

USSR /Chemical Technology. Chemical Products  
and Their Application

I-16

Treatment of natural gases and petroleum.  
Motor fuels. Lubricants.

Abs Jour: Referat Zhur - Khimiya, No 9, 1957, 31900

The fraction was washed with 70%  $H_2SO_4$ , 10% solution of soda, and with distilled water, to remove the non-hydrocarbon components. Dearomatization of the fraction was effected with  $H_2SO_4$  sp. gr. 1.84. Thereafter the normal paraffinic hydrocarbons were isolated with urea, the amount of which was taken on the basis of the mean molecular weight of the fraction. The thus separated n-paraffin hydrocarbons were extracted with ethyl ether, after the removal of which the mixture of n-paraffins was fractionated in a column having the effectiveness of 45 theoretical plates at a residual pressure of 10 mm Hg. The individ-

Card 2/3

USSR /Chemical Technology. Chemical Products  
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I-16

Treatment of natural gases and petroleum.  
Motor fuels. Lubricants.

Abs Jour: Referat Zhur - Khimiya, No 9, 1957, 31900

ual n-paraffin hydrocarbons were found to be concentrated in the fractions having the boiling points of 215-216°, 234-235°, 253-254° and 269-270°. From the investigated fraction of Noriyskaya petroleum were isolated the following n-paraffin hydrocarbons: dodecane, tridecane, tetradecane, pentadecane, identified by their physical properties and by the method of infrared spectroscopy.

Card 3/3

COUNTRY :Rumania H-23  
CATEGORY :  
ABS. JOUR. : RZKhim., No. 21 1959, No. 76103  
AUTHOR :Areshidze, Kh. I. and Benashvili, Ye. M.  
INST. :Iasi Polytechnic Institute  
TITLE :The Quantitative Determination of 5- and 6-membered  
Cyclanes in Gasoline-Ligroin Fractions from Nori  
Crude  
ORIG. PUB. :Bul Inst Politehn Iasi, 3, No 3-4, 103-108 (1957)  
ABSTRACT :The method of selective dehydrogenation catalysis  
of N. D. Zelinskiy has been applied to the quanti-  
tative determination of the content of 5- and 6-  
membered cyclanes in gasoline-ligroin fractions  
from Nori crude. The latter is characterized by a  
low content of aromatics and a high content of  
paraffins. It has been found that the amount of  
5-membered cyclanes found increases with increasing  
bp of the fractions (60-95°, 95-122°, 122-150°,  
150-200°). The content of hydroaromatic hydro-

CARD: 1/2

256

ARESHIDZE, Kh. I.

Conversion of some ethylene hydrocarbons and sulfur organic  
compounds in the presence of gumbrin. Trudy Inst. khim. AN Grus.  
SSR 13:175-182 '57. (MIRA 11:4)  
(Olefins) (Sulfur compounds) (Gumbrin)

ARESHIDZE, KH. I.

USSR/Chemical Technology - Chemical Products and Their Application. Treatment of Natural Gases and Petroleum. Motor and Jet Fuels. Lubricants. I-8

Abs Jour : Ref Zhur - Khimiya, No 1, 1958, 2532

Author : Areshidze, Kh.I., Kikvidze, A.V.

Inst : Institute of Chemistry, Academy of Sciences Georgian SSR

Title : Structure of Paraffinic Hydrocarbons of the 200-250° Fraction of Patara-Shirakskaya Petroleum.

Orig Pub : Tr. in-ta khimii AN GruzSSR, 1957, 13, 195-205

Abstract : The dearomatized 200-250° fraction of Patara-Shirakskaya petroleum and also the narrow fractions having the boiling ranges of the expected n-paraffins, were treated with urea (in the proportion of 1:10.5) to form the complex. By this treatment it was not possible to isolate the n-paraffin hydrocarbons. By determination of the aniline

Card 1/2

ARESHIDZE, Kh.; TAVARTKILADZE, Ye.

Analysis of gumbrine and askanite as dehydrating, cromerizing, and  
alkylating agents [in Georgian with summary in Russian]. Trudy Tbil.  
GU no.62:158-166 '57. (MIRA 11:4)

1. Tbilisskiy gosudarstvennyy universitet imeni Stalina, kafedra  
organicheskoy khimii.

(Askatite) (Gumbrine)

✓

ARESHIDZE, Kh.I., Doc Chem Sci -- (diss) "Study of the chemical nature of Georgian petroleum and ~~of the~~ contact transformation of alken<sup>e</sup>s, cycloalken<sup>e</sup>s, alkane<sup>e</sup>s, and cycloalkane<sup>e</sup>s in the presence of gumbrine." Mos, 1958, 26 pp (Acad Sci USSR. Inst of Organic Chemistry im N.D. Zelinskiy) 130 copies. List of author's works, pp 24-26 (KL, 23-58, 101-2)

ARESHIDZE, Kh.I.

Behavior of the catalyst, palladium on activated carbon, in catalytic isomerization reactions of alkanes and their cyclization, resulting in the formation of five-membered cyclanes. Trudy Inst.khim. AN Gruz.SSR 14:129-135 '58. (MIRA 13:4)  
(Palladium) (Carbon, Activated) (Paraffins)



ARESHIDZE, KH.I.; BENASHVILI, Ye.M.

Investigating hexahydroaromatic hydrocarbons of Noric gasolines  
by dehydrogenating catalysis. Soob. AN Gruz. SSR 20 no. 3:291-297  
Mr '58. (MIRA 11:7)

1. AN GruzSSR, Institut khimii im. P.G.Melikishvili. Predstavleno  
chlenom-korrespondentom Akademii G.V.TSitsishvili.  
(Hydrocarbons)

ARESHIDZE, Kh.I.; CHARKVIANI, T.N.

New bases for nickel catalysts. Soob. AN Gruz.SSR 21 no.6:667-672  
D '58. (MIRA 12:4)

1. AN GruzSSR, Institut khimii im. P.G. Melikishvili. Predstavleno  
chlenom-korrespondentom Akademii G.V. TSitsishvili.  
(Nickel)

AUTHOR: Areshidze, Kh. I., Akviliya, A. V. 30730-121-6-2045

TITLE: ~~hydrocarbons of the decalin series in the Mirasa oil~~  
(Uglevodorody cyklo dekalina v mirasovskoy nefti)

REFERENCE: Doklady Akademi nauk USSR, 1958, Vol. 111, no. 6,  
pp. 1025-1027 (USSR)

ABSTRACT: The thorough investigation of the chemical composition of the oil fractions with a boiling point above 175° is one of the most urgent and important problems of the chemistry of petroleum. The authors have proved that the fraction 150 - 200° of the oil in question contains 25,6 % of hydro-aromatic hydrocarbons. The present investigation is intended for the determination of the individual nature of these hydrocarbons. It was of interest to find out whether the presence of condensed aromatic hydrocarbons and of their hydrated analogues (Refs 1,2) are specific only for the bituminous petroleum of Surakhany or for other kinds of petroleum as well. The investigation has proved the above mentioned compounds to be present in the oil under consideration, namely decalin, 4-methyldecalin, 1,6 and 1,7 dimethyldecalin. The naphthene-hydrocarbons contained in the petroleum of various oil fields in USSR are

Card 1/2

Hydrocarbons of the Decalin Series in the Mirzaan Oil 507/20-121-6-20/45

studied in the Laboratory imeni S.S. Nametkin of the Oil Institute of the AS USSR. There follows a short survey of publications (Refs 2,3). Table 1 shows the properties of the fraction 150-200<sup>o</sup> of the Mirzaan oil before and after the catalysis. The group-composition of the tested fraction in % has been computed from the depression of the aniline points, using the corresponding coefficients: aromatics 15,1; hydroaromatics 23,6; remaining cyclanes 27,3; paraffinoids 34,0. Hydroaromatics: Total amount of cyclane = 46,3. There are 2 tables and 8 references, 5 of which are Soviet.

ASSOCIATION: Institut khimii im. P.G. Melikishvili Akademii nauk GruzSSR (Institute of Chemistry imeni P.G. Melikishvili of AS. Gruzinskaya SSR)

PRESENTED: April 24, 1959, by B. A. Kazanskiy, Member, Academy of Sciences, USSR

SUBMITTED: April 24, 1959.

Card 2/2

ARESHIDZE, Kh.I.; KIKVIDZE, A.V.

Hydrocarbons of the naphthalene series and benzene derivatives  
of Mirzaani crude. Dokl. AN Azerb. SSR 15 no.4:307-310 '59.  
(MIRA 12:6)

I. Institut khimii im. P.G. Melikishvili AN Gruzinskoy SSSR.  
Predstavleno akademikom AN Azerbaydzhanskoy SSR Yu.G. Mamedaliyevym.  
(Petroleum--Analysis) (Naphthalene) (Benzene)

ARESHIDZE, Kh.I.

Catalytic aromatization of Georgian gasolines. Trudy Inst.khim.  
AN Azerb.SSR 17:195-203 '59. (MIRA 13:4)

1. Institut khimii AN GruzSSR.  
(Gasoline) (Aromatization)

ARESHIDZE, Kh.I.; MELIKADZE, I.D., red.; AVALIANI, N.M., red. izd-va;  
TODUA, A.R., tekhn. red.

[Study of the chemical properties of Georgian petroleum and  
contact conversion of hydrocarbons in the presence of gumbrin]  
Issledovanie khimicheskoi prirody neftei Gruzii i kontaktnykh  
prevrashchenii uglevodorodov v prisutstvii gumbrina. Tbilisi,  
Izd-vo Akad. nauk Gruzinskoi SSR, 1960. 232 p. (MIRA 14:5)  
(Georgia--Petroleum) (Cracking process)

1,0196  
S/081/82/000/013/039/054  
B156/B101

11.0120  
AUTHORS:

Areshidze, Kh. I., Benashvili, Ye. M., Kikvidze, A. V.

