium-nickel steel alloyed with silicon is the least oxidation resistant, and materials alloyed with aluminum were the most oxidation resistant. Analogous results were obtained during prolonged experiments in the air for 5000-10,000 hours [N. N. Kozlova, et al., Struktura i svoystva zharoprochnykh metallicheskikh materialov, Moscow, Nauka, 306, 1967]. The OxalBS2Yu2BT (EP 676) steel without nickel and KhN45Yu (EP 747) alloys sparingly alloyed with nickel had the greatest oxidation resistance in oxygen and air.

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USSR

UDC 669.18.001.5:669.14.015.853

KOZLOVA, N. N., LYAPUNOV, A. I., MASLENKOV, S. B., and BELYAYEVA, V. A.

"Oxidation Resistance of Steels in the System Fe-Cr-Ni-Al as a Function of Relationship of Alloying Elements"

Spetsial'nyye Stali i Splavy [Special Steels and Alloys--Collection of Works], No 77, Metallurgiya Press, 1970, pp 27-32

Translation: Alloys in the system Fe-Cr-Ni-Al were studied in the 1000-1250°C temperature interval. The principal regularities of the influence of alloying elements on the oxidation resistance of the alloys were established, and the dependence of oxidation resistance and phase composition of scale on the relationships of alloying elements was demonstrated. 4 figures; 2 tables; 2 biblio. refs.

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Organophosphorous Compounds

USSR

UDC 541.128 + 547.451

MEL' NICHENKO, I. V., KOZLOVA, N. YA, and YASNIKOV, A. A.

"Hydrolysis of Phosphate Ester of Glyceraldehyde in the Presence of Aromatic Amines"

Kiev, Ukrainskiy Khimicheskij Zhurnal, Vol 38, No 11, 1972, pp 1152-1155

Abstract: In contrast to results of earlier studies of the hydrolysis of the phosphate ester of glyceraldehyde (FGA) in the presence of salt buffers, aliphatic amines and diamines, FGA hydrolysis with various aromatic amines yielded a new type of catalysis. Hydrolysis of FGA was conducted in an aqueous solution at 40° in a pH interval 4-10. FGA hydrolysis kinetics were measured with the following amines: o-, m-, p-phenylenediamine, aniline, o- and p-aminophenol, p-nitroaniline, alpha-aminopyridine, N,N diethyl-p-phenylenediamine, quinone, hydroquinone, and p-nitrophenol. Reaction rate was measured by phosphate concentration level. The formation of methylglyoxal in the reaction mixture was proven by adding 2,4-dinitrophenylhydrazine to the reaction mixture. The resultant methylglyoxal hydrazone was identified by chromatography. The aromatic amines are classified into 3 groups of catalysts on the basis of rate dependance on pH. The first group(p-phenylenediamine,

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USSR

MEL'NICHENKO, I. V., et al., *Ukrainskiy Khimicheskii Zhurnal*, Vol 38, No 11, 1972, pp 1152-1155

p-aminophenol) shows a sharp maximum in the reaction rate in the pH 5-7 range. The second (aniline, o- and m-phenylenediamine, O-aminophenol, p-nitroaniline) show only a slight maximum in reaction rate in the pH < 7 range. The third group (alpha-aminopyridine, N,N diethyl-p-phenylenediamine, p-nitrophenol, quinone, hydroquinone), like the buffer salts show little if any significant catalytic activity. Thus, the most effective catalysts are p-phenylene diamine and p-aminophenol. The end of the hydrolysis is due to the formation of dihydroxyacetone phosphate. The rate of hydrolysis is directly proportional to the concentration of p-phenylenediamine, with addition of acetate, pyridine, and aniline showing no effect on the reaction rate in the presence of p-phenylenediamine.

p-Phenylenediamine and p-aminophenol sharply differ from other catalysts studied not only in the rate of catalysis but also in the very shape of their curve of reaction rate dependence on pH. This specific catalysis appears to be manifested only in the para structure. Thus the action of these catalysts is connected with their formation of quinoid intermediates. The lack of

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USSR

MEL'NICHENKO, I. V., et al., *Ukrainskiy Khimicheskly Zhurnal*, Vol 38, No 11, 1972, pp 1152-1155

catalysis by o-substituted amines is explained by the instability of the o-quinoid intermediates. A scheme for quinone formation via hydride ion transfer is given. At pH  $>$  5.9 the reaction rate is limited by the rate of acid-catalyzed dehydration. At lower pH levels hydrolysis rate is lowered due to protonation of the amine. The existence of a reaction rate dependence on pH rules out quinone formation as a limiting factor in FGA hydrolysis. The catalytic activity of aniline and other similar catalysts in FGA hydrolysis is similar to the catalytic activity of butylamine.

