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SOV/62-60-1-36/37

AUTHORS:

Nesmeyanov, A. N., Borisov, A. Ye., Novikova, N. V.

TITLE:

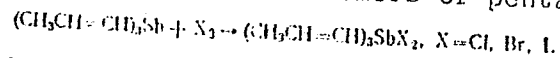
Letter to the Editor. Geometrical isomers of Propenyl Compounds of Tri- and Pentavalent Antimony

PERIODICAL:

Izvestiya Akademii nauk SSSR, otdeleniye khimicheskikh nauk, 1960, Nr 1, p 147 (USSR)

ABSTRACT:

The authors report that during the study of stereo-chemistry of organometallics, a series of geometrical isomers of propenyl compounds of tri- and pentavalent antimony were synthesized, and that cis- and trans-propyllithium react with antimony trichloride to form corresponding cis- and trans-propylantimony. The reaction between these isomers and halogen lead to the formation of a series of isomers of pentavalent antimony:



cis- isomers, containing Cl and Br, are crystalline and

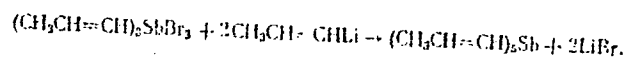
Card 1/2

Letter to the Editor. Geometrical Isomers
of Propenyl Compounds of Tri- and Penta-
valent Antimony

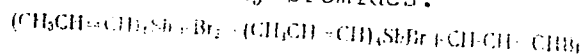
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SOV/62-60-1-36/31

the trans-isomers are liquids. Liquid geometrical isomers of pentapropenylantimony were synthesized from cis- and trans-isomers of tripropenylantimony dichloride and the corresponding isomers of propenyl-lithium:



These isomers have different refractive indices and absorption spectra. They react with bromine, forming two tetrapropenylantimony bromides:



ASSOCIATION:

There is 1 Soviet reference.
Institute of Element-Organic Compounds, Academy of
Sciences, USSR (Institut elementoorganicheskikh
soyedineniy Akademii nauk SSSR)

SUBMITTED:

October 29, 1959

Card 2/2

HESEMAYANOV, A.N.; BORISOV, A.Ye.; KOVIKOVA, N.V.

Vinyl compounds of tri- and pentavalent antimony. Izv.AN SSSR
Otd.khim.nauk no.5:952 Ny '60. (MIRA 13:6)

1. Institut elementoorganicheskikh soedineniy Akademii nauk SSSR.
(Antimony compounds) (Vinyl compounds)

BRESTKIN, A.P.; NOVIKOVA, N.V.

Kinetics of hydrogen peroxide decomposition by catalase. *Biokhimiia*
25 no.4:584-592 J1-Ag '60. (MIRA 13:11)

1. Chair of Inorganic Chemistry, Sanitary-Hygienic Medical Institute,
Leningrad.

(HYDROGEN PEROXIDE)

(CATALASE)

NESMEYANOV, A.N., akad.; BORISOV, A.Ye.; NOVIKOVA, N.V.

Atomic refraction of antimony. Dokl.AN SSSR 134 no.1:100-101
S '60. (MIRA 13:8)

1. Institut elementoorganicheskikh soyedineniy Akademii nauk SSSR.
(Antimony compounds)
(Mercury compounds)
(Arsenic compounds)

NOVIKOVA, N.V., BRESTKIN, A.P., PROKOFYEVA, YE. G., RZHEKCHINA, NI (USSR)

"Kinetics of Enzymic Hydrolysis of Phenyl Phosphate."

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

NESMEYANOV, A.N.; BORISOV, A.Ye.; NOVIKOVA, N.V.

Propenyl stereoisomers of tri- and pentavalent antimony. *Izv. AN SSSR Otd. khim. nauk* no. 4: 612-617 Ap '61. (MIRA 14:4)

1. Institut elementoorganicheskikh soyedineniy AN SSSR.
(Antimony compounds)

NESMEYANOV, A.M.; BORISOV, A.Ye.; NOVIKOVA, N.V.

Compounds of the type $(RCH CR')_3Sb(C_2H_5)_2$. *Izv. AN SSSR Otd. khim.*
nauk no.4:730 Ap '61. (MIRA 14:4)

1. Institut elementoorganicheskikh soedineniy AN SSSR.
(Antimony compounds)

53700

27486
S/062/61/000/009/001/014
B117/B101

AUTHORS: Nesmeyanov, A. N., Borisov, A. Ye., and Novikova, N. V.

TITLE: Isopropenyl and vinyl compounds of tri- and pentavalent antimony

PERIODICAL: Akademiya nauk SSSR. Izvestiya. Otdeleniye khimicheskikh nauk, no. 9, 1961, 1578-1582

TEXT: Isopropenyl and vinyl derivatives of antimony of the types R_3Sb , R_5Sb , R_4SbX , R_3SbX_2 ; where $R=CH_2-\overset{CH_3}{C}-$, $CH_2=CH-$; $X = Cl, Br, I$, were

synthesized in the present work. The authors had previously prepared cis- and trans propenyl derivatives of tri- and pentavalent antimony (Ref. 1: *Izv. AN SSSR. Otd. khim. n.*, 1960, 147) and pentavinyl antimony (Ref. 2: *Izv. AN SSSR. Otd. khim. n.*, 1960, 952). Triisopropenyl antimony ($C_9H_{15}Sb$) and trivinyl antimony (C_6H_9Sb) were obtained by reaction of antimony trichloride with isopropenyl lithium, or vinyl magnesium bromide,

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B117/B101

Isopropenyl and vinyl compounds ...

respectively. The compounds thus obtained react readily with halogens, forming derivatives of pentavalent antimony: $R_3Sb + X_2 \rightarrow R_3SbX_2$. Triisopropenyl antimony dibromide ($C_9H_{15}SbBr_2$), a white crystalline substance, m.p. $138^\circ C$, reacts with isopropenyl lithium to give penta-isopropenyl antimony ($C_{15}H_{25}Sb$), a white amorphous substance, m.p. $60^\circ C$. Treatment of trivinyl antimony dibromide ($C_6H_9SbBr_2$, $n_D^{20} 1.6480$) with vinyl magnesium bromide leads to pentavinyl antimony ($C_{10}H_{15}Sb$), a slightly greenish liquid. Quantitative analysis showed that both pentaalkenyl antimony compounds were sufficiently pure. By treating these compounds dissolved in $CHCl_3$ with equimolecular quantities of bromine at $-5^\circ C$, the authors obtained tetraisopropenyl stibonium bromide ($C_{12}H_{20}SbBr$, leaf-shaped shiny crystals, m.p. $125-135^\circ C$) and tetravinyl stibonium bromide ($C_8H_{12}SbBr$, needle-shaped crystals, m.p. $53-54^\circ C$), respectively. Treatment with equimolar quantities of iodine at room temperature tetraisopropenyl stibonium iodine ($C_{12}H_{20}SbI$, m.p. $163-164^\circ C$) and, respectively, tetravinyl

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Isopropenyl and vinyl compounds ...

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B117/B101

stibonium iodine ($C_8H_{12}SbI$, m.p. 68-70°C) in crystalline form. On heating on an oil bath at 180°C, pentaisopropenyl and pentavinyl antimony form triisopropenyl antimony and trivinyl antimony, respectively. This was confirmed by bromination of the triisopropenyl antimony obtained, respectively distillation of the trivinyl antimony, which in the former case yielded triisopropenyl antimony dibromide, m.p. 137-138°C, and in the latter a colorless liquid, n_D^{20} 1.5595, which was identical with trivinyl antimony. Trivinyl and triisopropenyl antimony react with thallium trichloride to give trivinyl antimony dichloride ($C_6H_9SbCl_2$, liquid) and triisopropenyl antimony dichloride ($C_9H_{15}SbCl_2$, white crystals, m.p. 102-103°C). In this reaction thallium is transformed to the monochloride. There are 3 references: 2 Soviet and 1 non-Soviet.

ASSOCIATION: Institut elementoorganicheskikh soyedineniy Akademii nauk SSSR (Institute of Elemental Organic Compounds of the Academy of Sciences USSR)

SUBMITTED: February 15, 1961
Card 3/3

BRESTKIN, A.P.; NOVIKOVA, N.V.; PROKOP'YEVA, Ye.G.; RZHEKHINA, N.I.

Kinetics of sodium phenyl phosphate hydrolysis by alkaline phosphatase.
Biokhimiia 26 no.2:266-275 Apr '61. (MIRA 14:5)

1. Chair of Inorganic Chemistry, Sanitary-Hygienic Medical Institute,
Leningrad.

(PHOSPHATASE)

(SODIUM PHENYL PHOSPHATE)

88575

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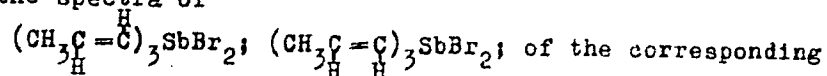
S/020/61/136/001/027/037
B004/B056

9.4300 (1137, 1143, 1164)

AUTHORS: Borisov, A. Ye., Novikova, N. V., and Chumayevskiy, N. A.TITLE: Infrared Absorptionspectra of Organometallic Compounds of the Ethylene Series. On Cis- and Trans-configurations of Propylene-antimony Compounds (Sb^{III} and Sb^V)

PERIODICAL: Doklady Akademii nauk SSSR, 1961, Vol. 136, No. 1, pp. 129-132

TEXT: The present paper is an account on investigations of the infrared absorption spectra of cis- and trans-isomeric propylene compounds with tri- and pentavalent antimony. Synthesis of these substances was described in an earlier paper (Ref. 1). Investigation was made with a 8MKC M-3 (VIKS M-3) spectrometer and an NaCl prism within the range of 700-1800 cm⁻¹ and with an MKC-12 (IKS-12) spectrometer and KBr prism within 400-700 cm⁻¹. Figs. 1-3 show the spectra of



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Infrared Absorptionspectra of Organometallic Compounds of the Ethylene Series. On Cis- and Trans-configurations of Propylene-antimony Compounds (Sb^{III} and Sb^{V})