TITLE:

The isomerization of homologous compounds of cyclopentane included in the composition of Norio and Mirzaani gasolines, carried out in the presence of gumbrin

PERIODICAL:

Referativnyy zhurnal. Khimiya, no. 13, 1962, 530, abstract 13M171 (Tr. In-ta khimii AN GruzSSR, v. 15, 1961, 189-202)

TEXT: It has been established that the cyclopentane hydrocarbons (CH) contained in the 60-150°C Norio gasoline fraction are 19.8 % isomerized into hydroaromatic hydrocarbons in the presence of gumbrin and 29.5 % isomerized into the hydroaromatic carbons when in contact with gumbrin activated with 25 % HCl. In the presence of activated gumbrin there is 40 % isomerization of the CH included in the composition of the dearomatized catalyzate from the 150-200°C Norio petroleum fraction. On investigating the isomerization of the CH included in the composition of Mirzaani petroleum (the 60-150°C fraction) into cyclohexane hydrocarbons it was found that the maximum isomerization effect occurs in the presence of gumbrin activated by 30 %

Card 1/2



ARESHIDZE, Kh. I.; KIKVIDZE, A.V.

Hydrocarbons of the cyclohexane series in Mirzaani crude. Soob. AN Gruz.  
SSR 26 no.1:17-22 Ja '61. (MIRA 14:3)

1. AN Gruzinskoy SSSR, Institut khimii imeni P. G. Melikishvili. Pred-  
stavleno chlenom-korrespondentom Akademii G. V. TSitsishvili.  
(Mirzaani region--Petroleum) (Cyclohexane)

S/081/61/000/023/045/061  
B138/B101

AUTHORS: Areshidze, Kh. I., Kikvidze, A. V.

TITLE: Hydrocarbons of the cyclohexane series in Mirzaani petroleum

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 23, 1961, 447, abstract  
23M63 (Soobshch. AN GruzSSR, v. 26, no. 1, 1961, 17 - 22)

TEXT: The individual nature of representative cyclohexane homologs in the 150 - 200<sup>o</sup> fraction of Mirzaani petroleum have been established by the dehydrogenation catalysis, chromatographic adsorption, picrate and optical methods. The hexahydro-aromatic hydrocarbons of this fraction were studied at the same time. The presence of isopropyl-, n-propyl-, 1-methyl-2-ethyl- and 1-methyl-3-ethylcyclohexanes was established. [ Abstracter's note: Complete translation. ]

Card 1/1

S/251/62/029/005/003/003  
D287/D307

Areshidze, Kh.I. (Corresponding Member of the AS  
Georgian SSSR) and Charkviani, T.N.

AUTHORS:

Preparation of C<sub>2</sub>-C<sub>4</sub> olefin monomers by the thermal  
decomposition of n-pentadecane

TITLE:

Akademiya nauk Gruzinskoy SSSR. Soobshcheniya, v.29,  
no. 5, 1962, 533-538

PERIODICAL:

TEXT:  
The present paper was submitted during the 12th All-  
Union Conference on High-molecular Weight Substances (Section on  
Monomers), April 4, 1962. C<sub>2</sub>-C<sub>4</sub> olefin monomers can be prepared  
by thermal and catalytic decomposition of C<sub>6</sub> and higher alkanes.  
In the present experiments, up to 76% of C<sub>2</sub>-C<sub>4</sub> olefins were obtained  
by pyrolysis of n-pentadecane, at temperatures between 540 and 780°C.  
The experiments were carried out in silica tubes, the reaction tem-  
perature being controlled by means of the device ЛАТР-1 (ЛАТР-1)  
and measured with a Ni-constantan thermocouple. Steam was used in  
some investigations, the volume velocity varied between 0.03 and  
Card 1/2

APRESHIDZE, Kh.I.

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PHASE I BOOK EXPLOITATION

SOV/6195

Nauchnaya konferentsiya institutov khimii Akademiy nauk Azerbaydzhanskoy, Armyanskoy i Gruzinskoy SSR. Yerevan, 1957.

Materialy nauchnoy konferentsii institutov khimii Akademiy nauk Azerbaydzhanskoy, Armyanskoy i Gruzinskoy SSR (Materials of the Scientific Conference of the Chemical Institutes of the Academies of Sciences of the Azerbaydzhans, Armenian, and Georgian SSR) Yerevan, Izd-vo AN Armyanskoy SSR, 1962. 396 p. 1100 copies printed.

Sponsoring Agency: Akademiya nauk Armyanskoy SSR. Institut organicheskoy khimii.

Resp. Ed.: L. Ye. Ter-Minasyan; Ed. of Publishing House: A. G. SIkuni; Tech. Ed.: G. S. Sarkisyan.

PURPOSE: This book is intended for chemists and chemical engineers, and may be useful to graduate students engaged in chemical research.

COVERAGE: The book contains the results of research in physical, inorganic, organic, and analytical chemistry, and in chemical engineering, presented at the Scientific Conference held in Yerevan, 20 through 23 November 1957. Three reports of particular interest are reviewed below. No personalities are mentioned. References accompany individual articles.

Materials of the Scientific Conference (Cont.)

SOV/6195

Areshidze, Kh. I., and Ye. M. Benashvili. The Action of Urea on Normal Alkanes As a Method of Separating Them From Petroleum. (Institut khimii, Akademiya nauk Gruzinskoy SSR).

296

A method based on the capacity of urea to react or form complexes with normal alkanes and other straight-chain hydrocarbons has been used to separate  $C_9 - C_{18}$  alkanes from fractions of Mirzaani and Norio petroleum boiling at 150-200 and 200-250°C, respectively. The method consists in 1) purification of the petroleum fraction with 75%  $H_2SO_4$ , 10%  $NaCO_3$  solution, and distilled water; 2) de-aromatization by chromatographic adsorption of silica gel; 3) crystallization of urea/hydrocarbon complexes from a solution of urea in  $CH_3OH$  (20% on wt. of urea); 4) dissolution of crystals in distilled water followed by the extraction of the hydrocarbon layer with ethyl ether; and 5) distillation of the extract in a perforated plate column at 40 to 10 mm Hg residual pressure. The Mirzaani and Norio

Card 7/11

2/2

ARESHIDZE, Kh.I.; ELASHVILI, Z.M.

Investigation of gumbrin and askanite a dehydrating, isomerizing, and alkylating catalysts. Part 10: Isomerization of isopropylcyclopentane in the liquid phase in the presence of gumbrin. Zhur.ob.khim. 32 no.8:2657-2659 Ag '62. (MIRA 15:9)

1. Institut khimii imeni P.G. Melikishvili AN Gruzinskoy SSR.  
(Cyclopentane) (Isomerization) (Gumbrin)

ARESHIDZE, K.H.I.

JUN 25 1963

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PHASE I BOOK EXPLOITATION

SOV/6195

Nauchnaya konferentsiya institutov khimii Akademiy nauk Azerbaydzhanskoy, Armyanskoy i Gruzinskoy SSR. Yerevan, 1957.

Materialy nauchnoy konferentsii institutov khimii Akademiy nauk Azerbaydzhanskoy, Armyanskoy i Gruzinskoy SSR (Materials of the Scientific Conference of the Chemical Institutes of the Academies of Sciences of the Azerbaydzhans, Armenian, and Georgian SSR) Yerevan, Izd-vo AN Armyanskoy SSR, 1962. 396 p. 1100 copies printed.

Sponsoring Agency: Akademiya nauk Armyanskoy SSR. Institut organicheskoy khimii.

Resp. Ed.: L. Ye. Ter-Minasyan; Ed. of Publishing House: A. G. Silkuni; Tech. Ed.: G. S. Sarkisyan.

PURPOSE: This book is intended for chemists and chemical engineers, and may be useful to graduate students engaged in chemical research.

Card 1/11

Materials of the Scientific Conference (Cont.)

SOV/6195

COVERAGE: The book contains the results of research in physical, inorganic, organic, and analytical chemistry, and in chemical engineering, presented at the Scientific Conference held in Yerevan, 20 through 23 November 1957. Three reports of particular interest are reviewed below. No personalities are mentioned. References accompany individual articles.

TABLE OF CONTENTS:

PHYSICAL CHEMISTRY

Tsitsishvili, G. V., and Ye. D. Rosebashvili. Use of the Magnetic Method in Studying Some Complex Cobalt Compounds	5
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Card 2/11



Materials of the Scientific Conference (Cont.)

SOV/6195

Areshidze, Kh. I., and Ye. M. Benashvili. The Action of Urea on Normal Alkanes As a Method of Separating Them From Petroleum. (Institut khimii, Akademiya nauk Gruzinskoy SSR).

296

A method based on the capacity of urea to react or form complexes with normal alkanes and other straight-chain hydrocarbons has been used to separate  $C_6 - C_{18}$  alkanes from fractions of Mirzaani and Norio petroleum boiling at 150-200 and 200-250°C, respectively. The method consists in 1) purification of the petroleum fraction with 75%  $H_2SO_4$ , 10%  $NaCO_3$  solution, and distilled water; 2) de-aromatization by chromatographic adsorption of silica gel; 3) crystallization of urea/hydrocarbon complexes from a solution of urea in  $CH_3OH$  (20% on wt. of urea); 4) dissolution of crystals in distilled water followed by the extraction of the hydrocarbon layer with ethyl ether; and 5) distillation of the extract in a perforated plate column at 40 to 10 mm Hg residual pressure. The Mirzaani and Norio

Card 7/11

ARESHIDZE, Kh.I.

