"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203110008-4

SMIRNOVA, K. I.

UDC 556.16:551.461.25(262.8)

RESTRICTION OF RUNOFF INTO THE KARA-BOGAZ-GOL BAY AND THE FUTURE LEVEL OF THE CASPIAN SEA

[Article by K. I. Smirnova, USSR Hydrometeorological Scientific Research Center; Moscow, Meteorologiya i Gidrologiya, Russian, No 12, 1971, submitted 15 June 1971, pp 65-70]

It is demonstrated that the restriction of runoff into the Kara-Bogaz-Gol Bay to 5 $km^3$/year will lead to an increase in the level of the Caspian Sea by 25 cm in the year 2000 under the condition of increased river runoff and by 30 km with additional consideration of the transfer of the runoff of the northern rivers to the Volga basin.

The discharge of water from the Caspian Sea into the Kara-Bogaz-Gol Bay takes place through the narrow Karabogaz Strait. The depth of the strait is 6.5-4.5 meters. The mean flow velocity in the strait varies from 1 to 5 m/sec. At the waterfall 6 km from the head, the flow velocity increases. In the direction of the bay, the flow velocity also increases as a function of depth of the strait and its bottom slope. The slope in the strait is not constant and is determined by the difference in levels between the sea and the bay, surge phenomena and variability of the sandy bed of the strait. In the case of high standing of the sea level, the sea-bay level difference does not exceed 1 meter with respect to observations over many years; the runoff from the sea into the bay has reached 25 $km^3$/year. The length of the strait was 6.5 km in this case.

With lowering of the level of the Caspian Sea (consequently, with a decrease in the surface influx of water to the sea), the difference in the sea-bay levels increased to 2 meters in 1945 and almost 4 meters (380 cm) by 1957. Accordingly, the length of the strait increased to 11.5 km. Its width decreased appreciably, and the strait became deeper.

With variation of the morphometric characteristics of the strait, the runoff from the sea into the bay decreased to 6-7 $km^3$/year. With further lowering of the sea level, the level of the bay began to drop more intensely. The difference in sea-bay levels increased, the slope increased and, consequently, the flow rate increased in the strait which led again to an increase in runoff



JPRS 55331
2 Mar 72

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USSR UDC 633.11+582.285.2

SMIRNOVA, L. A., Candidate of Biological Sciences

"The Role of Resistance of the Zoned Wheat Variety in the Formation of Uredopopulations of Stem Rust Pathogens"

Moscow, Vestnik Sel'skokhozyaystvennoy Nauki, No 7, 1972, pp 16-19

Abstract: The populations of P. graminis f. sp. tritici causing stem rust on wheat display two characteristic trends in the percent composition of the various races of that pathogen. On susceptible wheat strains (Odesskaya 16, Dneprovskaya 440, and Kiyevskaya 893), the predominant races are 34, 14, 21, 11, and IVx. On resistant wheat strains, especially the Bezostaya 1, the prevalent race is 1k, while the concentration of races 34 and 14 is considerably smaller. This change in the biotype composition of the fungus population consistently develops after each infection of the Bezostaya with the mixed pathogen. It is due to the fact that this wheat strain, though regarded as resistant in general, actually has a specific resistance to only some rust fungus races and lacks this resistance to other biotypes.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203110008-4

USSR UDC 633.11:632.4:582.285.22

SMIRNOVA, L. A., North Caucasus Scientific Research Institute of Phytopathology

"The Use of Monogenic Wheat Strains of the Marquise Variety for the Detection of Biotypes of the Pathogen of Stem Rust"

Moscow, Biologicheskiye Nauki, No 6(102), 1972, pp 104-106

Abstract: In the differentiation of populations of Puccinia graminis f. sp. tritici Erikss. and Henn. that causes stem rust of wheat in the Northern Caucasus, a method for the detection of biotypes of the fungus on monogenic wheat strains that had been proposed by Canadian phytopathologists was applied. Strains of the wheat variety Marquise with the genes Sr6, Sr7, Sr8, Sr9a, Sr9b, Sr10, and Sr11 were used. The results showed that the method in question can be used for the detection of stem rust biotypes virulent towards a variety the resistance genes of which are known. The most heterogenic of the wheat strains investigated that occur in Northern Caucasus were 14, 34, and 40, on which avirulent biotypes of the fungus were found most frequently. Against these biotypes almost all of the resistance genes were effective. On the other hand, fungus biotypes with the virulence formulas 11/5,6,8,9a,10 and 6/5,7,8,9a, 9b,10,11 were detected, which would be virulent towards wheat strains with a resistance based on the genes Sr5-Sr10 and Sr7-Sr11, respectively. The ratio

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USSR

SMIRNOVA, L. A., Biologicheskiye Nauki, No 6(102), 1972, pp 104-106

of these two biotypes in uredopopulations of the fungus did not exceed 0.7-2.0%. Biotypes capable of overcoming the resistance due to the presence of the genes Sr6 and Sr11 were not found in a single instance; hence, one can use in the Northern Caucasus as a basis for resistance against stem rust wheat strains with the gene combination Sr6 + Sr11.

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Plant Pathology

USSR

UDC 633+632.938

SMIRNOVA, L. A., ANPILOGOVA, L. K., SOLOV'YEVA, A. I. (Deceased), RUDANOVSKAYA, Ye. A., RASSADINA, Ye. G., CHUMAKOV, A. Ye., and MOSTOVOY, V. A., All-Union Scientific Institute of Plant Protection, Leningrad, North Caucasian Scientific Research Institute of Plant Pathology, Krasnodar, and Central Asian Scientific Research Institute of Plant Pathology, Tashkentskaya Oblast

"Face Formation in Puccinia graminis Pers. f. sp. tritici in the USSR"

Leningrad, Mikologiya i Fitopatologiya, No 6, 1971, pp 494-499

Abstract: Besides discussing the current status of the problem of the race composition of stem rust of wheat, the article synthesizes the latest data embodied in reports sent to the journal Mikologiya i Fitopatologiya for publication. More than 100 races are now known, many discovered in the last 10 years. During this time the main races of P. graminis were fairly stable, with changes occurring only in their quantitative correlations in different years and geographic zones. Despite their great variety, only a few are found in almost all zones, i.e., 11, 17, 21, and 34. The sexual process, heterokaryosis, and mutations play a major role in the origin of new races of the agent of stem rust of wheat. The factor most responsible for the formation of new virulent races is the presence of resistant wheat varieties grown for a long time over large areas.

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Surgery

USSR UDC 616.1324616.13]-89.28-07:616.151.5-07

PETROVSKIY, B. V., KNYAZEV, M. D., KOBLOV, L. F., STEPANOV, G. A., and SMIRNOVA, L. A., Scientific Research Institute of Clinical and Experimental Surgery, Ministry of Health USSR

"Hemostasis After Repair Operations on the Aorta and Major Arteries Using Electroconductive Prostheses"

Moscow, Kardiologiya, No 4, 1971, pp 9-14

Abstract: Vascular prostheses woven with silver threads were implanted in 30 patients with occlusion (due to atherosclerosis and endarterteritis) of the terminal portion of the aorta and iliac arteries or aneurysms of the aorta). A like number of patients with similar lesions received nonconducting terylene prostheses. Hypercoagulability was characteristic of both groups of patients before surgery because of high fibrinogen concentration, lowered fibrinolytic activity, increased antifibrinolysin activity, and slow blood flow. Postoperatively, none of the patients who received an electroconductive prosthesis required anticoagulant and fibrinolytic therapy, whereas most of those who received a terylene prosthesis showed signs of hypercoagulability, and several developed thrombosis despite the administration of anticoagulants.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203110008-4

USSR UDC 576.851(Providencia)+616.935-039-0

AVDEYEVA, T. A., SMIRNOVA, L. A., TIKTINA, Ye. G., and KAPKOVA, A. G., Leningrad Institute of Epidemiology and Microbiology imeni Pasteur, Leningrad City Sanitary Epidemiological Station, and Leningrad Neva District Sanitary Epidemiological Station, Leningrad

"Biological Characteristics of Providencia Bacteria in Connection with Their Possible Etiological Role in Group Outbreaks of Dysentery-Like Diseases"

Moscow, Zhurnal Mikrobiologii, Epidemiologii i Immunobiologii, Vol 48, No 2, Feb 71, pp 120-123

Abstract: Strains of Providencia (Enterobacteriaceae) isolated in the summer of 1968 from children 7-14 years old in connection with a study of dysentery-like diseases with a single alimentary source of infection were subjected to serological typing. A study of 88 isolated strains of Providencia indicated that these strains had common cultural and enzymatic characteristics, but

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USSR

AVDEYEVA, T. A., et al, Zhurnal Mikrobiologii, Epidemiologii i Immunobiologii, Vol 48, No 2, Feb 71, pp 120-123

could be subdivided into six serological types on the basis of reactions with rabbit OH-immune sera. Five of the six serological types, comprising the majority of the strains, were closely related with respect to O- or H-antigens. Within each of the six O-groups, independently of the number of strains in the group, the strains had an identical H-antigen, i.e., they belonged to the same serotype. These serological characteristics differed considerably from those established for Providencia cultures of diverse origin.

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1/2 020 UNCLASSIFIED PROCESSING DATE--23OCT70

TITLE--ELECTRICAL CONDUCTIVITY OF LITHIUM ALUMINOSILICATE GLASSES AND THEIR STURCTURE X(LI SUB2 O.AL SUB2 O SUB3) TIMES (1-X)SIO SUB2 CROSS

AUTHOR-(02)-KONDRATYEV, YU.M., SMIRNOVA, L.A.

COUNTRY OF INFO--USSR

SOURCE--IZV. AKAD. NAUK SSSR, NEORG. MATER. 1970, 6(3), 524-7

DATE PUBLISHED--------70

SUBJECT AREAS--MATERIALS

TOPIC TAGS--ELECTRIC CONDUCTIVITY, LITHIUM GLASS, ALUMINOSILICATE GLASS, GLASS STRUCTURE, THERMAL DEGRADATION, ALUMINUM OXIDE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1997/0593 STEP NO--UR/0363/70/006/003/0524/0527

CIRC ACCESSION NO--AP0119511

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2/2 020 UNCLASSIFIED PROCESSING DATE--23OCT70

CIRC ACCESSION NO--AP0119511

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE ELEC. COND. FOR GLASSES AND POLYCRYST. SAMPLES OF THE SECTIONS XLI SUB2 O(1-X)SIO SUB2, 17LI SUB2 O.XAL SUB2 O SUB3 (83-X)SIO SUB2, AND 25LI SUB2 OXAL SUB2 O SUB3 (75-X) SIO SUB2 WAS STUDIED UPON THE ISOMORPHIC SUBSTITUTION IN THEIR STRUCTURE OF (SIO SUBFOUR HALVES) NODES BY THE (AL PRIME NEGATIVE O SUBFOUR HALVES)LI PRIME POSITIVE NODES. THE STURCTURE OF GLASSES OF THE SECTION X(LI SUB2 O.AL SUB2 O SUB3) TIMES (1-X)SIO SUB2 REPRESENTS A 3 DIMENSIONAL SKELETON IN THE 1ST APPROXN. THE DEGREE OF DISSOCN. OF THE (AL PRIME NEGATIVE O SUBFOUR HALVES)LI PRIME POSITIVE NODES INCREASES WITH INCREASING SILICA CONCN. IN THE STURCUTRE OF HIGH ALUMINA GLASSES THERE CAN BE OBSERVED (ALO SUBSIX FOURTHS) NODES, BEING A RESULT OF THERMAL DISSOCN. OF ALUMINOSILICATES AT HIGH TEMP.

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USSR

KOLCHURINA, A. A., (Deceased), TARANOVA, G. P., and SMIRNOVA, L. B., State Control Institute of Medical and Biological Preparations imeni L. A. Tarasevich, Moscow

"Some Special Aspects of the Biological Properties of Influenza A2 Virus Strains Isolated in 1968-1970"

Moscow, Voprosy Virusologii, No 4, Jul/Aug 71, p 492

Translation: A control analysis was performed on influenza A2 virus strains isolated in various years. Changes were found not only in antigenic structure, but also in other biological properties of the pathogen. In the process of this mutation, at first inhibitor-resistant strains disappeared, and then inhibitor-resistant viruses vanished from a mixed population of strains sensitive to inhibitors. Virus particles with reduced sensitivity to inhibitors were found, but no virus particles completely resistant to the inhibitors were observed in a population of A2 strains (1968-1970). The strains displayed a high replication rate of infectious virus and hemagglutinins and a weak capacity to replicate at 40°C.

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USSR UDC 669.24:538.221

BORODKINA, M. M., PESIN, V. S., SMIRNOVA, L. G., SOSNIN, V. V., and STAROSTIN, Yu. V., Institute of Precision Alloys of the Central Institute of Ferrous Metallurgy imeni I. P. Bardin

"Magnetic Properties and Texture of a Thin Band of Nickel-Iron-Molybdenum Alloys"

Sverdlovsk, Fizika Metallov i Metallovedeniye, Vol 33, No 6, Jun 72, pp 1188-1194

Abstract: A study was made of the magnetic properties (coercive force, induction, and the rectangularity factor) and the texture of bands of Ni-Fe-Mo alloys (75-87%Ni, 0-5.5%Mo) 20, 5, and 2 $\mu$m thick. The optimum cooling rate ensuring the highest $\alpha$ value depends on Ni and Mo contents and the final reduction value in rolling. The optimum final reduction increases with decreasing thickness. The predominance of the $\langle 111 \rangle$ or $\langle 100 \rangle$ textures is essentially for $\alpha$ in the case of relatively thick bands ($\geqslant 5\ \mu$m). For 20-$\mu$m-thick bands, there is a correlation between the relation of the $\langle 111 \rangle$ & $\langle 100 \rangle$ orientations and the rectangularity factor $\alpha$. For 5-$\mu$m-thick bands, a correlation is observed only at high reductions, and for 2-$\mu$m-thick bands there is no correlation. In the thinnest bands, a mechanism which is independent of the magnetocrystalline anisotropy and which can be related to orientated imperfections produced by rolling with high reduction rates, is probably predominant. Six figures, two tables, twelve bibliographic references.

