SHRGIYEVSKAYA, S.I.; KROPACHEVA, A.A.; SVENTSITSKAYA, L.Ye.

Study of fatty-aromatic amino alcohols. Part 2: Methods for the preparation of α-(m-hydroxyphenyl)-β-methylaminoethanol. Zhur. ob. khim. 26 no.8:2322-2325 Ag '56. (MLRA 10:11)

1. Vsesoyuznyy nauchno-issledovatel'skiy khimiko-farmatsevticheskiy institut imeni S. Ordzhonikidze.
(Ethanol)

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000826630002-4"

AUTHORS: Sventsitskaya, L. Ye., Kropacheva, A. A., Sergiyevaskaya, S. I.

SOV/79-28-6-37/63

TITLE: 2,4-Di-(Ethylenimino)-1,3,5-Triazine (2,4-di-(etilenimino)-1,3,5-triaziny)

PERIODICAL: Zhurnal obshchey khimii, 1958, Vol. 28, Nr 6, pp. 1601-1607 (USSR)

ABSTRACT: Among the 1,3,5-triazine has been well known for a long time as medicament against some kinds of carcinoma; this caused the upshoot of a great number of analogous compounds and supplied a great contribution of new data to the chemistry of ethylenimino triazines. In their search for better remedies against carcinoma the authors synthesized the 2,4,-di-(ethylenimino)-1,3,5-triazines which in the third substituent (R) in the cycle of triazine either contain a nitrogen-containing heterocyclic radical or as radical the ester of an aliphatic or aliphatic-aromatic amino acid (see scheme 1). In the synthesis of the substituted 1,3,5-triazines cyanuric chloride usually serves as initial material, in which the chlorine atoms are either completely or only partially substituted by other groups or radicals. The substitution can be carried out in different ways independence on the character of the reacting compounds and on the conditions of reaction (Ref 1). Two ways could be taken to synthesize the compounds chosen: 1) To synthesize the already known 2,4-di-(ethylenimino)-6-chloro-1,3,5-triazine and to substitute the chlorine by corresponding amino acids in it; or 2) First to substitute only one chlorine atom in the cyanuric chloride by the amino compound in order to then react it on the substituted 2,4-dichlorotriazine

with ethylenimine (see scheme 2). Both methods were used. Thus the 6-substituted 2,4-di-(ethylenimino)-1,3,5-triazines were obtained. Those substituted were nitrogen-containing heterocycles and esters of aliphatic and aliphatic-aromatic amino acids. In general the biologic properties of these products are similar to those of triethyleniminotriazine without having special medical-clinical advantages as compared to those already used in medical practice. There are 3 references. 0 of which are Soviet.

ASSOCIATION: Vsesoyuznyy nauchno-issledovatel'skiy khimiko-farmatsevticheskiy institut im. S. Ordzhonikidze
(All-Union Scientific Chemo-Pharmaceutical Research Institute Imeni S. Ordzhonikidze)

SUBMITTED: May 19, 1957

1. Triazines--Synthesis

CHERNOV, V.A.; LYTKINA, V.B.; SERGIYEVSKAYA, S.I.; KROPACHEVA, A.A.; PARSHINA, V.A.; SVENTSITSKAYA, L.Ye.

On the antitumor activity of certain derivatives of the trimer and tetramer of phosphonitrile. Farm. i toks. 22 no.4:365-367 Jl-Ag '59. (MIRA 13:1)

1. Vsesoyuznyy nauchno-issledovatel'skiy khimiko-farmatsevticheskiy institut imeni S. Ordzhonikidze.
(HETEROCYCLIC COMPOUNDS pharmacol.)
(ANTINEOPLASTIC AGENTS pharmacol.)

AUTHORS: Kropacheva, A. A., Parshina, V. A. SOV/79-29-2-43/71

TITLE: Derivatives of Ethylenimine (Proizvodnyye etilenimina). I. Ethylenimides of Phosphoric Acid (I. Etilenimidy fosfornoy kisloty)

PERIODICAL: Zhurnal obshchey khimii, 1959, Vol 29, Nr 2, pp 556-560 (USSR)

ABSTRACT: The derivatives of phosphoric acid are not only used in agriculture and industry but also for medical purposes. Recently several papers have been published on the activity of some ethylenimides of phosphoric acids inhibiting malignant new growths. Two of these, the compounds (A) and (B) were used in medicine. In 1955 the authors began their work on the synthesis of the ethylenimine derivatives of phosphoric acids. They intended to have the compounds they were to obtain biologically tested in order to investigate the influence exercised by the substituents to be introduced upon malignant swellings. The first part of the present paper consisted in the synthesis of aryl-di-(ethylene)-phosphorus triamides of the general formula 4. These compounds were synthesized according to scheme 1. In accordance with this scheme the n-oxy-chloro phosphines of the arylamines (II)

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are obtained from the corresponding amino compounds (I) and the remaining chlorine atoms are then substituted by ethylenimine (III). Compounds (II) were obtained by two methods: 1) By one mole of phosphorus oxychloride with two moles of amino compounds and 2) by heating of the chlorine hydrate of the amino compound with an excess of phosphorus oxychloride. By the first method only N-oxy-chloro phosphines of n-methoxy-aniline and β-naphthyl amine were obtained. All the other N-oxy-chloro phosphines (of aniline, n-chloro aniline, m-nitro-aniline of the m-aminobenzoic acid chloride, n-iodo aniline, n-carbethoxy aniline) were obtained by the second method. The first four were already known (Ref 2). All N-oxy-chloro phosphines obtained were exposed to the influence of ethylenimine in order to synthesize the ethylenimine derivatives. According to Bestian (Ref 3) it was possible to replace chlorine by the ethylimine cycle. By action of ethylenimine upon the N-oxy-chloro phosphine of the m-aminobenzoic acid chloride (Table 1, Nr 7) the halogen of the acid halide group also entered into reaction with ethylenimine. The product obtained is, quite unexpectedly,

Derivatives of Ethylenimine. I. Ethylenimides of Phosphoric Acid SOV/79-29-2-43/71

no polymer. According to the analysis it corresponds either to ethylenimide (IV) or to a derivative of oxazolene (V). The infrared spectrum recorded indicated (IV). In this way a compound with three ethylenimine cycles was obtained. Altogether 9 hitherto not described di-(ethylene)-aryl-triamides of phosphoric acid and five N-oxy-chloro phosphines of the arylamines were synthesized. There are 2 tables and 4 references, 2 of which are Soviet.

ASSOCIATION: Vsesoyuznyy nauchno-issledovatel'skiy khimiko-farmatsevticheskiy institut imeni S. Ordzhonikidze (All-Union Scientific Chemico-pharmaceutical Research Institute imeni S. Ordzhonikidze)

SUBMITTED: November 1, 1957

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TARNYNVA, A.I.; KROPACHEVA, A.A.; RABINOVICH, F.Ye.

Comparative studies on anthelmintic properties of various salts of piperazine. Med.paraz.i paraz.bol. 37 no.5:591-594 S-O '59. (MIRA 13:4)

1. Iz otdela farmakologii Vsesoyuznogo nauchno-issledovatel'skogo khimiko-farmatsevticheskogo instituta imeni S. Ordzhonikidze (zaveduyushchiy otdelom - prof. M.D. Mashkovskiy).
(PIPERAZINE pharmacol.)

KROPACHEVA, A.A.; PARSHINA, V.A.; SERGIYEVSKAYA, S.I.

Derivatives of ethylenimine. Part 2: Ethylenimides of phosphoric and thiophosphoric acids. Zhur. ob. khim. 30 no.11:3584-3588 N'60. (MIRA 13:11)

1. Vsesoyuznyy nauchno-issledovatel'skiy khimiko-farmatsevticheskiy institut imeni S.Ordzhonikidze.

(Ethylenimine) (Phosphoric acid) (Phosphorothioic acid)

S/169/62/000/001/082/083
D228/D302

AUTHOR: Kropotkin, P. N.

TITLE: Paleomagnetism, paleoclimates, and the problem of large horizontal movements of the crust

PERIODICAL: Referativnyy zhurnal, Geofizika, no. 1, 1962, 31, abstract 1G222 (Sov. geologiya, no. 5, 1961, 16-38)

TEXT: The author quotes new, latterly accumulated data which permit it to be affirmed that paleomagnetism finds wide application in paleoclimatology and for the correlation and coordination of stratigraphic sections, especially in studying barren Proterozoic masses and in determining the age of intrusions. The paleomagnetic method is also important for geotectonic research, i.e. it permits a closer approach to solving the advantageous question of fixing and mobilism of large crustal blocks. It is noted that paleomagnetic investigations are being widely conducted in the USSR, and that the development of new magnetometric apparatus is being undertaken; instructions on sample selection and on paleomagnetic

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research procedure have been compiled. A map of the positions of the North Pole in different geologic epochs according to the data of rock paleomagnetism for North America, Europe, the Siberian platform, China and Japan, Indonesia, Africa, Australia, and Antarctica is adduced with an indication of the type of rocks from which the specimens were chosen. The curves of polar movement according to the data of samples taken in different continents abruptly differ longitudinally which is the main argument in favor of the mobilism of continental blocks. A scheme of the position of the paleomagnetic poles in Upper Paleozoic, Mesozoic, and Lower Tertiary rocks of southern continents is also given with the reconstruction of their former arrangement according to Du Toit. The connexion of paleomagnetism and climatic zoning in lithology is considerd; schematic maps are given for the climatic zoning of north-western Eurasia in the Devonian and in the Kungurian stage of the Permian. In the concluding section ("Contemporary state of the theory of epeirophorosis") ("continental drift") it is mentioned that the criticism of mobilism in the works of N. S. Shatskiy and V. V. Belousov was directed against the original version

of the Wegener hypothesis which proposed the "free drifting" of continental blocks on a plastic shell under the action of external forces. Contemporary mobilism is related rather to the development of Ampferer's idea about "subcrustal currents". This theory has been developed by a number of scientists. Crustal deformations are, thereby, considered as the result of active movements of abyssal masses. A number of examples of the similarity of the geologic structure of the corresponding parts of the now separated continents are quoted in support of the theory of mobilism, geologic sections are given for the Falkland Islands and South Africa, and the astonishing correspondence of these sections is noted despite the fact that the present distance between them amounts to 6500 km. 75 references. /Abstractor's note: Complete translation./

KROPACHEVA, A.A.; MUKHINA, L. Ye.; KASHNIKOVA, N.M.; PARSHINA, V.A.

