is assumed to proceed in a normal process. Microscopic photos have shown that the formation of platinum films takes place in certain layers of the solution, and not only on the surface, which is explained by the fact that the process of the crystalline particles in relation to the surface of the solution has not been electrographically investigated. The structure of platinum films obtained by the described method is analogous to the structure of smoke films of metal oxides. The maximum dimension of the smallest crystalline particles comprising the thin films was, according to electron-microscopic estimations, equal to 30 A. It was determined electrographically that the average size of crystalline particles for different films varies in range between 60 to 80 A. Films having a thickness above 90 A consist mainly of flat units, whose sizes vary between 0.8-1.0 μ. The electron-microscopically investigated structure of the films is in conformity with the kinetic of their growth in the process of regeneration.

(33)

FEDOTOVA, G. G.

USSR/Physics
Electron Microscopy
Platinum

PA 52/49T100

May 49

"Electron-Microscope Investigation of the Structure of Platinum Films on the Surface of Water Solutions of Metal Salts by the Action of Gas Regenerators," N.N. Buynov, N. V. Demenev, A. S. Shur, G. G. Fedorova, Inst of Chem and Metal, Inst of Phys of Metals, Ural Affiliate, Acad Sci USSR, 4 pp

"Dok Ak Nauk SSSR" Vol LXVI, No 2

Presents results of an investigation of platinum films produced on surfaces of aqueous potassium chloroplatinate solutions by action of hydrogen on the surface. Used an RCA transmission magnetic electron microscope, type EMI-2A. Took ordinary stereoscopic and diffraction photographs. In initial reduction stages films consisting of separate elementary crystals whose dimensions are less than 50 angstroms are obtained. When time of reduction is increased, thicker films are obtained, very porous and consisting of units of various sizes. Suggests that forces responsible for coagulation along the surface of elementary crystals are unevenly distributed. Submitted by Acad A. N. Frumkin, 11 May 49.

15-57-8-11888

Translation from: Referativnyy zhurnal, Geologiya, 1957, Nr 8, pp 284-285 (USSR)

AUTHORS: Sheina, Z. G., Fedorova, G. G.

TITLE: Control of Concentration of Various Wetting Agents (Metod kontrolya kontsentratsii razlichnykh smachivateley)

PERIODICAL: Sb. rabot po silikozu. AN SSSR, Nr 1, 1956, pp 50-56

ABSTRACT: Washing and the use of dust wetting additives during drilling of blast holes are the preventive methods used to combat silicosis. The methods for controlling the concentration of wetting agents (measurement of surface tension, film flotation) used in laboratory practice are unsuitable for wide use under operational conditions. The authors propose a simpler method which is a variation of the analogous method of the NIOPIK (Scientific Research Institute of Organic Semifinished

Card 1/3

Mining Geol. Inst. Ural Affil AS USSR

Control of Concentration of Various Wetting Agents (Cont.)

Products and Dies) imeni Voroshilov Institute and is based on determination of the rate of wetting of the coal dust. Fifty ml of a solution of the wetting agent is poured into a glass tube 60 mm to 80 mm high, with a diameter of 30 mm to 40 mm. A weighed amount (0.1 g) of coal dust-ethanol mixture is poured in a small heap on the surface of the liquid. The time required for complete wetting of the weighed amount, that is, the time required for the coal dust to sink into the solution, is determined. The variation in temperature has a great effect on the value of the surface tension of the water and on the rate of wetting the coal. Thus, for example, the time of wetting of a weighed amount of coal at a temperature of 10° C amounts to 58 sec for the DB wetting agent; with an increase in temperature to 40° C., it decreases to 27 sec. The DB wetting agent is found to be most effective, according to experimental data obtained in testing this method. Positive results were also obtained in wetting dust with alkaline sulfite cellulose (STsShch), which successfully replaces the wetting agents in a 1 percent concentration.

Control of Concentration of Various Wetting Agents (Cont.)

The time for wetting a standard weighed amount of coal, using a mixture of 0.05 percent DB and 0.25 percent STsShch, amounts to 30 sec. This rapid method for control of the concentration of a wetting agent insures effective dust interception. It is possible to establish the relationship between the kinetics of wetting and the concentration of the wetting agent by measuring the rate of wetting of standard coal dust. The proposed method also permits analysis of new wetting agents. Coal with the weakest tendency to oxidation should be used as the standard coal dust.

Card 3/3

I. D. Gol'denberg

FEDOROVA, G.G.

FEDOROVA, G.G.

Quick method for comparative qualitative evaluation of clays as fire-extinguishing materials. Izv. vost. fil. AN SSSR no.12:87-96 '57. (MIRA 11:1)

1. Ural'skiy filial AN SSSR.
(Clays--Testing)
(Coal mines and mining--Fires and fire prevention)

FEDOROVA, G.G.

Studying the mechanism of structure formation during the coagulation of clayey suspensions and its significance for the practice of fire extinction. Izv. Sib. otd. AN SSSR no.5:74-89 '58. (MIRA 11:9)

1.Ural'skiy filial AN SSSR.
(Clay) (Coagulation) (Mine fires)

SIDOROV, I.N., kand. tekhn. nauk; FEDOROVA, G.G.; SHEINA, Z.G.

Prevention of endogenous fires in Ural coal mines. Trudy Gor.-geol. inst. UFAN SSSR no.31:97-122 '58. (MIRA 12:9)
(Ural Mountain region--Mine fires)

FEDOROVA, G. G. Cand Chem Sci -- (diss) "Study of the [redacted] colloid-chemical properties of clays and the coagulation formation structure of clay suspensions as silting material." Sverdlovsk, 1959. 15 pp (Min of Higher and Secondary Specialized Education RSFSR. Ural Polytechnic Inst im S. M. Kirov), 150 copies (KL, 45-59, 144)

FEDOROVA, G.G.; SHEINA, Z.G.

Colloidal properties of Chelyabinsk clays and the evaluation of their suitability for silting operations. Trudy Gor.-geol.inst. UFAN SSSR no.41:119-132 '59. (MIRA 13:5)
(Chelyabinsk Province--Clay)
(Coal mines and mining--Fires and fire prevention)

KOCHNEV, K.V., prof., doktor tekhn.nauk; SHEINA, Z.G., kand.khimicheskikh nauk; FEDOROVA, G.G., kand.khimicheskikh nauk

Preventing dust formation and keeping down floating dust in the Korkino open-pit mine. Sbor. rab. po silik. no.3:109-117 '61. (MIRA 15:10)

1. Gorno-geologicheskiy institut Ural'skogo filiala AN SSSR.
(Chelyabinsk Basin—Mine dusts)

FEDOROVA, G.G.; KUKLIN, L.S.; KHRUSHCHEV, G.N.

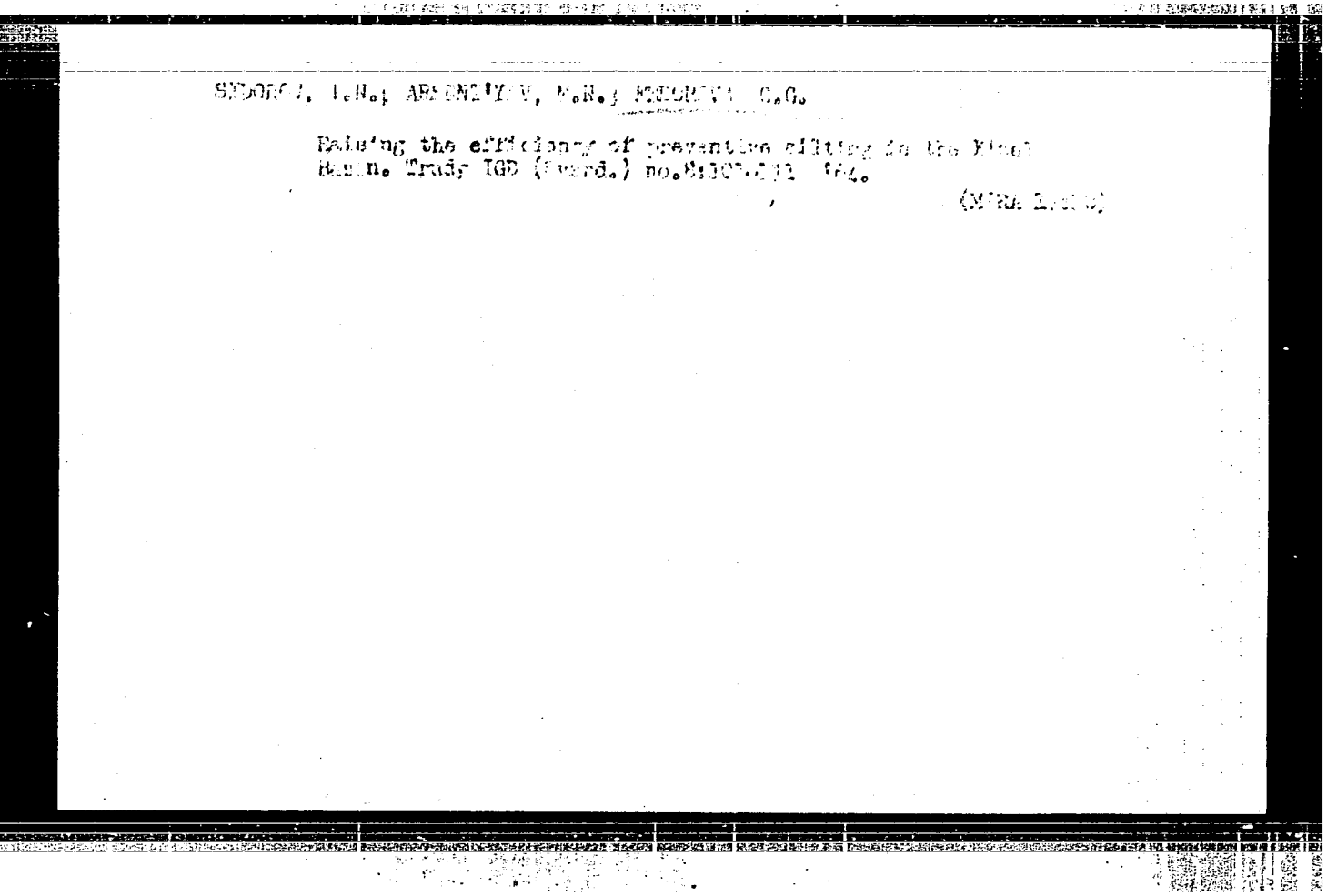
Effect of some physicochemical factors on the breaking of coal in a laboratory experiment. Trudy Inst. gor. dela UFAN SSSR no.3:45-47 '62. (MIRA 16:3)

(Coal—Testing)

KOCHNEV, K.V., prof., doktor tekhn.nauk; SHEINA, Z.G., kand.khim.nauk; FEDOROVA, G.G., kand.khim.nauk

Wetting agents and saline additives as means of controlling the process of dust prevention. Bor'ba s sil. 5:21-27 '62. (MIRA 16:5)

1. Gorno-geologicheskiy institut Ural'skogo filiala AN SSSR.
(Mine dusts—Prevention)



FEDOROVA, G.G.