Dehydrogenation catalysis as a method for investigating naphthenes at a present stage of development of the chemistry of alkanes and cyclanes. Trudy Inst.khim.AN Gruz,SSR 16:75-87 '62.

(MIRA 16:4)

(Paraffins)

(Cycloalkanes)

(Dehydrogenation)

L 15484-63

EPR/EWP(j)/EPF(c)/EWT(m)/BDS Pc-4/Ps-4/Pr-4 RM/WW

ACCESSION NR: AP3005448

S/0204/63/003/004/0518/0522 42

AUTHORS: Areshidze, Kh. I.; Chivadze, G. O. 41

TITLE: Preparation of C sub 2 - C sub 4 monomers by the pyrolysis of hydrocarbon mixtures separated from petroleum

SOURCE: Neftekhimiya, v. 3, no. 4, 1963, 518-522

TOPIC TAGS: n-heptane pyrolysis, cyclohexane thermal decomposition, methylcyclopentane, thiocarbamide, thermal decomposition, cyclohexane

ABSTRACT: The pyrolysis of hydrocarbon fractions of n-heptane and two fractions of methylcyclopentane-cyclohexane which were separated by means of thiocarbamide from benzenes have been studied. The separation of n-heptane from the benzene for the use in the pyrolysis results in upgrading the benzene's explosive stability. The results of the thermal decomposition of n-heptane fraction show that the concentration of olefines and dienes of the composition C<sub>2</sub>-C<sub>4</sub> is 56.3%, of which the ethylene fraction is 26.6%. The results of the pyrolysis

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L 15484-63

ACCESSION NR: AP3005448

of methylcyclopentane and cyclohexane fraction differ from the pyrolysis of n-hexane. At a temperature of 735C, the content of olefine and diene fractions of the composition C<sub>2</sub>-C<sub>4</sub> is 64.9%, which contains 18.7% of butadiene. The maximum content of olefins and dienes from the thermal decomposition of cyclohexane and methylcyclopentane at a temperature of 730C was 73.7% and a maximum content of butadiene in the gas at 735C was 18.6%. The study shows that the type of raw material used will determine the composition of the gas produced with the application of the above pyrolytic methods. Orig. art. has: 1 table.

ASSOCIATION: Institut khimii AN GruzSSR im. P. G. Melikishvili  
(Institute of chemistry, AN GSSR)

SUBMITTED: 21Feb62

DATE ACQ: 06Sep63

ENCL: 00

SUB CODE: CH

NO REF SOV: 009

OTHER: 000

Card 2/2

ARESHIDZE, Kh.I.; CHIVADZE, G.O.

Obtaining C<sub>2</sub>-C<sub>4</sub> monomers by pyrolysis of hydrocarbon  
mixtures isolated from petroleum. Neftekhimiia 3 no.4:  
518-522 J1-Ag '63. (MIRA 16:11)

1. Institut khimii AN Gruzinskoy SSR imeni P.G. Melikishvili.

ARESHIDZE, Kh.I.; KHECHINASHVILI, Ye.P.

Quantitative determination of five- and six-membered cyclanes in  
Satskhenizi petroleum. Soob. AN Gruz. SSR 28 no.4:401-408 Ap '62.  
(MIRA 18:1)

1. AN Gruzinskoy SSR, Institut khimii im. P.G.Melikishvili, Tbilisi.
2. Chlen-korrespondent AN Gruzinskoy SSR (for Areshidze).

KHECHINASHVILI, Ye.P.; ARESHIDZE, Kh.I.

Monocyclic aromatic hydrocarbons of Satskhenisi crudes. Soob.  
AN Gruz. SSR 34 no.1373-78 Ap'64 (MIRA 1787)

1. Institut khimii imeni P.G. Melikishvili AN Gruzinskoy SSR.
2. Chlen-korrespondent AN Gruzinskoy SSR (for Khechinashvili).

ARESHIDZE, Kh.I.; CHARKVIANI, T.N.

Production of olefin monomers ( $C_2 - C_4$ ) by thermal decomposition  
of H-pentadecane. Soob. AN Gruz. SSR 29 no.5:533-538 N 162.  
(MIRA 18:3)

1. Institut khimii im. P.G.Melikishvili AN GruzSSR, Tbilisi.
2. Chlen-korrespondent AN GruzSSR (for Areshidze).



ARESHIDZE, Kh.I.; CHARKVIANI, T.N.

Individual hydrocarbon composition of gasoline from Mirzaani crudes.  
Soob. AN Gruz. SSR 35 no.2:306-314 Ag '64.

1. AN Gruzinskoy SSR, Institut imeni P.G.Melikishvili, Tbilisi. 2. Chlen-korrespondent AN Gruzinskoy SSR (for Areshidze). (MIRA 17:12)

ACCESSION NR: AP4011473

S/0251/63/032/002/0343/0350

AUTHOR: Areshidse, Kh. I.; Chivadse, G. O.

TITLE: Preparation of olefinic and diolefinic monomers by the thermal decomposition of low-octane gasolines

SOURCE: AN GruzSSR. Soobshoheniya, v. 32, no. 2, 1963, 343-350

TOPIC TAGS: olefin, diolefin, gasoline, pyrolysis, low octane gasoline pyrolysis, ethylene, butadiene, unsaturated hydrocarbon, normal alkane, paraffin hydrocarbon

ABSTRACT: Low octane numbers of gasolines are often caused by the presence of large amounts of normal alkanes. The authors attempted to find out whether  $C_2$ -- $C_4$  olefins would be formed when gasoline containing aromatic, naphthenic and iso-paraffinic hydrocarbons in addition to normal alkanes was subjected to pyrolysis. The starting material contained cyclohexane and its homologues, which gave butadiene on pyrolysis. In order to obtain olefinic and diolefinic monomers, the authors subjected low-octane gasolines from Mirzaan and Turkmen petroleum to pyrolysis. The experiments were carried out at  $800^{\circ}C$  in the presence of water vapor. The reaction vessel was a quartz tube placed in an electric furnace. In some experiments, a gas containing ethylene in amounts of 36.5 to 37.8% by volume was obtained.

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ACCESSION NR: AP4011473

The high content of ethylene in the gases produced by the pyrolysis of low-octane gasolines makes its separation easier. The total amount of unsaturated hydrocarbons in the liquid pyrolysate was determined by means of the bromine number. The bromine number in the pyrolysates of Mirzaan gasoline varied between 7.3 and 32.4, and that of the Turkmen gasoline, between 13.1 and 30.1.

ASSOCIATION: none

SUBMITTED: 07Jun63

DATE ACQ: 10Feb64

ENCL: 00

SUB CODE: FP

NO REF SOV: 009

OTHER: 002

Card 2/2

ARESHIDZE, Kh.I.; ELASHVILI, Z.M.

Isomerization of isopropylcyclopentane in the vapor phase in the presence of gumbrin. Soob. AN Gruz. SSR 34 no.2:339-343 My '64. (MIRA 18:2)

1. Chlen-korrespondent AN Gruzinskoy SSR (for Areshidze).

ARESHIDZE, Kh.I.; CHIVADZE, G.O.

Pyrolysis of the product of petroleum refinery for the  
purpose of obtaining monomers. Soob. AN Gruz. SSR 39 no.1:  
59-66 J1 '65. (MIRA 18:10)

1. Chlen-korrespondent AN GruzSSR (for Areshidze).

ARESHIDZE, Kh. I.; TAVARTKILADZE, Ye. K.

Simultaneous dehydration of n-butyl alcohol and ammonia in  
the presence of gumbrin. Soob. AN Gruz. SSR 39 no.3:569-575  
S: '65. (MIRA 18:10)

1. Ghlen-korrespondent AN GruzSSR (for Areshidze).

ARESHIDZE, Kh.I.; KIKVIDZE, A.V.

Thermal decomposition of tetradecane. Soob. AN Gruz. SSR 38  
no.1:77-84 Ap '65. (MIRA 18:12)

1. Institut fizicheskoy i organicheskoy khimii imeni Melikishvili  
AN GruzSSR. 2. Chlen-korrespondent AN GruzSSR (for Areshidze).  
Submitted Nov. 30, 1964.

L 40890-56 EWI(m)/T WE/CE

ACC NR: AT6017559 (A)

SOURCE CODE: UR/0000/65/000/000/0294/0298

43  
41  
B+1

AUTHOR: Areshidze, Kh. I.; Chivadze, G. O.

ORG: none

TITLE: Refining of Turkmenian gasoline by means of CaA synthetic zeolite

SOURCE: Vsesoyuznoye soveshchaniye po tseolitam, 2d, Leningrad, 1964. Tseolity, ikh sintez, svoystva i primeneniye (Zeolites, their synthesis, properties, and application); materialy soveshchaniya. Moscow, Izd-vo Nauka, 1965, 294-298

TOPIC TAGS: zeolite, octane improver, fuel octane rating, adsorption, chromatography, alkane, petrochemistry

ABSTRACT: An artificial CaA zeolite, in the form of granules furnished by the Gorkil Experimental Station of VNINP (Gor'kovskaya opytnaya baza VNINP) was employed to remove n-alkanes (180C, 400 mm Hg, gasoline flow rate 0.15 hr<sup>-1</sup>) from gasoline refined at the Batumi Petroleum Refinery (Batumskiy neftepererabatyvayushchiy zavod) from Turkmenian crude in an attempt to improve its present octane number of 55. Isolated n-alkanes were identified by vapor-liquid chromatography, their percentage and the physical properties of the gasoline are listed. The octane number was improved to 72.7 (empirical test). Some of the results are tabulated.