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USSR

UDC 546.46'621'831'21

SUVOROV, S. A., KLYUCHAROV, YA. V., and KOZLOV, O. I.

"Distribution of Magnesium Oxide in Compounds in the System  
MgO-Al<sub>2</sub>O<sub>3</sub>-ZrO<sub>2</sub>"

Moscow, Neorganicheskiye Materialy, Vol 7, No 4, Apr 71, pp 659-664

Abstract: Phase conversions were studied in the ternary system MgO-Al<sub>2</sub>O<sub>3</sub>-ZrO<sub>2</sub> as functions of the chemical activity of the initial components. In order to exclude the influence of an excess of any given component, they were mixed in equal molar ratios. The distribution of magnesium oxide in complex compounds of the composition MgO: Al<sub>2</sub>O<sub>3</sub> : ZrO<sub>2</sub> = 1 : 1 : 1 was found to depend on the chemical activity of the initial components and to be accompanied by the formation of both magnesia-alumina spinel and solid solutions of MgO in ZrO<sub>2</sub>. The greatest quantity of solid solution of magnesium oxide in zirconium dioxide is formed in complex compounds involving magnesium oxide annealed at 1750°

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USSR

SUVOROV, S. A., et al., Neorganicheskiye Materialy, Vol 7,  
No 4, Apr 71, pp 659-664

C, electrically melted corundum, and nitric acid zirconium. By using components with various chemical activities, it is possible to change the final phase composition of compounds in the  $MgO-Al_2O_3-ZrO_2$  systems with identical initial material composition. The course of curves of thermal expansion of these compounds depends directly on the phase composition.

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USSR

UDC 546.46'621'831'21

SUVOROV, S. A., KLYUCHAROV, YA. V., and KOZLOVA, O. B.

"Distribution of Magnesium Oxide in Compounds in the System  
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USSR

SUVOROV, S. A., et al., Neorganicheskiye Materialy, Vol 7,  
No 4, Apr 71, pp 659-664

C, electrically melted corundum, and nitric acid zirconium. By using components with various chemical activities, it is possible to change the final phase composition of compounds in the  $MgO-Al_2O_3-ZrO_2$  systems with identical initial material composition. The course of curves of thermal expansion of these compounds depends directly on the phase composition.

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Acc. No: **A P0036432**

**K**

Ref. Code: UR 0213

PRIMARY SOURCE: Okeanologiya, 1970, Vol 10, Nr 1, pp 86 - 98

Yu. A. BOGDANOV, O. G. KOZLOVA, Y. V. MUKHINA  
**DISTRIBUTION AND COMPOSITION OF SUSPENDED MATTER IN THE  
NORTHERN AND CENTRAL INDIAN OCEAN**

**Summary**

Some results are presented of the studies of suspended matter collected with the aid of separation and membrane filtration from the ocean surface and from different ocean depths. The distribution of suspended matter in the surface water is irregular. Its maximum amounts are confined to the near-shore areas, while in the central open parts of the ocean, to the areas of the rich development of planktonic organisms. Two types of the distribution of suspended matter in depth have been established depending on its material composition.

Different components of suspended material, siliceous, carbonate and terrigenous, are characterized and their distribution and role in the accumulation of sediments are determined.

*D. A.*

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USSR

UDC 8.74

VORONIN, YU. A., KOZLOVA, O. S.

"Software for a Computer for Solving Districting Problems"

V sb. Primeneniye mat. metodov i EVM pri poiske polezn. iskopayemykh (Application of Mathematical Methods and Computers for Prospecting Minerals--collection of works), Novosibirsk, 1972, pp 180-199 (from RZh-Kibernetika, No 12, Dec 72, Abstract No 12V484)

No abstract

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USSR

UDC 621.762.669.018.5(088.8)

RABKIN, V. B., KOZLOVA, R. F.