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USSR

VYSOTSKIY, D. A., PETROV, M. D., REKOV, A. I., ROMANOV, A. I.,
SEPP, V. A., SEREBRENNIKOVA, V. Ye., SHIRNOVA, L. C., KURTEPOVA, O. I.,
Institute of High Temperatures of the Academy of Sciences USSR

"Test Results on Installations and Electrode Materials in a Plasma Jet"

Moscow, Teplofizika vysokikh temperatur, No. 3, May/Jun 72, pp 635-639

Abstract: The characteristics of electrodes of silicon carbide with additives of alloying metals (Mo, Ti, Cr), interelectrode insulators of refractory concretes based on high-alumina VGB and AFB concretes and magnesian MB concrete and module insulation walls of MB concrete were investigated in a model of an MHD generator. The maximum electrode temperature during the experiments reached 2300°K, the interelectrode insulators reached 2100°K and the installation walls reached 1700°K. The electrode samples were prepared by pressing a mixture of SiC powders and the appropriate alloying additive (Mo, Ti, Cr) with organic binding and subsequent heat treatment at a temperature of 2100°C for 10-15 min. The experimental device in which the materials were tested consisted of the following elements: a plasmatron producing an air flow with a

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USSR

VYSOTSKIY, D. A., et al, Teplofizika vysokikh temperatur, No. 3, May/Jun 72, pp 635-639

temperature of 3000°K, a mixing chamber where an easily ionized additive was introduced into the air flow in the form of potassium or $K_2CO_3$ vapors, a nozzle, the MHD generator channel, and a system for evacuating the gas flow. The flow rate in the channel was approximately 500 m/sec. The advantages of a sectional structure for the channel are shown and it was established that the current density is determined by the conductivity of the films from the interaction products of the electrode and additive materials, independent of the type of alkali additive (potassium or potash vapor) at the temperature of its condensation on the electrode surface. At an electrode temperature of less than 900°K in supplying K-vapors and of 1200°K in supplying $K_2CO_3$ powder, the current density remains constant at 0.2 a/cm$^2$. At these temperatures the current density is evidently determined by the conductivity of the liquid film of the interaction products of the additive material, the working gas, and the electrode and of their emission properties. With an increase in electrode temperature above 900-1200°K the emission properties of the electrode material directly begin to play a basic role.

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1/2 020 UNCLASSIFIED PROCESSING DATE--02OCT70

TITLE--NEW EPOXY POLYAMIDE PRIME COATS AND ENAMELS -U-

AUTHOR-(04)-CHEBOTARVESKIY, V.V., YESELEV, A.D., SMIRNOVA, L.I., GABIRUV, I.Z.

COUNTRY OF INFO--USSR

SOURCE--LAKOKRASOCH. MATER. IKH. PRIMEN. 1970, (1), 22-5

DATE PUBLISHED--------70

SUBJECT AREAS--MATERIALS

TOPIC TAGS--ENAMEL, PROTECTIVE COATING, EPOXY RESIN, PAINT, GASOLINE, KEROSINE, FERTILIZER, THERMAL STABILITY, CHEMICAL STABILITY/(U)EP076 PRIMER, (U)EP140 ENAMEL, (U)EP076T PAINT, (U)PD200 PAINT RESIN, (U)EP09T COATING, (U)A63A PRIMER

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1989/0554 STEP NO--UR/0303/70/000/001/0022/0025

CIRC ACCESSION NO--AP0107159

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2/2 020 UNCLASSIFIED PROCESSING DATE--02OCT70

CIRC ACCESSION NO--AP0107159

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. FORMULATIONS WERE DEVELOPED FOR EPOXY RESIN POLYAMIDE EP-076 PRIMER (I) AND EP-140 ENAMEL (II). I WAS COMPOSED OF EP-076T PAINT AND HARDENER NO. 2 (III) (A 30PERCENT PO-200 RESIN SOLN.) WHICH WERE BLENDED IN 75:25 RATIO JUST PRIOR TO APPLICATION; II WAS ALSO COMPOSED OF A PAINT AND III, AND WAS AVAILABLE IN A VARIETY OF COLORS. THE 2 COATINGS HAD SIMILAR PHYSICOMECH. PROPERTIES, BUT I (DUE TO THE SPECIFIC STRUCTURE OF POLYAMIDES) WAS INTERNALLY PLASTICIZED, WHICH MARKEDLY IMPROVED ITS THERMAL STABILITY AND AGING RESISTANCE. A 4 YEAR STUDY OF II APPLIED OVER AN AG-3A PRIMER SUGGESTED THAT THE FORMER EXHIBITED GOOD WEATHERABILITY AND RESISTANCE TO GASOLINE, KEROSINE, NH SUB4 OH, AND VARIOUS DETERGENTS. II CAN BE EFFECTIVELY USED AS A PROTECTIVE COATING IN PLANTS MANUFG. N FERTILIZERS. I COATINGS WERE MARKEDLY MORE PROCESSABLE THAN EP-09T COATING AND HAD SUPERIOR HARDNESS, THERMAL STABILITY, AND OIL RESISTANCE.

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USSR UDC 539.192/.194+535.33/.34.01

KRUMSHTEYN, Z. V., PETRUKHIN, V. I., SMIRNOVA, L. M., SUVOROV, V. M., YUTLANDOV, I. A.

"Investigation of the Character of the H-O Bond in Certain Oxygen-Containing Acids With the Aid of $\pi^-$-Meson Capture by Hydrogen"

Issledovaniye khraktera svyazi H-O v nekotorykh kislorodsoderzhashchikh kislotakh s pomoshch'yu zakhvata $\pi^-$-mezonov vodorodom (cf. English above), Joint Institute of Nuclear Research, Laboratory of Nuclear Problems, No. P12-5224, Preprint, Dubna, 1970, 10 pp, ill. (from RZh-Fizika, No 5, May 71, Abstract No 5D98)

Translation: The degree of ionicity of the H-O bond in sulfuric acid, nitric acid, phosphoric acid, boric acid, and oxalic acid was evaluated with the aid of $\pi^-$-meson capture by hydrogen. Oxalic acid should belong to a group of stronger acids on the basis of the degree of the ionicity of the H-O bond.

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USSR UDC 678.84.01:537

BAZHENOVA, T. S., PAKHOMOV, V. I., ZHDANOV, A. A., POLYAKOVA, L. L., SMIRNOVA, L. N., EKSANOVA, N. D., and TARASOV, Ye. V.

"Electric Properties of the Epoxyorganosilicon Resin ES-9 and Compounds Based on This Resin"

Moscow, Plasticheskiye Massy, No 2, 1973, pp 21-23

Abstract: Results are reported of the study of electric properties of the compounds based on dianic resin ED-5, polyfunctional resin ETP and epoxy-siliconorganic resin TPE-9 containing triphenylpentamethoxytrisiloxane [resin ES-9]. It was shown that the ES-9 resin is a good, active solvent for compounds based on any epoxy resin prepared for electrotechnical utilization. The ES-9 resin lowers considerably the starting viscosity of the epoxy binder preserving at the same time all of the desired electric properties of epoxy compounds both under normal usage as well as during prolonged heating, increased humidity, and elevated temperature.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203110008-4

UDC 678.643.01:53

USSR

GOLUBENKOVA, L. I., DEMEKHINA, YE. M., CHIBISOV, YE. I., SMIRNOVA, L. N., EKSANOVA, N. D., and YUDIN, V. F.

"Binders for Fiberglass-reinforced Plastics Based on Epoxy Resin ETF"

Moscow, Plasticheskiye Massy, No 6, 1970, pp 13-15

Abstract: In order to increase the thermostability of fiberglass-reinforced plastics, work is being done to create binders based on epoxy resins which differ in structure from diane resins, primarily cycloaliphatic and polyfunctional epoxy resins. Polyfunctional resin ETF, which is the product of the interaction of 1,1,3-tri-(hydroxyphenyl)-propane and epichlorohydrin, has a molecular weight of 540-700 and contains 20-24 percent epoxy groups. Hardening of this resin with amine or acid hardeners makes it possible to obtain specimens possessing higher thermostability than diane epoxy resins. The greatest bending strength is found in specimens hardened with aniline-phenol-formaldehyde resin 211, the greatest compression strength in specimens hardened with maleic anhydride. Aniline-phenol-formaldehyde

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USSR

GOLUBENKOVA, L. I., et al., Plasticheskiye Massy, No 6, 1970, pp 13-15

resin 211 was chosen as the main hardener. The binder representing a composite of resins ETF and 211 has been given the brand designation T-71-S. Since resin ETF softens in the 35-55° C range, it can be used for the "dry" process of fiberglass-reinforced plastics manufacture. The properties of the binder applied to the glass cloth, as well as of the resultant fiberglass-reinforced plastics depend on the character of the solvent used to impregnate the glass filler and the storage conditions for the impregnated cloth.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203110008-4

Acc. Nr.: AM0106711 Ref. Code: UR0000

Gumen, V. F.; Moskalev, V. P.; Smirnova, L. N.; Shmyreva, M. M.

Step Regulators for Programmed Control of Hydraulic Presses (Shagovyye regulyatory dlya programmnogo upravleniya gidropressami) Leningrad, Nauka, 1970, 82 pp (SL:2076)

TABLE OF CONTENTS:


| | | |
|---|---|---|
| Chapter I | Extrusion on Hydraulic Presses and Characteristics of Technological Realization of Control Laws | 3 |
| II | Synthesis of a System and Calculated Relationships for Elements of a Step Regulator | 12 |
| III | Step Drive of the Actuator of a Regulator | 26 |
| IV | An Example of Calculation of the Step Regulator Circuit | 43 |
| Appendix | | 77 |
| Bibliography | | 82 |


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Reel/Frame
19890033

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203110008-4

Acc. Nr.: AM0106711

The book deals with laws in control of extrusion rates of aluminum alloys on hydraulic presses. Given are methods for design and calculation of programmed regulators for realization of these laws, as well as comparative evaluations of methods for investigation of dynamic properties of systems with step motors...

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Reel/Frame
19890034

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203110008-4

SMIRNOVA, L. O.

Acc. Nr: AP0052333 Ref. Code: UR0238

PRIMARY SOURCE: Fiziologichniy Zhurnal, 1970, Vol 16, Nr 2, pp 190-196

# PARTICIPATION OF HYPOTHALAMUS IN THE REGULATION OF CONTENT AND CIRCULATION OF BLOOD AND LYMPH

P. D. Kharchenko, V. P. Glagolev, V. G. Tsibenko, L. M. Ponomarenko, L. O. Smirnova
*Department of Physiology, State University, Kiev*

Summary

The effect of hypothalamus stimulation was investigated on the regional blood circulation, lymph stream rate and lymph content, on the physicochemical properties of blood and acetylcholine content in it.

The data obtained testify to the fact that, when stimulating hypothalamus, there appear not isolated reactions of one system or organ, but the whole complex of vegetative reactions and processes connected between themselves.

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REEL/FRAME
19820919

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203110008-4"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203110008-4

USSR

UDC 669.1:538.248

KEKALO, I.B., SMIRNOVA, L. P., Moscow Institute of Steel and Alloys

"Low-Temperature Magnetic Aftereffect in Ferrosilicon Single Crystals Subjected to Thermomagnetic Treatment"

Sverdlovsk, Fizika Metallov i Metallovedeniye, Vol 35, No 3, 1973, pp 512-517

Abstract: The effect of thermomagnetic treatment (TMT) on a ferrosilicon alloy containing 3% Si and traces of carbon was studied. The surface of the samples was identical with the (011) plane and their longitudinal axes formed the angle $\varphi$ which amounted to 0.55 and 90° with the direction [100]. The magnetic field during the TMT was applied along the longitudinal axis, transversely to this axis, and during rotation of samples around their axes (perpendicular to the plane (011)). The TMT was applied at 550°C followed by a gradual cooling in the magnetic field to 150°C. The results indicate that the TMT in several cases changed the magnetization curves and the $H_s(B)$ curves. The effect of TMT on the nature of magnetization curves and $H_s(B)$ curves was observed only in those cases when a complete or local rearrangement of the domain structure took place. This rearrangement was caused by the redistribution of the axes of easy magnetization, and as a result the boundaries of domains that participate in magnetization changed. In those cases when the axes of light magnetization remained unchanged, the TMT did not affect the nature of the magnetization curves.

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5 Single Crystals

USSR UDC 669.1:[illegible]

KEKALO, I. B., VILLEMS, Kh.-E., SMIRNOVA, L. P., STOLYAROV, V. [illegible], and IVANOV, I. I.

