

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100

1ST AND 2ND ORDERS

PROCESSES AND PROPERTIES INDEX

Pyruvic acid as intermediary product of carbohydrate metabolism. M. J. Prukhoczka. *Trans. Physiol. Inst. Leningrad* 16, 31-2(1950). The pyruvic acid content of arterial blood of dogs normally averages 2-4 mg. per 100 cc. It is increased by ingestion of carbohydrate, injection of adrenaline and to a smaller extent by insulin. Normally the liver and brain produce the acid, while the kidney retains it; when carbohydrate is given, the intestines and cerebrum produce it. The amount in the kidney increases and the liver decreases its production of the acid, sometimes re-synthesizing it into glycogen.

H. C. P. A.

COMMON ELEMENTS

OPEN

MATERIALS INDEX

ASSOCIATED METALLURGICAL LITERATURE CLASSIFICATION

ALPHABETIC INDEX

1ST AND 2ND ORDERS

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100

PROKHOROVA, M. I.

USSR/Medicine - Nervous System, Injuries and Wounds Jan 48

Medicine - Carbohydrates, Metabolism

4/49765  
"Carbohydrate Exchange Due to Injuries to the Nervous System and the Role of Individual Organs," M. I. Prokhorova, 3 pp

PA  
"Vest Leningrad U" No 1

Summary of thesis for degree of Doctor, based on experimental data obtained from angiotomized animals and over 200 patients in neurosurgical hospital. Pays special attention to role of lactic and pyruvic acids. Concludes that despite the extensive changes taking place throughout the organism due to

4/49765  
USSR/Medicine - Nervous System, Injuries and Wounds (Contd) Jan 48

Injuries to the nervous system, no pronounced biochemical changes were observed in the blood.

4/49765

CA

11/5

The role of pyruvic acid in the animal organism. M. I. Prokhorova. *Voprosy Sovremennoi Biol.* (Advances in Modern Biol.) 28, 256-84(1949).—Review of biochemistry of pyruvic acid and a discussion of anal. methods, with many references. G. M. Kosolapoff

117

CA

Pyrotartaric acid exchange in isolated organs. M. I. Prokhorova (A. A. Ukhtomskii Physiol. Inst., Leningrad) *Trudy Leningrad. Obshchestva Estestvoispytatelei, Otdel Fiziol. i Biokhim.* 69, No. 5, 185-200 (1950).—Pyrotartaric acid (I) was detd. in arterial and venous blood, and in liver, kidney, intestine, brain, and muscle of anguostomized test animals, before and after injecting adrenaline or insulin. Results show a hepatic regulatory function similar to that for blood sugar, but muscle and kidney also participate in maintaining I at its normal level in the blood. After adrenaline (0.15-0.2 mg./kg.) is injected subcutaneously, arterial and venous blood generally show a slight rise of I in the first 40 min., then a drop (1-2 hrs.); the arterial-venous gradient increases. After insulin (2 units/kg.) I decreases in the first 40 min., then rises (1-2 hrs.), with a greater increase in venous than in arterial blood, and muscle begins to release I to the blood. Both insulin and adrenaline tend to increase the regulatory activity of muscle for I.

Julian F. Smith

CA

117

Distribution of pyrotartaric acid between plasma and blood-forming components. M. S. Prokhorova (A. A. Ukhtomskii Physiol. Inst., Leningrad). *Trudy Leningrad Obshchestva Estroispytatelei, Otdel. Fiziol. i Biokhim.* 69, No. 5, 207-13 (1950). --Canine erythrocytes are richer than the plasma in pyrotartaric acid. Muscular exertion, glucose intake (2.5 g./kg.), and injections of pyruvate (20-120 mg./kg.), adrenaline (0.16 mg./kg.), or insulin (2 units/kg.) decrease the pyrotartaric acid content of whole blood. The greatest change occurs in the plasma; the level remains nearly const. in the erythrocytes. Julian F. Smith

1. M. I. PRCKHOROVA
2. USSR (600)
4. Carbohydrates in the Body
7. Use of carbohydrates in the brain during its various physiological and pathological states. Nauch. biul. Len. un. no. 28. 1951.

9. Monthly List of Russian Accessions, Library of Congress, April 1953, Uncl.



KAZIMIROVA, Z.N.; PROKHOROVA, M.I.

Significance of angiostomy in the light of I.P.Pavlov's teachings.  
Uch.zap.Len.un.no.138:3-14 '52. (MLRA 9:6)  
(BLOOD VESSELS--SURGERY)



PROKHOROVA, M.I.

Metabolism of pyruvic and lactic acids in experimental liver disease. Uch.zap.Len. un. no.138:38-54 '52. (MLRA 9:6)

1. Iz Laboratorii obmena veshchestv imeni Ye.S.Londona Fiziologicheskogo instituta imeni akademika A.A.Ukhtomskogo i Leningradskogo gosudarstvennogo universiteta imeni A.A.Zhdanova. (LACTIC ACID) (PYRUVIC ACID) (LIVER--DISEASES)

PROKHOROVA, M. I.

Lactic and pyruvic acid content of blood as affected by various agents. Uch.zap.Len.un. no.138:55-70 '52. (MLRA 9:6)

1. Iz Laboratorii obmena veshchestv imeni Ye.S.Londona. Fiziolgicheskogo instituta imeni akademika A.A.Ukhtomskogo i Leningradskogo gosudarstvennogo universiteta imeni A.A.Zhdanova.  
(LACTIC ACID) (PYRUVIC ACID) (BLOOD--ANALYSIS AND CHEMISTRY)

PROKHOVA, L. I.

Uchenye zapiski Leningradskogo gosudarstvennogo universiteta. No. 161, Biologiya i Biofizika (Scientific Notes of the Leningrad State University, No. 161, Biology and Biochemistry), Leningrad University and A. A. Sidorov Press.

Contents: The Physiology of Higher Nervous Activity -- M. A. Ayrapent'yants, "O vnutrenney signalizatsii" (On Internal Signalling); N. Ye. Vasil'yevskaya, "K voprosu o tseppakh uslovnnykh refleksakh" (Toward the Question of Conditioned Reflex Chains), etc; General Laws of Nervous Processes -- L. L. Yacil'rov and N. A. Shestina, "Vostanovlenie srtshevykh devatel'nosti razdrasheniyej elektrokardial'nykh nervov" (Restoration of Heart Activity by Stimulation of Intracardiac Nerves); S. Ye. Rudashevskiy, "O tsentral'nykh vliyaniyakh s sechenovskimi tormozheniyami" (on the Central Influences of Sechenov Inhibitions") etc; Biochemistry-- G. Ye. Vladimirov, "Nekotoryye novyye dannyye po energeticheskim kharakteristike reaktsii glikoliza" (Several New Facts on the Energy Characteristics of the Glycolytic Reaction); E. N. Ivanova, "Vozrastnyye izmeneniya kolichestva i kisloty kislota v skeletnoy i serdetsnoy muskul'nykh tkanyakh krolika" (Age Modifications of the Number of Nucleic Acids in Skeletal and Cardiac Muscles of the Rabbit); N. I. Evallerson, "K voprosu ob uglevodnom obratno nomen pri normal'nom ego sostoyanii" (On the Problem of the Carbohydrate Metabolism of the Brain in Its Normal State"), etc.

SO: Sovetskoye Imeni (Soviet People), No. 106, 1973, Moscow, (5-6472)

PROKHOROVA, M. I.

✓ Brain-glycogen metabolism. M. I. Prokhorova. *Biochim. Nerwnoi Sistemy, Izdatel. Akad. Nauk Ukr. S.S.R.*, (Kiev) 1954, 87-97; Referat. *Zhur. Khim., Biol. Khim.* 1955, No. 3930.—Studies were made of the glycogen (I) of the brain and liver of white rats.  $\text{NaHC}^{14}\text{O}_3$  (II) or a mixt. of  $\text{C}^{14}$ -glucose (III) and  $\text{C}^{14}$ -sucrose (IV) were injected subcutaneously. Expts. with II verified the ability of the liver to fix  $\text{CO}_2$  to a degree depending upon the amt. of preëxisting I. The ability of the brain to fix  $\text{CO}_2$  could not be ascertained, due to the possibility of the inclusion of  $\text{C}^{14}$  in I of the brain emanating from the liver III. After the injection of III and IV the sp. activity ( $A_{sp}$ ) of the C of I in the liver increased, reaching a max. in the liver in 1-1.5 hrs. and in the brain in 1-2 hrs.  $A_{sp}$  of the liver tissue is many times greater than that of the brain tissue.  $A_{sp}$  of the C of I of the liver during the first hr. is somewhat greater than that of the brain. Two hrs. later the condition is reversed. The rate of renewal of C of I of the brain exceeded the rate of renewal of the total C of the brain, in some instances being 40-60 times as great. B. S. Leybo.

PROK HOROVA, M. I.

SSR

Carbohydrate metabolism of normal brain. M. I. Prokhorova. *Uchenye Zapiski Leningrad, Gosudarst. Univ. im. A. A. Zhukovskaya* No. 161, Ser. Biol. Nauk No. 32, 352-70 (1954); cf. *Nauch. Byull. Leningrad, Gosudarst. Univ.* No. 28(1951).—Brain carbohydrate metabolism was studied by arteriovenous differences in sugar, lactic acid, and blood gases. Sugar, lactic acid, CO<sub>2</sub>, and O<sub>2</sub> of blood flowing to and from the upper longitudinal sinus, without excitation of the animal were carried out, from 2 months to over 2 years. Sugar content of arterial blood fluctuated from 68 to 101 mg. %, and was lower (45-86 mg. %) in blood flowing away from the brain, the fluctuation range being greater for the more excitable dogs. In the normal state, brain used 0.0-15.0 mg. sugar/100 ml. blood, av. 8-9 mg./100 ml. blood. Sugar fluctuation was 5-12 mg. % for short time intervals of 1-3 hrs. The brain yielded 0.4 ml. CO<sub>2</sub>/100 ml. inflowing blood. Normal brain respiratory quotient (R.Q.) usually ranged from 0.60 to 1.26; the R.Q. approximated unity (av. of 65 detns.). The wide range in R.Q. indicated that metabolism of compts. in the brain is a continuous proc-

(OVER)

M. I. PRINERVA

esp. Oxidizing processes of the brain over short intervals apparently occur at unequal intensities. Comparison of glucose and O<sub>2</sub> consumption with CO<sub>2</sub> indicated that most of the glucose is oxidized to CO<sub>2</sub> in the brain. Lactic acid values of blood for different dogs, particularly of the more excitable ones, fluctuated greatly; the arteriovenous difference was not const., amounting frequently to  $\pm 1.0$  mg. %, which could be due to exp. error. The brain at times retains, and then gives up, lactic acid. Variability of lactic acid metabolism in the brain can be attributed to variability in oxidation processes of brain tissue within given time intervals. O<sub>2</sub> consumption by dog brain averaged 0.8 ml./100 ml. blood flowing through brain tissue; the CO<sub>2</sub> evolution being 0.4 ml., the R.Q. approximately 1. Comparison of glucose consumption by the brain with CO<sub>2</sub> evolution or retention of lactic acid, indicates that oxidizing processes account for not less than 80-90% of the carbohydrate consumption.

