28259
P/006/60/008/004/006/010
D265/D303

24.4200 1103

AUTHOR: Pełka, Zbigniew

TITLE: A catenoidal shell

PERIODICAL: Rozprawy inżynierskie, v. 8, no. 4, 1960, 697-724

TEXT: This paper provides the stress analysis for the convex catenoidal shell obtained by moving one catenary along another. Both curves, lying in mutually perpendicular vertical planes, form a translational shell for which

$$z = f_1(x) + f_2(y) = m\left(\mathrm{ch}\frac{x}{m} - 1\right) + m\left(\mathrm{ch}\frac{y}{m} - 1\right) \qquad (1.1)$$

where m is the parameter of the curve. The shell considered is in the state of membrane stresses and is assumed to be supported by rigid diaphragms which do not transfer any forces in the direction perpendicular to their vertical planes. The symmetrical element of the shell, whose horizontal projection forms a square, is considered for the shell acted on by a uniform

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D265/D303

A catenoidal shell

load and for a constant thickness shell under its own weight. The equilibrium is obtained in the elliptical form

$$\mathrm{ch}\frac{x}{m}\frac{\partial^2 F}{\partial y^2} + \mathrm{ch}\frac{y}{m}\frac{\partial^2 F}{\partial x^2} = -Zm \qquad (1.7)$$

where F(x,y) is the stress function and z represents the loading per unit of the projected area. The funicular polygon method of solution by numerical calculations is provided by dividing the projected square of the elemental shell into 10 equal squares and obtaining the system of 15 equations, for which the corresponding values of each of the constituent parts of these equations are tabulated. The normal and tangential forces are determined and the inverse matrix permits the passage from the values of stress functions F_i to those of the second derivatives F_i''. The distribution of

at the corners of the shell is considered and their

is analyzed. The

PELKA, Z.

Catenoidal shell. Bul Ac Pol Tech 8 no.8:477-483 '60. (EEAI 10:6)

1. Department of Mechanics of Continuous Media, Institute of Basic Technical Problems, Polish Academy of Sciences. Presented by W.Wierzbicki.
(Structural shells) (Catenary)

PELKIN, S.

ALEKSIEV, N.; PELKIN, S.; NICHEV, V.; TODOROV, V.

Problem of therapeutic physical culture in pulmonary tuberculosis.
Suvrem. med., Sofia 7 no.12:113-121 1956.

1. Iz Nauchnoizsledovatelskiia institut po tuberkuloza (Direktor:
Dots. St. Todorov).
(TUBERCULOSIS, PULMONARY, therapy,
exercise ther. (Bul))
(EXERCISE THERAPY, in var. dis.
pulm. tuberc. (Bul))

MITEV, Z., MUDr.; PELKIN, S., MUDr.

Ovarian function in pulmonary tuberculosis. Cesk. gyn. 22[37] no.1/2: 90-93 Jan 58.

1. Por.-gyn. klinika pri VMI v Sofii, prednosta prof. Dr G. Tosev VUTbc v Sofii, prednosta Dr T. Sarkov. Prelozil doc. Dr A. Kotasek, Praha 2, Aplinarska 18.

(TUBERCULOSIS, PULMONARY, compl.
menstruation disord. (Cz))
(MENSTRUATION DISORDERS, in var. dis.
tuberc., pulm. (Cz))

PELKIN, Spas

Artificial pneumothorax therapy [with summary in French]. Probl.tub. no.1:72-75 '59. (MIRA 12:2)

1. Nauchnyy sotrudnik tuberkuleznogo instituta (Sofiya), chlen bolgarskoy meditsinskogy gruppy Krasnogo kresta v Koreye.
(PNEUMOTHORAX, ARTIFICIAL,
result statist. (Rus))

PELKIN, Sp.

DZHUROV, G.; PELKIN, Sp.

Early results of the treatment of chronic disseminated tuberculosis of the lung with tubigal; preliminary communication. Suvrem.med., Sofia 6 no.8:19-25 1955.

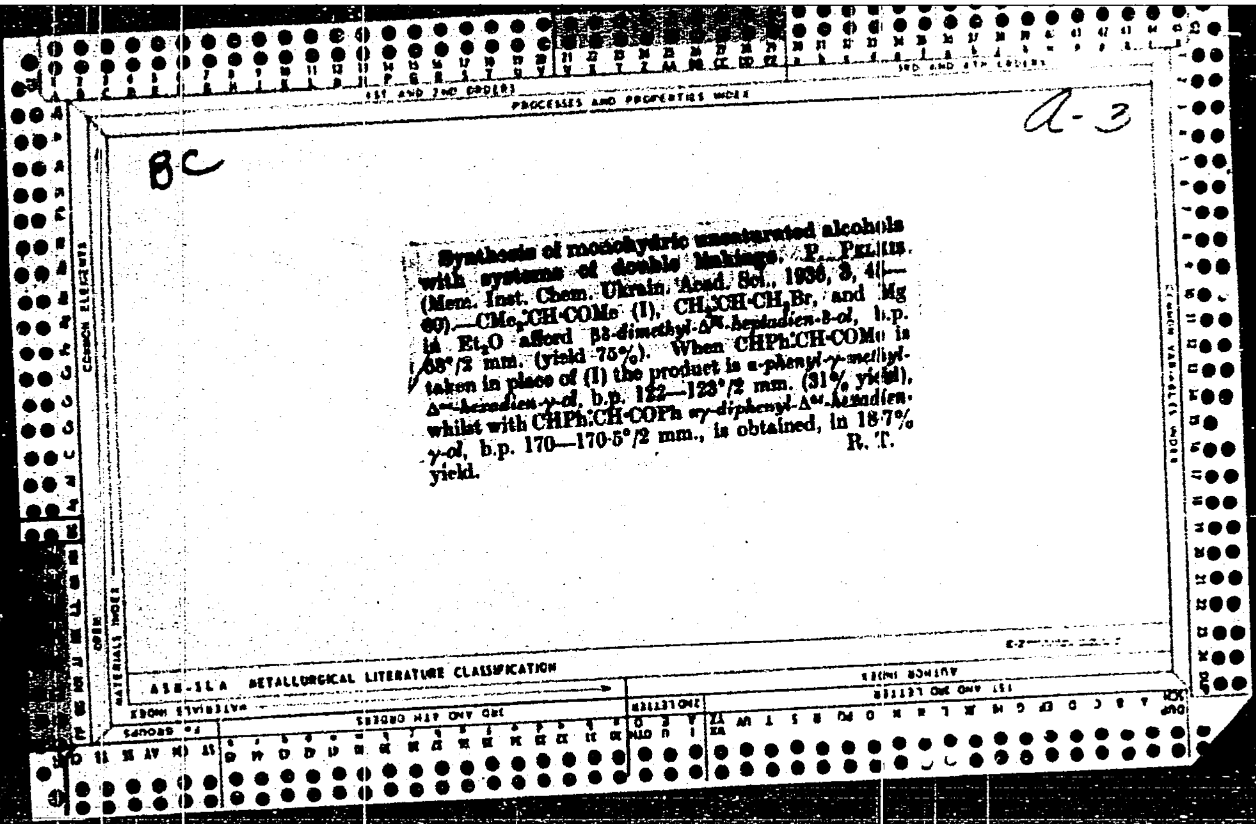
1. Iz Nauchno-izsledovatelskiia institut po tuberkuloza - Sofiia. (direktor: dots. St.Todorov)
(THIOSEMICARBAZONES, therapeutic use,
tubigal in pulm.tuberc.)
(TUBERCULOSIS, PULMONARY, therapy,
thiosemicarbazone tubigal)

KELEYNIKOV, Yu.Ya., polkovnik, voyennyy letchik pervogo klassa; SOKOLOV, V.D., podpolkovnik; STEPANENKO, P.I., mayor; REBROV, M.F., inzh.-kapitan; PEL'KIN, V.P., starshiy leytenant, voyennyy letchik vtorogo klassa

Flight day. Vest.Vodz.Fl. no.12:1-20 D '60. (MIRA 14:5)
(Flight training)

PEL'KINA, L., iskusstvoved

Discussion of pictorial arts [to be continued]. Nauka i zhyttia 12 no.12:40-41 D '62. (MIRA 16:8)



BC

a-3

Synthesis of monohydric unsaturated alcohols with systems of double linkings. P. PELIUS. (Mem. Inst. Chem. Ukrain. Acad. Sci., 1936, 3, 41—60).—CMe$_2$:CH·COMe (I), CH$_2$:CH·CH$_2$Br, and Mg in Et$_2$O afford βδ-*dimethyl*-$\Delta^{\beta\epsilon}$-*heptadien-δ-ol*, b.p. 68°/2 mm. (yield 75%). When CHPh:CH·COMe is taken in place of (I) the product is α-*phenyl*-γ-*methyl*-$\Delta^{\alpha\epsilon}$-*hexadien*-γ-*ol*, b.p. 122—123°/2 mm. (31% yield), whilst with CHPh:CH·COPh αγ-*diphenyl*-$\Delta^{\alpha\epsilon}$-*hexadien*-γ-*ol*, b.p. 170—170·5°/2 mm., is obtained, in 18·7% yield. R. T.