"Study of the Dynamics of the Domain Structure During Deformation and Magnetoelastic Damping of Oscillations in Single Crystals of the Alloy Fe-3% Si"

Sverdlovsk, Fizika Metallov i Metallovedeniye, Vol 30, No 3, Sep 70, pp 561-576

Abstract: The Fe-3% Si alloy was used in a study of the magnetoelastic damping of oscillations and investigation of the dynamics of the domain structure during twisting, allowing a number of regularities to be determined which expand our ideas of the domain mechanism of magnetoelastic damping in this material. During twisting of single crystal specimens of Fe-3% Si, the following irreversible processes occur: displacement of the 180° boundaries of the principal domains, fractionation of the initial domain structure as a result of the appearance of a pair of boundaries within the principal domains, and also complete restructuring. Comparatively slight displacements of the 180° boundaries of the principal domains, as well as displacements of the boundaries of drop-shaped domains during twisting of a specimen with $\phi = 0°$ caused no losses in magnetoelastic hysteresis. High magnetoelastic attenuation in specimens with $\phi = 55$ and 90° could have been

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KEKALO, I. B., et al, Fizika Metallov i Metallovedeniye, Vol 30, No 3, Sep 70, pp 566-570

related to intensive displacement of the 180° boundaries of the principal domains or the effect of fractionation of the domain structure, which obviously results in restructuring of the internal domain structure with participation of the 90° boundaries. Restructuring of the principal domain structure in specimens with $\phi = 55°$ occurred with deformations considerably exceeding the deformations for which magnetoelastic attenuation reaches its maximum.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203110008-4

USSR UDC 669.15-194:669.782:669-172:621.365.5:539.21

KEKALO, I. B., and ~~SMIRNOVA, L. P.~~, Moscow Institute of Steel and Alloys

"Effect of the Anisotropy of Form on the Efficiency of Thermomagnetic Treatment of Fe-3% Si Alloy Single Crystals"

Moscow, IVUZ Chernaya Metallurgiya, No 4, 1970, pp 148-150

Abstract: The effect of dimensions of laminar specimens on the magnetic properties and domain structure before and after thermomagnetic treatment is considered. Two series of specimens were studied: 1) 70 mm long, 10 mm wide, and 0.5, 0.3, and 0.15 mm thick; 2) 70 mm long, 10.5 mm wide, and 0.3 mm thick. The effectiveness of thermomagnetic treatment depends to a considerable extent on the form of the specimens, which is related to the rearrangement of the domain structure as a result of thermomagnetic treatment.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203110008-4

USSR

UDC 576.809.518

VERBINA, N. M., SMIRNOVA, L. S., and DANIL'CHENKO, R. N., All-Union Correspondence Institute of the Food Industry, Moscow

"The Antibacterial Activity of Some Quaternary Ammonium Compounds"

Moscow, Prikladnaya Biokhimiya i Mikrobiologiya, Vol 9, No 4, 1973, pp 575-578

Abstract: An investigation is made of the antiseptic properties of some new surface-active quaternary ammonium salts with respect to typical brewery microflora. The antibacterial action of Bradozol (an imported preparation) and four domestic preparations, namely Cationate 2B, Cationate $C_{12}$, cetylpyridinium chloride, and sulfoureide, was tested against three cultures: beer sarcina (Pediococcus damnosus and Pediococcus perniciosus), intestinal bacilli (Escherichia coli), and slime-forming bacteria comprising a mixture of cultures of Pediococcus viscosum and bacteria of the Pseudomonas genus. It was established that the least bactericidal activity was found in sulfoureide, and high activity was manifested by Cationate 2B, Cationate $C_{12}$ and Bradozol. 2 tables. 3 references.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203110008-4

1/2 018 UNCLASSIFIED PROCESSING DATE--30OCT70

TITLE--STUDIES ON RESPIRATION OF KANAMYCIN PRODUCING ORGANISM DURING BIOSYNTHESIS -U-

AUTHOR-(05)-BRINBERG, S.L., GRABOVSKAYA, O.Z., SMIRNOVA, L.V., PAPATSENKO, V.P., KALMYKOVA, G.V.

COUNTRY OF INFO--USSR

SOURCE--ANTIBIOTIKI, 1970, VOL 15, NR 6, PP 500-505

DATE PUBLISHED--------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--BIOSYNTHESIS, KANAMYCIN, MICROORGANISM

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--2000/1832 STEP NO--UR/0297/70/015/006/0500/0505

CIRC ACCESSION NO--AP0125443

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203110008-4"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203110008-4

2/2 018 UNCLASSIFIED PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0125443

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE EFFECT OF CHANGES IN AERATION AND MIXING CONDITIONS ON RESPIRATION OF THE KANAMYCIN PRODUCING ORGANISM AND BIOSYNTHESIS OF THE ANTIBIOTIC WAS STUDIED. DURING INTENSIVE MIXING AN INCREASE IN THE AMOUNT OF AIR SUPPLIED WITHIN 1 TO 3 VOL-VOL DID NOT AFFECT THE ANTIBIOTIC BIOSYNTHESIS. AT LOW LEVELS OF MIXING TI SLIGHTLY INCREASED. A DECREASE IN THE INTENSITY OF MIXING MARKEDLY SUPPRESSED THE ANTIBIOTIC BIOSYNTHESIS. NATURAL CHANGES IN THE RESPIRATION LEVELS DEPENDANT ON THE MIXING CONDITIONS WERE PROBABLY ABSENT. THE MODE OF ACTION OF THE MIXING INTENSITY ON THE ANTIBIOTIC BIOSYNTHESIS MUST BE ATTRIBUTED TO LEVELLING OF THE CONCENTRATIONS OF THE NUTRIENTS AND METABOLITES NEAR THE CELL WALLS, AND NOT TO IMPROVEMENT OF THE AERATION CONDITIONS. FACILITY: ALL UNION INSTITUTE FOR ANTIOBIOTICS, MOSCOW,

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203110008-4"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203110008-4

USSR

UDC 621.371

PETROVSKIY, A. D., SMIRNOVA, L. V., and TOMILIN, V. K.

"Results of the Physical Modeling of Radio Wave Propagation in a Conducting Medium Using Screens"

Moscow, V sb. X Vses. konf. po rasprostr. radiovoln. Tezisy dokl. Sekts. 6 (Tenth All-Union Conference on the Propagation of Radio Waves; Report Theses; Section 6--collection of works) "Nauka," 1972, pp 59-63 (from RZh--Radiotekhnika, No 10, 1972, Abstract No 10A391)

Translation: The investigation was conducted by the method of physical modeling, based on the principle of electrodynamic analogy. A reservoir filled with a solution of NaCl was used as the model. The antenna feeder devices were made in the form of symmetrical half-wave vibrators; the screens were imitated by aluminum plates. The screening coefficient was obtained in terms of the geometric configuration of the screen. One illustration, bibliography of four. N. S.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203110008-4

USSR

UDC 621.37/.39(031)

BODILOVSKIY, V. G., SMIRNOVA, M. A.

Spravochnik molodogo radista. Izd. 2-e, pererabot. dop. (Young Radio Operator's Manual. Second Edition, Reworked and Supplemented), Moscow, Vysshaya Shkola Press, 1971, 311 pp, ill., 66 k (from RZh-Radiotekhnika, No 4, Apr 71, Abstract No 4A23K)

Translation: Brief information is presented on the principles of radio engineering, electrovacuum and semiconductor devices, radiotechnical materials and radio parts. The problem of amplifying electric oscillations, their generation and reception, pulse shaping, and the electric power supply for radiotechnical devices are discussed. The information on electrovacuum and semiconductor devices is brought up to date and expanded in this edition, and the material of the other chapters is better organized.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203110008-4

1/2 020 UNCLASSIFIED PROCESSING DATE--11SEP70

TITLE--ASCORBIC ACID EFFECT ON HEXOKINASE ACTIVITY IN THE SKIN OF GUINEA PIGS -U-

AUTHOR--SMIRNOVA, M.G.

S

COUNTRY OF INFO--USSR

SOURCE--VOPROSY MEDITSINSKOY KHIMII, 1970, VOL 16, NR 2, PP 204-206

DATE PUBLISHED-------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--ASCORBIC ACID, ENZYME ACTIVITY, SKIN, GUINEA PIG, INSULIN, CORTICOSTEROID, VITAMIN DEFICIENCY

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1986/0644 STEP NO--UR/0301/70/016/002/0204/0206

CIRC ACCESSION NO--AP0102630

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203110008-4"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203110008-4

2/2 020 UNCLASSIFIED PROCESSING DATE--11SEP70

CIRC ACCESSION NO--AP0102630

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. HEXOKINASE ACTIVITY IN THE SKIN OF GUINEA PIGS FED WITH ASCORBIC ACID AT VARIOUS AMOUNTS DURING 35-40 DAYS WAS DETERMINED. THE STATISTICALLY SIGNIFICANT INHIBITION IN HEXOKINASE ACTIVITY OF THE SKIN OF SCURVY ANIMALS AND THOSE RECEIVED THE ASCORBIC ACID AT A GREAT AMOUNTS DURING THE PROLONGED PERIOD OF TIME WAS NOTED. THE REASON FOR SUCH INHIBITION IN SCURVY ANIMALS IS HYPOINSULINISM CONNECTED WITH THE DECREASE IN SKIN PROTEIN CONCENTRATION. AFTER THE ADMINISTRATION OF INSULIN HEXOKINASE ACTIVITY WAS TWO FOLD INCREASED. INHIBITION IN SKIN HEXOKINASE REACTION IN THE ANIMALS RECEIVED THE ASCORBIC ACID AT A LARGE AMOUNTS WAS PROBABLY CAUSED BY THE ELEVATION IN CORTICOSTEROIDS PRODUCTION. INSULIN AT A DOSE 6-8 UNITS PER KG DECREASES THIS INHIBITION.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203110008-4

1/2 033 UNCLASSIFIED PROCESSING DATE--30OCT70

TITLE--PROCESSING OF WASTES OF TUNGSTEN, CHROMIUM, VANADIUM, MOLYBDENUM TOOL STEEL BY MEANS OF POWDER METALLURGY -U-

AUTHOR-(04)-MEYERSON, G.A., KIPARISOV, S.S., BOGODUKHOV, S.I., SMIRNOVA, M.M.

COUNTRY OF INFO--USSR

SOURCE--POROSH. MET. 1970, 10(2), 38-45

DATE PUBLISHED--------70

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

TOPIC TAGS--TOOL STEEL, TUNGSTEN STEEL, CHROMIUM STEEL, VANADIUM STEEL, MOLYBDENUM STEEL, MATERIAL CRUSHING, HIGH SPEED STEEL, HOT FORGING, COMMINUTION, POWDER METALLURGY, ALLOY DESIGNATION, INDUSTRIAL WASTE/(U)R18 HIGH SPEED STEEL

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1997/0005 STEP NO--UR/0226/70/010/002/0038/0045

CIRC ACCESSION NO--AP0119003

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203110008-4"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203110008-4

UNCLASSIFIED PROCESSING DATE--30OCT70

2/2 033

CIRC ACCESSION NO--AP0119003

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE EFFECT WAS STUDIED OF CRUSHING METHODS OF THE CHIPS INTO POWDER AND OF THE PRESSING AND SINTERING CONDITIONS ON THE DENSIFICATION PROCESS DURING SINTERING AND ON THE STRUCTURE AND THE PROPERTIES OF SINTERED STEEL. SINTERED HIGH SPEED W-CR-V-MO, STEEL (R18) POWDERS OF VARIOUS GRAIN SIZE WERE STUDIED. THE EFFECTS OF THE FOLLOWING FACTORS ON DENSIFICATION WERE DETD.; (A) USE OF POWDER WHICH WAS NOT REDUCED AFTER CRUSHING AND CONTG. 0.3-0.4PERCENT O; (B) ADDN. OF SOOT TO THE POWDER IN AN AMT. EQUIV. TO THE O CONTENT; (C) EXTENSIVE DRYING OF H; (D) HIGH PRESSING PRESSURE (UP TO 7-10 TON-CM PRIME2); (E) RAPID HEATING TO 1250DEGREES AND HOLDING THERE FOR 1-2HR. THE COMBINATION OF THESE FACTORS MADE IT POSSIBLE TO PRODUCE BRIQUETS WITH 97-8PERCENT RELATIVE D. A LEDEBURTIC EUTECTIC WAS FORMED DURING SINTERING AT 1200-1250DEGREES. THIS PHENOMENON WAS EXPLAINED BY THE FORMATION, AT THE START OF SINTERING, OF A LIQ. PHASE (WHICH LATER VANISHES) WITH THE IMPURITY OXIDES TAKING PART. SUBSEQUENT HOT FORGING OF THE SINTERED BILLETS ENSURES ZERO POROSITY. THE STRUCTURE OF THESE BILLETS IS SIMILAR TO THE STRUCTURE OF THE BILLETS FROM STEEL R18, BUT HAS SMALLER AND MORE UNIFORMLY DISTRIBUTED CARBIDES, WHICH IS REFLECTED IN THEIR HIGHER HARDNESS, REFRACTORINESS, AND HEAT COND. THE PHYS. MECH. AND CUTTING PROPERTIES OF BLADES MADE FROM SUCH STEEL ARE SOMEWHAT BETTER THAN THOSE FOR BLADES MADE FROM CAST AND PRESSURE WORKED STEEL R18. FACILITY: MOSK. INST. STALI SPLAVOV, MOSCOW, USSR.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203110008-4

1/2 009 UNCLASSIFIED PROCESSING DATE--30OCT70

TITLE--AMINO ACIDS AND PEPTIDES. III. SYNTHESIS OF PEPTIDES WITH PHENYLALANINE CONTAINING FLUORINE IN THE AROMATIC RING -U-

AUTHOR-(03)-KAUROV, O.A., MARTYNOV, V.F., SMIRNOVA, M.P.

COUNTRY OF INFO--USSR

SOURCE--ZH. OBSHCH. KHIM. 1970, 40(4), 903-4

DATE PUBLISHED--------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--PEPTIDE, CHEMICAL SYNTHESIS, PHENYLALANINE, FLUORINATED AROMATIC COMPOUND

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3001/1986 STEP NO--UR/0079/70/040/004/0903/0904

CIRC ACCESSION NO--AP0127381

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203110008-4

2/2 009 UNCLASSIFIED PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0127381

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. L-PHENYLALANINE AND N-CARBOBENZOXY-S BENZYL-L-CYSTEINE P-NITROPHENYL ESTER (I) IN DIOXANE (FOLLOWED BY ELECTROPHORESIS) GAVE 85PERCENT N-CARBOBENZOXY-S-BENZYL-L-CYSTEINYL L-PHENYLALANINE, M. 156-8DEGREES, (ALPHA) PRIME20 SUBD 85DEGREES, AFTER ACIDIFICATION WITH HCL. SIMILARLY WAS PREPD. 80PERCENT N-CARBOBENZOXY-S-BENZYL-L CYSTEINYL-DL-P-FLUROPHENYLALANINE, M. 174.5-5.5DEGREES. DL-PENTA FLUOROPHENYLALANINE-HBR ADJUSTED TO PH 8 WITH NA SUB2 CO SUB3, THEN TREATED WITH I OVERNIGHT, EVAPD., AND KEPT 6 HR IN AW. DMF GAVE 72PERCENT N-CARBOBENZOXY-S-BENZYL-L-CYSTEINYL-DL-PENTAFLUOROPHENYLALANINE, M. 167-8.5DEGREES. FACILITY: LENINGRAD. GOS. UNIV., LENINGRAD, USSR.

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APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203110008-4"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203110008-4

USSR

UDC 615.916-057:661.992]-06:616.5-003.217

SMIRNOVA, N. A., ZHDANEYEVA, G. S., and VAYSMAN, V. D.

"A Case of Respiratory Poisoning with Phosgene Complicated by Subcutaneous Emphysema"

Moscow, Gigiyena Truda i Professional'nyye Zabolevaniya, No 9, Sep 71, pp 46-48

Translation: Interstitial emphysema in the upper trunk, neck, and head is very rare in the absence of thoracic lesions and pneumothorax. We therefore want to report a case of acute respiratory poisoning with phosgene, complicated by subcutaneous emphysema.

