GRIGOR'YEVA, N.I.

Injections of nicotinic acid in the treatment of atrophy of the optic nerve and of certain diseases of the fundus oculi. Vest. oft., Moskva 32 no.4:23-25 July-Aug 1953. (CEML 25:1)

1. Candidate Medical Sciences. 2. Of the Eye Clinic (Acting Head -- Docent G. F. Lushinskiy), Sverdlovsk Medical Institute.

USSR/Medicine - Veterinary, Foot-and-Mouth Disease — Sep 53

"Course of the Foot-and-Mouth Disease on a Suburban Farm," Aspirant N. I. Grigor'yeva, Chair of Animal Hygiene and Vet Medicine, Moscow Acad Agr Sci im K. A. Timiryazev

Veterinariya, Vol 30, No 9, pp 27-28

A total from 150 to 500 units of penicillin in a 0.25% sol of novocain administered intramuscularly, in the vicinity of the upper area of each animal, at the rate of 5-10 cc per day for 2-3 successive

270T79

days, proved effective in the treatment of foot-and-mouth disease. The weight, age, and condition of each animal must be taken into consideration in calculating the total amount of penicillin to be administered. Rinsing the oral and nasal cavities with the following solns proved beneficial: 1%-2% solution of alum, 0.5% solution of acetamide, and 1:1,000 soln of potassium permanganate. Streptocidum album ointment proved very effective in the treatment of the teats.

270T79

GRIGOR'YEVA, N. I.

"The Effect of Changing the Parameters of a Thr e-Cycle Milking Machine on the Condition of the Udder and the Health of the Cow." Cand Agr Sci, Moscow Order of Lenin Acad of Agriculture imeni K. A. Timiryazev, Moscow, 1954. (K , No 1, Jan 55)

Survey of Scientific and Technical issertations Defended at USSR Higher Educational Institutions (13)
SO: Sum. No. 598, 29 Jul 55

ZNAMENSKIY, A.A., dotsent; GRIGOR'YEVA, N.I., kand.sel'skokhoz.nauk

Study of the use of six-row cow sheds. Veterinariia 36 no.7: 59-62 Jl '59. (MIRA 12:10)

1. Voronezhskiy zooveterinarnyy institut.
(Dairy barns)

GRIGOR'YEVA, N.K.

USSR

Investigations of systems with concentrated hydrogen peroxide. IV. Solubility isotherms of the ternary system calcium hydroxide-hydrogen peroxide-water. S. Z. Makarov and N. K. Grigor'eva. *Bull. Acad. Sci. U.S.S.R., Div. Chem. Sci.* 1954, 223-8 (Engl. translation).—See *C.A.* 49, 7106g. H. L. H.

GRIGOR'YEVA, N.K.

USSR •

Systems containing concentrated hydrogen peroxide V. The thermal characteristics of the solid phases of the system calcium hydroxide hydrogen peroxide water. S. Z. Makarov and N. K. Grigor'eva. *Bull. Acad. Sci. U.S.S.R., Div. Chem. Sci.* 1954, 311-14 (Engl. translation). See *C. A.* 49, 7455*h*.

GRIGOR'YEVA, N K.

USSR/Chemistry Peroxide Compounds

Card : 1/1

Authors : Makarov, S. Z., and Grigoryeva, N. K.

Title : Investigation of concentrated hydrogen peroxide systems. Part 4. - Solubility isotherms of a ternary $Ca(OH)_2$ - H_2O_2 - H_2O system

Periodical : Izv. AN SSSR, Otd. Khim. Nauk, 3, 385 - 391, May - June 1954

Abstract : The solubility isotherms of a ternary $Ca(OH)_2$-H_2O_2-H_2O system characterized by two solid phases were established at −21 and −10°, by studying the reaction between aqueous calcium hydroxide solutions and concentrated H_2O_2. The solubility isotherm at 0° is characterized by the presence of three solid phases of described composition. The effect of increased H_2O_2 concentration on the establishment of the equilibrium of the system, is explained. The effect of temperature, at which the H_2O_2 solution solidifies, on the existence of $CaO_2 \cdot 2H_2O_2$ is also explained. Nineteen references: 7 USSR, 4 French since 1818-1900, 3 German, 5 USA. Tables, graphs.

Institution : Acad. of Sc. USSR, Laboratory of Peroxide Compounds

Submitted : July 2, 1953

USSR/ Chemistry Peroxide compounds

Card : 1/1 Pub. 40 - 3/27

Authors : Makarov, S. Z., and Grigoryeva, N. K.

Title : Investigation of systems containing concentrated H_2O_2. Part 5.- Thermal characteristics of solid phases of $Ca(OH)_2$ - H_2O_2 - H_2O system

Periodical : Izv. AN SSSR. Otd. khim. nauk 4, 598 - 603, July - August 1954

Abstract : The thermal characteristics of the three solid-phases of the $Ca(OH)_2$ - H_2O_2 - H_2O system, were determined by the isothermal curve of the system. It was established that octohydrate $CaO_2 \cdot 8H_2O$ and dihydrate $CaO_2 \cdot 2H_2O$ of CaO_2 dehydrogenate easily and convert into anhydrous CaO_2, which remains stable up to 300°. It was also found that the thermal decomposition of this system is exceptionally rapid and followed by a large liberation of heat. Complete decomposition of CaO_2 was noticed at a temperature slightly above 300°. Four references: 1 USSR; 2 USA and 1 French (1900 - 1954). Tables; graphs.

Institution : Acad. of Sc. USSR, Laboratory of Peroxide Compounds

Submitted : August 8, 1953

GRIGOR'YEVA, N.K.

System with conductivity hydrogen peroxide. VII. Isotherm at 0° of the system NaOH-H_2O-H_2O_2. S. Z. Makarov and N. K. Grigor'eva. *Bull. Acad. Sci. U.S.S.R., Div. Chem. Sci.* 1955, 15–17.—See *C.A.* 49, 12942b. H. L. H.

GRIGORYEVA, N.K.

USSR/Chemistry - Analysis methods

Card 1/1 Pub. 40 - 3/27

Authors : Makarov, S. Z., and Grigoryeva, N. K.

Title : Study of systems with concentrated H_2O_2. Part 7. The 0° isotherm of a ternary NaOH -H_2O_2-H_2O system

Periodical : Izv. AN SSSR. Otd. khim. nauk 1, 17-20, Jan-Feb 1955

Abstract : Employing the solubility method the authors analyzed the 0° isotherm for the ternary system consisting of NaOH-H_2O_2-H_2O in liquid phase. The presence of three solid phases of a certain specific composition was established. The derivation of perfectly stable sodium peroxide octohydrates ($Na_2O_2 \cdot 8H_2O$ in the form of laminated crystals is described. Dehydration of the octohydrates results in conversion into anhydrous Na_2O_2. Six references: 1 Russian, 1 USA and 4 German (1862-1912). Table; graph.

Institution : Acad. of Sc., USSR, The N. S. Kurnakov Inst. of Gen. and Inorg.

Submitted : April 27, 1954

GRIGORYEVA, N. K.

USSR/ Chemistry - Inorganic chemistry

Card 1/1 Pub. 40 - 3/26

Authors : Makarov, S. Z., and Grigoryeva, N. K.

Title : Investigation of systems containing concentrated H_2O_2. Part 8. Thermal characteristic and stability of solid phases of the $NaOH-H_2O_2-H_2O$ system

Periodical : Izv. AN SSSR. Otd. khim. nauk 2, 208 - 215, Mar-Apr 1955

Abstract : The solid phases of a ternary ($NaOH-H_2O_2-H_2O$) system were investigated to determine the thermal stability and dehydration properties of the system. The synthesis of sodium hydrogen peroxide NaOOH or $Na_2O_2.H_2O_2$ according to the Tafel method is described. The system $Na_2O_2.8H_2O$ was found to be a hydrate form of sodium peroxide. This was also confirmed by the presence of an endothermal dehydration effect. The properties of sodium hydrogen peroxide are analyzed. Six references: 4 German, 1 French and 1 USSR (1878-1955). Tables; graphs.