Role of colloid disperse clay particles in the develop^ nt of an inrush of silt and water into operating mine workings following silting. Trudy IGD (Sverd.) no.8:113-122 '64.
(MIRA 17:10)

FEDOROVA, G.G.; SIDOROV, I.N.

Effect of fire preventives on the kinetics of coal oxidation.
Trudy IGD (Sverd.) no.8:123-131 '64.
(MIRA 17:10)

Fedorova, G.I.

KRUSHINSKIY, L.V.; SERNYSKIY, M.Ya.; PUSHKARSKAYA, L.P.; FEDOROVA, G.I.

Experimental studys on a new antiepileptic. Zh. vys. nerv. deiat. 5 no.6:892-900 N-D '55. (MLRA 9:3)

1. Laboratoriya patofiziologii kafedry vysshey nervnoy deyatel'nosti Moskovskogo universiteta gosudarstvennogo i Gosudarstvennyy institut psikhiatrii RSFSR.

(ANTICONVULSANTS,
mixture of barbiturates, bromides, caffeine, calcium gluconate & papaverin, eff. in animals.)

FEDOROVA, G.I.

17

37201

S/560/61/000/011/007/012
E027/E635

27 2407

AUTHORS: Zhukov-Verezhnikov, N.N., Mayskiy, I.N., Yazdovskiy, V.I., Pokhov, A.P., Gyurdzhian, A.A. Nefed'yeva, N.P., Kapichnikov, M.M., Podoplelov, I.I., Rybakov, N.I., Klemparskaya, N.N., Klimov, V.Yu., Novikov, S.N., Novikova, I.S., Petrov, R.V., Sushko, N.G., Ugryumov, Yo.P., Fedorova, G.I., Zakharov, A.F., Vinogradova, I.N., Chamova, K.G. and Buyko, Yo.A.

TITLE: The results of the first microbiological and cytological experiments in Space in Earth satellites

SOURCE: Akademiya nauk SSSR. Iskusstvennyye sputniki Zemli. no. 11. Moscow, 1961. Rezul'taty nauchnykh issledovaniy, provedennykh vo vremya poletov vtorogo i tret'yego kosmicheskikh korabley-sputnikov, 44 - 67

TEXT: The authors report the results of their investigations of biological objects which had been exposed to space conditions in satellite vehicles. The first part of the work was devoted to a study of the survival of cells of differing levels of organisation under the influence of radiation and other

Card 1/5

S/560/61/000/011/007/012
E027/E635

The results of the ---

unfavourable factors, in comparison with control materials which remained in the laboratory over the same period. In experiments with bacteria 2ml. samples of suspensions of Escherichia coli, Aerobacter aerogenes, Staphylococcus aureus and Clostridium butyricum containing 500 million organisms or spores per ml. were sealed in ampoules, and exposed to a space flight of unstated duration; the number of viable individuals after the exposure did not differ significantly from the values for the control samples. A similar experiment was carried out with the T2 phage of E. coli and the 1321 phage of A. aerogenes, which were sent in the second satellite; again, no sigificant reduction in the titre of the phage preparations could be detected after return from space. Similar results were obtained with preparations of phage sent into space in the fourth and fifth satellites. Two bottles and six tubes of HeLa cells, some of which were saturated with oxygen, were exposed to space flight

Card 2/5

S/560/61/000/011/007/012
E027/E635

The results of the . ..

conditions, after it had first been shown that vibration and acceleration did not detach the cells from the glass. The cultures without oxygen appeared normal on return, whereas in those exposed to oxygen most of the cells had degenerated. Subculture showed that 90% of the cells, whether detached from or remaining on the glass, were dead; however, two tubes gave good growth, and the cells which grew up showed no abnormalities of morphology. No antigenic differences could be detected in the cells in anaphylaxis and desensitization experiments in guinea-pigs. In subsequent space flights fibroblast and human amnion cell cultures were studied, with similar results. Pieces of human and rabbit skin were also used. On August 12th 1960 two pieces of skin 2.5 x 3.5 cm, in size and 0.5 mm, thick were taken from a human donor, placed in Hanks solution and sent into space in the second satellite. On recovery they were regrafted on the original site in the donor and became firmly attached after seven days.

Card 3/5

The results of the ---

Similar results were obtained with two other donors. An apparatus was devised for making a subculture in space, in order to study the ability of bacteria to multiply under space conditions. In experiments with Clostridium butylicum no deviations from the controls were observed. The second part of the work was devoted to a study of possible genetic effects brought about by exposure to space conditions, mainly by looking for the production of auxotrophic mutants and lysogeny in bacteria. The former were detected by inoculation on a layer of minimal medium which was then covered with an overlay of the same medium in order to fix the colonies. When the latter had grown up their position was noted and an overlay of complete medium was then put on, and the colonies which then grew up as a result of the diffusion of essentialnutrients were selected as auxotrophic mutants. No such mutants could be found in suspensions of Escherichia coli recovered from the second satellite. The experiments on the induction of lysogenic bacteria were carried out on a strain of E. coli lysogenized by a λ phage which had been exposed to cosmic

Card 4/5

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E027/E635

The results of the ---

radiation in the fifth satellite. Free phage particles were removed by adding phage antiserum; after the end of the latent period the action of the antiserum was cut short by diluting 1:100, streptomycin was added to inhibit the host organisms, and the mixture was plated out on the indicator strain in order to count the phage particles produced. The results obtained, considered in comparison with control experiments, provided no evidence of induction by cosmic radiation during a space flight of ninety minutes. No difference was observed in the plaque morphology. No changes could be detected in the chemical and physical properties of calf thymus deoxyribonucleic acid recovered after a space flight. The results as a whole indicate that no damage was suffered by isolated cells during a brief exposure to space conditions. There are 6 figures and 10 tables.

SUBMITTED: May 23, 1961

Card 5/5

KAGAN, G.Ya.; YERSHOV, F.I.; SHCHEGOLEV, A.G.; FEDORCVA, G.I.; PROZOROVSKIY, S.V.; MIKHAYLOVA, V.S.; LEVASHEV, V.S.

Some regularities in the L-form reversion of pathogenic species of bacteria. Zhur. mikrobiol.; epid. i immun. 41 no.6:67-70 Je '64. (MIRA 18:1)

1. Institut epidemiologii i mikrobiologii imeni Gamalei AMN SSSR i II Moskovskiy meditsinskiy institut imeni Pirogova.

FEDOROVA, G.I.

Significance of the state of the cellular wall for the formation of L-forms. Zhur. mikrobiol., epid. i immun. 41 no.12:78-83 D '64. (MIRA 18:3)

1. II Moskovskiy meditsinskiy institut imeni Pirogova i Institut epidemiologii i mikrobiologii imeni Gamalei AMN SSSR.

FEDOROVA, G.I.

Forming of colonies from protoplasts of Bacillus megaterium. Zhur. mikrobiol., epid. i immun. 42 no.8:36-39 Ag '65. (MIRA 18:9)

1. II Moskovskiy meditsinskiy institut imeni Pirogova i Institut epidemiologii i mikrobiologii imeni Gamalei AMN SSSR.

FEDOROVA, G.I.

Comparative study of the formation of L-colonies by lysozyme and glycine spheroblasts of Salmonella typhimurium. Antibiotiki 10 no. 10:916-919 O '65. (MIRA 18:12)

1. II Moskovskiy meditsinskiy institut imeni N.I.Pirogova i otdel obshchey meditsinskoy mikrobiologii (zav. - prof. V.D. Timakov) Instituta epidemiologii i mikrobiologii imeni N.F. Gamalei AMN SSSR. Submitted Nov. 14, 1964.

L 23406-66 EWT(1)/T JK

ACC NR: AP6014015 SOURCE CODE: UR/0016/65/000/008/0036/0039

25
B

AUTHOR: Fedorova, G. I.

ORG: Second Moscow Medical Institute im. N. I. Pirogov (II Moskovskiy meditsinskiy institut); Institute of Epidemiology and Microbiology im. Gamaleya, AMN SSSR (Institut epidemiologii i mikrobiologii AMN SSSR)

TITLE: Formation of colonies from B. megatherium protoplasts

SOURCE: Zhurnal mikrobiologii, epidemiologii i immunobiologii, no. 8, 1965, 36-39

TOPIC TAGS: penicillin, enzyme, bacteria, bacteriology

ABSTRACT: Addition of lysozyme to Micr. lysodeicticus or B. megatherium cultures under conditions of raised osmotic pressure leads to depolymerization and complete disappearance of the cell wall. The lysozyme protoplasts that form retain the essential properties of bacterial cells, but are incapable of forming colonies under ordinary conditions of seeding. On seeding B. megatherium strain No 654 lysozyme protoplasts on hypertonic media usually applied for the culturing of L-forms of bacteria, protoplast cultures containing all elements characteristic for L-forms (globules, vacuoles, granular light-refracting bodies) were obtained. These colonies formed only on media that did not contain penicillin; when penicillin was present, the colonies did not develop. As distinguished from L-forms, the protoplast colonies could not be reseeded; they must therefore be regarded as M-forms that cannot be preserved for long periods. Orig. art. has: 3 figures. [JPRS]

SUB CODE: 06 / SUBM DATE: 10Mar64 / OTH REF: 003

UDC: 576.8.094.3:615.779.935

Card 1/1 10

KIRSANOV, A.V. [Kirsanov, O.V.]; FEDOROVA, G.K. [Fedorova, H.K.]

Complexes of phosphorus pentachloride with aryl- and styryl-phosphorus tetrachlorides. Dop.AN URSR no.6:801-803 '60. (MIRA 13:7)

1. Institut organicheskoy khimii AN USSR. 2. Chlen-korrespondent AN USSR (for Kirsanov).

(Phosphorus chlorides)

KIRSANOV, A.V. [Kirsanov, O.V.]; FEDOROVA, G.K. [Fedorova, H.K.]