S/020/61/136/001/027/037
B004/B056

chlorides and iodides, moreover of $(\text{CH}_3\overset{\text{H}}{\underset{\text{H}}{\text{C}}=\overset{\text{H}}{\text{C}}})_3\text{Sb}$; $(\text{CH}_3\overset{\text{H}}{\underset{\text{H}}{\text{C}}=\overset{\text{H}}{\text{C}}})_3\text{Sb}$;
 $(\text{CH}_3\overset{\text{H}}{\underset{\text{H}}{\text{C}}=\overset{\text{H}}{\text{C}}})_5\text{Sb}$; $(\text{CH}_3\overset{\text{H}}{\underset{\text{H}}{\text{C}}=\overset{\text{H}}{\text{C}}})_5\text{Sb}$; $(\text{CH}_3\overset{\text{H}}{\underset{\text{H}}{\text{C}}=\overset{\text{H}}{\text{C}}})_4\text{SbBr}$; $(\text{CH}_3\overset{\text{H}}{\underset{\text{H}}{\text{C}}=\overset{\text{H}}{\text{C}}})_4\text{SbBr}$; and, for
 comparison, sketches of $\text{CH}_3\overset{\text{H}}{\underset{\text{H}}{\text{C}}=\overset{\text{H}}{\text{C}}}-\text{Br}$ and $\text{CH}_3\overset{\text{H}}{\underset{\text{H}}{\text{C}}=\overset{\text{H}}{\text{C}}}-\text{Br}$ spectra. Frequencies

are listed in Table 1. All trans-configurations exhibit intense absorption at $945\text{-}970\text{ cm}^{-1}$. The frequencies of the CH-group uneven oscillations are at 971 cm^{-1} for tri- and pentapropenyl antimony, at 945 cm^{-1} for dihalogen derivatives, and at 967 cm^{-1} for tetrapropenyl stilbonium bromide. The trans-configurations are distinguished by bands at $718\text{-}726\text{ cm}^{-1}$ which do not exist in the cis-configuration. The $920\text{-}940\text{ cm}^{-1}$ absorption bands of the cis-configuration are considerably less intense than the $945\text{-}970\text{ cm}^{-1}$ absorption bands of the trans-configuration. Only cis-tripropenyl antimony and cis-pentapropenyl antimony turned out to have bands at 970 cm^{-1} , but their intensity amounts to only one third of the trans-configuration

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Infrared Absorptionspectra of Organometallic
Compounds of the Ethylene Series. On Cis- and
Trans-configurations of Propylene-antimony
Compounds (Sb^{III} and Sb^V)

S/020/61/136/001/027/037
B004/B056

intensity. The same holds for propenylbromide: Intensity of the 930 cm^{-1} band of the cis-configuration only one third of the trans-configuration band. The bands at $655\text{-}660\text{ cm}^{-1}$ of the cis-configuration are 2 - 2.5 times more intense than those of the trans-configuration. Cis-configurations of the halogen derivatives and of tetrapropenyl stilboniumbromide showed intense bands at 452 cm^{-1} which were not observed in the case of trans-configurations and cis- and trans-tri- and pentapropenyl antimony. The plane vibrations at the double bonds are more intense at 1200 cm^{-1} in the case of trans-isomers and at 1300 cm^{-1} in the case of cis-isomers. A. N. Nesmeyanov is mentioned in the paper. The authors thank Academician I. V. Obreimov for his interest in the investigation, and R. A. Isayeva and Ye. D. Vlasov for their collaboration. There are 3 figures, 2 tables, and 8 references: 5 Soviet, 1 US, and 2 British. X

ASSOCIATION: Institut elementoorganicheskikh sovedineniy Akademii nauk
SSSR (Institute of Elemental Organic Compounds of the
Academy of Sciences USSR)

Card 3/4

88575

Infrared Absorption Spectra of Organometallic Compounds of the Ethylene Series. On Cis- and Trans-configurations of Propylene-antimony Compounds (Sb^{III} and Sb^V)

S/020/61/136/001/027/037
B004/B056

PRESENTED: July 18, 1960, by I. V. Obreimov, Academician

SUBMITTED: June 16, 1960

Legend to table 1. Frequencies of the Sb^{III} and Sb^V propenyls. 1) cis, 2) trans, 3) boiling point, 4) melting point.

(CH ₂ CH=CH) ₂ ·Sb		(CH ₂ CH=CH) ₂ ·SbCl ₂		(CH ₂ CH=CH) ₂ ·SbBr ₂		(CH ₂ CH=CH) ₂ ·SbI ₂		(CH ₂ CH=CH) ₂ ·SbBr		(CH ₂ CH=CH) ₂ ·Sb	
1) цис-т. кип) 70°/4-5	2) транс-т. кип) 82°/5 мм	1) цис-т. пла) 74-75°	2) транс-т. кип) 160-162/4мм	1) цис-т. пла) 83-85°	2) транс-т. кип) 167°/4 мм	1) цис-т. пла) 122-123°	2) транс-	1) цис-т. пла) 140-143°	2) транс-т. пла) 45-48°	1) цис-т. кип)	2) транс-т. кип.)
1600	1600	1606	1607	1604	1605	1600	1598	1600	1600	1600	1600
1438	1442	1440	1440	1443	1440	1425	1437	1443	1432	1440	1437
1378	1377	1335	1370	1382	1377	1378	1375	1380	1367	1380	1375
1320	1320	1308	1306	1305	1306	1297	1302	1305	1304	1321	1308
1183	1159	1201	1191	1189	1189	1150	1185	1195	1225	1200	1180
1115	1115	—	1109	—	1105	1100	1109	1109	1185	1115	1110
—	1060	1047	—	1045	1075	—	1025	1048	1062	—	1062
1039	1040	—	1042	—	1041	1040	1039	—	1043	1035	1040
970	971	910	957	939	951	937	945	950	967	970	971
920	935	928	—	925	—	925	—	924	945	920	938
710	720	665	724	—	722	—	718	700	725	—	722
660	655	625	667	683	655	660	660	660	663	660	662
—	610	455	620	482	—	610	615	635	625	—	600

Table 1

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S/062/63/000/001/024/025
B101/B186

AUTHORS: Nesmeyanov, A. N., Borisov, A. Ye., and Novikova, N. V.

TITLE: Diphenyl stibine

PERIODICAL: Akademiya nauk SSSR. Izvestiya. Otdeleniye khimicheskikh nauk, no. 1, 1963, 194

TEXT: Reaction of diphenyl antimony chloride with lithium aluminum hydride in anhydrous ether under an atmosphere of argon, produced the hitherto unknown diphenyl stibine, $(C_6H_5)_2SbH$, in 50% yield, a colorless liquid, b.p. 115-120°C/0.5 mm Hg, n_D^{20} 1.6882, which quickly decomposes in air with formation of a precipitate. ✓

ASSOCIATION: Institut elementoorganicheskikh soyedineniy Akademii nauk SSSR
(Institute of Elemental Organic Compounds of the Academy of Sciences USSR)

SUBMITTED: November 27, 1962
Card 1/1

BORISOV, A.Ye.; NOVIKOVA, M.V.; NESMEYANOV, A.N.

Triallylstibins. Izv.AN SSSR.Ser.khim. no.8:1506-1507 Ag '63.
(MIRA 16:9)

1. Institut elementoorganicheskikh soedineniy AN SSSR.
(Stibins)

S/020/63/148/006/015/023
B117/B186

AUTHORS: Nesmeyanov, A. N., Academician, Borisov, A. Ye., Novikova, N. V.,
Chumayevskiy, N. A.

TITLE: Infra-red absorption spectra of stereo-isomers of propenyl-
lithium

PERIODICAL: Akademiya nauk SSSR. Doklady, v. 148, no. 6, 1963, 1312 - 1313

TEXT: Infra-red absorption spectra of cis- and trans-isomers of propenyl-
lithium were studied more accurately in comparison with the results ob-
tained (in a 20% ether solution) earlier (DAN, 119, 712 (1958)) by the
same authors, and with those of N. L. Allinger and R. B. Hermann (J. Org.
Chem., 26, 1040 (1961)). In order to eliminate the misleading frequencies
by which the ether is characterized, the spectra mentioned were taken both
in ether solution and in paraffin oil. A comparison of the spectra taken
in these media showed the following frequencies to be consistent:

1625 cm^{-1} , 1540 cm^{-1} and 1300 cm^{-1} in spectra of the cis-isomer; 1635 cm^{-1} ,
1550 cm^{-1} in the spectrum of the trans-isomer. Hence the higher frequencies
in the infra-red spectrum of propenyllithium of the C-C oscillations
Card 1/2

Infra-red absorption spectra of...

S/020/63/148/006/015/023
B117/B186

(1635 cm^{-1} and 1545 cm^{-1}) correspond to the trans-isomer, and the lower frequencies (1625 cm^{-1} and 1535 cm^{-1}) correspond to the cis-isomer. Thus, the infra-red absorption spectra gave results that were in agreement with those obtained by Allinger and Hermann. The conclusions drawn in the above paper from optical and chemical data as to the configuration of cis- and trans-isomers are still valid.

ASSOCIATION: Institut elementoorganicheskikh soyedineniy Akademii nauk SSSR
(Institute of Elemental Organic Compounds of the Academy of Sciences USSR)

SUBMITTED: November 26, 1962

Card 2/2

NESMEYANOV, A.N.; BORISOV, A.Ye.; NOVIKOVA, N.V.

Trialkenyldialkyl and trialkenyldiaryl compounds of antimony.

Izv. AN SSSR Ser. khim. no.7:1197-1202 J1 '64.

(MIRA 17:8)

1. Institut elementoorganicheskikh soyedineniy AN SSSR.

L 14335-65 EWT(m)/EPF(c)/EPR/EWP(j)/T Pc-4/Pr-4/Ps-4 SSD/AEDC(a)/ASD(p)-3
ACCESSION NR: AP4042870 WW/RM S/0062/64/000/007/1202/1209

AUTHOR: Nesmeyanov, A. N. ; Borisov, A. Ye. ; Novikova, N. V.