Reactions of esters of certain amino acids an piperidine with the phosphonitrile chloride trimer. Zhur. ob. khim. 31 no.3:1036-1037 Mr '61. (MIRA 14:3)

1. Vsesoyuznyy nauchno-issledovatel'skiy khimiko-farmatsevticheskiy institut imeni S. Ordzhonikidze.
(Phosphonitrile chloride) (Amino acids) (Piperidine)

KROPACHEVA, A.A.; DERKACH, G.I.; KIRSANOV, A.V.

N, N', N"-Triethylenetriamidophosphazo compounds and N', N", N'"-triethylene-N-diamidophosphinylarenamidines. Zhur.ob.khim. 31 no.5:1601-1604 My '61. (MIRA 14:5)

1. Institut organicheskoy khimii Akademii nauk Ukrainskoy SSR.
(Phosphazo compounds) (Amidines)

KROPACHEVA, A.A.; MUKHINA, L.Ye.

Interaction of ethylenimine with a trimer of phosphonitrile trichloride. Zhur.ob.khim. 31 no.7:2437 Jl '61. (MIRA 14:7)

1. Vsesoyuznyy nauchno-issledovatel'skiy khimiko-farmatsevticheskiy institut imeni S. Ordzhonikidze.
(Ethylenimine) (Phosphonitrile chloride)

KROPACHEVA, A.A.; SAZONOV, N.V.

Derivatives of ethyleneimine. Part 3: Diethyleneimides of pyrimidylamidophosphoric acids. Zhur. ob. khim. 31 no. 11:3601-3605 N '61. (MIRA 14:11)

1. Vsesoyuznyy nauchno-issledovatel'skiy khimiko-farmatsevticheskiy institut imeni S. Ordzhonikidze.
(Phosphoramidic acid)

Khimiya i Primeneniye Fosforoorganicheskikh Soyedineniy (Chemistry and Application of Organophosphorus Compounds) A. Ye. Arbuzov, Ed. publ. by Kazan' Affil, Acad. Sci. USSR, Moscow, 1962 638pp.

Collection of complete papers presented at the 1959 Kazan Conference on Chemistry of Organophosphorus Compounds.

S/079/62/032/002/002/011
D227/D303

AUTHORS: Kropacheva, A.A. and Mukhina, L.Ye.

TITLE: Reactions of phosphonitrie chloride trimer. 1. Substitution of chlorine atoms of the trimer with morpholine

PERIODICAL: Zhurnal obshchey khimii, v. 32, no. 2, 1962, 521-525

TEXT: The authors conducted a study of the reaction of phosphonitrile chloride trimer with morpholine. A step-bystep substitution of 1 to 6 chlorine atoms was carried out to find out the order of substitution, the number of Cl atoms which can be substituted and the possibility of isomerism. The reactions were conducted in ether or benzene at different temperatures and with varying quantities of reactants using morpholine as an HCl acceptor. The reaction products after filtration of morpholine hydrochloride and removal of solvent were examined by chromotography. It was shown that by changing the ratio of reactants and temperature it was possible to control the reaction and, therefore, the degree of substitution. Phosphonitrile chloride trimers with substituted 1,2,3,4, 5 and 6

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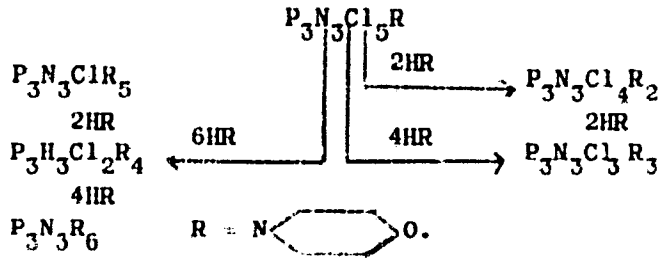
Cl atoms were obtained. In the preparation of trimorpholyl derivative, products with different m.p.'s but similar compositions were produced. Mono-, di-, tetra- and hexamorpholyl derivatives were obtained in yields of 64, 62, 75,75%respectively (corresponding m.p.'s being 92.5-93.5, 106-108, 157-158, and 293°C). Trimorpholyl derivative's (m.p.'s 114-115 and 101.5-102.5°C) yield was only 36% and that of penta-morpholyl derivative 13.3 %, indicating intensive side reactions. The authors have also found the possibility of convertingtriphosphonitrile chloride with lower degree of substitution into derivatives with higher degree of substitution with morpholine according to the following scheme:



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There are 2 tables and 7 references, 1 Soviet-bloc and 6 non-Soviet-bloc. The reference to the English-language publication reads as follows: Andrieth, L.F. Steinman and A.D. Toy, Chem. Revs., 32, 109 (1943).

ASSOCIATION: Vsesoyuznyy nauchno-issledovatel'skiy khimiko-farmatsevticheskiy institut im. S. Ordzhonikidze (All-Union Scientific Research Chemico-Pharmaceutical Institute im. S. Ordzhonikidze).

SUBMITTED: January 19, 1961

S/079/62/032/002/010/011
D243/D303

53630

AUTHORS: Kropacheva, A.A. and Kashnikova, N.M.

TITLE: Reaction of pyrrolidine with the trimer of phosphonitrylchloride

PERIODICAL: Zhurnal obshchey khimii, v. 32, no. 2, 1962, 652

TEXT: The authors studied the reaction of pyrrolidine with the trimer of phosphonitrylchloride. It was found that, depending on the reaction conditions, it is possible to obtain derivatives with different degrees of substitution (from one to six) of the chlorine atoms in the trimer of phosphonitrylchloride. It was revealed that, in the case of di-, tri- and tetrapyrrolidine derivatives, isomerism occurs. The compounds formed are given in a table. [Abstractor's note: Complete translation]. There is 1 table.

ASSOCIATION: Vsesoyuznyy nauchno-issledovatel'skiy khimiko-farmatsevticheskiy institut (All-Union Scientific Research Chemical and Pharmaceutical Institute)

SUBMITTED: October 21, 1961

Card 1/1

KROPACHEVA, A.A.; DERKACH, G.I.; ZHURAVLEVA, L.P.; SAZONOV, N.V.; KIRSANOV, A.V.

N-diethylenediamidophosphonyl-N-arylurea. Zhur.ob.khim. 32 no.5:1540-1542 My '62. (MIRA 15:5)
(Urea)

KROPACHEVA, A.A.; SAZONOV, N.V.; SERGIYEVSKAYA, S.I.

Derivatives of ethylenimine. Part 4: Diethylenimides of pyrimidine-2-aminophosphoric acids. Zhur.ob.khim. 32 no.11:3796-3799 N '62. (MIRA 15:11)

1. Vsesoyuznyy nauchno-issledovatel'skiy khimiko-farmatsevticheskiy institut imeni S. Ordzhonikidze.
(Pyrimidine) (Phosphoric acid) (Aziridine)

KROPACHEVA, A.A.; KASHNIKOVA, N.M.

Isomerism of di-, tri-, and tetrapyrrolidyl derivatives of a phosphonitrile chloride trimer. Zhur.ob.khim. 33 no.3:1046-1047 Mr '63. (MIRA 16:3)

1. Vsesoyuznyy nauchno-issledovatel'skiy khimiko-farmatsevticheskiy institut imeni S. Ordzhonikidze.
(Phosphonitrile chloride)
(Pyrrolidine) (Isomerism)

KROPACHEVA, A.A.; KASHNIKOVA, N.M.; PARSHINA, V.A.

Reactions of phosphonitrile chloride trimers. Part 2: Interaction of a phosphonitrile chloride trimer with glycine ethyl ester. Zhur. ob.khim. 34 no.2:530-532 F '64. (MIRA 17:3)

1. Vsesoyuznyy nauchno-issledovatel'skiy khimiko-farmatsevticheskiy institut imeni S.Ordzhonikidze.

L 2560-66 EWT(m)/EWP(j) RM

ACC NR: AP6016707 SOURCE CODE: UR/0079/65/035/012/2229/2231

AUTHOR: Kropacheva, A. A.; Kashnikova, N. M.

ORG: All-Union Scientific Research Chemico-Pharmaceutical Institute im. S. Ordzhonikidze (Vsesoyuznyy nauchno-issledovatel'skiy khimiko-farmatsevticheskiy institut)

TITLE: Reaction of the trimer of phosphonitrile chloride. III. Structure of di- and tetra(carboethoxymethylamino)-triphosphonitrilechlorides

SOURCE: Zhurnal obshchey khimii, v. 35, no. 12, 1965, 2229-2231

TOPIC TAGS: phosphonitrile, ester, glycine, organic synthetic process, nonmetallic organic derivative, organic imine compound

ABSTRACT: The results of a study on di- (I) and tetra-(carboethoxymethylamino)triphosphonitrile chlorides (II), are presented. It was established that in these compounds the glycine ester groups are placed on the phosphorus atoms in pairs, as in the ethylenimine derivatives of triphosphonitrile chloride previously reported by A. A. Kropacheva and L. Ye. Mukhina. To show the paired position of the glycine ester groups on compounds (I) and (II), the mixed-hexaamino derivative structures were synthesized by changing the order of introduction of the substituents. [JPRS]

SUB CODE: 07 / SUBM DATE: 02Oct64 / ORIG REF: 002 / OTH REF: 001

Card 1/1 UDC: 546.185 : 546.171.1

L 18014-66 EWT(m)/EWP(j)/T WW/JW/RM

ACC NR: AP6003495 (N) SOURCE CODE: UR/0020/66/166/001/0155/0157

AUTHOR: Kokoreva, I. Yu.; Syrkin, Ya. K.; Kropacheva, A. A.; Kashnikova, N. M.; Muchina, L. Ye.