"Cermet Alloy Based on Molybdenum"

USSR Author's Certificate No 309062, filed 27 Nov 69, published 15 Sep 71, (from RZh—Metallurgiya, No44, Apr 72, Abstract No 4G419P)

Translation: A cermet alloy is proposed for junctions with ceramics in electro-vacuum device assemblies. In order to achieve a coefficient of thermal expansion of the alloy equal to the coefficient of thermal expansion of aluminum oxide ceramic, the alloy components are taken in the following ratio: 36-40% Cu, 6-7% Ni, and the rest Mo.

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USSR

UDC: 8.74

KOZLOVA, S. I.

"Sorting of Economic Information in a Digital Computer by a Merge Method"

V sb. Teoriya i praktika sbora, peredachi i obrabotki ekon. inform. (Theory and Practice in the Collection, Transmission and Processing of Economic Information--collection of works), Moscow, 1971, pp 83-92 (from RZh-Kibernetika, No 4, Apr 72, Abstract No 4V545)

Translation: The paper analyzes the problem of uniting two ordered data blocks into a single common ordered data block. The author gives an analysis of the effectiveness of the merging method for groups with different numbers of elements, and refines the analytical estimates of the effectiveness of sorting by the merging method for two ordered groups with identical numbers of elements presented previously by L. S. Lozinskiy (Kibernetika, 1965, No 3). Formulas are derived which indicate the average number of comparisons required to merge two groups with equal and unequal numbers of elements, and the average number of displacements is determined for forming a common sequence from two groups. Estimates are given for internal sorting of an unordered sequence of  $N = 2^M$  elements

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USSR

UDC 613.63+615.9-057+612.014.46

RUMYANTSEV, G. I., and KOZLOVA, T. A., Chair of General Hygiene, First Moscow Medical Institute imeni I. M. Sechenov

"Some Results of Research on the Combined Effects of Toxic Substances on the Body"

Moscow, Gigiyena i Sanitariya, No 10, 1971, pp 36-40

Abstract: While there is substantial information available concerning the effects of various toxic substances and physical factors acting in isolation, comparatively little has been done on the effects of the combined action of several toxic substances or of a toxic substance plus one or more physical factors. Some recent work, briefly described in the article, dealt with the effects of: various combinations of toxic substances on animals and combinations of these substances with high ambient temperatures; low concentrations of sulfur dioxide and carbon monoxide/nitric oxide; sulfur dioxide combined with high ambient temperatures; benzene and acetone, toluene, and epichlorohydrin; low concentrations of fumes of solvents, saturated and unsaturated hydrocarbons combined with sulfur dioxide and high temperatures. A great deal of attention is now focused on the effects of toxic agents on general resistance (as determined by the phagocytic activity of leukocytes, an  
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USSR

RUMYANTSEV, G. I., and KOZLOVA, T. A., Gigiyena i Sanitariya, No 10, 1971,  
pp 36-40

important index of natural immunity), the mutagenic activity of toxic chemicals (as measured by chromosome aberrations), chronic action of low concentrations of chemical compounds at maximum permissible concentrations, and the effects of toxic substances entering the body through different routes.

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USSR

UDC 547.26'118

GRAPOV, A. F., KOZLOVA, T. F., MEL'NIKOV, N. N.

"Alkoxy- and Alkylthiomethylthiophosphonic Acid Dichlorides"

Leningrad, Zhurnal Obshchey Khimii, Vol 43 (105), No 3, Mar 73, p 676

Abstract: The best method for the synthesis of thiophosphonic acid dichlorides is by heating the corresponding phosphonic acid dichloride with phosphorus pentasulfide to 120-160°. Following acid dichlorides have been synthesized, parent acid, b.p.,  $n_D^{25}$ , and  $d_4^{25}$  being reported: methoxymethylthiophosphonic, 34-35°/0.12 mm, 1.5548, 1.4262; ethoxymethylthiophosphonic, 34-35°/0.12 mm, 1.5358, 1.3512; ethylthiomethylthiophosphonic, 66-67.5°/0.12 mm, 1.5852, 1.3797; isopropylthiomethylthiophosphonic, 82-82.5°/0.17 mm, 1.5702, 1.3392; and butylthiomethylthiophosphonic acid, 85-86°/0.17 mm, 1.5622, 1.2975.