Clayton P. Holway

PROKHOROVA, M.I.

Carbohydrate metabolism of the brain under normal conditions. Uch.  
zap.Len.un. no.164:362-376 '54. (MIRA 10:3)  
(CARBOHYDRATE METABOLISM) (BRAIN)

Prokhorova, M.I.

✓ A study of the intensity of renewal of glucose and glycogen in the brain and in the liver with the aid of tagged carbon ( $C^{14}$ ). M. I. Prokhorova. *Vestnik Leningrad. Univ.* 10, No. 7, Ser. Biol., Geogr., i Geol. No. 3, 79-88(1955).  
White mice were injected with radioactive glucose, 1-5 microcuries/100 g. of wt., 2-3 times during the expts. which lasted from 30 min. to 2 hrs. The mice were frozen in liquid  $O_2$ , and the brains and livers were removed, ground, and analyzed biochemically. The data show that the sp. activity of glucose in the liver reaches a max. generally after 30 min. and seldom after 1 hr. and in the brain after 1-1.5 hrs. The renewal of glycogen takes place in the brain within 2-4 hrs. and not so fast in the liver. Calens. were made on the utilization of glucose and release of  $CO_2$  by brain. Only 5-10% glucose is utilized for the synthesis of glycogen, as shown by expts. with dogs. When the animals were subjected to an  $O_2$  deficiency, the glycogen of the liver breaks down and its synthesis is reduced. J. S. Hoff

PHD



PROKHOROVA, M. I.

✓ An important method of sinusostomy for the study of the exchange of substances in the brain in chronic experiments. M. I. Prokhorova and Z. N. Karimirova. *Vestnik Leningrad Univ.* 11, No. 3, Ser. Biol. No. 1, 121-8(1959).—An operation is described by which blood samples can be obtained at frequent intervals from the longitudinal sinus of a dog's brain. The same animal can be studied under a variety of conditions over a 1-2-yr. period. Values for blood glucose obtained on these samples agreed well with values previously reported in the literature. Edwin L. Sexton

2  
Med

PROKHOROVA, M. TUPIKOVA, Z.

"The Specific Activity of Cerebral Glycogen Increases with the Simultaneous Reduction of its Amount during an Excitation induced by Phenamine." Paper submitted at 2nd Conference on Biochemistry of the Nervous System, AS USSR, 12-16 Feb 1957, Kiev.

Translation 1122802

L 25755-66

ACC NR: AP6016387

SOURCE CODE: UR/0300/65/037/005/0778/0786

AUTHOR: Prokhorova, M. I.; Peneva, T. I.; Romanova, L. S.; Tumanova, S. Yu. 24ORG: Physiological Institute, Leningrad State University (Fiziologicheskiy institut Leningradskogo gosudarstvennogo universiteta) BTITLE: Gangliosides of the brain 22SOURCE: Ukrayins'kyy biokhimichnyy zhurnal, v. 37, no. 5, 1965, 778-786TOPIC TAGS: rat, brain, chromatography, biochemistry

ABSTRACT: Determination of the gangliosides in the rat brain by the thio-barbiturate method at 10-12 days, 3-4 weeks, one and a half, and 3 months of age indicated that the accumulation of gangliosides in the rat brain is completed at 3-4 weeks of age. The ganglioside content in the brains of adult animals is an average of 0.15%, calculated on the basis of crude weight of the tissue. The brain gangliosides were separated by thin-layer chromatography into eight fractions, with Rf values: 0.05, 0.14, 0.25, 0.33, 0.43, 0.52, 0.67, and 0.71. Disialogangliosides comprise 68% of the brain gangliosides, trisialogangliosides, about 20%, and monosialogangliosides, about 12% of the total. Orig. art. has: 3 figures and 3 tables. [JPRS]

SUB CODE: 06 / SUBM DATE: 30May65 / ORIG REF: 007 / OTH REF: 041

Card 1/1 CC 2

L 24768-66 - FWT(1)

ACC NR: AP6015532

SOURCE CODE: UR/0054/65/000/001/0026/0029

AUTHOR: Prokhorov, L. V.

ORG: none

TITLE: Analytic properties of the form-factor in nonlocal theory

SOURCE: Leningrad. Universitet. Vestnik. Seriya fiziki i khimii, no. 1, 1965, 26-29

TOPIC TAGS: analytic function, mathematics

ABSTRACT: In previous papers, by other authors a study was made of the possibility of setting up the formalism of scattering for the case of nonlocal fields. In the present paper a study is made of the analytic properties of the form-factor in nonlocal theory. It is shown that the form-factor is an analytic function in nonlocal theories of a certain type. The dependence of the analytical properties of the form-factor on the character of nonlocality is analyzed. Orig. art. has: 14 formulas. [JPRS]

SUB CODE: 12 / SUBM DATE: 18Feb64 / ORIG REF: 003 / OTH REF: 001

Card 1/1

KULIKOVA, E.N.; STRONGIN, G.M.; PROKHOROVA, M.I.; KHOKHLOVA, L.F.

Determination of hexachlorocyclohexane isomers by the isotope-  
dilution method using chlorine-36. Zhur. anal. khim. 21 no.1:  
103-109 '66 (MIRA 19:1)

1. Chernorechenskiy khimicheskiy zavod imeni Kalinina, Dzerzhinsk.

PROKHOROVA, M.I.; PENEVA, T.I.; ROMANOVA, L.S.; TUMANOVA, S.Yu.

Cerebral gangliosides. Ukr. biokhim. zhur. 37 no.5:778-786 '65.  
(MIRA 18:10)

1. Fiziologicheskiy institut leningradskogo gosudarstvennogo  
universiteta.

LEBEDEV, V.I., prof., otv. red.; MORACHEVSKIY, A.G., dots., otv. red.; PROKHOROVA, M.I., prof., otv. red.; TRUTNEV, A.G., prof., otv. red.; POZDYSHEVA, V.A., red.; PETROVICHEVA, O.L., red.; MATVEYEVA, V.V., red.; SKOBYHINA, N.P., red.

[Chemistry in the natural sciences] Khimiia v estestvennykh naukakh. Leningrad, Izd-vo Leningr. univ., 1965.  
216 p. (MIRA 18:9)

1. Leningrad. Universitet.

BESPALOVA, M.A.; PROKHOROVA, M.I.

Changes in the cerebroside content in the brain during  
various functional states of the animal. Nerv. sist.  
no.5:3-9 '64. (MIRA 18:3)

1. Laboratoriya obmena veshchestv leningradskogo gosudarstvennogo  
universiteta.



KULIKOVA, M.N.; STRONGIN, G.M.; PROKHOROVA, M.I.

Determination of delta-hexachlorocyclohexane by the method of isotope dilution. Trudy po khim.i khim.tekh. no.1:56-60 '63.

(MIRA 17:12)

KULIKOVA, M.N.; STRONGIN, G.M.; PROKHOROVA, M.I.

Determination of the alpha-hexachlorocyclohexane content by the isotope dilution method. Trudy po khim.i khim.tekh. no.1:75-79 '63.  
(MIRA 17:12)

PROKHOROVA, M.I.; SOKOLOVA, G.P.

Effect of some substances on the biosynthesis of cholesterol  
and the total lipid fraction in the brain of growing rats. Nerv.  
sist (Leningrad) 2 no.3:5-11 '62. (MIRA 17:7)

1. laboratoriya obmena veshchestv Fiziologicheskogo instituta  
imeni Ukhtomskogo Leningradskogo gosudarstvennogo universiteta.

PROKHOROVA, M.I.; TUMANOVA, S. Yu. (Leningrad)

Cholesterin biosynthesis in the animal body. Usp. sov. biol.  
55 no.3:355-377 My-Je'63 (MIRA 17:3)

STRONGIN, G.M.; KULIKOVA, M.N.; PROKHOROVA, M.I.

Extraction of the  $\gamma$ -isomer from hexachloran with coal-tar oils. Zhur.  
prikl.khim. 36 no.2:465-467 F '63. (MIRA 16:3)  
(Cyclohexane) (Isomers) (Coal-tar products)

PROKHOROVA, M.I.; DAVYDOVA, T.I.

Metabolism of glycogen, glucose, and lactic acid in the muscle and liver following excitation of the animal with phenamine. Vop.med. khim. 5 no.5:353-357 S-O '59. (MIRA 13:2)

1. Chair of Biochemistry of the "A.A. Zhdanov" State University, Leningrad.

(GLYCOGEN metab.)  
(GLUCOSE metab.)  
(LACTATES metab.)  
(LIVER metab.)  
(MUSCLES metab.)  
(ACETOPHENECIDIN pharmacol.)

UKHTOMSKIY, Aleksey Aleseych (1875-1942), akademik; TEREKHOV, P.G.;  
VINOGRADOV, M.I., prof., otv. red.; FROKHOROVA, M.I., prof.,  
red.; AYRAPET'YANTS, E.Sh., prof., red. toma; GOLIKOV, N.V.,  
prof., red. toma; VASIL'YEV, L.L., prof., ZHUKOV, Ye.K., prof.,  
red.; MAKAROV, P.O., prof., red.; RUDASHEVSKIY, S.Ye., dots.,  
red.; KARPOVA, L.A., red.; VODOLAGINA, S.D., tekhn.red.

[Collected works]Sobranie sochinenii. Leningrad, Izd-vo Le-  
ningr. univ. Vol.6.[Public scientific speeches, scientific  
and review articles and materials on the history of Soviet  
and world physiology]Obshestvenno-nauchnye vystupleniia,  
nauchnye i obzornye stat'i i materialy k istorii otechestven-  
noi i mirovoi fiziologii. 1962. 210 p. (MIRA 15:9)  
(Ukhtomskii, Aleksey Alekseevich, 1875-1942) (Physiology)

PROKHOROVA M.I., SOKOLOVA G.P., TARANOVA N.P. (USSR)

"Intensity of Metabolism of Lipid Fractions of the Brain"

Report presented at the 5th Int'l Biochemistry Congress,  
Moscow, 10-16 Aug. 1961



PROKHOROVA, M.I.; MATVEYEVA, I.M.; PUTILINA, F.Ye.; SOKOLOVA, G.P.