1ST AND 2ND ORDERS

PROCESSES AND PROPERTIES INDEX

10

Ca

Reaction of phenylcarbylamine chloride with sodium azide. P. S. Pel'kis and Ts. S. Dunaevs'ka. *Mem. Inst. Chem., Acad. Sci. Ukrain. S. S. R.* 6, No. 2, 163-77 (in Russian, 177; in English, 178-80)(1940). The reaction between $PhN{:}CCl_2$ and NaN_3 is quant. in acetone provided the mixt. is stirred and heated to boiling. The reaction product, $PhN.N{:}N.N{:}CN_3$, m. 80°. B. Z. Kamich

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

1ST AND 2ND ORDERS

PROCESSES AND PROPERTIES INDEX

3RD AND 4TH ORDERS

ea

13

Synthesis of monohydric unsaturated alcohols with two
and three double bonds. P. S. Pel'kis and Z. N. Pazenko.
Zapiski Inst. Khim., ~~*Akad. Nauk U.*~~ *R. S. R.*, *Inst.*
Khim. 6, Nos. 3-4, 311-39 (in Russian, 340-1; in German,
341-2) (1940).—2,6-Heptadien-4-ol was prepd. by inter-
action of an equimol. mixt. of allyl bromide and croton-
aldehyde with Mg. The yield of alc. was 50%. It b_{16}
68-68.2°, n_D^{20} 0.86325. A compd. corresponding to
$C_{19}H_{18}O$, was obtained by interaction of $(PhCH:CH)_2CO$
and allyl bromide with Mg. The compd. m. 86° and has
3 double bonds and ketonic properties. Stepwise bro-
mination indicates great activity of one of the 3 double
bonds, probably the allyl. B. Z. Kamich

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

PEL'KIS, P.S.; PUPKO, L.S.

Research in the field of thiocarbazone substituted derivatives. Part 1. Ditolylthiocarbazones. Ukr.khim.zhur.17 no.1:93-102 '51. (MLRA 9:9)

1.Institut organicheskoy khimii Akademii nauk Ukrainskoy SSR.
(Thiocarbazone)

PIL'KIS, P.S.

Vladimir Polikarpovich IAvorskii; on the 10th anniversary of his death. Ukr.khim.zhur. 19 no.1:3-20 '53. (MLRA 7:4)

1. Institut organicheskoy khimii Akademii nauk USSR.
(Chemistry, Organic) (IAvors'kii, Volodymir Polykarpovych, 1876-1942)

PEL'KIS, P. S.

Tautomerism of 1,5-diphenylthiocarbazone (dithizone). P. S. Pel'kis. *Doklady Akad. Nauk S.S.S.R.* 88, 999-1002 (1953).—1,5-Diphenylthiocarbazone (I) is a mixt. of thioketo (II) and enethiol (III) forms, the former having an absorption max. at 620 mμ and the latter at 450 mμ. An equimolar mixt. of I and MeI in alkali yielded the *Me deriv.*, m. 122-3°, giving pink solns. in org. solvents and having max. at 545 and 430 mμ, indicating a mixt. of *S*-Me and *N*-Me derivs. Chromatographic sepn. on Al_2O_3 in petr. ether, followed by C_6H_6-$CHCl_3$, yielded the 2 forms: red, m. 116-17°, decomp. 127-8°, max. 430 mμ, and brown, m. 124°, max. 545 mμ. From the absorption max. data, the latter is the *N-Me*, the former the *S-Me* deriv. The *N*-Me forms passes into the *S*-Me form in various solvents (curve in C_6H_6 at 18° is shown), the reaction being complete in C_6H_6 in 20 hrs. II and III could not be sepd. in this manner. III is predominant in MeOH solns., which are yellow and show max. 470 mμ. In MeOH I forms metal complexes and with alkalies gives a red color. Addn. of C_6H_6 to such solns. gives a green color characteristic of II, and the soln. shows max. 450 and 620 mμ; the latter probably arises from destruction of the H-bonded complex with MeOH. Protophilic solvents affect the max. of I solns. The 450 and 620 mμ max. are seen in hexane, C_6H_6, and CCl_4; in $CHCl_3$, they are 440 and 610; in Me_2CO, they are 450 and 640; in PrOH, 450 and 600; in MeOH, 470 and 620; in $MeNO_2$, 440; and in $HCONH_2$, 460. Absorption max. of analogs of I; di-*o*-tolyl max. 470 and 632 in C_6H_6; di-*p*-tolyl 465 and 630; di-*m*-tolyl 465 and 635; di-*p*-xenyl 480 and 655; di-2-naphthyl 662; and di-1-naphthyl 683. Derivs. whose short wave max. is feeble are less sol. in aq. alkali and form metal complexes at higher pH levels. The naphthyl derivs. are insol. even in 10% alkali. G. M. Kosolapoff

KIPRIANOV, A.I.; BABICHEV, F.S.; MUSHKALO, L.K.; POCHINOK, V.Ya.; PEL'KIS,P.S.

[Outline history of organic chemistry at Kiev University] Ocherki po istorii organicheskoi khimii v Kievskom universitete. Pod red. A.I. Kiprianova. [Kiev] Izd-vo Kievskogo gos. univ. im. T.G.Shevchenko, 1954. 130 p. (MLRA 9:8)
(Chemistry, Organic) (Kiev University)

PEL'KIS, P.S

Substituted thiocarbazones. Synthesis and the study of properties of unsymmetrical derivatives of thiocarbazone. L. S. Pupko and P. S. Pel'kis. *J. Gen. Chem. U.S.S.R.* 24, 1623-6(1954)(Engl. translation).—See *C.A.* 49, 13141e. 6H ①

B. M. R.

PEL'KIS, P.S.

USSR/ Chemistry - Synthesis

Card 1/1 : Pub. 151 - 32/42

Authors : Pupko, L. S., Pel'kis, P. S.

Title : Study of thiocarbazone substitutes. Synthesis and study of properties of nonsymmetrical thiocarbazone derivatives.

Periodical : Zhur. ob. khim. 24/9, 1640-1645, Sep 1954

Abstract : The problems of whether and how nonsymmetrical thiocarbazones react with different cations, how the disturbance in the symmetry is reflected on the nature of thiocarbazone absorption curves and how stable thiocarbazones are against oxidation, were investigated. A new method for the derivation of thiocarbazones with two different aryls was developed. Some results obtained with the new method are described. Ten references: 4-USA; 4-German and 2-USSR (1878-1953). Table; graphs.

Institution : Acad. of Sc. Ukr-SSR, Institute of Organic Chemistry

Submitted : March 22, 1954

Pel'K;S,P.S.

7 3

Inst Org Chem [illegible]

PELKIS, P. S.