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USSR

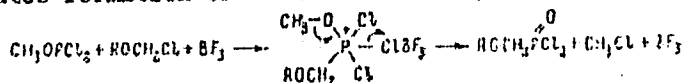
UDC: 547.241

KOZLOVA, T. F., GRAPOV, A. F., MEL'NIKOV, N. N., All-Union Scientific Research Institute of Agents for Plant Protection

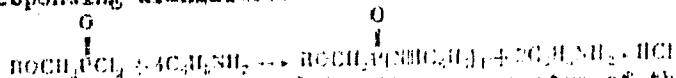
"The Reaction of O-Methyl Dichlorophosphite With Alkyl Chloromethyl Ethers, Catalyzed by Boron Trifluoride Etherate"

Leningrad, Zhurnal Obshchey Khimii, Vol 42(104), No 6, Jun 72, pp 1282-1285

Abstract: The authors studied the reaction of alkyl chloromethyl ethers with methyl dichlorophosphite, catalyzed by the etherate of boron trifluoride. When the reaction mixture is heated for several hours at 80-100°C, alkoxy-methylphosphonic acid dichlorides are formed in 25-55% yield. The reaction is apparently analogous to the Arbuzov reaction. The electrophilic boron trifluoride facilitates formation of an intermediate pseudophosphonium complex.



Aniline in an ether solution readily converts the alkoxy-methyl phosphonic acid dichlorides to the corresponding dianilides.



The authors thank V. V. Negrebetskiy for studying the nmr spectra of the compounds.

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UDC 632.951.2.07

USSR

KOZLOVA, T. F., SHAKHOVA, G. B., BELUGIN, V. F., ZHELONKIN, V. G., and  
~~SEDOV, N. V.~~

"Synthesis of the Koral Insecticide"

Moscow, Khimicheskaya Promyshlennost', No 6, 1971, pp 29-30 (429-430)

Abstract: Koral -- 0,0-diethyl-3(3-chloro-4-methylcoumaryl-7)thiophosphate is an insecticide of low toxicity in respect to cattle, when applied externally. The synthesis of this material consists of four steps; preparation of 0,0-diethylchlorothiophosphate (I) by the reaction of thiochlorophosphorus with ethanol; synthesis of  $\alpha$ -chloroacetoacetate from acetoacetate and sulfur chloride followed by condensation with resorcinol to yield 3-chloro-7-hydroxy-4-methylcoumarine (II) and finally condensation of (I) with (II) by refluxing their mixture in acetone containing potassium carbonate. Koral is a white powder, m.p. 92-92.5°C. It is practically insoluble in water, slightly soluble in alcohols, and hydrocarbons, dissolves well in ketones.

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USSR

UDC 621.311.21.001.5

KOZLOVA, V. F.

"Stability of Parallel Operation in Enclosed Hydraulic Units"

Tr. Vses. proektno-izyskat. i NII Gidroyekt (Works of the Gidroyekt All-Union Planning, Surveying and Scientific Research Institute), 1970, collection 19, pp 141-148 (from RZh-Elektrotehnika i Energetika, No 4, Apr 71, Abstract No 4 D120)

Translation: A study was made of the dynamic stability of horizontal enclosed hydraulic units. Results are presented from natural studies of the stability of the units at the Kiev Hydroelectric Power Plant with two-phase short circuits to ground on the hydroelectric power plant buses. It is necessary to more precisely define the procedure for calculating the stability as applied to low-inertia generators.