Rate of resotration of some plastic and energy-producing substances  
in the brain. Nerv. sist. no. 2:22-30 '60. (MIRA 14:4)  
(BRAIN)

PROKHOROVA, M.I.

Quantitative description of the energetic expenditure in the brain  
at relative rest. Nerv. sist. no.1:24-32 '60. (MIRA 13:9)

1. Laboratoriya obmena veshchestv kafedry biokhimii, Leningradskiy  
ordena Lenina gosudarstvennyy universitet im. A.A. Zhdanova.  
(BRAIN) (METABOLISM)

PHASE I BOOK EXPLOITATION

SOV/3597

Prokhorova, Mariya Illarionovna, and Zinaida Nikolayevna Tupikova

Metody opredeleniya radioaktivnogo ugleroda ( $C^{14}$ ) v komponentakh uglevodnogo i lipidnogo obmena (Methods of Determining the Radioactive Carbon ( $C^{14}$ ) in Carbohydrate- and Lipid-Exchange Components) [Leningrad] Izd-vo Leningradskogo univ., 1959. 103 p. Errata slip inserted. 1,800 copies printed.

Ed: O.L. Petrovicheva; Tech. Ed.: Ye.G. Zhukova.

PURPOSE: This book is intended for scientific workers and aspirants of biochemistry and physiology laboratories as well as for advanced students in higher educational institutions.

COVERAGE: This book deals with methods for the determination of radioactive carbon ( $C^{14}$ ) in carbohydrate- and lipid-exchange components of the blood, brain, liver and muscles. It describes experiments on animals and analyzes the experimental data obtained. N.I. Brodskaya, S.I. Zaytseva, A.M. Korvat-skaya, F. Ye. Putilina, and G.P. Sokolova participated in conducting the

Card 1/5

Methods of Determining (Cont.)

SOV/3597

experiments and in the chemical processing of specimens. The authors review biological studies made by the radioactive method in the Soviet Union and abroad and include them in the bibliography. There are 100 references, 33 of which are Soviet.

TABLE OF CONTENTS:

Introduction	3
I. Performing Tests on Animals With the Use of Radioactive Carbon (C <sup>14</sup> )	9
1. Brief information on the radioactivity of C <sup>14</sup>	9
2. Level of radioactivity at different stages of the tests with animals	11
3. Precautionary measures in working with animals poisoned by radioactive carbon	12
4. Introduction of the radioactive substance, extracting the organs, and preparing the specimens	14
II. Determining Activity in Specimens Containing Radioactive Carbon (C <sup>14</sup> )	19
1. Instruments for measuring activity	19

Card 2/5

Methods of Determining (Cont.)

SOV/3597

2. Determining the activity of the background and specimen.	22
3. Determining the correction for self-absorption	25
4. Statistical processing of the results of radioactivity measurements	28
5. Computing the magnitude of the specific activity of specimens containing radioactive carbon	32
III. Determination of the Quantitative Content and Specific Activity of Ordinary Carbon in the Tissues	33
1. Determination of carbon in organic substances by the "wet combustion" method	33
2. Measuring the activity of barium carbonate residue	38
3. Determining the C <sup>14</sup> activity in a homogeneous sample of tissue	40
IV. Determination of the Specific Activity and the Quantitative Content of Glucose in Tissues	43
1. Determining the specific activity of glucose	43
2. Quantitative determination of glucose in tissues	48

Card 3/5

Methods of Determining (Cont.)

SOV/3597

V. Determination of the Quantitative Content and Specific Activity of the Glycogen in the Brain	51
1. Quantitative determination of glycogen in the brain tissue	51
2. Determination of the specific activity of the glycogen in the brain	55
VI. Determination of the Quantitative Content and Specific Activity of Glycogen in the Liver and Muscles	59
1. Quantitative determination of glycogen in the liver and muscle tissues	59
2. Determination of the specific activity of the glycogen in the liver and muscles	62
3. Determination of the quantitative content and specific activity of the lyoglycogen fraction in the liver and muscles	64
VII. Determination of the Quantitative Content and Specific Activity of Pyroracemic Acid	67
1. Quantitative determination of pyroracemic acid content in tissues	67
2. Determination of the specific activity of pyroracemic acid	71

Card 4/5

Methods of Determining (Cont.)	SOV/3597	
VIII. Determination of the Quantitative Content and Specific Activity of Citric Acid		74
1. Quantitative determination of citric acid content in tissues		74
2. Determination of the specific activity of citric acid		77
IX. Determination of the Specific Activity and Quantitative Content of the General Lipid Fraction		81
X. Determination of the Quantitative Content and Specific Activity of Cholesterol		85
1. Quantitative determination of cholesterol in tissues		85
2. Obtaining the cholesterol-digitonin residue ( $C_{82}H_{140}O_{29}$ ) and determining its activity		87
XI. Determination of the Specific Activity of Expired Carbon Dioxide		91
XII. Obtaining Radioactive Glucose by Photosynthesis		95
Bibliography		100
AVIALABLE: Library of Congress		
Card 5/5		
		TM/lsh 5-18-60

USSR / Human and Animal Physiology (Normal and Pathological).  
Nervous System.

Abs Jour : Ref Zhur - *Biologiya*, No 13, 1958, No. 60739

Author : Prokhorova, M. I.; Brodskaya, N. I.; Gubaydulina, D. Kh.;  
Zolotareva, A. N.; Korvatskaya, A. M.

Inst : Leningrad State University

Title : The Changes of Carbohydrate and Gaseous Exchange in  
the Brain in O<sub>2</sub> Insufficiency

Orig Pub : Uch. zap. IGU, 1957, No 222, 272-286

Abstract : To produce an oxygen deficiency, a methemoglobin forming agent (NaNO<sub>3</sub>) was injected in the following doses: into dogs intravenously 15 - 30 mg./kg., into rats subcutaneously 20 mg./100 gm., and into rabbits intravenously 90 - 100 mg./kg. The blood samples were drawn from the artery and the upper longitudinal brain sinus according to the method of E. S. London. The rate of blood flow, determined

Card 1/2

136



USSR / Human and Animal Physiology (Normal and Pathological).  
Nervous System.

T

Abs Jour : Ref Zhur - Biologiya, No 13, 1958, No. 60739

with the aid of P32 after the injection of  $\text{NaNO}_3$ , appeared to be reduced, and equal on the average to  $10 \pm 2$  sec., instead of  $7 \pm 1$  sec. as normally. The  $\text{O}_2$  content in the arterial and venous blood and their difference was reduced. In severe cases of hypoxemia a sharp drop in  $\text{CO}_2$  was found in the arterial and venous blood, and a decrease in the arteriovenous difference in the  $\text{CO}_2$  level. The glucose content of blood increased, and in the brain with severe hypoxemia it decreased. The lactic and pyruvic acids rose both in the blood and in the brain. The relation between the lactic and pyruvic acids in the brain sharply moved in the direction of lactic acid formation. --  
M. Ye. Ioffe

Card 2/2

USSR / Human and Animal Physiology. Metabolism.

T

Abs Jour: Ref Zhur-Biol., No 9, 1958, 40952.

Author : Prokhorova, M. I.; Brodskaya, N. I.; Sokolova, G.P.

Inst : ~~Not Given.~~

Title : The Intensity of Glycogen and Glucose Metabolism  
in the Brain and Liver in Hypoxia.

Orig Pub: Vopr. med. khimii, 1957, 3, No 4, 279-285.

Abstract: Hypoxia was produced in rats by subcutaneous injection of 15-20mg of  $\text{NaNO}_2$ /100gm of weight. Within 40-45 minutes the animals were submerged in liquid oxygen and then the glycogen and glucose contents in the brain and liver were determined. The amount of glycogen in the brain during hypoxia decreased

Card 1/2

USSR / Human and Animal Physiology. Metabolism.

T

Abs Jour: Ref Zhur-Biol., No 9, 1958, 40952.

Abstract: from 72-53mg%, and in the liver from 2100-490mg%. The glucose content remained unchanged. The authors also noted a considerable decrease in the rate of inclusion of glucose - C<sup>14</sup> into the glycogen of the brain and liver under conditions of hypoxia. -- V. I. Rozengart.

Card 2/2

13

M. I. PROKHOROVA and Z. N. TUPIKOVA

"On the intensity of the carbohydrate metabolism in organs."

The Chemistry and Metabolism of Carbohydrates in Animal and Plant Organisms.  
Conference in Moscow. January 28 to January 30 1956.

(VAN SSSR, No 6, 58)

PROKHORA, M.I.

PROKHOROVA, M.I.; BRODSKAYA, N.I.; SOKOLOVA, G.P.

Intensity of aglycogen and glucose metabolism in the brain, and in the liver in anoxia [with summary in English]. Vop.med.khim. 3 no.4:279-284 J1-Ag '57. (MIRA 10:11)

1. Laboratoriya obmena veshchestv kafedry biokhimii Leningradskogo ordena Lenina gosudarstvennogo universiteta imeni A.A.Zhdanova.