TITLE: Pentaalkenyl compounds of antimony

SOURCE: AN SSSR. Izvestiya. Seriya khimicheskaya, no. 7, 1964, 1202-1209

TOPIC TAGS: organoantimony compound, pentaalkenylantimony, pentacovalent antimony compound, synthesis, pentaisopropenylantimony, pentavinylantimony, thermal stability, halogenation, bromination, iodination, trialkenylantimonydibromide, pentanaphthylantimony, exchange reaction

ABSTRACT: Cis-propenyllithium, trans-propenyllithium, isopropenyllithium and vinylmagnesium bromide were reacted with SbCl₅ to form the pentacovalent antimony compounds: penta(cis-propenylantimony), penta(trans-propenyl)

and exchange reaction was investigated. Heating I to 101°C or II to 180°C, pro-

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L-14335-65

ACCESSION NR: AP4042870

moted gas evolution and formation of the tri(cis- or trans-propenyl) antimony, which was then brominated to the tri(cis-propenyl)antimony dibromide (V) or tri(trans-propenyl)antimony dibromide (VI). Reaction of I or II with an equivalent amount of iodine gave the tetra (cis- or trans-propenyl)stibonium iodide. All four initial compounds reacted with 2 moles of iodine to form the corresponding periodides: R_4SbI_5 . Reaction of the tetraalkenylstibonium bromides with

Card 2/3

L 14335-65
ACCESSION NR: AP4042870

ASSOCIATION: Institut elementoorganicheskikh soyedineniy Akademii nauk SSSR
(Institute of Organometallic Compounds Academy of Sciences SSSR)

SUBMITTED: 27Nov62

ENCL: 00

SUB CODE: GB

NO REF SOV: 002

OTHER: 000

Card

3/3

NOVIKOVA, N.V.; PROKOF'YEVA, Ye.G. (Leningrad)

Comparative evaluation of various methods for determining the
activity of alkaline phosphatase. Lab. delo no. 12:713-716 '64.
(MIRA 18:1)

L 57093-65 EWT(m)/EPF(c)/EWP(j)/T Pc-4/Pr-4 RM

ACCESSION NR: AP5012459

UR/0062/65/000/004/0763/0763
542.957AUTHORS: Nesmeyanov, A. N.; Borisov, A. Ye.; Novikova, N. V.

23

TITLE: Organometallic derivatives of ethylene 1

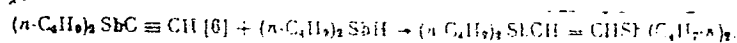
22

SOURCE: AN SSSR. Izvestiya. Seriya khimicheskaya, no, 4, 1965, 763

6

TOPIC TAGS: organo metallic compound, ethylene, organic synthesis, antimony

ABSTRACT: The authors have synthesized dimetallic derivatives of antimony and ethylene by combining organometallic hydrides with organometallic monoacetylides according to the scheme:

The resulting 1,2-bis(n-dibutylantimonyl)ethylene boils at 108-109C ($2.5 \cdot 10^{-3}$ mm);

mp 1.5490. The IR spectrum has (in cm^{-1}) 880 s, 970 s, 987 md, 1010 md, 1055 wk, 1083 s, 1127 wk, 1155 s, 1182 s, 1255 s, 1295 md, 1345 md, 1365 wk, 1382 s, 1423 md, 1450-1470 s, 1528 md, a number of weak bands at 1577, 1620, 1670 and a moderate band at 1740. The C-H vibration of the ethylene carbon is at 987, characteristic for trans-isomers of organometallic compounds.

L 57093-65

ACCESSION NR: AP5012459

Measured composition (in %) gave 42.49 and 42.23 C, 7.51 and 7.68 H, and 48.33 and 48.14 Sb; $C_{18}H_{38}Sb_2$. Computed percentages were 43.41 C, 7.69 H, and 48.90 Sb.

In similar fashion $(C_6H_5)_2SbCH=CHSb(C_4H_9-n)_2$ was obtained from diphenyl antimonous anhydride and di-n-butylethynyl antimony. Boiling point is 147-150C

($3.5 \cdot 10^{-3}$ mm): n_D^{20} 1.5960. Measured composition (in %) gave 48.66 and 48.83 C, 6.06 and 6.23 H, and 44.06 and 43.89 Sb; $C_{22}H_{30}Sb_2$. Computed composition gave 49.09 C, 5.62 H, and 45.27 Sb. Orig. art. has: 1 formula.

ASSOCIATION: Institut elementoorganicheskikh soyedineniy, Akademii nauk SSSR
(Institute of Organoelemental Compounds, Academy of Sciences, SSSR)

SUBMITTED: 26Feb65

ENCL: 00

SUB CODE: 00, 00

NO REF SOV: 003

OTHER: 004

GR
Card 2/2

MISHEYANOV, A.N., akademik; BORISOV, A.Ye.; NOVIKOVA, N.V.

**Geometric isomers of germanium alkanyl compounds. Dokl. AN SSSR
165 no.2:333-336 N '65. (MIRA 18:11)**

1. Institut elementorganicheskikh soedineniy AN SSSR.

NOVIKOVA, N.V.; YEVSTIGNEYEV, V.B.

Conditions for photophosphorylation in extracts from the
anaerobic sulfur bacterium Chromatium. Biokhimiia 30 no.6:
1245-1250 N-D '65. (MIRA 19:1)

1. Institut fotosinteza i Institut biokhimii imeni A.N. Bakha
AN SSSR, Moskva. Submitted March 29, 1965.

SOURCE CODE: UR/0218/66/031/003/0463/0467

AUTHOR: Novikova, N. V.; Prokof'yeva, Ye. G.--Prokof'eva, E. G.

ORG: Sanitary-Hygienic Medical Institute, Leningrad (Sanitarno-gigiyenicheskiy meditsinskiy institut)

TITLE: Kinetics of simultaneous hydrolysis of phenylphosphate and glycolphosphate under the action of alkaline phosphatase

SOURCE: Biokhimiya, v. 31, no. 3, 1965, 463-467

TOPIC TAGS: hydrolysis, phosphatase, organic phosphate

SUB CODE: 06,07

ABSTRACT: In view of an earlier investigation by Yu. G. Zhukovskiy dealing with the simultaneous hydrolysis of phenylphosphate and glycolphosphate under the action of acid phosphatase, the authors considered it of interest to conduct an analogous investigation with alkaline phosphatase. It was found that under the very same conditions (37°, 0.075 M carbonate buffer, pH 10, concentration of alkaline phosphatase preparation 0.004 mg/ml and substrate concentration 2 millimoles) the rate of enzymic hydrolysis of sodium glycolphosphate is almost 32-fold less than that of sodium phenylphosphate, i. e. much less than for acid phosphatase according to Zhukovskiy's data. The quantities K_m and V are determined for both substrates. It was found that when both esters are present un-

ODC: 577-153,3
0932 1330

ACC NR: AP7012403

der identical conditions, phenylphosphate displays strong inhibitor action in relation to glycolphosphate, while the latter has practically no such effect vis-a-vis phenylphosphate. Equations are derived permitting computation of the rate of enzymic hydrolysis of each of the esters when either or both are present in the reaction mixture. Orig. art. has: 2 formulas. [JPRS: 40,422]

2/2

GLADKOVA, A.I.; NOVIKOVA, N.V.

Use of ornid in hypertension of endocrine origin. Pat. fiziol.
i eksp. terap. 9 no.3:60-61 My-Je '65. (MIRA 18:9)

1. Otdel fiziologii (zav.- prof. B.A. Vartapetov) Ukrainskogo
instituta eksperimental'noy endokrinologii, Khar'kov.

BLYUGER, A.F.; ANSHELEVICH, Y.u.V.; KOVSH, O.Y.u.; GAUDYN'SH, E.P.; NOVIKOVA,
O.A.; PAVLOVSKAYA, A.I.; IZRAYLET, L.I.; LANDA, B.A.

Bicillin-3 and its clinical use. Sov.med. 25 no.7:78-81 JI '61.
(MIRA 15:1)

1. Institut organicheskogo sinteza AN Latvyskoy SSR, Rzhskiy
meditsinskiy institut i Rzhskaya gorodskaya detskaya klinicheskaya
bol'nitsa.

(BICILLIN)

PROPERTIES AND PROPERTIES NOTES

9

ca

Transformations in high-speed high-speed steel. Yu. A. Geller and O. A. Novikova (Moscow Steel Inst.). *Steel* 7, 239-45(1947).—The behavior of Co during hardening and tempering and its effect on high-speed steel were studied. In high-speed steel Co was found predominantly in solid soln. with Fe and not in the carbide phase. Transformation in steel was affected more by Co during temper than during hardening. On twice tempering Co did not hamper the transformation of residual austenite. The transformation was completed at 500°. Co hampered the coagulation of the carbide phase, and as a result the steel had an increased red hardness. Also, the Co caused (during tempering) the sepn. of Co tungstates and possibly Fe tungstates in the form of a highly dispersed phase. When high-speed steel was heated at elevated temps. (1100-1300°) for hardening Co did not hamper the growth of crystals nor did it necessitate the raising of the hardening temp. Co enhanced the stability of austenite on cooling and it lowered somewhat the hardness of hardened steel. The formation of a hard, highly dispersed phase on tempering at 500-620° increased the hardness and red-hardness considerably but it also increased the brittleness of tempered steel. The brittleness increased with the Co content. Co promotes decarburization, and care should be taken to prevent it when the steel is heated to high temp.

M. Honeh

ASB.ELA METALLURGICAL LITERATURE CLASSIFICATION

COMMON ELEMENTS

MATERIALS INDEX

SECTION NUMBER

SECTION NUMBER

SECTION NUMBER

NOVIKOVA, O. A.