Card 1/3



L 40890-66

ACC NR: AT6017559

Table 1. Results of experiments on the separation of n-alkanes from gasoline

Gasoline property	Initial gasoline	Deparaffinated gasoline	Mixture of n-alkanes
Yield, wt. %	--	76.8	20.2
Specific gravity $d_4^{20}$	0.7229	0.7301	0.6792
Refractive index $n_D^{20}$	1.4109	1.4193	1.3840
Group hydrocarbon composition, wt. %			
paraffinic	53.2	41.2	91.7
naphthenic	35.7	44.6	--
aromatic	11.1	14.0	--
Maximum aniline point	56.8	50.4	69.5
Octane number	55	72.7	--
Fractional composition, °C			
beginning of boiling	37	43	37
10% boils	77	79	78
50% boils	110	115	103
90% boils	145	147	130
end of boiling	158	158	151

The separation of n-alkanes was investigated by the gas-liquid chromatography method. This Card 2/3

L 40890-66

ACC NR: AT6017559

2

part of the work was performed at the Institute of Organic Chemistry im. N. D. Zelinskiy, AN SSSR (Institut organicheskoy khimii AN SSSR) by Senior Scientific Worker M. I. Rozengart, to whom the authors express their sincere gratitude. Orig. art. has: 1 table and 1 figure.

SUB CODE: 07,11/ SUBM DATE: 29Oct65/ ORIG REF: 011/ OTH REF: 004

Card 3/3 MLP

ARESHIDZE, N.D.

A tractor engine fan that can be disengaged. Trakt.i sel'khoz mash.  
no.8:14 Ag '62. (MIRA 15:8)  
(Tractors--Cold weather operation)

Handwritten text, possibly "Hoechlin 28 11/11"

S/137/62/000/001/228/237  
A154/A101

AUTHOR: Areshidze, T. V.

TITLE: Study and development of methods for separate determination of niobium and tantalum

PERIODICAL: Referativnyy zhurnal, Metallurgiya, no. 1, 1962, 10, abstract 1K56  
("Yezhegodnik Kavkazsk. in-ta mineral'n. syr'ya za 1957 g."  
Moscow, Gosgeoltekhizdat, 1959, 51)

TEXT: An investigation was made into the transition of Mo and Cu compounds into a solution upon the reaction of oxidized and sulfide ores in particular with underground waters of the following types: hydrocarbonate-sulfate-calcium-magnesium; hydrogen-sulfide-alkaline; sulfuric-acid-sulfate; carbonic-acid-hydrocarbonate-calcium. Upon prolonged reaction of the waters with Mo-containing ores for 2-3 months, a gradual increase in the Mo-content of the solution was observed, followed by a gradual decrease. Phase analysis of the precipitates obtained after treatment of the ores by hydrocarbonate-calcium precipitates revealed the presence of powellite.

[Abstracter's note: Complete translation]

L. Vorob'yeva

Card 1/1

ARESHKIN, G., inzhener-podpolkovnik

Each unit should have a well equipped motor pool. Tyl i snab.  
Sov.Voor.Sil 21 no.1:67-69 Ja '61. (MIRA 14:6)  
(Automobiles, Military)

BUTUZOV, Andrey Fedorovich; VASILEVSKIY, Vladimir Konstantinovich;  
ARESHKIN, G.I., red.; IVANS, A.K., red.; PEREDERIY, S.P.,  
tekh. red.

[Conducting individual exercises in tractor and combine operations] Provedenie individual'nykh zaniatii po vozhdeniiu traktorov i kombainov. Moskva, Proftekhizdat, 1963. 49 p.

(MIRA 16:12)

1. Zamestitel' nachal'nika Leningradskogo oblastnogo upravleniya professional'no-tekhnicheskogo obrazovaniya (for Vasilevskiy). 2. Direktor uchilishcha mekhanizatsii sel'skogo khozyaystva No.8 (for Butuzov).

(Agricultural machinery)

ARESHKIN, G. Ya.

K teorii kratnogo integrirovaniya na abstraktnykh mnozhestvakh. tbiisi, Soobshch.  
AN Gr SSR, 5 (1944), 360-363.

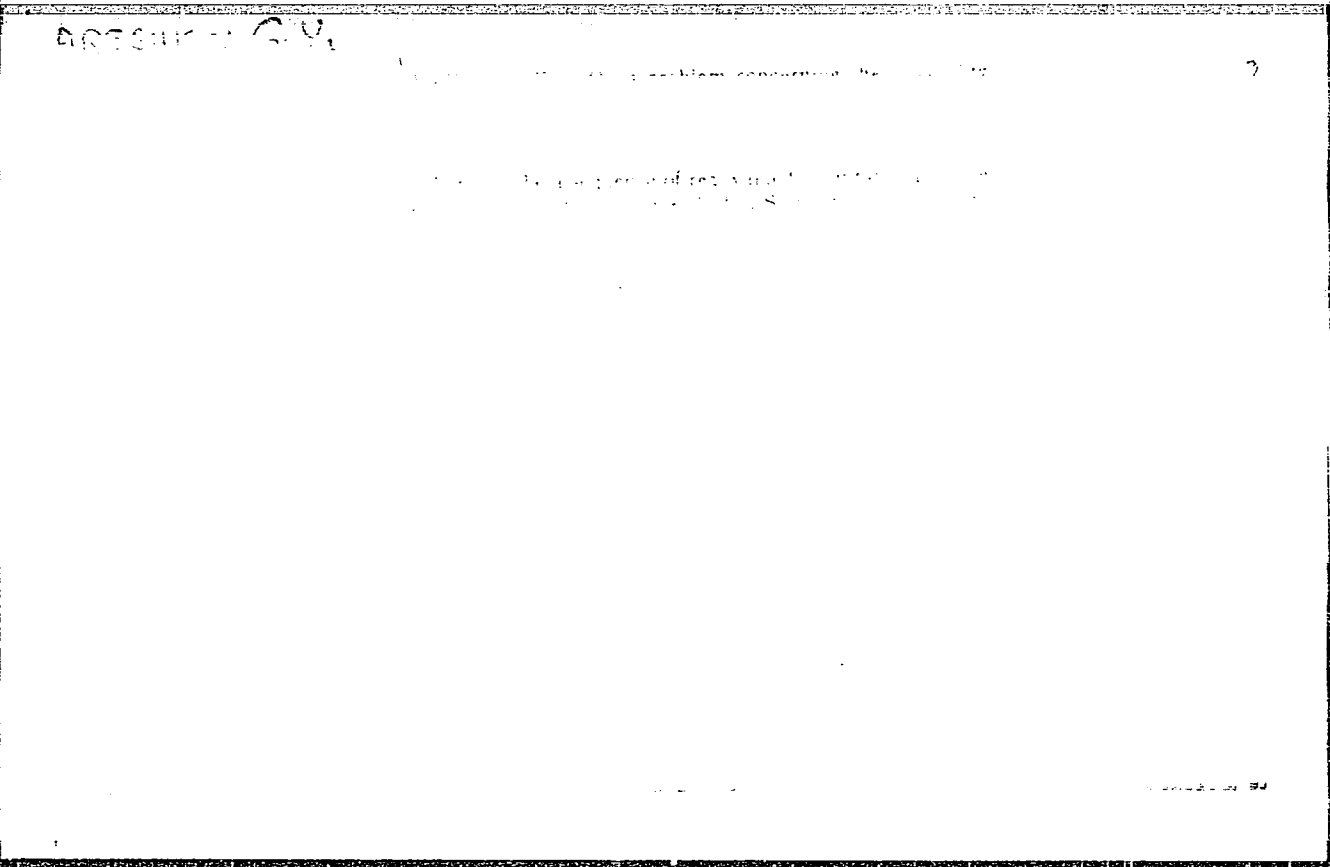
SO: Mathematics in the USSR, 1917-1947  
edited by Kurosh, A. G.,  
Markushevich, A. K.,  
Rashevskiy, P.K.  
Moscow-Leningrad, 1948



ARESHKIN, G. YA.

19739 ARESHKIN, G. YA. O perekhode K predely nod znakom integrala Lebege-Radona. Soobshch. Akad. NAUK Gruz. SSR. 1949, No. 2, S. 69-76