Patient S, aged 21, was brought to the clinic 4 hours after poisoning. The accident occurred on the job, when a plug fell out of a phosgene line and a burst of liquid phosgene hit the face of a metal worker working nearby without a face shield. The immediate reaction was tickling in the throat, coughing, and a feeling of suffocation. These sensations quickly disappeared, and the worker felt fine. He took a shower, completed his work, and went home. On the way, he suddenly became very weak, began to breath fast, and felt pressure in his chest. With these symptoms, he reported to a medical station where he was given first aid.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203110008-4

USSR

SMIRNOVA, N. A., et al., Gigiyena Truda i Professional'nyye Zabolevaniya, No 9, Sep 71, pp 46-48

He was brought to the clinic in seious condition, complaining of acute dysprea and cough. His skin and mucous membranes were cyanotic and his pharynx hyperemic. His thorax was in the inspiratory position, and respiration was shallow and rapid (44 breaths per minute). Percussion sounds over the lungs were shallow; many dry whistling noises and wet, medium- and small-bubble noises were heard. The heart contour was normal, heart tones were muffled, pulse of 120 per minute was rhythmic and with good filling. Arterial pressure was 110/70. The abdomen was soft without tender areas. Neither the liver nor the spleen were enlarged.

Blood analysis yielded the following results: Hb 120 units (20 g%); RBCs 6,350,000; color index 0.95; WBCs 23,400 including lymphocytes 5%, juvenile neutrophils 1%, p 8%, and segmented neutrophils 86%; sed rate 1 mm per hour. ECG showed a marked sinus tachycardia and a dextrogram. There were signs of right atrial and ventricular overload.

Eighteen hours after intoxication, chest X-rays revealed spotty shadows of medium intensity with diffuse edges, resembling lumps of melting snow, present in all pulmonary areas. The outline of the lungs was diffuse and hardly discernible. The boundaries of the pulmonary roots were unclear and fusing with the spots. The pulmonary pleura in the right lung was enlarged.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203110008-4

USSR

SMIRNOVA, N. A., et al., Gigiyena Truda i Professional'nyye Zabolevaniya, No 9, Sep 71, pp 46-48

Clinical diagnosis: severe acute intoxication with phosgene; preedematous stage; toxic pneumonia.

The patient was confined to bed. He was breathing oxygen with periodic additions of 30% alcohol vapor as a defoaming agent. He was given dimedrol in the inhalation mixture together with hydrocortisone and penicillin and codeine. To prevent pulmonary edema, 200 ml of blood was taken. The patient then received a 40% glucose solution with ascorbic acid, a 10% calcium chloride solution intravenously, novurit intramuscularly, cordiamine intravenously, and corglycon in a 40% glucose solution. At the same time, anti-inflammatory therapy was performed: sodium sulfapyridazine internally and penicillin and streptomycin intramuscularly.

During the first 4 days, the patient's condition remained very severe. His temperature was 37.9-38°. After the slightest physical exertion, his breathing became very labored. The number of small, wet and crepitant noises in his lungs periodically increased. On the second day, subcutaneous emphysema was diagnosed in the neck and shoulders. On the fifth day, the patient's condition improved, his temperature and breathing became normal, his cough was better, cyanosis disappeared, and his blood picture returned to normal. Because of his improved general condition, it was possible to perform a thorough X-ray

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203110008-4

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SMIRNOVA, N. A., et al., Gigiyena Truda i Professional'nyye Zabolevaniya, No 9, Sep 71, pp 46-48

examination (frontal and lateral chest x-ray pictures and tomograms: the median layer and layers 2 cm in front and behind it). An x-ray of the thorax 18 hrs after phosgene intoxication is shown.

The frontal x-ray picture had a shadow running parallel to and 2-8 mm away from the left heart contour. No other changes were found in the lungs. The heart boundary was normal. At that time, the x-ray picture taken 18 hours after the accident was reexamined: it also contained the linear shadow running parallel to the heart. It was assumed that a pneumomediastinum had developed. The linear shadow was believed to represent parietal pleura displaced by air. The picture corresponded to data described in literature (A. I. Dombrovskiy; G. A. Zedgenidze and L. P. Lindenbraten).

On the ninth day, the patient had no complaints, his cough subsided, dyspnea developed only during physical exertion, there were no pulmonary noises, and the subcutaneous emphysema was no longer felt. His pulse was unstable, fluctuating from 64 to 120 beats per minute. EKG was normal with no signs of right heart dilation. The linear shadow along the left heart edge was no longer present on x-ray pictures, which confirmed the previous diagnosis of pneumomediastinum.

On the 25th day, the patient was discharged from the hospital in good condition.

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UDC 616.2-057-02:613.632.4

USSR

SMIRNOVA, N. A., and GRANIK, N. P.

"Remote Aftereffects of Acute Occupational Lesions of the Respiratory Tract Caused by the Action of Irritating Gases"

Moscow, Gigiyena Truda i Professional'nyye Zabolevaniya, Vol 15, No 11, Nov 71, pp 16-19

Abstract: Remote aftereffects were investigated after acute occupational lesion of the respiratory tract in 88 workers at chemical enterprises as a result of exposure to chlorine (46 cases), hydrogen chloride (2 cases), phosgene (9 cases), nitrogen oxides (11 cases), nickel tetracarbonyl (14 cases), formaldehyde (4 cases), and ammonia (2 cases). The remote aftereffects, which were exhibited by 35 persons, comprised pneumosclerosis, bronchitis of various degrees of severity, bronchiectasis, pulmonary emphysema, and respiratory insufficiency. Subatrophic pharyngo-laryngitis was also encountered, but rarely. The most severe remote aftereffects followed renewed acute intoxication with irritating gases. Persons who have sustained acute poisoning with such irritants should remain under medical observation and work for a certain period of time under conditions in which renewed contact with irritating substances cannot occur.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203110008-4

UNCLASSIFIED PROCESSING DATE--18SEP70

1/2 024

TITLE--ANODIC BEHAVIOR OF STAINLESS STEEL KH18N10T -U-

AUTHOR-(05)-MALTSEV, V.F., SHAVEL, M.M., MARUNENKO, L.V., GAMALI, T.A., SMIRNOVA, N.A.

COUNTRY OF INFO--USSR

SOURCE--ZAVOD. LAB. 1970, 36(2), 140-3

DATE PUBLISHED--------70

SUBJECT AREAS--MATERIALS

TOPIC TAGS--STAINLESS STEEL, STAINLESS STEEL COMPOSITION, MANGANESE STEEL, SILICON STEEL, CHROMIUM STEEL, NICKEL STEEL, TITANIUM STEEL, ELECTROLYTE, CHLORIDE, THIOUREA, SOLUBILITY/(U)KH18N10T STAINLESS STEEL

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED STEP NO--UR/0032/70/036/002/0140/0143

PROXY REEL/FRAME--1989/0601

CIRC ACCESSION NO--AP0107198 UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203110008-4"

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UNCLASSIFIED PROCESSING DATE--18SEP70

2/2 024

CIRC ACCESSION NO--AP0107198

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. POTENTIAL TIME PLOTS ARE GIVEN FOR STAINLESS STEEL KH18N10T CONTG. C 0.082, MN 1.17, SI 0.58, CR 17.5, NI 10.8, AND TI 0.33PERCENT DURING ITS ANODIC DISSOLN. IN DIFFERENCE ELECTROLYTES. CONST. PASSIVATION AND IRREGULARITIES IN LOCAL DISSOLN. OF THE STEEL WERE OBSERVED IN 0.2N CCL SUB3 CO SUB2 H, 0.2N ACOH, 0.2N GLYCINE, OR 0.005N H SUB2 SO SUB4. SMOOTH ANODIC DISSOLN., GOOD ISOLATION OF THE CARBIDES, AND ELIMINATION OF PASSIVATION WERE ACHIEVED IN THE MIXED ELECTROLYTE CONTG. M KCL, 0.24M HCL, 10 G THIOUREA-L., AND 0.2N CARBOXYLIC ACID. ADDNS. OF CHLORIDES AND OF THIOUREA ALSO IMPROVE THE ANODIC DISSOLN. IN DIL. H SUB2 SO SUB4 OR H SUB3 PO SUB4.

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Acc. Nr.: AP0029106

Ref. Code: UR 0246

PRIMARY SOURCE: Zhurnal Nevropatologii i Psikhiatrii, 1970, Vol 70, Nr 1, pp 115-122

# CORRELATIONS OF THE CLINICAL PICTURE AND MORPHOLOGICAL BRAIN CHANGES IN THE PROPULSIVE FORM OF EPILEPSY

I. S. Tets, G. F. Perevoshchikova, N. A. Smirnova

On the basis of personal experience and literary data the authors discuss problems of the morphological basis in propulsive forms of epilepsy. Clinico-anatomical data are reported of a case in a 9-year-old patient. The lethal outcome was due to bronchopneumonia. The convened data demonstrated that propulsive epilepsy is one of the forms of dysontogenesis. Mental immaturity so typical for this form of epilepsy is probably related to an organic brain insufficiency on the cerebellar-stem-subcortical nodes — cortical level (motor and temporal, and particularly in the speech zones). The depicted pathology in the area of the cerebellar system, as well as in the speech zones of the brain allow to under — stand the anatomo— functional basis of acute cerebellar ataxia seen so often in propulsive epilepsy. The mechanism of propulsive attacks are also determinad by changes in the subcortical-stem and cerebellar system.

2 mB

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19680617

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203110008-4

USSR

UDC 669-172:541.12.03

SMIRNOVA, N. B., SMIRNOV, B. G., MIKHAYLOV, S. M., SHUPPE, G. N., and GRISHKOV, G. N.

"Thermoelectronic Emission of Faces of a Single Crystal of MR-27 Alloy"

Monokristally Tugoplavkikh i Redkikh Metallov [Single Crystals of Refractory and Rare Metals -- Collection of Works], Nauka Press, 1971, pp 78-81

Translation: The thermoelectronic parameters of the (110), (100), and (111) faces of a single crystal of MR-27 alloy (Mo + 27% Re) are measured at various stages of heat treatment; values are produced for work function $\phi$ and Richardson constant $A_{eff}$. 1 Table; 4 Figures; 5 Bibliographic References.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203110008-4

1/2 025 UNCLASSIFIED PROCESSING DATE--20NOV70

TITLE--THERMOEMISSION PROPERTIES OF 100 FACES OF SINGLE CRYSTALS OF IRIDIUM, OSMIUM, AND RHENIUM SOLID SOLUTIONS IN TUNGSTEN -U-

AUTHOR-(04)-SMIRNOVA, N.B., SMIRNOV, B.G., MIKHAYLOV, S.M., SHUPPE, G.N.

COUNTRY OF INFO--USSR

SOURCE--FIZ. TVERD. TELA 1970, 12(4), 1277-9

DATE PUBLISHED--------70

SUBJECT AREAS--MATERIALS, PHYSICS

TOPIC TAGS--METAL SINGLE CRYSTAL, IRIDIUM ALLOY, OSMIUM ALLOY, RHENIUM ALLOY, TUNGSTEN ALLOY, SOLID SOLUTION, WORK FUNCTION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3001/0486 STEP NO--UR/0181/70/012/004/1277/1279

CIRC ACCESSION NO--AP0126238

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203110008-4"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203110008-4

2/2 025 UNCLASSIFIED PROCESSING DATE--20NOV70

CIRC ACCESSION NO--AP0126238

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE THERMAL EMISSION FROM THE (100) FACES OF SINGLE CRYSTAL SOLID SOLNS. IN W OF THE FOLLOWING METALS WAS STUDIED: RE (1 ATOM PERCENT), OS AND IR (2 ATOM PERCENT). HEATING OF W-IR2 CRYSTAL AT HIGH TEMPS. (2050-200DEGREESK), OR 20-30 HR LEADS TO THE APPEARANCE OF THE RICHARDSON CURVES OF 2 SECTIONS THAT ARE SHARPLY DIFFERENT IN SLOPE. AT 1800-2030DEGREESK, PHI SUBR EQUALS 4.54 EV, A SUB4 EQUALS 6 A-CM PRIME2 DEGREE PRIME2, AND AT 2030-200DEGREESK PHI SUB4 EQUALS 5.28 EV, A SUB4 EQUALS 250 A-CM PRIME2 DEG PRIME2. THE LOW TEMP. PHI SUBR IS PROBABLY THAT OF THE SECTIONS OF W SURFACE OCCUPIED BY W ATOM. IF THE CRYSTAL IS HEATED AT 1900DEGREESK FOR 15 HR THE RICHARDSON CURVE CHANGES INTO A STRAIGHT LINE WITH PHI SUB4 EQUALS 5.30 EV AND A SUBR EQUALS 420 A-CM PRIME2 DEGREE PRIME2. TEMP. DEPENDENCE OF THE WORK FUNCTION FOR W-OSL ALLOY AT 1700-2380DEGREESK INDICATES 2 SECTIONS: FOR 1700-2030DEGREESK PHI SUBR EQUALS 4.57 EV, A SUBR EQUALS 10 A-CM PRIME2 DEGREE PRIME2, FOR 2080-300DEGREESK, PHI SUBR EQUALS 5.12 EV, A SUBR EQUALS 190 A-CM PRIME2 DEGREE PRIME2. THE VALUE OF 4.57 EV CHARACTERIZES THE SECTIONS OF (100) FACE PACKED WITH W ATOMS.

FACILITY: TASHKENT. GOS. UNIV. IM. LENINA, TASHKENT, USSR.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203110008-4

1/2 006 UNCLASSIFIED PROCESSING DATE--27NOV70

TITLE--COMPARATIVE INVESTIGATION OF SOME SPECIES OF DIGITALIS TO DETERMINE THE CONTENT OF LANATOSIDES A, B, AND C -U-

AUTHOR-(03)-SMIRNOVA, N.D., BEZUKLADNIKOVA, N.F., LIBIZOV, N.I.