Institution : Acad. of Sc., USSR, The N. S. Kurnakov Inst. of Gen. and Inorgan. Chem.

Submitted : April 27, 1954

GRIGOR'YEVA, N.K.

USSR/Inorganic Chemistry. Complex Compounds C

Abs Jour : Referat. Zhurnal Khimiya, No 6, 1957, 18808

Author : S Z. Makarov, N.K. Grigor'yeva
Inst : -
Title : On The Problems Concerning Production of Calcium Superperoxyde CaO_4.

Orig Pub : Zh. Neorgan. Khimii, 1956, 1, No 7, 1607 - 1612

Abstract : Basing on the results of experiments carried out with a view to test the analytic methods of the determination of "molecular" and "active" oxygen contents in superoxides of alkali and alkali-earth metals, as well as of experiments of CaO_4 production by the methods described in the bibliography, the authors arrive at the conclusion that the bibliographic data regarding the existence of CaO_4 are not sufficiently substantiated.

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-1-

5(2),5(4)
AUTHORS: Makarov, S.Z., Grigor'yeva, N.K. SOV/62-58-11-3/26

TITLE: Investigation of Systems Containing Concentrated Hydrogen Peroxide (Izucheniye sistem s kontsentrirovannoy perekis'yu vodoroda)
Communication XV. Isotherm of the Solubility at 10° of the Ternary System $Ca(OH)_2$-H_2O_2-H_2O and Complementary Characterization of Solid Phases (Soobshcheniye 15. Izoterma rastvorimosti 10° troynoy sistemy $Ca(OH)_2$-H_2O_2-H_2O i dopolnitel'naya kharakteristika tverdykh faz)

PERIODICAL: Izvestiya Akademii nauk SSSR. Otdeleniye khimicheskikh nauk, 1958, Nr 11, pp 1289 - 1295 (USSR)

ABSTRACT: The $Ca(OH)_2$-H_2O_2-H_2O ternary system has been investigated already earlier (Ref 1) according to the method of solubility at temperatures from 0 to -20°. The thermal analysis (Ref 2) confirmed the fact that actually all solid phases are individual calcium peroxide compounds. It also made possible the determination of the limits of stability of these phases. The isothermal lines of the solubility (Ref 1) have shown the ranges where these phases exist as

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Investigation of Systems Containing Concentrated Hydrogen Peroxide. Communication XV. Isotherm of the Solubility at 10° of the Ternary System $Ca(OH)_2$-H_2O_2-H_2O and Complementary Characterization of Solid Phases

well as their conditions of formation according to temperature and the concentration of hydrogen peroxide in solution. In the present paper the authors set up a polythermal diagram of the ternary system $Ca(OH)_2$-H_2O_2-H_2O with the solid phases $CaO_2.8H_2O$, $CaO_2.2H_2O$ and $CaO_2.2H_2O_2$ according to the data of the isothermal lines of the solubility from -21 to 10°. Crystals of hydrates and perhydrates of calcium peroxide belong to a lower syngony than the cubic ones. X-ray investigations of CaO_2 and $CaO_2.8H_2O$ powders confirmed the data mentioned in publications on the belonging of the crystals to the tetragonal syngony. The penetration of 2 water molecules into the crystal lattice of CaO_2 slightly deforms the fundamental lattice. It seems that the water molecules fill intermolecular vacancies. Roentgenograms of $CaO_2 \cdot 2H_2O_2$ powders considerably differ from those of the other calcium compounds. This confirms the individual character of the

Investigation of Systems Containing Concentrated Hydrogen Peroxide. Communication XV. Isotherm of the Solubility at 10° of the Ternary System $Ca(OH)_2$-H_2O_2-H_2O and Complementary Characterization of Solid Phases SOV/62-58-11-3/26

compound concerned. There are 6 figures, 2 tables, and 6 references, 4 of which are Soviet.

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

SUBMITTED: May 17, 1957

Card 3/3

5(2) SOV/62-59-1-2/38

AUTHORS: Makarov, S. Z., Grigor'yeva, N. K.

TITLE: Study of Systems Containing Concentrated Hydrogen Peroxide (Izucheniye sistem s kontsentrirovannoy perekis'yu vodoroda) Communication XVII. Isothermal Lines of the Solubility and Solid Phases of the Ternary System $Ba(OH)_2 - H_2O_2 - H_2O$ (Soobshcheniye 17. Izotermy rastvorimosti i tverdyye fazy troynoy sistemy $Ba(OH)_2 - H_2O_2 - H_2O$)

PERIODICAL: Izvestiya Akademii nauk SSSR. Otdeleniye khimicheskikh nauk, 1959, Nr 1, pp 9 - 16 (USSR)

ABSTRACT: Among alkali earth metals only barium peroxide can be obtained directly from oxide and oxygen at high temperature and in the presence of humidity. In the interaction of barium hydroxide or barium salts with aqueous solutions of hydrogen peroxide hydrates or perhydrates of barium peroxide are formed which can be transformed into barium peroxide by dehydration. The numerous data to be found in publications on hydrates and perhydrates of barium peroxide are contradictory. The preparative methods applied do neither explain the actual

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composition of the compounds formed nor conditions of their existence and formation. A systematic investigation of the interaction of aqueous solutions of barium hydroxide with oxygen peroxide seems to be most effective by means of physico-chemical analysis. It permits to determine both the composition and nature of the barium peroxide compounds formed as well as the limits of their existence and the dependence on temperature and concentration. The authors thoroughly investigated the ternary system $Ba(OH)_2 - H_2O_2 - H_2O$ at -10, 0, 20, and 50° by the method of solubility under isothermal conditions. The system was investigated within a wide range of H_2O_2 concentrations, whereby the composition of solid phases was determined by the method of residues. The octohydrate of barium peroxide without carbonate and hydrogen peroxide of different concentrations, which had been freed from stabilizers by fractional distillation, were used as initial products. The data obtained in the study of the isothermal lines of solubility at -10, 0, 20, and 50° are given

Study of Systems Containing Concentrated Hydrogen Peroxide. Communication XVII. Isothermal Lines of the Solubility and Solid Phases of the Ternary System $Ba(OH)_2-H_2O_2-H_2O$ SOV/62-59-1-2/39

in (Tables 1-4) and plotted in (Figs 1-4). According to the isothermal data (Table 5) a polythermal diagram of the crystallization range of solid phases is shown (Fig 5). It is characterized by the presence of 3 ranges. Solid phases of the system $Ba(OH)_2-H_2O_2-H_2O$ were separated and investigated by thermal analysis. In addition, their stability under different conditions was investigated. Experimental data made it further possible to device a method of synthesizing barium peroxide. There are 5 figures, 5 tables, and 24 references, 3 of which are Soviet.

ASSOCIATION: Institut obshchey i neorganicheskoy khimii im. N. S. Kurnakova Akademii nauk SSSR (Institute of General and Inorganic Chemistry imeni N. S. Kurnakov of the Academy of Sciences, USSR)

SUBMITTED: May 28, 1957

Card 3/3

9 (2)
AUTHORS: Makarov, S. Z., Grigor'yeva, N. K. SOV/62-59-7-3/38

TITLE: Investigation of Systems With Concentrated Hydrogen Peroxide (Izucheniye sistem s kontsentrirovannoy perekis'yu vodoroda). Communication 19. Studies of the Properties of Barium Peroxide Compounds (Soobshcheniye 19. Izucheniye svoystv perekisnykh soyedineniy bariya)

PERIODICAL: Izvestiya Akademii nauk SSSR. Otdeleniye khimicheskikh nauk, 1959, Nr 7, pp 1163-1168 (USSR)

ABSTRACT: The system $Ba(OH)_2$-H_2O - H_2O was investigated. The solid phases were separated out of this system. The dehydrated barium peroxide was subjected furthermore to a thermal analysis and its stability was investigated under different conditions. Some samples were also subjected to a qualitative X-ray analysis and microphotos taken of them. The thermal analysis was carried out by plotting the differential heating curve by means of the photorecording pyrometer of Kurnakov. The octahydrate of the barium peroxide $BaO_2.8H_2O$ (heating curve in figure 1) was the component of the solid phase. On heating a stepwise dehydration occurs as far as the semihydrate (0.5 H_2O) with two endothermal effects at

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55 and 100°; furthermore the diperhydrate of the barium peroxide $BaO_2.2H_2O_2$. Two characteristic fundamental effects are to be noticed at 65° and 100° (Fig 2) corresponding to the decomposition of the H_2O_2 and at 150° a weak effect - the separation of the remaining water. The decomposition of $BaO.2H_2O_2$ takes place differently under different conditions.