Complex compounds of phosphorus pentachloride with α,α-dichloralkylphosphorus tetrachlorides. Dop.AN URSR no.8:1086-1089 '60.
(MIRA 13:9)

1. Institut organicheskoy khimii AN USSR. 2. Chlen-korrespondent AN USSR (for Kirsanov).
(Phosphorus cholorides)

87532

S/079/60/030/012/016/027
B001/B064

53630

AUTHORS: Fedorova, G. K. and Kirsanov, A. V.

TITLE: Reaction of Phosphorus Pentachloride With Unsaturated Hydrocarbons

PERIODICAL: Zhurnal obshchey khimii, 1960, Vol. 30, No. 12, pp.4044-4048

TEXT: No compound of the $RCHClCH_2PCl_4 \cdot PCl_5$ and $RCHClCH_2PCl_4$ types had hitherto been obtained in the pure state. It is hardly believable that in the hydrolysis of such compounds or under the action of SO_2 upon them, under milder conditions, a quantitative separation of HCl should take place only under the formation of unsaturated phosphinic acids or their acid dichlorides, and not under the formation of the corresponding β-chloro phosphinic acids or their acid dichlorides. It may be assumed that the reaction of PCl_5 suggested by E. Bergmann and A. Bondi (Ref.4) with unsaturated hydrocarbons may proceed in a different way, i.e., without formation of β-chloro phosphinic acid derivatives by the scheme

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87532

Reaction of Phosphorus Pentachloride With Unsaturated Hydrocarbons

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$RCH{=}CH_2 + PCl_4^+ \longrightarrow [(RCHCH_2PCl_4)^+] \longrightarrow HCl + [RCH{=}CHPCl_3^+] \xrightarrow{+PCl_6^-}$
$\longrightarrow RCH{=}CHPCl_3^+ \cdot PCl_6^-$. It was the aim of this study to obtain the immediate reaction products of PCl_5 with unsaturated hydrocarbons and to identify them. PCl_5 which reacts readily with styrene, was the initial product. A crystalline complex $C_6H_5CH{=}CHPCl_3^+ \cdot PCl_6^-$ formed at $0^\circ C$ in the course of six hours under the formation of 1 mole HCl. Thus, it may be concluded that in this case the intermediate product of the $ArCHClCH_2PCl_4 \cdot PCl_5$ (Ref.7) does either not form at all or is so unstable that it decomposes at $0^\circ C$ already. The $C_6H_5CH{=}CHPCl_3^+ \cdot PCl_6^-$ yield amounted to 80%. When the complex is reacted with SO_2, styryl phosphinic acid dichloride forms in a high yield (Ref.7). Styryl phosphorus tetrachloride is obtained under the action of styrene. When reduced with red phosphorus (Ref.8), the complex is converted into styryl phosphine dichloride. All these chemical conversions together with the analytical data confirm the

Card 2/3

87532

Reaction of Phosphorus Pentachloride With Unsaturated Hydrocarbons

S/079/60/030/012/016/027
B001/B064

structure of the complex. When heated, the complex decomposes to HCl, PCl_3, and halogenated hydrocarbons. The unstable styryl phosphorus tetrachloride could not be obtained in the pure state; its structure was, however, confirmed by its conversion into styryl phosphinic acid dichloride under the action of SO_2 and by reduction with red phosphorus to styryl dichloro phosphine. Similar complexes of the $ArPCl_3^+ \cdot PCl_6^-$ type were synthesized by reacting PCl_5 with aryl phosphinic acid dichlorides: $ArPOCl_2 + 2PCl_5 \longrightarrow POCl_3 + ArPCl_3^+ \cdot PCl_6^-$. There are 9 references: 4 Soviet, 6 US, 1 British, and 3 German.

ASSOCIATION: Institut organicheskoy khimii Akademii nauk Ukrainskoy SSR (Institute of Organic Chemistry of the Academy of Sciences Ukrainskaya SSR)

SUBMITTED: January 28, 1960

Card 3/3

89520

S/079/61/031/002/013/019
B118/B208

5-3630

AUTHORS: Fedorova, G. K. and Kirsanov, A. V.

TITLE: Reaction of dichlorides of alkyl phosphinic acids with phosphorus pentachloride

PERIODICAL: Zhurnal obshchey khimii, v. 31, no. 2, 1961, 594-598

TEXT: On reaction of the dichlorides of aryl phosphinic acids with PCl_5, crystalline complexes $ArPCl_3^+ \cdot PCl_6^-$ are formed, as has been shown by the authors in Ref. 1. The purpose of the present study was to clarify whether this reaction is specific only for the dichlorides of aromatic phosphinic acids, or holds for the dichlorides of aryl a n d alkyl phosphinic acids. The authors studied the reaction of PCl_5 with dichlorides of ethyl-, propyl-, and butyl phosphinic acids, and found that under mild conditions (in benzene, at 80°C) not only the dichloro phosphinyl group is converted to the group $PCl_3^+ \cdot PCl_6^-$, but also complete chlorination of the α-carbon atom occurs giving complex compounds of PCl_5 with α, α-dichloro-alkyl phosphorus tetra-

X

Card 1/4

Reaction of dichlorides ...

chlorides:

$RCH_2POCl_2 + 4PCl_5 \longrightarrow 2HCl + 2PCl_3 + POCl_3 + RCCl_2PCl_3^+ \cdot PCl_6^-$. The position of the chlorine atoms in the alkyl groups is confirmed by the fact that the complex $C_2H_3Cl_2PCl_3^+ \cdot PCl_6^-$ gives with SO_2 the dichloride of dichloro-ethyl phosphinic acid which corresponds to that obtained by A. M. Kinnear (Ref. 2) from α, α-acid. The complexes $RCCl_2PCl_3^+ \cdot PCl_6^-$ (Table 1) are insoluble in common solvents, and react vigorously with water and alcohols, they are hydrolyzed at different rates depending on the character of the radical. The complex $CH_3CCl_2PCl_3^+ \cdot PCl_6^-$ is hydrolyzed with water at 20°C, splitting off about nine chlorine atoms, and about ten chlorine atoms when boiling with water for two hours; the last chlorine atom cannot be split off even by prolonged boiling. The complexes $C_2H_5CCl_2PCl_3^+ \cdot PCl_6^-$ and $n\text{-}C_3H_7CCl_2PCl_3^+ \cdot PCl_6^-$ are hydrolyzed by boiling with water for one hour, splitting off all chlorine atoms. Reaction of sulfur dioxide with the complexes $RCCl_2PCl_3^+ \cdot PCl_6^-$ ($R=CH_3$, C_2H_5, $n\text{-}C_3H_7$) gives the dichlorides of α, α-dichloro-

Card 2/4

Reaction of dichlorides ...

alkyl phosphinic acids:
$RCCl_2PCl_3^+ \cdot PCl_6^- + 2SO_2 \longrightarrow POCl_3 + 2SOCl_2 + RCCl_2POCl_2$. The complex $CH_3CCl_2POCl_2$ (I) first synthesized by A. M. Kinnear (Ref. 2) has not been characterized in detail. It is crystalline, distillable in vacuo, causes weeping, and is well soluble in organic solvents. When treating complex (I) with alcohols in the presence of pyridine monoalkyl esters of the monoacid chloride of α, α-dichloro-ethyl phosphinic acid (II), $CH_3CCl_2PO(OR)Cl$ are formed. They have a fruitlike odor and possess insecticidal properties. Complete hydrolysis of the dichloride of α, α-dichlorobutyl phosphinic acid, or of the complex $n\text{-}C_3H_7CCl_2PCl_6^+$, gave α-ketobutyl phosphinic acid $(n\text{-}C_3H_7COP(OH)_2)$ which is stable in aqueous acid solutions (Ref. 4).

M. I. Kabachnik and P. A. Rossiyskaya are mentioned. There are 2 tables and 5 references: 3 Soviet-bloc and 3 non-Soviet-bloc.

ASSOCIATION: Institut organicheskoy khimii Akademii nauk Ukrainskoy SSR (Institute of Organic Chemistry of the Academy of Sciences Ukrainskaya SSR)

89520
S/079/61/031/002/013/019
B118/B208

Reaction of dichlorides ...

SUBMITTED: March 14, 1960

Card 4/4

FEDOROVA, G. K.

Cand Chem Sci - (diss) "Phosphorilization of unsaturated compounds by phosphorus pentachloride." Kiev, 1961. 9 pp; (Ministry of Higher and Secondary Specialist Education Ukrainian SSR, Kiev Order of Lenin Polytechnic Inst); 120 copies; price not given; (KL, 5-61 sup, 177)

FEDOROVA, G.K.; KIRSANOV, A.V.

Styryldialkyl phospines and their oxides. Zhur.ob.khim. 33 no.3:1011-1013 Mr '63. (MIRA 16:3)

1. Institut organicheskoy khimii AN UkrSSR.
(Phosphine)
(Phosphine oxide)

DERKACH, G.I.; FEDOROVA, G.K.; GUBNITSKAYA, Ye.S.

Phenyldialkyl- and styryldialkylphosphazo acyls. Zhur.ob.khim. 33 no.3:1017-1019 Mr '63. (MIRA 16:3)

1. Institut organicheskoy khimii AN UkrSSR.
(Phosphorus organic compounds)

FEDOROVA, G.K.; LANCHUK, G.A.

Phenyldialkylphosphazosulfonylphenyls. Zhur.ob.khim. 34 no.2:511-513 F '64. (MIRA 17:3)

1. Institut organicheskoy khimii AN UkrSSR.

FEDOROVA, G.V.

Effect of C^{14} on the embryonic and early postembryonic development of Coregonus peled (Gmel.). Nauch. dokl. vys. shkoly; biol. nauki no.2:84-87 '65. (MIRA 18:5)

1. Rekomendovana laboratoriyey radiobiologii Biologicheskogo nauchno-issledovatel'skogo instituta Leningradskogo gosudarstvennogo universiteta im. A.A.Zhdanova.

L 29288-66 EWP(j)/EWT(m) RM

ACC NR: AP6019325 SOURCE CODE: UR/0079/65/035/008/1483/1487

21
B

AUTHOR: Fedorova, G. K.; Kirsanov, A. V.