COUNTRY OF INFO--USSR

SOURCE--FARMATISYA, MOSCOW 1970, 19(2), 36-9

DATE PUBLISHED--------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--PROCESSED PLANT PRODUCT, CARDIOVASCULAR DRUG, CHEMICAL ANALYSIS

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3004/0652 STEP NO--UR/0466/70/019/002/0036/0039

CIRC ACCESSION NO--AP0131257

UNCLASSIFIED

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203110008-4

2/2 006 UNCLASSIFIED PROCESSING DATE--27NOV70

CIRC ACCESSION NO--AP0131257

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. OF 13 SPECIES OF FOXGLOVE (DIGITALIS), LAMARCK (CONTG. MAINLY A) AND ASH GREY (MAINLY C) WERE THE BEST AS RAW MATERIAL FOR DIGITOZIN, ACETYLDIGITOXIN, AND LANATOSIDE C. ALL 13 WERE POS. FOR LANATOSIDES (0.112-0.624PERCENT). THE RANGE FOR A WAS 0.065-0.601PERCENT, WITH HIGHEST IN LAMARCK; FOR B, 0.005-0.114, HIGHEST IN SMALL FLOWERED; AND FOR C, 0.003-0.150PERCENT, HIGHEST IN ASH GREY. AS COMPARED WITH BIENNIAL AND PERENNIAL, ANNUAL SPECIES CONTAINED THE LARGEST AMT. OF TOTAL A,B,C, WHICH DECREASED WITH AGE.

FACILITY: VSES. NAUCH.-ISSLED. INST. LEK. RAST., BITTSA, USSR.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203110008-4

USSR UDC: 597.0/5-15

SHENTYAKOVA, L.F., SHENTYAKOV, V.A., STEPANOV, V.S., SMIRNOVA, N.F., KUZMINA, V.V., BARONKIN, O.F., BAYEVA, G.D., ZAYTSEVA, K.N., Institute of Biology of Inland Waters Academy of Sciences, USSR

"The Effect of Alternating Current on Fish and Aquatic Invertebrates"

Moscow, Voprosy Ikhtiologiya (Problems of Ichthyology) Vol 10, No 3, 70, pp 506-518

Abstract: This study on the influence of alternating currents on fish in various stages of life and development, in many different inland waters, covers a period of several years, and includes a great variety of fish. Trawl fishing with alternating current, the effect of current on spawning, embryo, larvae and fry and the subsequent condition of varieties of fish and their reproductive capacity, were studied. Results (summarized in five tables and a graph) show that alternating currect in doses causing electronarcosis does not harm any fish in any phase of life and that from spawn to adult, fish develop normally. The catch of fish by alternating-current trawl is 125-263% above the normal. Studies on zooplankton and benthos showed that some organisms are not affected by low current intensities. Current of higher intensity stirred the little animals to a greater activity, and still higher induced electronarcosis. Plankton and benthos revive rapidly after withdrawal of current. Only in current doses 15-126 times that necessary to induce narcosis does death occur with about 10% of the plankton and benthos surviving.

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USSR

UDC 66.074.71546.56

LASKORIN, B. N., YUZHINA, A. D., SMIRNOVA, N. M., SADOVNIKOVA, G. I., NOVIKOV, YU. P., and VITKOVSKAYA, A. A.

"Ion Exchanging Fibers and Fabrics . III. Extraction of Gold From Cyanide Solutions and From Pulps by Means of Ion Exchanging Fabrics"

Leningrad, Radiokhimiya, Vol 15, No 2, 1973, pp 236-240

Abstract: The possibility of extracting gold from cyanide solutions and pulps obtained after leaching out the gold containing ores by means of ion exchange fabrics has been studied. The capacity for gold of the medium and strongly basic anion exchange fabrics under static conditions (0.8-1.4 mg/g) is comparable to the capacity of the granular sorbent AM (1.74 mg/g). Under identical conditions the fabrics absorb 5.6 times less admixtures than the resin AM, the rate of gold absorption being 20-30 times faster than by the resin. The fabrics are easily regenerated with hydrochloric solutions of thiourea. Under dynamics conditions 62.2% of gold is removed from the fabric by three volumes of the regenerating solution.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203110008-4

1/2 026 UNCLASSIFIED PROCESSING DATE--20NOV70

TITLE--DETERMINATION OF NEODYMIUM, SAMARIUM, AND EUROPIUM AS IMPURITIES IN LANTHANUM OXIDE BY A LUMINESCENCE OF METHOD -U-

AUTHOR-(03)-POLUEKTOV, N.S., SMIRDOVA, N.I., YEFRYUSHINA, N.P.

COUNTRY OF INFO--USSR

SOURCE--ZH. ANAL KHIM.: 25: 715-18 (APR 1970)

DATE PUBLISHED--------70

SUBJECT AREAS--CHEMISTRY, PHYSICS

TOPIC TAGS--LUMINESCENCE, NEODYMIUM, EUROPIUM, SAMARIUM, LANTHANUM OXIDE, CHLORIDE, OXYGEN COMPOUND, METAL CHEMICAL ANALYSIS, FLUORESCENCE SPECTRUM, CRYSTAL PHOSPHOR

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3001/0456 STEP NO--UR/0075/70/025/000/0715/0718

CIRC ACCESSION NO--AP0126208

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203110008-4"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203110008-4

2/2 026 UNCLASSIFIED PROCESSING DATE--20NOV70

CIRC ACCESSION NO--AP0126208

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. A LUMINESCENCE METHOD HAS BEEN DEVELOPED FOR DETERMINING NEODYMIUM, SAMARIUM, AND EUROPIUM IN LANTHANUM OXIDE OF HIGH PURITY BY RECORDING THE FLUORESCENCE SPECTRA OF CRYSTAL PHOSPHORS BASED ON LANTHANUM OXYCHLORIDE. THE SENSITIVITY OF THE METHOD IS N TIMES 10 PRIME NEGATIVE5 TO N TIMES 10 PRIME NEGATIVE4PERCENT.

FACILITY: INST. OF GENERAL AND INORGANIC CHEMISTRY, ODESSA.

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Crystals and Semiconductors

USSR

UDC: 548.33

GRANADCHIKOVA, B. G., SMIRNOVA, N. L., BELOV, N. V., Moscow State University imeni M. V. Lomonosov

"Polymorphic Transitions in the System of Structural Types of Elements"

Moscow, Kristallografiya, Vol 17, No 1, Jan/Feb 72, pp 117-130

Abstract: The authors consider family relationships between structural types on the basis of polymorphic transitions of simple substances -- elements. The α-Fe-Cu-Mg triangle lies at the base of the structural system of elements. Transitions from alpha iron to the other two structural types and from the copper type to the magnesium structural type are considered. In spite of gaps due to lack of experimental data, the general scheme fits the picture of the origin of structural types and the relations between them. Five illustrations, bibliography of twelve titles.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203110008-4

USSR

UDC 547.241:536.423.15

NAKHUTIN, I. Ye., SMIRNOVA, N. M., KRIVENKO, V. I. and LOSHAKOV, G. A.

"Vapor Pressure of Di-n-heptylphosphoric Acid and Tri-n-Octylphosphine Oxide and the Solubility of Iodine in These Compounds"

Leningrad, Zhurnal Obshchey Khimii, Vol 41, No 5, May 1971, pp 940-943

Abstract: Data on the vapor pressures of di-n-heptylphosphoric acid and tri-n-octylphosphine oxide are provided, in addition to boiling points and isosteric temperatures of evaporation from the liquid phase. The compensation method was used to plot vapor pressure curves. The solubility of iodine in the liquid phase of both compounds was studied. Although organophosphorous compounds rarely act as acceptors in a chemical reaction, the specific compounds considered show characteristics of electrophilic bonding with iodine. In the case of di-n-heptylphosphoric acid, iodine solubility increases with rising temperatures within the range of 80-180°, while for tri-n-octylphosphine oxide, it remains constant over the same range.

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USSR

NEL'NIKOV, N. N., MANDEL'BAUM, YA. A., ABRAMOVA, G. L., SMIRNOVA, N. S., GAR, K. A., BOKAREV, YE. M., ORLOVA, V. I., and MAKEYEVA, V. F.

"Synthesis and Pesticidal Activity of Dithiophosphoric Acid Amides"

V sb. Khim. sredstva zashchity rast. (Chemical Plant Protective Agents -- collection of works), No 2, Moscow, 1972, pp 210-214 (from RZh-Khimiya, No 19, Oct 73, Abstract No 19N479)

Translation: Studying the relationship of structure-pesticidal activity a series of amides $R'R''N(ClCH_2CH_2O)P(S)SR'''$ (I) has been synthesized and evaluated (R=alkyl; R'=H or alkyl; R'''=alkyl, Ph, substituted phenyl) the compounds showing insecticidal and acaricidal activity. The following I have been obtained (R', R'', R''', $d_4^{20}$, $n_D^{20}$, m.p. °C being reported):

Me, H, Pr, 1.2210, 1.5450, -; Et, H, Pr, 1.1956, 1,5380, -; Pr, H, Pr, 1.1660, 1.5300, -; iso-Pr, H, Pr, 1.1735, 1.5318, -; Bu, H, Pr, 1.1485, 1.5320, -; iso-Bu, H, Pr, 1.1505, 1.5280, -; Me, H, Bu, 1.2018, 1.5410, -; Et, H, Bu, 1.1795, 1.5360, -; Pr, H, Bu, 1.1500,

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MEL'NIKOV, et al., V sb. Khim sredstva zashchity rast., No 2, Moscow, 1972, pp 210-214

1.5285, -; iso-Pr, H, Bu, 1.1295, 1.5310, -; Bu, H, Bu, 1.1285, 1.5280, -; iso-Bu, H, Bu, 1.1285, 1.1545, -; Me, Me, Pr, 1.2123, 1.5450, -; Et, Et, Pr, 1.1313, 1.5180, -; Pr, Pr, Pr, 1.0831, 1.5040, -; Bu, Bu, Pr, 1.0601, 1.5031, -; Me, Me, iso-Pr, 1.1900, 1.5325, -; Et, Et, iso-Pr, 1.1233, 1.5160, -; Pr, Pr, iso-Pr, 1.0910, 1.5080, -; Bu, Bu, iso-Pr, 1.0732, 1.5090, -; Me, Me, Bu, 1.2133, 1.5500, -; Et, Et, Bu, 1.1123, 1.5160, -; Pr, Pr, Bu, 1.0827, 1.5160, -; Bu, Bu, Bu, 1.0581, 1.5060, -; Me, H, Ph, -, -, 124; Et, H, Ph, -, -, 65; Pr, H, Ph, -, -, 60; iso-Pr, H, Ph, -, -, 74-5; Bu, H, Ph, -, -, 45; iso-Bu, H, Ph, -, -, 78-9; Me, H, $C_6H_4Cl$-4, -, -, 118-9; Et, H, $C_6H_4Cl$-4, -, -,

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USSR

MEL'NIKOV, et al., V sv. Khim sredstva zashchity rast., No 2, Moscow, 1972 pp 210-214

71-2; Pr, H, $C_6H_4Cl$-4, -, -, 59-60; iso-Pr, H, $C_6H_4Cl$-4, -, -, 60-1; Bu, H, $C_6H_4Cl$-4, -, -, 60-1; iso-Bu, H, $C_6H_4Cl$-4, -, -, 61-62; Me, Me, $C_6H_4Cl$-4, 1.3632, 1.6081, -; Et, Et, $C_6H_4Cl$-4, 1.2700, 1.5705, -; Pr, Pr, $C_6H_4Cl$-4, 1.2261, 1.5565, -; Bu, Bu, $C_6H_4Cl$-4, 1.1821, 1.5530, -; Me, Me, Ph, 1.2561, 1.5720, -; Et, Et, Ph, 1.2223, 1.5675, -; Pr, Pr, Ph, 1.1700, 1.5520, -; Bu, Bu, Ph, 1.1610, 1.5500, -; Me, Me, $C_6H_3Cl_2$-2,5, -, -, 74-75; Et, Et, $C_6H_3Cl_2$-2,5, -, -, 70-1; Pr, Pr, $C_6H_3Cl_2$-2,5, -, -, 66-7; Bu, Bu, $C_6H_3Cl_2$-2,5, 1.2763, 1.5660, -; Me, H, Ph, -, -, 74-5; Et, H, Ph, -, -, 73-4; Pr, H, Ph, -, -, 64-5; iso-Pr, H, Ph, -,

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USSR

MEL'NIKOV, N. N., et al., V sb. Khim. sredstva zashchity rast., No 2, Moscow, 1972, pp 210-214

-, 69-70; Bu, H, Ph, -, -, 59-60; iso-Bu, H, Ph, -, -, 83-4; Me, Me, Ph, -, -, 78-9; Et, Et, $C_6H_5$, -, -, 61-3; Bu, Bu, $C_6Cl_5$, -, -, 40-1; Me, H, $C_6H_4NO_2$-4, -, -, 69-70; Et, H, $C_6H_4NO_2$-4, -, -, 65-6; Pr, H, $C_6H_4NO_2$-4, -, -, 62-3; iso-Pr, H, $C_6H_4NO_2$-4, -, -, 60-1; Bu, H, $C_6H_4NO_2$-4, -, -, 62-3; iso-Bu, H, $C_6H_4NO_2$-4, -, -, 60-2; Me, Me, $C_6H_4NO_2$-4, -, -, 73-4; Et, Et, $C_6H_4NO_2$-4, -, -, 70-1; Pr, Pr, $C_6H_4NO_2$-4, -, -, 69-70; Bu, Bu, $C_6H_4NO_2$-4, -, -, 65-6.

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USSR UDC 541.13:542.91:546.28'131:547.241

KARTSEV, G. N., ALEYNPKOV, V. I., SMIRNOVA, N. V., GLUBOKOV, YU. M., and SHCHERBAKOVA, E. S., Institute of Metallurgy imeni A. A. Baykova, Academy of Sciences USSR and Moscow Institute of Fine Chemical Technology imeni M. V. Lomonosova

"Dielectric Study of the Interaction of Silicon, Germanium, and Tin Tetrachlorides With n-Tributylorthophosphate"

Moscow, Seriya Khimicheskaya, 9, 1973, pp 1972-1975

Abstract: The title study was carried out in order to establish the thermodynamic properties and structures formed during the reaction of these tetrachlorides with tributylorthophosphate (TBP) by a dielectrometric titration. No significant reaction was observed in the $SiCl_4$-TBP and $GeCl_4$-TBP systems. In the $SnCl_4$-TBP, stepwise molecular complexes were formed having ratios of reactants of 1:1 and 1:2. Equilibrium concentrations were calculated by computer for the complex-forming reactions between $SnCl_4$ and TBP. From these equilibrium constants were determined. The dipole moments were measured for the complexes and related to the specific conformation of the complex.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203110008-4

USSR UDC 577.1:615.7/9

ANTIPOV, V. V., VASIN, M. V., DAVYDOV, B. I., SAKSONOV, P. P., and SMIRNOVA, N. V.

