PESIN V.G. [illegible]

[illegible]ETSKIY A. M.

[redacted] : [illegible]

[illegible] The chemistry of 2,1,3-thiadiazo[illegible]. [illegible] Chlorination [illegible] of benz-2,1,3-thiadiaz[illegible] . 27 no.6 [illegible] 10:[illegible]

[illegible] Michurin[illegible]

[illegible] 600 ml H_2O yielding 77.3% Cu salt [illegible] & Cu(OAc)$_2$

powder, m. 131-3° [illegible]

KHALETSKIY, A.M.

PESIN, V.G.; KHALETSKIY, A.M.

Chemistry of 2,1,3,-thiodiazole. Part 5: Nitration of some mono- and dihalogen derivatives of benz-2,1,3,-thiodiazole. Zhur. ob. khim. 27 no.9:2599-2604 S '57. (MIRA 11:3)

1. Leningradskiy khimiko-farmatsevticheskiy institut.
(Pyrrole) (Nitration)

KHALETSKIY, A.M.

KHALETSKIY, A.M., prof.

Using sterols of sulfate soap for the synthesis of steroid hormones. Bum. prom. 32 no.10:10-11 O '57. (MIRA 11:1)

1. Leningradskiy khimiko-farmatsevticheskiy institut.
(Sulfate soap) (Sterols) (Steroids)

AUTHOR: KHALETSKIY, A.M., PESIN, V.G. and CHZHAO CHZHI-CHZHUN PA - 3163
TITLE: Inquiries into the Chemistry of Piazothiole (3,4-bens-1,2,5-thiodiazole).
(Issledovaniya v oblasti khimii piaztiola (3,4-benz-1,2,5-tiodiazola) Russian).
PERIODICAL: Doklady Akademii Nauk SSSR, 1957, Vol 113, Nr 3, pp 627 - 630 (U.S.S.R.)
Received: 6 / 1957 Reviewed: 7 / 1957

ABSTRACT: Investigations showed that piazothiole (in contrast to the statements made by Efros and Levit (ZhOKh, 23, 1552 (1953); 25, 199 (1955)) very energetically associates chlorine as well as bromine while developing that. The reaction is realized in the melting as well as in the medium of organic solvents (chloroform, dichlorine-ethane etc.) with or without catalyzers (iron-filings). The products of the reaction are tetrachlorine- and tetrabromine-tetrahydrobenz-2,1,3-thiodiazoles which occur in form of a mixture of stereoisomers. On the strength of investigations it can be assumed that on the occasion of interaction between piazothiole and chlorine- and bromine an association of 4 halide-atoms takes place, on which occasion tetrahalide-tetrahydro-derivatives develop, which, in the case of collaborating with an alcoholic solution of a base, split off two molecules of halide-hydrogen (HCl or HBr) under formation of dihalide-derivatives.

Card 1/2

AUTHORS: Khaletskiy, A. M., Pesin, V. G., Chzhou Tsin' 20-114-4-36/63

TITLE: Investigations on the Chemistry of Piazothiol (Issledovaniye v oblasti khimii piaztiola) The Oxidation of 3,4-Benzo-1,2,5,-Thiodiazole and Its Derivatives (Okisleniye 3,4-benz-1,2,5-tiodiazola i yego proizvodnykh)

PERIODICAL: Doklady Akademii Nauk SSSR, 1957, Vol. 114, Nr 4, pp. 811--814 (USSR)

ABSTRACT: It has been reported earlier that pyazothiol and its derivatives, as well as 1',2'-naphthopyazothiol, are characterized by a certain unsaturatedness besides having aromatic properties. Thus it is not possible to realize, with regard to pyazothiol, some reactions characteristic for the ethylene compounds (addition of HCl, diene synthesis). It was found that the unsaturatedness of pyazothiol itself is diminished in its 1,4-dichloro derivative; The aromatic character of this latter compound is however increased. In this connection it was of interest further to investigate the unsaturated properties of pyazothiol. For this purpose the authors used oxidation. In the

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Investigations on the Chemistry of Piazothiol. The Oxidation of 3,4-Benzo-1,2,5,-Thiodiazole and Its Derivatives 20-114-4-36/63

oxidation of pyazothiol, 2-chloro-,2-methyl- and 1,4-dichloro pyazothiol with peracetic acid a prevalent destruction of the organic part of the molecule was noticed. It is well-known that the peracetic acid favors the formation of N-oxides of heterocyclic compounds. In the oxidation of pyazothiol with potassium permanganate the authors isolated two products: 1) to judge from the results of the analysis, most probably an S-dioxide of 2,1,3-thiodiazole-4,5-dicarbonic acid, 2) not thoroughly investigated, according to analysis results it corresponds to $C_2H_2N_2O_4SK$. The formation of these substances can be explained by assuming that the oxidation with potassium permanganate undergoes a previous addition of hydrogensuperoxide elements. At the same time as oxidation of the obtained 2,1,3-thiodiazole-4,5-dicarbonic acid takes place. In a similar way the oxidation reaction of 2-methyl-and 1',2',-naphtho pyazothioles occurs. Apparently, the opinions expressed with regard to the oxidation mechanism with potassium permanganate are confirmed by the oxidation of 1,4-dichloropyazothiol. This latter substance possesses a considerably lower degree of un-

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KHALETSKIY, A.M

AUTHORS: Pesin, V. G., Khaletskiy, A. M. 79-1-5/63

TITLE: Investigations in the Field of the Chemistry of 2,1,3-Thiodiazole (Issledovaniya v oblasti khimii 2,1,3-tiodiazola) VI. Chlorination and Bromination of 4- and 5-Aminobenz-2,1,3--Thiodiazoles (VI. Khlorirovaniye i bromirovaniye 4 - i 5 - aminobenz - 2,1,3 - tiodiazolov)

PERIODICAL: Zhurnal Obshchey Khimii, 1958, Vol. 28, Nr 1, pp. 20-26(USSR)

ABSTRACT:

The authors earlier showed that 4- and 5-aminobenz-2,1,3--thiodiazoles are easily acylated under conditions which are customary for aromatic amines. The present paper gives data which were obtained in the investigation of the chlorination- and bromination-reaction of 4- and 5-aminobenz-2,1,3-thiodiazoles. It was shown that in the chlorination of 4-aminobenz--2,1,3-thiodiazole with dichloroamine 4-amino-5,7-dichlorobenz-2,1,3-thiodiazole with a good yield forms; in the bromination of the same product with bromine in acetic acid 4-amino-5,7-dibromobenz-2,1,3-thiodiazole with a good yield (80%

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Investigation in the Field of the Chemistry of 2,1,3-Thiodiazole. VI. Chlo 79-1-5/63
rination and Bromination of 4- and 5-Aminobenz-2,1,3-Thiodiazoles

and more) is obtained. It became evident that under the influ-
ence of chlorine or bromine upon molten 4-aminobenz-2,1,3-thio-
diazole 4-amino-5,7-dichloro- and accordingly, 4-amino-5,7-di-
bromobenz-2,1,3-thiodiazoles are produced. In the bromination
of 5-aminobenz-2,1,3-thiodiazole 5-amino-6-bromobenz-2,1,3-
-thiodiazole forms, in the chlorination with dichloramine
5-amino-6-chlorobenz-2,1,3-thiodiazole. Under the influence
of hydrocyanic acid upon 4-5-aminobenz-2,1,3-thiodiazoles
benz-2,1,3-thiodiazole-4-thiourea and, accordingly, benz-2,
1,3-thiodiazole-5-thiourea are produced which are in bromina-
tion converted to the corresponding cyclo derivatives. A syn-
thesis of 5,6-(2-aminothiazole)-benz-2,1,3-thiodiazole was
realized by the influence of thiocyanic acid upon 5-amino-6-
-bromobenz-2,1,3-thiodiazole as well as by bromination of
benz-2,1,3-thiodiazole-5-thiourea. There are 19 references,
15 of which are Slavic.