4

✓Structure of methylated forms of dithizone and its derivatives. S. Pel'kis and [illegible]

[illegible] Mes group [illegible] ex-change with S [illegible] MeS group by [illegible]

[illegible] band of the [illegible] I and II are cis-trans stereoisomers. The following analogs were prepd. conventionally: o-MeC$_6$H$_4$N:NC(SMe):NNHC$_6$H$_4$Me-o (III), yellow, m. 139°, λ 435 mμ; p,p'-analog, violet; [illegible]

[illegible] represent the [illegible] II [illegible] formed as are its violet analogs. [illegible]

PEL'KIS, P.S.

AUTHOR: Pel'kis, P. S. and Dubenko, R. G. 73-1-10/26

TITLE: Photochemical Isomerization of Methylated Derivatives of Dithizon and Its Substitute. (Fotokhimicheskaya Izomerizatsiya Metilirovannykh Proizvodnykh Ditizona i Yego Zameshchennykh.)

PERIODICAL: Ukrainskiy Khimicheskiy Zhurnal, 1957, Vol.23, No.1, pp. 64 - 68 (USSR).

ABSTRACT: In previous communications it was shown that the yellow methylation products of dithizone and of its derivatives can be considered as the cis-cis-isomers (formula I) and the violet-coloured products as the trans-trans isomers (formula II) (viz. Refs. 1,2). Their sensitivity to light was observed as well as their capacity of inter-isomerisation the velocity of which depends on the light and on other factors. The authors have now investigated the velocity of isomerisation of trans-isomers of S-methyl derivatives of dithizone and and of the cis-isomer of S-methyl derivatives of di-(o-tolyl)-thiocarbazole in benzene under the influence of sunlight and of artificial light, also in the presence of a pyridine catalyst. Kinetic curves of the velocity of isomerisation can be described by the monomolecular law. The velocity of isomerisation of the cis-isomer

Card 1/2

75-1-10/26

Photochemical Isomerization of Methylated Derivatives of Dithizon and Its Substitute.

of the S-methyl derivative of di-(o-tolyl)thiocarbazole into the trans-isomer exceeds the velocity of isomerisation of the trans-S-methyl derivative of dithizone to the cis-isomer considerably. Table 1 gives the analytical data of the synthesised derivatives of dithizone. Graphs showing the velocities of isomerisation (graph 1 - 6) are included. There are 6 graphs, 4 tables and 3 references, 2 of which are Slavic.

SUBMITTED: July, 11, 1956.

ASSOCIATION: Institute of Organic Chemistry, Academy of Sciences, Ukrainian SSR. (Institut Organicheskoy Khimii AN USSR).

AVAILABLE: Library of Congress

Card 2/2

PEL'KIS, P.S.

73-1-11/26

AUTHOR: Pel'kis, P. S. and Dubenko, R. G.

TITLE: Isomeric Transformations of Benzyl Derivatives of Dithizone and Its Substitutes. (Izomernyye Prevrashcheniya Benzil'nykh Proizvodnykh Ditizona i Yego Zameshchennykh.)

PERIODICAL: Ukrainskiy Khimicheskiy Zhurnal, 1957, Vol.23, No.1, pp. 69 - 71 (USSR).

ABSTRACT: It was found that during the methylation of dithizone and its substitutes yellow cis-cis- and violet trans-trans-isomers of S-methyl derivatives were formed (Refs. 1 - 3). The benzyl derivative of dithizone, 1,5-di-(o-tolyl)- and 1,5-di-(o-phenoxyphenyl)-thiocarbazole were synthesised. The synthesised benzyl derivatives are shown to undergo isomeric transformation under the influence of light. In an analogous way to the methyl derivatives of dithizone it follows that the violet-coloured benzyl derivatives are the trans-trans- isomers whereas the yellow-coloured derivatives represent the cis-cis-isomeric forms. Analytical data of monobenzyl derivatives of dithizone and of 2 substituents are given in table 1. Absorption curves of the compounds in benzene are given in graphs 1 and 2; the velocity of isomerisation in benzene is given in graphs 3 and 4. There are 1 table, 4 graphs and 3 references, all of which

73-1-11/26

Isomeric Transformations of Benzyl Derivatives of Dithizone
and its Substitutes.

are Slavic.

SUBMITTED: July, 11, 1956.

ASSOCIATION: Institute of Organic Chemistry, Academy of Sciences,
Ukrainian SSR. (Institut Organicheskoy Khimii AN USSR.)

AVAILABLE: Library of Congress

Card 2/2

Pel'kis, P.S.

PEL'KIS, P.S.; DUBENKO, R.G.

[redacted] Investigations in the field of substituted arylthiocarbazones. Effect of the solvent on the tautomeric equilibrium of arylthiocarbazones. Ukr. khim. zhur. 23 no.6:748-753 '57. (MIRA 11:1)

1. Institut organicheskoy khimii AN USSR.
(Solution (Chemistry))
(Tautomerism) (Carbazone)

Pel'kis, P.S.,

PEL'KIS, P.S.; DUBENKO, R.G.; PUPKO, L.S.

[redacted]

Investigations in the field of substituted arylthiocarbazones. Resistance of 1,5-diphenylthiocarbazone and its substitutes to oxidation. Ukr.khim. zhur. 23 no.6:754-756 '57. (MIRA 11:1)

1. Institut organicheskoy khimii AN USSR.
(Dithizone) (Oxidation)

PEL'KIS, P.S.; DUBENKO, R.G.; PUPKO, L.S.

Studies in the field of substituted 1,5 diphenylthiocarbazone. Part 6: Synthesis and study of the properties of mono- and dihalide substituted 1,5-diphenylthiocarbazone. Zhur. ob. khim. 27 no.8:2134-2138 Ag '57. (MLRA 10:9)

1. Institut organicheskoy khimii Akademii nauk Ukrainskoy SSR. (Dithizone)

PUPKO, L.S.; PEL'KIS, P.S.

Reduction clearage of unsymmetrical derivatives of 1,5-diphenylthiocarbazone. Ukr. khim. zhur. 24 no.4:477-480 '58.
(MIRA 11:10)

1. Institut organicheskoy khimii AN USSR.
(Dithiazone) (Reduction, Chemical)

SOV/ 20-120-2-26/63

AUTHORS: Pel'kis, P. S., Dubenko, R. G.

TITLE: An Investigation of the Solvent's Influence Upon the Position of Tautomeric Equilibrium in the Arylthiocarbazone Series (Issledovaniye vliyaniya rastvoritelya na polozheniye tautomernogo ravnovesiya v ryadu ariltiokarbazonov)

PERIODICAL: Doklady Akademii Nauk SSSR, 1958, Vol. 120, Nr 2, pp. 320-322 (USSR)

ABSTRACT: This influence is generally known, but many problems of the theory of this phenomenon are undetermined, although much has already been achieved (Refs 1 - 10). A survey on this is given (Refs 1, 6, 10 - 12). The first author proved (Ref 13) that 1,5-diphenyl-thiocarbazone (dithizone) in solvents represents a tautomeric mixture of thione (a) and thiol (b). The interrelation between the thione- and the thiol-form in the tautomeric mixture depends on the nature of the solvent and of the substituent in the aromatic nuclei of thiocarbazone. The maxima at the absorption curves of the substituents of 1,5-diphenyl-thiocarbazone in the short-

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SOV/ 20-120-2-26/63

An Investigation of the Solvent's Influence Upon the Position of Tautomeric Equilibrium in the Arylthiocarbazone Series

-wave range belong to the thiol-forms, whereas the maxima in the long-wave range belong to the thione-forms. From this the constant of tautomeric equilibrium is derived. As the experimental data show this constant of dithizone and its substituents in solvents is approximately equal to the ratio $d_\lambda \max_2 / d_\lambda \max_1$. The ratio $\varepsilon_1/\varepsilon_2$ is practically independent of the solvent and is approximately = 1; thus the second term of the sum of equation (2) may be disregarded. Table 1 gives the data concerning the determination of the constants of tautomeric equilibrium of the 3 thiocarbazones in different solvents. Table 2 gives the absorption maxima for the investigated thiocarbazones and the corresponding optical densities as well as their ratio. As is to be seen from table 2 and figure 1 the linear nature of dependence and the inclination angle of the straight line (45°) is quite satisfactorily observed. It can therefore be stated that the relation derived by M. I. Kabachnik which extends the rules governing the acid-basic protolytical equilibrium to the ketonal equilibrium is in the arylcarbazone series confirmed for the tautomeric thione-thiol equilibrium. There are 1 figure, 2 tables, and

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SOV/ 20-120-2-26/63

An Investigation of the Solvent's Influence Upon the Position of Tautomeric Equilibrium in the Arylthiocarbazone Series

16 references, 14 of which are Soviet.