"Sensitivity of Mice to Radioprotectors From the Amino Thiol and Indolyl Alkyl Amine Series During the Aftereffect of Transverse Overloads"

V sb. Probl. kosmich. biol. (Problems in Space Biology -- Collection of Works), Vol 14, Moscow, "Nauka" (Science), 1971, pp 53-57 (Russian) (from RZh-Biologicheskaya Khimiya, No 20, 25 Oct 71, Abstract No 20F1713 from summary)

Translation: Mice were subjected to the action of overloads (centrifugation; 10 and 30 units 15 minutes, 40 units 10 minutes), and cystamine dihydrochloride (I; 180-350 mg/kg), S,β-aminoethylisothiouronium bromide (AET; 160-220 mg/kg), 5-methoxytryptamine (II; 180-240 mg/kg) or monosodium salt of β-aminoethylthiophosphoric (III; cystaphos; 800-1200 mg/kg) was injected intraperitoneally five minutes to 24 hours later. A slight increase in resistance to the amino thiols (I, III) was noted immediately after centrifugation, and a reliable increase in sensitivity to I and AET in 30 minutes; the reaction of the animals returned to normal in one hour. II, administered one day after overload, raised the animals' resistance. The animals' resistance to I rose with an increase in the intensity of the overloads.

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USSR

UDC 615.216.5:[547.586+547.581.2

ARENDARUK, A. P., SKOLDINOV, A. P., [redacted], KHARKEVICH, D. A., TSVETKOVA, G. I., and SHMARYAN, M. I., Scientific Research Institute of Pharmacology, Acad. Med. Sc. USSR, Moscow, I Moscow Medical Institute Imeni I. M. Sechenov

"Curareform Activity of the Monoquaternary Salts Containing the Adamantyl Radical at the Nitrogen Atom"

Moscow, Khimiko-Farmatsevticheskiy Zhurnal, Vol 6, No 4, Apr 72, pp 8-13

Abstract: A series of methiodides of alkylaminoesters of benzoic and cinnamic acids has been synthesized in an attempt to lower the depolarizing neuromuscular blocking activity of the parent compound. Replacing a methyl group at the nitrogen atom with an i-adamantyl group did indeed change the depolarizing blocking of parent compounds to nondepolarizing activity; at the same time the curareform activity dropped 200-300 fold. Changes in the length of the alkyl radical between the acid group and nitrogen atom as well as substituents on the aryl ring showed no effect on this activity. The modification due to the adamantyl radical appeared to be general in nature. It is proposed that this specificity is due to the high lypophilic property of the adamantyl radical rather than to its bulk alone.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203110008-4

1/2 009 UNCLASSIFIED PROCESSING DATE--30OCT70

TITLE--PHYSIOLOGICAL STUDIES ON ERYTHROMYCIN PRODUCING ORGANISM ANTINOMYCES ERYTHREUS, STRAIN 1-EPHR -U-

AUTHOR-(04)-LOBANOVA, V.V., GRABOVSKAYA, O.Z., SMIRNOVA, N.V., BRINBERG, S.L.

COUNTRY OF INFO--USSR

SOURCE--ANTIBIOTIKI, 1970, VOL 15, NR 6, PP 505-509

DATE PUBLISHED--------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--ACTINOMYCES, ERYTHROMYCIN, FERMENTATION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--2000/1869 STEP NO--UR/0297/70/015/006/0505/0509

CIRC ACCESSION NO--AP0125480

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203110008-4"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203110008-4

2/2 009 UNCLASSIFIED

CIRC ACCESSION NO--AP0125480 PROCESSING DATE--30OCT70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. PHYSIOLOGY OF TWO STRAINS OF ACTINOMYCES ERYTHREUS PRODUCING ERYTHROMYCIN WERE STUDIED COMPARATIVELY. THE PHAGE RESISTANT STRAIN IAE-1-EPHR DIFFERED FROM THE INITIAL STRAIN LS-E2577 BY MORE INTENSIVE SYNTHESIS OF ERYTHROMYCIN, AS WELL AS BY ITS ATTITUDE TO MINERAL NITROGEN. NO SIGNIFICANT PHYSIOLOGICAL DIFFERENCES BETWEEN THE STRAINS WERE OBSERVED WITH RESPECT TO THEIR ATTITUDE TO THE CARBON SOURCES, CONCENTRATIONS OF MINERAL PHOSPHORUS AND CORN STEEP LIQUOR. OPTIMAL RATIO OF THE FERMENTATION MEDIUM COMPONENTS OPTIMAL FOR STRAIN I-I-EPHR WAS DETERMINED. THE ANTIBIOTIC YIELD ON THE MEDIUM IN FLASKS AND PILOT PLANT FERMENTORS REACHED 2000 UNITS-ML. THE EFFECT OF TEMPERATURE, AMOUNT OF THE INOCULUM AND CONCENTRATION OF WHALE OIL ON ERYTHROMYCIN BIOSYNTHESIS BY STRAIN I-EPHR WAS FOUND. STRAIN I-EPHR DIFFERED FROM STRAIN 2577 IN ITS MICROMORPHOLOGY BY FORMATION OF HYPHAE OF THE SECONDARY GROWTH. FACILITY: ALL UNION INSTITUTE FOR ANTIBIOTICS, MOSCOW AND SVERDLOVSK PLANT OF MEDICAL PREPARATIONS.

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203110008-4"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203110008-4

1/2 018 UNCLASSIFIED PROCESSING DATE--30OCT70

TITLE--INCORPORATION OF RADIOACTIVELY LABELED PRECURSORS INTO HISTONES AND DNA OF REGENERATING RAT LIVER -U-

AUTHOR-(03)-ORLOVA, L.V., SMIRNOVA, N.V., RODIONOV, V.M.

COUNTRY OF INFO--USSR

SOURCE--TSITOLOGIYA 1970, 12(1), 111-14

DATE PUBLISHED--------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--RADIOACTIVE TRACER, DNA, ORGAN REGENERATION, MALE RAT, LIVER, LEUCINE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1996/0458 STEP NO--UR/9053/70/012/001/0111/0114

CIRC ACCESSION NO--AP0117694

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203110008-4"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203110008-4

2/2 018 UNCLASSIFIED PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0117694

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. MALE RATS (WT. 130-200 G) WERE KILLED 6, 12.5, 14, 15, 17, AND 18 HR AFTER PARTIAL HEPATECTOMY; 30 MIN BEFORE SACRIFICE, THYMIDINE,2,PRIME14C AND LEUCINE,2,PRIME3H (20 AND 40 MUCI-100 G, RESP.) WERE INJECTED I.P. FROM THE INCORPORATION OF THE LABELED COMPDS. INTO SOL. AND PRECIPITABLE HISTONES AND DNA, IT WAS FOUND THAT THE SYNTHESIS OF HISTONES STARTED BETWEEN 12.5 AND 14 HR, WHILE THE SYNTHESIS OF DNA BEGAN 15 HR AFTER HEPATECTOMY.

FACILITY: LAB. CELL BIOCHEM., INST. BIOL. MED. CHEM., MOSCOW, USSR.

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203110008-4"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203110008-4

1/2 029 UNCLASSIFIED PROCESSING DATE--18SEP70

TITLE--SEROLOGICAL EXAMINATIONS OF SOME SPECIES OF WILD AND DOMESTIC BIRDS FOR PREVALENCE OF INFECTIOUS AND ONCOGENIC AVIAN VIRUSES -U-

AUTHOR-(05)-VORONIN, YE.S., OZAGUROV, S.G., SMIRNOVA, N.YE., MOROZOV, K.V., YELEKOYEV, K.A.

COUNTRY OF INFO--USSR

SOURCE--VOPROSY VIRUSOLOGII, 1970, NR 2, PP 213-217

DATE PUBLISHED--------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--BIRD, SEROLOGIC TEST, VIRUS, ANTIBODY, LEUKEMIA

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1990/0736 STEP NO--UR/0402/70/000/002/0213/0217

CIRC ACCESSION NO--AP0108942

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203110008-4"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203110008-4

2/2 029 UNCLASSIFIED PROCESSING DATE--18SEP70

CIRC ACCESSION NO--AP0108942

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. SEROLOGICAL EXAMINATION OF SERUM SPECIMENTS FROM SOME SPECIES OF DOMESTIC AND WILD BIRDS WAS CARRIED OUT IN ORDER TO DETERMINE THE PRESENCE OF ANTIBODY FOR SOME ONCOGENIC AND INFECTIOUS AVIAN VIRUSES. WIDE PREVALENCE OF LEUKEMIA GROUP OF VIRUSES WAS ESTABLISHED IN ALL THE STRAINS AND BREEDS OF CHICKEN EXAMINED. EXAMINATION OF SERA FROM JAPANESE QUAIL FROM KHOSTA AND MAIKOP FARMS REVEALED NO ANTIBODY EITHER TO INFECTIOUS OR TO ONCOGENIC VIRUSES OF BIRDS. SURVEY OF JAPANESE QUAIL FARMS CLOSELY CONTACTING WITH CHICKEN FARMS ESTABLISHED CIRCULATION OF AGENTS FROM AVIAN LEUKEMIA GROUP.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203110008-4

Veterinary Medicine

USSR

UDC 576.858.095.38:598.2

VORONIN, Ye. S., DZAGUROV, S. G., SMIRNOVA, N. Ye., MOROZOV, K. V., and YELEKOYEV, K. A., State Control Institute of Medical Biological Preparations imeni L. A. Tarasevich, Moscow

"Serological Examination of Some Species of Wild and Domestic Birds in Regard to the Spread of Infectious and Oncogenic Avian Viruses"

Moscow, Voprosy Virusologii, No 2, Mar/Apr 70, pp 213-217

Abstract: Serological examination of serum specimens from some species of domestic and wild birds was carried out in order to determine the presence of antibodies to some oncogenic and infectious avian viruses. A wide prevalence to the leukemia group of viruses was found in all strains and breeds of fowl examined. Examination of sera from Japanese quail from Khosta and Maykop farms revealed no antibodies either to infectious or to oncogenic avian viruses. Survey of Japanese quail farms in close proximity to chicken farms established the circulation of agents from the avian leukemia group.

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USSR

Inorganic Compounds

UDC 661.143

SMIRNOVA, O. M. and FEDOSOV, A. YE.

"Production of Calcium Sulfide for Luminescent Compositions"

V s. Monokristally i tekhnika (Single Crystals and Technology -- Collection of Works), Vyp 5, Khar'kov, 1971, pp 196-198 (from RZh-Khimiya, No 13, 10 Jul 72, Abstract No 13L154 from summary)

Translation: An arrangement is described for obtaining calcium sulfide by the reduction of $CaSO_4$ with hydrogen. The firing ampoule in which the reduction occurs, rotates, the $CaSO_4$ powder is stirred, and as a result of this there is an increase in the contact surface of the gas phase of the powder. The resultant calcium sulfide contains 97-99 percent of the principal substance and is suitable for the preparation of luminescent compositions.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203110008-4

1/2 029 UNCLASSIFIED PROCESSING DATE--27NOV70

TITLE--SYNTHESIS AND STUDY OF PHOSPHORUS CONTAINING POLYCARBONATES BASED ON PHOSGENE, DIAN, AND METHYLPHOSPHONIC ACID DICHLORIDE -U-

AUTHOR-(03)-SMIRNOVA, O.V., SAMSONIYA, SH.A., KOLESNIKOV, G.S.

COUNTRY OF INFO--USSR

SOURCE--VYSOKOMOL. SOEDIN., SER. B 1970, 12(5), 384-7

DATE PUBLISHED--------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--CHEMICAL SYNTHESIS, CARBONATE, PHOSPHATE ESTER, PHOSGENE, CHLORINATED ORGANIC COMPOUND, X RAY ANALYSIS, IR SPECTRUM

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3006/1230 STEP NO--UR/0460/70/012/005/0384/0387

CIRC ACCESSION NO--AP0134904

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203110008-4"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203110008-4

2/2 029 UNCLASSIFIED PROCESSING DATE--27NOV70

CIRC ACCESSION NO--AP0134904

ABSTRACT/EXTRACT--(U) GP-O- ABSTRACT. THE POLYCONDENSATION OF (P HOC SUB6 H SUB4) SUB2 CME SUB2 (I) MEPOCL SUB2, AND CLCL SUB2 AT THE INTERFACE BETWEEN THE ALK. AND ORG. PHASES GAVE POLYCARBONATES CONTG. OP(:O)MEO UNITS. THE POLYMERS CONTG. THESE UNITS ABSORB MORE O IN VACUUM THAN THE POLYCARBONATES BASED ON COCL SUB2 AND I ONLY. THIS IS DUE TO THE REACTIONS OF O WITH THE H ATOMS OF ME GROUPS. X RAY DIFFRACTOMETRY AND IR SPECTROSCOPY SHOWED THAT THE INTRODUCTION OF P DOES NOT SUBSTANTIALLY ALTER THE CRYSTALLINITY AND THE CRYSTAL TYPE OF THESE POLYCARBONATES. FACILITY: MOSK. KHIM.-TEKHNOL. INST. IM. MENDELEEVA, MOSCOW, USSR.

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APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203110008-4"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203110008-4

UNCLASSIFIED PROCESSING DATE--04DEC70

1/2 017

TITLE--SYNTHESIS OF COLORED POLYESTERS BASED ON 2,2,BIS 4,HYDROXYPHENYL PROPANE AND PHTHALIC ACIDS -U-

AUTHOR-(04)-SMIRNOVA, O.V., LAMM, V.N., MIKITAYEV, A.K., KOLESNIKOV, G.S.