- (ANOXIA, effects,  
on brain & liver glucose & glycogen metab. (Rus))
- (BRAIN, metabolism,  
glucose & glycogen, eff. of anoxia (Rus))
- (LIVER, metabolism,  
same)
- (GLUCOSE, metabolism,  
brain & liver, eff. of anoxia (Rus))
- (GLYCOGEN, metabolism,  
same)

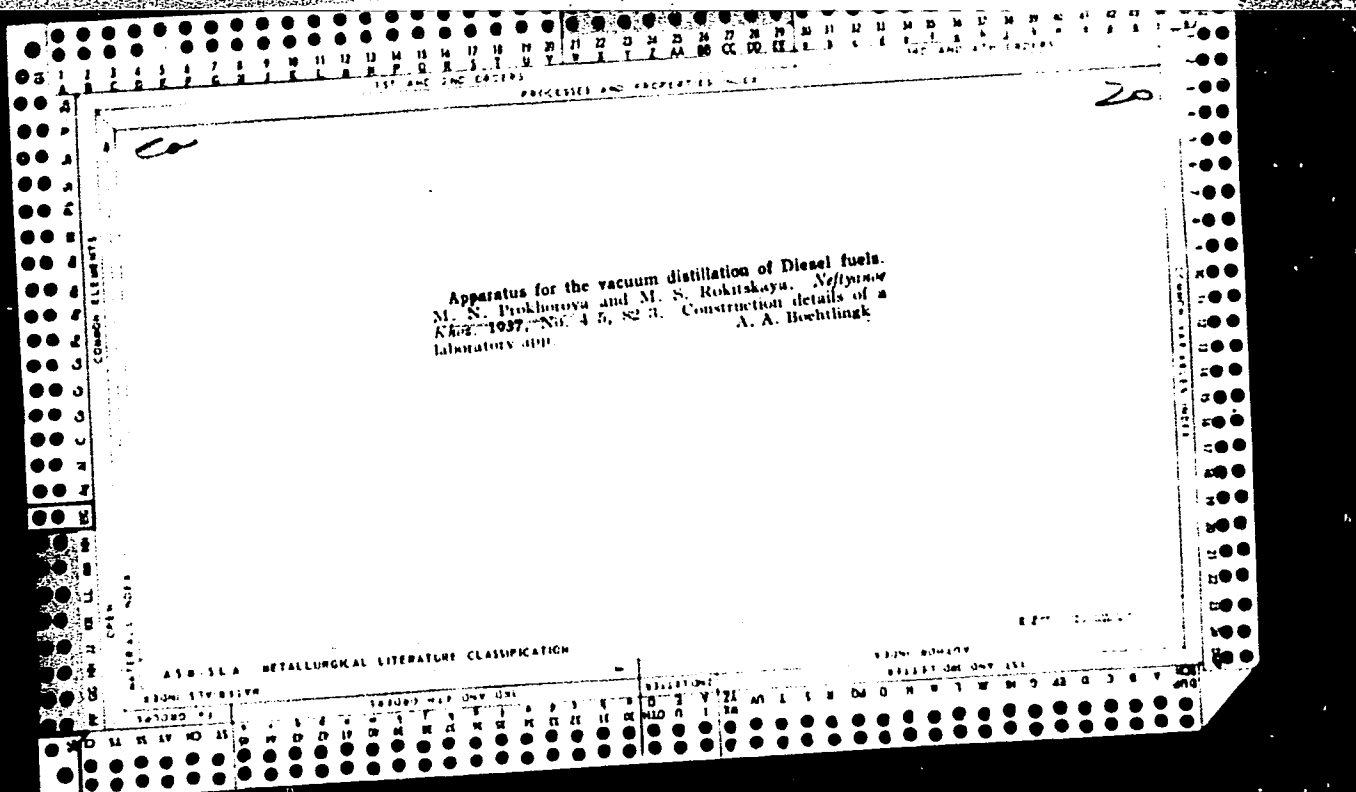
PROKHOROVA, Mariya Illarionovna; TUFIKOVA, Zinaida Nikolayevna;  
PETRUN'KINA, A.M., doktor biol. nauk, otv. red.;  
PETROVICHEVA, O.L., red.

[Comprehensive laboratory manual on carbohydrate and lipid  
metabolism] Bol'shoi praktikum po uglevodnomu i lipidnomu  
obmenu. Leningrad, Izd-vo Leningr. univ., 1965. 219 p.  
(MIRA 18:9)

PROKHOROVA, M. L., TU-IKOVA, E. N., BRODSKAYA, N. I. (USSR)

"The Difference in the Rate of Renewal of Glycogen  
Fractions in the Organs."

Report presented at the 5th International Biochemistry Congress,  
Moscow, 10-16 August 1961





*Прокhodova, M.M.*

VASIL'YEV, A.M.; POPEL', A.A.; PROKHOROVA, M.M.

Determining the solubility of O-oxyquinoline in mixed solvents.

Uch. zap. Kaz. un. 113 no.8:75-81 '53.

(MLRA 10:5)

1. Kafedra analiticheskoy khimii.  
(Solvents) (Quinoline)

PROKHOROVA, M. M.

USSR •

✓ Determination of the solubility of 8-quinolinol in mixed solvents. A. M. Vasil'ev, A. A. Popel, and M. M. Prokhorova. Uchenye Zapiski Kazan. Univ. 113, No. 8: 76-81 (1953); Referat. Zhur., Khim. 1954, No. 38175.—The soly. of 8-quinolinol in water-acetone and water-alc. solns. at 20° was studied polarographically and amperometrically (A. A. Popel, *ibid.*, 110, 4, (1950)). The concns. of Me<sub>2</sub>CO and alc. were varied from 2.5 to 35 vol.%. The soly. of 8-quinolinol in H<sub>2</sub>O-Me<sub>2</sub>CO solns. rose sharply with the increase of Me<sub>2</sub>CO concn. At 20% Me<sub>2</sub>CO the soly. was 8 times as much as the soly. in H<sub>2</sub>O and twice as much as the soly. in a 20% H<sub>2</sub>O-alc. soln. The soly. of 8-quinolinol was also studied in NH<sub>3</sub> solns. at 25°. The concn. of NH<sub>3</sub> was varied from 0.4 to 4.9 mole/l. The dissoc. const. of 8-quinolinol detd. from its soly. in NH<sub>3</sub> solns. was  $0.4 \times 10^{-11}$ . The effect of temp. and concn. of NH<sub>4</sub>Cl on the soly. of 8-quinolinol was also detd.

M. Hersh

Handwritten initials or signature.

PROKHOROVA, M. N.

K. RAMAYYA, Neftyanoe Khozraistvo 29, No. 9, 57-61, 1935

PROKHOROVA, M. N.

K. RAMAYYA, Neftyanoe Khozyaistvo 29, No. 9, 57-51, 1935

PROKHOROVA, M. S.

"Disproportionation of Methyl Groups in Xylene--Benzene System Effected by  
Aluminium Chloride," Zhur. Obshch. Khim., 16, No. 6, 1946.

Mbr., Lab. Organic Catalysis im. M. D. Zelinskiy, Moscow Order-Lenin State Univ.

im. Lomonosov, -1944-.

L 58867-65 EWP(k)/EWT(d)/EWT(m)/EWP(h)/EWP(b)/EWP(l)/EWP(v)/EWP(t) ... PF-4

ACCESSION NR: AP5014481

UR/0115/65/000/004/0021/0023  
658.564:531.717

22  
21  
B

AUTHOR: Markov, B. N.; Ped', Ye. I.; Prokhorova, N. A.

TITLE: Device for automatic control of stepped shafts during their grinding 18

SOURCE: Izmeritel'naya tekhnika, no. 4, 1965, 21-23

TOPIC TAGS: shaft grinding, size control

ABSTRACT: The development of a pneumatic gage for controlling the size of large stepped shafts in the course of their grinding is reported. The shaft is measured by prisms 1 hinged on lever 2, see Fig. 1 of the Enclosure; compressed air taken from the plant air system enters gage 3 and then, via gap z, is released into the atmosphere. Pressure in the gage chamber depends on the value of z. As the grinding allowance is taken off, the pressure in 3 decreases, and point 5 moves until the

that permits measurements of ...  
being tested on a grinding machine that handles 250-100-1000 ...  
1 figure and 8 formulas.

Card 1/3

L 58867-65

ACCESSION NR: AP5014481

ASSOCIATION: Moskovskiy stankoinstrumental'nyy institut (Moscow Machine and  
Tool Institute)

SUBMITTED: 00

ENCL: 01

SUB CODE: IE

NO REF SOV: 001

OTHER: 000

Card 2/3

L 58867-65  
ACCESSION NR: AP5014481

ENCLOSURE: 01

0

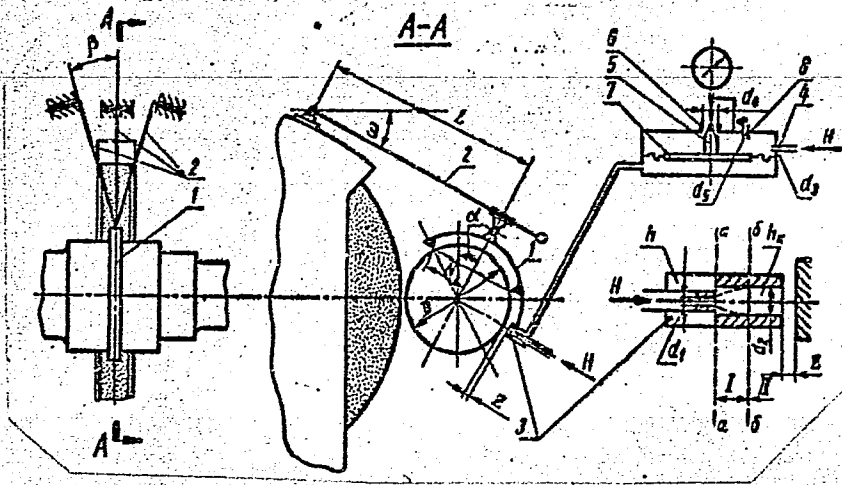


Fig. 1. Pneumatic device for controlling stepped-shaft diameter during the process of grinding

Card 3/3  
tjp



PROKHOROVA, N.I.; GONIKBERG, M.G.

Nucleophilic aromatic substitution at high pressure. Izv. AN SSSR. Ser.  
khim. no.7:1188-1193 '65. (MIRA 18:7)

1. Institut organicheskoy khimii im. N.D.Zelinskogo AN SSSR.

5(4), 5(3)

AUTHORS:

Poroshin, K. T., Khurgin, Yu. I., Prokhorova, N. I. SOV/62-58-12-5/22

TITLE:

Kinetics and Chemistry of the Polycondensation of  $\alpha$ -Amino Acid Esters (Kinetika i khimizm polikondensatsii efirov  $\alpha$ -amino-kislot) Communication 7: Kinetics of the Change in Composition of Polycondensation Products of Glycine Ethyl Ester in the Presence of N-Carboxy Glycine Anhydride (Soobshcheniye 7. Kinetika izmeneniya sostava produktov polikondensatsii etilovogo efira glitsina v prisutstvii angidrida N-karboksiglitsina)

PERIODICAL:

Izvestiya Akademii nauk SSSR. Otdeleniye khimicheskikh nauk, 1958, Nr 12, pp 1428-1434 (USSR)

ABSTRACT:

In the present paper the results of investigations of the kinetics of a joint polycondensation of  $\alpha$ -amino acid esters and N-carboxy- $\alpha$ -amino acid anhydride were shown by the example of glycine derivatives as well as of the effect of the relative anhydride concentration ( $A/A_0$ ) on the composition of reaction products. The majority of the experiments was carried out with a 5% solution of the initial products in dioxane. It was found that with the content of initial products changing from 0.5 to 10% the amount of the solvent does not exercise any