ORG: Institute of Organic Chemistry, AN UkrSSR (Institut organicheskoy khimii AN UkrSSR)

TITLE: Derivatives of bis-beta-alkoxyvinylphosphinic acids

SOURCE: Zhurnal obshchey khimii, v. 35, no. 8, 1965, 1483-1487

TOPIC TAGS: phosphorylation, phosphorus chloride, phosphinic acid, ether

ABSTRACT: On phosphorylation of alkylvinyl ethers with PCl_5 applied in the molar ratio 1:4, bis-beta-alkoxyvinylphosphorus trichlorides (I) formed: $4ROCH{=}CH_2 + PCl_5 \rightarrow (ROCH{=}CH)_2PCl_3$ (I) + $2ROCHClMe$. I(R = Et), obtained in this manner with a yield of 70%, had a m. p. of 70-75°. I (R = Bu) was an oily substance (yield 63%) which could not be isolated in a pure state. Upon hydrolysis of I (R = Et, Bu) with the calculated amount of water, the chlorides of phosphinic acids (II) formed: $(ROCH{=}CH)_2PCl_3 + H_2O \rightarrow 2HCl + (ROCH{=}CH)_2POCl$ (II). They were colorless, high-boiling, oily liquids which dissolved in organic solvents. By treating acid chlorides II with alcohols R'OH, esters $(ROCH{=}CH)_2POOR'$ (III) were prepared. The following esters III were obtained:

Card 1/2 UDC: 546.185:557.361

L 29288-66

ACC NR: AP6019325

III (R = Et, R' = Me); III (R = R' = Et); III (R = Et, R' = Pr); III (R = Et, R' = Bu); III (R = Et, R' = CH_2=$CHCH_2$); III (R = Et, R' = Ph); III (R = Et, R' = C_7H_{15}); III (R = Bu, R' = Me); III (R = Bu, R' = Et); III (R = Bu, R' = Pr); III (R = R' = Bu). Esters III were colorless liquids with a faint odor which dissolved in organic solvents and were soluble with difficulty in water. They added readily four atoms of Br at the unsaturated bonds - e.g. III (R = Et, R' = Me) was converted by the addition of four atoms of Br in a CCl_4 solution into a dark oil which fumed in the air, could not be distilled without decomposition, and was soluble in organic solvents. Orig. art. has: 4 formulas and 1 table. [JPRS]

SUB CODE: 07 / SUBM DATE: 08Jul64 / ORIG REF: 004

Card 2/2

L 2777-66 ENP(j)/ENT(m) RM

ACC NR: AP6018502 SOURCE CODE: UR/0079/65/035/011/1984/1988

AUTHOR: Fedorova, G. K.; Zhaturskiy, Ya. P.; Kirsanov, A. V. 36 B

ORG: Institute of Organic Chemistry, AN UkrSSR (Institut organicheskoy khimii AN UkrSSR)

TITLE: Derivatives of styryl-2-chlorostyrylphosphinic and bis-phenylacetylenyl-phosphinic acids

SOURCE: Zhurnal obshchey khimii, vo. 35, no. 11, 1965, 1984-1988

TOPIC TAGS: phosphorylation, ester, phenol, amine, chlorinated organic compound, organic phosphorus compound, hydrolysis, nonmetallic organic derivative

ABSTRACT: Phenylacetylene is phosphorylated by styryltetrachlorophosphorus, forming styryl-2-chlorostyryltrichlorophosphorus. Styryl-2-chlorostyryl-trichlorophosphorus is hydrolyzed to the corresponding acid, and reacts with sulfur dioxide to give the chloride of styryl-2-chlorostyrylphosphinic acid. Treatment of styryl-2-chlorostyrylphosphinic and bis-2-chlorostyrylphosphinic acids with alcoholic potassium hydroxide results in the formation of styrylphenylacetylenylphosphinic and bis-phenylacetylenylphosphinic acids. Under the action of phenols and aromatic amines, the chlorides of styryl-2-chlorostyrylphosphinic and bis-phenylacetylenylphosphinic acids are converted to the corresponding esters and anilides. Yields, melting points, crystal type, and analytic data are given for all the reaction products. Orig. art. has: 2 tables. [JPRS]

SUB CODE: 07 / SUBM DATE: 30Nov64 / ORIG REF: 001/

Card 1/1 UDC: 546.185:547.341

L 10363-67 EWP(j)/EWT(m) RM
ACC NR: AP7003111 SOURCE CODE: UR/0079/66/036/007/1262/1267

AUTHOR: Fedorova, G. K.; Shaturskii, Ya. P. 20

ORG: Institute of Organic Chemistry, AN UkrSSR (Institut organicheskoy khimii AN UkrSSR)

TITLE: Phosphorylation of phenylbutadiene

SOURCE: Zhurnal obshchey khimii, v. 36, no. 7, 1966, 1262-1267

TOPIC TAGS: phosphorylation, butadiene, phosphorus chloride

ABSTRACT: Phosphorus trichloride reacts with excess phenylbutadiene (1:3 ratio) to form bisphenylbutadienyltrichlorophosphorus. Phenyltetrachlorophosphorus and styryltetrachlorophosphorus phosphorylate phenylbutadiene (in a 1:1 ratio) to yield phenylbutadienylphenyl- and phenylbutadienylstyryltrichlorophosphorus. The phosphorylation products undergo hydrolysis with water, yielding the corresponding phosphinic acids, while sulfur dioxide converts them to the chlorides of the corresponding phosphinic acids. The chlorides of bisphenylbutadienyl-, phenylbutadienyl-, phenylbutadienylphenyl-, and phenylbutadienylstyrylphosphinic acids are hydrolyzed by water to the acids, while reaction with phenol and anilin yields the corresponding phenyl esters and anilides. Bromination of phenylbutadienylphenylphosphinic acid yields a mixture of two bromine-containing acids: phenyltribromobutenylphenylphosphinic and phenyltetrabromobutylphenylphosphinic acids. Dehydrobromination of the two acids with alcoholic alkali results in the formation of phenylbutadienylphenylphosphinic acid. The latter can be formed only if the phosphorus-containing group is in the 4-position of the diene chain. Orig. art. has: 1 figure and 1 table. [JPRS: 38,970]

SUB CODE: 07 / SUBM DATE: 21Jun65 / ORIG REF: 001 / OTH REF: 002

UDC: 547.538.3

Card 1/1 2D

0205 2067

ACC NR: AP7006123 SOURCE CODE: UR/0056/67/052/001/0021/0028

AUTHOR: Pavlov, S. I.; Rakhovskiy, V. I.; Fedorova, G. M.

ORG: All-Union Electrotechnical Institute im. V. I. Lenin (Vsesoyuznyy elektrotekhnicheskiy institut)

TITLE: Measurement of the cross sections for the ionization of substances with low vapor tension by electron impact

SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 52, no. 1, 1967, 21-28

TOPIC TAGS: ionization cross section, impact ionization, vapor pressure, lead, copper, silver

ABSTRACT: Since all earlier studies of ionization by electron impact were made for elements with high vapor tension, mostly metals, and at relatively low temperatures, and most elements have remained uninvestigated, for lack of a sufficiently simple and reliable measurement technique, the authors describe a procedure and apparatus for this purpose. The procedure is a modification of the atomic-beam method, first proposed by H. Funk (Ann. der Phys. v. 4, 149, 1930). In the apparatus developed by the authors, the substance is introduced in the ionization space in the form of an atomic beam and is made to cross a beam of monoenergetic electrons. The total number of ions produced in this manner is determined by measuring the ion current, and the concentration of the neutral atoms is determined from the intensity of the atomic beam. To separate the ion current due to the investigated substance from the ion

Card 1/2 UDC: none

ACC NR: AP7006123

current due to the residual gas, the atomic beam is modulated and the ac component of the ion current is recorded. Measurements were made of the apparent ionization cross sections of lead, copper, and silver at energies from the ionization threshold to 150 ev. The maximum ionization cross sections and the corresponding electron energies were 8×10^{-16} cm^2 at E = 55 ev for lead, 3.1×10^{-16} cm^2 at 29 ev for copper, and 2.9×10^{-16} cm^2 at 29 ev for silver. The results agree well with published theoretical estimates. The ionization functions of the three metals showed a linear dependence of the ionization on the energy, with an added structure superimposed on the curve for lead, which can be ascribed to autoionization. The authors thank M. A. Mazing and V. A. Fabrikant for a discussion of the work, B. N. Klyarfel'd for valuable remarks, and V. L. Granovskiy for suggesting the topic and directing the main results. Orig. art. has: 5 figures and 1 formula. [02]

SUB CODE: 20/ SUBM DATE: 27Jun66/ ORIG REF: 002/ OTH REF: 026/
ATD PRESS: 5117

Card 2/2

FEDOROVA G.M.

ARUTYUNOV, V.Ya., prof.; GURVICH, Ye.I., prof. pri uchastii vrachey: E.M. Khublarova, Z.F.Ivantsovoy (Podol'sk), A.V.Stepanova, P.N.Goryacheva, M.I.Yeliseyevoy (Mytishchi), S.F.Stepanovoy (Bolshevo), V.A.Leonovoy (Babushkin), M.P.Goncharova (Kaliningrad), G.Ya.Ashkinezer (Kostino), V.M.Pototskogo, G.I.Ponomarevoy, A.A.Pleve, A.V.Beskodarova (Serpukhov), I.I.Kutakova (Yegor'yevsk), G.S.Indenbaum (Kolomna), L.I.Andreyeva, V.G.Ionovoy (Pushkino), G.M.Fedorova (Zagorsk), I.S.Belen'kogo (Tushino)

Late results in the treatment of syphilis. Vest.derm. i ven. 32 no.2:57-60 Mr-Ap '58. (MIRA 11:4)

1. Iz kozhno-venerologicheskoy kliniki (dir. - prof. V.Ya.Arutyunov) Moskovskogo oblastnogo nauchno-issledovatel'skogo klinicheskogo instituta imeni M.F.Vladimirskogo (dir. - kand.med.nauk P.M.Leonenko)

(SYPHILIS, ther.
late results (Rus))

KARASEV, K.I., kand. khim.nauk; MAKOTINSKIY, M.P., kand. arkh.; TROSHICHEV, V.M.; Prinimali uchastiye: LUTSIK, L.D., inzh.; FEDOROVA, G.M., tekhnik; LIVSHITS, A.M., inzh.; ANDREYEV, V.S., retsenzent; MIRENSKIY, B.R., inzh., retsenzent; GURVICH, E.A., red.izd-va; TEMKINA, Ye.L., tekhn. red.

[Catalog of finishing materials and products] Katalog otdelochnykh materialov i izdelii. Moskva, Gosstroiizdat. Pt.2. [Paints and lacquers] Kraski i laki. 1961. 76 p. (MIRA 16:7)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut novykh stroitel'nykh materialov. 2. Chlen-korrespondent Akademii stroitel'stva i arkhitektury SSSR (for Andreyev).
(Paint materials—Catalogs)

FEDOROVA, G.M.