*Influence of Composition on the High-Coercivity Condition of Iron-Nickel-Aluminum Alloys. O. S. Izrael, Yu. M. Kasimov, and O. A. Novikova (*Doklady Akad. Nauk S.S.S.R.*, 1951, 81, 231-234). [In Russian]. If high-coercivity Fe-Ni-Al alloys are continuously cooled from 1000°-1200° C. at some optimum rate (single heat-treatment), then the value of the coercive force (H_c) obtained is greater than the value obtained by rapid quenching followed by annealing (double heat-treatment). To investigate this phenomenon, L. K. and N. prepared specimens in the form of rods (3 mm. in dia., 50-100 mm. long) of two series of alloys: (i) contg. 80-20 at.-% Fe in the Fe-NiAl section, and (ii) contg. Fe 60, Ni 32-14, and Al 18-36 at.-%. For each alloy, the specimens were homogenized at 1100° C.; half the specimens were then quenched in water from 1100° C. and given stopped annealing treatments beginning at 400° C. and quenched in water or cooled in air; the other half were cooled from 1100° C. at various rates. For all treatments at 600°-1100° C. the specimens were sealed in evacuated quartz

ampoules. After each treatment H_c and the magnetic saturation $4\pi I_m$ were measured: the results are shown graphically. For the Fe-NiAl series of alloys, H_c increased sharply as the Fe content fell below 80 at.-%, rising to a max. of 640 Oe. at ~45 at.-% Fe for single heat-treatment, and 725 Oe. at ~30 at.-% Fe for double heat-treatment. Various reasons are given why this difference cannot be due to incomplete decomposition of the initial supersaturated soln. $4\pi I_m$ varies linearly with compn. (and has the same magnitude for optimum single and double treatments for any given alloy), falling to zero at 8 at.-% Fe (the β_2 phase). For the second series of alloys, single heat-treatment gave greater values of H_c than did double treatment, and the max. values occurred at ~24-28 at.-% Al. The curves of $4\pi I_m$ for single-treatment alloys contg. 18-24 at.-% Al were somewhat lower than those for the double-treatment materials. These observations are explained in terms of the theories of Kittel (*Uspakhi Fiz. Nauk*, 1950, 41, 452) and Kondorsky (*Doklady Akad. Nauk S.S.S.R.*, 1950, 70, 215; 1950, 74, 213; *M.A.*, 18, 600; 20, 683). H_c falls below the max. value if the d of peaking of the precipitated particles of β phase increases.—G. V. E. T.

Instit. Gen. & Inorg. Chem., AS USSR

DM
RA

NOVIKOVA, O.A.

IVANOV, O.S.; NOVIKOVA, O.A.; RYABOVA, G.G.

Study of the system iron -- cobalt -- nickel -- aluminum, based on
the section with 50 % iron. *Izv. Sekt. fiz.-khim. anal.* 22:129-139 '53.
(MLRA 7:5)

1. Institut obshchey i neorganicheskoy khimii im. N.S. Kurnakova
Akademii nauk SSSR. (Iron-cobalt-nickel-aluminum alloys)

NOVIKOVA, G.A.; RUDNITSKIY, A.A.

Investigating the silver-platinum system. Zhur. neorg. khim. 2
no.8:1840-1847 Ag '57. (MIRA 11:3)
(Silver) (Platinum) (Chemical equilibrium)

78-3-3-35/47

AUTHORS: Novikova, O. A. , Rudnitskiy, A. A.

TITLE: Investigations of the System Gold-Silver-Platinum
(Issledovaniye sistemy zoloto-serebro-platina)

PERIODICAL: Zhurnal Neorganicheskoy Khimii, 1958, Vol.3, Nr 3, pp.729-749
(USSR)

ABSTRACT: By the thermal analysis in the system gold-silver-platinum an α -solid solution, enriched with gold and silver, and an β -solid solution of silver and gold in platinum was determined. The domains of the α - and β -solid solution in the phase diagram were determined. The alloys were also determined by determinations of the microstructure, the hardness, the strength, the specific weight, the electric resistance as well as the temperature coefficient of the electric resistance for three isothermal sections at 900, 600 and 20°C. By the determination of the thermoelectric force the solubility of platinum in the α -solid solution was determined. In alloys with 10% silver the thermoelectric force on addition of platinum and gold increases. On

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Investigations of the System Gold-Silver-Platinum

78-3-3-35/47

further increase of the quantity of gold the thermoelectric force further increases and at 60 % it attains its maximum. In alloys with 20 % silver in an heterogeneous domain the thermoelectric force decreases with an increase in the gold content, as the concentration of platinum in the α -solid solution decreases. In the case of a constant platinum content and with an increase of the gold and silver content the thermoelectric force decreases. For the construction of the ternary diagram binary sections with a constant silver content were produced which stand in parallel with the gold-platinum side. The limit between the α - β -phase is determined on the basis of the analysis of the composition diagram and by the microstructure analysis. It was found that the unlimited solubility of gold in silver is limited by the introduction of the third component, platinum. On addition of 10 % platinum the β -phase occurs in the structure of the alloys, enriched with gold and silver. On the basis of the performed investigations the phase diagram of the systems silver-gold-platinum was constructed and the properties of the occurring phases in dependence on temperature and composition were investigated. There are 23 figures, 5 tables, and 28 references, 8 of which are Soviet.

Card 2/3

78-3-3-35/47

Investigations of the System Gold-Silver-Platinum

ASSOCIATION: Institut metallurgii im. A. A. Baykova Akademii nauk SSSR
(Metallurgical Institute imeni A. A. Baykov, AS USSR)

SUBMITTED: June 18, 1957

Card 3/3

5(2), 18(7)

AUTHORS:

Rudnitskiy, A. A., Novikova, O. A.

SOV/78-4-7-21/44

TITLE:

Investigation of the Alloys of Silver With Ruthenium (Issledovaniye splavov serebra s ruteniyem)

PERIODICAL:

Zhurnal neorganicheskoy khimii, 1959, Vol 4, Nr 7, pp 1596-1600 (USSR)

ABSTRACT:

In the present paper alloys are investigated which are rich in silver. The production of alloys having a high ruthenium content is difficult because of the diverging melting points. Ruthenium melts only at 2445° , i.e. above the boiling point of silver. Alloys containing 0.5, 1, 2, 3 and 5% ruthenium were investigated. All alloys crystallize by forming an eutectic at 920° , the maximum of which is near 3% ruthenium. In the crystallization of the phases with a higher ruthenium content destratification into two liquid phases occurs. First, the β -phase, which is richer in ruthenium, solidifies. Because of the more rapid cooling and the inclination towards undercooling, crystallization does not develop according to the phase diagram. Crystallization of the β -phase is not complete, and the liquid phase solidifies with a higher ruthenium content than corresponds to the diagram. The eutectic is formed at the end and

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SOV/78-4-7-21/44

Investigation of the Alloys of Silver With Ruthenium.

fills the gaps between the grains of the metastable phases. During thermal treatment the metastable phase decays, separating the β -phase. Separation takes place very slowly. Figure 1 shows the microstructure of the cast, and figure 3 that of the annealed alloys. Figure 2 shows the phase diagrams of the alloys. Table 1 gives the data of the thermal analysis, table 2 shows the mechanical properties and the electric resistance of the alloys, and table 3 the e.m.f. of the thermocouples Ag-Pt and alloy-Pt. There are 3 figures, 3 tables, and 4 references, 1 of which is Soviet.

SUBMITTED: April 2, 1958

Card 2/2

SOV/78-4-7-22/44

5(2), 18(7)
AUTHORS:

Rudnitskiy, A. A., Novikova, O. A.

TITLE:

Investigation of the Alloys of Gold With Ruthenium (Issledovaniye splavov zolota s ruteniyem)

PERIODICAL:

Zhurnal neorganicheskoy khimii, 1959, Vol 4, Nr 7, pp 1601-1605 (USSR)

ABSTRACT:

The subject mentioned in the title is referred to only once in publications. In the statement made by J. O. Linde (Ref 1) that the solubility of ruthenium in gold is negligibly low. In the present paper gold alloys with 0.5, 1, 2 and 3% ruthenium were investigated. In order to facilitate a crystallization in phase equilibrium, the alloys were kept at a temperature slightly above the point of solidification for a considerable time, were mixed several times, after which they were cooled as slowly as permitted by experimental conditions. All alloys were found to be biphasic, the quantity of the second phase increasing with an increasing concentration of the ruthenium. Signs of non-miscibility of the two phases have already been detected in alloys with 1% ruthenium. Figure 1 shows the microstructure of the alloys with from 0.5 to 2% Ru. The bright phases of Ru, which are not etchable by means of aqua regia,

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SOV/78-4-7-22/44

Investigation of the Alloys of Gold With Ruthenium

are irregularly distributed upon the background of the fundamental structure. Its distribution, shape, and dimensions show that they have been formed in the liquid phase and that their growth has not been hampered by anything except by the rate of cooling. The primary secretions of the ruthenium-rich β -phase form no crystallization centers. The melt more rich in gold solidifies by building polymers of the solid solution, the concentration of which varies with temperature. Figure 2 shows the phase diagram and the physical properties of Au-Ru alloys. The results obtained by thermal analysis and the microstructures lead to the conclusion that in the system Au - Ru the solid α -solution of ruthenium in gold is formed as the result of a peritectic reaction developing at 1066° . The alloy with 0.5% Ru, which is hardened at 1000° and chilled with ice water, remains diphasic (Fig 3). The electric resistance of pure Au is hardly changed by the addition of Ru. Table 1 gives the crystallization temperatures of the alloys, figure 4 shows the microstructures of the annealed alloys, and table 2 gives their properties. A considerable part of the ruthenium phase is separated at the boundaries of the large grains of the solid

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SOV/78-4-7-22/44

Investigation of the Alloys of Gold With Ruthenium

α -solution in form of long, thin polyhedrons. The thermo-electric properties of the alloys with 0.5 and 1% Ru are given in table 3. They prove the low degree of solubility of ruthenium in gold. The addition of 0.5% Ru deteriorates the plasticity of gold, reduces tensile strength, and does not influence hardness to any considerable extent. There are 5 figures, 3 tables, and 1 reference.