SO: LETOPIS' ZHURNAL STATEY, Vol. 27, Moskva 1949



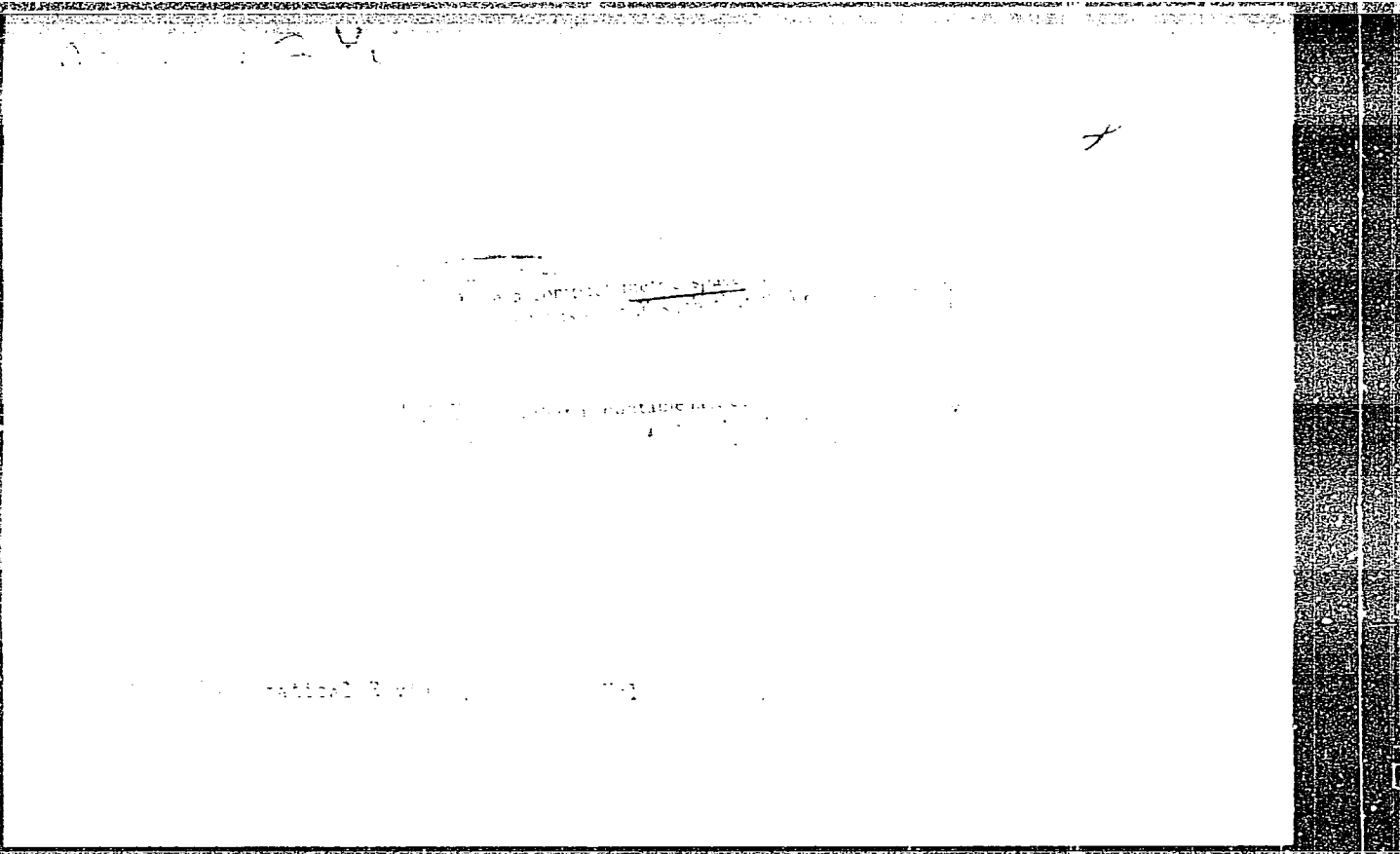
ARESHKIN, G. V.

1/14  
CFR

ARSHUKIN G. V.

Arshukin G. Ya. On continuous mappings of subject

Source



ARESHKIN G. Ya.

Arshkin, G. Ya. On convergence in length of curves and  
on curvilinear Lebesgue integrals. Doklady Akad. Nauk

Source: Mathematical Reviews, Vol 12, No. 3.

AREŠKIN, G. Ya.

Mathematical Reviews  
Vol. 14 No. 8  
Sept. 1953  
Topology.

Areškin, G. Ya. On the lattice theory of topological spaces.  
Akad. Nauk Gruzin. SSR. Trudy Mat. Inst. Razmadze  
18, 53-66 (1951). (Russian. Georgian summary)

This paper contains the proof of a theorem announced  
earlier [Doklady Akad. Nauk SSSR (N.S.) 81, 129-132  
(1951); these Rev. 13, 534]. Also discussed are conditions,  
in terms of bases for closed sets, under which a (bi-)compact  
 $T_1$ -space  $X$  admits a continuous mapping onto a (bi-)com-  
pact Hausdorff space  $Y$  [cf. also Areškin, *ibid.* (N.S.) 59,  
629-630 (1948); Izvestiya Akad. Nauk SSSR. Ser. Mat. 13,  
213-220 (1949); these Rev. 9, 455; 10, 726].

*E. Hewitt* (Seattle, Wash.).

АРЕШКИН, Г. Я.

Mathematical Reviews  
Vol. 14 No. 8  
Sept. 1953  
Algebra

Арешкин, Г. Я. Operator lattices of locally compact topological groups with a countable basis. Akad. Nauk Gruzin. SSR. Trudy Mat. Inst. Razmadze 18, 67-91 (1951). (Russian. Georgian summary)  
A proof is given for a theorem announced earlier [Doklady Akad. Nauk SSSR (N.S.) 81, 129-132 (1951); these Rev. 13, 534], giving an axiomatic characterization of operator lattices which can serve as bases for closed sets in a locally compact group with a countable open basis. An analogous theorem is stated and proved for compact metric groups, and conditions, in terms of these lattices, under which a given group is isomorphic or homomorphic to another group are also presented.  
*E. Hewitt* (Seattle, Wash.).



ARESHKIN, G. YA.

USSR/Mathematics - Modern Algebra (Compacta) 11 Nov 51

"Operator Structures of Locally Compact Topological Groups With Even Weight," G. Ya. Areshkin, Tbilisi Math Inst imeni A. M. Razmadze, Acad Sci Georgian SSR

"Dok Ak Nauk SSSR" Vol LXXXI, No 2, pp 129-132

Studies locally compact topological groups with even wt with the aid of the purely algebraic concept of "operator structure." Shows that each such topological group is detd by its operator structure with an accuracy up to an isomorphism.

199781

USSR/Mathematics - Modern Algebra (Compacta) (Contd) 11 Nov 51

The central place in this work is assumed by the axiomatic characteristics of operator structures of locally compact and compact groups. Obtains also a criterion for isomorphism and homomorphism of groups in terms of the operator structures. Submitted 12 Nov 51 by Acad A. N. Kolmogorov.

199781

012  
ARESHKIN, G. Ya.

Will Defend his dissertation for the Degree of Dr. Physico-Mathematical Sciences, "Structural Methods in the theory of Topologic Spaces", at the Mathematics Institute imeni Steklov, 29 June 1953 at 1630 hrs.

SO: Izvestiya, 5 June 1953, No 131 (11202)

ARESHKIN, G. YA.

USSR/Mathematics - Topology,  
Set-Theoretic

Jul/Aug 53

"Free Distributive Structures and Free Bicompat  
T. O. Spaces, G. Ya. Areshkin, Leningrad Branch of  
Math Inst im Steklov, Acad Sci USSR

Mat Sbor, Vol 33 (75), No 1, pp 133-156

States that the theory of distributive structures  
is closely connected with set-theoretic topology  
and, particularly, with bicompat and locally bi-  
compact topological spaces. The understanding of  
this theory requires knowledge of set-theoretic

271T85

topology as given in Hausdorff and Birkhof. This  
connection is established naturally by means of the  
bases of topological spaces which form, under the  
supplementary condition of closedness of these  
bases relative to operations of union and inter-  
section of two sets, a distributive structure. Notes  
that such a connection with the theory of structures  
immediately creates a large complex of problems and  
lies at the basis of the extensive penetration of  
new algebraic concepts and investigative methods  
into set-theoretic topology. Presented 3 Sep 52.

271T85

AREŠKIN, G. Ya.

Mathematical Reviews  
Vol. 15 No. 3  
March 1954  
Algebra

7-13-54  
LL

Areškin, G. Ya. On congruence relations in distributive lattices with a zero element. Doklady Akad. Nauk SSSR (N.S.) 90, 485-486 (1953). (Russian) 4

Let  $L$  denote a distributive lattice with 0,  $K$  a congruence relation on  $L$ ,  $I$  a multiplicative ideal of  $L$ , and  $\bar{K}(I)$  the smallest congruence relation on  $L$  with kernel  $I$ . The following results are stated without proof. Theorem 1: The greatest congruence relation  $\bar{K}(I)$  with kernel  $I$  is the one with  $x \equiv y$  if and only if  $a \cap (x \cap y) \in I$  implies  $a \cap (x \cup y) \in I$  for every  $a \in L$ . Theorem 2: If  $K$  has kernel  $I$ , then there is a unique congruence relation  $K^*$  on the factor lattice  $L/K(I)$  (whose zero is  $\bar{0}$ ) such that  $K = \bar{K}(I) \cdot K^*$ ,  $\bar{K}(\bar{0}) \leq K^* \leq \bar{K}(\bar{0})$ , and the mapping  $K \rightarrow K^*$  is an isomorphism of the interval  $[\bar{K}(I), \bar{K}(I)]$  onto  $[\bar{K}(\bar{0}), \bar{K}(\bar{0})]$ . Definition: A lattice is weakly complemented if for every pair  $x \neq y$  in it, there exists  $z$  with  $z \cap (x \cap y) = 0$ ,  $z \cap (x \cup y) \neq 0$ . Theorem 3:  $L$  is a generalized Boolean algebra if and only if for every  $I$ ,  $L/\bar{K}(I)$  is weakly complemented. Theorem 4: If  $K$  has kernel  $I$ ,  $L/\bar{K}(I)$  is weakly complemented if and only if  $K = \bar{K}(I)$ . Theorem 5 [cf. G. Birkhoff, Lattice theory, Amer. Math. Soc. Colloq. Publ., v. 25, rev. ed., New York, 1948, problem 73; these Rev. 10, 673]: The following are equivalent: (1) every congruence relation in  $L$  is uniquely determined by its kernel; (2) if  $x, y \in L$  and  $a \cap (x \cap y) \in I$  imply  $a \cap (x \cup y) \in I$ ,  $a \in L$ , then there exists  $a_0 \in L$  with  $a_0 \cap (x \cap y) \in I$  and  $a_0 \cup (x \cap y) \geq x \cup y$ ; (3) for every  $I$ ,  $L/\bar{K}(I)$  is weakly complemented; (4)  $L$  is a generalized Boolean algebra. [For closely related results, see the paper reviewed above.] P. M. Whitman (Silver Spring, Md.).