ASSOCIATION: **Leningrad Chemical-Pharmaceutical Institute** (Leningradskiy
Khimiko-farmatsevticheskiy institut)

Card 2/3

KHALETSKIY, A. M.

AUTHORS: Pesin, V. G., Khaletskiy, A. M. 79-2-23/64

TITLE: Investigations in the Field of the Chemistry of 2,1,3-Thiodiazole
(Issledovaniya v oblasti khimii 2,1,3-tiodiazola)
VII. The Thiocyanogenation of 4- and 5-Aminobenz-2,1,3-Thiodiazoles
(VII. Rodanirovaniye 4- i 5-aminobenz-2,1,3-tiodiazolov)

PERIODICAL: Zhurnal Obshchey Khimii, 1958, Vol. 28, Nr 2, pp. 383 - 388 (USSR)

ABSTRACT: In the preceding report (reference 1) it was shown that 4-amino-
-5,7-dihalogenbenz-2,1,3-thiodiazoles are formed by the chlorina-
tion and bromination of 4-aminobenz-2-1-3-thiodiazole. By the chlo-
rination and bromination of 5-aminobenz-2-1-3-thiodiazole, however,
5-amino-6-halogenbenz-2-1-3-thiodiazoles form. The thiocyanogena-
tion takes place quite analogously. The thiocyanogenation was per-
formed according to Kaufman (reference 2) with thioyanogen which
formed in the interaction of bromine with ammonium thiocyanate
(potassium) in the presence of ammonium bromide (potassium) in the
medium of an inert solvent (methanol) at 0 - 2°C. Conclusions:
1) The authors found that 4-amino-5-7-dithiocyanogenbenz-2,1,3-thio-
diazole with a large yield (95 %) forms in the thiocyanogenation
of 4-aminobenz-2,1,3-thiodiazole. On heating with diluted hydro-
chloric acid it is (probably) converted to 7-thiocyanogen-4,5-(2-

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Investigations in the Field of the Chemistry of 2,1,3-Thiodiazole. VII. The Thiocyanogenation of 4- and 5-Aminobenz-2,1,3-Thiodiazoles 79-2-23/64

aminothiazole)-benz-2,1,3-thiodiazole. 2) It was found that 5-amino-6-thiocyanogenbenz-2,1,3-thiodiazole with a high yield (90 %) forms in the thiocyanogenation of 5-aminobenz-2,1,3-thiodiazole. On heating with diluted hydrochloric acid the former is isomerized to 5,6-(2'-aminothiazole)-benz-2,1,3-thiodiazole. 3) It was found that 6-thiocyanogen-4-nitro-1,3-diaminobenzole with an almost quantitative yield forms in the thiocyanogenation of 4-nitro-1,3-diaminobenzene. On heating with diluted hydrochloric acid it isomerizes to 2,5-diamino-6-nitrobenzthiazole. 4) An accessible method for the synthesis of 2,5,6-triaminobenzthiazole with a high yield was found. 5) It was shown that 5,6-(2'-aminothiazole)-benz-2,1,3-thiodiazole forms in the interaction of the chlorhydrate of 2,5,6-triaminobenzthiazole with thionylaniline (in the presence of potassium acetate). 6) It was shown that the thiodiazole cycle is under identical conditions considerably easier formed than the imidazole cycle. 7) The reaction of the interaction of thionylaniline with o-diamines of the aromatic series was extended to the o-diamines of the benzthiazole series, which contain an amino group in position 2. Besides it was shown that under certain conditions the diamines can enter into a reaction with thionylaniline, not only in the form of free bases but also as salts. There are 5 references,

Card ~~2/3~~ 2/2

Leningrad Chem. Pharm. Inst.

AUTHORS: Pesin, V. G., Khaletskiy, A. M., Chzhou, Tsin' SOV/79-28-8-19/66

TITLE: Investigations Concerning the Chemistry of 2,1,3-Thiodiazoles (Issledovaniya v oblasti khimii 2,1,3-tiodiazola) VIII. Oxidation of Benzo-2,1,3-Thiodiazole and Its Derivatives (VIII. Okisleniye benz-2,1,3-tiodiazola i yego proizvodnykh)

PERIODICAL: Zhurnal obshchey khimii, 1958, Vol. 28, Nr 8, pp. 20[illegible]-2094 (USSR)

ABSTRACT: Since they were not successful in previous attempts in carrying out some of the reactions characteristic of ethylene compounds (addition of HCl, diene synthesis) with benzo-2,1,3-thiodiazole, the authors were interested in further studying the unsaturation properties of this compound and its derivatives in regard to oxidation. In oxidizing the benzo-2,1,3-thiodiazole and its 5-methyl, 5-chloro, and 4,7-dichloro derivatives the organic molecule was decomposed and the sulfur could be recovered only as ammonium sulfate. In the oxidation of 5-chlorobenzo-2,1,3-thiodiazole a small amount of 2,4-dinitrophenylhydrazone (probably as the glycol aldehyde) separated out in addition to the ammonium sulfate.

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SOV/79-28-8-[illegible]/66

AUTHORS: Pesin, V. G., Khaletskiy, A. M., Chzhou Tsin'

TITLE: Investigations Concerning the Chemistry of the 2,1,3-Thiodiazoles (Issledovaniya v oblasti khimii 2,1,3-tiodiazola) IX. The Decomposition Reaction of o-Benzoquinonedioxime With Sulfur Dichloride (IX. O vzaimodeystvii o-benzokhinondioksima s dvukhloridom sery)

PERIODICAL: Zhurnal obshchey khimii, 1958, Vol. 28, Nr 8, pp. 2094-2096 (USSR)

ABSTRACT: The authors undertook the synthesis of compounds which in earlier investigations (Refs 1, 2) had shown the properties of benzo-2,1,3-thiodiazole (Formula 1) and its derivatives. Compounds about whose quinoidal structure there could be no doubt were used as starting materials. According to the literature (Ref 4) benzofurazan (II) does not react with phosphorous pentasulfide, so it was assumed that the acid in the benzofuroxan cyclic diazole (III) is less strongly bound to the nitrogen atoms than it is in the benzofurazan (see the formula diagram). It was thus attempted to synthesize benzo-2,1,3-thiodiazole (I) or its oxide (IV) by reacting

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benzofuroxan (III) with phosphorous pentasulfide or with hydrogen sulfide. This attempt was not successful, nor were the desired results achieved by reacting o-benzoquinonedioxime with H_2S in the presence of sodium acetate. In both instances benzofurazan (II) was produced instead of (I) (a dehydration reaction occurred). These results led to the assumption that with the introduction of compounds which react under mild conditions, i.e. the compounds which prevent dehydration, the formation of the thiodiazole ring is not prevented. Therefore, reactions between o-benzoquinonedioxime and thionyl chloride, thionyl aniline, and sulfur dichloride were carried out. These studies showed that thionyl chloride and thionyl aniline do not react with o-benzoquinonedioxime. Only a derivative of the benzo-2,1,3-thiodiazole was obtained by the reaction of this oxime with sulfur dichloride. The structure of this derivative is that shown in formula (IV) or (V). There are 5 references, 1 of which is Soviet.

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Leningrad Chem Pharm Inst.