ORG: none

TITLE: Dipole moments of phosphonitrile chloride derivatives

SOURCE: AN SSSR. Doklady, v. 166, no. 1, 1966, 155-157

TOPIC TAGS: dipole moment, phosphonitrile, organic nitrogen compound, organic phosphorus compound, organic imine compound

ABSTRACT: The dipole moments of phosphonitrile chloride trimer and 17 of its derivatives of the pyrrolidine, piperidine, morpholine, and ethylenimine series were measured in dilute benzene solutions at 25° by the heterodyne method. Atomic polarization was not taken into account, so that the true values are somewhat lower than the tabulated ones. The dipole moment of phosphonitrile chloride trimer is 0.93 D. In the hexa-derivatives studied, the presence of substituents is thought to distort the plane of the ring, causing an increase in the dipole moment (1.75 D for the hexapyrrolidine and 1.16 D for the hexapiperidine

Card 1/2 UDC: 541.67

L 18014-66
ACC NR: AP6003495

derivatives). In the case of the mono-derivatives, the dipole moment of the trimer differs markedly from the moments of the monopyrrolidyl (3.74 D), monopiperidyl (3.67 D), monoethylenimyl (3.07 D), and monomorpholyl (1.91 D) derivatives. This substantial difference is attributed to the fact that phosphorus accepts the unshared pair of electrons of the nitrogen of the substituent in its 3d subshell. Orig. art. has: 1 table.

SUB CODE: 07 / SUBM DATE: 08Jul65 / ORIG REF: 001 / OTH REF: 006

Card 2/2

L 27590-66

ACC NR: AP6018385 SOURCE CODE: UR/0409/65/000/003/0433/0437

AUTHOR: Kropacheva, A. A.; Sazonov, N. V.

ORG: All-Union Chemical and Pharmaceutical Scientific Research Institute im. Ordzhonikidze, Moscow (Vsesoyuznyy nauchno-issledovatel'skiy khimiko-farmatsevticheskiy institut)

TITLE: Reaction of 2-aminopyridines with phosphorus pentachloride

SOURCE: Khimiya geterotsiklicheskikh soyedineniy, no. 3, 1965, 433-437

TOPIC TAGS: phosphorus, chloride, pyridine, phosphorylation, organic azo compound

ABSTRACT: The study of the interaction of 2-aminopyridines, substituted on the 4 or 5, and 4, 5 and 4,6 positions, with PCl_5 in boiling benzene is a continuation of the work on the phosphorylation of 2-aminopyridines in an effort to extend the phosphazo reaction of Kirsanov to obtain the dichlorides of pyrimidyl-2-aminophosphoric acids. The formation of phosphazo compounds or tetrachlorophosphoropyrimidines is dependent on the basicity of the initial amine. The former are formed when the basicity is weak, pK_a is less than 3.6; the latter, above 3.6. The formation of the above compounds was confirmed by their conversion into the dichlorides of pyrimidyl-2-aminophosphoric acid. Basicity measurements were made by I. V. Persianova. Orig. art. has: 1 table and 4 formulas. [JPRS]

SUB CODE: 07/ SUBM DATE: 04May64/ ORIG REF: 007

Card 1/1 UDC: 547.853 + 542.95

L 27772-66 EWP(j)/EWT(m)/T IJP(c) RM/WW

ACC NR: AP6018503

SOURCE CODE: UR/0079/65/035/011/1988/1992

AUTHOR: Kropachova, A. A.; Kashnikova, N. M.

ORG: All-Union Scientific Research Chemical and Pharmaceutical Institute im. S. Ordzhonikidze (Vsesoyuznyy nauchno-issledovatel'skiy khimiko-farmatsevticheskiy institut)

TITLE: Reaction of phosphonitrile chloride trimer. IV. Reaction of replacement of chlorine atoms of phosphonitrile chloride trimer by pyrrolidine

SOURCE: Zhurnal obshchey khimii, v. 35, no. 11, 1965, 1988-1992

TOPIC TAGS: phosphonitrile, nonmetallic organic derivative, chlorinated organic compoun

ABSTRACT: The possibility of successive replacement of one to six chlorine atoms of phosphonitrile chloride trimer by pyrrolidine was established, and the order of substitution was demonstrated. Replacement of the first and second chlorine atoms proceeds vigorously with evolution of heat; in the further substitution, the reactivity of the remaining chlorine atoms decreases with increasing number of substituted pyrrolidine groups. Complete substitution is possible after prolonged standing or with heating. The reaction is not unambiguous at any of the degrees of substitution, the reaction mass containing derivatives with lower and higher degrees of substitution at the same time. Variation of the temperature system and rate of addition of pyrrolidine permitted an influence on the course of the reaction, directing it toward predominant formation of derivatives with a set degree of substitution. Mono-, tri-, and hexapyrrolidyl derivatives can be

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UDC: 546.287:547.743.1

L 27772-66

ACC NR: AP6018503

produced in 60-80% yields, whereas the yields of the di- and tetra-derivatives do not exceed 36-38%, and the yields of the pentapyrrolidyl derivative are negligible. Isomeric compounds of the di-, tri-, and tetrapyrrolidyl derivatives were isolated. Ten structures with substituents of one type out of the 12 theoretically possible were isolated for the first time. Replacement of the chlorine atoms by pyrrolidine was found to proceed for the most part not in pairs, but one by one on different phosphorus atoms. [JPRS]

SUB CODE: 07/ SUBM DATE: 13Nov64 / ORIG REF: 004 / OTH REF: 002

Card 2/2

KRASICHEVA, E. D.

ERESLER, L.S.; DOLGOPLOSK, B.A.; KOLECHKOVA, M.F.; KROPACHEVA, Ye.N.

Copolymerization of butadiene with isoprene under the effect of complexes of butyllithium with triethylamine and tetrahydrofuran. Dokl.AN SSSR 144 no.2:347-348 My '62. (MIRA 15:5)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut sinteticheskogo kauchuka im. S.V.Lebedeva. 2. Chlen-korrespondent AN SSSR (for Dolgoplosk).

(Butadiene) (Isoprene) (Catalysts)

5.3831
~~5(3), 13(9)~~

67892

AUTHORS: Kropacheva, Ye.N., Dolgoplosk, B.A., Corresponding Member AS USSR, Kuznetsova, Ye.M.

S/020/60/130/06/020/059
B011/B015

TITLE: Investigation of the Rate of Addition of Lithium Ethyl to Styrene and Isoprene in the Course of the Polymerization Process

PERIODICAL: Doklady Akademii nauk SSSR, 1960, Vol 130, Nr 6, pp 1253-1255 (USSR)

ABSTRACT: The aim of this paper is to prove that the original organometallic compound is not added at once to the diene monomer as shown by data of S.Ye.Bresler and collaborators (Ref 1). The authors carried out their experiments in pure anhydrous argon at 250-300°. For this purpose they used a special reaction apparatus (Fig 1). Samples were taken from the reaction vessel within certain intervals, and by means of them the amount of the polymer formed was determined as well as that of the lithium ethyl which did not enter the reaction. The molar ratio between lithium ethyl and monomer was 1/150 (with isoprene) and 1/100 (with styrene). Figure 2 shows the polymerization kinetics of

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Investigation of the Rate of Addition of Lithium Ethyl to Styrene and Isoprene in the Course of the Polymerization Process

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styrene at +1°, figure 3 the same at 24° for isoprene. These data indicate that the addition of lithium ethyl to the monomer proceeds gradually in the course of the entire process of polymerization. The polymerization of styrene and isoprene in the presence of tetrahydrofurane with which organolithium compounds form complexes was investigated in a similar way. For this purpose, solutions in heptane were used which contained 16% of styrene (at -20°) or 20% of isoprene (at +25°). The curves III in figures 2 and 3 show the consumption of lithium ethyl in the course of the polymerization of styrene and isoprene, respectively, in the presence of tetrahydrofurane (1 : 5). Curves IV show the polymer yield. They indicate the rapid acceleration of the primary act of addition of lithium ethyl to the monomer brought about by tetrahydrofurane. Thus, polymerization is also accelerated. The "living" polymer chain thus developing remains capable of further growing during a long time, even if the entire lithium ethyl and the monomer are consumed. Curves V and VI (Fig 3) indicate that the polymerization process sets in with normal rapidity when isoprene (20%) was filled up in heptane. The data set up by the authors deal

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Investigation of the Rate of Addition of Lithium Ethyl to Styrene and Isoprene in the Course of the Polymerization Process

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with the concentration range of lithium ethyl between 0.7 and 1% by mole (referred to the monomer). A considerable dependence of the rates of the primary addition act and the growth of chain on the association degree of lithium ethyl is possible. This degree decreases with falling concentration of the organometallic compound in solution (Ref 10). There are 3 figures and 10 references, 8 of which are Soviet.

ASSOCIATION: Nauchno-issledovatel'skiy institut sinteticheskogo kauchuka im. S.V. Lebedeva (Scientific Research Institute of Synthetic Rubber imeni S.V. Lebedev)

SUBMITTED: November 23, 1959

Card 3/3

COUNTRY : USSR
CATEGORY : Cultivated Plants. Fruits. Berries. Nuts. Tea.
ABS. JOUR. : RzhBiol., No. 1, 1959, No. 1706
AUTHOR : Kronchova, F.G.
INST. : Omsk State Pedagogical Institute
TITLE : Ascorbic Acid Content in Fruits of Decumbent Apple.
ORIG. PUB. : Uch. zap. Omskogo gos. ped. in-ta, 1957, vyp. 5, 62-70
ABSTRACT : The ascorbic acid content was determined by the method of V.A. Deryatkin and V.M. Doroshenko during four years on identical varieties: Slavyanka, Shafran-Kitaika, Sarychapel, and Pudovshina in decumbent plants as well as in the varieties: Antonovka Orsati and Kitaika No. 4 growing in the stem form. In apples according to the degree of ripening, the amount of ascorbic acid increased at first but afterwards it decreased. Lowering of the ascorbic acid content began prior to the removable ripeness of the fruits and continued during their storage.
CARD. : 1/2

Biochemical peculiarities of apple fruit grown in Omsk
V. N. Ruchkin, F. G. Kropachova, and L. V. Paduchikh (S. M. Kirov Agr. Inst., Omsk). *Biokhim. Plodov i Ovoshchei, Akad. Nauk S.S.S.R., Inst. Biokhim., Sbornik* 3, 221-39(1955).—Tables of analyses of cultured and wild varieties of apples grown in Omsk area are given for dry matter, pectins, nitrogenous substances, ascorbic acid and intensity of respiration. The wild varieties tend to contain higher levels of vitamin C, but this tends to decline more rapidly in storage than is true of the cultured varieties. Wet and cold summers tend to lower the activity of oxidases. Within a given variety no correlation could be found between storage stability, preservation of vitamin C, and oxidase activity.