ASSOCIATION: Institut organicheskoy khimii Akademii nauk USSR (Institute of Organic Chemistry, AS Ukrainian SSR)

PRESENTED: December 27, 1957, by B. A. Kazanskiy, Member, Academy of Sciences, USSR

SUBMITTED: September 27, 1955

1. Cyclic compounds--Properties 2. Solvents--Chemical reactions
3. Acid-base equilibrium--Mathematical analysis

Card 3/3

SOV/79-29-1-41/74

AUTHORS: Pel'kis, P. S., Dubenko, R. G.

TITLE: Investigations in the Field of Substitution Products of 1,5-Diphenyl Thiocarbazone (Issledovaniya v oblasti zameshchennykh 1,5-difeniltiokarbazona) VII. Influence of the Nature of the Substituents in Phenyl Nuclei of 1,5-Diphenyl Thiocarbazone on Thione-Thiol Tautomery (VII. Vliyaniye prirody zamestiteley v fenil'nykh yadrakh 1,5-difeniltiokarbazona na tion-tiol'noye tautomernoye ravnovesiye)

PERIODICAL: Zhurnal obshchey khimii, 1959, Vol 29, Nr 1, pp 194 - 197 (USSR)

ABSTRACT: Many investigations have been carried out dealing with the problem of dependence of keto—enol tautomery on the structure of the compounds capable of tautomery; few, however, in the field of thione-thiol tautomery. In this connection no attention at all was paid to aryl thiocarbazones. It was therefore interesting to investigate the influence of the substituents in the phenyl nuclei of aryl thiocarbazones which is exercised upon thione-thiol tautomery in the solution. The synthesis of aryl thiocarbazones

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Investigations in the Field of Substitution Products of 1,5-Diphenyl Thiocarbazone. VII. Influence of the Nature of the Substituents in Phenyl Nuclei of 1,5-Diphenyl Thiocarbazone on the Thione-Thiol Tautomery

SOV/79-29-1-41/74

was already earlier described (Refs 3,4). The table shows the data of spectrophotometric investigation of aryl thiocarbazones. From these data the conclusion can be drawn that in the case of thiocarbazones with nucleophilic substituents in the phenyl nuclei the extinction of the maximum in the short-wave range is equal or higher as compared to the maximum in the long-wave range (preparations Nr 13-32). In the case of thiocarbazones with electrophilic substituents in the phenyl nuclei the extinction of the maximum in the short-wave range is equal or higher as compared to the maximum in the long wave range (preparations Nr 1-12). This is illustrated in detail in figure 1. Also further investigations showed that the electrophilic substituents in the phenyl nucleus of 1,5-diphenyl thiocarbazone have the same influence upon the relation between thione- and thiol forms of thiocarbazones as the polar solvents (methyl alcohol, formamide and others)(Ref 1). Thus, 36 substitution products of 1,5-diphenyl thiocarbazone

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Investigations in the Field of Substitution Products of 1,5-Diphenyl Thiocarbazone. VII. Influence of the Nature of the Substituents in Phenyl Nuclei of 1,5-Diphenyl Thiocarbazone on the Thione-Thiol Tautomery SOV/79-29-1-41/74

were spectrophotometrically investigated; summarizing it was shown that the electrophilic substituents shift the tautomeric equilibrium of the thione- and thiol form in the substituents of 1,5-diphenyl thiocarbazone towards the side of the thiol form. There are 2 figures, 1 table, and 5 references, 4 of which are Soviet.

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

SUBMITTED: October 9, 1957

Card 3/3

SOV/79-29-1-42/74

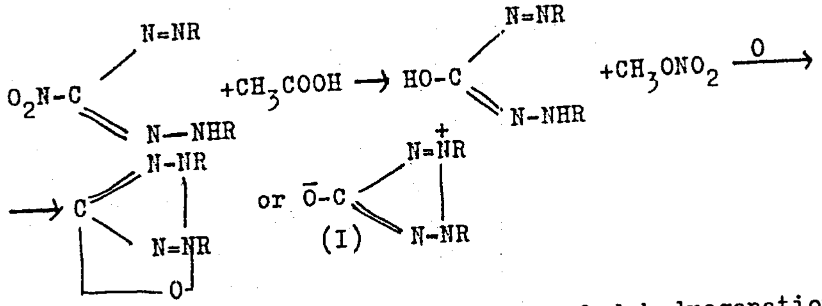
AUTHORS: Dubenko, R. G., Pel'kis, P. S.

TITLE: Investigations in the Series of the Substitution Products 5-Oxy-2,3-Diphenyltetrazolium Betaines (Issledovaniya v ryadu zameshchennykh 5-oksi-2,3-difenil-tetrazoliy-betaina)

PERIODICAL: Zhurnal obshchey khimii, 1959, Vol 29, Nr 1, pp 197 - 200 (USSR)

ABSTRACT: In recent years various quaternary ammonium derivatives . as inert soaps have been investigated and also tested with respect to their bactericidal properties (Ref 1). In this connection the authors investigated various compounds of tetrazolium. On the synthesis of aryl thiocarbazone according to the formazyl method (Refs 2,3) they obtained as intermediate products various substituted products of 1,5-diphenyl-3-nitroformazane. According to Pechmann and Runge (Ref 4) such formazyl compounds can be transformed into corresponding derivatives of tetrazolium or into the betaine-like compounds in the case of oxidation (Ref 5) according to the scheme:

Investigations in the Series of the Substitution Products SOV/79-29-1-42/74
5-Oxy-2,3-Diphenyltetrazolium Betaines



The best way for the oxidation or cyclodehydrogenation, apart from the yellow mercury oxide or amyl nitrite in an alcohol solution with hydrochloric acid (Ref 4) is to use lead tetraacetate in chloroform (Ref 1). According to Wedekind, Stauve the tendency of the substituted formazyl derivatives to close the tetrazole cycle depends on the nature of the substituents in position 3. Bamberger and collaborators cyclodehydrogenated 1,5-diphenyl-3-nitroformazane by heating in acetic acid in the presence of

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amyl nitrite, in which case an acidolysis of the nitro group takes place with subsequent oxidation of nitro formazane to tetrazolium derivative (Ref 7). Under the same conditions the authors carried out the cyclodehydrogenation of 9 different substitution products of 1,5-diphenyl-3-nitro formazane. In this connection they succeeded in the cyclodehydrogenation in good yield of the meta- and para-substituted derivatives to the derivatives of tetrazolium; which is not the case with the ortho-substitution products. The table shows the synthesized substitution products of 5-oxy-2,3-diphenyltetrazolium betaines with the general formula (I). They are of a crystalline nature. Their absorption spectra were investigated. There are 1 figure, 1 table, and 7 references, 2 of which are Soviet.

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

SUBMITTED: October 9, 1957

SOV/79-29-2-17/71

AUTHORS: Dubenko, R. G., Pel'kis, P. S.