KHALETSKIY, A.M.; PESIN, V.G.; CHZHOU TSIN' [Chou Ch'in]

Synthesis and study of N-oxides of heterocyclic compounds. Part 1: N-oxides of morphine derivatives of tetrahydro isoquinoline and quinoline. Zhur.ob.khim. 28 no.9:2348-2355 S '58. (MIRA 11:11)

1. Leningradskiy khimiko-farmatsevticheskiy institut.
(Quinoline) (Isoquinoline) (Morphine)

KHALETSKIY, A.M.; PESIN, V.G.; DEN ZHUN'-SYAN [Teng Jun-hsiang]

Pyrazolidine. Part 1: Synthesis and properties of mono and di substituted 1,2-diphenyl-3,5-dioxypyrazolidine. Zhur.ob.khim. 28 no.9:2355-2359 S '58. (MIRA 11:11)

1. Leningradskiy khimiko-farmatsevticheskiy institut.
(Pyrazolidine)

AUTHORS: Pesin, V. G., Khaletskiy, A. M., Den Zhun'-syan

SOV/79-28-10-39/60

TITLE: Investigations in the Field of the Chemistry of Pyrazolidine (Issledovaniya v oblasti khimii pirazolidina)II. Halogenation and Thiocyanation of 1,2-Diphenyl-3,5-Dioxo Pyrazolidine and Its Derivatives (II. Galogenirovaniye i rodanirovaniye 1,2-difenil-3,5-dioksopirazolidina i yego proizvodnykh)

PERIODICAL: Zhurnal obshchey khimii, 1958, Vol 28, Nr 10, pp 2816 - 2820 (USSR)

ABSTRACT: In contrast to pyrazolones, pyrazolidines which are structurally closely related to them are insufficiently investigated. The authors succeeded in easily bringing 1,2-diphenyl-3,5-dioxo pyrazolidine (Compound I) into reaction with chlorine, bromine and thiocyanate under the formation of the corresponding monochloro, bromo and thiocyano derivatives (II); this was achieved without catalysts (Scheme 1). The gaseous chlorination and bromination in the chloroform medium were carried

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Investigations in the Field of the Chemistry of Pyrazolidine. II. Halogenation and Thiocyanation of 1,2-Diphenyl-3,5-Dioxo Pyrazolidine and Its Derivatives

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out under cooling. The treatment with thiocyanate formed by the reaction of bromine and thiocyano ammonium in methanol saturated with ammonium bromide was carried out at 0-2°. The corresponding 4-chloro-, 4-bromo-, 4-thiocyano derivatives of 1,2-diphenyl-3,5-dioxo pyrazolidine were separated. It was demonstrated that on the action of a double amount of halogen or thiocyanate (pseudohalogen) on this pyrazolidine its 4,4-dibromo, and 4,4-dithiocyano derivatives (III) and (IV) are formed. The 4,4-dichloro-1,2-diphenyl-3,5-dioxo pyrazolidine could not be obtained. In the chlorination, bromination and thiocyanation of 4-n-butyl-1,2-diphenyl-3,5-dioxo pyrazolidine the corresponding 4-chloro-, 4-bromo, and 4-thiocyano derivatives of 4-n-butyl-1,2-diphenyl-3,5-dioxo pyrazolidine are formed. The 4-bromo-4-n-butyl-1,2-diphenyl-3,5-dioxo pyrazolidine reacts with thiocyano potassium under the formation of 4-thiocyanate-4-n-butyl-1,2-diphenyl-3,5-dioxo

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AUTHORS: Khaletskiy, A. M., Pesin, V. G., Chzhou Tsin SOV/79-28-10-40/60

TITLE: Synthesis and Investigation of the N-Oxides of Heterocyclic Compounds (Sintez i issledovaniye N-okisey geterotsiklicheskikh soyedineniy) II. N-Oxides of Acridine Derivatives (II. N-Okisi proizvodnykh akridina)

PERIODICAL: Zhurnal obshchey khimii, 1958, Vol 28, Nr 10, pp 2821-2825 (USSR)

ABSTRACT: Some N-oxides of the acridine series are described. These oxides are of great importance for medicine and are significant as intermediate products of syntheses of all types. The oxidation of the acridine derivatives has been investigated only slightly. The authors investigated the following acridine derivatives: 2-ethoxy-6-nitro-9-chloro acridine (I), 2-ethoxy-6,9-diamino acridine (II), 2-ethoxy-6,9-diacetyl diamino acridine (III), 3,6-diamino acridine (IV), and 3,6-diacetyl diamino acridine (V). In the oxidation of (I) with perbenzoic acid in chloroform the N-oxide (VI) (89% yield) was obtained which was transformed by ammonia in phenol solution into the N-oxide of 2-ethoxy-6-nitro-9-amino acridine (VII); this points to the fact that the

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Synthesis and Investigation of the N-Oxides of Heterocyclic SOV/79-28-10-40/60
Compounds. II. N-Oxides of Acridine Derivatives

N-oxide group does not effect the movability of the chlorine. Perbencoic acid does not act on (II), whereas peracetic acid causes compouhd (III) to be formed (18,6% yield) with a subsequent chromatography of the reaction products on aluminum oxide. By the oxidation of this compound with perbencoic acid the N-oxide (VIII) is formed, which with NaHSO$_3$ in alcohol diluted with water is transformed into (II). Compound (IV) reacts in a similar way. In the reaction of the two peracids with (IV) only an acylation but no oxidation to the N-oxide is the result. In the oxidation of (V) with perbencoic acid their N-oxide (IX) is obtained. This proves that the two peracids used cannot be taken for a direct transformation of the amino acridines into the N-oxides. In their oxidation in peracetic acid an acylation first of all takes place and only then the formation of N-oxides of the acyl derivatives. There are 3 references, 1 of which is Soviet.

ASSOCIATION: Leningradskiy khimiko-farmatsevticheskiy institut (Leningrad Chemical and Pharmaceutical Institute)

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AUTHORS: Khaletskiy, A. M., Pesin, V. G., Teng Jun-hsiang SOV/79-28-11-28/55

TITLE: Investigations in the Field of the Chemistry of Pyrazolidine (Issledovaniya v oblasti khimii pirazolidina) III. Investigation of the Reactivity of 1,2-Diphenyl-3,5-Dioxopyrazolidine (Nitration, Sulfonation etc.) (III. Izucheniye reaktsionnoy sposobnosti 1,2-difenil-3,5-dioksopirazolidina.(Nitrovaniye, sul'firovaniye i dr.))

PERIODICAL: Zhurnal obshchey khimii, 1958, Vol 28, Nr 11, pp 3027 - 3030 (USSR)

ABSTRACT: In the further investigation of the reactivity of the methylene group of the 1,2-diphenyl-3,5-dioxopyrazolidine (I) its nitration and sulfonation were carried out. The nitration with the nitration mixture under cooling yielded the mononitro derivative (II). The assumption that the nitro group is at the C_4 atom (II) is concluded from the fact that the hydrogen at C_4 is highly mobile, and that in the case of the introduction of the NO_2 group into the benzene nucleus a dinitro derivative had to be formed. The amino

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Investigations in the Field of the Chemistry of Pyrazolidine. III. Investigation of the Reactivity of 1,2-Diphenyl-3,5-Dioxopyrazolidine (Nitration, Sulfonation etc.)

compound formed from it by reduction forms after the diazolization and combination with β-naphthene an unstable dye that could not be separated, as was the case with the 4-aminopyrazole. The sulfonation of the compound (I) after the analysis of the barium salt yields the trisulfo derivative (III), which had to be assumed according to the data given in reference 3, as the latter point to the fact that in the sulfonation of the 1-phenyl-3-methyl pyrazolone-5 (IV) which is similar in structure, the compounds (V), (VI) and (VII) are obtained; the latter have the sulfo groups at the C_4 in the pyrazolone nucleus and in the para-position in the benzene nuclei. In the further reactions of the mentioned sulfo acids with nitrous acid and aryl diazonium compounds the structures (VIII) and (IX) could be attributed to the barium salts of the sulfo acid (VI) and the disulfo acid (VII). In checking these data (Ref 2) with respect to the

Investigations in the Field of the Chemistry of Pyrazolidine. III. Investigation of the Reactivity of 1,2-Diphenyl-3,5-Dioxopyrazolidine (Nitration, Sulfonation etc.) SOV/79-28-11-28/55

sulfonation products of the 1,2-diphenyl-3,5-dioxopyrazolidine the observations made were very similar, so that the structure (III) could be ascribed to it. Thus, the pyrazolidine cycle in the nitration and sulfonation behaves in much the same way as the pyrazolone cycle. Compound (I) easily reacts with n-nitroso-dimethyl aniline and phenyl diazonium chloride according to the mentioned reaction scheme. This fact points to the reactivity of the methylene group. There are 2 Soviet references.