ARSHKIN, G. Ya.

Congruence relationships in distributive structures with a zero  
element. Uch. zap. Ped. inst. Gerts. 183:85-127 '58.

(MIRA 13:8)

(Congruences).

ARESHKIN, G.Ya.

Cauchy directions and the complementation of regular spaces.  
Trudy Mat. inst. AN Gruz. SSR 27:85-102 '60. (MIRA 15:3)  
(Topology)

ARESHKIN, G. Ya.

Fundamental concepts and problems of mathematical analysis in  
topological measure spaces. Uch.zap.Ped.inst.Gerts. 218:1-12  
'61.

(MIRA 14:10)

(Topology)

ARESHAIN, G.Ya.

Cauchy directions and the expansions of regular spaces. Dokl.  
AN SSSR 137 no. 1:9-12 Mr-Apr '61. (MIRA 14:2)

1. Predstavleno akademikom P.S. Aleksandrovym.  
(Spaces, Generalized)



ARESHKIN, G.Ya.

Compactness of a family of totally additive functions of a set.  
Uch.zap.Ped.inst.Gerts. 238:102-118 '62. (MIRA 16:4)  
(Aggregates) (Sequences (Mathematics))

PROCESSES AND PROPERTIES OF

**ARESHKINA, L.Ye.** *CA*

The effect of fertilizers on the quality of tangerines of the species "Unahlu" L. Ya. Areshkina *Sov. Zh. Khim.* 1940, No. 1, 32-3. (Chem. Abstr. 1940, 11, 1310) K fertilizers hasten the ripening, increase the pulp content, and generally improve the quality of the fruit but do not affect the juice content nor the quantity of sol. salts in the juice. N fertilizers diminish the pulp content but increase the content of sol. salts in the juice, the sugar content, and the total content of extractable substances.

410.55.8 METALLURGICAL LITERATURE CLASSIFICATION

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

**ARESHKINA, L. YA.** *CA*

Alkaloids of *Galanthus woronovi*. N. P. Prskurnina and L. Ya. Areshkina (Pharmacol. Inst., Med. Sci. Acad., Moscow). *J. Gen. Chem.* (U.S.S.R.) 17, 1216-19 (1947) (in Russian). --Dried and ground bulbs of *Galanthus woronovi* (10 kg.), moistened with 10% NH<sub>4</sub>OH, were extd. with (CH<sub>2</sub>Cl)<sub>2</sub>; the ext. was shaken out with 5% H<sub>2</sub>SO<sub>4</sub> and the latter was made alk. with 10% NaOH to give 88.2 g. alkaloids as a microcryst. mass; the alk. mother liquor was extd. with CHCl<sub>3</sub> and the latter evapd. to give 50 g. amorphous alkaloids. Extn. of the cryst. fraction with hot Me<sub>2</sub>CO and cooling of the ext. gave *galantine*, m. 132-4° (from EtOH); *hydrate*, which loses H<sub>2</sub>O of crystn. at 125° and then m. 100-2°, is sol. in EtOH, Me<sub>2</sub>CO, and CHCl<sub>3</sub>, difficultly sol. in H<sub>2</sub>O and Et<sub>2</sub>O; its compn. is C<sub>11</sub>H<sub>15</sub>NO, and it forms the *HCl salt*, m. 198-9° (from EtOH); *HBr salt* m. 201-3° (from EtOH); *perchlorate* m. 190-201° (from dil. EtOH), [α]<sub>D</sub> 30.2°.

*Galantine* has [α]<sub>D</sub> -87°, contains 3 MeO groups and 1 OH group. The methiodide (2 g.) boiled 10 min. with 30 cc. 25% KOH in MeOH gave 0.5 g. greenish needles, C<sub>11</sub>H<sub>15</sub>N(OH)O<sub>3</sub>, m. 172-4°, apparently due to loss of MeOH and H<sub>2</sub>O, accompanied by aromatization of 1 of the alkaloid rings. The Me<sub>2</sub>CO-insol. residue from the isolation of *galantine* with 1:3 Me<sub>2</sub>CO-HBr yielded *galantidine-HBr*, m. 213-13.5°, [α]<sub>D</sub> 32.3° (from EtOH); treatment with NH<sub>4</sub>OH (5%) gave the free *galantidine*, C<sub>11</sub>H<sub>15</sub>NO, m. 235-8° (from EtOH), almost insol. in H<sub>2</sub>O, Et<sub>2</sub>O, and CHCl<sub>3</sub>; heating it with phloroglucinol and H<sub>2</sub>SO<sub>4</sub> gave a red ppt.; this shows the presence of a methylenedioxy group; it is optically active but its rotation could not be detd. directly owing to poor soly.; its *HCl salt* m. 197-9°; *methiodide* m. 213-3° (from EtOH).

G. M. Kosolapoff

AS 11-31A METALLURGICAL LITERATURE

ARESHKINA, L. YA.

PA 11/49T10

USSR/Chemistry - Alkaloids, In Senecio Jul 48  
Platyphyllus  
Chemistry - Alkaloids, Oxidized

"N-Oxides of Senecio Platyphyllus Plant Alkaloids,"  
L. Ya. Areshkina, Inst Biochem imeni A. N. Bakh,  
Acad Sci USSR, 3 $\frac{1}{4}$  pp

"Dok Ak Nauk SSSR" Vol LXI, No 3

Describes experiments to investigate content of  
two types of alkaloid, oxidized or N-oxide and  
reduced, in Senecio platyphyllus. Tabulated re-  
sults indicate that alkaloids may play a part in  
metabolism of the plant. Submitted 24 May 48.

11/49T10

ARESHKINA, L. YA.

PA 39/49T18

USSR/Chemistry - Alkaloids, in Senecio  
Platyphyllus  
Medicine - Plant Physiology

Apr 49

"N-Oxides of Alkaloids in Senecio Platyphyllus Plants,"  
L. Ya. Areshkina, Inst Biochem imeni A. N. Bakh,  
Acad Sci USSR, 4 pp

"Dok Ak Nauk SSSR" Vol LXV, No. 5

Attempts to determine whether alkaloids of Senecio  
platyphyllus take part in the plants' oxidizing-  
reducing processes. Describes experiments using  
indigocarmine, ascorbic acid, and citric acid as  
easily oxidizable substrates. Shows interaction of  
amino oxides ( $\neq N=O$ ) of Senecio platyphyllus alkaloids  
with easily oxidizable organic compounds. Submitted  
by Acad A. I. Oparin, 16 Feb 49.

39/49T18

BUKIN, V.N.; ARESHKINA, L.Ya.

Proteic combining of provitamins and vitamins A and D. *Biokhimiia*,  
Moskva 15 no.5:448-456 Sept-Oct 1950. (GLML 20:7)

1. Institute of Biochemistry imeni A.N. Bakh, Academy of Sciences  
USSR, Moscow.

BUKIN, V.N.; ARESHKINA, L. Ya.

Proteic compounds of provitamins and vitamins A and D. Vit.res.  
i ikh isp. no.1:7-21 '51. (MLRA 8:12)  
(PROVITAMINS) (VITAMINS--A) (VITAMINS--D)

ARESHKINA, L. YA.

USSR/Biology - Alkaloids, Plants

Sep/Oct 51

"The Role of N-Oxides of Alkaloids in the Plant,"  
L. Ya. Areshkina, Inst Biochem imeni A. N. Bakh,  
Acad Sci USSR, Moscow

"Biokhim" Vol XVI, No 5, pp 461-470

On the basis of extensive exptl data, discusses  
the phytochem significance of N-oxides of alka-  
loids, with particular attention to Senecio  
platyphyllus.

202T19



ARESHKINA, L. Ya.

Chemical Abst.  
Vol. 48 No. 8  
Apr. 25, 1954  
Biological Chemistry

Sterol-protein complexes and their transformations

Ya. Areshkina, V. N. Bukin, and B. I. Skarobogov

*Dokl. Akad. Nauk SSSR*, 1954, 10, 1021

*Biochimiyer* 18, 651-654 (1953). Chem. and physico-chem.

methods of analysis were employed. In egg yolk and egg

yolk, sterol complexes with P-contg. proteins are represented

by a variety of compls. having different protein and sterol

components. Esterified and non-esterified sterols may en-

ter into complex formation with proteins; hence it can not be

assumed that the hydroxyl group of ring A sterols is the

factor responsible for complex formation. The introduction

into ring B of another acid, lauric (provitamin D) or the split-

ting of ring B (vitamin D) does not render the sterol in-

capable of protein complex formation. This would indicate

that the complex formation occurs at the H bond of C atoms

in positions 5, 7 of ring B. The stability of the complexes

varies. Some are destroyed by treatment with org. solvents,

while others can be destroyed only by alk. hydrolysis. Com-

plexes of varying degree of stability can be present in egg

and the same lipoprotein. A direct relation exists in the

complexes between P, K and the sterols. The formation

and splitting of the sterol-protein complexes are connected

with the processes of phosphorylation and dephosphoryla-

tion of the protein resulting correspondingly in an increase or

decrease in the sterol and lipoprotein content. The cleav-

age of non-esterified sterols from the complex is connected

with the process of dephosphorylation. The cleavage of

esterified sterols occurs through other processes without the

reduction in P content of protein. In the egg yolk, provi-

itamin D enters into complex formation with the water-sol-

fraction of the protein, and this complex is easily destroyed

by heat of coagulation. B. S. Levin

Handwritten initials and a circled number '2'.