TITLE: Investigation of Aryl Thiocarbazones Methylated on Sulphur (Issledovaniye metilirovannykh po sere ariltiokarbazonov)

PERIODICAL: Zhurnal obshchey khimii, 1959, Vol 29, Nr 2, pp 435-437 (USSR)

ABSTRACT: In follow-up to their previous papers (Refs 1,2,3) the authors wanted to investigate on further compounds the influence exerted by the nature of substituents upon the formation of the cis or trans-form of the methylated aryl thiocarbazone derivatives. S-methyl derivatives were synthesized as follows: equimolecular quantities of aryl thiocarbazone and methyl iodide were intermixed in alcohol alkali medium at low temperature and the mixture was left standing for a few hours. The methyl derivatives, separated in good crystals and purified overnight, were analyzed and investigated by spectrum analysis. Some of them were also subjected to chromatography in columns with aluminum oxide (Table). The yields in S-methyl derivatives given by aryl thiocarbazones were good. All preparations have but one absorption maximum. As already shown earlier, S-methyl derivatives of aryl thiocarbazones with the maximum in the short-wave range 420-470 mμ are cis-isomers, whereas those having the maximum in the

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Investigation of Aryl Thiocarbazones Methylated on Sulphur SOV/79-29-2-17/71

530-570 mμ range are trans-isomers. As can be observed from the tabulated spectral photometric data covering ten derivatives and three that had been earlier investigated (Ref 1), five of them give cis-derivatives, compounds, with orthosubstituents and trans-derivatives with substituents in the para-position. Cis-isomers rapidly isomerize into the trans-forms under the influence of sunlight. The figure shows the absorption curves of the cis and trans-forms of S-methylated derivatives of 1,5-di-(2-bromophenyl) and 1,5-di-(2-anisyl)-thiocarbazone and their absorption curves after a 30-minute exposure in scattered sunlight. There are 1 figure, 1 table, and 3 Soviet references.

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

SUBMITTED: November 18, 1957

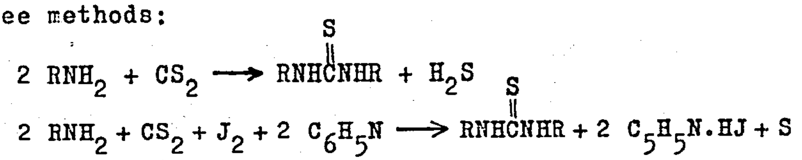
Card 2/2

5(3)
AUTHORS: Dubenko, R. G., Pel'kis, P. S. SOV/79-29-3-28/61

TITLE: Investigations in the Series of Thiocarbanilide Derivatives (Issledovaniya v ryadu proizvodnykh tiokarbanilida). I. Synthesis of the Sulfamide-, Carboxy-, and Sulfo-substituted Compounds (I. Sintez sul'famido-, karboksi-, i sul'fozameshchennykh)

PERIODICAL: Zhurnal obshchey khimii, 1959, Vol 29, Nr 3, pp 885-887 (USSR)

ABSTRACT: In the last years many different thiourea derivatives were synthesized and investigated as to their antibacterial and specific tuberculostatic qualitites (Refs 1-6). Among the thiourea derivatives the sulfonamide derivatives and the carboxy-substituted derivatives are little investigated. The aim of the present paper was to fill this gap. The diaryl thiourea derivatives were obtained according to the following three methods:



1) $2\ RNH_2 + CS_2 \longrightarrow RNH\overset{\overset{S}{\|}}{C}NHR + H_2S$

2) $2\ RNH_2 + CS_2 + J_2 + 2\ C_6H_5N \longrightarrow RNH\overset{\overset{S}{\|}}{C}NHR + 2\ C_5H_5N.HJ + S$

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Investigations in the Series of Thiocarbanilide SOV/79-29-3-28/61
Derivatives. I. Synthesis of the Sulfamide-, Carboxy -, and Sulfo-substituted Compounds

3) $2\ RNH_2 + CS_2 \xrightarrow{S} RNH\overset{S}{\overset{\|}{C}}NHR + H_2S.$

The best and most convenient method of synthesizing the substituted aryl thioureas proved to be that which is based on the corresponding amines and carbon disulfide in the presence of sulfur (Ref 7). The 11 aryl thiocarbanilides synthesized are listed in the table, nine of which being new. As may be seen the yields are high. They are of crystalline nature. The figure gives the absorption spectra of the alcoholic solutions of five thiocarbanilides in ultraviolet. There are 1 figure, 1 table, and 8 references, 1 of which is Soviet.

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

SUBMITTED: November 18, 1957

Card 2/2

DUBENKO, R.G.; PEL'KIS, P.S.; SHEKA, I.A.

Dipole moments of some S-methyl derivatives of arylthiocarbazones.
Ukr.khim.zhur. 26 no.1:48-52 '60. (MIRA 13:5)

1. Institut organicheskoy khimii AN USSR, Institut obshchey i neorganicheskoy khimii AN USSR.
(Carbazone--Dipole moments)

PEL'KIS, P.S.; PERETYAZHKO, M.Z.

Synthesis and study of the properties of carboxy- and sulfonamide-substituted derivatives of 1,4-diphenylthiosemicarbazide. Ukr. khim. zhur. 26 no.5:637-640 '60. (MIRA 13:11)

1. Institut organicheskoy khimii AN USSR.
(Semicarbazide)

DUBENKO, R.G.; PEL'KIS, P.S.

Substituted aryl hydrazones of phenylglyoxyloyl chloride. Zhur. ob.khim. 33 no.12:3917-3920 D '63. (MIRA 17:3)

1. Institut organicheskoy khimii AN UkrSSR.

NESYNOV, Ye.P.; PEL'KIS, P.S.

Synthesis of p-nitrophenyl esters of substituted carbamic acids. Zhur. ob. khim. 34 no.10:3467-3469 O '64.

Synthesis of urea derivatives. Ibid.:3469-3473

(MIRA 17:11)

1. Institut organicheskoy khimii AN UkrSSR.

PERETYAZHKO, M.Z.; PEL'KIS, P.S.

Synthesis of substituted 1,4-diphenylthiosemicarbazides and their cyclization to 2,3-diaryl-5-arylamino-1,3,4-thiodiazolines. Zhur. ob. khim. 34 no.10:3484-3486 0 '64.

(MIRA 17:11)

1. Institut organicheskoy khimii AN UkrSSR.

DUBENKO, R.G.; GORBENKO, Ye.F.; PEL'KIS, P.S.

Synthesis of unsymmetrical derivatives of thiocarbanilide. Ukr. khim. zhur. 26 no.5:641-643 '60. (MIRA 13:11)

1. Institut organicheskoy khimii AN USSR.
(Carbanilide)

S/079/60/030/05/08/074
B005/B002

AUTHORS: Dubenko, R. G., Pel'kis, P. S.

TITLE: Investigations of Asymmetric Derivatives of 1,6-Diaryl Hydrazodithiodicarbamides I

PERIODICAL: Zhurnal obshchey khimii, 1960, Vol. 30, No. 5, pp. 1437-1441

TEXT: The authors synthesized various asymmetric derivatives of 1,6-diphenyl hydrazodithiodicarbamides with the general formula RNHCSNHNHCSNHR' by way of the reaction of substituted 4-phenyl thiosemicarbazides with the correspondingly substituted phenyl isothiocyanates on boiling in absolute alcohol. The scheme of this reaction is given. The derivatives of 4-phenyl thiosemicarbazide (general formula:  NHCSNHNH$_2$) used as initial products are given in Table 1. 18 derivatives are specified along with their melting points, yields in the production, gross formulas, and nitrogen contents. These compounds were obtained by the reaction of the correspondingly substituted phenyl isothiocyanates with hydrazine hydrate in aqueous-alcoholic solution (Ref. 5). The substituted phenyl

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isothiocyanates used as a second initial product were obtained from the corresponding amines and thiophosgene in chloroform and water as a medium (Ref. 6). Two figures show the absorption spectra of 6 derivatives of 4-phenyl thiosemicarbazide and of 8 derivatives of 1,6-diphenyl hydrazo dithiodicarbamide in the ultraviolet range of the spectrum. The spectra were taken by means of a spectrophotometer of type CФ-4 (SF-4), with the substances being in alcoholic solution. Table 2 shows the asymmetric derivatives of 1,6-diphenyl hydrazo dithiodicarbamide synthesized by the authors. 39 derivatives are mentioned along with their yields, melting points, gross formulas, and nitrogen contents. All of the syntheses carried out are described in an experimental part. Among other things, a description is also given of the procedure of synthesizing certain substituted phenyl isothiocyanates, that have heretofore not been described in publications. There are 3 figures, 2 tables, and 6 non-Soviet references.