Card 1/3

SOV/62-58-12-5/22  
Kinetics and Chemism of the Polycondensation of  $\alpha$ -Amino Acid Esters.  
Communication 7: Kinetics of the Change in Composition of Polycondensation  
Products of Glycine Ethyl Ester in the Presence of N-Carboxy Glycine Anhydride

essential effect on the course of the reaction. The qualitative composition of the polycondensation products was chromatographically investigated. The content of tetra and tripeptide fraction, and of diketo piperazine (Ref 20) was determined by the method of differential titration. The average degree of the polycondensation was determined by measuring the amino nitrogen according to the Van-Slyayk method. At the same time, experiments without solvents were carried out (in the block). In this case all processes developed more rapidly, they did, however, not show any qualitative differences. A comparison between the results obtained and those of the investigation of the polycondensation of glycine ethyl ester in the presence of carbon dioxide (Ref 19) shows that the rules governing this process are basically the same in the course of either process. However, intermediate products in the first polycondensation stage show differences: by the addition of  $\text{CO}_2$  a symmetrical carbamate  $\text{R}^1\text{OOC}\cdot\text{CHR}\cdot\text{NH}_2^+\cdot\text{OOC}\cdot\text{NH}\cdot\text{CHR}\cdot\text{COOR}^1$  is formed; by the initiating of N-carboxy amino acid anhydride an asymmetric

Card 2/3

SOV/62-58-12-5/22  
Kinetics and Chemism of the Polycondensation of  $\alpha$ -Amino Acid Esters.  
Communication 7: Kinetics of the Change in Composition of Polycondensation  
Products of Glycine Ethyl Ester in the Presence of N-Carboxy Glycine Anhydride

carbamate is formed  $R'OOC.CHR.NH_3^+ \cdot ^-OOC.NH.CHR.CO.NH.CHR.COOR'$ .

This apparently explains the observed differences in the velocity of the course of the process as well as in the distribution of reaction products in the individual stages. There are 4 figures and 21 references, 5 of which are Soviet.

ASSOCIATION: Institut organicheskoy khimii imeni N. D. Zelinskogo Akademii nauk SSSR (Institute of Organic Chemistry imeni N. D. Zelinskiy Academy of Sciences USSR)

SUBMITTED: February 26, 1957

Card 3/3

FEL'DSHTEYN Aleksandr L'vovich; YAVICH, Lev Rafnelovich. Pri-  
nimala uchastiye PROKHOROVA, N.I.; YAKOBSON, A.Kh.

[Synthesis of four-terminal and eight-terminal micro-  
wave networks] Sintez chetyrekhpoliusnikov i vos'mipo-  
liusnikov na SVCh. Moskva, Izd-vo "Sviaz'," 1965. 352 p.  
(MIRA 18:5)

GONIKBERG, M.G.; PROKHOROVA, N.I.

Effect of pressure on the rate of aromatic nucleophilic substitution.  
Izv. AN SSSR, Ser. khim. no.6:1110-1112 Je '64.

(MIRA 17:11)

1. Institut organicheskoy khimii im. N.D. Zelinskogo AN SSSR.

S/020/63/148/001/022/032  
B144/B186

AUTHORS: Gonikberg, M.G., Prokhorova, N.I., Litvin, Ye.F.

TITLE: Effect of high pressure on the structural trend of  
tert-butyl benzene phenylation

PERIODICAL: Akademiya nauk SSSR. Doklady, v. 148, no. 1, 1963, 105-108

TEXT: The phenylation of tert-butyl benzene with benzoyl peroxide under various pressures was studied to confirm the assumption that an increase in pressure increases the portion of ortho-isomer, which is supported by various publications. The method by J.I. Cadogan et al. (J. Chem. Soc., 1954, 3352) using atmospheric pressure was repeated. The isomer mixture, however, was separated by gas - liquid chromatography in a column, 2 m long and of 5 mm diameter, containing 15% polyethylene glycol adipinate on diatomite at 170°C, with helium serving as gas carrier (50 ml/min). The material of the reaction vessel (glass, steel) did not affect the isomer mixture. The total yield of 42.6% was approximately equal to Cadogan's value whereas the 2-isomer proportion was lower (17% as compared to 24%). The absence of secondary reactions of tert-butyl

Card 1/3

Effect of high pressure on the ...

S/020/63/148/001/022/032  
B144/B186

diphenyls was proved by the constant composition of the isomer mixture during the individual stages of reaction. Experiments at a pressure of 2000 kg/cm<sup>2</sup> yielded 23.1% 2-isomer. The use of lead ampoules increased the yield in 2-isomer by 2% at atmospheric pressure and also at 2000 kg/cm<sup>2</sup>. At a pressure of 4000 kg/cm<sup>2</sup>, the yield in 2-isomer was 28.3%, at 6000 kg/cm<sup>2</sup> it was ~30%. Results: An increase from atmospheric pressure to 6000 kg/cm<sup>2</sup> caused: (1) An increase in ratio 2-isomer : (3 + 4) isomers by more than 70%; (2) doubling of the 2 : 4 isomer ratio; (3) slight increase in the 3 : 4 isomer ratio. Conclusions: A pressure increase may affect the structural development of the reaction by accelerating the formation of the isomer in direction of the steric hindrance. The change in the 2 : 4 isomer ratio at increasing pressure may be calculated from  $\partial \log ([2]/[4])/\partial P = \Delta \Delta V^*/RT$ , where [2] and [4] are the concentrations of 2-tert-butyl diphenyl and 4-tert-butyl diphenyl, respectively, and  $V^*$  is the volume change when 1 mole of the active complex is obtained from the initial particles. So far, the effect of Pb on the isomer composition has not been explained. There are 2 tables.

Card 2/3



Effect of high pressure on the ...

S/020/63/148/001/022/032  
B144/B186

ASSOCIATION: Institut organicheskoy khimii im. N. D. Zelinskogo Akademii  
nauk SSSR (Institute of Organic Chemistry imeni  
N. D. Zelinskiy of the Academy of Sciences USSR)

PRESENTED: September 15, 1962, by B. A. Kazanskiy, Academician

SUBMITTED: September 5, 1962

Card 3/3

POROSHIN, K.T.; PROKHOROVA, N.I.; KHURGIN, Yu.I.

Kinetics and mechanism of the polycondensation of  $\alpha$ -amino acid esters and peptides. Part 10: Constitution of the products of interaction between the ethyl ester of *d*, *l*-alanine and N-carboxy-*d*, *l*-alanine anhydride. Vysokom. soed. 1 no.6:907-912 Je '59. (MIRA 12:10)

1. Institut organicheskoy khimii im. N.D. Zelinskogo AN SSSR.  
(Alanine)

GONIKBERG, M.G.; PROKHOROVA, N.I.; LITVIN, Ye.F.

Effect of high pressure on the steric orientation of homolytic  
aromatic substitution. Izv.AN SSSR.Otd.khim.nauk no.8:1495  
Ag '62. (MIRA 15:8)

1. Institut organicheskoy khimii im. N.D.Zelinskogo AN SSSR.  
(Aromatic compounds) (Substitution (Chemistry))

GONIKBERG, M.G.; PROKHOROVA, N.I.; LITVIN, Ye.F.

Influence of high pressure on the steric course of tert-butyl-  
benzene phenylation. Dokl. AN SSSR 148 no.1:105-108 Ja '63. (MIRA 16:2)

1. Institut organicheskoy khimii im. N.D. Zelinskogo AN SSSR.  
Predstavleno akademikom B.A. Kazanskim.  
(Benzene) (Phenylation) (Steric hindrance)

POROSHIN, K.T.; KHURGIN, Yu.I.; PROKHOROVA, N.I.

Hydrolysis of *p*-nitrophenyl acetate in the presence of *N*-carbobenzoxy-asparagylserylglycine. Izv. AN SSSR Otd. khim. nauk no.10:1901-1902 (MIRA 13:10) 0 '60.

1. Institut organicheskoy khimii im. N.D.Zelinskogo Akademii nauk SSSR.

(Glycine)

(Acetic acid)

507/492

PROKHOROVA, N. I.

International symposium on macromolecular chemistry, Moscow, 1960.

Meshmarodnyy simposium po makromolekulyarnoy khimii SSSR, Moskva, 14-18 Iyunya 1960 g.; doklady i svodnyy spisok. Sektziya I. (International Symposium on Macromolecular Chemistry held in Moscow, June 14-18, 1960; Reports and Summaries. Section I.) [Moscow, Izd-vo AN SSSR, 1960] 345 p. 5,500 copies printed.

Sponsoring Agency: The International Union of Pure and Applied Chemistry, Commission on Macromolecular Chemistry

Tech. Ed.: T. V. Poljakova.

PURPOSE: This collection of articles is intended for chemists and researchers interested in macromolecular chemistry.

COVERAGE: This is Section I of a multivolume work containing scientific papers on macromolecular chemistry in Moscow. The material includes data on the synthesis and properties of polymers, and on the processes of polymerization, copolymerization, polycondensation, and polycondensation. Each text is presented in full or summarized in French, English, and Russian. There are 47 papers, 28 of which were presented by Soviet, Rumanian, Hungarian, and Czechoslovakian scientists. No personalities are mentioned. References accompany individual articles.

Peroshin, E. I., M. I. Esherida, R. T. Kozlovskaya, M. I. Pechenkova, and E. B. Monkova (USSR). Polycondensation of the $\alpha$ -Methyl- $\beta$ -Keto Esters in the Presence of Carbon Dioxide	210
Mikss, J. A. (Hungary). On the Behavior of Mixed Purfural-Formaldehyde Phenolic Plastics	218
Antik, M. S., and L. A. Medvedeva (USSR). On the Heterogeneous Method of the Polycondensation	228
Mikhaylov, M. V., V. I. Markovskaya, and S. S. Mikolayeva (USSR). On Some Aspects of the Interfacial Polycondensation of Acid Chlorides of Dicarboxylic Acids and Diamines in the Process of Fiber Formation	237
Alexandru, I., and L. Dascalu (Rumania). Synthesis of Polyureids by Interfacial Polycondensation	245
Bischoffberger, A. A., G. A. Lefkowitz, and J. A. Pariza (USSR). The Catalytic Action of Some Isallin Compounds on the Formation of Polyurethanes	255
Lelek, P., and B. Chrenček (Czechoslovakia). Some Problems of Polycondensation in a Suspension	262
Golubova, A. I., E. F. Ermakova, and A. I. Vashnina (USSR). Copolymers of $\alpha$ -Methylstyrene and Vinyl Naphthalene with Other Vinyl Compounds	282
Lis, D., and M. Kolinsky (Czechoslovakia). Chain Transfer Reactions in the Polymerization of Vinyl Chloride	304
Zelinger, J. (Czechoslovakia). Study of the Kinetics of Dispersed Polymerization of p-chlorostyrene in a Column Containing an Aqueous Solution with a Linear Density Gradient	305/7
Kissler, J., V. Matzka, and E. Polacek (Czechoslovakia). Thermal Aging of Polychloroprene	328
AVAILABLE: Library of Congress	JA/500/10 9-69-62
Card 9/9	2-7
Organotin Polymers	180
Kozlov, M. M., T. M. Kisilova, and P. S. Florinsky (USSR). The Effect of Chemical Structure on the Polymerisation Activity of the Unsaturated Organotin Compounds	187
Polymers of Methyl Methacrylate (MMA) (USSR). Cooperative Processes in the Polycondensation of Biopolymers	202

49

PROKHOROVA, N.P.; BREZHNEVA, N.Ye.