G. M. Kirolagoff

KROPACHEVA, F.G.

Variations in the ascorbic acid content of fruit and leaves taken from the top and bottom parts of the apple-tree crown. Uch. zap. Omsk. gos. ped. inst. no.12:21-28 '59. (MIRA 14:6)
(APPLE) (ASCORBIC ACID)

KROPACHEV, A.M.; KROPACHEVA, T.S.; KHURSIK, V.Z.

Minor (accessory) elements in the halites of the Solikamsk and Yuryuzan'-Sylva Depressions. Sov. geol. 8 no.8:157-159 Ag '65. (MIRA 18:10)

1. Permskiy gosudarstvennyy universitet im. A.M.Gor'kogo i Permskiy politekhnicheskiy institut.

KROPACHEV, A.M.; KROPACHEVA, T.S.

Active soil erosion. Priroda 50 no.6:112 Je '61. (MIRA 14:5)

1. Permskiy universitet imeni A.M.Gor'kogo (for Kropachev).
2. Permskiy gornyy institut (for Kropacheva).
(Erosion)

14-57-7-14536

Translation from: Referativnyy zhurnal, Geografiya, 1957, Nr 7, pp 43-44 (USSR)

AUTHORS: Kropachev, A. M., Kropacheva, T. S.

TITLE: Highland Terraces in an Eastern Transpolar Region (Nagornyye terrasy odnogo iz rayonov vostochnogo Zapolyar'ya)

PERIODICAL: Nauch. tr. Molotovsk. gor. in-ta, 1956, sb. Nr. 1, pp 126-135

ABSTRACT: Horizontal or slightly sloping areas are found at different heights on the mountain peaks in this area. Crescent-shaped terrace-like areas, with lengths varying from several meters to more than 1000 m and with widths of 2 km, were observed on the mountain slopes. The scarps in these highland terraces vary from 1 m to 100 m in height, though more often they are 10 m to 20 m. Terraces and flat mountain tops

Card 1/2

14-57-7-14536

Highland Terraces in an Eastern Transpolar Region (Cont.)

are covered with eroded matter to a depth of 2 m to 4 m. This indicates that these highland terraces are structural forms which have been produced in bedrock regardless of its lithology. They are common on the northern, northeastern, and northwestern mountain slopes, but are extremely rare in the west. Snow banks cover the terrace ledges even in summer. Nevation, related to these snow banks, is considered by the authors as the chief cause of highland terraces. Even after the snow disappears terraces can be formed, when a "frost action" is substituted for a "snow action" (Boch, S.G., Krasnov, I.I., Priroda, 1951, Nr 5).

Card 2/2

G.K.

3(8)

SOV/7-59-1-12/14

AUTHORS: Kropachev, A. M., Kropacheva, T. S., Shestov, I. N.

TITLE: Strontium in Weakly Mineralized Ground Waters of the Middle Pre-Ural Region (Strontsiy v podzemnykh slabomineralizovannykh vodakh srednego Predural'ya)

PERIODICAL: Geokhimiya, 1959, Nr 1, pp 93-96 (USSR)

ABSTRACT: 189 samples from fountains, wells, and drill-holes were investigated. The dry residue was analyzed with the spectrograph ISP-22. A mixture of following substances in mg/l 366.0 HCO_3, 43.4 Cl, 148.0 SO_4, 12.0 Mg, 174.6 Ca, 19.4 Na - K, amounting to a total of 759.4 mg/l was taken as standard sample. 1.0; 0.1, 0.01, 0.001% Sr were added to this mixture. The blackening of the lines 4077.714 Å and 4607.331 Å was compared visually by means of a spectrum projector. The analyses were carried out by A. M. Kropachev. A table summarizes stratigraphical horizon, type of rock, number of samples, total mineralization in mg/l and average strontium content in percent of the dry residue and in mg/l water (Table 1). Waters of the Perm horizons, e.g. P_1^{3ks} and P_1^{2lem} with 1.0% Sr in the dry residue have the highest strontium content. In table 2 18 complete analyses of mineral waters from different geologi-

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Strontium in Weakly Mineralized Ground Waters of the Middle Pre-Ural Region SOV/7-59-1-12/14

cal horizons are given. There are 2 tables and 4 Soviet references.

ASSOCIATION: Permskiy gosudarstvennyy universitet im. A. M. Gor'kogo (Perm' State University imeni A. M. Gor'kiy)

SUBMITTED: December 11, 1957

Card 2/2

KORNEYEVA, A.A.; SEROVA, N.A.; KROPACHEVA, V.A. (Moskva)

Effectiveness of using chlorophos in controlling bedbugs.
Fel'd. i akush. 27 no.4:51-52 Ap '62. (MIRA 15:6)
(BEDBUGS--EXTERMINATION)
(CHLOROPHOS)

KROPACHEVA, Ye. I., Cand of Med Sci — (diss) "On the Problem of the Clinico-Anatomical Conflicts During Acute Appendicitis," Khabarovsk, 1959, 15 pp (Khabarovsk State Medical Institute) (KL, 2-60, 117)

CA

Cyclic acetals of hydroxycarbonyl compounds. I Preparation and properties of the methyl lactolide of methylbenzoylcarbinol (1-methoxy-1-phenyl-1-propene oxide). T. I. Temnikova and E. N. Kropacheva (Kafedra Stroeniya Org. Soedinenii Leningrad. Gosudarst. Ordena Lenina Univ. im. A. A. Zhdanova). *Zhur. Obshchei Khim* (J. Gen. Chem.) 19, 1917-26(1949).—PhCOCHBrMe (32 g.) in Et_2O treated slowly with a suspension of MeONa (from 10 g. Na) in Et_2O yielded 10 g. *1-methoxy-1-phenyl-1-propene oxide*, Ph(MeO)C.CHMe.O, b_{15} 63.5°, d_4^{20} 1.0521, n_D^{20} 1.49604, which polymerizes on standing (mol. wt. doubles in 24 hrs.). The product (0.5 g.) treated with 1.5 g. $PhNHNH_2$ in EtOH contg. a little AcOH, heated 0.5 hr. on a steam bath, and let stand overnight gave 0.45 g. *PhC(:NNHPh)CHMeNHNHPh*, m. 120° (from EtOH). Heating the oxide with H_2SO_4 in all dilns. gave mostly tars; with 5% H_2SO_4 there was obtained a very low yield of a solid, m. 208° ($C_{18}H_{18}O_4$), and phenylacetylcarbinol, b_{15} 120-1° (semicarbazone, m. 189°). Addn. of the oxide (8.5 g.) to 5% H_2SO_4 preheated to 80° and stirring 1.5 hrs. on a steam bath gave 3.43 g. methylbenzoylcarbinol, b_{14} 83-5°, n_D^{20} 1.54571 (forms a semicarbazide, m. 290°, on prolonged standing with the reagent). Reaction of this hydrolysis product with PhMgBr gave *1,1-diphenyl-1,2-propanediol*, m. 91-2° (from petr. ether), which gives Ph_2CO on chromic acid oxidation. Addn. of 3 ml. 3% MeOH-HCl to 0.5 g. oxide gave, after vigorous action, 0.3 g. *2,5-dimethoxy-3,5-dimethyl-3,6-diphenyl-p-dioxane*, m. 251° (from C_6H_6). The nomenclature of olefin oxides and lactols is discussed; the use of the prefix cyclo for the ring forms is urged. G. M. Kosolapoff

CA 10

Research in the field of cyclic acetals of hydroxycarbonyl compounds. I. Synthesis and properties of the methyl lactolide of methylbenzoylcarbinol (1-methoxy-1-phenyl-1-propene oxide). T. I. Temnikova and E. N. Kropacheva (Leningrad State Univ.). *J. Gen. Chem.* (U.S.S.R.) 19, No. 10, 1383-93(1949)(English translation).—See *C.A.* 44, 1929b. E. J. C.

CA

10

Cyclic acetals of hydroxycarbonyl compounds II

Action of alkali on 1-methoxy-1-phenyl-1-propene oxide
T. I. Temnikova and E. N. Kropacheva (Leningrad State Univ.). *Zhur. Obshchei Khim.* (J. Gen. Chem.) 21, 183-6 (1951); cf. C.A. 44, 6402d. Heating 7 g. 1,2-epoxy-1-methoxy-1-phenylpropane with 100 ml. 10% K_2CO_3 1.5 hrs. gave 3.27 g. oil, b_4 104.7°, d_4^{20} 1.0881, n_D^{20} 1.5162, identified as *PhCH(OH)Ac*; *semicarbazone*, m. 182.5°; reaction with PhMgBr gave *1,2-diphenyl-1,2-propanediol*, m. 95.6°. Possibly the hydrolysis of the oxide first yields BzCH(OH)-Me, which then isomerizes into the more stable final product. Not a trace of org. acid forms in the hydrolysis. The bearing of the result on the possible mechanism of hydrolysis of α-Br ketones is discussed. G. M. Kosolapoff

1951

GTRSPL Vol. 5-No. 1 Jan. 1952

[illegible] and Krupochkina, E.N. (A.E. Favorski Laboratory, A.A. Zhdanov Leningrad State University), Transformations of methyl lactolide of methyl benzoylcarbinol (oxy-[illegible]-phenylpropylene) in an acid medium, 291-4

Akademiya Nauk, S.S.S.R., Doklady Vol. 78, No. 2, 1951

ALFEROVA, L.V.; DOLGOPLOSK, B.A.; KROPACHEV, V.A.

Mechanism of the decomposition of aliphatic - aromatic triazenes under the influence of acids and water. Vysokom.soed. 2 no.1:3-12 Ja '60. (MIRA 13:5)

1. Institut vysokomolekulyarnykh soyedineniy AN SSSR.
(Triazene)

ALFEROVA, L.V.; DOLGOPLOSK, B.A.; KHOPACHEV, V.A.

Decomposition of diazoaminobenzene in hydrocarbon media under the influence of organic acids, and use of the reaction in initiating polymerization. Vysokom.soed. 2 no.1:67-74 Ja '60. (MIRA 13:5)

1. Institut vysokomolekulyarnykh soyedineniy AN SSSR.
(Benzene) (Acids, Organic) (Polymerization)

KROPACHEVA, YE. N.