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1/2 016 UNCLASSIFIED PROCESSING DATE--300CT70  
 TITLE--SOME DATA ON THE INFLUENCE OF THE SKELETAL MUSCLES UPON FUNCTIONAL  
 PROPERTIES OF THE RESPIRATORY CENTER --U-  
 AUTHOR--KOZLOVA, V.I.  
 CCOUNTRY OF INFO--USSR  
 SOURCE--FIZIOLOGICHESKIY ZHURNAL SSSR IMENI I. M. SECHENOVA, 1970, VOL 56,  
 NR5, PP 759-763  
 DATE PUBLISHED-----70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES  
 TOPIC TAGS--MUSCULOSKELETAL SYSTEM, RESPIRATORY PHYSIOLOGY

CCNTRGL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED  
 PROXY REEL/FRAME--3001/1605 STEP NO--UR/0239/70/056/005/0759/0763

CIRC ACCESSION NO--AP0127096  
 UNCLASSIFIED



2/2 016

UNCLASSIFIED

PROCESSING DATE---30OCT7C

CIRC ACCESSION NO--AP0127096

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. IN CHRONIC EXPERIMENTS ON DOGS INFLUENCE OF THE STATIC TENSION OF THE SKELETAL MUSCLES OF THE CHARACTER OF EXTERNAL RESPIRATION AND SOME FUNCTIONAL PROPERTIES OF THE RESPIRATORY CENTER WERE INVESTIGATED. RESPIRATORY REACTION PHASES CONNECTED WITH THE PERIOD OF STATIC TENSION WERE DETERMINED. INCREASE IN THE STATIC TENSION OF THE MUSCLES LEAD TO THE INCREASE IN FREQUENCY AND DEPTH OF BREATHING, AND OF THE LUNG VENTILATION VOLUME.  
FACILITY: MEDICAL INSTITUTE, ORENBURG.

UNCLASSIFIED

USSR

UDC 577.150.6

KOZLOVA, V. KH., and FOMINA, N. A.

"Cholesterol-Decomposing Activity of Some Bacterial Species"

Moscow, Mikrobiologiya, No 2, 1971, pp 275-279

Abstract: Study of 38 bacterial cultures isolated from various sources showed that most forms of Pseudomonas are capable of decomposing cholesterol in varying degrees. In 13 of the 18 Pseudomonas cultures examined, activity ranged from 10 to 27%. *Ps. pyocyanea* and *Ps. fluorescens* strain 22 were most active, 33 to 40%. A comparison of some Pseudomonas strains with *Lycobacterium rubrum* revealed that *L. rubrum* strains are almost twice as active as the former when grown on a medium without cholesterol. When cholesterol was added to the medium, *L. rubrum* became 30% more active, while some Pseudomonas cultures became less active. The addition of high cholesterol concentrations (50 to 100  $\mu$ g/ml) to the medium depressed cholesterol oxidase activity in *Ps. pyocyanea*.

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Acc. Nr:

AP0034763

Ref. Code: UR 0241

PRIMARY SOURCE: Meditsinskaya Radiologiya, 1970, Vol 15,  
Nr 1, pp 39-43

THE USE OF RADIOIODINE-LABELLED THROMBRINE FOR DETERMINATION  
OF THE GLOMERULAR FILTRATION

Sysovev, V. F.; Kozlova, V. N. *K*

Summary

The paper describes the technique of determining the glomerular filtration based on a single injection and evaluating the mean concentration of radioiodine-labelled thrombrine during the period of clearance on the basis of a single blood test and continuous recording of changes in the concentration of radioiodine-labelled thrombrine on the precordial curve.

*D. H.*

*11*  
REEL/FRAME

02

10711473

Magnesium

USSR

UDC 669.71.053.4.067

VOLKOVA, N. S., MAZEL', V. A., KOZLOVA, V. P., PROKHOROV, S. T.

"Effect of the Specific Surface of Magnesium Oxide on the Kinetics of Desilicization of Aluminate Solutions"

Tr. Vses. n.-i. i proyekt. in-ta alumin., magn. i elektrod. prom-sti  
(Works of the All-Union Scientific Research and Planning and Design Institute of Aluminum, Magnesium and Electrode Industry), 1970, No 70, pp 161-171 (from RZh-Metallurgiya, No 4, Apr 71, Abstract No 4G143)

Translation: The specific surface of MgO is lowered with an increase in temperature from 500 to 1,100° and with an annealing time from 1 to 4 hours. MgO obtained at 500° for 2 hours has the highest specific surface and quenching rate. The index of light refraction increases from 1.682 to 1.728 with an increase in the annealing temperature from 500 to 1,100° and during a time period from 1 to 6 hours. The nature of the rings on the electron diffraction patterns and electron microscope pictures of the obtained MgO samples indicate consolidation of the fine particles as the annealing temperature of the basic Mg carbonate increases. The desilicizing capacity of MgO depends on its specific surface. MgO has a higher desilicizing capacity than CaO. As the CaO content in the additive is increased (with  
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USSR