To find out the reasons of these differences the stability of the compound was investigated under different influences. In vacuum, on heating under isothermal conditions up to 50°, stepwise heating up to 90° and at temperatures of about -5 to 0° and over sulphuric acid at room temperature. Two possibilities of decomposition resulted: $BaO_2.H_2O_2.H_2O$ and $BaO_2.H_2O$. The alteration of the composition on decomposing the diperhydrate of the barium peroxide is given in figure 3 (second case). In table 1 the composition on heating up to 900° is given. The decomposition curves plotted from the separation of the active oxygen are represented in figures 4, 5. Respective data are

given in table 2. The following was discovered furthermore in the mentioned system: $BaO_2.H_2O_2$. This is formed either by reaction of BaO and H_2O_2 at 30° or by the mentioned decomposition (II). It is easily decomposed to BaO_2. The peroxide last mentioned has a crystalline structure (Fig 8) and decomposes quickly over 500° (description in Fig 7). There are 8 figures, 2 tables, and 9 references, 3 of which are Soviet.

ASSOCIATION: Institut obshchey i neorganicheskoy khimii im. N. S. Kurnakova Akademii nauk SSSR (Institute of General and Inorganic Chemistry imeni N. S. Kurnakov of the Academy of Sciences, USSR)

SUBMITTED: October 18, 1957

5.2000

75060
SOV/80-32-10-9/51

AUTHORS: Makarov, S. Z., Grigor'yeva, N. K.

TITLE: Concerning the Preparation of High-Grade Calcium and Barium Peroxides

PERIODICAL: Zhurnal prikladnoy khimii, 1959, Vol 32, Nr 10, pp 2184-2189 (USSR)

ABSTRACT: This is a study of the synthesis by way of Ca and Ba peroxide hydrates, of anhydrous CaO_2 and BaO_2, which are not formed by the direct reaction of Ca and Ba hydroxides and salts with H_2O_2. I. Anhydrous CaO_2. (1) Preparation of $CaO_2 \cdot 8H_2O$. The reaction of $CaCl_2$ with H_2O_2 in an ammonia solution to form $CaO_2 \cdot 8H_2O$ is described in Figs. 1, 2, and 3, whose study reveals the following optimum preparative conditions for $CaO_2 \cdot 8H_2O$: 2.5% H_2O_2 in solution; $CaCl_2/H_2O_2$ = 1/4; temperature

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Concerning the Preparation of High-Grade Calcium and Barium Peroxides

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SOV/80-32-10-9/51

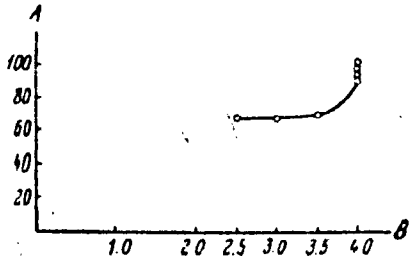

Fig. 1. Effect of $CaCl_2/H_2O_2$ ratio on $CaO_2 \cdot 8H_2O$ yield: (A) yield (%); (B) H_2O_2 used/H_2O_2 stoichiometric.

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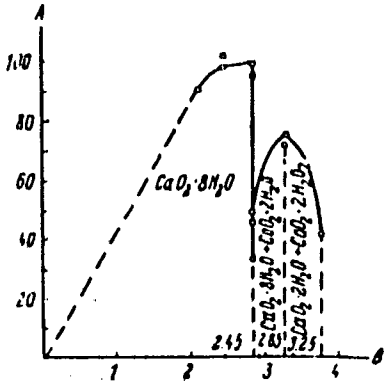

Fig.2. Effect of H_2O_2 concentration on CaO_2 hydrate formation at +2 to +4° C: (A) yield (%); (B) H_2O_2 concentration in solution (%).

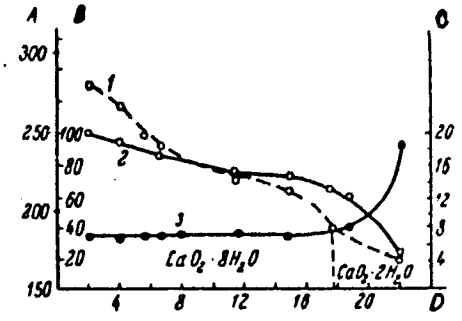

Fig.3. Effect of reaction mixture temperature on CaO_2 hydrate formation: (A) reactive O_2 content, (1) (g/%); (B) yield, (2) (%); (C) reactive O_2 content, (3) (%); (D) temperature (°C).

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0° to +4°; 2% NH_3. It is imperative that the 20% $CaCl_2$ solution be added to the cold H_2O-H_2O_2-NH_3 mixture. Preparation of anhydrous CaO_2 by forming a mixture of $CaO_2 \cdot 8H_2O$ and $CaO_2 \cdot 2H_2O$ is not more effective since the mixture has a very fine crystalline structure difficult to filter and wash. (2) Conversion of $CaO_2 \cdot 8H_2O$ to $CaO_2 \cdot 2H_2O$ by heating in water to a temperature just higher than that required to detach six H_2O molecules. (3) Vacuum drying of $CaO_2 \cdot 2H_2O$ to 93-94% anhydrous CaO_2. The procedure by way of steps (2) and (3) avoids CaO_2 decomposition whose extent during direct drying of the hydrate increases with degree of hydration. II. Preparation of anydrous BaO_2. In contrast to CaO_2 hydrates, the temperature- and H_2O_2 concentration-

Concerning the Preparation of High-Grade Calcium and Barium Peroxides

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SOV/80-32-10-9/51

range of stability for $BaO_2 \cdot 8H_2O$ is narrow, and that of $BaO_2 \cdot 2H_2O$ is wide, so that the dihydrate was selected as the intermediate. Preparation conditions: (1) $BaO_2 \cdot 2H_2O$: 3.5 to 4% H_2O_2, $Ba/2H_2O_2$ = 1/2.25 or 1/2.5, room temperature; (2) drying at 110 to 115°, at 1 atm. Yield 80 to 85% on Ba basis. Both preparative methods I and II were tested under industrial conditions at the "Krasnyy khimik" ("Red Chemist") plant of the Ministerstvo khimicheskoy promyshlennosti (Ministry of the Chemical Industry) at Leningrad, and adopted for production. There are 3 figures; and 8 references, 6 Soviet, 2 German.

ASSOCIATION: Institute of General and Inorganic Chemistry of the AS, USSR (Institut obshchey i neorganicheskoy khimii AN SSSR)

SUBMITTED: December 17, 1958

Card 6/6

GRIGOR'YEVA, N.K.; SELEZNEVA, K.I.; DUGANOVA, V.M.

Niobium peroxide compounds. Izv.AN SSSR.Otd.khim.nauk no.6: 937-943 62. (MIRA 15:8)

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

(Niobium oxide)

GRIGOR'YEVA, N.K.; DERGACHEVA, K.N.

Sodium and potassium pervanadates. Izv.AN SSSR.Otd.khim.nauk no.6:943-948 '62. (MIRA 15:8)

1. Institut obshchey i neorganicheskoy khimii im. N.S.Kurnakova AN SSSR.
(Sodium vanadate) (Potassium vanadate)

GRIGOR'YEVA, N.K.; SELEZNEVA, K.I.