Effect of temperatures below freezing point on the low-frequency electric resistance of winter wheat and rye. Fiziol.rast. 12 no.4:688-692 Jl-Ag '65. (MIRA 18:12)

1. Moskovskiy oblastnoy pedagogicheskiy institut imeni N.K. Krupskoy. Submitted July 27, 1964.

FEDOROVA, G.N.

137-58-5-11181

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 5, p 326 (USSR)

AUTHORS: Serdyuk, L.S., Fedorova, G.N.

TITLE: An Investigation of the Reaction of Magnesium with Aluminone and its Application in Colorimetric Analysis (Issledovaniye reaktsii magniya s alyuminonom i primeneniye yeye v kolorimetricheskom analize)

PERIODICAL: Tr. Nauchno-tekhn. o-va chernoy metallurgii. Ukr. resp. pravl., 1956, Vol 4, pp 154-159

ABSTRACT: Optimal conditions for the formation of Mg complexes with aluminone (I) were studied. It is established that the determination of Mg with I in electrolytic Ni-baths should be conducted at a pH of 11 with a 0.2% aqueous ammonia solution of I. After the separation of Ni, the process of Mg determination requires 20-25 minutes. 10 cc of the electrolyte solution are placed into a 100 -cc flask, where they are diluted to a certain mark. After adding 65 cc of water to 10 cc of the solution, the latter is heated to 80°C; Fe is oxidized with HNO_3, 20 cc of a 1% alcohol solution of dimethyglyoxime are added together with a quantity of NH_4OH sufficient to produce odor. After 30 minutes, the

Card 1/2

An Investigation of the (cont.)

Ni is filtered out, and the solution is heated until all the NH_4OH is removed. After cooling, the solution is placed into a 200-cc flask, from which 5 cc are subsequently withdrawn into a 5 -cc flask; a small amount of an ammonium acetate buffer solution (pH 11) is added to the 50-cc flask together with 5 cc of freshly prepared I. After adding a quantity of buffer sufficient to raise its level to a predetermined mark, the solution is subjected to photometric analysis under a green light filter.

K. K.

1. Magnesium--Chemical reactions 2. Aluminone--Applications 3. Colorimetry --Applications

Card 2/2

28-3-19/33

AUTHOR: Fedorova, G.N., Engineer

TITLE: A New Grade of Coal-Benzene (Novaya marka kamennougol'nogo benzola)

PERIODICAL: Standartizatsiya, 1957, # 3, May-June, p 65 (USSR)

ABSTRACT: The present standard ГОСТ 8448-57 supersedes standard ОСТ 10463-39. Up to now, benzene (C_6H_6) was produced in two grades - "Pure benzene for nitration" and "Pure benzene". The new standard adds the grade "Pure benzene for synthesis" in two brands. The conditions for the first brand corresponds to conditions set by the international standard project. 95 % of this benzene is to be processed within temperature limits of not over 0.6 °C (for other benzene grades the limits are 0.8 and 1 °C). The temperature of crystallization for the first brand is to be not below 5.3 °C, for the second brand 5.1 °C. Carbon sulfide content is established as not over 0.005 % for the first brand and 0.02 % for the second brand. Thiophene content in the first brand is not to be over 0.005 %. Hydrogen sulphide and mercaptans are completely excluded in benzene of all grades. Benzene has to meet the copper plate test. It is stated that the new standard abruptly raises the quality and purity of benzene to meet contemporary requirements.

Card 1/2

A New Grade of Coal-Benzene

28-3-19/33

AVAILABLE: Library of Congress

Card 2/2

KOREYSHA, M.M.; SAPOZHNIKOV, R.M.; SHUMSKIY, P.A., doktor geogr. nauk, otv. red.; GRAVE, N.A., doktor geogr. nauk, otv. red.; FEDOROVA, G.N., red.; ERILING, N.V., red.

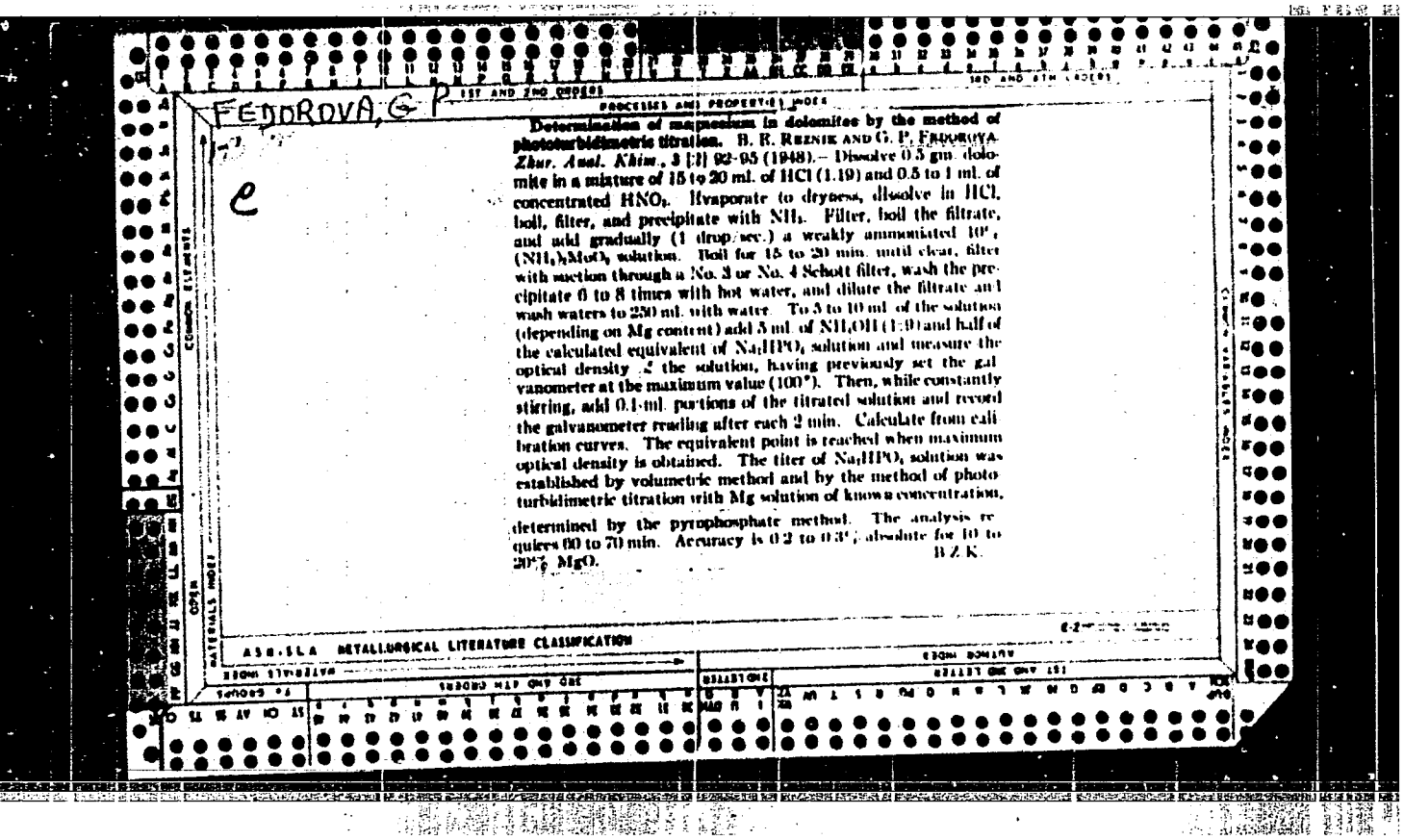
[Suntar-Khayata] Suntar-Khaiata. Moskva, 1963. 2 v. (MIRA 18:5)

1. Akademiya nauk SSSR. Sibirskoye otdeleniye. Institut merzlotovedeniya.

FEDORVA, G. P.

FEDORVA, G. P. - "The treatment of infixed wounds with aspergillin and its effect on experimental peritonitis". Moscow, 1955. First Moscow Order of Lenin Medical Inst. (Dissertation for the degree of Candidate of Medical Sciences).

SO: Knizhnaya Letopis' No. 46, 12 November 1955. Moscow



FEDOROVA, G P

PROCESSES AND PROPERTIES INDEX

Determination of magnesium in dolomites by the method of phototurbidimetric titration. B. R. REZNIK AND G. P. FEDOROVA. *Zhur. Anal. Khim.*, 3 [1] 92-95 (1948).– Dissolve 0.5 gm. dolomite in a mixture of 15 to 20 ml. of HCl (1.19) and 0.5 to 1 ml. of concentrated HNO_3. Evaporate (to dryness, dissolve in HCl, boil, filter, and precipitate with NH_3. Filter, boil the filtrate, and add gradually (1 drop/sec.) a weakly ammoniated 10% $(NH_4)_2MoO_4$ solution. Boil for 15 to 20 min. until clear, filter with suction through a No. 3 or No. 4 Schott filter, wash the precipitate 6 to 8 times with hot water, and dilute the filtrate and wash waters to 250 ml. with water. To 5 to 10 ml. of the solution (depending on Mg content) add 5 ml. of NH_4OH (1:1) and half of the calculated equivalent of Na_2HPO_4 solution and measure the optical density of the solution, having previously set the galvanometer at the maximum value (100°). Then, while constantly stirring, add 0.1-ml. portions of the titrated solution and record the galvanometer reading after each 2 min. Calculate from calibration curves. The equivalent point is reached when maximum optical density is obtained. The titer of Na_2HPO_4 solution was established by volumetric method and by the method of phototurbidimetric titration with Mg solution of known concentration, determined by the pyrophosphate method. The analysis requires 60 to 70 min. Accuracy is 0.2 to 0.3%, absolute for 10 to 20% MgO.

B Z K.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

FEDOROVA, G. P.

Reznik, B. Ye, and Fedorova, G. P. - "The determination of calcium in dolomite by the photo-nephelometric titration method," Nauch. zapiski (Dnepropetr. go.. un-t), Vol. XXXIII, 1948, p. 163-72, - Bibliog: p. 172

SO: U-5240, 17, Dec. 53, (Letopis 'Zhurnal 'nykh Statey, No. 25, 1949).