(3)

Chemical Abst.
Vol. 48 No. 5
Mar. 10, 1954
Organic Chemistry

Cyclic acetals of hydroxycarbonyl compounds. III. Transformations of the methyllactolide of methylbenzoylcarbinol under the influence of acids and alkaline reagents. T. I. Temnikova and E. N. Kropacheva (A. A. Zhdanov State Univ., Leningrad). J. Gen. Chem. U.S.S.R. 22, 1197-1204(1952)(Engl. translation).—See C.A. 47, 6001g. H. L. H.

7-28-54

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000826630002-4"

5(3)

SOV/20-123-4-30/53

AUTHORS: Dolgoplosk, B. A., Corresponding Member, AS USSR, Kropacheva, Ye. N., Nel'son, K. V.

TITLE: The Cis-Trans-Isomerization of Natural Rubber Under the Effect of Organo-Aluminum Compounds and Titanium Tetrachloride (Tsis-trans-izomerizatsiya natural'nogo kauchuka pod vliyaniyem alyuminiyorganicheskikh soyedineniy i chetyrekhkhloristogo titana)

PERIODICAL: Doklady Akademii nauk SSSR, 1958, Vol 123, Nr 4, pp 685 - 687 (USSR)

ABSTRACT: As is known, the catalysts of Ziegler (Teigler) have recently gained importance in the synthesis of polymers of regular structure, especially of cis-poly-isoprene (Refs 1-4). Previously, the effect of physical and chemical properties of the catalysts have been made responsible for the break of the structure of the chain due to the formation of trans-members. These properties were said to influence the addition character of the monomer (diene) in the course of polymerization. In the present paper it was proved that the regular structure can depend on the isomerization of cis-members to trans-members in a complete polymer chain. This is due to the components used

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The Cis-Trans-Isomerization of Natural Rubber Under the Effect of Organo-Aluminum Compounds and Titanium Tetrachloride SOV/20-123-4-30/53

for stimulating the polymerization process. A short survey of publications (Refs 5,6) is given. The said phenomenon is known in the case of polybutadiene (Ref 7), however, not for natural rubber under similar conditions. The isomerizing effect of the compounds mentioned in the title was investigated in solutions of rolled rubber (NR) in benzene, within sealed glass ampoules in argon. The unsaturated character and the microstructure of the chain of each sample were determined. For the latter infrared spectra according to the method of the last mentioned author, reference 8, were used. Table 1 gives the results obtained. Therefrom it is concluded that the components of the Ziegler catalyst ($TiCl_4$, AlR_3, AlR_2Cl) exert an isomerizing effect on the polymer chain of natural rubber. By the example of $TiCl_4$ it was proved that the number of trans-members increases with the concentration of the isomerizing agent and the longer duration of the action. Figure 1 shows very clearly the isomerization of polyisoprene on absorption bands of infrared radiation which correspond to various contents of cis- and trans-members. This isomerization is accompanied

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The Cis-Trans-Isomerization of Natural Rubber Under the Effect of Organo-Aluminum Compounds and Titanium Tetrachloride SOV/20-123-4-39/53

by a considerable decrease of the unsaturated character of the polymer. Apparently this depends on: a) Cyclization processes within the chain, b) The additivity of the mentioned compounds to the C=C bond. It is probably preceded by the formation of an unstable complex which can decompose under the formation of initial substances. Triethyl aluminum dichloride causes deeper secondary changes of natural rubber; unsolvable amorphous powders with high melting points are formed. $TiCl_4$ leads to similar results, but only if large amounts are used (100% of the rubber weight). There are 1 figure, 1 table, and 8 references, 3 of which are Soviet.

ASSOCIATION: Vsesoyuznyy nauchno-issledovatel'skiy institut sinteticheskogo kauchuka im. S. V. Lebedeva (All-Union Scientific Research Institute of Synthetic Rubber imeni S. V. Lebedev)

SUBMITTED: August 22, 1958

Card 3/3

SOV/79-29-2-45/7

AUTHORS: Kropacheva, Ye. N., Dolgoplosk, B. A., Kulakova, M. N.

TITLE: Oxidoreduction Systems as Stimulants in the Radical Processes (Oksilitel'novosstanovitel'nyye sistemy dlya initsiirovaniya radikal'nykh sistem).
IX. Mechanism and Actual Efficiency of Polyamine Systems in the Polymerization Process (IX. Mekhanizm i effekt'vnost' deystviya poliaminnykh sistem v protsesse polimerizatsii)

PERIODICAL: Zhurnal obshchey khimii, 1959, Vol 29, Nr 2, pp 565-575 (USSR)

ABSTRACT: Concerning the effective mechanism all known oxidoreduction systems which are applied as stimulants in the radical processes may be divided into two types. The first one, which is the most wide-spread, consists of systems which act under the participation of metals of variable valency. The reaction in these systems always leads to the formation of a radical:

$$Me^{n} + BX \rightarrow Me^{n+1} + B\cdot + X^{-}$$

$Me^{n+1} + AH \rightarrow Me^{n} + A\cdot + H^{+}$, where BX denotes the oxidizing and AH the reducing agent. The second type consists of systems in which

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Oxidoreduction Systems as Stimulants in the Radical Processes. IX. Mechanism and Actual Efficiency of Polyamine Systems in the Polymerization Process

the oxidoreduction reaction leads to the formation of two radicals, e.g.:

$$ROOH + AH \rightarrow RO\cdot + H_2O + A.$$

$$SO_2 + C_6H_2Cl_3SH \rightarrow (\cdot SO_2H) + C_6H_2Cl_3S.$$

In both types of systems the free radicals form directly in the stage of oxidoreduction reaction. The systems in which hydrogen peroxides and polyethylene polyamines participate belong, according to the present investigation, to a new type of system which is characterized by the fact that the oxidoreduction reaction leads to the formation of a new intermediate product which is thermally unstable and decomposes into radicals, i.e. at lower temperature than is the case with hydrogen peroxide. In spite of the fact that polyamine systems are very often employed for the stimulation of polymerization at low temperatures, the mechanism of its actual efficiency has not yet been explained. The detailed results of this investigation of the composition of the reaction products of the corresponding hydrogen oxide with polyamines made it possible to explain

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Oxidoreduction Systems as Stimulants in the Radical Processes. IX. Mechanism and Actual Efficiency of Polyamine Systems in the Polymerization Process

the mechanism of the main and side reactions. It was shown that it is possible to employ the polyamine systems for producing a highly active polymerization process in emulsions at 5°.- There are 9 figures, 5 tables, and 25 references, 9 of which are Soviet.

ASSOCIATION: Vsesoyuznyy nauchno-issledovatel'skiy institut sinteticheskogo kauchuka (All-Union Scientific Research Institute for Synthetic Rubber)

SUBMITTED: December 19, 1957

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5 (3)

AUTHORS: Kropacheva, Ye. N., Dolgoplosk, B. A., Otten, V. F., Golodova, K. G.

SOV/79-29-6-16/72

TITLE: Synthesis of 1,4-Polyisoprene by Means of Organosodium Compounds and Titanium Tetrachloride (Sintez 1,4-poliizoprena s pomoshch'yu natriyorganicheskikh soyedineniy i chetyrekhkhloristogo titana). Formation of High-melting Polymers in the Catalytic Polymerization of Dienes (Obrazovaniye vysokoplavkikh polimerov pri kataliticheskoy polimerizatsii diyenov)

PERIODICAL: Zhurnal obshchey khimii, 1959, Vol 29, Nr 6, pp 1853 - 1856 (USSR)

ABSTRACT: In addition to the polymerization syntheses described in the papers of references 1-4 the authors showed that the complexes of the organosodium compound with $TiCl_4$ are also effective in the polymerization of dienes. On the polymerization of isoprene in benzine solution at room temperature in the presence of isoamyl sodium and $TiCl_4$ two polymers were separated in the molar ratio: an elastomer soluble in benzine and an insoluble amorphous powder. The polymerization products of divinyl are also of the same nature. On changing the component ratio of the

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Synthesis of 1,4-Polyisoprene by Means of Organosodium Compounds and Titanium Tetrachloride. Formation of High-melting Polymers in the Catalytic Polymerization of Dienes SOV/79-29-6-16/72

catalytic complex, i.e. on an increased $TiCl_4$ quantity, the yield in the solid polymer rises. At a ratio of 1:3 of the isoamyl sodium to titanium chloride only a solid polymer is formed (Table 1). With increasing temperature, concentration of the catalyst and the monomer, also the reaction rate considerably increases. The insoluble powdery polymers of divinyl and isoprene are also formed in small amounts on their polymerization in benzine alone with $TiCl_4$. The infrared spectrum analysis of the resultant polymers shows that the polyisoprene soluble in benzine contains about 90% of components of the structure 1,4 (Table 2). In this respect the polymers obtained by the authors differ from the polyisoprene which is formed in the presence of sodium and organosodium compounds without titanium chlorides. The resultant powdery polymers are highly heat-resistant. The reactions in the polymers can proceed in two directions: 1) Reactions which involve the formation of condensed six-membered rings in the chain (Scheme). 2) Reactions between the polymeric chains which lead

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Synthesis of 1,4-Polyisoprene by Means of Organosodium Compounds and Titanium Tetrachloride. Formation of High--melting Polymers in the Catalytic Polymerization of Dienes SOV/79-29-6-16/72

to a building-up of ring structures of uncertain nature. The considerable heat-resistance of the polymers synthesized can be explained by their high melting points (Ref 6). Instead of organosodium compounds also the corresponding organo-compounds of potassium, magnesium and aluminum may be used. There are 2 tables and 8 references, 2 of which are Soviet.

ASSOCIATION: Vsesoyuznyy nauchno-issledovatel'skiy institut sinteticheskogo kauchuka imeni S. V. Lebedeva (All-Union Scientific Research Institute of Synthetic Rubber imeni S. V. Lebedev)

SUBMITTED: June 11, 1958

Card 3/3

5.3300

69507

AUTHORS: Boldyreva, I. I., Dolgoplosk, B. A., Corresponding Member, AS USSR, Kropacheva, Ye. N., Nel'son, K. V.