Synthesis and properties of sodium and potassium peroxyorthoniobates and peroxyorthotantalates and metaperoxy acids of niobium and tantalum. Izv.AN SSSR.Otd.khim.nauk no.7:1137-1140 Jl '62. (MIRA 15:7)

1. Institut obshchey i neorganicheskoy khimii im. N.S.Kurnakova Akademii nauk SSSR.
(Alkali metal niobates) (Alkali metal tantalates) (Peroxy acids)

ACCESSION NR: AT4028337 S/0000/63/000/000/0177/0184

AUTHOR: Makarov, S. Z. (deceased); Grigor'yeva, N. K.; Selezneva, K. I.

TITLE: Peroxide compounds of niobium and tantalum

SOURCE: Soveshchaniye po khimii perekisny*kh soyedineniy. Second, Moscow, 1961. Khimiya perekisny*kh soyedineniy (chemistry of peroxide compounds); Doklady* soveshchaniy. Moscow, Izd-vo AN SSSR, 1963, 177-184

TOPIC TAGS: peroxide compound, niobium, tantalum, metasalt, sodium hydroxide, potassium hydroxide, hydrogen peroxide, endothermal effect

ABSTRACT: Since 1958, the authors have been studying the reaction of niobium and tantalum metasalts with hydrogen peroxide for the purpose of producing the compounds and investigating their properties. The investigation was made within a wide range of concentrations and temperatures. The peroxometa-acids of niobium and tantalum: $HNb(Ta)O_4 \cdot nH_2O$ were separated in a solid state; some of their properties were studied. In the case of $HNbO_4 \cdot H_2O$, the corresponding peroxometaniobates $Na(K)NbO_4 \cdot nH_2O$(N=1.5-3.5) were separated. The corresponding salts for $HTaO_4 \cdot nH_2O$ were not obtained. However, these as well as $HNbO_4 \cdot nH_2O$ were obtained from the peroxortho salts. The peroxide compounds $NaNbO_4 \cdot nH_2O$, $Na(K)NbO_4 \cdot nH_2O \cdot mH_2O_2$, $Na_4Ta_2Ol_2 \cdot nH_2O$

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ACCESSION NR: AT4028337

were synthesized first. Some properties of the new obtained compounds were studied (thermal and chemical stability, solubility in H_2O and H_2O_2 and others). Supplementary data on the properties of the sodium and potassium peroxortho salts of niobium and tantalum were obtained (thermal, chemical stability, solubility in H_2O) as well as x-rays of the powders. So far the experiments in separating niobium and tantalum on the basis of peroxide compounds have not confirmed the possibility of such separation. Orig. art. has: 13 figures

ASSOCIATION: Institut obshchey i neorganicheskoy khimii im. NS Kurnakova AN SSSR (Institute of General and Inorganic Chemistry AN SSSR)

SUBMITTED: 13Dec63 DATE ACQ: 06Apr64 ENCL: 00

SUB CODE: CH NO REF SOV: 001 OTHER: 003

Card 2/2

ACC NR: AP6021452 (N) SOURCE CODE: UR/0413/66/000/011/0075/0075

INVENTOR: Ustinov, V. V.; Grigor'yeva, N. M.; Grishin, A. A.; Belov, L. V.; Brusilovskiy, A. A.; Sinalayev, O. P.

ORG: None

TITLE: A method for measuring the thickness and rate of application of films. Class 42, No. 182339

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 11, 1966, 75

TOPIC TAGS: surface film, resonator, quality control, industrial automation

ABSTRACT: This Author's Certificate introduces a method for using two piezoelectric resonators to measure the thickness and rate of deposition of a film on a base. The procedure is designed for a wide range of thicknesses and for obtaining information in a discrete form which is convenient for automation of the process. The monitored portion of the flow of material being applied to produce the film is switched from one resonator to the other and back again after the required thickness has been reached in the given section. Film thickness is determined from the number of reversals while the rate of application is determined from the reversal frequency.

SUB CODE: 11, 13/ SUBM DATE: 03Apr65

Card 1/1 UDC: 531.7;621.9.08;531.717.1;531.767

GRIGOR'YEVA, N.M.

Diseases in city population in Udmurtsk ASSR in 1950. Sovet. zdravookhr. 11 no.2:39-41 Mar-Apr 1952. (CLML 22:1)

1. Of the Department of Public Health Organization (Head -- Docent M. M. Vilenskiy), Izhevsk Medical Institute.

GRIGOR'YEVA, N.N. (Moskva)

More attention to preserving the health of mothers and children.
Vop.okh.mat. i det. 1 no.1:3-9 Ja-F '56. (MLRA 9:9)

1. Zamestitel' ministra zdravookhraneniya
(PUBLIC HEALTH)

GRIGOR'YEVA, N.N.; STANTSO, Ye.I.

All-Union conference on the further use of psychoprophylactic preparation of pregnant women for childbirth. Vop.okh.mat. i det. 1 no.2:88-90 Mr-Ap '56. (MLRA 9:9)
(OBSTETRICS--CONGRESSES)
(CHILDBIRTH--PSYCHOLOGY)

GRIGOR'YEVA, N.N. (Moskva)

On the convocation of a meeting and conference of pediatrists.
Vop.okh.mat.i det. 1 no.6:3-6 N-D '56. (MLRA 10:1)

1. Zamestitel' ministra zdravookhraneniya RSFSR.
(PEDIATRICS)

GRIGOR'YEVA, N.N.

GRIGOR'YEVA, N.N.

Forty years of mother and child care in the R.S.F.S.R. Zdrav.Ros. Feder. 1 no.11:24-31 N '57. (MIRA 10:12)

1. Zamestitel' ministra zdravookhraneniya RSFSR.
(MATERNAL AND INFANT WELFARE)

GRIGOR'YEVA, N.N.

GRIGOR'YEVA, N.N.

Forty years of mother and child care in the R.S.F.S.R. Vop.okh. mat i det. 2 no.5:5-14 S-O '57. (MIRA 10:12)

1. Zamestitel' ministra zdravookhraneniya RSFSR.
(MATERNAL AND INFANT WELFARE)

GRIGOR'YEVA, N.N.

Some problems in further improvement in care for mothers and children. Vop.okh.mat. i det. 3 no.6:3-9 N-D '58 (MIRA 11:12)
(MEDICAL CARE)

BUBNOVA, M.M., prof., otv.red. (Moskva); GRIGOR'YEVA, N.N., otv.red. (Moskva); LIBOV, A.L., prof., otv.red. (Leningrad); SKORNYAKOVA, L.K., otv. red. (Moskva); TUR, A.F., prof., otv.red. (Leningrad); LYUDKOVSKAYA, N.I., tekhn.red.

[Transactions of the All-Russian Conference of Pediatricians on Problems in "Pneumonia and Antibiotics"] Trudy Vserossiiskoi nauchnoi konferentsii detskikh vrachei po problemam "Pnevmoniia" i "Antibiotiki". Otv.red.M.M.Bubnova i dr. Moskva, Gos.izd-vo med.lit-ry, 1959. 215 p. (MIRA 14:1)

1. Vserossiyskaya nauchnaya konferentsiya detskikh vrachey po problemam "Pnevmoniya" i "Antibiotiki." Moscow, 1957. 2. Deystvitel'nyy chlen Akademii meditsinskikh nauk SSSR (for Tur).
(PEDIATRICS--CONGRESSES) (PNEUMONIA) (ANTIBIOTICS)

BUBNOVA, M.M.; GRIGOR'YEVA, N.N.

Objectives outlined by the All-Russian Congress of Pediatricians.
Vop. okh. mat. i det. 5 no. 2:7-13 Mr-Ap '60. (MIRA 13:10)
(PEDIATRICS—CONGRESSES)

GRIGOR'YEVA, N.N., otv.red.; BUBNOVA, M.M., prof., red.(Moskva); VLASOV, V.A., prof., red. (Moskva); SKORNYAKOVA, L.K., red. TUR, A.F.,zasl. deyatel' nauki, prof.,red.(Leningrad); ROMANOVA, Z.A., tekhn. red.