Determination of the stability constants of  $\text{Hf}(\text{NO}_3)_4$  ions  
by the tributyl phosphate extraction method. Zhur. neorg.  
khim. 7 no.8:1846-1853 Ag '62. (MIRA 16:6)

(Hafnium nitrate) (Complex compounds)  
(Butyl phosphate)

...n. re.; KORPUSOV, G. V.; PATRUSHEVA, Ye. N.; PROKHOROVA, N. P.; KRYLOV, Yu. S.

"Extraction of radioactive fission elements."

report submitted for 3rd Intl Conf, Peaceful Uses of Atomic Energy, Geneva,  
31 Aug-9 Sep 64.



S/078/62/007/009/007/007  
B144/B101

AUTHORS:

Korpusov, G. V., Levin, V. I., Brezhneva, N. Ye.,  
Prokhorova, N. P., Yeskevich, I. V., Seredenko, P. M.

TITLE:

Extractive separation of cerium

PERIODICAL: Zhurnal neorganicheskoy khimii, v. 7, no. 9, 1962, 2254-2261

TEXT: Practical methods for extractive separation of  $Ce^{IV}$  from rare earth (RE) concentrates were developed by studying the distribution coefficients and taking account of the following factors: 1) The solvate formed in  $Ce^{IV}$  nitrate extraction by way of tributyl phosphate (TBP) from  $HNO_3$  media of different concentration is  $H_2[Ce(NO_3)_6] \cdot 2(C_4H_9)_3PO_4$ . On complete saturation the organic phase contains per liter 200-210 g metallic Ce or 250 g  $CeO_2$ . 2) When TBP is diluted with hydrated kerosene, xylene, toluene, or  $CCl_4$ , the capacity changes proportionally with the dilution. 3) TBP must be purified by oxidation or vacuum distillation. 4) The optimum  $HNO_3$  concentration is 3 - 5 moles/l and corresponds to the overall minimum  
Card 1/2

Extractive separation of cerium

S/073/62/007/009/007/007  
B144/B101

distribution coefficients of  $\text{Ce}^{\text{III}}$ .

- a) by  $\text{H}_2\text{O}_2$  for  $\text{pH} > 5$  or by atmospheric  $\text{O}_2$ , if large quantities are involved;
- b) by  $\text{KBrO}_3$ ,  $\text{KMnO}_4$ , ozone, if small quantities must be separated.

6) Reextraction with  $\text{H}_2\text{O}_2$  dissolved in dilute  $\text{HNO}_3$  yields  $\text{Ce}^{\text{III}}$ . 7) The

$\text{Ce}^{\text{III}}$  distribution coefficients depend on the  $\text{Ce}$  content in the organic phase and on the dilution of TBP. Hence 100% TBP and dilute TBP are suggested for the extraction respectively of large and small  $\text{Ce}$  quantities. or both methods can be combined. The operation is either continuous or intermittent. A plant consisting of one extraction and two washing stages is suggested. There are 4 figures and 5 tables.

SUBMITTED: November 27, 1961

Card 2/2

L 17580-63

EWP(q)/EWT(m)/EDS AFFTC/ASD JD/JG

ACCESSION NR: AP30C5222

S/0089/63/015/002/0138/0146

AUTHORS: Levin, Y. I.; Korpusov, G. V.; Man'ko, N. M.; Patrusheva, Ye. N.; Prokhorova, N. P.; Platnov, G. F.

59

TITLE: Extraction of tetravalent cerium with organic solvents.

SOURCE: Atomnaya energiya, v. 15, no. 2, 1963, 138-146.

TOPIC TAGS: cerium, tetravalent cerium, organic solvent, ozone, diethyl ether, nitromethane, tributyl phosphate

ABSTRACT: Authors studied the oxidation of small quantities of cerium and the mechanism of the extraction precipitation of microamounts of radioactive cerium. Authors showed that the use of ozone is most expedient for the oxidation of cerium, as it does not contaminate the solution by extraneous ions. The extraction of Ce(IV) by diethyl ether, nitromethane, and tributyl phosphate was studied, and it has been shown that in the first case, cerium is extracted as saturated cerium acid. In the latter two cases, at low HNO<sub>3</sub> concentrations, cerium is extracted as nitrate whereas at high concentrations it is extracted as H<sub>2</sub>(Ce(NO<sub>3</sub>)<sub>6</sub>). The constants of the complex formation of Ce(IV) with the nitrate ions were estimated. Orig. art. has: 16 figures, 3 tables and 7 formulas.

Card 1/2

17-00000-00000

L 43022-65 EWT(m)/EPF(c)/EWA(d)/EWP(j)/T/EWP(t)/EWP(z)/EWP(b) Pc-4/Pr-4  
EWA/JD/EM

8/2933/64/007/000/0016/0023

ACCESSION NR: AT5008621

AUTHORS: Korshunov, M. A.; Bukharova, V. A.; Kut'in, A. M.; Kudinova, R. N. 1/0  
Korshov, V. G.; Prokhorova, N. S. 39

TITLE: Synthesis of tert-dodecyl mercaptan from propylene tetramer and hydrogen sulfide in the presence of an aluminosilicate catalyst. Communication 2.

SOURCE: AN SSSR. Rashchirskiy filial. Khimiya sorganicheskikh sovedinoniy, sedurchashchikhnya v neftyakh i nefteproduktakh, v. 7, 1964, 16-23

TOPIC TAGS: mercaptan, catalysis, aluminum, silicate, hydrogen sulfide /  
12Kh150T steel, 12Kh13 steel, 12Kh25 steel, 12Kh17T steel, 12Kh steel, 12Kh11E steel

ABSTRACT: The authors discuss a method of synthesizing tert-dodecyl mercaptan from propylene tetramer and hydrogen sulfide with aluminosilicate catalyst. The laboratory setup is illustrated. The reactor is loaded with aluminosilicate catalyst, hermetically sealed, and put under pressure of 50 atm in nitrogen gas. The pressure is then lowered and the catalyst heated at some given temperature for 2 hours in a current of nitrogen. Freshly ground propylene tetramer is placed in a buret, and liquid hydrogen sulfide is added to it under a pressure of 30 atm. The two constituents are mixed and introduced into the reactor,