SUBMITTED: April 2, 1953! Abstractor's Note: Misprint: should read 1958

Card 3/3

S/509/62/000/011/011/019
E021/E351

AUTHOR: Novikova, O.A.
TITLE: The influence of ruthenium on the structure and properties of palladium-silver alloys
SOURCE: Akademiya nauk SSSR, Institut metallurgii. Trudy, no. 11. Moscow, 1962. Metallurgiya, metallovedeniye, fiziko-khimicheskiye metody issledovaniya. 143 - 147
TEXT: Improved mechanical properties of palladium-silver alloys, while maintaining or increasing their corrosion resistance, would extend their field of use. The influence of ruthenium was investigated with this aim in view. The sections parallel to the palladium-silver side of the equilibrium diagram with constant ruthenium contents of 1, 3, 5, 8 and 12 wt.% were chosen for investigation. Alloys containing 10, 20, 30, 40, 50 and 60 wt.% silver were prepared in a high-frequency furnace. The phase diagram showed incomplete solution of the components in the liquid state. The region of stratification of the melt occupied a wide range of concentration. Ternary solid solutions were not present in the range of composition studied. Alloys of the two-phase
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S/509/62/000/011/011/019
E021/E351

The influence of

region crystallized with the formation of a eutectic. They were forged easily when heated to 1 300 - 1 400 °C and could be easily rolled in the cold state. Ruthenium increased the hardness of palladium-silver alloys but decreased the strength, plasticity and electrical resistance. The results are tabulated. The phases rich in ruthenium had no tendency to grow during heat-treatment but after prolonged heating at high temperature decomposed. Thus, a change in solubility of palladium and silver in ruthenium occurred. This process occurred slowly and was accompanied by a decrease in hardness and increase in corrosion of the phase rich in ruthenium. There are 5 figures and 1 table.

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E021/E351

Alloy composition, %			Hardness, kg/cm ²	Elongation, %	Electrical resistance, $\mu\Omega \cdot cm$	
Ru	Ag	Pd			25 °C	100 °C
1	10	89	63	25.0	20.1	21.4
3	10	87	85.5	10.5	20.5	22.7
5	10	85	97.1	-	21.4	23.5

Card 3/3

S/509/62/000/011/012/019
E021/E351

AUTHOR: Novikova, O.A.

TITLE: The influence of ruthenium on the structure and properties of gold-palladium alloys

SOURCE: Akademiya nauk SSSR. Institut metallurgji. Trudy. no. 11. Moscow, 1962. Metallurgiya, metallovedeniye, fiziko-khimicheskiye metody issledovaniya. 148 - 154

TEXT: The investigation was carried out with the aim of increasing the mechanical properties of gold-palladium alloys without decreasing their corrosion-resistance. Six series of alloys were prepared by HF induction-melting, containing 10, 20, 30, 40, 50 and 60 wt.% of gold and 0, 1, 3, 8, 12 and 15 wt.% of ruthenium, the remainder being palladium. The mechanical properties, plasticity and electrical resistance were determined and metallographic examinations were carried out. The normal complete solid solubility of the Pd-Au alloys was affected by ruthenium additions, the solubility range becoming very limited in both liquid and solid states. No ternary solid solutions were found at room temperatures, although they existed at higher temperatures.
Card 1/2

The influence of ruthenium

S/509/62/000/011/012/019
E021/E351

Ruthenium additions produced fine-grain structures. Ruthenium increased the hardness and UTS of the alloys but decreased their plasticity and electrical conductivity. The results are tabulated. There are 5 figures and 1 table.

Composition, wt.%			Hardness, kg/cm ²	Elongation, %	Electrical resistance, $\mu\text{ohm}\cdot\text{cm}$	
Ru	Au	Pd			25 °C	100 °C
1.0	10	89	54.8	23	16.2	18.4
3.0	10	87	62.9	22.2	17.0	19.2
5.0	10	85	79.2	16.0	16.2	18.5
8.0	10	82	80.7	11.1	16.5	18.6

Card 2/2

S/509/62/000/011/013/019
E021/E551

AUTHOR: Novikova, O.A.

TITLE: Investigation of palladium-ruthenium alloys

SOURCE: Akademiya nauk SSSR. Institut metallurgii. Trudy.
no. 11. Moscow, 1962. Metallurgiya, metallovedeniye,
fiziko-khimicheskiye metody issledovaniya. 155 - 163

TEXT: The aim of the work was to determine the solubility of ruthenium in palladium and to investigate the mechanical and electrical properties of palladium-ruthenium alloys. Alloys containing 0.5, 1, 2, 3, 5, 8, 12, 15, 17, 20 and 30 wt.% ruthenium were prepared in a high-frequency furnace. The hardness, tensile strength, elongation and electrical resistance at 25 and 100 °C of the alloys was measured. The structures of the alloys were examined metallographically. The alloy system had a eutectic at about 12% ruthenium. The limiting solubility of ruthenium in palladium was less than 1%. At equilibrium below the eutectic temperature all the alloys were mixtures of two solid solutions in which the concentration of the solute component depended on temperature. The resistance to deformation of the alloys increased
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Investigation of

S/509/62/000/011/013/019
E021/E351

with increasing ruthenium content up to 15%, with a simultaneous decrease in plasticity. A particularly sharp decrease in elongation was observed at concentrations greater than 15%. Ruthenium increased the electrical resistance of palladium but the absolute value was determined to a considerable extent by the structure of the alloy. The temperature coefficient of electrical resistance was high. 0.5% ruthenium considerably increased the thermo-e.m.f. of palladium. The thermo-e.m.f. changed little with further increase in the ruthenium content. The results are tabulated. There are 4 figures and 2 tables.

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S/509/62/000/011/013/019
EQ21/E351

Investigation of

Table:

Ru, %	Hardness, kg/mm ²	Elongation, %	Electrical resistance, μohm.cm	
			25 °C	100 °C
0.5	37	12.5	11.35	13.75
1.0	32	9.0	11.70	14.05
5.0	97	16.0	18.00	19.75
15.0	109	14.4	15.10	17.55
20.0	112	7.0	14.70	17.0
30.0	124	8.0	14.45	17.0

Card 3/3

L 46604-66 ENT(m)/ENP(j)/T IJP(c) RM

ACC NR: AP6016482

(A)

SOURCE CODE: UR/0021/66/000/005/0627/0628

AUTHOR: Novikova, O. A.; Kuznyetsova, V. N.—Kuznetsova, V. P.; Kornyev, K. A.—Kornev, K. A. (Corresponding member AN UkrSSR)

ORG: Institute of Chemistry of Macromolecular Compounds, AN UkrSSR (Institut khimii visokomolekulyarnikh spoluk AN URSR)

TITLE: Polymerization¹ of triethylethynylsilane¹ in the presence of (C₂H₅)₃Al.TiCl₄ as catalyst¹

SOURCE: AN UkrSSR. Dopovidi, no. 5, 1966, 627-628

TOPIC TAGS: polymer, polymerization catalyst, conjugated polymer, triple bond system, triethylethynylsilane

ABSTRACT: The article deals with the polymerization of triethylethynylsilane in the presence of (C₂H₅)₃Al.TiCl₄ as catalyst. The resulting polymers have molecular weight of the order of 1000, and are orange oil-like products. The infrared spectra confirm that polymerization is effected along the triple bond system, resulting in the formation of conjugated double bonds products. [Translation of authors' abstract]

[AM]

SUB CODE: 07/ SUBM DATE: 13May65/ ORIG REF: 005/ OTH REF: 003

Card 1/1 mjs

LYUBIMOVA, V.V., doktor ekon. nauk; ~~NOVIKOVA, O.G.,~~ kand. ekon. nauk;
SERGEYEVA, A.G., kand. ekon. nauk; IVANOV, N.P., kand. istor.
nauk; OBORINA, G.A., kand. ekon. nauk; KHLYNOV, V.N., kand.
ekon. nauk; DANILEVICH, M.V., doktor ekon. nauk; POKATAYEVA,
T.S., kand. ekon. nauk; USOV, G.A., kand. ist. nauk;
SAL'KOVSKIY, O.V., kand. geogr. nauk. Primalni uchastiye:
PESCHANSKIY, V.V., kand. ist. nauk; PIROGOVA, I.M.; PRONIN,
S.N.; USVIATSOV, A.Ye.; MAKAROV, V., red.; DARONYAN, M.,
mladshiy red.; ULANOVA, L., tekhn. red.

[Real wages during the period of the general crisis of capi-
talism]Real'naya zarabotnaya plata v period obshchego krizisa
kapitalizma. Moskva, Sotsekgiz, 1962. 558 p. (MIRA 16:3)

1. Akademiya nauk SSSR. Institut mirovoy ekonomiki i mezhdunarodnykh otnosheniy.

(Wages)

NOVIKOVA, O.I., mladshiy nauchnyy sotrudnik

Calculation of velocity potentials and flow velocities about annular
cascades with high solidities. [Trudy] TSIKI no.27:52-58 '54.
(Gas flow) (MLRA 8:12)

ZHUKOVSKIY, M.I., doktor tekhn.nauk; SKNAR', N.A., kand.tekhn.nauk;
GUKASOVA, Ye.A., inzh.; MIKHAYLOVA, V.A., inzh.; NOVIKOVA, O.I., inzh.