[Transactions of the First All-Russian Congress of Pediatricians] Trudy Pervogo Vserossiiskogo s"zda detskikh vrachei. Otv.red.N.N. Grigor'eva. Red.koll.: M.M.Bubnova i dr. Moskva, Gos.izd-vo med. lit-ry, 1961. 308 p. (MIRA 14:12)

1. Vserossiyskiy s"yezd detskikh vrachey, 1st, Moscow, 1959. 2. Zamestitel' ministra zdravookhraneniya RSFSR (for Grigor'yeva).3. Nachal'nik Upravleniya lechebno-profilakticheskoy pomoshchi materyam i detyam Ministeterstva zdravookhraneniya RSFSR (for Skornyakova). 4. Deystvitel'nyy chlen Akademii meditsinskikh nauk SSSR (for Tur).
(PEDIATRICS—CONGRESSES)

GRIGOR'YEVA, N.N.

Grand program in the campaign for communism. Vop.okh. mat. i det. 6 no.10:3-7 O '61. (MIRA 14:11)

1. Zamestitel' ministra zdravookhraneniya RSFSR.
(WOMEN--HEALTH AND HYGIENE)
(CHILDREN--CARE AND HYGIENE)

GRIGOR'YEVA, N.N.

Plea for steady improvement in children's health. Sov.zdrav. 20 no.5:3-9 '61. (MIRA 14:5)

1. Zamestitel' ministra zdravookhraneniya RSFSR.
(PEDIATRICS)

GRIGOR'YEVA, N. N.

Tasks of the organs and institutions of the public health system in protecting children's health in the light of the decisions of the 22nd CPSU Congress. Zdrav. Ros. Feder. 6 no.6:3-8 Je '62. (MIRA 15:7)

1. Zamestitel' ministra zdravookhraneniya RSFSR.

(PEDIATRICS)

GRIGOR'YEVA, N. P. and ROZEN'YER, L. A.

GRIGOR'YEVA, N. P. and ROZEN'YER, L. A. "Some characteristics of the course of relapse typhoid in 1945-1946", Trudy Kishinevsk. gos. med. in-ta, Vol. 1, 1949, p. 94-100.

SO: U-3261, 10 April 53 (Letopis & Zhurnal 'nykh Statey No. 11, 1949)

GRIGOR'YEVA, M. P.

GRIGOR'YEVA, M. P. "On the casuistics of foreign bodies in the pharyngeal area", Trudy Kishinevsk. gos. med. in-ta, Vol. 1, 1949, p. 359-61.

SO: U-3261, 10 April 53 (Letopis - Zhurnal 'nykh Statey No. 11, 1949)

TSVAYNER, Ya.P.; GRIGOR'YEVA, N.P.

Abberant mammary gland on labium majus. Akush. i gig. 33 no.2: 89-90 Mr-Ap '56. (MLRA 9:7)

1. Iz ginekologicheskogo otdeleniya Sorikskoy gorodskoy bol'nitsy (glavnyy vrach F.P.Zatvornitskiy) i respublikanskogo onkologicheskogo dispansera (glavnyy vrach G.B.Khonelidze)
(VULVA) (MAMMARY GLANDS)

GRIGOR'YEVA, N.P.; LERNER, I.O.

Foreign bodies in the stomach. Mov. khir. arkh. no.2:133-134 Mr-Ap '59. (MIRA 12:7)

1. Respublikanskiy onkologicheskiy dispanser Kishineva i 2-ya gorodskaya bol'nitsa.
(BEZOAR)

LERNER, I.O.; GRIGOR'YEVA, N.P.

Riedel's struma. Zdravookhranenie 4 no. 2:54-55 My-Ap '61.
(MIRA 14:4)

1. Iz 2-y gorodskoy bol'nitsy g. Kishineva (glavnyy vrach L.Kh. Pinskiy) i Respublikanskogo onkodispansera (glavnyy vrach G.B. Khonelidze).
(GOITER)

FEDOROVA, V.N., starshiy nauchnyy sotr.; MYSHLYAYEVA, N.A., mlad. nauchnyy sotr.; GRIGOR'YEVA, N.P., mlad. nauchnyy sotr.; KIVOTOV, S.A., zasl. uchitel shkoly RSFSR; SHADRINA, M.S., red.; NOVOSELOVA, V.V., [illegible]n. red.

[Tie between teaching botany and the work of students in plant growing]Sviaz' obucheniia botanike s trudom uchashchikhsia po rastenievodstvu. Pod red. V.N.Fedorovoi. Moskva, Izd-vo Akad. pedagog.nauk RSFSR, 1962. 146 p. (MIRA 15:9)

1. Akademiya pedagogicheskikh nauk RSFSR, Moscow. Institut obshchego i politekhnicheskogo obrazovaniya.
(Botany—Study and teaching)

GRIGOR'YEVA, N.P. ; ZISMAN, I.F.

Sarcoma of the scrotum. Zdravookhranenie 6 no.3:60-61 My-Je'63
(MIRA 16:11)

1. Iz Moldavskogo nauchno-issledovatel'skogo instituta onkologii (dir. G.B.Khonelidze).

GRIGOR'YEVA, V. P.

"Combinational Profiling in Application to Searches for Deposits of Pyritic Ores." Cand Geol-Min Sci, Leningrad State U, Leningrad, 1954. (RZhGeol, Sep 54)

SO: Sum 432, 29 Mar 55

GRIGOR'YEVA, N.P.

DANA, James Dwight; GRIGOR'YEV, D.P., redaktor; GRIGOR'YEVA, N.P. [translator]; ZHAMENSKAYA, V.K., redaktor; SHAPOVALOV, V.I., tekhnicheskiy redaktor.

[The system of mineralogy. Translated from the English] Sistema mineralogii. Perevod s angliiskogo. Vol. 2. Pt. 2. [Selenates and tellurates, selenites and tellurites, chromates, phosphates, arsenates and vanadates, antimonates; antimonites and arsenites, vanadium oxysalts, molybdates and tungstates, organic compounds] Selenaty i telluraty, selenity i tellurity, khromaty, fosfaty, arsenaty i vanadaty, antimonaty; antimonity i arsenity, okisoli vanadiia, molibdaty i vol'framaty, organicheskie soedineniia. Pod red. D.P.Grigor'eva. Moskva, Izd-vo inostrannoi lit-ry. 1954. 589 p. (MLRA 7:10)
(Mineralogy)

GRIGOR'YEVA, N. P.

"Influence of the Boron Electrode in the Method of Cooling Profiling," Razvedka i Okhrana Nedr, No. 1, pp [illegible]-33, 1954

SO: W-31 39, 2 Sep 55

GRIGOR'YEVA, M.P.

Effect of a remote electrode in the combined configuration method. Razved.i okh.nedr 20 no.1:36-41 Ja-F '54. (MLRA 9:12)

(Prospecting--Geophysical methods)

GRIGOR'YEVA, N.P., referent

Problems relative to the classification of mineral reserves. Razved. i okh. nedr 26 no. 1:60 Ja '60. (MIRA 13:12)

1. VGF.

(Mines and mineral resources--Classification)

GRIGOR'YEVA, N.P.

Determination of the electric resistance of minerals. Min. sbor. no.16:399-403 '62. (MIRA 16:10)

1. Vsesoyuznyy institut metodiki i tekhniki razvedki, Leningrad.
(Minerals—Electric properties)

1. GRIGOR'YEVA, N. P.
2. USSR (600)
4. Botany - Study and Teaching.
7. Study of the subject "Basic groups of plants." Est. v shkole No. 6, 1950.

9. Monthly List of Russian Accessions, Library of Congress, February 1953. Unclassified.

GRIGOR'YEVA, N.P.

Method of conducting laboratory studies and demonstrations for botany lessons. Est.v shkole no.5:56-61 S-O '53. (MLRA 6:8)

1. Institut metodov obucheniya Akademii pedagogicheskikh nauk RSFSR.
(Botany--Study and teaching)

GRIGOR'YEVA, N.P.