COUNTRY OF INFO--USSR

SOURCE--VYSOKOMOL. SOEDIN., SER. B 1970, 12(4), 313-16

DATE PUBLISHED--------70

SUBJECT AREAS--CHEMISTRY, MATERIALS

TOPIC TAGS--INTERFACIAL POLYCONDENSATION, HYDROXYL RADICAL, NAPHTHALENE, AZO COMPOUND, CARBONATE, POLYESTER RESIN, PROPANE, COLOR

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3007/0736 STEP NO--UR/0460/70/012/004/0313/0316

CIRC ACCESSION NO--AP0136175

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203110008-4"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203110008-4

2/2 017 UNCLASSIFIED PROCESSING DATE--04DEC70

CIRC ACCESSION NO--AP0136175

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. COLORED (ORANGE) POLYESTERS WERE PREPD. BY INTERFACIAL POLYCONDENSATION IN C SUB2 H SUB2 CL SUB4 OF 2,2,BIS(4,HYDROXYPHENYL)PROPANE, BIS(4,(2,HYDROXY, 1,NAPHTHYLAZO)PHENYL)CARBONATE (I), AND TEREPHTHALOYL OR ISOPHTHALOYL CHLORIDES AT 20DEGREES. THE M.P. AND REDUCED VISCOSITIES OF BOTH POLYESTERS WERE DETD. FACILITY: MOSK. KHIM.-TEKHNOL. INST. IM. MENDELEEVA, MOSCOW, USSR.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203110008-4

1/2 024 UNCLASSIFIED

TITLE--SYNTHESIS OF POLYCARBONATES MODIFIED WITH SILICON -U- PROCESSING DATE--30OCT70

AUTHOR-(05)-SMIRNOVA, O.V., SIDNEV, A.I., BURAKOVA, T.P., KOROVINA, YE.V., KOLESNIKOV, G.S.

COUNTRY OF INFO--USSR

SOURCE--VYSOKOMOL. SOEDIN. SER. A 1970, 12(4), 917-21

DATE PUBLISHED----70

SUBJECT AREAS--CHEMISTRY, MATERIALS

TOPIC TAGS--HYDROXYL RADICAL, BENZENE DERIVATIVE, PROPANE, PHOSGENE, ORGANOSILICON COMPOUND, POLYCARBONATE RESIN, POLYSILOXANE, ELASTICITY, THERMAL STABILITY

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--2000/0665

STEP NO--UR/0459/70/012/004/0917/0921

CIRC ACCESSION NO--AP0124337

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203110008-4"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203110008-4

2/2 024 UNCLASSIFIED

CIRC ACCESSION NO--AP0124337 PROCESSING DATE--30OCT7

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE REACTION OF 2,2,BIS(4,HYDROXYPHENYL)PROPANE WITH COCL SUB2, ME SUB2 SICL SUB2, OR THEIR MIXTS. IN PYRIDINE,CH SUB2 CL SUB2 GAVE, RESP., A CRYST. POLYCARBONATE (I), POLYSILOXANES, OR AMORPHOUS MODIFIED I (II). THE INCREASE OF SI CONTENT IN II INCREASED ITS ELASTICITY BUT DECREASED THE MELT FLOW TEMP. AND THERMAL STABILITY. FACILITY: MOSK. KHIM. TEKHNOL. INST. IM. MENDELEEVA, MOSCOW, USSR.

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203110008-4"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203110008-4

1/2 013 UNCLASSIFIED PROCESSING DATE--02OCT70

TITLE--EFFECT OF SOME PHYSICAL FACTORS ON THE INTERFACIAL POLYCONDENSATION OF 2,2-BIS(4-HYDROXYPHENYL) PROPANE AND PHOSGENE -U-

AUTHOR-(03)-SMIRNOVA, O.V., KHURVAT, E., LOSEV, I.P.

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COUNTRY OF INFO--USSR

SOURCE--VYSOKOMOL. SOEDIN., SER. B 1970, 12(3), 208-11

DATE PUBLISHED--------70

SUBJECT AREAS--CHEMISTRY, MATERIALS

TOPIC TAGS--INTERFACIAL POLYCONDENSATION, HYDROXYL RADICAL, BENZENE DERIVATIVE, PROPANE, PHOSGENE, POLYCARBONATE, PHENOL, MONOMER, MOLECULAR WEIGHT

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1989/0257 STEP NO--UR/0460/70/012/003/0208/0211

CIRC ACCESSION NO--AP0106913

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203110008-4"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203110008-4

2/2 013

UNCLASSIFIED

CIRC ACCESSION NO--AP0106913 PROCESSING DATE--02OCT70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE INFLUENCE OF THE ORG. PHASE (HEPTANE, CCL SUB4, BENZENE OF CH SUB2 CL SUB2) AND MONOMER CONCN. ON MOL. WT. AND YIELD OF THE POLYCARBONATE (I) FROM INTERPHASE POLYCONDENSATION OF BISPHENOL A AND COCL SUB2 CATALYZED BY NAOH AND THE RATE OF COCL SUB2 HYDROLYSIS IN THESE SOLVENTS WERE STUDIED. AT 0.1 MOLE-L. CONCNS. OF EACH MONOMER, THE MOL. WT. OF I WAS 5-8 TIME MORE IN SOLVENTS THAT DID NOT DISSOLVE NOR SWELL I (HEPTANE, CCL SUB4 OR 7:3 VOL. MIXTS. OF HEPTANE AND CH SUB2 CL SUB2) THAN IN BENZENE OR CH SUB2 CL SUB2. HOWEVER, AT 0.7 MOLE-L. MONOMER CONCNS., I PREPD. WITH CCL SUB4 AND CH SUB2 CL SUB2 AS THE ORG. PHASE HAD MOL. WTS. 15,400 AND 15,000 COMPARED WITH 58,000 AND 7500 AT 0.1 MOLE-L. MONOMER CONCNS. CESSATION OF GROWTH OF I MOL. WT. AND YIELD OCCURRED IN HEPTANE, CCL SUB4, AND BENZENE AT SIMILAR TO 25, 5, AND 10 MIN, RESP., BU AT SIMILAR TO 5 MIN AND LARGER THAN 45 MIN IN CH SUB2 CL SUB2. HYDROLYSIS OF COCL SUB2 WAS 100PERCENT IN ALL 4 SOLVENTS WITHIN 90 SEC. APPARENTLY, THE POLYMER FILM FORMING AT THE INTERFACE IMPEDED MIGRATION OF COCL SUB2 TO THE REACTION ZONE AND THE CHARACTER OF THIS HINDRANCE DEPENDS LARGELY ON THE NATURE OF THE ORG. PHASE.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203110008-4

1/2 014 UNCLASSIFIED PROCESSING DATE--09OCT70

TITLE--EFFECT OF TERTIARY AMINES AND QUATERNARY AMMONIUM SALTS ON THE INTERFACIAL POLYCONDENSATION OF 2,2-BIS(4-HYDROXYPHENYL)PROPANE AND

AUTHOR-(03)-SMIRNOVA, O.V., KHORVAT, E., LOSEV, I.P.

COUNTRY OF INFO--USSR

SOURCE--VYSOKOMOL. SOEDIN. SER. A 1970, 12(2), 424-9

DATE PUBLISHED--------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--POLYMERIZATION RATE, HYDROXYL RADICAL, BENZENE DERIVATIVE, PROPANE, PHOSGENE, INTERFACIAL POLYCONDENSATION, SURFACE ACTIVE AGNET, POLYCARBONATE, TERTIARY AMINE, QUATERNARY AMMONIUM SALT

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1989/0249 STEP NO--UR/0459/70/012/002/0424/0429

CIRC ACCESSION NO--AP0106905

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203110008-4"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203110008-4

2/2 014

CIRC ACCESSION NO--AP0106905 UNCLASSIFIED PROCESSING DATE--09OCT70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THEPOLYNM. RATE OF (4-HOC SUB6 H SUB4)SUB2 CME SUB2 WITH COCL SUB2 IN ALK. SOLN. IS ACCELERATED BY ADDN. OF ET SUB3 N. PHNET SUB2, PHN(CH SUB2 PH)SUB2, PHCH SUB2 NET SUB3 CL, OR TRIETHYLOCTADECYLAMMONIUM CHLORIDE. THESE COMPDS. ACT NOT ONLY AS SURFACE ACTIVE AGENTS PROMOTING POLYMN AT THE INTERFACE BETWEEN ALK. AND ORG. PHASES, BUT ALSO FORM SOL. SALTS, SUCH AS R SUB4 N PRIME POSITIVE (4-OC SUB6 H SUB4 CME SUB2 C SUB6 H SUB4 O SUB2 C) SUBN CL, WHICH REACT FURTHER WITH THE GROWING POLYCARBONATE IN THE AQ. PHASE AWAY FROM THE INTERFACE. ADDN. OF THESE COMPDS. INCREASES THE MOL. WT. OF THE POLYCARBONATES.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203110008-4

USSR

UDC 616-058.9:355.3-008:612.591.1

LUKIN, V. K., and SMIRNOVA, O. Ya.

"Changes in the Functional States of Operators Working in Hot Humid Climates"

Moscow, Voyenno-Meditsinskiy Zhurnal, No 4, 1973, pp 62-63

Abstract: The functional states of the cardiovascular system were analyzed in the case of 18-22-year-old operators working under hot humid conditions, where the external air temperature ranged from 25 to 30° with a relative humidity of 60-80%. In the workshops the temperatures ranged from 30-36.6° and, in individual cases reached 40° with a relative humidity range of 73-82%. Analysis of the results showed that elevated temperatures decreased grip strength by 3-5 kg, facial hyperemia appeared, respiration was accelerated, profuse perspiration was present, and complaints of headache and momentary vertigo were common. In addition, the heart rate was increased from 70±1.9 to 77 ±3.9 beats/min, the pulse pressure was elevated, and statistically significant decreases in the systolic (from 114±1.8 to 105±2.5 mm Hg) and diastolic (from 77±0.06 to 66±0.06 mm Hg) blood pressures were evident. At 40° the sublingual temperature rose to 38-38.5°, the heart rate accelerated to 110/min or more, and arterial blood pressure fell from 114/77 to 100/70 (in some cases the fall was outside the normal range, 90/60). Following work under such conditions neurotic changes were noted (general weakness, dull headaches, sleep disturbances, abnormal

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203110008-4

USSR

LUKIN, V. K. and SMIRNOVA, O. Ya., Voyenno-Meditsinskiy Zhurnal, No 4, 1973, pp 62-63

sensations in the heart area) which last for 12 h and indicate overstress of the thermoregulatory mechanisms. The data show that lack of air conditioning may lead to significant functional changes as expressed by changes in body temperature and increased lability of the cardiovascular system, and the appearance of neurotic reactions.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203110008-4

USSR

UDC 612.388.014.46-087.45

SMIRNOVA, R. D.; NOVIKOV, Yu. V.; YUDINA, T. V.; KOS'MINA, L. F.; TAMBOVTSEVA, A. M.; Candidates of Medical Sciences, Moscow Scientific Research Institute of Hygiene imeni F. F. Erisman

"Permeability of the Histohematic Barriers and Some Biochemical Indices After the Combined Effect of a Number of Substances"

Moscow, Gigiyena i Sanitariya, No 7, 1971, pp 19-23

Abstract: Radioisotope ($P^{32}$) study was conducted of the effects of chronic administration of six substances (isopropylbenzene and its hydroperoxide, propylbenzene, butylbenzene, acetophenone, and dimethylphenylcarbinol) on the permeability of various rat organs (liver, kidneys, spleen, pancreas, thyroid, adrenals, testes, hypophysis), blood catalast activity, vitamin (C and carotene) metabolism, and liver function. The combination of organic compounds was found to decrease the permeability of the histohematic barriers of the hypophysis and testes and, to a

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203110008-4

USSR

SMIRNOVA, R. D., Gigiyena i Sanitariya, No 7, 1971, pp 19-23

lesser extent, spleen and kidneys. Catalase activity and vitamin C content was lower while the carotene content was higher in the experimental animals than in the controls. Liver function (bromsulphalein test) was also impaired. However, the animals' external appearance, behavior, and weight changes were indistinguishable from the control during the nine months of the experiment.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203110008-4

007

UNCLASSIFIED

TITLE--COMPARATIVE EFFECTIVENESS AND BALANCE OF POTASSIUM IN FIELD AND FODDER CROP ROTATIONS ON SOD PODZOLIC SOILS OF THE MOSCOW REGION -U-

PROCESSING DATE--04DEC70

AUTHOR-(02)-PCHELKIN, V.U., SMIRNOVA, R.S.

COUNTRY OF INFO--USSR

SOURCE--AGROKHIMIYA 1970, (4), 43-9

DATE PUBLISHED-------70

SUBJECT AREAS--AGRICULTURE

TOPIC TAGS--SOIL STRUCTURE, AGRICULTURE CROP, MINERAL FERTILIZER, POTASSIUM FERTILIZER, PLANT PHYSIOLOGY

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY FICHE NO----FD70/605001/D11 STEP NO--UR/0485/70/000/004/0043/0049

CIRC ACCESSION NO--AP0139359

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203110008-4"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203110008-4

2/2 007 UNCLASSIFIED

CIRC ACCESSION NO--AP0139359 PROCESSING DATE--04DEC70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE TITLED STUDY WAS MADE ON ROTATING FIELD AND FORAGE CROPS DURING 1962-67. THE FIELD CROPS WERE CULTIVATED IN THE ORDER: WINTER WHEAT, POTATOES, WINTER WHEAT, SPRING WHEAT AND CLOVER, AND FINALLY CLOVER ALONE. THE FODDER CROPS WERE: CORN, BEET, AND FEED GRADE BEANS. THE AGROCHEM. FEATURES OF THE SOIL, CLIMATE OF THE REGION, AND DETAILS OF TREATMENT OF THE SOIL WITH LIMESTONE AND N-P-K FERTILIZERS FOR EACH CROP ARE MENTIONED. THE MATERIAL BALANCES OF N-P-K NUTRIENTS FOR EACH CROP IS GIVEN. USE OF K FERTILIZER GREATLY INCREASED THE YIELDS FOR BOTH TYPES OF CROPS. WHEN CATTLE MANURE WAS USED, THE EFFECTIVENESS OF K ON THE YIELD DECREASED SIZABLY. PERCENT UTILIZATION OF K RANGED 32-44PERCENT FOR THE FIELD CROPS, AND WAS 50PERCENT IN THE ABSENCE OF LIMESTONE; FOR THE FODDER CROPS IT WAS SIMILAR TO 50PERCENT. FOR BOTH THE TYPE OF CROPS, THE SOIL FERTILITY INCREASED PROGRESSIVELY WITH FURTHER CULTIVATION. STOPPAGE OF K FERTILIZERS IN FEED DOSES IMMEDIATELY REDUCED THE YIELD OF THE NEXT CROP IN BOTH CASES, AND ALSO REDUCED THE CONTENT OF AVAILABLE K IN THE SOIL IN ALL CASES. THE PLANTS DID NOT REMOVE ALL K FED TO THE SOIL, AND THIS LED TO MOBILIZATION AND CONSEQUENT ACCUMULATION OF K IN CERTAIN SOIL LAYERS. AN EXPTL. PROCEDURE IS DESCRIBED TO DET. SUCH ACCUMULATION OF K IN THESE SOILS. FACILITY: VSES. INST. UDOBR. AGROPOCHVOVED., MOSCOW, USSR.