FEDOROVA, G.P. --

"Investigating Some Reactions of Precipitation and Complex Formation Using the Photometric Method." Cand Chem Sci, Dnepropetrovsk State U, Dnepropetrovsk, 1953. (RZhKhim, No 19, Oct 54)

Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (10)

SO: Sum No. 481, 5 May 55

S/593/60/000/000/002/007
D226/D302

AUTHORS: Serdyuk, L.S., and Fedorova, G.P., Candidates of Chemical Sciences

TITLE: The rare earth metals in metallurgy and methods of their determination

SOURCE: Soveshchaniye po khimicheskomu kontrolyu proizvodstva v metallurgicheskoy i metalloobrabatyvayushchey promyshlennosti. Dnepropetrovsk, 1958. Khimicheskiy kontrol' proizvostva v metallurgicheskoy i metalloobrabatyvayushchey promyshlennosti; [doklady soveschaniya] [Dnepropetrovsk], 1960, 91 - 99

TEXT: An account is first given of the application of the rare earth metals in ferrous and non-ferrous metallurgy, stressing especially the beneficial influence of these elements on the mechanical and chemical properties of the parent alloy, when added in small proportions. Examples of the above are quoted. Some present methods of lanthanon analysis are then briefly described, including: 1) Separation of Ce from the other rare earths by oxidation to Ce^{4+};
Card 1/3

The rare earth metals in ...

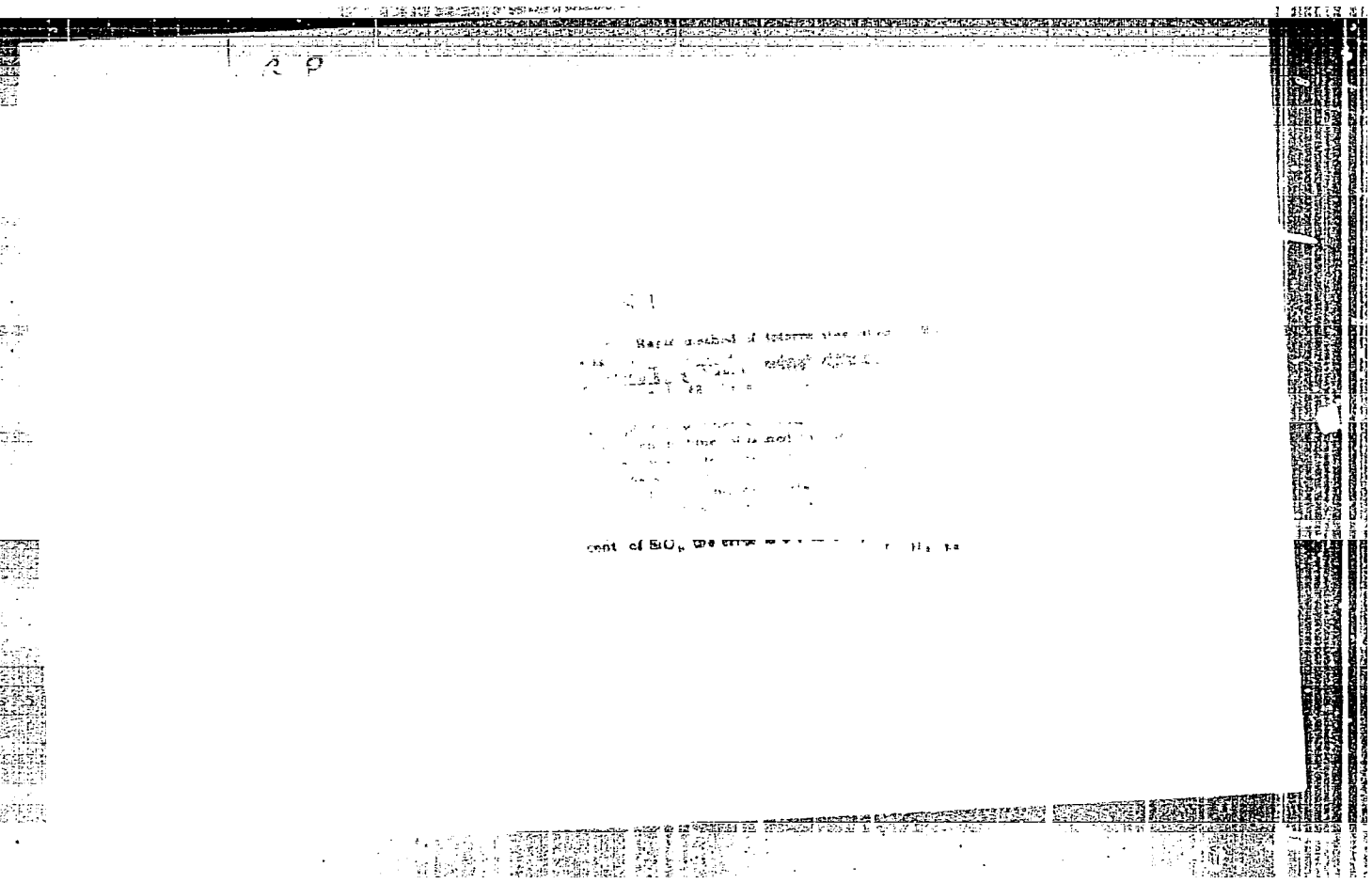
2) Determination of total lanthanons in steels by the gravimetric fluoride method and 3) Various colorimetric methods. The latter are thought to be particularly promising. The authors investigated the reactions of La, Ce and Y with aluminon and alizarin S, to develop methods of individual determination of these elements in mixtures. It was found that lakes with aluminon may be used for colorimetry, without sulphosalicylic acid, if the aluminon is used in aqueous, slightly ammoniacal solutions and the reaction is carried out in ammonium acetate buffered solutions at pH 6. Good results (tabulated) were obtained by this method for La, and Ce. Owing to a certain lack of stability of the aluminon reagent, the use of alizarin S, preferably in the presence of boric acid, was found more convenient, over a wide range of pH. Formation of La, Ce and Y alizarinates at various pH is shown graphically. It was found that the individual Ce and La curves differed appreciably from that of Y, but the La and Y were close together when the last 2 elements were mixed. Better Ya-Y separations were obtained replacing the boric acid with ethylene diamine. Under these conditions, sensitivity for Y was higher than for La. Determination of these two elements in stan-

The rare earth metals in ...

dard mixtures is described in full and the results are tabulated. The agreement is considered satisfactory. There are 2 figures, 2 tables and 58 references: 44 Soviet-bloc and 14 non-Soviet-bloc. The 4 most recent references to the English-language publications read as follows: M.C. Steele and L.J. England, Analyst, 82, 977, 593 -597, 1957; T.W. Newton and G. Arcand, J.Am.Chem.Soc. 75, no. 10, 2449-2453, 1953; Rao Ramachandra, A. Sitaramachandramurtg and Rao Raghawa, J.Sci.Ind.Res. 14B, no. 4190, 1955; T. Moeller, and M. Tecotzky, J.Am.Chem.Soc., 77, no. 9, 1649, 1955.

ASSOCIATION: Dnepropetrovskiy gosuniversitet (Dnepropetrovsk State University)

Card 3/3



SERDYUK, L.S.; FEDOROVA, G.P.

Study of the beryllium and aluminum reaction. Ukr. khim. zhur. 24 no.3:384-387 '58. (MIRA 11:9)
(Beryllium) (Aluminum)

5(2) SOV/78-4-1-19/48

AUTHORS: Serdyuk, L. S., Fedorova, G. P.

TITLE: Investigation of Colored Complexes of Several Rare Earths (Issledovaniye okrashennykh kompleksov nekotorykh redkozemel'nykh elementov)

PERIODICAL: Zhurnal neorganicheskoy khimii, 1959, Vol 4, Nr 1, pp 88-96 (USSR)

ABSTRACT: The reaction of yttrium, lanthanum, and cerium with alizarin S and aluminate was investigated. The influence of pH on the formation of alizarates of yttrium, lanthanum, and cerium was investigated. The absorption spectra of the complexes formed were recorded. The reaction of rare earths to alizarin S with pH higher than 4.6 is more delicate than had been stated in publications. The alizarates of yttrium, lanthanum, and cerium show a ratio of element : alizarin = 1 : 1. The molar absorption coefficients of alizarates were determined. The molar absorption coefficient of lanthanum and cerium is 10,300 and 9,800 respectively, and of yttrium 7,900. The investigation of the influence of several cations on the formation reaction of alizarates of lanthanum and cerium showed that with certain

Card 1/3

Investigation of Colored Complexes of Several Rare Earths

pH values calcium causes an increase of the optical density of alizarate solutions. The effect is used for raising the delicacy of the colorimetric determination of these elements. The effect of calcium on the formation of alizarates can be explained by the formation of double salts of rare earths with calcium and alizarin S. It was found that some masking complex formers, e.g. complexon, fluoric acid, citric acid, pyrophosphoric acid, oxalic acid, etc, suppress alizarate formation. Ascorbic acid and tartaric acid in certain concentration do not influence the optical density of the alizarate solutions of rare earths. Instructions for the colorimetric determination of lanthanum and cerium are given. Even with sulphosalicylic acid not being present, the rare earths form soluble complexes with aluminate if the hydrous solution of the reagent contains a small amount of ammonia. The complex formation of rare earths with aluminate depending on the pH value of the solution was investigated. It was found that on using buffer solutions with pH 6, complexes of rare earths with aluminate in the approximate ratio of 1:1 are formed. This reaction becomes more marked on heating. The determination of the optical density of complex solutions of rare earths with alizarin S and aluminate was carried out with

Card 2/3

. Investigation of Colored Complexes of Several Rare Earths

the photometer FM, with the filter number 5 (at λ = 533 mμ). There are 12 figures, 1 table, and 14 references, 6 of which are Soviet.

SUBMITTED: October 21, 1957

Card 3/3

S/075/60/015/003/012/033/XX
B005/B066

AUTHORS: Serdyuk, L. S. and Fedorova, G. P.