Lessons in studying the formation of organic substances in green leaves. Biol. v shkole no.6:25-32 N-D '57. (MIRA 10:12)

1. Institut metodov obucheniya APN RSFSR.
(Photosynthesis--Study and teaching)

LERNER, I.O.; GRIGOR'YEVA, N.P.

Case of papillary cystadenoma of the thyroid gland. Khirurgiia 35 no. 11:217 N '59. (MIRA 14:1)

(THYROID GLAND--TUMORS)

GEL'PERIN, N.I., prof.; ARTEM'YEV, V.I.; GURIDZHI, A.Ya.; GRIGOR'YEVA, N.S.

Continuous nitration in the production of amber musk. Zhur. VKHO 5 no.4:438-442 '60. (MIRA 13:12)
(Nitration) (Musk)

KOTEL'NIKOV, A.A., inzh.; GRIGOR'YEVA, N.V., inzh.-ekonomist; CHIGIN, V.P., inzh.

Use of excavating machinery in the construction of the Irtysh-Karaganda Canal. Gidr. i mel. 17 no.3:37-44 Mr '65. (MIRA 18:4)

[redacted]

GRIGOR'YEVA, N.V., starshiy nauchnyy sotrudnik; [redacted]

Measurement of the elastic-inertia properties of the [redacted] of furs by means of an elas odynamometer. Nauch. tr. trudy NIIMP no.12:73-76 '63. (MIRA 17:11)

SAVCHENKO, Ye.D.; GRIGOR'YEVA, N.V.

Pathomorphological changes following gamma-ray teletherapy of neglected cancer of the urinary bladder. Med. rad. 9 no.2: 44-52 F '64. (MIRA 17:9)

1. Patomorfologicheskiy otdel (zav.- dotsent Ye.D. Savchenko) Nauchno-issledovatel'skogo rentgeno-radiologicheskogo instituta (dir.- prof. I.G. Lagunova) Ministerstva zdravookhraneniya SSSR i radiologicheskoye otdeleniye (nauchnyy rukovoditel'- dotsent I.A. Pereslegin) Moskovskoy gorodskoy bol'nitsy No.57 (glavnyy vrach S.B. Vol'fson).

GRIGOR'YEVA, N. V.
CA

2

Dry buffer mixtures. N. V. Grigor'eva. *Zaglya. Prom.* 10, No. 10, 23–6(1950).—The following three are satisfactory for calibration of glass electrodes: (1) 9.07 g. KH_2PO_4 per l. to give pH of 4.3; (2) 6.35 g. KH_2PO_4 and 7.15 g. $Na_2HPO_4.12H_2O$ per l. to give pH of 5.8; (3) 21.87 g. $Na_2HPO_4.12H_2O$ per l. to give pH of 8.5.

B. Z. Kamich

GRIGOR'YEVA, N.V.

5(2),(3) PHASE I BOOK EXPLOITATION SOV/2554

Akademiya nauk SSR. Otdeleniye khimicheskikh nauk. Komissiya po khromatografii

Issledovaniya v oblasti ionoobmennoy, raspredelitel'noy i osadochnoy khromatografii (Studies in the Field of Ion Exchange, Distribution and Precipitation Chromatography) Moscow, Izd-vo AN SSSR, 1959. 150 p. Errata slip inserted. 3,500 copies printed.

Ed. of Publishing House: N.G. Yegorov; Tech. Ed.: I.N. Guseva; Editorial Board: K.V. Chmutov, Corresponding Member, USSR Academy of Sciences (Resp. Ed.); F.M. Shemyakin, Professor; K.M. Ol'shanova, Professor; E.M. Saldadze, Docent, and N.N. Tunitskiy, Professor.

PURPOSE: This book is intended for chemists and chemical engineers.

COVERAGE: The book discusses studies in ion-exchange, distribution, and precipitation chromatography. Various problems of the theory of chromatography and its application are also considered. This is the 4th collection of articles published by the Committee on Chromatography. The first collection was published in 1952 under the title: "Issledovaniya v oblasti khromatografii" (Studies in the Field of Chromatography); the second was published in 1955 under the title "Teoriya i praktika primeneniya ionoobmennykh materialov" (Theory and Practice of the Use of Ion-exchange Materials); and the third was published in 1957 under the title "Issledovaniya v oblasti ionoobmennoy khromatografii" (Studies in the Field of Ion-exchange Chromatography). No personalities are mentioned. References are given after most of the articles.

CHARUKHINA, Z.N., kand.tekhn.nauk; KIVSHITS, Ye.A., mladshiy nauchnyy sotrudnik; GRIGOR'YEVA, N.V., starshiy nauchnyy sotrudnik; ZABRODINA, I.P., laborant

Determining the concentration of solutions used in fur manufacture by their electric conductivity. Nauch.-issl.trudy NIIMP no.9:56-70 '59. (MIRA 14:5)

(Fur—Dressing and dyeing)
(Solution(Chemistry)—Electric properties)

GRIGOR'YEVA, N.V., inzh.; PCHELIN, V.A., prof., doktor khim.nauk

Mechanism of the tanning process. Izv.vys.ucheb.zav.; tekh.leg.prom. no.2:13-21 '61. (MIRA 14:5)

1. Nauchno-issledovatel'skiy institut mekhovoy promyshlennosti. Rekomendovana kafedroy tekhnologii kozhy Kiyevskogo tekhnologicheskogo instituta legkoy promyshlennosti.
(Tanning)

GRIGOR'YEVA, N.V., inzh.; PAVLOV, S.A., doktor tekhn.nauk, prof.

Structural and mechanical properties of the leather tissue. Izv.vys. ucheb.zav.; tekh.leg.prom. no.3:65-72 '61. (MIRA 14:7)

1. Rekomendovana kafedroy tekhnologii kozhi Kiyevskogo tekhnologicheskogo instituta legkoy promyshlennosti. 2. Nauchno-issledovatel'skiy institut mekhovoy promyshlennosti (for Grigor'yeva). 3. Moskovskiy tekhnologicheskiy institut legkoy promyshlennosti (for Pavlov).
(Leather)

GRIGOR'YEVA, N.V.; PCHELIN, V.A.; REBINDER, P.A.; akademik

Effect of tanning agents on the structure of gelatin solutions. Dokl. AN SSSR 139 no.6:1403-1404 Ag '61. (MIRA 14:8)

1. Nauchno-issledovatel'skiy institut mekhovoy promyshlennosti pri Vserossiyskom Sovete Narodnogo Khozyaystva RSFSR i Moskovskiy gosudarstvennyy universitet im. M.V. Lomonosova.
(Tanning) (Gelatin)

GRIGOR'YEVA, N.V.; PCHELIN, V.A.; REBINDER, P.A., akademik

Structural and mechanical properties of protein fibers. Dokl. AN SSSR 137 no.4:889-892 Ap '61. (MIRA 14:3)

1. Nauchno-issledovatel'skiy institut mekhovoy promyshlennosti i Moskovskiy gosudarstvennyy universitetim M. V.Lomonosova.
(Proteins)

PCHELIN, V.A.; GRIGOR'YEVA, N.V.; IZMAYLOVA, V.N.

Effect of the fixation of polypeptide chains in two conformations. Dokl. AN SSSR 151 no.1:134-135 Jl '63. (MIRA 16:9)

1. Moskovskiy gosudarstvennyy universitet im. M.V.Lomonosova i Nauchno-issledovatel'skiy institut mekhovoy promyshlennosti. Predstavleno akademikom P.A.Rebinderom.
(Peptides) (Polymers)

SHMELEVA, T.A.; GRIGOR'YEVA, N.V.; PAVLOV, S.A.; LEVINA, V.I.

Use of polyacrylates for the strengthening of the skin of sheep pelts. Kozh.-obuv. prom. 7 no.9:33-35 S '65.
(MIRA 18:9)

[illegible], [illegible] kand. med. nauk, GARNETSKAYA, [illegible], GRIGOR'YEVA, N.V.