S/020/60/131/04/031/073
B011/B017

TITLE: Cis-trans-isomerization of Natural Rubber Under the Influence of Hydrogen Chloride and Ethyl Aluminum Dichloride

PERIODICAL: Doklady Akademii nauk SSSR, 1960, Vol 131, Nr 4, pp 830-832 (USSR)

TEXT: The authors investigated the effect of anhydrous HCl and of ethyl aluminum chloride on a benzene solution of natural rubber under conditions which had been described earlier (Ref 1). HCl was introduced as a saturated benzene solution. The microstructure of each sample was characterized by means of the IR-absorption spectra. The quantitative content of cis- and trans-configurations was determined on the basis of the band 840 cm^{-1}. Since, due to the HCl addition, the non-saturation of the polymer is partly reduced, the relative content of the links of each configuration was calculated in % of the double bonds remaining in the polymer. Table 1, and figures 1 and 2 show the results. The authors emphasize that the data of the relative content of cis-trans-links only characterize the qualitative picture of the process since the accuracy of spectroscopic determinations sensibly decreases with decreasing non-saturation of the polymer. Since the solubility of the polymer is limited, it was not always possible to compensate for the decrease in the

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Cis-trans-isomerization of Natural Rubber Under the Influence of Hydrogen Chloride and Ethyl Aluminum Dichloride

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number of double bonds by increasing the concentration of the polymer in solutions. Table 1 shows that ethyl aluminum chloride as well as HCl exercise an isomerizing effect on the polymer chain of natural rubber. The number of trans-links increases with the concentration of the isomerizing agent. In both cases, the isomerization is accompanied by a reduction of the non-saturation of the polymer chain. In the case of aluminum chloride, this seems to be mainly due to the intramolecular ring formation. HCl, however, reduces the non-saturation only insofar as it is added to the double bond (Fig 1). The amount of HCl added corresponds to the reduction of non-saturation of the chain. The non-saturation continuously decreases with extension of the reaction time (Curve 1). In this connection, the relative content of trans-links (Curves 2 and 3), and the chlorine content in the polymer, increase steadily (Curve 3). Figure 2 shows that the isomerization and the addition of HCl already start at -70°, and that they considerably are accelerated in the case of a temperature rise. At 60°, the total content of double bonds, and of added chlorine, is only 82% of the theoretical content. This is apparently due to the ring formation. The experiments of the authors show that under the described conditions cis-polybutadiene is not sensibly isomerized. The high sensitivity of cis-polyisoprene to isomerization under the influence of ion catalysts is probably connected with

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Cis-trans-isomerization of Natural Rubber Under the Influence of Hydrogen Chloride and Ethyl Aluminum Dichloride

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the iso-structure of the chain. The easier stereospecific synthesis of cis-polyisoprene as compared to that of cis-polybutadiene is probably also due to this fact. There are 2 figures, 1 table, and 9 references, 2 of which are Soviet.

ASSOCIATION: Nauchno-issledovatel'skiy institut sinteticheskogo kauchuka im. S. V. Lebedeva (Scientific Research Institute of Synthetic Rubber imeni S. V. Lebedev)

SUBMITTED: October 26, 1959

Card 3/3

89024

S/020/60/135/004/021/037
B016/B062

11.2211

AUTHORS: Dolgoplosk, B. A., Corresponding Member AN USSR, Kropacheva, Ye. N., Khrennikova, Ye. K., Kuznetsova, Ye. I., and Golodova, K. G.

TITLE: Polymerization of Dienes Under the Influence of Homogeneous Catalytic Systems Containing Salts of Cobalt and Nickel

PERIODICAL: Doklady Akademii nauk SSSR, 1960, Vol. 135, No. 4, pp. 847-848

TEXT: The authors report on the considerable efficacy of homogeneous catalysts in the production of cis-polybutadiene from butadiene in benzene solution. The catalysts were hydrocarbon-soluble systems of cobalt chloride (concentration 0.005 - 0.01 percentage by weight, as referred to the monomer) in complex with pyridine or ethanol in combination with alkyl-, dialkyl-, and trialkyl aluminum chlorides. Polymerization takes place already at 0°C and 0.005 % cobalt chloride, the polymer structure being independent of temperature. The polymer yield rises with increasing concentration of the cobalt chloride, while the molecular weight of the polymer decreases. The polymerization rate is highest at a concentration of 0.01 %,

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Polymerization of Dienes Under the Influence of Homogeneous Catalytic Systems Containing Salts of Cobalt and Nickel

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BC 16/B062

whereas the molecular weight in the entire concentration range studied decreases simultaneously with the acceleration of polymerization. The temperature rise from 5° to 30°C also reduces the molecular weight to 1/2 - 1/3. The role of the displacement reactions becomes much more considerable in the presence of lower olefins. For instance, approximatively 1 % of β-butene (referred to the monomer) considerably decelerates the polymerization and reduces the molecular weight of the polymer from 150 000 to 90 000. On the strength of data on the microstructure of polybutadiene the authors found, depending on the catalyst system (Table 1, polymerization of divinyl), that the highest percentage of 1,4-members was obtained with diisobutyl aluminum chloride systems (97 %) and diethyl aluminum chloride systems. Triisobutyl aluminum considerably increases the number of 1,2-members (up to 70 %). Cobalt salts of stearic acid lead to an only inconsiderably deviating chain structure in the range of concentrations ensuring a homogeneous system. Polybutadiene produced in the presence of nickel stearate has a chain structure similar to that of cobalt stearate, but a lower molecular weight. If iron benzoate and stearate is used, the polymerization is considerably slower than with cobalt- and

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Polymerization of Dienes Under the Influence of Homogeneous Catalytic Systems Containing Salts of Cobalt and Nickel

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B016/B062

nickel salts. The cobalt systems are also effective in the polymerization of other diene-hydrocarbons, especially of isoprene. There are 2 figures, 1 table, and 7 references: 5 Soviet, 1 US, and 1 German.

ASSOCIATION: Vsesoyuznyy nauchno-issledovatel'skiy institut sinteticheskogo kauchuka im. S. V. Lebedeva (All-Union Scientific Research Institute of Synthetic Rubber imeni S. V. Lebedev)

X

SUBMITTED: August 22, 1960

Card 3/3

32429 S/020/61/141/006/014/021
B103/B147

15.9201
11.2211

AUTHORS: Yermakova, I. I., Dolgoplosk, B. A., Corresponding Member AS USSR, and Kropacheva, Ye. N.

TITLE: Cis-trans isomerization of the links of 1,4-polybutadiene under the effect of nitrogen peroxide

PERIODICAL: Akademiya nauk SSSR. Doklady, v. 141, no. 6, 1961, 1363 - 1365

TEXT: The isomerizing effect of NO_2 and its dimer N_2O_4, of hexaphenyl ethane, and of three disulfides was studied on 2% benzene solutions of a) cis-1,4-polybutadiene, and b) cis-butene-2 in glass ampullas. The content of 1,2 or trans-1,4 links in the polymer was calculated on the basis of the intensity in the maxima 909 and 967 cm^{-1}, respectively, of the infrared spectra (spectra taken by Z. D. Stepanova). The change of the cis-trans forms of the butenes was recorded chromatographically during the process (by A. N. Genkin). It has been found that in case a) the cis-lin of the polymer chain are isomerized to trans-links, i. e., the more inte

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sively the higher the NO_2 concentration. Thus, 23.5 mole% of NO_2 results in a polymer with 60% of trans-links. No isomerization occurred at -50°C owing to the tendency of NO_2 to dimerize below 0°C. Isomerization seems to be effected merely by the NO_2 form. At +96°C as well as at -50°C, NO_2 is added quantitatively to the double bond. The resulting products are insoluble in a hydrocarbon medium. In case b) similar results were obtained. With a NO_2 concentration of 6 mole%, 40% of cis-butene-2 is converted to trans-butene-2 at 90°C within 2.5 hr. The reaction does not reach the equilibrium state, because NO_2 is consumed by the addition. Neither hexaphenyl ethane at 96 - 130°C nor diphenyl-picryl hydrazyl at 20° and 60°C cause structural changes of the chain in case a). The disulfides decomposing into free radicals at 120°C (Refs. 1 - 4, see below) only lead to gel formation without isomerization, one radical being added to the double bond. It is assumed that the isomerization under the effect of RS' radicals, which is described in Refs. 1 - 4, does not take place owing to their addition to the double bond, but only when an H atom is broken off from the chain. The mercaptan formed in stage 1 takes part in the chain transfer; this results

32129
S/020/61/141/006/014/021
B103/B147

Cis-trans isomerization...

in the regeneration of the RS• radicals. Such an isomerization has to be accompanied by a migration of the double bond:

$$\underset{\underset{\cdot}{-CH_2}-\underset{\cdot}{CH}}{\overset{-CH_2-CH}{\|}} + RS^{\bullet} \xrightarrow{1} \underset{-CH_2-\underset{\cdot}{CH}}{\overset{-CH=CH}{|}} + RSH \xrightarrow{2} \underset{-CH_2-CH_2}{\overset{-CH=CH}{|}} + RS^{\bullet}$$

There are 2 figures and 11 references: 4 Soviet and 7 non-Soviet. The four most recent references to English-language publications read as follows: Ref. 1: J. I. Cunneen, F. W. Shipley, J. Polym. Sci., 36, 77 (1959); Ref. 2: J. I. Cunneen et al., Trans. Inst. Rubber Ind., 34, 260 (1959); Ref. 3: J. I. Cunneen, W. F. Watson, J. Polym. Sci., 38, 521 (1959); Ref. 4: J. I. Cunneen, W. F. Watson, ib. 533.

ASSOCIATION: Vsesoyuznyy nauchno-issledovatel'skiy institut sinteticheskogo kauchuka im. S. V. Lebedeva (All-Union Scientific Research Institute of Synthetic Rubber imeni S. V. Lebedev)

SUBMITTED: August 18, 1961

Card 3/3

38196

S/020/62/144/002/018/028
B101/B144

15.9201

AUTHORS: Bresler, L. S., Dolgoplosk, B. A., Corresponding Member AS USSR, Kolechkova, M. F., and Kropacheva, Ye. N.