VOLKOVA, N. S., et al., Tr. Vses. n.-i. i proyekt. in-ta alyumina, magn. i elektrodn. prom-sti, 1970, No 70, pp 161-171

a total amount of mixture of 5 g/liter), the degree of desiliconization drops. In the presence of carbonate alkali (10 gram/liter), the desiliconizing capacity of MgO drops. There are 8 illustrations, 2 tables and a 7-entry bibliography.

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Nickel

USSR

UDC 669.145.018.44:669.786

LEVI, L. I., BORISOVA, O. M., KOZLOVA, V. S., and PUSHIN, B. A.

"Nitrogen in Complexly Alloyed Nickel Casting Alloys"

Liteyn. proiz-vo (Foundry Production), 1970, No 7, pp 24-26 (from RZh-Metal-lurgiya, No 12, Dec 70, Abstract No 12 I1823 by M. PRIMOVA)

Translation: The use of ordinary methods of nitrogen determination (distillation of N in the form of ammonia and vacuum melting) cannot be recommended for complexly alloyed Ni alloys due to the obtaining of sharply understated results. The authors suggest a new, differential method of nitrogen determination (a chemical method, with fusion of precipitate and subsequent analysis), which makes possible nitrogen determination in solid solution and nitride phases. With the help of the new method an investigation was made of heat-resistant ZhS-6K brand Ni alloy. N concentrates mainly, not in solid solution, but in nitride phases (CrN, TiN, etc.). Total nitrogen content depends on the conditions of alloy smelting. It is assumed that carbonitride and nitrocarbide phases of the  $M_nC_yN_z$  type are present in the alloy. Two tables. Bibliography of seven titles.

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1/2 20  
 UNCLASSIFIED PROCESSING DATE--11SEP70  
 TITLE--ROLE OF THE HEREDITARY FACTOR IN THE DEVELOPMENT OF ULCER DISEASE  
 -U-  
 AUTHOR--GELLER, L.I., KOZLOVA, Z.P. K  
 COUNTRY OF INFO--USSR  
 SOURCE--VRACHEBNOYE DELO, 1970, NR 3, 41-43  
 DATE PUBLISHED-----70  
 SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES  
 TOPIC TAGS--DIGESTIVE DISEASE, DUODENUM, LESION, HEREDITARY DISEASE  
 CONTROL MARKING--NO RESTRICTIONS  
 DOCUMENT CLASS--UNCLASSIFIED  
 PROXY REEL/FRA--1986/0950 STEP NO--UR/0475/70/000/003/0041/0043  
 CIRC ACCESSION NO--AP0102889  
 UNCLASSIFIED

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UNCLASSIFIED

PROCESSING DATE--11SEP70

CIRC ACCESSION NO--AP0102889

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. PATIENTS WITH DUODENAL ULCER HEREDITARILY BURDENED SHOWED MORE FREQUENTLY AS COMPARED WITH NON HEREDITARILY BURDENED PATIENTS. TRYING TO EXPLAIN THE POSSIBLE MECHANISM OF THIS PHENOMENON THE AUTHORS REVEALED THAT GENETICALLY BURDENED PATIENTS SHOW DURING THE REMISSION PERIOD LEVELS OF ACIDFORMING ACTIVITY OF GASTRIC MUCOSA WHICH DO NOT DIFFER FROM THOSE OBSERVED DURING EXACERBATION. GENETICALLY NON BURDENED PATIENTS SHOW A TENDENCY TO SOME REDUCTION OF THE PRODUCTION OF HYDROCHLORIC ACID DURING THE REMISSION PERIOD AS COMPARED WITH THE EXACERBATION PERIOD.