Investigations of Asymmetric Derivatives of 1,6-Diaryl Hydrazodithiodicarbamides I

S/079/60/030/05/08/074
B005/B002

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

SUBMITTED: March 26, 1959

Card 3/3

LOZINSKIY, M.O.; PEL'KIS, P.S.

Synthesis of some symmetrical derivatives of 1,5-diphenyl-3-chloroformazan. Ukr.khim.zhur. 27 no.5:667-669 '61. (MIRA 14:9)

1. Institut organicheskoy khimii AN USSR.
(Formazan)

DUBENKO, R.G.; PEL'KIS, P.S.

Symmetrical derivatives of 1,6-diarylhydrazodithiodicarbonamide.
Ukr.khim.zhur. 27 no.5:669-671 '61. (MIRA 14:9)

1. Institut organicheskoy khimii AN USSR.
(Amides) (Carbonic acid)

DUBENKO, R.G.; PEL'KIS, P.S.

Investigation of derivatives of thiocarbanilide. Part 1: Synthesis of asymmetric dihalide derivatives of thiocarbanilide. Ukr.khim.zhur. 27 no.5:673-675 '61. (MIRA 14:9)

1. Institut organicheskoy khimii AN USSR.
(Carbanilide)

LOZINSKIY, M.O. [Lozyns'kyi, M.O.]; PEL'KIS, P.S.

On the synthesis of arylazochloracetic acids. Dop.AN URSR no.4:508-510 '61. (MIRA 14:6)

1. Institut organicheskoy khimii AN USSR. Predstavleno akademikom AN USSR A.I. Kiprianovym. (Acetic acid)

PERETYAZHKO, M.Z.; PEL'KIS, P.S.

Synthesis of 2,3-diaryl-5-arylamino-1,3,4-thiodiazoline. Ukr.khim. zhur. 30 no.2:206-208 '64. (MIRA 17:4)

1. Institut organicheskoy khimii AN UkrSSR.

DUBENKO, R.G.; TANCHUK, Yu.V.; PEL'KIS, P.S.

Synthesis and study of derivatives of trimethylenetrisulfone. Part 1: 2,4,6-Triarylhydrazones of trimethylene-1,3,5-trisulfone. Zhur.ob.khim. 34 no.2:682-684 F '64. (MIRA 17:3)

1. Institut organicheskoy khimii AN UkrSSR.

DUBENKO, R.G.; GORBENKO, Ye.F.; PEL'KIS, P.S.

Synthesis of certain formazans with carbohydrate residue.
Zhur. ob. khim. 31 no.3:883-885 Mr '61. (MIRA 14:3)

1. Institut organicheskoy khimii AN USSR.
(Formazans)

LOZINSKIY, M.O.; PEL'KIS, P.S.

1, 5-Diaryl-3-haloformazan series. Part 2: Synthesis of arylazochloracetic acids. Zhur.ob.khim. 31 no.5:1621-1624 My '61. (MIRA 14:5)

1. Institut organicheskoy khimii Akademii nauk Ukrainskoy SSR.
(Acetic acid) (Formazans)

DUBENKO, R.G.; PEL'KIS, P.S.

Synthesis of the halogen-substituted asymmetric derivatives of 1,6-diphenylhydrazodithiodicarbonamide. Part 4. Zhur.ob.khim. 31 no.5: 1661-1665 My '61. (MIRA 14:5)

1. Institut organicheskoy khimii Akademii nauk Ukrainskoy SSR. (Carbonamides)

DUBENKO, R.G.; PEL'KIS, P.S.

Synthesis of asymmstric alkoxy-substituted 1, 6-diphenylhydrazodithiodicarbonamide. Part 2. Zhur.ob.khim. 31 no.6:2045-2049 Je '61. (MIRA 14:6)

1. Institut organicheskoy khimii AN Ukrainskoy SSR. (Amides)

GRABENKO, A.D.; PEL'KIS, P.S.

Substituted arylamides of dithiocarboxylic acids. Part 2: Synthesis of halo-, sulfo-, and carboxy-N-phenyldithiooxamides. Zhur.ob.khim. 31 no.8:2739-2743 Ag '61. (MIRA 14:8)

1. Institut organicheskoy khimii AN Ukrainskoy SSR.
(Oxamide)

PEL'KIS, P.S.; PERETYAZHKO, M.Z.

Synthesis of substituted erivatives of 1,4-diphenylthiosemicarbazide.
Zhur. ob. khim. 31 no. 11:3726-3728 N '61. (MIRA 14:11)

1. Institut organicheskoy khimii AN Ukrainskoy SSR.
(Semicarbazide)

L 41615-65 EWG(j)/EWT(m) GS

ACCESSION NR: AT5008044 S/0000/64/000/000/0179/0192

AUTHOR: Gorodetskiy, A. A.; Dubenko, R. G.; Pel'kis, P. S.; Ryabova, E. Z.

TITLE: Derivatives of diarylthiocarbohydrazides in the prophylaxis of acute radiation sickness

SOURCE: Patogenez, eksperimental'naya profilaktika i terapiya luchevykh porazheniy (Pathogenesis, experimental prevention, and therapy of radiation injuries); sbornik statey. Moscow, Izd-vo Meditsina, 1964, 179-192

TOPIC TAGS: diarylthiocarbohydrazide, radiation protection, radiation sickness

ABSTRACT: The action of new radiation protection preparations of the group of diarylthiocarbohydrazides and diarylthiocarbamide was studied. Various derivatives of 1,5-diphenylthiocarbohydrazide were synthesized and studied as radiation protection agents. It was shown that these derivatives are able to form internal complexes with cations of heavy metals, that they possess reducing properties, and, depending on the pH of the medium, react in the thion or thiol form. The greatest protective activity in the irradiation of animals with lethal doses of x-rays is exhibited by the derivatives of 1,5-diphenylthiocarbohydrazide and 1,3-diphenylthiocarbamide with substitutions which give them solubility in water: disodium

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L 41615-65
ACCESSION NR: AT5008044

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salt 1,5-di-(4-sulfonephenyl)-thiocarbohydrazide (preparation No. 12), disodium salt 1,5-di-(4-carboxyphenyl)-thiocarbohydrazide (preparation No. 19), 1,5-(4-amidosulfanylphenyl)-thiocarbohydrazide (preparation No. 9), and disodium salt 1,3-di-(*m*-oxy, *n*-carboxyphenyl)-thiocarbamide (preparation No. 26). The most effective preparations (Nos. 12 and 26) possess marked toxic properties. Orig. art. has: 5 figures, 3 tables, 8 formulas

ASSOCIATION: none

SUBMITTED: 19Aug64 ENCL: 00 SUB CODE: LS,GC

NO REF SOV: 000 OTHER: 000

m.c.
Card 2/2

DUBENKO, R.G.; PEL'KIS, P.S.

Study in the series of arylhydrazones, substitution derivatives of glyoxylic acid (IV). Zhur. org. khim. 1 no.7:1255-1260 Jl '65. (MIRA 18:11)

1. Institut organicheskoy khimii AN UkrSSR.

BORISEVICH, A.N.; PEL'KIS, P.S.

Cyclization of 2,3,4-pentantrione 3-arylhydrazones. Zhur. org. khim. 1 no.7:1297-1299 Jl '65. (MIRA 18:11)

1. Institut organicheskoy khimii AN UkrSSR.

PUPKO, L.S.; PEL'KIS, P.S.

Synthesis and study of asymmetric diarylthiocarbazones with halo and carboxy substituents. Zhur. org. khim. 1 no.4:735-738 Ap '65. (MIRA 18:11)

1. Institut organicheskoy khimii AN UkrSSR.

LOZINSKIY, M.O.; PEL'KIS, P.S.