TITLE: Copolymerization of butadiene with isoprene under the action of complexes of butyl lithium with triethyl amine or tetrahydrofuran

PERIODICAL: Akademiya nauk SSSR. Doklady, v. 144, no. 2, 1962, 347-348

TEXT: C^{14}-tagged butadiene was copolymerized with isoprene using the anionic complex catalysts Li-n-C_4H_9 + $N(C_2H_5)_3$ (I) and Li-n-C_4H_9 + $(CH_2)_4O$ (II). The molar ratio between catalyst and monomer was 1:300, and that between complexing agent and butyl lithium was 70:1. Copolymerization was carried out at 20°C in argon. At a low degree of conversion, it was interrupted by cooling to -70°C. The catalyst was decomposed with ethanol, and the unreacted monomer was distilled off together with the solvent. The degree of polymerization was determined from the weight of the polymer dried in vacuo, and the number of butadiene

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links in the polymer was derived from the C^{14} activity. The copolymerization constants were calculated according to M. Fineman and S. D. Ross (J. Polym. Sci., 5, 259 (1950)). At yields above 10%, the initial monomer concentration was corrected according to C. G. Overberger, D. Tanner, and E. M. Pearce (J. Am. Chem. Soc., 80, 4566 (1958)). Results: With catalyst I, the copolymerization constant was $r_1 = 3.6$ for butadiene, and $r_2 = 0.11$ for isoprene; with catalyst II, $r_1 = 4.5$, and $r_2 = 0.13$. $r_1 = 2.8$ and $r_2 = 0.43$ were obtained by using the Fineman-Ross equation to convert data of G. V. Rakova and A. A. Korotkov (DAN, 119, 982 (1958)) for butyl lithium dissolved in n-hexane. Thus, the relative activity of butadiene during copolymerization with isoprene rises as a function of the solvent: hexane < triethyl amine < tetrahydrofuran.. These findings corroborate the assumption that the $C^{(-)}$-$Li^{(+)}$ bond is polarized to a greater extent under the action of complexing electron donors. A comparison with data for R_3Al-$TiCl_4$ ($r_1 = 1.0$; $r_2 = 1.0$) and R_2AlCl-$CoCl_2$ ($r_1 = 2.3$; $r_2 = 1.15$) proves the substantial difference in activity between Ziegler and anionic catalysts.

Copolymerization of butadiene ... S/020/62/144/002/018/028
B101/B144

There are 1 figure and 1 table.

ASSOCIATION: Vsesoyuznyy nauchno-issledovatel'skiy institut sinteticheskogo kauchuka im. S. V. Lebedeva (All-Union Scientific Research Institute of Synthetic Rubber imeni S. V. Lebedev)

SUBMITTED: February 5, 1962

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S/020/62/144/004/015/024
B101/B138

AUTHORS: Grechanovskiy, V. A., Dolgoplosk, B. A., Corresponding Member AS USSR, Kropacheva, Ye. N., Poddubnyy, I. Ya., Sterenzat, D. Ye., and Khrennikova, Ye. K.

TITLE: Distribution of molecular weight in stereographically regular polybutadiene polymerized under the influence of "cobalt" systems

PERIODICAL: Akademiya nauk SSSR. Doklady, v. 144, no. 4, 1962, 792 - 794

TEXT: Changes in the molecular weight of polybutadiene and in its distribution M_o were studied in relation to the monomer concentration and degree of polymerization. The polymerization was performed in a 10% solution of the butadiene in benzene, in the presence of a complex catalyst composed of $CoCl_2 \cdot C_2H_5OH$ and $Al(iso\text{-}C_4H_9)_2Cl$, the concentration of the $CoCl_2$ being 0.01 % and that of the dibutyl-aluminum chloride 2% as referred to the monomer. The M_o was found using an ultra-centrifuge ($\sim$180,000 g), hexane and heptane in equal proportions being thermodynamically almost ideal as

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a solvent, and the calculation being done according to S. Ya. Frenkel' (ZhTF, 24, no. 12, 2167 (1954)). Results: (1) With 20% conversion the maximum M_o came at about 245,000. This enabled the number average molecular weight $\overline{M}_n$ to be calculated as 270,000 and the weight average molecular weight $\overline{M}_w$ as 320,000. (2) With 97% conversion M_o was about 90,000, $\overline{M}_n$ was 136,000 and $\overline{M}_w$ was 265,000. Similar results were obtained with the catalyst $CoBr_2 \cdot C_2H_5OH$ - $Al(iso\text{-}C_4H_9)_2Cl$. (3) Stepwise addition of the monomer, each successive portion thereof being added only after the preceding portion was completely polymerized, gave M_o = 55,000, $\overline{M}_n$ = 68,000 and $\overline{M}_w$ = 180,000 for all of the successively polymerized portions. Conclusions: (a) The catalyst is fully regenerated and remains active for a long time (>100 hr); (b) the reduced M_o, $\overline{M}_n$ and $\overline{M}_w$ in case (2) is due to reduction in the monomer concentration when polymerization lasts longer; (c) in case (3) two opposite tendencies compensate one another: namely the tendency to higher M_o through the catalyst becoming

diluted by added portions of monomer and the tendency to lower M_o as a result of diminishing butadiene concentration; hence all portions show the same values of M_o, $\overline{M}_n$ and $\overline{M}_w$. There are 4 figures.

ASSOCIATION: Vsesoyuznyy nauchno-issledovatel'skiy institut sinteticheskogo kauchuka im. S. V. Lebedeva (All-Union Scientific Research Institute of Synthetic Rubber imeni S. V. Lebedev)

SUBMITTED: March 13, 1962

S/190/63/005/003/011/024
B101/B186

AUTHORS: Bresler, L. S., Dolgoplosk, B. A., Kolechkova, M. F., ~~Kropacheva, Ye. N.~~

TITLE: Copolymerization of butadiene with isoprene under the effect of the complex organometallic catalysts

PERIODICAL: Vysokomolekulyarnyye soyedineniya, v. 5, no. 3, 1963, 357-362

TEXT: A study was made of the copolymerization of butadiene with isoprene under the effect of the heterogeneous system (I) from triisobutylaluminum and titanium tetrachloride and of the homogeneous system (II) from diisobutylaluminum chloride and the cobalt dichloride - ethanol complex in argon atmosphere. Butadiene was tagged with C^{14} so that the composition of the copolymer could be determined from its radioactivity. With system I copolymers were obtained the composition of which with regard to the content of 1,2-, 3,4-, and 1,4-isoprene, trans-1,4 and cis-1,4-butadiene links did not differ from the homopolymers. With system II copolymers with increased content of 1,2 links were formed. The copolymerization was proved by comparison with a mechanical mixture of the two components. For the copolymers a linear dependence of the glass transition point on the

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composition was observed. T_g increased from -110°C for 100% butadiene to -71°C for 100% isoprene. Also the elasticity curves showed only one minimum for the copolymers, whereas the mixtures had two minima corresponding to the content of the respective two components. For system I the relative activity of butadiene (r_1) as well as of isoprene (r_2) is 1.0 ± 0.05. For system II r_1 = 2.3 ± 0.1 and r_2 = 1.15 ± 0.05. There are 4 figures and 3 tables.

ASSOCIATION: Nauchno-issledovatel'skiy institut sinteticheskogo kauchuka im. S. V. Lebedeva (Scientific Research Institute of Synthetic Rubber imeni S. V. Lebedev)

SUBMITTED: August 13, 1961

S/020/63/149/003/018/028
B192/B102

AUTHORS: Bresler, L. S., Corresponding Member AS USSR, Dolgoplosk, B. A., Kropachova, Yu. N.

TITLE: Investigation of copolymerization of butadiene with isoprene in the presence of various ion catalysers

PERIODICAL: Akademiya nauk SSSR. Doklady, v. 149, no. 3, 1963, 595-598

TEXT: The copolymerization of butadiene with isoprene in the presence of catalyzers of organometallic complexes [$Al(iso\text{-}C_4H_9)_3$ + $TiCl_4$ and $Al(iso\text{-}C_4H_9)_2Cl$ + alcoholic complex of $CoCl_2$] was compared with the copolymerization in the presence of anion catalyzers [$LiC_4H_9+(CH_2)_4O$ and $LiC_4H_9+N(C_2H_5)_3$] or of cation catalyzers [$Al(C_2H_5)Cl_2+HCl$]. For copolymers formed under the effect of anion catalyzers the measurements showed an enrichment of butadiene as compared with the initial mixing proportion of the monomers. For copolymers formed with cation catalyzers they showed an enrichment of isoprene. If, however, organometallic catalyzers were used the composition of the copolymers was near the initial mixing proportion

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of the monomers. The copolymerization constant of butadiene, r_1, and of isoprene, r_2, was calculated. $r_1 < r_2$ followed for the catalyzer of the cation type, $r_1 > r_2$ for that of the anion type. In case of organometallic catalyzers the polymerization process proceeds in a substantially different way. Here is $r_1 \approx r_2 \approx 1$. This means that the linkage constant for a given terminal link is equal for both monomers ($r_1 = 1 = K_{11}/K_{12}$; $r_2 = 1 = K_{22}/K_{21}$). The rate of linkage is therefore not determined by the nature of the monomer but mainly by the nature of the active terminal link of the chain. The influence of the chosen catalyzer on the microstructure of copolymers was investigated and is discussed. There are 3 figures and 2 tables.

ASSOCIATION: Vsesoyuznyy nauchno-issledovatel'skiy institut sinteticheskogo kauchuka im. S. V. Lebedeva (All-Union Scientific Research Institute of Synthetic Rubbers, imeni S. V. Lebedev)

SUBMITTED: December 24, 1962

L 18900-63 EPR/EWT(j)/EPF(c)/EWT(m)/BDS ASD/ESD-3 Ps-4/Pc-4/Pr-4
RM/WW/MAY

ACCESSION NR: AP3006591 S/0020/63/151/006/1322/1325 78

AUTHORS: Bresler, L. S. (Corr. member AN SSSR); Dolgoplosk, B. A.; Kropacheva, Ye. N.; Nel'son, K. V.; Nikitina, A. P.

TITLE: Study of copolymerization process of butadiene-1,3 with 2,3-dimethylbutadiene-1,3 in the presence of various catalysts of the ionic type.