Late changes in the urinary bladder following radiation therapy for cancer of the cervix uteri. Vest. rent. i rad. 40 no.2: 49-52 Mr-Ap '65. (MIRA 18:6)

1. Urologicheskoye otdeleniye (zav. - doktor med. nauk I.S. Temkin) i radiologicheskoye otdeleniye (zav. - kand. med. nauk A.M. Merman) Gorodskoy klinicheskoy bol'nitsy No.57, Moskva.

GRIGOR'YEVA, N.V.

Gamma teletherapy in cancer of the urinary bladder. Urologiia. 29 no.2:40-43 Mr-Ap '64. (MIRA 18:7)

1. Radiologicheskoye otdeleniye (zav. N.V.Grigor'yeva) i urologicheskoye otdeleniye (zav. - doktor med. nauk I.S.Temkin) Moskovskoy gorodskoy bol'nitsy No.57.

GRIGOR'YEVA, N. Ya.

V. F. Kucherov and N. Ya. Grigor'yeva, "Application of the Principles of Conformational Analysis for Proving the Configuration of Isomers of 3-Acetoxy Cyclohexane-1,2,-dicarboxylic Acids."

report presented at the Symposium on Concepts of Conformation in Organic Chemistry which took place in Moscow at the IOKh AN SSSR (Institute of Organic Chemistry, AS USSR) from September 30 to October 2, 1958.

Izvestiya Akademii nauk SSR, Otdeleniye khimicheskikh nauk, 1959, No. 3, 561-564.

5 (3)
AUTHORS: Kucherov, V. F., Grigor'yeva, N. Ya., Nazarov, I. N. SOV/62-59-5-14/40

TITLE: Investigations in the Field of the Stereochemistry of Cyclic Compounds (Issledovaniye v oblasti stereokhimii tsiklicheskikh soyedineniy). Communication 24. Diene Condensations of 1-Acetoxybutadiene With Maleic Anhydride and Dimethyl Fumarate and Configuration of the Products Obtained (Soobshcheniye 24. Divenovyye kondensatsii 1-atsetoksibutadiyena s maleinovym angidridom i dimetilfumaratom i konfiguratsiya polychennykh adduktov)

PERIODICAL: Izvestiya Akademii nauk SSSR. Otdeleniye khimicheskikh nauk. 1959, Nr 5, pp 819-860 (USSR)

ABSTRACT: In this work the diene condensation of 1-acetoxybutadiene with maleic anhydride and dimethyl fumarate and the configuration and spatial transformation of the products formed were given a thorough investigation. 1-Acetylbutadiene was synthesized according to the Flaig method. The condensation with maleic anhydride showed spatial selectivity with formation of the cis-cis-product (II). The configuration was proved by hydrogenation and lactonization. With condensation of

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Investigations in the Field of the Stereochemistry of Cyclic Compounds. Communication 24. Diene Condensations of 1-Acetoxybutadiene With Maleic Anhydride and Dimethyl Fumarate and Configuration of the Products Obtained SOV/62-59-5-14/20

1-acetoxybutadiene with dimethyl fumarate both isomers possible were obtained: trans-trans and trans-cis (XIV and XV), the configuration of which was proved by their catalytic hydrogenation, saponification, and by the observation of molecular models. The derivatives of the cis-cis order and trans-cis order with an axial arrangement of the acetoxy group have a low stability. They separate acetic acid with catalytic hydrogenation, alkaline saponification, and heating while various cyclohexane-1,2-dicarboxylic acids are formed. The isomeric compounds of the trans-trans order with the equatorially arranged acetoxyl group are sufficiently stable so that some of their derivatives could be obtained. Three (out of four theoretically possible) isomers could be synthesized by means of diene synthesis, catalytic hydrogenation and a thorough investigation of the chemical transformations: 3-acetoxycyclohexane-1,2-dicarboxylic acid and two isomeric trans-3-oxycyclohexane-1,2-dicarboxylic acids. There are 9 references, 2 of which are Soviet.

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Investigations in the Field of the Stereochemistry of Cyclic Compounds. Communication 24. Diene Condensations of 1-Acetoxybutadiene With Maleic Anhydride and Dimethyl Fumarate and Configuration of the Products Obtained

SOV/62-59-5-14/10

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)

SUBMITTED: July 10, 1958

Card 3/3

5 (3) SOV/79-29-3-12/61

AUTHORS: Kucherov, V. F., Grigor'yeva, N. Ya., Nazarov, I. N. (Deceased)

TITLE: Investigation in the Field of the Stereochemistry of the Cyclic Compounds (Issledovaniye v oblasti stereokhimii tsiklicheskikh soyedineniy). XXVIII. Condensation of 1-Acetoxybutadiene With Citraconic Anhydride and Stereospecific Transformations of the Forming Isomeric Adducts (XXVIII. Kondensatsiya 1-atsetoksibutadiyena s tsitrakonovym angidridom i stereospetsificheskiye prevrashcheniya obrazuyushchikhsya izomernykh adduktov)

PERIODICAL: Zhurnal obshchey khimii, 1959, Vol 29, Nr 3, pp 793-803 (USSR)

ABSTRACT: The authors investigated the condensation of 1-acetoxybutadiene with the citraconic anhydride, which is important in the problems concerning the structural direction of diene synthesis and in the stereochemistry of the adducts. In this connection it was shown that owing to the unsymmetrical character of the two reacting components a mixture forms with a certain ease, consisting of about equal amounts of two possible ortho- and meta-adducts (I) and (II), which pass over to the isomeric acids (III) and (IV) by saponification with water (Scheme 1). Both isomeric adducts have a cis-cis con-

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Investigation in the Field of the Stereochemistry of the Cyclic Compounds. XXVIII. Condensation of 1-Acetoxybutadiene With Citraconic Anhydride and Stereospecific Transformations of the Forming Isomeric Adducts

figuration. The formation of a preponderant large quantity of metaisomer on the condensation of 1-acetoxybutadiene with citraconic anhydride shows at the same time that the electrostatic influence of the acetoxy group upon the structural direction of the diene synthesis is more marked than the influence exerted by the factors of spatial arrangement, which depend on the volume of the substituents. Both the structure and configuration of the isomeric ortho- and meta-adducts were thus proven by cleavage and lactonization reactions. There are 6 references, 5 of which are Soviet.

ASSOCIATION: Institut organicheskoy khimii Akademii nauk SSSR
(Institute of Organic Chemistry of the Academy of Sciences,USSR)

SUBMITTED: January 21, 1958

5(3) SOV/20-128-3-31/58

AUTHORS: Kucherov, V. F., ~~Grigor'yeva, N. Ya.~~

TITLE: Laws of Double-bond Isomerization in Cyclohexadiene-1,2-dicarboxylic Acids

PERIODICAL: Doklady Akademii nauk SSSR, 1959, Vol 128, Nr 3, pp 547-550 (USSR)

ABSTRACT: The displacements of double bonds in the acids mentioned in the title have been poorly investigated up to date. The authors have decided to undertake a systematic investigation of the character and the laws mentioned in the title in the $\Delta^{1,4}$-cyclohexadiene-1,2-dicarboxylic acids. For this purpose, they investigated the transformations of the homologa of dihydrophthalic acid with methyl groups in various positions on the ring. At first, they obtained the anhydride of 3-methyl-$\Delta^{1,4}$-cyclohexadiene-1,2-dicarboxylic acid (I) and its diester (II). It was found that in the saponification of this diester (II) a displacement of the double bond takes place from position Δ^1 into position Δ^6. This yields the 3-methyl-$\Delta^{4,6}$-cyclohexadiene-1,2-dicarboxylic acid (III). An alkaline saponification of the acid anhydride (I) also proceeds with the displacement of the double bond into the Δ^6-position. In this case, however, more complicated rearrangements of the double bonds take place. Now, 3-methyl-$\Delta^{3,6}$-cyclohexadiene-1,2-dicarboxylic acid (IV), with a system of nonconjugated double bonds, appears