FILE - HKINA, L. YA. USSR.

Micro- and macromethods for the determination of vitamin B<sub>12</sub>. V. N. Bukin, L. Ya. Archkina, and L. B. Kutseva (A. N. Bakh Inst. Biochem., Acad. Sci. U.S.S.R., Moscow). *Biochimiya* 19, 713-20 (1954).--A microbiol. and two chem. methods are described for the detn. of vitamin B<sub>12</sub> (I). In the first, a strain of *Escherichia coli* deficient in the production of I is used as the indicator organism. Transfers are made into tubes contg. a special synthetic liquid medium, incubated for 24 hrs., centrifuged, washed twice by resuspension and centrifugation in 0.9% NaCl, and a final standard suspension is made. To each of a series of tubes are added 5 ml. of the synthetic liquid culture medium and 5 ml. of varying dilns. of a standard concn. of I as the control set, and to another series of tubes are added 5 ml. of varying concns. of the exptl. material. Other steps of the procedure are described. The first chem. method consists of the following steps: mix 100 g. of minced liver and 300 ml. H<sub>2</sub>O, autoclave, and filter; mix 300 ml. of filtrate and 6 g. (2%) charcoal and filter; elute twice with 18 times the vol. of 65% alc.; conc. 192 ml. of eluate to 19.2 ml.; transfer 19.2 ml. of the concentrate into a mixt. of phenol and CHCl<sub>3</sub> and wash with CHCl<sub>3</sub>-saturd. H<sub>2</sub>O; to 10 ml. of phenol-CHCl<sub>3</sub> mixt. add 7 times the vol. of CHCl<sub>3</sub>; transfer 96 ml. of the phenol-CHCl<sub>3</sub> mixt. contg. the I into H<sub>2</sub>O; wash 10 ml. of the H<sub>2</sub>O soln. with ether and conc.; use 4-5 ml. per det. The product should be of rose color characteristic of I. Det. absorption in the spectrophotometric region of 548 mμ. Use the formula:  $\gamma$  of I =  $E \times V \times 10^4 / 64$ , where  $E$  is the observed absorption coeff.,  $V$  the final vol. of the H<sub>2</sub>O soln. in ml., 64 the absorption coeff. for 1% soln. of I at 548 mμ, 10<sup>4</sup> the conversion coeff. of I from 1% to  $\gamma$  per ml. Detns. can be made on samples having 50-75  $\gamma$  of I. The second chem. method, designed for special purposes, is a short cut of the first having the same initial 4 steps. B. S. Levin

*Arshkina, L. Ya.*

**BUKIN, V.N.; ARSHKINA, L.Ya.; SZOROBGATOVA, Ye.P.**

Chemical method for the determination of vitamin B<sub>12</sub>. Vit. res. 1  
ikh isp. no.3:182-187 '55. (MLRA 9:4)

(VITAMINS--B) (COLORIMETRY) (SPECTRUM ANALYSIS)

Areshkina, L. Ya.

MD ✓ Chemistry and biochemistry of vitamin B<sub>12</sub>. V. N. Bukin, L. Ya. Areshkina, and L. S. Kutseva. *Uspekhi Sovetskoih Biol.* 40, 263-88 (1955).—A review of the present status of the structure, phys. and chem. properties of vitamin B<sub>12</sub> and of its derivs. and analogs., methods of detn., sources of the vitamin, its relation to intrinsic factor, and numerous biochem. roles ascribed to the vitamin. The uncertain status of the exact biochem. function of vitamin B<sub>12</sub> is pointed out. J. A. Stekol

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EXCERPTA MEDICA Sec.2 Vol.11/3 Physio-biochem. Mar 58

1074. CHANGES INDUCED IN PROTEIN-STEROL COMPLEXES OF SERUM BY EXPERIMENTAL RICKETS AND HYPERVITAMINOSIS-D (Russian text) - Areshkina L. Ya., Bukin V. N., Erofeeva N. N. and Skobogatova E. P. Inst. of Biochem., Acad. of Scis of USSR, Moscow - BIOKHIMIA 1957, 22/1-2 (384-390) Tables 9 Illus. 3

A study was carried out on the serum of normal, rickety and D-hypervitaminotic rats. No quantitative changes were found in the content of individual protein fractions or in their electric mobility, but abrupt changes were noted in the composition and properties of fractions. In rickets, there was a decrease in P content, mostly in the albumin fraction, affecting both inorganic P and organic combined P. In D-hypervitaminosis an abrupt increase of P content was found, mainly in globulins and in the organic-bound forms an abrupt increase in the same fractions of Ca content, along with strengthening of its binding and a pronounced rise of lipids.

USSR/Plant Physiology. Respiration and Metabolism

Abs Jour : Ref Zhur - Biol., No 19, 1958, No 86633

Author : Areshkina L.Ya.

Inst : -

Title : Alkaloids of the Genus Senecio and Their Transformations in the Plants.

Orig Pub : Biokhimiya, 22, No 3, 527, 1957

Abstract : Along with the growth of Senecio platyphyllus plants there is a proportional increase in the sum total of alkaloids. At the end of vegetation, the observations established a decrease in the alkaloid content of the above-ground part of the plant and a pronounced accumulation of alkaloids in the rhizome. The alkaloids are basically represented by the N-oxide form, and their content varies mostly owing to that form. The content of the reduced form of alkaloids is insignificant and therefore constant in the course of growth of the plant. During the quiescent period the alkaloids are

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ARESHKINA, L. Ya

UNCLASSIFIED

PROCEEDINGS OF THE INTERNATIONAL SYMPOSIUM ON ENZYME CHEMISTRY, TOKYO & KYOTO, 1957  
AUTHOR: Organizational Committee, International Symposium on Enzyme Chemistry, Tokyo, 1957  
Moscow, 1958.

Vitamin D and Protein-Sterol Complexes in Blood Serum

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The enzyme fraction retains most of the activity of the original tissue extract for the biosynthesis of active vitamin D. The activity of the enzyme is inhibited by p-chloromercuribenzoic acid and mercuric chloride and this inhibition is reversed by mercaptoethanol. The significance of these results has been discussed.

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Discussion

A. L. LEVITSKY (Laboratory of Medicine, U.S.S.R.): I should like to ask our recent work on the actions of purified enzymes in the synthesis of active vitamin D. The reaction of 7-dehydrocholesterol to vitamin D<sub>3</sub> is catalyzed by the enzyme 7-dehydrocholesterol 7-epoxidase. The reaction is inhibited by p-chloromercuribenzoic acid and mercuric chloride and this inhibition is reversed by mercaptoethanol.

The action of cyanide described by Professor Galka appears to be different from the action of cyanide in the reaction of 7-dehydrocholesterol to vitamin D<sub>3</sub>. It has been shown that the reaction of 7-dehydrocholesterol to vitamin D<sub>3</sub> is inhibited by cyanide and this inhibition is reversed by reduced glutathione. The reaction of 7-dehydrocholesterol to vitamin D<sub>3</sub> is inhibited by cyanide but not by reduced glutathione. The reaction, however, does not require the presence of oxygen. In these reactions only 7-dehydrocholesterol and L-glutathione are involved.

Vitamin D and Protein-Sterol Complexes in Blood Serum

Y. K. BIRIN and L. Ya. ARESHKINA

A. S. Bakh Institute of Biochemistry, Academy of Sciences, Moscow, U.S.S.R.

In more than 10 years increasing interest has been attached to the investigation of protein-sterol complexes because in many cases they reflect the refined biochemical changes which occur in various diseases. The study of these complexes in blood serum is of great interest because it is related to embryonic development or development of atherosclerosis (1,2). It is of interest to know the nature of the complexes and the biochemical nature of the complexes of vitamin D in blood serum.

It has been found that the salts of the enzyme have been found to be effective and not the salts of the enzyme itself. It appears that the second stage of the reaction etc. the conversion of 7-dehydrocholesterol into active vitamin D is competitive with the formation of L-glutathione from L-glutathione. Without the formation of L-glutathione from L-glutathione in most animals, it is apparently with the reaction in present tissues of primates and the guinea pig. There are indications that the reaction of 7-dehydrocholesterol to vitamin D<sub>3</sub> is catalyzed by the enzyme 7-dehydrocholesterol 7-epoxidase.

H. C. Hays (*University of Kansas, Lawrence, Kansas*): We have previously described an enzymatic system which is present in the liver of the guinea pig and which catalyzes the reduction of a great number of substrates including D-glucosamine, according to the general equation: H-COO + TPNH + H<sup>+</sup> → CH(OH) + TPNH<sub>2</sub>.

The enzyme has been named "aldehyde reductase". It is a dimeric enzyme of the type found in many other animals and plants. It acts on D-glucosamine by the formation of a Schiff base with the amino group of the amino group of the substrate. In intact tissues, the high degree of reduction of TPNH<sub>2</sub> would assure a complete reduction of the substrate. C. C. Glick: I agree that the high level of reduced TPNH<sub>2</sub> is necessary to allow the reduction of the substrate. It is interesting to study to reduce the glucosamine to glucose.

V. N. BUCIN (*Academy of Sciences, U.S.S.R.*): I should like to ask you about the reaction of 7-dehydrocholesterol to vitamin D<sub>3</sub>. It has been shown that in rat experiments the reaction of 7-dehydrocholesterol to vitamin D<sub>3</sub> is inhibited by cyanide and this inhibition is reversed by reduced glutathione. It has been shown that the reaction of 7-dehydrocholesterol to vitamin D<sub>3</sub> is inhibited by cyanide and this inhibition is reversed by reduced glutathione. The reaction of 7-dehydrocholesterol to vitamin D<sub>3</sub> is inhibited by cyanide but not by reduced glutathione.