Aerodynamic characteristics of blade profile lattices of the
terminal stages of K-300-240 LMZ turbines. Energomashinostroenie
8 no.10:29-33 0 '62. (MIRA 15:11)
(Steam turbines)

ZHUKOVSKIY, M.I., doktor tekhn.nauk; NOVIKOVA, O.I., inzh.; SKNAR', N.A.,
kand.tekhn.nauk

Design method and experimental development of a group of guide
blade profiles with increased values of the moments of resistance.
Teploenergetika 9 no.10:52-55 0 '62. (MIRA 15:9)

1. Tsentral'nyy ketloturbinnyy institut.
(Turbines--Blades)

S/096/63/000/005/001/011
E191/E481

AUTHORS: Zhukovskiy, M.I., Doctor of Technical Sciences,
Durakov, N.I., Engineer, Novikova, O.I., Engineer

TITLE: Analysis by electronic computer of the potential flow
of an incompressible fluid around arbitrary cascades
of blade profiles

PERIODICAL: Teploenergetika, no.5, 1963, 26-30

TEXT: Methods practised at present in the analysis of potential
flow around arbitrary cascades of profiles are based either on
conformal mapping or on the solution of integral equations. The
latter are more suitable for computer programming. The method
used at the Central Boiler and Turbine Institute is based on an
integral equation formulated by M.I. Zhukovskiy, wherein the
unknown function is the velocity potential. The equation
constitutes a Fredholm integral equation of the second kind with a
continuous core. The continuous core is responsible for a
uniform accuracy at all points of the profile. Only the
coordinates of the profile and not their derivatives are used.
The solution of the equation is unique. A method of successive
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S/096/63/000/005/001/011
E191/E481

Analysis by electronic ...

approximations is applicable. The equation for $2n$ points of the contour can be replaced by a system of n linear equations. The free term of the equation contains the relative entry and exit angles as parameters. The solution can be plotted as a function of the entry angle. The method of solution is applicable to all practical geometry and flow parameters of blade cascades. This combination of advantages is not found in any other known integral equation. A numerical differentiation of the generalized potential is necessary at the end of the analysis but the errors due to differentiation do not affect the accuracy of preceding computations. The method of programming an electronic computer is discussed in detail. Profiles composed of circular arcs are chosen as a special example. A numerical example is given, dividing the profile contour into either 80 or 120 sections. The pitch/chord ratio was 0.646. The result is compared with a previously performed computation based on conformal mapping. Both are compared with experimental values showing close agreement. The special features of the program for profiles given by coordinate points are discussed. The machine time for one

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Analysis by electronic ...

5/096/63/000/005/001/011
E191/E481

numerical analysis is about 6 minutes. There are 6 figures.

ASSOCIATION: Tsentral'nyy kotloturbinnyy institut
(Central Boiler and Turbine Institute)

Card 3/3

DURAKOV, N.I., inzh.; NOVIKOVA, O.I., inzh.

Calculations of an axisymmetrical flow in the blading of an
axial-flow blower using electronic calculating machines.
Teploenergetika 10 no.10:35-38 0'63 (MIRA 17:7)

1. Tsentral'nyy kotloturbinnyy institut.

202950-65 EWT(m)/T

s/0291/64/000/006/0061/0066

ACCESSION NR: AP5005264

AUTHORS: Novikova, O. S.; Rassonskaya, I. S.; Ryabova, N. D.

15
13
B

TITLE: Thermographic investigation of some synthetic zeolites

SOURCE: Uzbekskiy khimicheskii zhurnal, no. 6, 1964, 61-66

TOPIC TAGS: thermographic analysis, x ray analysis, zeolite/ Kurnakov pyrometer

ABSTRACT: This paper is concerned with thermal treatment, thermal stability, and dehydration of zeolites. A large series of zeolites were examined by being first held at constant weight in a desiccator over a 10% solution of H₂SO₄ for 24 hours. Thermal curves were obtained on a Kurnakov pyrometer (specimen weight of 0.6 g). Thermal curves were obtained by a Pt-Pt/Rh thermocouple. All thermograms showed a

overheating the zeolites during the

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L 29950-65

ACCESSION NR: AP5005264

2
dehydration of zeolites may be reached by heating to 500C. The most rapid elimination of water takes place in the interval 100-250C. Greatest capacity was observed in NaX (29%), CaY (29.2%), MgA (29.03%), and NiX (29.3%). The smallest capacity was found in CaA (19.1%). Orig. art. has: 4 figures and 2 tables.

ASSOCIATION: Institut khimii AN UzSSR (Institute of Chemistry, AN UzSSR);
N. R. Kurnakova AN SSSR (Institute

NOVIKOVA, O.I., insh.

Calculation of the axisymmetrical flow in the running of axial turbines. Teploenergetika 12 no.4:63-67 Ap '65. (MIRA 18:5)

1. Tsentral'nyy kotloturbinnyy institut.

NOVIKOVA, O.M.; SATTAROV, I.S.; BELYAYEV, L.A.

Epidemiological and clinical characteristics of pertussis-like diseases caused by *Bordetella parapertussis*. Zhur.mikrobiol., epid. i immun. 42 no.4:126-131 Ap '65. (MIRA 18:5)

1. Ministerstvo zdravookhraneniya SSSR i Institut epidemiologii i mikrobiologii imeni Gamalei AMN SSSR.

NOVIKOVA, O.S.; RASSONSKAYA, I.S.; RYABOVA, N.D.

Thermographic investigation of some synthetic zeolites. Uzb. khim.
zhur. 8 no.6:61-66 '64. (MIRA 18:4)

1. Institut khimii AN UzSSR i Institut obshechey i neorganicheskoy
khimii imeni Kurnakova AN SSSR.

RASSONSKAYA, I.S.; NOVIKOVA, O.S.

Dehydration of crystal hydrates of disubstituted magnesium
phosphate. Zhur. neorg. khim. 10 no.6:1423-1426 Je '65.
(MIRA 18:6)

1. Institut obshchey i neorganicheskoy khimii imeni Kurnakova
AN SSSR.

NOVIKOVA, O.S.; ADYLOVA, T.T.; RYABOVA, N.D.

Using the differential thermal analysis data for the characteri-
zation of mineral adsorbents. Uzb.khim.zhur. 8 no.4:43-46 '64.
(MIRA 18:12)

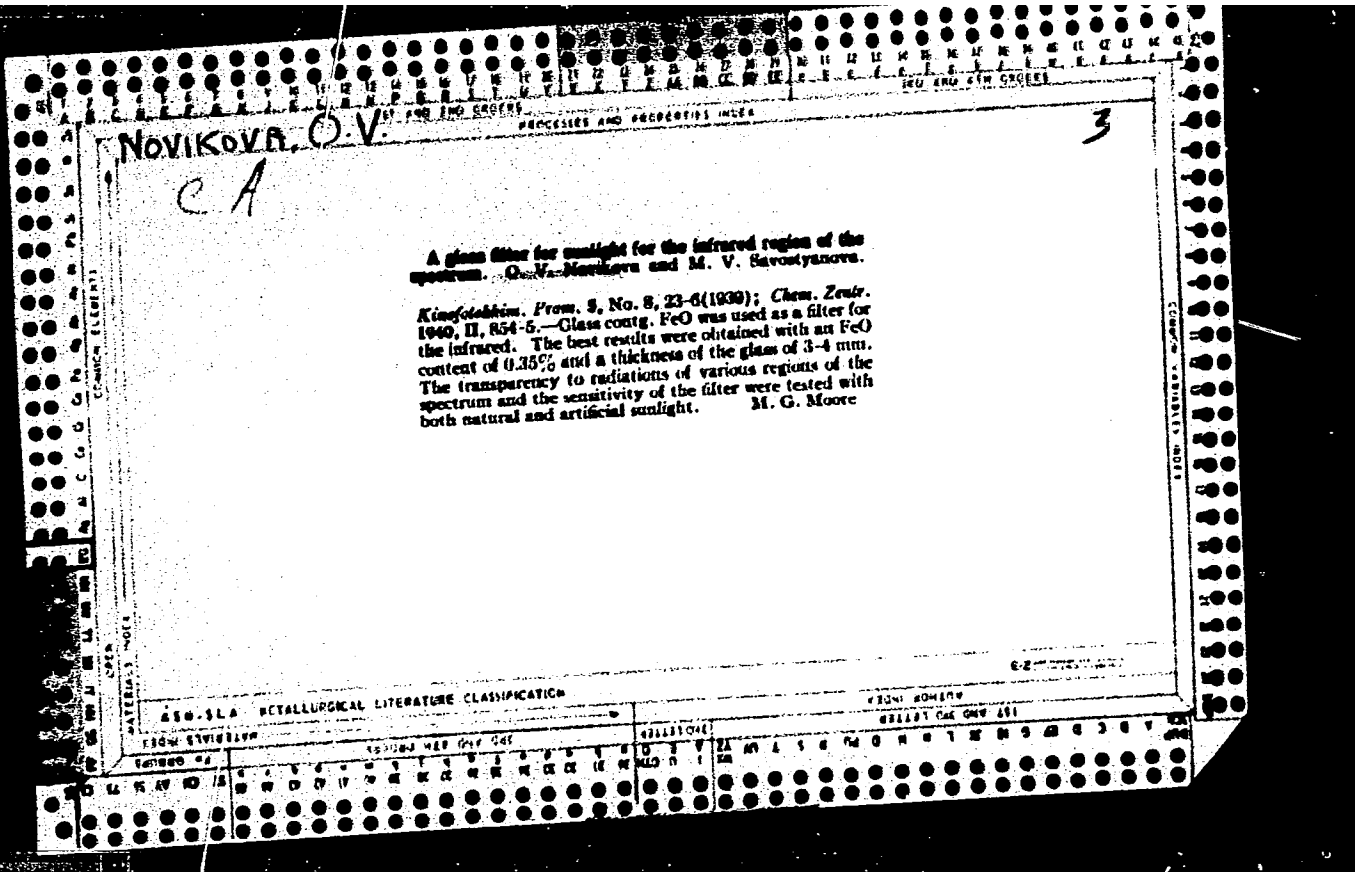
GOLUSHKO, N.A.; ALEKSANDROVA, T.A.; PROKHOROVA, I.Ya.; NOVIKOVA, O.V.

Graphite-containing crucibles. Ogneupory 29 no.1:5-11 '64.
(MIRA 17:3)

1. Luzhskiy zavod "Krasnyy Tigel'" (for Golushko). 2. Vsesoyuznyy
institut ogneuporov (for Aleksandrova, Prokhorova, Novikova).

NOVIKOVA, O.V., starshiy nauchnyy sotrudnik, kand.fiziko-matematicheskikh
~~rank~~

Study of the stresses of a double gallery with variable foundation
rigidity. Izv. VNIIG 65:149-169 '60. (MIRA 14:5)
(Drainage)



ACC NR: AT7002121 (A)

SOURCE CODE: UR/0000/66/000/000/0433/0444

AUTHORS: Novikova, O. V.; Rozanov, N. S.