Condensation and cyclization reactions of arylazo chloroacetic acids. Part 2: Isothiocyanates and selenocyanates of arylazo chloroacetic acids and their reactions with aromatic amines. Zhur. org. khim. 1 no.8:1415-1422 Ag '65. (MIRA 18:11)

1. Institut organicheskoy khimii AN UkrSSR.

NESYNOV, Ye.P.; BESPROZVANNAYA, M.M.; PEL'KIS, P.S.

Diethyl esters of arylazophenoxymalonic acid. Zhur. org. khim. 1 no.11:1963-1965 N '65. (MIRA 18:12)

1. Institut organicheskoy khimii AN UkrSSR. Submitted November 9, 1964.

ACC NR: AP6023580 SOURCE CODE: UR/0409/66/000/003/0368/0371

AUTHOR: Borisevich, A. N.; Shulezhko, S. A.; Pel'kis, P. S.

ORG: Institute of Organic Chemistry, Academy of Sciences, UkrSSR (Institut organicheskoy khimii Akademii nauk UkrSSR)

TITLE: Arylamides of substituted thioacetic acid. III. Cyclization of arylamides of acetylthioacetic acid

SOURCE: Khimiya geterotsiklicheskikh soyedineniy, no. 3, 1966, 368-371

TOPIC TAGS: acetylmethylenearylphenylthiazoline, acetylmethylenearylthiazolidone, cyclization, acetic acid

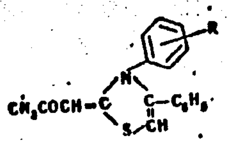
ABSTRACT:

Previously unreported 2-(acetylmethylene)-3-aryl-4-phenylthiazolines I—V (see Table 1) were obtained by boiling an equimolar mixture of arylamides of acetylthioacetic acid with ω-bromoacetophenone in ethanol and separation on a chromatographic column packed with Al_2O_3. Reactions

Card 1/3 UDC: 547.292+542.952.52

ACC NR: 923580

Table 1. 2-(acetylmethylene)-3-aryl-4-phenylthiazolines



Compound no.	R	T. mp.,°C	Formula	Found S,%	Calculated S,%	Yield %
I	H	215—216	$C_{18}H_{15}NOS^*$	11,03; 11,04	10,95	52
II	p-CH₃	158—159	$C_{19}H_{17}NOS$	10,26; 10,23	10,43	50
III	p-OCH₃	145—146 (Decomp.)	$C_{19}H_{17}NO_2S$	9,80; 9,77	9,90	52
IV	o-OCH₃	192—193	$C_{19}H_{17}NO_2S$	9,98; 9,98	9,90	48
V	p-OC₂H₅	132—133	$C_{20}H_{19}NO_2S$	9,34; 9,28	9,48	53

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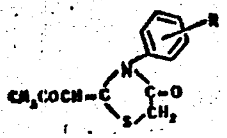
* Found: C 73,79; 73,72; H 5,01; 5,03; N 4,99; 5,09%; M 292,4. Calculated: C 73,65; H 5,14; N 4,77%; M 293,36.

of arylamides of acetylthioacetic acid with monochloroacetic acid in the presence of anhydrous sodium acetate in glacial acetic acid yielded the previously unreported 2-(acetylmethylene)-3-aryl-4-thiazolidones:

ACC NR: AP6023580

Table 2. 2-(acetylmethylene)-3-aryl-4-thiazolidones



Compound no.	R	T. mp., °C	Formula	Found s, %	Calculated S %	Yield
VI	H	204—206	$C_{11}H_{11}NO_2S$	13,46; 13,45	13,75	36
VII	p-CH_3	200—202	$C_{13}H_{13}NO_2S$*	12,86; 12,87	13,01	43
VIII	p-OCH_3	201—202	$C_{13}H_{13}NO_3S$	11,95; 12,02	12,19	43
IX	o-OCH_3	145—146	$C_{13}H_{13}NO_3S$	12,18; 12,26	12,19	40
X	p-OC_2H_5	163—164	$C_{14}H_{15}NO_3S$	11,64; 11,63	11,56	50

* Found: C 63,36; 63,32; H 5,31; 5,27; N 6,01; 6,03%; *M* 256,9. Calculated: C 63,13; H 5,29; N 5,66%; *M* 247,32.

Orig. art. has: 2 tables. [W.A.50; CBE No. 10]

SUB CODE: 07/ SUBM DATE: 04Jan65/ ORIG REF: 002/ OTH REF: 006

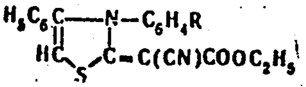
ADDRESS:

Card 3/3

Card 1/5 UDC: 547.789.5.542.952.52

ACC NR: AP6023579

Table 1.



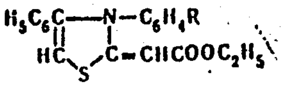
№	R	T. mp., °C	Formula	Found S, %	Calculated S, %	Yield, %
1	H	>240	$C_{20}H_{16}O_2N_2S$	9,23; 9,28	9,19	94
2	p-CH_3	207	$C_{21}H_{18}O_2N_2S$	8,70; 8,65	8,86	90
3	p-CH_3O	188	$C_{21}H_{18}O_2N_2S$	8,79; 8,87	8,47	81
4	м-Cl	210	$C_{20}H_{15}O_2N_2SCl$	8,42; 8,44	8,36	85
5	p-NH_2SO_2	>240	$C_{20}H_{17}O_4N_3S_2$	14,86; 14,90	14,98	58
6	p-C_2H_5OOC	218	$C_{23}H_{20}O_4N_2S$	7,63; 7,61	7,62	91
7	p-NO_2	180	$C_{20}H_{15}O_4N_3S$			82

amide malonic esters, the resultant 2-carbethoxycyanomethylene derivatives of thiazole resist saponification with aqueous or alcoholic KOH or with 60% sulfuric acid. Reaction of diethyl esters of arylamides of thiocarboxymalonic acid with ω-bromoacetophenone yielded 2-carbethoxymethylene-3-aryl-4-phenylthiazoles. When the reaction time on a steam

Card 2/5

ACC NR: AP6023579

Table 2.



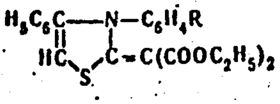
№	R	T. mp., °C	Formula	Found S, %	Calculated S, %	Yield, %
1	H	203	$C_{19}H_{17}O_2NS$	9,77; 9,62	9,90	94
2	p-C_2H_5O	144	$C_{21}H_{21}O_3NS$	8,54; 8,53	8,72	96
3	p-NO_2	162—163	$C_{19}H_{16}O_4N_2S$	8,59; 8,54	8,69	71
4	p-NH_2SO_2	Does not melt	$C_{19}H_{18}O_4N_2S_2$	16,29; 16,32	15,92	90

bath is shortened, or the reaction mixture is left to stand overnight at room temperature, 2-dicarbethoxymethylene-3-aryl-4-phenylthiazoles are formed. On heating for 3—4 hours, loss of a carbethoxy group results in formation of 2-carbethoxymethylene-3-aryl-4-phenylthiazoles;

ACC NR: AP6023579

Heating of diarylamides of dithiomalonic acid with ω-bromoacetophenone yields exclusively monobromides of 3,3'-diaryl-4,4'-diphenyl-2-methine-dithiazoles.

Table 3.



№	R	T. mp., °C	Formula	Found S, %	Calculated S, %	Yield, %
1	H	162	$C_{22}H_{21}O_4NS$	7,90; 7,97	8,10	88
2	p-CH_3	160	$C_{23}H_{23}O_4NS$	7,95; 8,02	7,82	66
3	p-C_2H_5O	118	$C_{24}H_{25}O_5NS$	7,52; 7,37	7,28	85
4	p-Br	168—169	$C_{22}H_{18}O_4NSBr$	6,44; 6,36	6,75	70
5	p-NO_2	205—206	$C_{22}H_{20}O_6N_2S$	7,39; 7,47	7,27	67

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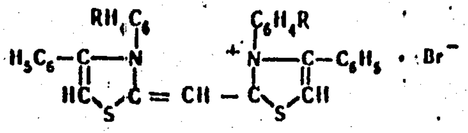
ACC NR: AP6023579

Table 4.