TITLE: Photometric Determination of Yttrium With the Stilbazo Reagent

PERIODICAL: Zhurnal analiticheskoy khimii, 1960, Vol. 15, No. 3, pp. 287 - 290

TEXT: The stilbazo reagent was suggested by V. I. Kuznetsov for the photometric determination of aluminum (Ref.1) and is also suited for the determination of tungsten, indium, gallium, and fluorine (Refs.8-10). The authors of the present paper investigated the reaction of yttrium with stilbazo and in addition developed a selective photometric method of determining yttrium. For this study a 10^{-3} M solution of stilbazo and a 10^{-2} M solution of yttrium chloride were used whose titer was determined gravimetrically by means of 8-hydroxy-quinoline. The absorption curves of the pure reagent and of the yttrium complex were taken on a УМ-2 (UM-2) universal monochromator (Fig.1). The absorption maximum of the complex

lies at 540 mμ. To measure the optical density of solutions of the complex, a green light filter with a maximum transmission at 540 mμ has to be applied which may be produced from potassium bichromate and copper sulfate solutions. The optimum pH for the reaction of yttrium with stilbazo is pH 7, as lanthanum, a frequent attendant of yttrium, does not react in neutral solution with stilbazo. The reaction of yttrium with the reagent proceeds rapidly; the optical density of the solutions of the complex reaches its constant maximum value already 10 - 15 minutes after combining the reagents. By heating the solution the complex is destroyed. The solutions of the complex obey Beer's law (Fig.4). It was found by the method of the isomolar series (Ref.19) that yttrium reacts with stilbazo in the molar ratio of 1:2. The molar extinction coefficient of the complex was determined by the saturation method (Ref.20); it has a value of ~60000 when using the green filter mentioned above; accordingly, the sensitivity of the reaction is very high. Potassium and sodium ions do not influence the optical density of the solutions, nor do calcium ions in a 50-fold and magnesium ions in 30-fold excess with respect to yttrium. Although lanthanum does not react with stilbazo at pH 7, its presence effects an increase of the optical density of the solution. This

Photometric Determination of Yttrium With the Stilbazo Reagent

S/075/60/015/003/012/033/XX
B005/B066

disturbing influence may be eliminated by adding small amounts of acetone. Cerium does not react with stilbazo at pH 7, whereas gadolinium and erbium disturb the determination. Masking agents (complexon III, sodium potassium tartrate, pyrophosphates, oxalates, fluorides, ascorbic acid, succinic acid, azelaic acid, adipic acid) destroy already in small quantities the color of the yttrium complex. The authors devised a method for the photometric determination of yttrium in the absence and in the presence of lanthanum; this method is described in detail. The required neutral pH is brought about by means of an ammonium acetate buffer solution. A table shows some results obtained by this method. Accuracy and reproducibility of the results are satisfactory. The optical densities were measured in a ФЭК-М (FEK-M) colorimetric photometer. There are 4 figures, 1 table, and 21 references: 14 Soviet, 2 German, 1 Indian, and 4 US.

ASSOCIATION: Dnepropetrovskiy gosudarstvennyy universitet (Dnepropetrovsk State University)

SUBMITTED: April 25, 1959

Card 3/3

FEDOROVA, G.P.; SERDYUK, L.S.

Determination of magnesium in soils with aluminum. Izv.vys.ucheb.-zav.;khim.i khim.tekh. 4 no.4:686-687 '61. (MIRA 15:1)

1. Dnepropetrovskiy gosudarstvennyy universitet, kafedra analiticheskoy khimii.
(Magnesium--Analysis) (Aluminum) (Soils--Analysis)

S/073/61/027/002/004/004
B101/B208

AUTHORS: Serdyuk, L. S., Fedorova, G. P.

TITLE: Study of the reaction of rare-earth elements with alizarin S in the presence of ammonia and amines

PERIODICAL: Ukrainskiy khimicheskiy zhurnal, v. 27, no. 2, 1961, 252-256

TEXT: In Ref. 4 (Soveshchaniye p. khimicheskomu kontrolyu proizvodstva v metallurgicheskoy i metalloobrabatyvayushchey promyshlennosti (Conference on Chemical Control of Production in the Metallurgical and Metalworking Industries), June 5-10, 1958, Tezisy dokladov, Dnepropetrovsk, 1958, p. 16) the authors found that alizarin S forms colored complexes with yttrium and lanthanum in the presence of ethylene diamine. On the basis of the difference of their absorption maxima, a method could be devised for the separate determination of Y and La. A study has now been made of the reaction of alizarin S with Y, La, and Ce in the presence of other nitrogen-containing substances (ammonia, diethylamine, pyramidon, antipyrine, and pyridine). 10^{-3} M solutions of YCl_3, $LaCl_3$, $CeCl_3$, and alizarin S were used. The red color of alizarin S was removed by adding H_3BO_3. If the amine was added last

Card 1/6

Study of ...

to the solution, maximum optical density was obtained. Fig. 1 shows spectrophotometric curves of Y, La, and Ce complexes with alizarin S in the presence of NH_3 at pH = 9.6-9.8. 25 ml of the solution studied contained 10 ml of 4% H_3BO_3, 3 ml of 10^{-3} M alizarin S, 0.5 mole of 10^{-3} M salt of the rare-earth element (REE), and 1 mole of NH_3. The resultant curves differed only little from the curves obtained in the presence of ethylene diamine. In the presence of diethyl amine, the curves shown in Fig. 3 were obtained at the same pH. The cerium complex was not stable. The curves in Fig. 4 resulted in the absence of amines, but in a solution that had been brought to the same pH by means of alkali. It may be seen from this that only the complexes in the presence of amines and NH_3 can be used for REE determination, owing to their spectral difference. The complexes of Ce and Y in the presence of NH_3 and ethylene diamine are extractable by butanol, isobutanol, and tributyl phosphate, while those of La cannot be extracted by these alcohols. The complexes studied were decomposed by fluorides. The decrease of optical density is highest in the La complex; the Ce complex in the presence of NH_3, and the Y complex in the presence of ethylene diamine are most stable. Spectral absorption curves of the REE complexes in the presence of pyramidon (pH = 7.0), pyridine (pH = 7.5), and antipyrine

(pH = 4.2) were recorded by an ФЭК-М(FEK-M) colorimetric photometer. Fig. 5 shows the result for Y, Fig. 6 for La, and Fig. 7 for Ce. Ammonium acetate was used as buffer solution. Isoamyl alcohol extracts the complex of yttrium alizarinate with pyramidon, but not the pyridine complex. While the alizarinates of La and Ce are hardly extracted by isobutanol, this solvent extracts the complexes of these metals with pyridine and pyramidone. Also the lanthanum complexes with pyridine and pyramidon are better extractable by amyl alcohol than alizarinates in the absence of nitrogen-containing compounds. The La complex with antipyrine is easily extracted by amyl, isoamyl, butyl and isobutyl alcohols. Sodium oxalate destroys the alizarinates of REE and their complexes formed with pyridine and pyramidon. The above-mentioned nitrogen-containing compounds thus form complexes in the reaction of REE with alizarin S, which differ in their spectral properties. There are 7 figures and 8 references: 4 Soviet-bloc and 4 non-Soviet-bloc. The 2 most recent references to English language publications read as follows: A. Y. Ponov, W. W. Wenlaudt, J. Am. Chem. Soc., 77 (4), 857, (1955); T. Moller, Record of Chem. Progress, 14 (2), 69, (1953).

ASSOCIATION: Dnepropetrovskiy gosudarstvennyy universitet (Dnepropetrovsk State University)

ROGOZKIN, V.A.; FEDOROVA, G.P.

Dinucleotide-nucleotide hydrolase in the tubers of different potato varieties. Dokl. AN SSSR 153 no.1:220-222 N '63.
(MIRA 17:1)

1. Leningradskiy nauchno-issledovatel'skiy institut fizicheskoy kul'tury. Predstavleno akademikom A.I. Oparinym.

ACCESSION NR: AP4014379 S/0300/64/036/001/0119/0125

AUTHOR: Fyodorova, G. P. (Fedorova, G. P.)

TITLE: Effect of muscular activity of varying duration on the amount of nicotinamide-adenine dinucleotide and its reduced form in muscles, liver and blood

SOURCE: Ukrayins'ky*y biokhimichny*y zhurnal, v. 36, no. 1, 1964, 119-125

TOPIC TAGS: physiology, muscular activity, nicotinamide-adenine dinucleotide, NAD, NAD-H, glycolycis, hypoxemia, lactodehydrogenase system

ABSTRACT: The effect of muscular activity of various duration on the levels of nicotinamide-aderine dinucleotide (NAD) and its recuced form (NAD-H) in the muscles, blood, and liver was studied in experiments on rats. Short strenuous work (swimming for 15 min.) had almost no effect on the total NAD content (NAD + NAD-H), but produced a marked decrease in the NAD level accompanied by an increase in the concentration of NAD-H; i. e., the NAD/NAD-H ratio decreased sharply. Prolonged work of moderate intensity, for which a stable state of metabolic processes is characteristic (swimming for 1 or 5 hrs), was not

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ACCESSION NR: AP4014379

accompanied by reliably established changes in the NAD content or the ratio of its fractions. Muscular activity of long duration leading to severe fatigue (swimming for 10 hrs) resulted in a decrease in the NAD/NAD-H ratio and in the total NAD content because of a decrease in the amount of the oxidized form of NAD. There was a direct correlation between the decrease in the NAD/NAD-H ratio and the intensity of glycolysis in muscles, i.e., the extent of physiological hypoxemia involving oxidation of NAD-H with participation of the lactodehydrogenase system. Changes in the NAD content of blood followed closely those established for the muscles. The NAD content and ratio of its fractions in the liver were not affected by muscular activity. Orig. art. has: 2 figures 1 table, and 1 formula.

ASSOCIATION: Sektor biokhimii nauchno-issledovatel'skogo instituta fizicheskoy kul'tury*, Leningrad (Sector of Biochemistry, Scientific Research Institute of Physical Culture)

SUBMITTED: 06Sep63 DATE ACQ: 14Feb64 ENCL: 00

SUB CODE: AM NO REF SOV: 009 OTHER: 024

2/2

FEDOROVA, G.P.

Effect of nicotinamide on the nicotinamide adenine dinucleotide content in rat tissues during rest and muscular activity. Ukr. biokhim. zhur. 37 no.1:91-96 '65. (MIRA 18:5)

1. Leningrad Research Institute of Physical Culture.

ROGOZKIN, V.A.; FEDOROVA, G.P.; MASHANSKIY, V.F.

Enzymatic synthesis of nicotinamide dinucleotide in isolated nuclei of skeletal muscle. Vop. med. khim. 10 no.5:546-547 S-O '64. (MIRA 18:11)

1. Nauchno-issledovatel'skiy institut fizicheskoy kul'tury i Institut tsitologii AN SSSR, Leningrad.

TUMANSKIY, V.K., doktor med. nauk; FEDOROVA, G.P., kand. med. nauk; STEPANOVA, N.P.