Card 1/3

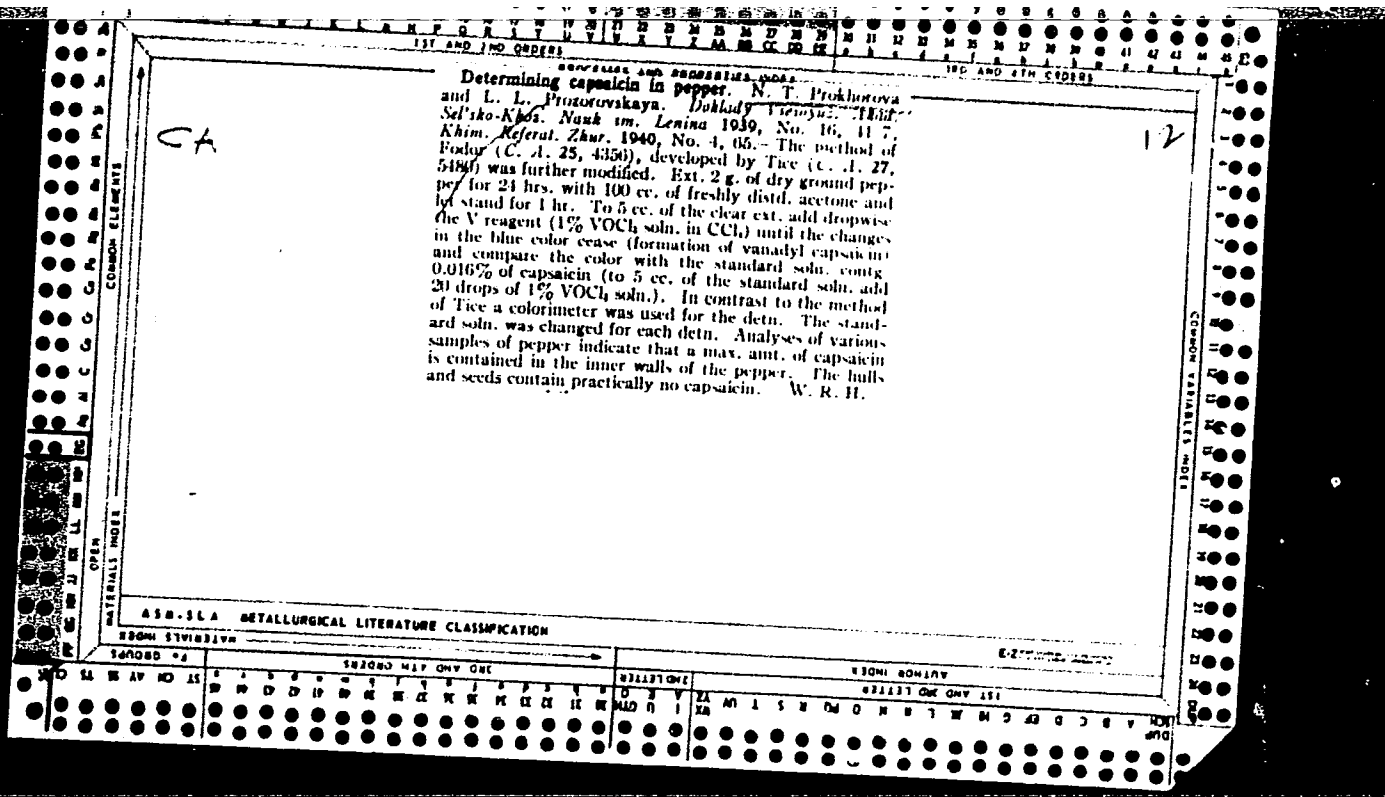
L 43928-85

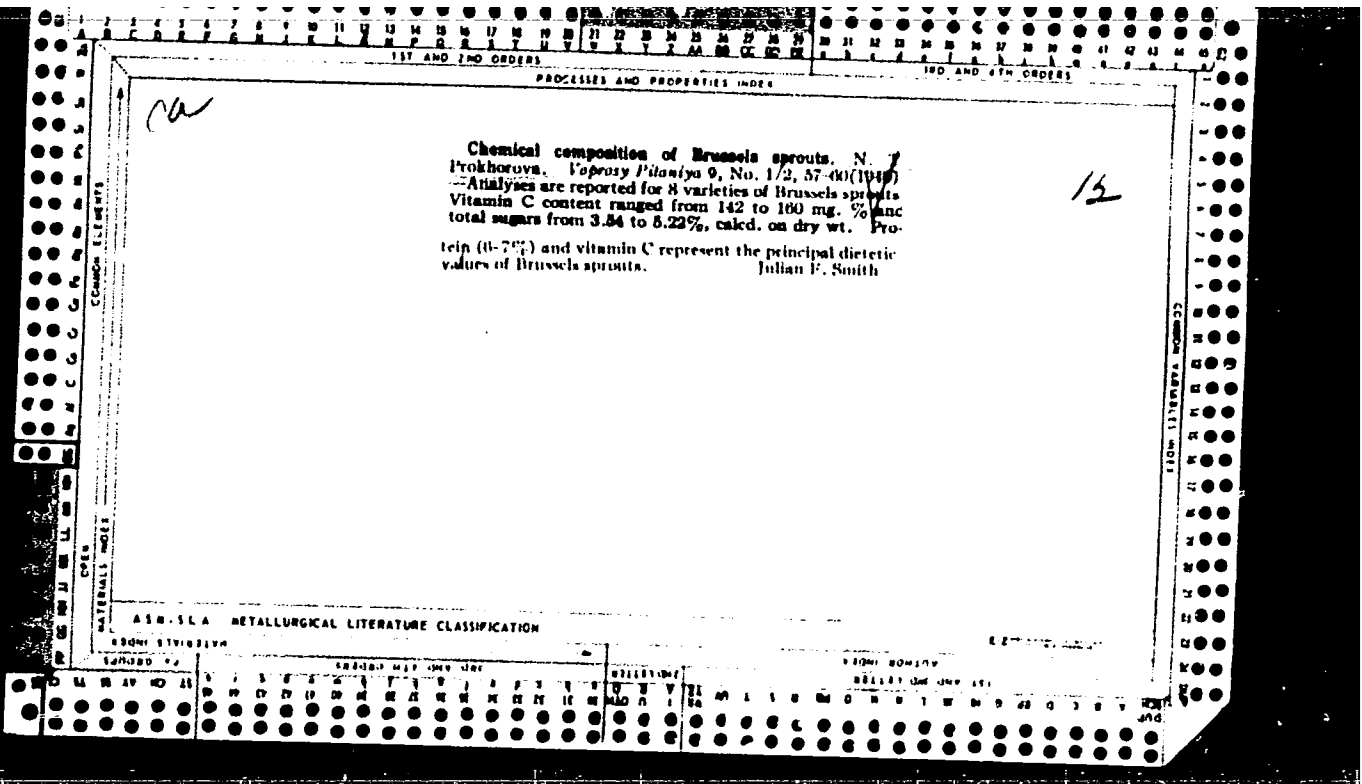
ACCESSION NR: AT5007621

where the pressure is rigidly controlled. The unused hydrogen sulfide is removed, and the liquid reaction product is poured into a glass receptacle, monomerized, and analyzed for its dodecyl mercaptan content. Results of producing tert-dodecyl mercaptan at different temperatures, pressures, and proportions of hydrogen sulfide are tabulated. It was found that the catalyst worked for a considerable period without marked loss of activity. After 28 hours, 60% production of the mercaptan was obtained as against 70% after only 12 hours. The authors discuss regeneration of the catalyst. A number of olefins and mercaptans were obtained in the synthesizing process, and the physical properties of these compounds have been tabulated. Tests were made on the resistance to corrosion of various metal parts in the equipment used for synthesizing. Results were again tabulated. It was found that chroma and chromo-nickel steels were very resistant, but ordinary carbon steel was not. Tests on the activity of tert-dodecyl mercaptan showed it to be an effective regulator in polymerization systems with Ronalite-Trilon activating group and potassium persulfate. The technology of producing tert-dodecyl mercaptan is discussed. Orig. art. has: 3 figures and 4 tables.

ASSOCIATION: Nauchno-issledovatel'skiy institut monomerov dlya sinteticheskogo kauchuka (Scientific Research Institute of Monomers for Synthetic Rubber)

Card 2/8





~~Prokhorova, N. T.~~  
PROKHOROVA, N. T.

rej

USSR.

Mineral composition of potatoes grown in the Leningrad region. M. T. Prokhorova (Sci.-Research Sanit.-Hyg. Inst., Leningrad). *Voprosy Pitaniya* 13, No. 4, 34-41 (1954).—Chem. compn. of fresh potatoes of 32 different varieties grown in the Leningrad region is the following: dry substance 16.15 (min.)-28.41 (max.); ash 0.43-0.92%, Ca 4.08-13.68, Mg 14.99-34.09, P 38.15-70.30, Fe 1.21-3.06, S 14.50-31.39, and Cl 48.63-81.51 mg. %, resp. Ecology and climatic factors affect the mineral compn. of potatoes. The nutritional value of potatoes is discussed: 300 g. potatoes supply approx. Ca 3, Mg 17, P 11, and Fe 40% of the daily human requirements, resp. E. W.



Prokhorova, N. T.

✓ The volatile organic acid composition of rye bread as an index of its acidity. N. T. Prokhorova (Sci. Research Sanit.-Hyg. Inst., Leningrad). *Voprosy Pitaniya* 15, No. 3, 26-30 (1968). — In 22 different rye breads the total acidity was from 9.4 to 11.8 Neumann's degrees ( $1^\circ = 1$  ml. of  $N$  NaOH/100 g. bread). The total amt. of volatile acids made up 40-50% of the total acidity; the amts. of AcOH, EtCO<sub>2</sub>H, and HCO<sub>2</sub>H constituted 37.8-68.4, 28-52, and 1.16-10.7% of the total volatile acids, resp. Lactic acid was not present. At the same titratable acidity, breads contg. more volatile acids appeared more sour in taste. 14 references. E. Wierbicki

PROKHOROVA, N.T.

Level of volatile acids in rye bread as an indicator of its acidity.  
Vest.khir. 77 no.11:26-30 N '56. (MLRA 10:1)

1. Iz otdela giginy pitaniya Leningradskogo nauchno-issledovatel'skogo sanitarno-gigiyenicheskogo instituta.

(ACIDS

volatile, level in rye bread as indicator of acidity)

(BREAD

rye bread, level of volatile acids as indicator of acidity)

*PROKHOROVA N.G.*

136-11-13/19

AUTHORS: Krapukhin, V.V. and Zuychenko, G.N., Candidates of  
Technical Sciences, Rezanova, N.S., Engineer and  
Prokhorova, N.G.

TITLE: Drying Hard Alloy Articles by Infrared Rays (Sushka tverdos-  
plavnykh izdeliy infrakrasnymi luchami)

PERIODICAL: Tsvetnyye Metally, 1957, No.11, pp. 75 - 78 (USSR).

ABSTRACT: In the work described by the authors and in which  
Engineer Ye.A. Gol'dberg participated, the influence of changes  
in drying temperature on the time required to dry (i.e. to  
remove volatiles from and strengthen) the compressed cermet-mix  
object was studied. This was followed by experiments in which  
the process was carried out in infra-red radiation from type  
C-1 lamps fitted with glass bowls and parabolic mirror reflectors.  
Drying time was reduced to 25-35 min., the advantages of  
additional heating from the bottom being established. On the  
basis of these laboratory experiments, a continuous drier (Fig.1)  
was designed (N.P. Yakovlev participating), in which the lamps  
are arranged in a checker pattern over the conveyor-borne ob-  
jects while nichrome heaters are arranged to heat the undersides  
of the objects. The authors show the temperature changes at  
different depths inside an object as it passes through the  
installation (Figs. 2 and 3) based on tests with a 40 mm high

Card 1/2

Drying Hard Alloy Articles by Infrared Rays

136-11-13/17

x 35 x 25 mm object fitted with thermocouples at three levels. Prolonged use of the installation for titanium-tungsten-cobalt sintered objects has confirmed its reliability. For these materials, the speed of the conveyor is 2.5 m/hr, drying is effected in 30 min., the electricity consumption amounts to 135 kWh/ton of dried material and the daily productivity exceeds 1 ton. The installation is recommended for other metallurgical processes. There are 3 figures and 4 Russian references.

ASSOCIATIONS: Mintsvetmetzoloto and the Moscow Combine for Hard Alloys  
(Mintsvetmetzoloto i Moskovskiy kombinat tverdykh splavov)  
Library of Congress

AVAILABLE:  
Card 2/2

1. Sintered alloys-Drying
2. Infrared rays-Applications

BABIN, P.N.; PROKHOROVA, R.G.

Refractories made of Kempirsay chromite ores. Trudy Inst. met.  
1 obog. AN Kazakh. SSR 6:181-185 '63. (MIRA 16:10)

RABIN, P.N. ; Prinimali uchastiye: PROKHOROVA, R.G.; GONCHAROVA, A.I.

Methods of evaluating the interaction of refractories and melts containing lead and zinc. Trudy Inst. met. i obogashch. AN Kazkh. SSR 2:103-113 '60. (MIRA 13:10)

(Nonferrous metals--Metallurgy)

(Refractory materials)

BABIN, P.N.; PROKHOROVA, R.G.

Chrome-magnesite refractories manufactured from various  
kinds of Kimpersay chromite ores. Trudy Inst. met. i  
obog. AN Kazakh. SSR 5:149-158 '62. (MIRA 15:11)  
(Kimpersay--Chromite) (Refractory materials)

VYZHGINA, L.B.; PROKHOROVA, R.I.