ASSOCIATION: Leningradskiy khimiko-farmatsevticheskiy institut (Leningrad **Chemopharmaceutic** Institute)

SUBMITTED: [illegible]

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AUTHORS: Pesin, V. G., Khaletskiy, A. M., **Teng Jun-hsiang** SOV/79-28-11-29/55

TITLE: Investigations in the Field of the Chemistry of Pyrazolidine (Issledovaniya v oblasti khimii pirazolidina) IV. Synthesis and Investigation of the Sulfides and Disulfides of the 1,2-Diphenyl and 4-n.Butyl-1,2-Diphenyl-3,5-Dioxopyrazolidines (IV.Sintez i issledovaniye sul'fidov i disul'fidov 1,2-difenil-i 4-n.-butil-1,2-difenil-3,5-dioksopirazolidinov)

PERIODICAL: Zhurnal obshchey khimii, 1958, Vol 28, Nr 11, pp 3030 - 3036 (USSR)

ABSTRACT: In the present paper the results of the investigations of the reactivity of chloro, bromo, and thiocyano derivatives of the 1,2-diphenyl and 4-n.-butyl-1,2-diphenyl-3,5-dioxopyrazolidine are described. The 4-bromo-1,2-diphenyl-3,5-dioxopyrazolidine (I) in the reaction with sodium sulfide leads to the formation of the sulfide (I) as main product, and to the compound (III) as secondary product. The

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Investigations in the Field of the Chemistry of Pyrazolidine. IV. Synthesis and Investigation of the Sulfides and Disulfides of the 1,2-Diphenyl and 4-n.-Butyl-1,2-Diphenyl-3,5-Dioxopyrazolidines

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4-bromo-4-n.-butyl-1,2-diphenyl-3,5-dioxopyrazolidine (VI) reacts with sodium sulfide under the formation of the sulfide (VII), as well as with triethyl ammonium diethyl phosphate (IV) under the formation of compound (VIII) and (IX), i.e. of thione and thiol structure. It was found that the 4-thiocyano-1,2-diphenyl-3,5-dioxopyrazolidine (X) easily enters reaction with alcoholic alkali liquor and yields the disulfide (XI). In the reaction of the 4-thiocyano-4-n.-butyl-1,2-diphenyl-3,5-dioxopyrazolidine with alcoholate a product without sulfur is obtained as final product. 4-bromo-4-n.-butyl-1,2-diphenyl-3,5-dioxopyrazolidin (VI) with sodium disulfide yields the disulfide of the di-4-n.-butyl-1,2-diphenyl-3,5-dioxopyrazolidine (XII). In the reaction of the bis-malonic ester with hydrazo benzene the bis-1,2-diphenyl-3,5-dioxopyrazolidine (III) (structural proof of the

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Investigations in the Field of the Chemistry of Pyrazolidine. IV. Synthesis and Investigation of the Sulfides and Disulfides of the 1,2-Diphenyl and 4-n.-Butyl-1,2-Diphenyl-3,5-Dioxopyrazolidines

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compound (III) by the other synthesis according to scheme 1) is formed. The experimental results show that in the series of the reactions the n.-butyl group at the C_4 atom exerts a mainly hampering influence on the reaction process. There are 5 references, 4 of which are Soviet.

ASSOCIATION: Leningradskiy khimiko-farmatsevticheskiy institut (Leningrad **Chemopharmaceutic** Institute)

SUBMITTED: July 15, 1957

Card 3/3

AUTHORS: Pesin, V. G., Khaletskiy, A. M., SOV/79-28-12-25/41
Teng Jun-hsiang

TITLE: Investigations in the Field of Pyrazolidine Chemistry (Issledovaniya v oblasti khimii pirazolidina) V. On Some Anomalous Reactions of 1,2-Diphenyl-3,5-Dioxo Pyrazolidine and Its Halogen and Thiocyane Derivatives (V. O nekotorykh anomal'nykh reaktsiyakh 1,2-difenil-3,5-dioksopirazolidina i yego galogen- i rodanproizvodnykh)

PERIODICAL: Zhurnal obshchey khimii, 1958, Vol 28, Nr 12, pp 3274-3277 (USSR)

ABSTRACT: 1,2-diphenyl-and 4-n.-butyl-1,2-diphenyl-3,5-dioxo pyrazolidine sometimes react in an anomalous way. The authors showed already earlier (Ref 1) that in the reaction of 4-n.-butyl-4-thiocyano-1,2-diphenyl-3,5-dioxo pyrazolidine with alcoholic alkali a sulfur-free product, but no disulfide is formed. In this paper some anomalous reactions of 1,2-diphenyl-3,5-dioxo pyrazolidine and of its 4-bromo derivative are mentioned. 4-bromo-1,2-diphenyl-3,5-dioxo pyrazolidine (I) reacts, for instance, with potassium thiocyanate under the formation of compound (II), and not, as expected, of 4-thiocyano-1,2-diphenyl-3,5-dioxo pyrazolidine. Compound (II) is formed as by-product

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5(3)

AUTHORS: Ksenofontova, Ye. V., Khaletskiy, A. M.

TITLE: Investigation of the Reactivity of α- and β-Oxides of β-Sitosterol

PERIODICAL: Zhurnal obshchey khimii, 1959, Vol 29, Nr 8, pp 2565-2569 (USSR)

ABSTRACT: From the structure of β-sitosterol (I), two isomers (II) and (III) had to be expected on its oxidation. The authors, however, succeeded in separating out only one product of the melting point 148-150° by oxidation with benzoyl hydroperoxide. Likewise, on oxidation of the 3-acetate of β-sitosterol, only one oxide of the melting point 160-162° separated out. Attempts at separating the oxides by repeated recrystallization in alcohol, or by means of chromatographic adsorption on aluminum oxide were unsuccessful. Only when treating the oxide dissolved in chloroform with the melting point 148-150° with gaseous HCl, two isomeric chlorodiols (IV) and (V) could be separated out which gave two compounds under the influence of alkaline caustic potash solution which corresponded with the sitosterol oxides as to their elementary composition. When gaseous HCl acts upon

Card 1/2

SOV/79-29-8-23/81

Investigation of the Reactivity of α- and β-Oxides of β-Sitosterol

the chloroform solution of the 3-acetate of β-sitosterol oxide, also two compounds were separated out which proved to be chlorohydrins of the above-mentioned acetates. Thus, on oxidation of β-sitosterol (I), on subsequent hydrochlorination and dehydrochlorination, the processes take place according to scheme 1. In reactions of the β-sitosterol oxides, and their acetyl derivatives with benzoyl chloride, 4 products with melting points 205-206.5°, 210-212°, 196-198°, 203-205° were separated out. The first two correspond with the formulas (VI) and (VII) (Scheme 2), as far as they are separated out of the 3-oxy-derivatives. The two remaining products correspond with the 3 β-acetoxy-5-chloro-6 β-benzoxy- and 3 β-acetoxy-5-oxy-6 β-chloro-β-sitostane. There are 2 references.

ASSOCIATION: Leningradskiy khimiko-farmatsevticheskiy institut (Leningrad Chemopharmaceutical Institute)

SUBMITTED: June 10, 1958

Card 2/2

ZAPUTRYAYEV, B.A.; VELITSKAYA, O.Ya.; GLIKINA, L.S.; KHALETSKIY, A.M.

Improvement in the synthesis of methylbenzylketone. Med.prom. 14 no.1:48-51 Ja '60. (MIRA 13:5)

1. Leningradskiy khimiko-farmatsevticheskiy institut.
(PROPANONE)

KHALETSKIY, A M

~~KAHLETSKIY, A.M.~~

"Chemistry of vitamins" by V.M.Berezovskii. Reviewed by A.M.Khaletskii.
Med. prom. SSSR 14 no.12:54-55 D '60. (MIRA 13:12)
(VITAMINS) (BEREZOVSKII, V.M.)

PESIN, V.G.; KHALETSKIY, A.M.; KAUKHOVA, L.A.