ORG: none

TITLE: A study of the stressed state of hydrotechnical pressure tunnels

SOURCE: Vsesoyuznaya konferentsiya po polarizatsionno-opticheskomu metodu issledovaniya napryazheniy. 5th, Leningrad, 1964. Polarizatsionno-opticheskiy metod issledovaniya napryazheniy (Polarizing-optical method of investigating stresses); trudy konferentsii. Leningrad, Izd-vo Leningr. univ., 1966, 433-444

TOPIC TAGS: hydraulics, material strength, dam, stress analysis, concrete

ABSTRACT: The results of an experimental study of the stressed state of the jacketing in underwater tunnels of the Aswan Dam (United Arab Republic) are presented. The studies were conducted with the use of the polarization-optical method. The tunnels have different outlines at various sections, and are strengthened by concrete jacketing 1--4 m thick. In certain instances the surrounding mass of the dam is cement-strengthened to a depth of 7 m. The stiffness of the materials at various sections is characterized by their deformation modulus E, taken to be equal to $2.0 \cdot 10^5$ -- $2.4 \cdot 10^5$ kg/cm² for concrete jacketing, and $0.25 \cdot 10^5$ -- $1.5 \cdot 10^5$ kg/cm² for respective parts of the dam. During use, the tunnels undergo hydrostatic supply water pressure heads up to 100 m. Such pressure may also occur in the clearances between the jacketing and

Card 1/2

PETROV, V.A.; OSIPOV, I.S.; PIVANOVA, P.S.; NOVIKOVA, R.E.

Distribution of doses in the surface layers of the tissue
along the beam axis of the GUT-Co-400-1 gamma apparatus.
Med. rad. 8 no.7:78-81 J1 '63. (MIRA 17:1)

1. Is ISentral'nogo nauchno-issledovatel'skogo instituta
meditsinskoy radiologii (dir. Ye.I. Vorob'yev) Ministerstva
zdravookhraneniya SSSR.

PETROV, V.A.; OSIPOV, I.S.; PIVANOVA, P.S.; NOVIKOVA, R.E.

Relation of the surface dose distribution in gamma therapy
to the state of collimation. Med. rad. 9 no.2:86-89, F '64.

(MIRA 17:9)

1. Tsentral'nyy nauchno-issledovatel'skiy institut meditsinskoy
radiologii (dir. Ye.I. Vorob'yev) Ministerstva zdoravookhraneniya
SSSR.

NOVIKOVA, R.F., aspirant

Clinical symptoms in experimental trichomoniasis of swine.
Veterinariia 41 no.9:62-64 9 '64. (MIRA 18:4)

1. Vitebskiy veterinarnyy institut.

L 8944-66 EWI(1)/EWA(j)/EWA(b)-2 RO

ACC NR: AP5026554

SOURCE CODE: UR/0286/65/000/019/0111/0111

AUTHORS: ⁵⁵Baskakov, Yu. A.; ⁵⁵Faddeyeva, M. I.; ⁵⁵Andreyeva, Ye. I.; ⁵⁵Golyshin, N. M.;
Novikova, R. G.

ORG: none

39
B

TITLE: Method for obtaining fungicidal derivatives of N-carboalcoxyarylhydroxyl amines. Class 45, No. 175347 /announced by All-Union Scientific Research Institute for Chemical Agents for Protection of Plants (Vsesoyuznyy nauchno-issledovatel'skiy institut khimicheskikh sredstv zashchity rasteniy)

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 19, 1965, 111

TOPIC TAGS: ⁵⁵fungicide, arylhydroxyl amine, plant disease control

ABSTRACT: This Author Certificate presents a method for obtaining fungicidal derivatives of N-carboalcoxyarylhydroxyl amines by reacting alkylchlorocarbonates with arylhydroxylamines. To increase the variety of fungicides, halogen arylhydroxylamines are used as arylhydroxylamines.

SUB CODE: 07/ ⁰⁶ SUBM DATE: 22Jul64

UDC: 632.951.2.547
547.555

Card 1/1 ¹⁰

NOVIKOVA, R.I.

Anesthesia in thymectomy for malignant myasthenia. Eksper. khir. i
anest. 9 no.1:73-74 Ja-F '64. (MIRA 17:12)

1. Kafedra fakul'tatskoy khirurgii (zav. - prof. K.T.Ovnatanyan)
Donetskogo meditsinskogo instituta (dir. - dotsent A.M.Ganichkin) na
baze oblastnoy bol'nitsy (glavnyy vrach V.F.Zubko).

ACCESSION NR: AP4031638

8/0203/64/004/002/0333/0342

AUTHORS: Bobrov, M. S.; Koroleva, N. F.; Novikova, R. M.

TITLE: Properties of the solar wind according to permanent geomagnetic disturbances on days with very low K_p

SOURCE: Geomagnetizm i aeronomiya, v. 4, no. 2, 1964, 333-341

TOPIC TAGS: solar wind, geomagnetic disturbance, corpuscular stream, polar cap, Mariner 2, K_p

ABSTRACT: Initial data for this study were the hourly amplitudes of the H component of magnetic disturbances recorded at observatories on the northern and southern polar caps during days of very low planetary magnetic activity. The investigated interval was from July 1957 to December 1962. Days of low activity were considered to be those in which K_p and the daily total K_p did not exceed 2₀ and 10₀ respectively. The authors have shown that the disturbances were due to the solar wind. An analysis of the disturbances indicated that for the period investigated the solar wind was permanent with respect to time. It represented an

Card 1/2

AYZENSHTEN, M.S.; LUNTS, R.I.; NOVIKOVA, R.S.; SHAPIRO, V.S.

Combination of adenomatosis and tuberculosis of the lungs. Probl.
tub. 38 no.7:43-48 '60. (MIRA 14:1)

1. Iz Moskovskoy klinicheskoy infektsionnoy bol'nitsy No.1
(glavnyy vrach - zaslushennyy vrach RSFSR N.G. Zaleskver)
i Moskovskoy gorodskoy klinicheskoy tsentral'noy tuberkulez-
noy bol'nitsy (glavnyy vrach - zaslushennyy deyatel' nauki
prof. V.L. Eynis).
(TUBERCULOSIS) (LUNGS--TUMORS)

BOBROV, M.S.; NOVIKOVA, R.T.

Relationship between the solar corpuscular wind intensity and
the phase of the solar cycle. Astron. tsir. no. 242:1-2 My '64.
(MIRA 17:4)

1. Astronomicheskiy soviet AN SSSR.

L 8615-65 EWT(1)/EWG(-)/FCC/SEC-4/EEC(t)/EWA(E) Pc-4/Pe-5/Pq-4/Pae-2
Peb/Pi-4 APWL/APFT AFMIA

ACCESSION NR: AR4038682

8/0289/84/000/003/0055/0055

SOURCE: Ref. zh. Astron. Otd. vyzp., Abs. 3.51.420

AUTHOR: Bobrov, M. S.; Novikova, R. T.

TITLE: Dependence of the intensity of the solar corpuscular wind on the phase of solar activity

CITED SOURCE: Astron. tsirkulyar, no. 342(Maya 4), 1963, 1-2

TOPIC TAGS: astrophysics, solar activity, solar corpuscular wind, geomagnetic field, geomagnetic disturbance

TRANSLATION: Using the period from July 1957 through November 1961 the authors have computed the mean seasonal values of the hourly amplitudes of the horizontal component of the geomagnetic field at Mirny and three island (north and south)

greatly during the period considered. I. Zh.

Card 1/2

8615-65

ACCESSION NR: AR4088682

DATE ACQ: 17Apr84

SUB CODE: ES, AA

ENCL: 00

Novikova, S. A.

ARKHANGEL'SKAYA, M.F., kandidat tekhnicheskikh nauk; NOVIKOVA, S.A.,
inzhener; SMELOVA, P.I., inzhener.

Speed method of determining irregularities in dyeing viscose
rayon. Tekst.prom. 15 no.11:40-41 N '55. (MLRA 9:1)

(Dyes and dyeing--Rayon)

NOVIKOVA, S.A.; IVANOVA, R.S.

Measurement of the double refraction of polyester fibers. *Khim.*
volok. no.5:54-55 '61. (MIRA 14:10)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut iskusstvennogo
volokna.
(Textile fibers, Synthetic--Optical properties) (Esters)

ROGOVINA, A.A., NOVIKOVA, S.A., GIL'MAN, I.S., VASIL'YEV, YU.V.

Some structural changes of polyamide fibers on heating and dynamic fatigue.

Report presented at the 13th Conference on high-molecular compounds
Moscow, 8-11 Oct 62

NOVIKOVA, S. A.; IVANOVA, R. S.

Measuring the force of birefrigerence of synthetic fibers.
Khim. volok. no.6:34-36 '62. (MIRA 16:1)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut iskusstven-
nogo volokna.

(Textile fibers, Synthetic—Optical properties)

NOVIKOVA, S.A.; VOROB'YEVA, V.I.

Microscopic studies of dyed cross sections of viscose fibers.
Khim. volok. no.3:51-53 '64. (MIRA 17:8)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut iskusstvennogo volokna.

DEMINA, Natal'ya Vasil'yevna; MOTORINA, Aleksandra Vasil'yevna;
NOVIKOV, Nikolay Alekseyevich, kand.tekhn.nauk;
NOVIKOVA, Sof'ya Aleksandrovna; KEMCHENKO, Eleonora
~~Adol'fovna, kand. tekhn. nauk;~~ PANFILOVA, Mariya
Mikhaylovna; ROGOVINA, Alisa Aleksandrovna, kand. tekhn.
nauk; ROMANOVA, Lyubov' Stepanovna; TALYZIN, M.D., kand.
tekhn. nauk, retsenzent; VERBITSKAYA, Ye.M., red.

[Methods of physicommechanical testing of synthetic fibers,
threads and films] Metody fiziko-mekhanicheskikh ispytaniy
khimicheskikh volokon, nitei i plenok. Moskva, ^{lagkaia} lagkaia
industriia, 1964. 352 p. (MIRA 18:1)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut iskus-
stvennykh volokon (for all except Talyzin, Verb'tskaya).