UNCLASSIFIED



1/2 026 UNCLASSIFIED PROCESSING DATE--04DEC70  
TITLE--DISORDERS OF THE SEROTONIN METABOLISM IN CIRRHOSIS OF THE LIVER -U  
AUTHOR--(03)-GELLER, L.I., KOZLOVA, Z.P., KONTSEVAYA, N.G.  
COUNTRY OF INFO--USSR  
SOURCE--SOV MED 33(3): 19-21. 1970.  
DATE PUBLISHED-----70  
SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES  
TOPIC TAGS--LIVER, CIRRHOSIS, SEROTONIN, METABOLISM  
CONTROL MARKING--NO RESTRICTIONS  
DOCUMENT CLASS--UNCLASSIFIED  
PROXY FICHE NO----FD70/605004/E04 STEP NO--UR/0399/70/033/003/0019/0021  
CIRC ACCESSION NO--AP0139661  
UNCLASSIFIED

2/2 026

UNCLASSIFIED

PROCESSING DATE--04DEC70

CIRC ACCESSION NO--AP0139661

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. INVESTIGATIONS MADE IN 34 PATIENTS WITH LIVER CIRRHOSIS WHICH DEVELOPED AFTER EPIDEMIC HEPATITIS (ACUTE VIRAL HEPATITIS) SHOWED A CONSIDERABLE FALL OF SEROTONIN BINDING PROPERTIES OF THE BLOOD SERUM BY COMPARISON WITH HEALTHY PERSONS. IN LIVER CIRRHOSIS WITH ESOPHAGEALGASTRIC HEMORRHAGES STEMMING FROM PORTAL HYPERTENSION PREVAILING IN THE CLINICAL PICTURE, THE DEGREE OF AN INCREASED BLOOD SERUM MONOAMINOXIDANSE ACTIVITY AND URINARY EXCRETION OF THE BASIC METABOLITESEROTONIN (5, OXYINDOYL ACETIC ACID) IS SUBSTANTIALLY GREATER THAN IN PATIENTS SUFFERING FROM LIVER CIRRHOSIS WITH MARKED HEPATIC INSUFFICIENCY WITHOUT NOTICEABLE PORTAL HYPERTENSION. IT IS TO BE PRESUMED THAT DISTURBED SEROTONIN METABOLISM PLAYS A DEFINITE ROLE IN THE DEVELOPMENT AND PROGRESSING HEMORRHAGES OF PORTAL GENESIS IN PATIENTS WITH LIVER CIRRHOSIS. ATTEMPTS AT CLINICAL APPROBATION OF ANTISEROTONIN PREPARATIONS IN LIVER CIRRHOSIS WITH PORTAL HYPERTENSION SHOULD BE CONSIDERED FULLY JUSTIFIABLE. FACILITY: NARUSHENIYA OBMA SEROTONINA SEROTONINA PRI TSIRROZE PECHENI.

UNCLASSIFIED

USSR

UDC 577.4

DOBROLYUBOV, A. I., KOZLOVSKAYA, A. B.

"Problems of Simulation and Analysis When Checking Complex Contact Relay Structures"

V sb. Tekhn. diagnostika (Technical Diagnostics -- collection of works), Moscow, Nauka Press, 1972, pp 184-188 (from RZh-Kibernetika, No 7, Jul 72, Abstract No 7V408)

No abstract

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USSR

UDC: 621.397.335.89

MOISEYEV, V. K., FOMIN, P. P., ZHOVTIS, I. M., KOZLOVSKAYA, A. V.

"A Device for Automatically Locking on and Tracking Video Pulses"

Moscow, Otkrytiya, izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, No 18, Jun 71, Author's Certificate No 305598, Division E, filed 11 Aug 69, published 4 Jun 71, p 197

Translation: This Author's Certificate introduces a device for automatically locking onto and tracking video pulses for automatically putting a pulse tracking system in the tracking mode of operation. The device contains a time modulator, a selector gate generator, a time discriminator with accumulation and two data transcribing oscillators, a trigger pre divider, a pulse generator for recording information on the time modulator, and a lock-on flip-flop. As a distinguishing feature of the patent, the system for locking onto the video pulses is simplified by connecting a delay device and two coincidence circuits in the trigger circuit for the selector gate generator. The pulse input of one of the coincidence circuits is connected directly to the output of the time modulator, and the pulse input of the second coincidence circuit is connected through a delay element to the

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