Chemistry of 2,1,3-thiodiazole. Part 11: Chlorination and bromination of 1',2'-naphtho-2,1,3-thiodiazole. Zhur.ob. khim. 30 no.7:2187-2192 Jl '60. (MIRA 13:7)

1. Leningradskiy khimiko-farmatsevticheskiy institut.
(Thiadiazole)

KHALETSKIY, A.M.

Professor A.F. Gammerman; on her 70th birthday. Trudy Len. khim.-farm. inst. 12:7-10 '61. (MIRA 15:3)
(GAMMERMAN, ADEL' FEDOROVNA, 1888-)

KHALETSKIY, A.M.

Studies in the field of β-sitosterol and non-steroid androgens. Med. prom. 15 no.11:32-37 N '61. (MIRA 15:6)

1. Leningradskiy khimiko-farmatsevticheskiy institut.
(STEROLS) (ANDROGENS)

ZAPUTRYAYEV, B.A.; KHALETSKIY, A.M.; PIMENOVA, L.D.

Synthesis of aryl amides of 2-oxocyclopentanecarboxylic acid.
Zhur. ob. khim. 31 no. 2:387-389 F '61. (MIRA 14:2)

1. Leningradskiy khimiko-farmatsevticheskiy institut.
(Cyclopentanecarboxylic acid)

ZAPUTRYAYEV, B.A.; KHALETSKIY, A.M.; PIMENOVA, L.D.

Bromination of methyl 2-oxocyclopentanecarboxylate. Zhur. ob. khim. 31 no.3:737-739 Mr '61. (MIRA 14:3)

1. Leningradskiy khimiko-farmatsevticheskiy institut.
(Cyclopentanecarboxylic acid) (Bromination)

VINOKUROVA, N.M.; KHALETSKIY, A.M.

Synthesis and investigation of 5-(2-methylthioethyl)-5-(1-methylbutyl)-2-thiobarbituric acid. Zhur. ob. khim. 31 no.4:1085-1087 Ap '61. (MIRA 14:4)

1. Leningradskiy khimiko-farmatsevticheskiy institut.
(Barbituric acid)

PESIN, V.G.; KHALETSKIY, A.M.

Salts of dialkylthiophosphoric acids. Zhur. ob khim. 31 no.8:2508-2515 Ag '61. (MIRA 14:8)

1. Leningradskiy khimiko-farmatsevticheskiy institut.
(Phosphorothioic acid)

PESIN, V.G.; KHALETSKIY, A.M.

Salts of dialkylthiophosphoric acids. Part 2: Properties of di-(β-chloroethyl)-phosphorous acid. Zhur. ob. khim. 31 no.8: 2515-2518 Ag '61. (MIRA 14:8)

1. Leningradskiy khimiko-farmatsevticheskiy institut.
(Phosphorous acid)

PESIN, V.G.; KHALETSKIY, A.M.

Salts of dialkylthiophosphoric acids. Part 3: Reactivity and structure of diethylthiophosphoric acid salts. Zhur. ob. khim. 31 no.8:2518-2522 Ag '61. (MIRA 14:8)

1. Leningradskiy khimiko-farmatsevticheskiy institut.
(Phosphorothioic acid)

PESIN, V.G.; KHALETSKIY, A.M.; VITENBERG, I.G.

Salts of dialkylthiophosphoric acids. Part 4: Reactions of dialkylthiophosphoric acid salts with aromatic and heterocyclic halogen derivatives. Zhur. ob. khim. 31 no.8:2522-2526 Ag '61.
(MIRA 14:8)

1. Leningradskiy khimiko-farmatsevticheskiy institut.
(Phosphorothioic acid) (Halogen compounds)

KHALETSKIY, A.M.; VASIL'YEVA, M.V.

Sulfonic esters and their transformations. Zhur.ob.khim. 31 no.9:2996-3000 S '61. (MIRA 14:9)

1. Leningradskiy khimiko-farmatsevticheskiy institut.
(Sterols) (Sulfonic acid)

PESIN, V.G.; KHALETSKIY, A.M.; ZOLOTOVA-ZOLOTUKHINA, L.V.

Chemistry of 2,1,3-thio- and selendiazole. Part 12: Synthesis and study of derivatives of pyrimidine-2,1,3-thio and selendiazole. Zhur.ob.khim. 31 no.9:3000-3003 S '61. (MIRA 14:9)

1. Leningradskiy khimiko-farmatsevticheskiy institut.
(Pyrimidine) (Selenium organic compounds)

ZONIS, L.S.; KHALETSKIY, A.M.; PESIN, V.G.

Synthesis and study of some 5,5'-dialkylaminoalkyl derivatives of barbituric and thiobarbituric acids. Zhur.ob.khim. 31 no.9:3004-3006 S '61. (MIRA 14:9)

1. Leningradskiy khimiko-farmatsevticheskiy institut.
(Barbituric acid)

KHALETSKIY, A.M., prof.

β-Sitosterol. Bum.prom. 36 no.4:10-11 Ap '61. (MIRA 14:5)

1. Leningradskiy khimiko-farmatsevticheskiy institut.
(Sitosterol)

KHALETSKIY, A. M.

Principal trends in the works of the All-Union Chemicopharmaceutical Research Institute during the period 1920-1957. Med. prom. 16 no.1:60-63 Ja '62. (MIRA 15:3)

(PHARMACEUTICAL RESEARCH)

PESIN, V.G.; KHALETSKIY, A.M.; SERGEYEV, V.A.

2,1,3-Thio- and selendiazoles. Part 13: Nitration of 4- and 5-aminobenz-2,1,3-thiodiazoles. Zhur. ob. khim. 32 no.1:181-186 Ja '62. (MIRA 15:2)

1. Leningradskiy khimiko-farmatsevticheskiy institut.
(Thiadiazole) (Nitration)

KHALETSKIY, A.M.; PESIN, V.G.; VITENBERG, I.G.

Synthesis of amides of β-phenylisopropylamine and of some carboxylic acids. Zhur.ob.khim. 32 no.4:1068-1071 Ap '62. (MIRA 15:4)

1. Leningradskiy khimiko-farmatsevticheskiy institut.
(Isopropylamine) (Amides)

PESIN, V.G.; KHALETSKIY, A.M.

Chemistry of 2,1,3-thio and selenodiazoles. Part 14:
Reactivity of bromine in derivatives of 2,1,3-benzothiadiazole.
Zhur.ob.khim. 32 no.10:3284-3290 O '62. (MIRA 15:11)

1. Leningradskiy khimiko-farmatsevticheskiy institut.
(Benzothiadiazole) (Bromine)

PESIN, V.G.; KHALETSKIY, A.M.; D'YACHENKO, Ye.K.

Chemistry of 2,1,3-thiodiazole. Part 15: Oxidation of benzo-2,1,3-thiodiazole by potassium permanganate. Zhur.ob.khim. 32 no.11:3505-3510 N '62. (MIRA 15:11)

1. Leningradskiy khimiko-farmatsevticheskiy institut.
(Thiadiazole) (Oxidation)

KSENOFONTOVA, Ye. V.; VASIL'YEVA, M. V.; KHALETSKIY, A. M.

Oxidation of isomeric β-sitosterol 5,6-dibromides. Zhur. ob. khim. 32 no.12:4013-4015 D '62. (MIRA 16:1)

1. Leningradskiy khimiko-farmatsevticheskiy institut.

(Sitosterol) (Oxidation)

KHALETSKIY, A.M.; KLEBANOV, G.S., red.;

[Pharmaceutical chemistry; inorganic compounds] Farmatsevticheskaia khimiia: neorganicheskie soedineniia; uchebnoe posobie dlia studentov-zaochnikov. Leningrad, Leningradskii khimiko-farmatsevticheskii institut, 1963. 126 p.
(MIRA 16:12)

(CHEMISTRY, MEDICAL AND PHARMACEUTICAL)

KRASNOV, Ye.A.; KHALETSKIY, A.M.