Quadrics in Galilean space. Uch. zap. MOPI 123:479-490 '63.  
(MIRA 17:4)



L 51548-65 EWT(1)/EWT(m)/EWG(m)/T/EMP(t)/EEC(b)-2/EMP(b) P1-4 IJP(c)  
 ACCESSION NR: AP5010757 RDM/JD/GG UR/0181/65/007/004/1265/1266

AUTHOR: Gol'taman, B. M.; Prokhorova, S. D. 35

TITLE: Microsegregation in bismuth telluride 34

SOURCE: Fizika tverdogo tela, v. 7, no. 4, 1965, 1265-1266 0

TOPIC TAGS: bismuth telluride, crystallization, crystal growth, microsegregation, concentration supercooling 21

ABSTRACT: The authors investigated the conditions under which stability occurs in the crystallization front of bismuth telluride, inasmuch as the thermoelectric efficiency of this material depends on the crystallization conditions. The profile of the front is...

... the concentration front changed from a smooth to a

Card 1/2

L 51548-65  
ACCESSION NR: AP5010757

jogged front, with the jogs stretching in a direction perpendicular to the ternary axis, unlike the isotropic distribution of projections observed in concentration supercooling of lead or germanium. The difference is attributed to the higher anisotropy of the growth rate of bismuth telluride in the plane perpendicular to the ternary axis. The value of the ratio  $G/v$  at the time when the front lost stability was lower than the critical value  $(1.2-1.5) \times 10^4$  deg-sec/cm<sup>2</sup>, in agreement with theory of concentration supercooling developed by W. A. Tiller et al. (Acta Metal. v. 1, 428, 1953). It is concluded that the concentration supercooling is brought about by an excess of tellurium, which appears in the melt during the crystalliza-

was no concentration supercooling. Orig. art. has: 2 figures.

ASSOCIATION: Institut poluprovodnikov AN SSSR, Leningrad (Institute of Semiconductors AN SSSR)

SUBMITTED: 25Nov64

ENCL: 00

SUB CODE: 88, IC

MR REF SOV: 000

OTHER: 005

Card 2/2 *LS*

L 24379-66 EMT(m) JD/HW

ACC NR: AP6009702

SOURCE CODE: UR/01B1/66/008/003/0975/0977

AUTHOR: Pisarev, R. V.; Prokhorova, S. D.; Syrnikov, P. P.

*477*  
*10 45*

ORG: Institute of Semiconductors, AN SSSR, Leningrad (Institut poluprovodnikov AN SSSR)

TITLE: Changes in the intensity of the electronic transitions of the Mn<sup>2+</sup> and Ni<sup>2+</sup> ions in the antiferromagnet NaNi<sub>0.96</sub>Mn<sub>0.04</sub>F<sub>3</sub>

*27 27*

SOURCE: Fizika tverdogo tela, v. 8, no. 3, 1966, 975-977

TOPIC TAGS: antiferromagnetic material, manganese, nickel, light absorption, electron transition, absorption spectrum, line intensity, spectral line

ABSTRACT: The authors report on an investigation of the intensity of the electronic transitions of both Mn<sup>2+</sup> and Ni<sup>2+</sup> in the antiferromagnets NaNiF<sub>3</sub> and NaNi<sub>0.96</sub>Mn<sub>0.04</sub>F<sub>3</sub>, by measuring the optical absorption in a broad spectral interval, making it possible to draw certain definite conclusions concerning the growth of the transition intensity. The absorption spectra were investigated photometrically with a double prism monochromator (DMR-4). The results (Fig. 1) show the effect of a mutual influence of the Mn<sup>2+</sup> and Ni<sup>2+</sup> ions, resulting in an increase in the intensity of certain absorption lines of Mn<sup>2+</sup> ions.

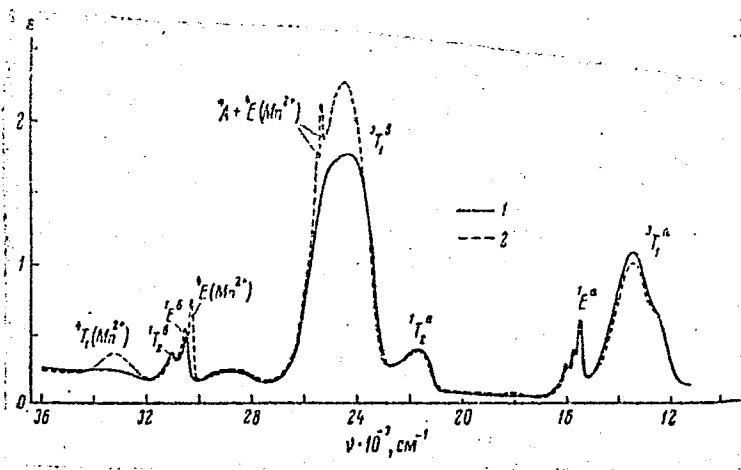
"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001343210004-3"

The abstract was obtained from the original document. The abstract is a summary of the original document and is not intended to replace the original document. The abstract is provided for information only and should not be used as a substitute for the original document. It is concluded that the greatest role in the observed intensification of the spectral-line intensity is probably played by exchange interaction between 3d-ions. The transitions responsible for

Card 1/2

ACC NR: AF6009702

Fig. 1. Absorption spectrum of single crystals of  $\text{NaNiF}_3$  (1) and  $\text{NaNi}_{0.98}\text{Mn}_{0.04}\text{F}_3$  (2) at 77K.  $\epsilon$  -- coefficient of molecular extinction



the different spectral lines are briefly analyzed and the absorption spectra evaluated and compared with other data. The authors thank G. A. Smolenskiy for interest in the work and valuable remarks, and P. V. Usachev for a chemical analysis of the crystals. Orig. art. has: 1 figure and 1 table.

SUB CODE: 07 / SUBM DATE: 21Oct65/ OTH REF: 002

Card 2/2 (V)R

GORINA, M.Ye.; KOROLEVA, Ye.V.; PROKHOROVA, S.M.

Bibliographic index of literature on the spinning of bast fibers  
and the manufacture of cordage published from 1958 to 1960.  
Nauch.-issl.trudy TSNIILV 17:162-174 '62. (MIRA 16:10)

IVANOV, K.K.; KOVALENKOVA, V.K.; DAVYDOVA, T.A.; BORISOVA, V.N. Primalni  
uchastiye; SOKOLOVA, L.B.; PROKHOROVA, T.G.; SHATILOVA, Z.K.;  
PYL'NEVA, L.I.; SEMENOVA, V.S.

Obtaining colimycin on an enriched medium. Med.prom. 14 no.11:13-16  
N '60. (MIRA 13:11)

1. Institut po izyskaniu novykh antibiotikov AMN SSSR.  
(NEOMYCIN)

BABKIN, N.N.; GREBENSHCHIKOV, L.S.; ZHALIN, N.I.; PROKHOROVA, T.I.;  
LYAPUNOV, Yu.A.; LOBAZOV, P.A.

Overall dust removal from the atmosphere of the Berezovskiy  
Mine. Gor. zhur. no.5:61-63 My '64. (MIRA 17:6)

1. Vsesoyuznyy nauchno-issledovatel'skiy gornometallurgicheskiy  
institut tsvetnykh metallov (for Babkin, Grebenshchikov, Zhalin,  
Prokhorova). 2. Berezovskiy rudnik, KazSSR (for Lyapunov,  
Lobazov).

PROKHOROVA, T.I.; SHRAYBER, Yu.F.

Ventilation of the Mirgalimsay Mine. Sbor. trud. VNIITSVETMET  
no.4:229-235 '59. (MIRA 16:8)

(Margalimsay region--Mine ventilation)



IVANOV, K.K.; GAVRILINA, G.V.; KOVALENKOVA, V.K.; LIROVA, S.A.;  
SOKOLOVA, L.B.; Prinsipali uchastiye: BOYARSKAYA, R.V., inzh.;  
PROKHOROVA, T.I., inzh.; SHATILOVA, Z.K., inzh.

Aer~~ation~~ation and respiration of actinomycetes and proactinomycetes  
synthesizing antibiotics in fermentors in relation to biochemical  
changes in the culture media. Antibiotiki 6 no.11:984-989 N '61.  
(MIRA 15:3)

1. Institut po izyskaniyu novykh antibiotikov AMN SSSR.  
(ACTINOMYCETES) (ANTIBIOTICS)

PROKHOROVA, T. P.

PROKHOROVA, T.P.; BASILOV, V.V., inzhener, redaktor.

[Manual of safety techniques for the railroad lineman] Pamiatka po  
tehnike bezopasnosti putevomu rabochemu. Moskva, Gos. transp.  
zhel-dor. izd-vo, 1953. 61 p. (MLRA 7:5)  
(Railroads--Safety measures) (Railroads--Maintenance and repair)

25366

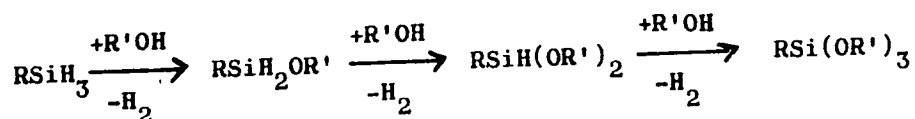
S/079/61/031/008/004/009  
D215/D30453700

AUTHORS: Reykhsfel'd, V.O. and Prokhorova, V.A.

TITLE: Study in the field of mono-organosilanes. (II) Re-  
activity of mono-organosilanes with alcohols

PERIODICAL: Zhurnal obshchey khimii, 1961, v. 31, no. 8, 2613-2618

TEXT: The reactions studied are generalized by the following equations:



The alcohols studied were benzyl, propyl-, allyl- and propargyl- and the silanes, butyl-, phenyl-, n-chlorophenyl-. The kinetics of the reactions were followed by measuring the rate of H<sub>2</sub> liberation in the reaction catalyzed by a strictly determined amount of freshly deposited Cu,

Card 1/2

25366

Study in the field of mono-...

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D215/D304

at varying temperatures, i.e. 10, 20, 30 and 40°C. The results of the studies are shown in tabulated and graphic form. It is deduced from the results that the reaction of mono-organosilanes with alcohols takes place by a mechanism of nucleophilic substitution of the type  $S_N 2$

(as defined by Ingold and Hughes). There are 4 figures, 5 tables and 7 references: 3 Soviet-bloc and 4 non-Soviet-bloc. The references to the English-language publications read as follows: W.H. Nebergall, J. Amer. Chem. Soc., 1950, vol. 72, 4702; W.S. Miller, J.S. Peake, and W.H. Nebergall, *ibid.*, 1957, vol. 79, 5604; A.A. Frost and W.C. Schwemer, *ibid.*, 1952, vol. 74, 1268.

ASSOCIATION: Leningradskiy tekhnologicheskii institut imeni Lensoveta  
(Lensovet Technological Institute Leningrad)

SUBMITTED: July 8, 1960

Card 2/2