I 10409-66 EWT(m)/FVP(1)/T RM

ACC-NR AM5013297

44,55 BOOK EXPLOITATION

UR

Demina, Natal'ya Vasil'yevna; Motorina, Aleksandra Vasil'yevna; Novikov, Nikolay
 Alekseyevich (Candidate of Technical Sciences); Novikova, Sof'ya Aleksandrovna; 44,66
 Nemchenko, Eleonora Adol'fovna (Candidate of Technical Sciences); Panfilova, Mariya
 Mikhaylovna; Rogovina, Alisa Aleksandrovna (Candidate of Technical Sciences);
 Romanova, Lyubov' Stepanovna 44,55 44,55 15,44,55 64
 CR1

Physicomechanical testing methods for chemical fibers, filaments, and films (Metody
 fizikomekhanicheskikh ispytaniy khimicheskikh volokon, nitey i plenok), Moscow,
 Izd-vo "Legkaya industriya," 1954, 352 p. illus., tables, fold chart, plates,
 biblio., appen. 2,300 copies printed.

TOPIC TAGS: test instrumentation, test method, cellulose fiber, synthetic fiber,
 cellulose plastic, textile engineering, mechanical engineering

PURPOSE AND COVERAGE: Instruments and procedures used in the physicochemical test-
 ing of chemical fibers are described. A description of the test methods for staple
 fibers, filament yarn, and cellophane is given. The book is intended for workers
 dealing with fiber and film testing in the chemical fiber and textile industries.

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UDC:677-14+678-416]:620.1

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L-10409-66

ACC NR: AM5013297

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- Ch. II. Installation and instruments designed for producing desired air temperature and humidity parameters and their control -- 10
- Ch. III. Procedures and instruments for the determination of moisture in fibers and filaments -- 34
- Ch. IV. Instruments used for sample weighing and their operation -- 49
- Ch. V. Physicomechanical tests for filament yarn -- 56
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SUBMITTED: 24Nov64

SUB CODE: OC, MT

NO REF SOV: 044

OTHER: 002

Card 2/2

ROGOVINA, A.A.; NOVIKOVA, S.A.; GIL'MAN, I.S.; VASIL'YEV, Yu.V.

Some structural changes in polyamide fibers occurring during heating and dynamic fatigue. Khim. volok. no.4:56-60 '64.
(MIRA 18:4)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut iskusstvennogo volokna (for Rogovina, Novikova). 2. Moskovskiy tekstil'nyy institut (for Gil'man, Vasil'yev.).

REF AND ENG DEPT
PROCESSING AND PREPARE UNIT

ca *IE*

Investigation of the carbohydrate metabolism in animals independent on the character of the food rations under conditions of general fatiguing work. I. M. F. Huley and S. I. Novikova. *Biokh. J. (Ukraine)* 16, 429-55 (in Russian, 429-55); in English, 454-7 (1940).—Lactic acid (I) in the blood, muscles and liver after max. fatigue is always lower in "acid" (II) rabbits than in "alkaline" (III); muscle glycogen drop is also less. Liver glycogen drop is greater in II; blood and muscle sugar shows no difference. Under the same conditions of maintenance and ration II animals show higher work ability. In their behavior and carbohydrate metabolism the controls resemble III. (See references. II. *Ibid.* 450-60 (in Russian, 460-70); in English, 470-1).—To eliminate the possibility of too much acid and alkali in the diet, the adms. were reduced to 8.16 cc. N soln., from 13.0. The expts. were more definite and clear-cut. Lactic acid in the blood, liver and muscle at max. general fatigue is less in II; sugar is greater in III. There is more muscle, and less liver glycogen in II even with greater amt. of work. Adult males were used. B. Gutof

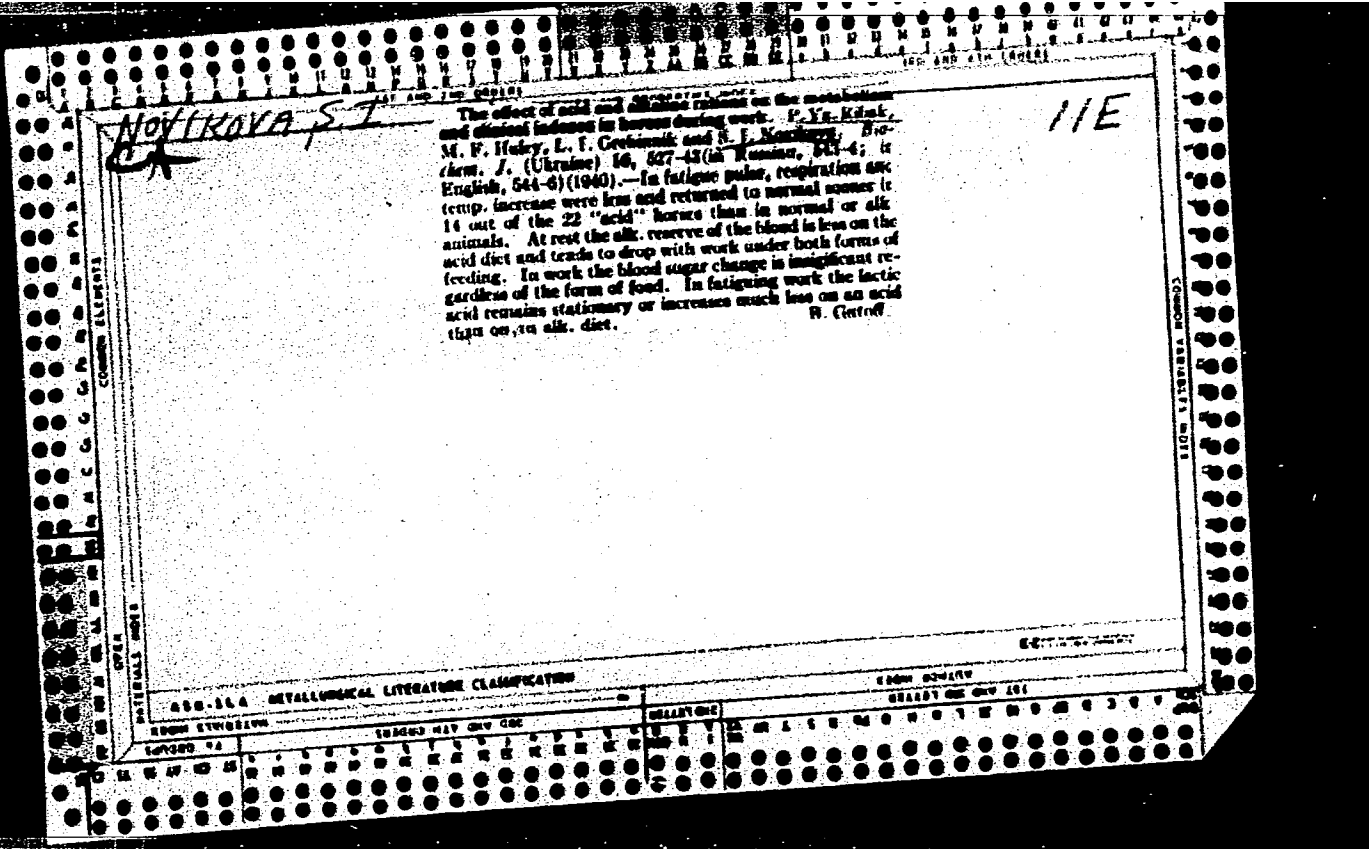
RES. I.C.A. METALLURGICAL LITERATURE CLASSIFICATION

FROM SYNDICATE
LACORDO #4

SYNDICATE HAS ONLY ONE

DELIVERED

FROM BUREAU
SERIAL ONE ONLY 101



MEDEVINS'KA, L. Yu.; NOVIKOVA, S. I.

Serological properties of secondary phago-resistant cultures of
Str. lactis. Mikrobiol. zhurn. 16 no.1:48-53 '54 (MLRA 8:4)

1. Z Institutu mikrobiologii AN URSS.

(STREPTOCOCCUS,

lactis, serol. properties of phago-resist. strains)

MEDVINSKAYA, L.Yu.; NOVIKOVA, S.I.

Types of lactic acid streptococci bacteriophage. Report No.1:
Obtaining types of lactic acid streptococci bacteriophage and their
characteristics. Mikrobiol.shur. 16 no.4:52-57 '54. (MIRA 10:1)

1. Z Institutu mikrobiologii Akademii nauk URSR.
(BACTERIOPHAGE) (LACTIC ACID BACTERIA)

Instit. Microbiol., A.S. V.I.R.

NOVIKOVA, S. I.:

NOVIKOVA, S. I.: "A study of the initial stages of the decomposition of lactose by cultures of *Streptococcus lactis*." Khar'kov State U. Kiev, 1956. (Dissertation for the degree of Candidate in Biological Sciences)

So: Knizhnaya letopis' No 38 1956. Moscow

NOVIKOVA, S. I.

The decomposition of the phosphoric acid esters of *Streptococcus lactis*. S. I. Novikova. *Mikrobiol. Zhur., Akad. Nauk Ukr. S.S.R., Ser. Mikrobiol. im. D. K. Zabolotnogo* 18, No. 2, 41-51 (Russian summary, 40) (1956).—Rashba and Novikova (cf. following abstr.) showed that *S. lactis* grown in milk in the presence of lactose utilizes inorg. P. Also the fraction of easily hydrolyzed P esters increased. It was assumed that the increase in this fraction occurred at the expense of the formation of β -galactose 1-phosphate (I) and α -glucose-phosphate (II) indicating that these esters were intermediary products of the process of lactose fermentation by *S. lactis*. An attempt was made to check on the correctness of this assumption. I and II were subjected to the action of washed cultures of *S. lactis* and of extracts of the bacterial cells. Neither the living bacterial cells nor their extracts attacked I, which is the product of direct phosphorylation of lactose. It was concluded that I could not be regarded as a product of lactose fermentation by *S. lactis* and that *S. lactis* does not hydrolyze lactose by way of direct phosphorylation. The washed cells of *S. lactis* actively fermented II, hydrolyzing it to lactic acid. The cell extracts converted II into the difficultly hydrolyzed P esters glucose 5-phosphate, indicating that in these extracts phosphomutase was present. It is concluded that glucose phosphate and glucose 5-phosphate are normal intermediary products of the process of lactose fermentation by *S. lactis*.

B. S. Levine