Materials for studying the chemical composition of the crowberry (Empetrum nigrum L.). Apt. delo 12 no.6:28-31 N-D '63. (MIRA 17:2)

1. Leningradskiy khimiko-farmatsevticheskiy institut.

KHALETSKIY, A.M.; MOLDAVER, B.L.

Pyrazolidine-3,5-diones; syntheses and pharmacalogical significance.
Usp.khim. 32 no.10:1201-1232 O '63. (MIRA 16:12)

1. Leningradskiy khimiko-farmatsevticheskiy institut.

PESIN, V. G.; KHALETSKIY, A. M.; SERGEYEV, V. A.

Chemistry of 2,1,3-thiodiazole. Part 16: Chlorination, bromination and thiocyanation of 5-aminobenzo-2,1,3-thiodiazole. Zhur. ob. khim. 33 no.1:230-233 '63.
(MIRA 16:1)

1. Leningradskiy khimiko-farmatsevticheskiy institut.

(Thiadiazole)

PESIN, V.G.; KHALETSKIY, A.M.; VITENBERG, I.G.

Salts of dialkyl phosphorothioic acids. Part 5: Interaction of slats of dialkyl phosphorothioic acids with aromatic halogen derivatives. Zhur.ob.khim. 33 no.2:388-391 F '63.
(MIRA 16:2)

1. Leningradskiy khimiko-farmatsevticheskiy institut.
(Phosphorothioic acid) (Halogen compounds)

PESIN, V.G.; KHALETSKIY, A.M.; SERGEYEV, V.A.

Chemistry of 2,1,3-benzothiadiazole. Part 17: Halogenation of 2,1,3-benzothiadiazole and its halo derivatives. Zhur.ob.khim. 33 no.3:949-952 Mr '63. (MIRA 16:3)

1. Leningradskiy khimiko-farmatsevticheskiy institut.
(Benzothiadiazole) (Halogenation)

PESIN, V.G.; KHALETSKIY, A.M.; LOTSMANENKO, I.A.

Chemistry of 2,1.3-thiodiazole. Part 18: Esters and amides of 5,7-dihalobenzo-2,1,3-thiodiazole-4-hydroxyacetic acids. Zhur.ob. khim. 33 no.4:1096-1101 Ap '63. (MIRA 16:5)

1. Leningradskiy khimiko-farmatsevticheskiy institut.
(Thiadiazole) (Acetic acid)

KHALETSKIY, A.M.; VASIL'YEVA, M.V.

Sulfoethers of sterols and their transformations. Part 2: Reactivity of γ-sitosterol sulfoether salts. Zhur.ob.khim. 33 no.4: 1104-1107 Ap '63. (MIRA 16:5)

1. Leningradskiy khimiko-farmatsevticheskiy institut.
(Sterols)

PESIN, V.G.; KHALETSKIY, A.M.; ZOLOTOVA-ZOLOTUKHINA, L.V.

Chemistry of 2,1,3-thio- and selenodiazoles. Part 19: Synthesis of 2-methylthiazolo (5,4-g)- and 2-methylthiazolo (4,5-g) benzo-2', 1',3'-thiodiazoles and their seleno analogs. Zhur.ob.khim. 33 no.4:1101-1104 Ap '63. (MIRA 16:5)

1. Leningradskiy khimiko-farmatsevticheskiy institut.
(Thiazole) (Thiadiazole) (Selenium organic compounds)

PESIN, V.G.; KHALETSKIY, A.M.; LOTSMANENKO, I.A.

2,1,3-Thiodiazole. Part 20: Bucherer reactions and diazotization involving amino derivatives of benzo-2,1,3-thiodiazole. Zhur.ob.khim. 33 no.6:1746-1752 Je '63. (MIRA 16:7)

1. Leningradskiy khimiko-farmatsevticheskiy institut.
(Benzothiazole) (Amino compounds)

PESIN, V.G.; KHALETSKIY, A.M.; LOTSMANENKO, I.A.

2,1,3-Thiodiazole. Part 21: Chlorination, bromination, and nitration of 4- and 5-hydroxybenzo-2,1,3-thiodiazoles. Zhur.ob.khim. 33 no.6:1752-1759 Je '63. (MIRA 16:7)

1. Leningradskiy khimiko-farmatsevticheskiy institut.
(Benzothiadiazole) (Halogenation) (Nitration)

PESIN, V.G.; KHALETSKIY, A.M.; SERGEYEV, V.A.

2,1,3-Thiodiazole. Part 22: Nitration of derivatives of benzo-2,1,3-thiodiazole. Zhur.ob.khim. 33 no.6:1759-1766 Je '63. (MIRA 16:7)

1. Leningradskiy khimiko-farmatsevticheskiy institut.
(Benzothiadiazole) (Nitration)

ZONIS, L.S.; KHALETSKIY, A.M.; PESIN, V.G.

Synthesis and study of 1-[p-β-diethylaminoethoxyphenyl)-p-tolyl-2-p-chlorophenyl] ethanol. Zhur.ob.khim. 33 no.10:3141-3142 O '63. (MIRA 16:11)

1. Leningradskiy khimiko-farmatsevticheskiy institut.

VASIL'YEVA, M.V.; KHALETSKIY, A.M.

Oxidation of isomeric 5,6-dibromo-β-sitostanol. Zhur.ob.khim. 33 no.12:3831-3833 D '63. (MIRA 17:3)

1. Leningradskiy khimiko-farmatsevticheskiy institut.

KHALETSKIY, A.M.; MOLDAVER, B.L.

Chemistry of pyrazolidine. Part 6: Sulfonation of 3,5-dihydroxypyrazolidines. Zhur.ob.khim. 34 no.1:216-224 Ja '64. (MIRA 17:3)

1. Leningradskiy khimiko-farmatsevticheskiy institut.

PESIN, V.G.; ZOLOTOVA-ZOLOTUKHINA, L.V.; KHALETSKIY, A.M.

2,1,3,-Thiadiazoles and selenadiazole. Part 24: Synthesis and study of 2-mercapto[3,4-e]thiazolo- and [4,5-e]benzo-2',1',3'-thiadiazoles. Zhur.ob.khim. 34 no.1:255-260 Ja '64. (MIRA 17:3)

1. Leningradskiy khimiko-farmatsevticheskiy institut.

PESIN, V.G.; KHALETSKIY, A.M.; SERGEYEV, V.A.

2,1,3-Thiadiazoles and selenadiazoles. Part 25: Direct amination of 2,1,3-benzothiadiazole derivatives. Zhur.ob.khim. 34 no.1:261-272 Ja '64. (MIRA 17:3)

1. Leningradskiy khimiko-farmatsevticheskiy institut.

KRASNOV, Ye.A.; KHALETSKIY, A.M.

Materials for the study of the chemical composition of the crowberry (Empetrum nigrum L.); report No. 2. Flavone substances. Apt. delo 13 no.1:30-35 Ja-F '64. (MIRA 17:4)

1. Leningradskiy khimiko-farmatsevticheskiy institut.

VASIL'YEVA, M. V.; KHALETSKIY, A. M.

Transformations of lignoceryl alchol. Zhur. ob. Khim. 34 no.6:
1771-1772 Je '64. (MIRA 17:7)

1. Leningradskiy khimiko-farmatsevticheskiy institut.

PESIN, V. G.; SERGEYEV, V. A.; KHALETSKIY, A. M.

2,1,3-Thia-and selenadiazoles. Part 30: Nitration of mono- and dimethyl derivatives of benzo-2,1,3-thiadiazole. Zhur. ob. Khim. 34 no.6:1986-1992 Je '64. (MIRA 17:7)

1. Leningradskiy khimiko-farmatsevticheskiy institut.

VASIL'YEVA, M.V.; KHALETSKIY, A.M.

Molecular compound of β-sitosterol with metal chlorides.
Zhur. ob.khim. 34 no. 5:1400-1401 My '64. (MIRA 17:7)

1. Leningradskiy khimiko-farmatsevticheskiy institut.

BALONOVA, E.M.; KHALETSKIY, A.M.; PESIN, V.G.