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Acc. Nr.: AN0045475

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International Legal Implications of Seabed Exploration Examined

(Summary: "The Ocean and Law," by S. Smirnov; Moscow, Izvestiya, 8 January 1970, p. 6)

Jurist S. Smirnov examines some of the legal questions which have arisen as a result of the fact that mineral resources in the seabeds beyond the jurisdiction of states are becoming more easily exploitable. He notes that the Geneva Convention of 1958 did not firmly establish the outer limits of the continental shelf, and this presents a serious obstacle to the development of legal norms for the exploitation of the ocean bottom. He believes that proposals to establish an "international mechanism" that would supervise the seabeds beyond the continental shelf and license certain areas to states for exploration are simply an attempt to transfer to intergovernmental relations, the capitalist practice of auctioning exploration rights to monopolies. Smirnov concludes that, while there may be a need to create special norms and principles to further international cooperation in the investigation and use of seabeds, such conditions must be based on existing international legal norms in the interest of all nations. [4]

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USSR

UDC 632.95 (2)

POLESHCHUK, V. D., LATYSHEV, V. I., KAMENNOV, N. A., DREMOVA, V. P., SMIRNOVA, S. N., STOLBOV, D. N.

"Repellent Activity of Diethylamide and Dibutylamide of Valeric Acid with Respect to Various Types of Ticks"

Sb. nauch. tr. Mosk. NII vaktsii i syvorotok (Collection of Scientific Works of Moscow Scientific Research Institute of Vaccines and Serums), No 22, 1972, pp 209-211 (from RZh-Khimiya, No 15, Aug 72, Abstract No 15N504)

Translation: According to field and laboratory tests, diethylamide and dibutylamide of valeric acid have high repellency with respect to the Hyalomma plumbeum plumbeum tick which carries hemorrhagic Crimean fever. The tissue treated with these repellents calculated at 7 grams/$m^2$ remained repellent for 5 days. For Alectrolobius tholorani papillipes these materials were not repellent. The five-day repellency of tissue for Ixodes persulcatus ticks, Dermacentor pictus and D. marginatus was achieved from a dibutylamide dose of 55-65 g/$m^2$. The DETA had no repellency with respect to N. p. plumbeum, A. th. papillipes and D. marginatus, but tissue treated with DETA calculated at 40-50 g/$m^2$ remained repellent for 20 days for I. persulcatus and D. pictus.

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USSR

UDC 595.421

SMIRNOVA, S. N., and DREMOVA, V. P., All Union Scientific Research Institute of Disinfection and Sterilization, Moscow

"Sensitivity of Ixodid Ticks Rhipicephallus and Hyalomma to Repellants"

Leningrad, Parazitologiya, Vol 5, Vyp No 4, Jul/Aug 71, pp 357-360

Abstract: The repellant properties of a series of preparations with respect to Rhipicephalus turanicus and H. detritum ticks were studied. These ticks participate in the circulation of agents of diseases with natural-foci. The repellants studied included Carboxide, Cusol A, DETA, dibutylamide of valeric acid, as well as butylacetanilide and isoamylacetanilide, and other preparations and various mixtures. The most effective mixture was Carboxide, Cusol A, and dimethyl phthalate in a ratio of 1:1:2. Nevertheless adaptation of the ticks to the repellants was observed. Also, repellants, such as Carboxide and Cusol A and to a lesser extent DETA, had a paralyzing effect on the ticks, particularly during the first hours after application. No acaricidal effect of the preparations was noted. Hyalomma dromedarii and H. asiaticum ticks showed considerably less sensitivity to the repellants than did H. detritum ticks. The following order in the sensitivity level with respect to repellants

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SMIRNOVA, S. N., and DREMOVA, V. P., Parazitologiya, Vol 5, Vyp No 4, Jul/Aug 71, pp 357-360

was established: Rh. turanicus B. Pom. > H. asiaticum P. Sch. and E. Schl. > H. dromedarii Koch.

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Epidemiology

USSR

UDC 614.449.577.1

DREMOVA, V. P., TITOVA, T. S., SMIRNOVA, S. N., GRIGOR'YEVA, YE. M., BELAN, A. A., and FUNDATOR, R. KH., Central Scientific Research Disinfection Institute, Ministry of Health USSR

"Mechanical Protection From Mosquito Bites by Means of Specially Woven Cloth"

Moscow, Meditsinskaya Parazitologiya i Parazitarnyye Bolezni, Vol 39, No 4, Jul/Aug 70, pp 458-462

Abstract: Jackets were made of cotton cloth with pore openings no more than 0.05 to 0.08 mm in diameter on the assumption that such openings would be too small to permit penetration of the mosquito's proboscis. Laboratory tests (insertion of an arm in a sleeve made from the cloth into a box containing mosquitoes) and field trials (wearing of the jackets by workers during the summer) showed that the material provided 100% protection against mosquitoes without irritating the skin. The cloth is wear- and tear-resistant, light, and launders well.

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TITLE--DIFFERENCES IN REPELLENT EFFECTIVENESS IN FOUR SPECIES OF TICKS -U-

AUTHOR-(02)-DREMOVA, V.P., SMIRNOVA, S.N.

COUNTRY OF INFO--USSR

SOURCE--JENA, ANGEWANDTE PARASITOLOGIE, VOL 11, NO 2, MAY 1970, PP 104-108.

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CIRC ACCESSION NO--AP0122730 PROCESSING DATE--30OCT70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE EFFECTIVENESS OF NINE REPELLENTS (BASED ON DIMETHYL PHTHALATE, DIACETYLTOLUAMIDE, KYSOL A (1,ACETYL,1,2,3,4,TETRAHYDROQUINOLINE), CARBOXIDE, BENZIMINE, BUTYL ACENTANILIDE, AN EXPERIMENTAL COMPOUND (RC-28; COMPOSITION NOT STATED), BENZOYLPIPERIDINE, AND DIBUTYL ADIPATE) AGAINST FOUR SPECIES OF IXODID TICKS (IXODES PERSULCATUS, DERMACENTOR PICTUS, DERMACENTOR MARGINATUS, AND HYALOMMA ASIATICUM) WAS INVESTIGATED, AND THE RESULTS WERE EXPRESSED IN TERMS OF RD-90, DENOTING THE DOSAGE REPELLING 90PERCENT OF THE TICKS PRESENT. THE CLEAR CUT DIFFERENCES IN RESPONSE (THE IXODES PERSULCATUS RESPONDING BEST AND THE HYALOMMA ASIATICUM RESPONDING THE LEAST) WERE DISCUSSED. FACILITY: CENTRAL SCIENTIFIC RESEARCH INSTITUTE FOR DISINFECTION.

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USSR

UDC 632.95

NAUMOV, YU. A., DREMOVA, V. P., KOST, A. N., MENTUS, A. N., and SMIRNOVA, S. N.

"Substituted Amides, Esters of Pyromucic Acid, Furfuryl and Tetrahydrofurfuryl Esters of Carboxylic Acids and Their Repellent Activity"

Tr. VNII dezinfektsii i steriliz. (Works of All-Union Scientific Research Institute of Disinfection and Sterilization), 1971, vyp. 21, Vol 2, pp 24-30 (from RZh-Khimiya, No 16, 25 Aug 72, Abstract No 16N403 by T. K. YUDOVSKAYA)

Translation: Repellent properties are possessed by N,N-dialkylamides and esters of pyromucic acid (I acid), furfuryl esters (FE) and tetrahydrofurfuryl esters (TFE) of carboxylic acids. The reaction of furoyl chloride with secondary amines in $C_5H_5N$ yields the following dialkylamides of I (shown are dialkyls, boiling point in °C/mm or melting point in °C, $n^{20}D$): $Et_2$, 91-2/0.5, 1.5060; $Pr_2$, 97-8/0.5, 1.4972; $Bu_2$, 113-4/0.5, 1.4929; $(iso\text{-}Bu)_2$, 101-2/0.5, 1.4910; $(CH_2)_5$, 57-8, ---; $(CH_2)_6$, 116-7/0.5, 1.5450; BuPh, 88, ---. The following esters of I are synthesized from I and the corresponding alcohol in the presence of $H_2SO_4$ or by the reaction of furoyl chloride with alkaline solutions of phenols (given hereinafter are the ester radical, boiling point in °C/mm and $n^{20}D$ or melting point in °C): $C_5H_{11}$, 91-3/0.5, 1.4719; $C_6H_{13}$, 104-5/0.5. 1.4720; $C_7H_{15}$, 118-20/0.5, 1.4711; $C_8H_{17}$, 125-6/0.5, 1.4713; $C_9H_{19}$, 1/3



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NAUMOV, YU. A., et al., Tr. VNII dezinfektsii i steriliz., 1971, vyp 21, Vol 2, pp 24-30

119-20/0.5, 1.4688; $C_{10}H_{21}$, 136-7/0.5, 1.4665 (24°); cyclohexyl, 95-7/0.5, 1.5026 (30°); $PhCH_2$, 136-7/0.5, 1.5552; Ph, 41.2, ---; o-$MeC_6H_4$, 109-10/0.5, 1.5566, m-$MeC_6H_4$, 37-8, ---; p-$MeC_6H_4$, 58-9; o-$MeOC_6H_4$, 75-6; m-$MeOCH_6H_4$, 137-8/0.5, 1.5640; p-$MeOC_6H_4$, 85-6, ---; o-$ClC_6H_4$, 53-4, ---; p-$ClC_6H_4$, 81-2, ---; 2,4-$Cl_2C_6H_3$ 83-4, ---. FEs and TFEs are synthesized by the reaction of acid chlorides with the corresponding alcohols in a medium of $C_5H_5N$(shown are acid, boiling point in °C/mm and $n^{20}D$ first for FE, then for TFE): caproic acid, 110-3/0.8, 1.4580; 120-2/0.68, 1.4400; enanthic acid, 118-21/0.8, 1.4585, 135-7/0.8, 1.4428; caprylic acid, 128-30/0.8, 1.4580, 137-40/0.8, 1.4458; pelargonic acid, 118-20/0.5, 1.4590, 150-2/2, 1.4469; capric acid, 150-1/0.8, 1.4569, 138-40/0.8, 1.4480; pyromucic acid, 117-9/0.8, 1.5723, 124-6/0.8, 1.5038; benzoic acid, 146-7/0.8, 1.5423, 147-8/0.8, 1.5251; phenylacetic acid, 120-3/0.8, 1.4627; 135-6/0.8, 1.5129; phenoxyacetic acid, 145-6/0.8, 1.5379, 170-2/0.8, 1.5196; m-toluic acid, 145-7/0.8, 1.5423, 156-7/0.8, 1.5213. The highest repellent activity for fleas X. cheopis is possessed by dialkylamides of I in a dose of 40 g/sq m (86-100%, duration of action 8-10 days). FEs of enanthic and benzoic acids showed repellent activity for 4-8 days. Under field

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NAUMOV, YU. A., et al., Tr. VNII dezinfektsii i steriliz., 1971, vyp 21, Vol 2, pp 24-30

conditions satisfactory repellence of mosquitos of the genus Aedes is afforded (when applied to the tissue in the proportion of 20 g/mg) by dipropylamide, piperidid and hexamethyleneimide of pyromucic acid and by TFEs of benzoic, phenosyacetic, enanthic and pelargonic acids [factor of repellent action for the first few days 78-87%, duration of action 6-10 days; activity referred to standard (DETA) was 0.5-0.8].

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VASHKOV, V. I., DEDOV, V. S., DREMOVA, V. P., SMIRNOVA, S. N., OSIPYAN, V. T., MASLIY, L. K., KOCHANOVA, A. P., and MARKINA, V. V.

"Entomological and Toxicological Characteristics of a New Repellent -- Carboxide"

Tr. VNII dezinfektsii i steriliz. (Works of All-Union Scientific Research Institute of Disinfection and Sterilization), 1971, vyp. 21, Vol 2, pp 30-37 (from RZh-Khimiya, No 14, 25 Jul 72, Abstract No 14N465 by T. A. Belyayeva)

Translation: Carboxide is an effective repellent for mosquitoes, midges, and some species of horseflies and mites. As creams and ointments are made, protective film-forming substances must be put in since carboxide is absorbable through the skin. Refined carboxide, when used in its various forms (ointment, cream etc.), causes no lesions on exposed areas of the body and has no side effect on the human organism. Use of unrefined (industrial) carboxide to make various forms of the repellent can induce skin irritation.

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USSR

UDC 621.791:62-7[illegible].65

GENKIN, A. G., Candidate of Technical Sciences, SMIRNOVA, S. V., Engineer, and ASTAKHOVA, A. P., Engineer

"Welding of Bellows From EI702 Alloys With Kh18N9T Steel Fittings"

Moscow, Svarochnoye Proizvodstvo, No 8, Aug 70, pp 44-45

Abstract: The initial bellows design unit specified bead forming of the bellows from EI702 alloy with K18N9T steel fittings. The bellows did not weld with the fittings and the joint disintegrated in the weld-affected zone. An attempt to arc-weld the bellows with fittings from EI702 alloys proved the possibility of producing a high-quality weld. This led to a new variant of a bellows unit in which the bellows were joined with the fittings by automatic arc welding and the fittings were joined with the body by friction welding. A microscopic examination of the weld of EI702 with Kh18N9T confirmed the possibility of obtaining a dense, flawless weld by friction welding. Metallographic analysis confirmed the reliability of the fusion of both materials in the bellows. After welding, the units were vacuum tested with a mixture of air and helium. The tests demonstrated that argon arc welding insures strength and airtightness and meets technical requirements.

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