A. A. LEVITSKY: In connection with the reduction of D-glucose to D-glucitol, it is interesting to know the nature of the complexes of vitamin D in blood serum. It is of interest to know the nature of the complexes of vitamin D in blood serum. It is of interest to know the nature of the complexes of vitamin D in blood serum.

ARSHKINA, L.Ya

Fourth All-Union Conference on Vitamins. Izv. AN SSSR Ser. biol.  
no. 3:377-379 My-Je '58 (MIRA 11:6)  
(VITAMINS--CONGRESSES)



SOV/30-58-9-24/51

AUTHORS: Areshkina, L. Ya., Candidate of Biological Sciences  
Glikina, M. V., Candidate of Biological Sciences, Mosolov,  
V.V., Candidate of Biology

TITLE: News in Brief (Kratkiye soobshcheniya) Methodological Symposium  
on the Structure of Albumin (Metodicheskiy simpozium po strukture  
belkov)

PERIODICAL: Vestnik Akademii nauk SSSR, 1958, Nr 9, pp. 92 - 93 (USSR)

ABSTRACT: The symposium took place in Prague (Praga) from June 2 to  
14. It had the purpose of informing scientists from other  
countries on the latest methods of albumin research of the  
Khimicheskiy institut Chekhoslovatskoy Akademii nauk (Che-  
mical Institute of the Czechoslovakian Academy of Sciences).  
It was attended by representatives of the Soviet Union, Poland,  
Hungary, Bulgaria, the Chinese People's Republic. Practical  
work was explained and reports were delivered in Russian  
and German. In the Khimicheskiy institut (Chemical Institute)  
an instrument for electrophoresis and a new method of  
chromatography was shown. A simple and handy instrument for  
the separation of higher peptides from lower ones was  
demonstrated.

Card 1/2

ARESHKINA, L. YA., KUTSEVA, L. S., and SKOROBOGATOVA, E. P. (USSR)

"The Participation of Vitamin B<sub>12</sub> in the Protein Metabolism of  
Escherichia Coli 113-3."

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

ARESHKINA, L. Ya.; KUTSEVA, L.S.; SKOROBOGATOVA, Ye.P.; ZHUKOVA, I.G.

Participation of vitamin B<sub>12</sub> in the protein metabolism of Escherichia coli. Vit. res. i ikh. isp. no.5:19-31 '61. (MIRA 15:1)

1. Institut biokhimii im. A.N.Bakha AN SSSR, Moskva.  
(CYANOCOBALAMINE) (PROTEIN METAPOLITIM)

ARESHKINA, L. Ya.; SKOROBOGATOVA, Ye.P.

Chemical testing of vitamin B<sub>12</sub> produced by the use of propionic acid bacteria. Vit. res. i ikh. isp. no.5:164-167 '61. (MIRA 15:1)

1. Institut biokhimii im. A.N.Bakha AN SSSR, Moskva.  
(CYANOCOBALAMINE)  
(DRUGS ADULTERATION AND ANALYSIS)

ANDREYEVA, N. A.; KUTSEVA, L. S.; ARESHKINA, L. Ya.

Participation of folic acid and vitamin B<sub>12</sub> in purine synthesis  
by the cells of Escherichia coli 113-3. Dokl. AN SSSR 141 no.1:  
223-226 N '61. (MIRA 14:11)

1. Institut biokhimii im. A. N. Bekha AN SSSR. Predstavleno  
Akademikom A. I. Oparinym.

(FOLIC ACID)  
(CYANOCOBALAMINE)  
(PURINES)

ARESHKINA, L.Ya.; CHANAN SINGKH; KUTSEVA, L.S.; SKOROBOGATOVA, Ye.P.

Isolation of the coenzyme of vitamin B<sub>12</sub>. Dokl. AN SSSR 146  
no.1:207-209 S '62. (MIRA 15:9)

1. Institut biokhimii im. A.N. Bakha AN SSSR. Predstavleno  
akademikom A.I. Oparinym.  
(CYANOCOBALAMIN) (COENZYMES)

ARESHKINA, L. Ye., ANDREYEVA, N.A., KUTSEVA, L.S., BUKIN, V.N.

"Combined effect of Folic Acid and Vitamin B12 in Purine Synthesis"

Report to be presented at Medical Society of J. E. PURKYNE, Czech,  
Vitaminological Cong., Prague Czech., 3-6 Jun 63

ARESHKINA, L.Ya.; KUTSEVA, L.S.; SKOROBOGATOVA, Ye.P.

Cobamide coenzymes. Usp.biol.khim. 5:262-274 '63.

(MIRA 17:3)



ARESHKINA, L.Ya.; ANDREYEVA, N.A.; KUTSEVA, L.S.; BUKIN, V.N.

Joint participation of vitamin B<sub>12</sub> and folic acid in purine synthesis. Dokl. AN SSSR 148 no.3:704-707 Ja '63.

(MIRA 16:2)

1. Institut biokhimii im. A.N. Bakha AN SSSR. Predstavleno akademikom A.I. Oparinym.

(CYANOCOBALAMIN) (FOLIC ACID) (PURINES)

KUSEVA, I.S.; ARESHKINA, I.Ya.; KLYUYEVA, N.M.; SKOPCHENKOVA, Ye.G.

Control methods in the production of lysine. Prikl. biokhim.  
i mikrobiol. i no.2:217-221 Nov-Apr '65.

(MIRA 18:33)

1. Institut biokhimi imeni A.N.Bakha AN SSSR, Moskva.

KUTSEVA, L.S.; ARESHKINA, L.Ya.; ANDREYEVA, N.A.; SKOROBOGATOVA, Ye.P.

Folic acid activating enzyme system resistant to aminopterin  
and containing vitamin B<sub>12</sub>. Biokhimiia 29 no.5:969-974  
Jl-Ag '64. (MIRA 18:11)

1. Institut biokhimii imeni Bakha AN SSSR, Moskva.

ARESHKINA, L.Ya.; RAMINYA, L.O. [Ramina, L.]; ARE, R.Yu.; KARKLIN'SH, R.Ya.  
[Karklins, R.]

Isolation and purification of L-lysine from culture fluid  
by the ion exchange method. Prikl. biokhim. i mikrobiol.  
1 no.4:404-405 J1-Ag '65. (MIRA 18:11)

1. Institut biokhimi imeni A.N.Bakha AN SSSR, Institut  
mikrobiologii imeni A.Kirkhenshteyna AN Latvyskoy SSR i  
Rizhskiy zavod biokhimicheskikh preparatov.

ARESHKINA, L.Ya.; BEKER, M.Ye.; BUKIN, V.N.; KARKLIN'SH, R.Ya. [Karklins, R.];  
KLYUYEVA, N.M.; KUTSEVA, L.S.; LIYEPIN'SH, G.K. [Liepins, G.]

Microbiological synthesis of L-lysine. Prikl. biokhim. i  
mikrobiol. 1 no.4:396-403 J1-Ag '65.

(MIRA 18:11)

1. Institut biokhimii imeni A.N.Bakha AN SSSR, Institut  
mikrobiologii imeni A.Kirkhensteyna AN Latvyskoy SSR i  
Rizhskiy zavod biokhimicheskikh preparatov.

ARESHKOVICH, V. D.

PA 20/49T67

USSR/Engineering  
Construction Industry  
Stacks, Smoke-

Nov 48

"Erection of Steel Smokestacks," A. Z. Tsifrinovich,  
Engr, Laureate of Stalin Prize, V. D. Areshkovich,  
I. M. Livshits, Engineers, 5½ pp

"Stroitel' Prom" No 11

"Stal'montazh" Trust has been responsible for erecting  
many steel smokestacks. Briefly describes experience  
gained and optimum methods. Engineering data  
necessary for the raising of separate sections of  
steel smokestacks.

20/49T67

ARESHKOVICH, V.D., inzhener; FLEYER, A.D., inzhener.

Demonstration building of the No.12 blast furnace in Dneprodzerzhinsk. Stroi.prom. 34 no.10:2-10 0 '56. (MLRA 9:12)

1. Trest Dzerzhinskstroy.  
(Dneprodzerzhinsk--Blast furnaces)

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So: Knizhnaya letopis' No. 38, 1956 Moscow



ARESHNIKOV, B.A., kand.biol.nauk

New phosphorus organic compounds for controlling the shield bug  
*Eurygaster integriceps*. Zashch.rast.ot vred. i bol. 3 no.6:39-40  
' 58. (MIRA 11:12)

1. Ukrainskiy Nauchno-issledovatel'skiy institut zashchity rasteniy,  
g. Kiyev. (Eurygasters) (Phosphorus organic compounds)

ARESHNIKOV, B.A.[Arieshnikov, B.A.], kand.biolog.nauk

Ecology of the lupine weevil and bases for the chemical control  
of the beetles of the new generation. Nauch. trudy UASHN 9:146-158  
159.

(Lupine—Diseases and pests) (Weevils)

(MIRA 14:3)

ARESHNIKOV, B.A., kand.biolog.nauk

Chlorophos in the protection of farm crops. Zashch. rast. ot vred.  
i bol. 6 no.12:20 D '61. (MIRA 16:5)

1. Ukrainskiy nauchno-issledovatel'skiy institut zashchity rasteniy.

RUDNEV, D.F., doktor biolog.nauk; ARESHNIKOV, B.A., kand.biolog.nauk

Chlorophos. Zashch. rast. ot vred. i bol. 8 no.7:37-38 J1 '63.  
(MIRA 16:9)

1. Ukrainskiy nauchno-issledovatel'skiy institut zashchity rasteniy.