SOURCE: AN SSSR. Doklady*, v.151, no. 6, 1963, 1322-1325

TOPIC TAGS: butadiene, synthetic rubber copolymerization, lithium, 2,3-dimethylbutadiene, butyllithium, HCl, C sup 14, Al, tetrahydrofuran, IR, absorption spectrum, 2,3-dimethylbutadiene, aluminum, Li

ABSTRACT: The relative activities of 2,3-dimethylbutadiene and butadiene during its copolymerization in the presence of anionic type catalysts such as butyllithium complex with tetrahydrofuran, cationic type catalysts such as aluminum ethyldichloride in the presence of hydrochloric acid, and complex organo-metallic catalysts was studied. The microstructures of the polymers obtained by the above systems

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ACCESSION NR: AP3006591

2

were also studied. Butadiene tagged with carbon C^{14} was used to study the composition of copolymer. The non-radioactive polymeric microstructures were investigated by IR absorption spectra using NaCl prism. The vitrification temperature of the polymerized product mixture of butadiene and 2,3-dimethylbutadiene under the influence of catalysts decreases with an increase in its butadiene ratio. This points to the formation of true copolymers and not homopolymers. It was found that 2,3-dimethylbutadiene is more active in the cationic polymerization mechanism and butadiene is more active in the anionic type polymerization. Copolymers formed in the presence of complex catalysts are enriched in butadiene as compared to the initial monomeric mixture. The relative activity of 2,3-dimethylbutadiene is slightly lower than the activity of isoprene. Orig. art. has: 3 tables and 3 figures.

ASSOCIATION: Nauchno-issledovatel'skiy institut sinteticheskogo kauchuka im. S. V. Lebedeva, (Scientific research institute for synthetic rubber)

Card 2/2

DRESLER, [illegible]; [illegible], [illegible]; [illegible], Ye.N.

Polymerization of cis- and trans-piperylene under the effect of catalytic coordination systems. Dokl. AN SSSR 155 no. 5: 1101-1103 Ap '64. (MIRA 17:5)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut sinteticheskogo kauchuka im. S.V.Lebedeva, P. Chlen-korrespondent AN SSSR (for Dolgoplosk).

EWT(m)/EPF(c)/EWP(j)/T

ACCESSION NR: AP4049486 S/0020/64/159/002/0365/0368

25
24
B

AUTHOR: Bresler, L.S., Kropacheva, Ye. N., Poddubnyy, I.Ya., Sokolov, V.N.

[illegible] polymerization [illegible] catalytic

This work was undertaken to [illegible] temperature [illegible] catalyst systems were employed in the [illegible] and butadiene [illegible]

[illegible] formed under the influence [illegible] during de-
composition with $C_3H_5OH^-$ and its radioactivity during deactivation with $CH_3C^{14}H_2OH$ is [illegible] solely with the carbonyl groups. However [illegible] obtained in the presence

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L 24833-65

ACCESSION NR: AP4049486

[illegible] tritium [illegible]

[illegible]

ASSOCIATION: Vsesoyuznyy nauchno-issledovatel'skiy institut sintet cheskogo kauchuka im [illegible]

YERMAKOVA, I.I.; KROPACHEVA, Ye.N.; DOLGOPLOSK, B.A., akademik; KOL'TSOV, A.I., akademik; NEL'SON, K.V.

Interaction of 3-methyl-2-pentene with cation-type catalysts. Dokl. AN SSSR 159 no.4:835-838 D '64 (MIRA 18:1)

1. Nauchno-issledovatel'skiy institut sinteticheskogo kauchuka im. S.V. Lebedeva.

KRESLER, L.S.; KROPACHEVA, Ye.N.; PODDUBNYY, I.Ya.; SOKOLOV, V.N.

Mechanism of diene polymerization under the effect of complex catalysts based on cobalt compounds. Dokl. AN SSSR 159 no.2: 365-368 N '64. (MIRA 17:12)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut sinteticheskogo kauchuka im. S.V. Lebedeva. Predstavleno akademikom V.A. Karginym.

KALNINA, N.A., kand.tekhn.nauk; KROPACHEVA, Ye.N., inzh.; LEGASHEVA, V.P., inzh.

Lightweight autoclave-hardened materials made of local raw materials. Stroi. mat. 6 no.7:35-36 Jl '60. (MIRA 13:7)
(Building materials)

KALNINA, N.A., kand.tekhn.nauk; KROPACHEVA, Ye.N., inzh; LEGASHOVA, V.P., inzh.

Silicate and sawdust concrete blocks from local materials.
Trudy Zap.-Sib.fil.ASiA no.3:41 '60. (MIRA 15:2)
(Sand-lime products)
Concrete blocks)

(S/[illegible])

[illegible] (T[illegible]) [illegible] of [illegible] (T[illegible]) [illegible] (in combination with other [illegible]) [illegible] (S2-[illegible]) graphs [illegible]

[illegible] in combination with [illegible] in [illegible] curves, but only 7 curves [illegible] improvement. [illegible] in [illegible] of L.L. [illegible] no [illegible] contents.

[illegible] - [illegible] Arty (XX, 5, 7, 15)

SO: [illegible], VOL. 7, NO. 2, [illegible] Annual [illegible]

KEPINSKI, Antoni, Krakow, Skawinska 8; KROPACZEK, Zofia

Hydrocephalus and obstruction of the spinal canal in the course of tuberculous meningoencephalitis in adults. Gruzlica 22 no.11: 771-786 Nov 54.

1. Z kliniki ftyzjatrycznej Akad. Med. w Krakowie - kierownik prof. dr. St.Hornung

(MENINGOENCEPHALITIS
tuberc., with hydrocaphalus & obstruct. of spinal canal)
(HYDROCEPHALUS, complications
meningoencephalitis, tuberc., & obstruct. of spinal canal)
(SPINAL CANAL, diseases
obstruct. in meningoencephalitic, tuberc., with hydrocephalus)

JABLONSKA-JAROSZ, Wladyslawa; KROPACZEK. Zofia.

Case of tuberculous meningoencephalitis with excessive proliferative reaction (leptomeningitis tuberculosa proliferans) treated with antibiotics and ACTH. Gruslica 23 no.11: 815-819 Nov. '55.

1. Z Kliniki Ftyzjatrycznej A.M. w Krakowie. Kierownik: prof. dr St. Hornung i z Zakladu Anatomii Patologicznej A.M. w Krakowie. Kierownik: prof. dr J. Kowalczykowa. Krakow, ul. Skawinska 8, Klinika Ftyzjatryczna.

(ACTH, therapeutic use,
tuberc.leptomeningitis, proliferative, with isoniazid & streptomycin)

(NICOTINIC ACID ISOMERS, therapeutic use,
isoniazid in tuberc. leptomeningitis, proliferative, with ACTH & streptomycin)

(STREPTOMYCIN, therapeutic use,
tuberc.leptomeningitis, proliferative, with ACTH & isoniazid)

(TUBERCULOSIS, MENINGEAL, therapy,
ACTH with isoniazid & streptomycin in proliferative leptomeningitis)

KROPACZEK, Zofia; SOKOLOWSKA-PITUCHOWA, Janina

Cerebral oligodendroglioma with a clinical picture of tuberculous encephalomeningitis. Gruslica 23 no.11:821-823 Nov. '55.

1. Z Kliniki Ftyzjatrycznej A.M. w Krakowie. Kierownik: prof. dr St. Hornung. i z Zakladu Anatomii Patologicznej A.M. w Krakowie Kierownik: prof.dr J. Kowalczykowa. Krakow, ul. Krowoderska 19.

(BRAIN, neoplasms, oligodendroma, differ.diag. from tuberc. encephalomeningitis)
(OLIGODENDROMA, brain, differ. diag. from tuberc.encephalomeningitis)
(TUBERCULOSIS, MENINGEAL, differential diagnosis, oligodendroma of brain)

1575. ADRENOCORTICOTROPIC HORMONE (ACTH) IN THE TREATMENT OF TUBERCULOUS ENCEPHALOMENINGITIS IN ADULTS - Hormon adrenokortykotropowy (ACTH) w leczeniu gruźliczego zapalenia mózgu i opon mózgowo-rdzeniowych u dorosłych - Kropaczek Z. Klin. Fityzjatrycznej A.M., Kraków - GRUŹLICA 1958, 26/5 (395-405) Graphs 1 Tables 3

Starting in 1953, 80 adult women were treated with streptomycin and isoniazid, combined with ACTH, cortisone or hydrocortisone. Prognosis was improved by hormone therapy, especially in cases with late diagnosis (over 14 days) and in cases of disseminated miliary tb accompanying the meningitis. Indications for ACTH in the first group were: serious - and especially acute - symptoms of inflammation. The favourable action of ACTH in this group consisted in shortening the duration of the acute symptoms, hastening the return to normal of the CSF and in speeding recession of the neurological signs. The 2nd group comprised cases complicated by spinal block and paralysis of the cranial nerves. In this group, the anti-phlogistic and anti-exudative action of ACTH was most pronounced in cases of recent spinal block. In more advanced cases, transient improvement and partial opening of the block was obtained. Of 2 cases of blindness treated in this group, one case regained sensitivity to light and the 2nd showed widening of the visual field. Rapid improvement was also achieved in a patient in whom in the 4th month exudative pericarditis occurred. This was quickly controlled by administration of ACTH. The 3rd group comprised 4 relapses, all of which were cured. The favourable action of ACTH in pregnant women is noteworthy. In 3 such cases, treatment made it possible to keep alive both mother and child. ACTH was administered to 80 patients, at first in daily doses of 75 mg. in 3 injections. At present a lower dosage is used: 25-50 mg., for longer periods (one month or more). (L, 8, 15)

1. Z Kliniki Fytyzjatrucznej A.M. w Drakowie. Kierownik: prof. dr. St Hornug.

KROPACZEK, Zofia (Krakow)

ACTH and adrenal cortex hormones in the treatment of various forms of tuberculosis, tuberculous encephalitis and meningitis and certain lung diseases. Gruzlica 29 no.1:99-100 Ja '61.

(TUBERCULOSIS ther)
(CORTICOTROPIN ther)
(ADRENAL CORTEX HORMONES ther)

KROPACZEK, Zofia; OSTROWSKA, Aleksandra

Study on blood enzymes in tuberculosis. V. Behavior of the glutamic-oxalic transminase activity in the cerebrospinal fluid and blood serum in patients with tuberculous meningo-encephalitis. Gruslica 31 no.4:315-322 '63.

1. Z Kliniki Ftizjatrycznej A.M. w Krakowie Kierownik: prof. dr S. Hornung.

(TUBERCULOSIS, MENINGEAL)
(ASPARTATE AMINOTRANSFERASE)
(BLOOD CHEMICAL ANALYSIS)
(CEREBROSPINAL FLUID)
(ENZYME TESTS)