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Laws of Double-bond Isomerization in Cyclohexadiene-1,2-dicarboxylic Acids

as the main product. It became evident that the system of isolated double bonds in the acid (IV) is rather stable, and suffers no noticeable changes by boiling with alkali. Under sufficiently hard saponification conditions, however, the non-conjugated $\Delta^{1,4}$-grouping, which is stable in the acid-anhydride ring, is isomerized. Here, the double bond is displaced from the intercarboxylic position into the nonsubstituted position Δ^6. At the same time, the Δ^4-bond may be displaced into the Δ^3-position. Its further isomerization into position Δ^2 is inhibited by the methyl group in position 3. This inhibitory effect was also confirmed by the example of 4-methyl-$\Delta^{1,4}$-cyclohexadiene-1,2-dicarboxylic acid (V). The same law applies to 3,4-dimethyl-$\Delta^{1,4}$-cyclohexadiene-1,2-dicarboxylic acid (IX). Also here, the second double bond, on which there is a methyl group standing, is not isomerized. The ultraviolet spectra recorded by T. M. Fadeyeva for all acids obtained by the authors, containing a conjugated system of double bonds and substituted in the same way, are in agreement with each other. The introduction of a new methyl group on the carbon atom of the conjugated system shifts the absorption maximum by about 10 mμ into the range of long waves (Ref 7) (See Table 1). The data of table 2 show that the absorption character is greatly

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changed by the introduction of a 2nd isolated double bond into the anhydride of Δ^1-cyclohexene-1,2-dicarboxylic acid. Such an anomalous absorption suggests that in these acid anhydrides there seems to be an electronic interaction of two formally isolated double bonds for which a homoallyl conjunction (Ref 8) becomes possible due to the existence of a rigid system of the five-membered acid-anhydride ring. There are 1 figure, 2 tables, and 8 references, 2 of which are Soviet.

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GRIGOR YEVA, N Ye.

Pyridine salts with negative substituents in the aromatic nucleus, and *N*-aryl-pyridinium salts. N. E. Grigor'eva and I. K. Gintse (*Ukr. khim. Zhur.*, 1952, **18**, 89–96).—Symmetrical and unsymmetrical dyes of the general formula $[RNH\cdot(CH{:}CH)_4\cdot CH{:}\overset{+}{N}HR']Cl^-$ are obtained by condensing 2 : 4-dinitrophenylpyridine (I) with *o*- and *p*-aminobenzoic acid, Et *p*-aminobenzoate, and sulphanilic acid (II). The dyes with R = R' = *p*- and *o*-$C_6H_4\cdot CO_2H$ and *p*-$C_6H_4\cdot CO_2Et$, respectively, have m.p. of 138, 140, and 139°, and their absorption max. in neutral EtOH are 508, 523, and 515 mμ., and in alkaline EtOH 543, 545, and 568 mμ. Separation of the symmetric from the unsymmetric dyes (which were not isolated) is in all cases difficult, and was not satisfactory in the mixture obtained from reaction of I with II. The corresponding *N*-aryl-substituted pyridinium salts are obtained by hydrolysis of the dyes.

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10-13-54 YGG

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Cleavage of pyridine 2,4-dinitrochlorophenylate by nitroanilines. N. E. Grigor'eva, I. K. Cinitse and M. I. Rozenberg (A. M. Gorkii State Univ., Kharkov). *Sbornik Statei Obshchei Khim.* 2, 1448–52(1953); cf. *C.A.* 48, 11411*af*.—Cleavage of pyridine 2,4-dinitrochlorophenylate (I) by *p*-$O_2NC_6H_4NH_2$ in EtOH in the presence of pyridine yields *1-(2,4-dinitrophenylamino)-5-(p-nitrophenylamino)-penta-1,3-dien-5-ylidene chloride*, violet, m. 140–1° (from EtOH, retaining some EtOH); green, m. 158–60° (from reaction mixt., in AcOH-HCl mixt.). Use of *o*-$O_2NC_6H_4NH_2$ in the above reaction gave *1,5-bis(o-nitrophenylamino)-1,3-pentadien-5-ylidene chloride* (II), red, m. 142–3°; the use of *m*-$O_2NC_6H_4NH_2$ gave the *m-nitrophenylamino analog* (III), orange, m. 136–7°. *Pyridine p-nitrochlorophenylate* which does not m. up to 300°, is obtained from I and *p*-$O_2NC_6H_4NH_2$ in hot EtOH; it forms a salt with $2HgCl_2$, m. 153–4.5° (from H_2O). II heated with MeOH and concd. HCl 0.5 hr. gave *o*-$O_2NC_6H_4NH_2$, but III gave *pyridine m-chlorophenylate*, isolated as *salt* with $HgCl_2$, m. 172°; treatment with H_2S gave the free *quaternary salt*, m. 130°, red powder.

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GRIGOR'YEVA, N. Ye.

Reaction products of pyridine 2,4-dinitrochlorophenylate with sulfanilamides. N. E. Grigor'eva and M. M. Nikolaeva. *Uchenye Zapiski Khar'kov. Univ.* 50, *Trudy Nauch.-Issledovatel. Inst. Khim. i Khim. Fakul'teta* No. 11, 135–40 (1954); *Referat. Zhur., Khim.* 1955, No. 9534.—Dyes [$RNHO_2SC_6H_4NH(CH{:}CH)_2CH{:}NHC_6H_4SO_2NHR$]Cl (I), where R is H (II), 2-pyridyl (III), or 2-thiazolyl (IV), were obtained by the action of pyridinium 2,4-dinitrophenylate (V) on sulfanilamide (VI), sulfanilamidopyridine (VII), or sulfanilamidothiazole (VIII) in the presence of pyridine. V (1 g.), 1.2 g. VI, 5 ml. Me_2CO, and 2 ml. pyridine were heated 15 min. at 100° yielding 55% II, m. 170° (from MeOH-$CHCl_3$), 158°(from HCO_2H), λ (HCO_2H) 500 mμ. V (0.7 g.) in 2 ml. pyridine and 1 g. VIII in 3 ml. Me_2CO was heated for 5–7 min. at 100°, poured into acidified water, and the ppt. washed with warm water and Me_2CO to yield 86% IV, m. 240°, λ (HCO_2H) 505 mμ. V (0.8 g.), 1 g. II, 2 ml. pyridine, and 3 ml. Me_2CO were heated 15–20 min. at 100°, yielding 75% III, m. 210°, λ (HCO_2H) 515 mμ. Acidic and basic solns. of the dyes decompd. upon heating, forming $RNHO_2SC_6H_4NH_2$ and ($RNHO_2SC_6H_4X$)Cl (X = pyridinium)(IX). V (1 g.), 1.2 g. VI, 5 ml. Me_2CO, and 2 ml. pyridine was heated 2 hrs. to complete decompn. of II, and the mixt. poured into water, yielding 37.5% IX (R = H), which did not melt up to 300°. Analogously, from IV was obtained IX (R = 2 thiazolyl) of which the double salt with $HgCl_2$ m. 175°, the picrate m. 161°. Similarly III yielded IX (R = 2-pyridyl), its double salt with $HgCl_2$ m. 201°, the picrate m. 220°. M. Hoch

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USSR/Chemistry - Dyes

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Authors : Grigoryeva, N. E., and Gintse, I. K.

Title : Pyridine dyes derivatives of diphenyl

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Abstract : The synthesis of three hitherto unknown pyridine dyes : 1,5-bis-(4-amino diphenyl)-pentadiene-1,3-ylidene-5;chloride; 1,5-bis-(4-nitro-4'-aminodiphenyl)-pentadiene-1,3-ylidene-5 chloride and 1,5-bis-(p-aminochlorodiphenylate pyridine)-pentadiene-1,3-ylidene-5 chloride is announced. It is shown that the heating of dyes of benzidine and 4-aminodiphenyl derivatives is followed by an isomeric conversion of the molecule without cleavage of the amine. The derivation of four hitherto unknown quaternary pyridine salts is described. Three references: 1-USSR and 2-German (1904-1952). Table.

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