Visceral neurofibromatosis. Sov. med. 27 no.11:125-130 N '63 (MIRA 18:1)

1. Iz kafedry obshchey khirurgii (zav. - chlen-korrespondent AMN SSSR prof. V.I. Struchkov) Moskovskogo ordena Lenina meditsinskogo instituta imeni I.M. Sechenova na baze klinicheskoy bol'nitsy No.23 imeni "Medsantrud" (glavnyy vrach A.N. Lobanova).

FEDOROVA, G.S.

Physiotherapeutical methods in vestibular disorders. Vop.kur.fizioter. i lech.fiz.kul't. 22 no.6:51-55 N-D '57. (MIRA 11:2)

1. Iz kafedry lechebnoy fizicheskoy kul'tury TSentral'nogo instituta usovershenstvovaniya vrachey (zav. kafedroy - prof. V.N.Moshkov) i Nauchno-issledovatel'skogo instituta zabolevaniy ukha, gorla i nosa Ministerstva zdravookhraneniya RSFSR (dir. - zasluzhennyy deyatel' nauki prof. V.K.Trutnev)
(PHYSICAL THERAPY)
(VESTIBULAR APPARATUS--DISEASES)

FEDOROVA, G. S. Cand Med Sci -- (diss) "Physical ~~Exercise~~ therapy as a method of restorative therapy [illegible] in [illegible] vestibular disorders." Mos, 1958. 16 pp (Min of Health USSR. Central Inst for the Advanced Training of Physicians), 200 copies (KL, 36-58, 117)

KORYAKIN, M.F.; PROSKURYAKOVA, M.A.; FEDOROVA, G.S.

Investigation of the structure of the elementary reaction of the raising of a leg in some neurological diseases and its importance in the formation of an efficient method for exercise therapy. Vop. kur., fizioter. i lech. fiz. kul't. 29 no.1:13-19 '64. (MIRA 17:9)

1. Kafedra lechebnoy fizicheskoy kul'tury i vrachebnogo kontrolya (zav.- prof. V.N. Moshkov) TSentral'nogo instituta usovershenstvovaniya vrachey, Moskva.

AUERMAN, L.Ya.; ZAPARINA, Ye.A.; STEPANOVA, E.I.; FEDOROVA, G.S.

Effect of various fats on bread quality. Izv.vys.ucheb.zav.pishch. tekh. no.4:74-77 '58. (MIRA 11:11)

1. Moskovskiy tekhnologicheskiy institut pishchevoy promyshlennosti, Kafedra tekhnologii khlebopekarnogo proizvodstva, Spetslaboratoriya tekhnologii khlebopecheniya.
(Bread) (Oils and fats, Edible)

OSTROVSKIY, A.I., prof.; DONETSKAYA, T.F., nauchnyy sotrudnik; TUL'SKIY, M.S., kand.tekhn.nauk; FEDOROVA, G.S., starshiy nauchnyy sotrudnik

The most efficient way to use corn flour in bread making. Trudy MTIPP no.19:15-21 '62. (MIRA 17:4)

ABANINA, Anna Vasil'yevna, dots.; FEDOROVA, Galina Sergeyevna, dots.; SHCHEDRIN, Nikolay Ivanovich, dots.; NOVIKOVA, S.N., red.

[Problems and exercises in the organization of machine accounting] Sbornik zadach i uprazhnenii po organizatsii mekhanizirovannogo ucheta. Moskva, Statistika, 1965. 154 p. (MIRA 18:7)

FEDOROVA, G.T.

Case of recurrent pulmonary hemorrhage complicating a combined mitral heart defect. Vrach.delo no.9:148-150 S '62. (MIRA 15:8)

1. Kafedra fakul'tetskoy terapii (zav. - deystvitel'nyy chlen AMN SSSR, akademik AN USSR, prof. V.N.Ivanov [deceased] Kiyevskogo meditsinskogo instituta.
(MITRAL VALVE--DISEASES) (HEMORRHAGE)

KORCLEVA, V. A.; FEDOROVA, G. V.

Don River - Sturgeons

Critical periods in the development of eggs and larvae of the Don sturgeon (Acipenser Guldenstadti colchicus M.) and their morphophysiological characteristics. Uch. zap. Len. un. no. 142, 1951.

9. Monthly List of Russian Accessions, Library of Congress, November 1952, Uncl.

FEDOROVA, G.V.

Academician K.M.Baer as an ichthyologist. Trudy Inst.ist.est.i tekh. 16:76-96 '57. (MIRA 10:10)
(Baer, Karl Ernst von, 1792-1876) (Fishes)

FEDOROVA, G.V.

CA

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PROCESSES AND PROPERTIES INDEX

Use of sulfocoal [sulfonated coal] for analytical purposes. G. V. Fedorova. *Izvest. VTI (Vsesoyuz. Teplotekh. Inst. im. Feliksa Dzerzhinskogo)* 15, No. 2, 28-9(1946). A base-exchange reaction is used for detg. chloride and sulfate in natural and feed waters. Place 30-40 g. of sulfonated, ash-free coal in a buret over a layer of quartz. Pass 70 ml. of a 5% HCl soln. during 6-7 min. Wash with distd. H_2O until free of Cl. This usually requires 300 ml. of H_2O and 25-30 min. Filter the unknown H_2O through the exchanger at a rate of 100 ml. in 10 min. The ionic strength of the unknown should not exceed 0.010-0.015 g.-equiv. per l. Discard the first 150-200 ml. of filtrate and then titrate 100-ml. aliquots with a 0.1 N NaOH soln.
M. Hosch

ASA-SLA METALLURGICAL LITERATURE CLASSIFICATION

FEDOROVA, G. V.

USSR/Manganese Chlorides Aug 1947
Chemistry - Manganese Chloride

"Preparation of Chemically Pure $MnCl_2$," T. A. Kaganer, V. A. Rumyantseva, G. V. Fedorova, Hydro Laboratory of the VTI, 1 p

"Izvestiya VTI" No 8 (148)

$MnCl_2$ is produced from manganese ore by using the following chemical formula: $MnO_2 + 4HCl = MnCl_2 + H_2O + Cl_2$. Discusses the experiments and various ways of conducting them successfully.

PA 18718

FEDOROVA, G.V.

Materials on the development and periods of high sensitivity of smelt eggs in Lake Beloye. Uch. zap. Ped. inst. Gerts. 179:203-210 '58. (MIRA 16:5)

(Beloye, Lake (Leningrad Province)—Smelts)
(Fishes—Eggs)

FEDOROVA, G.V.

Absorption and liberation of radiocarbon (C^{14}) by fishes. Nauch. dokl. vys. shkoly; biol. nauki no.4:84-89 '63 (MIRA 16:11)

1. Rekomendovana laboratoriyey radiobiologii Biologicheskogo nauchno-issledovatel'skogo instituta Leningradskogo gosudarstvennogo universiteta im. A.A. Zhdanova.

FEDOROVA, G.V.

Experimental study of penetration into developing eggs and larvae of fresh water fishes. Radiobiologiia 3 no.5:677-681 '63.
(MIRA 17:4)

1. Gosudarstvennyy universitet imeni A.A. Zhdanova, Leningrad.

FEDOROVA, G.V.

Effect of strontium-90 on the eggs and larvae of Coregonus lavaretus ludoga Pol. Vest.LGU 18 no.3:48-53 '63. (MIRA 16:2)
(FISHES--EGGS) (STRONTIUM ISOTOPES--PHYSIOLOGICAL EFFECT)
(LARVAE--FISHES)

FEDOROVA, G.V.

Effect of water temperature, age and sex of fishes on their absorption and elimination of C^{14}. Dokl. AN SSSR 150 no.1:168-169 My '63. (MIRA 16:6)

1. Leningradskiy gosudarstvennyy universitet im. A.A.Zhdanova. Predstavleno akademikom V.N.Chernigovskim.

(Carbon isotopes) (Fishes--Physiology)

FEDOROVA, G.V.

Absorption and excretion of radioactive carbon in embryonic and early postembryonic stages of the development of the whitefish Coregonus peled. Vest. LGU 19 no.21:39-50 '64
(MIRA 18:1)

L 29900-66 EWT(m)

ACC NR: AP6001523 (A,N) SOURCE CODE: UR/0337/65/000/009/0017/0019

AUTHOR: Fedorova, G. V. 35

ORG: Leningradskiy gosudarstvennyy universitet (Leningrad State University) B

TITLE: Contamination of fish by radioactive carbon 19

SOURCE: Rybnoye khozyaystvo, no.9, 1965, 17-19

TOPIC TAGS: radioactive contamination, biology, water pollution, radioisotope, radiation hazard

ABSTRACT: Experiments with carp in water containing $CH_3C^{14}OONa$ concentrations of 20-24 μc/l at 18-20 C show that after spending one day in the water the fish become radioactive and that the highest contamination (16.8-52.3 μc/kg raw fish flesh) occurs in the gills, scales, and fins. During the next days the contamination is accompanied by an increase of radioactivity in the internal organs as shown by the following data tabulated for a period of 50 days:

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Organs and tissues	Radioactivity, μc per kg of raw fish flesh
Scales	166 ± 9.9
Fins	218.8 ± 12.7
Gills	150.0 ± 16.0
Skin	44.24 ± 0.57
Head	105.7 ± 1.19
Eyes	121.5 ± 3.3
Brains	290 ± 2.5
Gastro-intestinal tract	1083.6 ± 11.3
Liver	213.6 ± 4.1
Muscles	50.96 ± 2.1
Bones	129.8 ± 2.5

The radioactivity of contaminated fish, placed for 30 days in clean fresh water, decreases about 80% in the brains and liver and 60-70% in some of the other organs and tissues. Experiments with guppies show that their contamination at temperatures of 19 to 21 C is 2.5 to 3 times greater than at 10 to 21 C, that the accumulation of radioactivity for 30 days is 121.4 μc/kg for females and only 72.5 μc/kg

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ACC NR: AP6001523

for males, and that the accumulation coefficient for young guppies is 1.5-3 times higher than that for grown guppies. The absorption of C^{14} by roe and larvae from water is very high. In about one week, the radioactivity of embryos becomes 2 to 3 times greater than that of the contaminated water. This increase is especially great in larvae fed with chlorella, which also intensively accumulates C^{14}. The high coefficient of C^{14} accumulation in larvae makes larvae suitable tracers for the determination of water contamination. The C^{14} enters the fish organisms directly from the water and indirectly from the feed, such as phytoplankton. The conclusion is drawn that the C^{14} radioisotope accumulates in fish organisms in quantities hazardous to life and living processes. Orig. art. has: 3 tables.

SUB CODE: 06/ SUBM DATE: none

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