Esters of β-sitosterol. Zhur. ob. khim. 34 no.7:2157-2158 Jl '64 (MIRA 17:8)

1. Leningradskiy khimiko-farmatsevticheskiy institut.

MOLDAVER, B.L.; KHALETSKIY, A.M.

Chemistry of pyrazolidine. Part [illegible]:Sulfonation of 3,5-dioxo-pyrazolidines with pyridine sulfotrioxide. Zhur. ob. khim. 34 no.7:2397-2402 Jl '64 (MIRA 17:8)

1. Leningradskiy khimiko-farmatsevticheskiy institut.

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[illegible] AP[illegible]

[illegible]

sulfide, 2-3% of the disulfide, and some [illegible] dithiophosphate were formed. When the reaction is conducted with 4-nitro-5-bromobenz-2,1,3-thiadiazole, both in alcohol and in acetone, a mixture of [illegible] and the dithiophosphoric acid ester is formed. The reaction was [illegible]

PESIN, V.G.; SERGEYEV, V.A.; KHALETSKIY, A.M.

2,1,3-Thia- and selenadiazole. Part 31: Halogenation of 2,1,3-benzothiadiazole and its halo-, mono-, and dimethyl derivatives. Zhur. ob. khim. 34 no.9:3028-3034 S '64. (MIRA 17:11)

1. Leningradskiy khimiko-farmatsevticheskiy institut.

ASSOCIATION: Leningradskiy khimiko-farmatsevticheskiy institut (Leningrad [illegible] Institute)

SUBMITTED: 26Jun63 ENCL: 00 SUB CODE: OC, GC

NO REF SOV: 0[illegible]3 OTHER: 015

Card [illegible]

sponding di(beta-hydroxyet [illegible]

[illegible]

[illegible] AP5011029

[illegible] xyethyl)aminobenz-2,1,3-[illegible]

KHALETSKIY, A.M. (Astrakhan')

Complete and dissociated structures of psychoses. Zhur. nevr. i psikh. 64 no.11:1666-1670 '64. (MIRA 18:6)

STUDENNIKOVA, L.D.; KHALETSKIY, A.M.

Materials on the study of the chemical composition of Atractylodes ovata (Thunb.) DC. Report No.1. Apt. delo 14 no.6:23-26 N-D '65. (MIRA 18:12)

1. Leningradskiy khimiko-farmatsevticheskiy institut. Submitted April 21, 1965.

KHALETSKIY, A.M., prof.

Perspectives of pharmacotherapy in atherosclerosis. Zhur. VKHO 10 no. 6:606-615 '65 (MIRA 19:1)

KHALETSKIY, M.M. Cand Phys-Math Sci -- (diss) "Measurement of total cross-sections zeta t and differential cross-sections of elastic scattering of 14.8 Mev neutrons -- zeta elastic (theta) by the method of counting (n alpha) coincidences." Mos, 1957. 8 pp 22 cm. (Acad Sci USSR, Inst of Chem-Phys) 100 copies (KL, 11-57,96)

5

AUTHOR KHALETSKIY, M.M., PA - 3o17

TITLE Total Cross-Sections ${}_t$ for E_n = 14,8 MeV Neutrons as Measured by Counting (n,α)-Coincidences.
(Izmereniye polnykh secheniy ${}_t$ dlya neytronov E_n = 14,8 MeV po schetu (n,α)-sovpadeniy -Russian)

PERIODICAL Doklady Akademii Nauk SSSR, 1957, Vol 113, Nr 2, pp 3o5-3o6,(U.S.S.R.)
Received 6/1957 Reviewed 7/1957

ABSTRACT The registration of the α-particles originating from reaction $D^2(T,n)He^4$ permits the seperation of a small bundle of neutrons by the aid of a coincidance scheme. When applying a bundle of neutrons, which are correlated with α-particles, for measuring the cross-section ${}_t$ it is possible to get rid of the background. In the present paper a thick T-Zr-target was used. The bundle of magnetically separated deuterons fell upon this target with the energy of E_d = 160 keV. The α-particles flying out of the target were registered by a NaJ(Tl)-crystal and a photo-multiplier FEU-19. On the other side of the target, there was in a distance of 75 cm the neutron counter, a stibene-crystal with a FEU -19. The neutron detector was attached in the bundle of the correlated neutrons with an accuracy of ± 5°. Between target and neutron counter in a distance of 26 cm from the target cylindrical scatters were brought into the bundle and out again by means of a special device. The measuring of the total cross-sections ${}_t$ consisted in the fact, that the (n,α)-coincidences were counted with and without scatter. ${}_t$ was then determined from the decrease of the number of (n.α)-coincidences $T = e^{-n\,{}_t\,d}$

Card 1/2

Total Cross-Sections ${}_t$ for E_n = 14,8 MeV Neutrons as Measured PA-3o17 by Counting (n,α)-Coincidences.

(where n- denotes the number of nuclei in 1 cm^3). For the measurings a coincidence scheme of the resolving power = 5.10^{-8} sec was used. Measuring results of ${}_t$ are shown together in a table and compared with the results of other authors. The here described method for measuring of the cross-sections of neutrons can be applied to the neutrons originating from the reaction $D^2(T,n)He^4$ for E_n 14 MeV and for E_n 14 MeV(and it makes no difference if the reaction $D^2(T,n)He^4$ with large energies of deuterons remains of source of monochromatic neutrons or if two groups of neutrons come forth). Furthermore this method of measuring is qualified for the neutrons originating from the reactions $D^2(D,n)He^3$ and $p(T,n)He^3$.
(With 2 ill.and 1 table)

ASSOCIATION Institute for Chemical Physics of the Academy of Sciences of the USSR.
PRESENTED BY KONDRAT'YEV, V.N., 13.11.1956
SUBMITTED 2.11.1956
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PA - 3141

1.

The Determination of the Differential Cross Section of the Elastic Scattering of Neutrons with the Energy E_n - 14,8 MEV by Counting the (n,α)- Coincidences(1).

out scatterer (Φ (background)); 3.) The neutrons (N_n) emerging from the target onto the torus at a given position of this torus. Some mention is also made on the behavior of the background. The formula serving for the~computation of the cross section σ (Θ) is given and explained.

The velocity of the counting of the coincidences amounted to ~1 pulse per second for the measuring discussed here; the background Φ amounted to from 30 to 50 % of the total counting result. For the purpose of decreasing the background Φ a lead rod was introduced into the reflector.

The cross sections σ (Θ) measured on Pb, Sn, Fe, Al, C are shown in three diagrams. For measurements carried out repeatedly also the measuring erros committed are entered into the diagrams. The statistical error committed at a single measuring amounts to ~15 %. The measuring results thus found agree with the results obtained by American measurements (carried out by means of another method). (With 4 illustrations.)

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PA - 3141

1.

The Determination of the Differential Cross Section of the Elastic Scattering of Neutrons with the Energy E_n - 14,8 MEV by Connting the (n,α)- Coincidences(1).

ASSOCIATION: Chemical-Physical Institute of the Academy of Science of the U.S.S.R.
PRESENTED BY: K/ONDRAT'YEV, V.N., Member of the Academy
SUBMITTED: 2 Novemver 1956
AVAILABLE: Library of Congress

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15.8540

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AUTHORS: Khaletskiy, M. M., Sukhorukov, B. I.

TITLE: Polymerization of methyl methacrylate in a strong electric d-c field

PERIODICAL: Vysokomolekulyarnyye soyedineniya, v. 3, no. 9, 1961, 1347-1351

TEXT: The purpose of the present paper is to study the polymerization of methyl methacrylate (MMA) in a strong electric d-c field. According to K. V. Filippova (Izv. AN SSSR, ser. fiz., 22, 343, 1958) solid polymethyl methacrylate (PMMA), which is placed between flat electrodes, heated to ~150°C, and arranged in an electric field of ~10 kv/cm, becomes a permanently magnetic electret which retains its electric state for some methods at room temperature. The intention of the authors was: (a) to prepare a PMMA electret during MMA polymerization; (b) to study the dichroism of the vibrational absorption bands in the IR spectrum of the PMMA electret formation in order to determine the orientation of polar groups; (c) to compare the polymerization of MMA in a strong electric field

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with the polymerization without a field. MMA was polymerized at 70°C in the electric field E = 9 kv/cm in the presence of 1% benzoyl peroxide in order to form an electret. This was performed in a condenser with flat Al electrodes with 70 mm diameter and an interelectrode distance d = 1.8 mm. After disconnecting the field and cooling down to room temperature, the electret charge was measured on an electrometer by the method of depolarization. Dichroism was studied on an ИКС-11 (IKS-11) spectrometer with ЭППВ-51 (EPPV-51) recorder. A polarization attachment according to G. I. Distler, K. P. Bondarenko, G. F. Dobrzhanskiy (Ref. 11: Pribory i tekhnika eksperimenta, 1957, no. 6, 106) was used. For the 40-70 μ thick PMMA films which were mounted on stops of 8 mm diameter, the direction of electret formation was perpendicular to the incident light beam. The PMMA films were formed between two Ni electrodes. Between these electrodes there was a stack of plate glass with mica on the edges (40-70 μ distance between the plates). MMA was polymerized in the presence of 0.5% benzoyl peroxide at 65°C in a 17 kv/cm field. The film thickness checked by means of an ИЗВ-1 (IZV-1) thickness gauge varied 10% per cm^2. No dichroism and, thus, no "frozen" orientation of polar groups was found in the PMMA electret. Voltage was applied to the $10 \cdot 30\ mm^2$ Ni electrodes of the test vessel of the apparatus (Fig. 2), the electrodes of the control vessel

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were short-circuited. The temperature in the reaction vessels was measured by differential copper-constantan thermocouples. 15 ml dehydrated purified MMA was filled in. Polymerization was conducted at constant temperature and constant voltage in the presence of atmospheric oxygen. The time-dependence curves disclosed distinct flares of conductivity and temperature, that of the current appeared a little later than that of temperature, and with smaller width. The flare of conductivity was partly due to polymer heating in the range of self-acceleration, partly to an increase of the rate of radical decomposition. Temperature flare took place earlier in the voltage-free control vessel and to a lower extent. This fact indicates that the polymerization in this case proceeds at a higher rate. The time-dependence of the logarithm of the current (Fig. 4) at $E = 16$ kv/cm and 59.5, 70, and 81°C with 0.5% benzoyl peroxide shows an initial effect of electrode polarization. Then begins the range of conductivity for a low viscosity of the liquid. After the inflexion for an increased MMA viscosity the logarithm of conductivity linearly decreases with time. In this range preceding the flare of current the temperature dependence of $\ln(\Delta \ln J/\Delta \tau)$ was constructed, assuming that the angle of inclination of the straight line $\ln J$ with the time coordinate represents the rate of

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polymerization. The activation energy of the process was determined from the Arrhenius equation to be E = 17.4 kcal/mole, that is near its value for the MMA polymerization (E = 19.5 kcal/mole). The authors refer to the analogous result obtained by R. W. Warfield (see below) for the activation energy of diallyl phthalate polymerization. The authors thank L. A. Blyumenfel'd for his interest in this work. There are 5 figures and 13 references: 5 Soviet and 8 non-Soviet. The three most recent references to English-language publications read as follows: Ref. 1: R. W. Warfield, M. C. Petree, J. Polymer, Sci., 37, 305, 1959; Ref. 2: J. A. Aukward, R. W. Warfield, M. C. Petree, ibid., 27, 199, 1958; Ref. 7: S. D. Chattergee, T. C. Bhadra, Indian J. Phys., 32, 281, 1958.

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ASSOCIATION: Institut khimicheskoy fiziki AN SSSR (Institute of Chemical Physics AS USSR)

SUBMITTED: October 26, 1960

Fig. 2. Diagram of the assembly. Legend: (1) thermostat; (2), (3) differential thermocouples; (4) electrodes; (5) M-139 (M-139) microammeter; (6) static kilovoltmeter; (7) high-tension rectifier.

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KHALETSKIY, Nikolay Mikhaylovich, inzhener; UDAL'TSOV, A.N., glavnyy redaktor; SHREYDER, A.V., kandidat tekhnicheskikh nauk, redaktor

[Semiautomatic instruments for measuring the thickness of the cathode coating on electronic instruments] Poluavtomaticheskii pribor dlia izmereniia tolshchiny pokrytiia katodov elektronnykh priborov. Tema 9, no. P-56-430. Moskva, Akad. nauk SSSR, 1956. 9 p.
(MLRA 10:4)

(Measuring instruments)

ISHIMOVA, L.M., prof., red.; KHALEV, Yu.V., red.; LARIONOV,
A.S., red.; VOZNESENSKIY, L.S., red.; PIVOVAROV, Yu.P.,
red.

[Scientific Conference of Students of Medical Institutions of Higher Education of the R.S.F.S.R. on the Problem "Allergy"] Tezisy dokladov Nauchnoi konferentsii studentov meditsinskikh vuzov RSFSR po probleme "Allergiia." Moskva, Glavnoe upr. uchebnymi zavedeniiami, 1962. 74 p. (MIRA 17:10)

1. Nauchnaya konferentsiya studentov meditsinskikh vuzov RSFSR po probleme "Allergiya."

KHALEVIN, A., inzhener.

Standardizing the stability of ships. Mor. flot 16 no.10: 20-22 O '56. (MLRA 9:11)

1. Pribaltiyskaya inspektsiya Registra SSSR.
(Stability of ships)

KHALEVIN, A.

Improving vocational courses in rural schools. Politekh.obuch. no.6:92 Je '59. (MIRA 12:12)

1. Istobenskaya srednyaya shkola Orichevskogo rayona Kirovskoy oblasti.

(Vocational education)

KHALEVIN, A.A.; VENETSKIY, V.N., uchitel'.; BYSTROV, I.V.; NIMENSKIY, I.P., uchitel'.

Organizing practical work in stockbreeding. Est.v shkole no.3: 75-80 My-Je '56. (MLRA 9:8)

1. Zaveduyushchiy uchebnoy chastiyu shkoly (for Khalevin).
2. Metodist Smol'ninskogo rayonnogo otdela narodnogo obrazovaniya (for Bystrov).

(Stock and stockbreeding--Study and teaching)

1. KHALEVIN, N. I.

2. USSR 600

4. Prospecting - Geophysical Methods

7. Using electric geophysical exploration for an interpretation of magnetic anomalies, Izv. AN SSSR. Ser. geofiz, No. 1, 1953.

9. Monthly List of Russian Accessions, Library of Congress, April 1953, Uncl.

KHALEVIN, N. I.

USSR/Geophysics - Electrical Prospecting Jan/Feb 53

PA 241T35

"Application of Electrical Prospecting for Interpretation of Magnetic Anomalies," N. I. Khalevin, Mining-Geology Inst, Ural Affil, Acad Sci USSR

"Iz Ak Nauk SSSR, Ser Geofiz" No 1, pp 61-68

Discusses problem of applying elec prospecting methods to separate magnetic anomalies into a) anomaly caused by flat bodies of magnetite composition, and b) anomaly due to increased concn of dispersed magnetite. Presents data of field investigations on the basis of which the author recommends vertical elec soundings

241T35

with electrodes dispersed over the course of the anomalous zones for the purpose of discerning the anomalies.

241T35

USSR/Physics of the Earth - Geophysical Prospecting, 0-5

Abst Journal: Referat Zhur - Fizika, No 12, 1956, 36493

Author: Khalevin, N. I.

Institution: None

Title: Reference Device for Seismograph During Seismic Well Logging

Original Periodical: Razved. i promysl. geofizika, 1955, No 14, 32-34

Abstract: A rigid contact between the seismograph and the walls of the well is insured by 2 plane steel springs, attached from both sides to the lower part of the seismograph. The springs are released before the instrument has started to be pulled out of the well.

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