№	R	T. mp., °C	Formula	Found S, %	Calculated S, %	Yield, %
1	H	Does not melt	$C_{31}H_{26}N_2S_2Br$	10,83; 10,70	11,25	85
2	p-CH_3O	″	$C_{33}H_{29}O_2N_2S_2Br$	9,96; 10,02	10,17	83
3	o-C_2H_5O	″	$C_{35}H_{31}O_2N_2S_2Br$	9,94; 9,87	9,77	78
4	p-C_2H_5O	″	$C_{35}H_{31}O_2N_2S_2Br$	9,61; 9,46	9,77	86

Orig. art. has: 4 tables. [W. A. 50; CBE No. 10]

SUB CODE: 07/ SUBM DATE: 31Dec64/ ORIG REF: 004/ OTH REF: 001

Card 5/5

ACC NR: AP6025392 SOURCE CODE: UR/0366/66/002/007/1213/1220

AUTHOR: Nesynov, Ye. P.; Besprozvannaya, M. M.; Pel'kis, P. S.

ORG: Institute of Organic Chemistry, Academy of Sciences, UkrSSR (Institut organicheskoy khimii Akademii nauk UkrSSR)

TITLE: Preparation of arylhydrazones of diethyl mesoxalate

SOURCE: Zhurnal organicheskoy khimii, v. 2, no. 7, 1966, 1213-1220

TOPIC TAGS: hydrazone, mesoxalate ester, condensation reaction, isomerism, CARBOXYLIC ACID, HYDRAZINE COMPOUND, ISOMER

ABSTRACT:

This work is a continuation of the study of physiologically active aryazocarboxylic acids. Reaction of malonic ester with aryldiazonium salts yields arylhydrazones of diethyl mesoxalate. A reaction by-product consists of diethyl diarylazomalonates. The arylhydrazones were separated

$$(C_2H_5OOC)_2CH_2 + ArN{\equiv}N^+Cl^- \xrightarrow{CH_3COONa} \underset{(I)}{(C_2H_5OOC)_2C{=}NNHAr}$$

$$\underset{(II)}{(C_2H_5OOC)_2C(N{=}NAr)_2}$$

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ACC NR: AP6025392

into isomers by elution chromatography on alumina; UV and IR spectra of the isomers were recorded. It is suggested that the existence of isomers is determined not only by cis-trans isomerism about the C=N bond, but also by hydrazone-azo tautomerism. Orig. art. has: 2 tables. [W.A. 50; CBE No. 10]

SUB CODE: 07/ SUBM DATE: 26Apr65/ ORIG REF: 003/ OTH REF: 004

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ACC NR: AM6001716 Monograph UR/

Gorodetskiy, Aleksey Afanas'yevich; Pel'kis, Petr Solomonovich; Ryabova Era Zinov'yevna; Dubenko, Roza Grigor'yevna

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Antiradiation properties of aryl amides and aryl hydrazides of thiocarbonic acids (Protivoluchevyye svoystva arilamidov i arilgidrazidov tiokarbonovykh kislot) Kiev, Izd-vo "Naukova dumka," 1964. 110 p. illus., biblio. 1600 copies printed. (At head of title: Akademiya nauk Ukrainskoy SSR. Institut fiziologii im. A. A. Bogomol'tsa. Institut organicheskoy khimii)

TOPIC TAGS: antiradiation drug, radiation protection, amide, hydrazide, pharmacology

PURPOSE AND COVERAGE: This monograph is the result of searches for and tests of new antiradiation substances. A series of substituted aryl amides and aryl hydrazides of thiocarboxylic acids were synthesized and investigated. The compounds of this series are reducing agents, capable of forming various inner complexes, and also, depending on pH, can exist in the thion or thiol form. Various symmetrical and unsymmetrical derivatives of thiocarbanilide, 1, 5-diphenylthiocarbohydrazide, were also synthesized and biologically investigated. Thirty-six newly synthesized substances were subjected to biological testing of their prophylactic properties. Together with investigations of the effect of the synthesized preparations on the clinical course and result of radiation injuries, the toxicological and pharmacological properties of the most effective

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substances were studied, and also the distribution of the compounds, means and rate of their elimination from the organism. The monograph is intended for radiobiologists, synthetic chemists, biologists, and doctors.

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SUB CODE: 07/ SUBM DATE: 13Mar64/ SOV REF: 064/ OTH REF: 134/

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L 42171-66 EWT(m) RM

ACC NR: AR6014530 (N) SOURCE CODE: UR/0081/65/000/019/H044/H044

AUTHORS: Gorodetskiy, A. A.; Dubenko, R. G.; Pel'kis, P. S.; Ryabova, E. Z. 36

TITLE: Derivatives of diarylthiocarbohydrazide 1 in the prophylactic treatment of B acute radiation sickness

SOURCE: Ref. zh. Khimiya, Abs. 19Zh156

REF SOURCE: Sb. Patogenez, eksperim. profilaktika i terapiya luchevykh porazheniy. M., Meditsina, 1964, 179-192

TOPIC TAGS: radiation sickness, x-ray irradiation, antiradiation drug, hydrazine compound, toxicity

ABSTRACT: A series of substituted 1,5-diphenylthiocarbohydrazides of general structure $(ArNHNH)_2CS$ {Ia-s, where a, Ar = 2,4-$(CH_3)_2C_6H_3$; b, Ar = 2,5-$(CH_3)_2C_6H_3$; c, Ar = 3,4-$(CH_3)_2C_6H_3$; d, Ar = 4-iso-$C_3H_7C_6H_4$; e, Ar = 3-$CH_3COC_6H_4$; f, Ar = 4-$C_2H_5OOCC_6H_4$; g, Ar = 2-$C_2H_5OC_6H_4$; h, Ar = 2-$CH_3SC_6H_4$; i, Ar = 4-$H_2NSO_2C_6H_4$; j, Ar = 4-[(2-ethyl-1,3,4-thiadiazolyl-5)-aminosulfonyl]-phenyl; k, Ar = 4-[(4,6-dimethylpyrimidyl-2-aminosulfonyl]-phenyl; ℓ, Ar = 4-$NaO_3SC_6H_4$; m, Ar = 2-ClC_6H_4; n, Ar = 3-ClC_6H_4; o, Ar = 2-IC_6H_4; p, Ar = 4-IC_6H_4; q, Ar = 2,4-$(Cl)_2C_6H_3$; r, Ar =

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DUBENKO, R.G.; TANCHUK, Yu.V.; KISILENKO, A.A.; PEL'KIS, P.S.

Synthesis and study of trimethylene trisulfone derivatives. Part 3: Infrared spectra of arylazo and arylhydrazono derivatives of 2,4,6-trimethylene 1,3,5-trisulfone. Zhur. org. khim. 1 no.9:1692-1696 S '65. (MIRA 18:12)

1. Institut organicheskoy khimii AN Ukrainskoy SSR. Submitted March 17, 1964.

PUPKO, L.S.; DYCHENKO, A.I.; PEL'KIS, P.S.

Synthesis of asymmetrical derivatives of 5-hydroxy-2,3 diaryl tetrazolium betaine. Ukr. khim. zhur. 31 no. 12:1306-1309 '65
(MIRA 19:1)

1. Institut organicheskoy khimii AN UkrSSR. Submitted October 1, 1964.

DUBENKO, R.G.; TANCHUK, Yu.V.; PEL'KIS, P.S.

Synthesis and study of trimethylene trisulfone derivatives. Part 4: Arylazo derivatives of 2,4,6-trimethylene 1,3,5-trisulfone and products of their reduction. Zhur. org. khim. 1 no.9:1696-1699 S '65. (MIRA 18:12)

1. Institut organicheskoy khimii AN Ukrainskoy SSR. Submitted April 13, 1964.

DUBENKO, R.G.; USENKO, Yu.N.: PEL'KIS, P.S.

Aryl hydrazones of ethyl ester of arylsulfonylglyoxylic acid. Part 3: Diethyl ester of arylazo- and arylsulfonylmalonic acid and their derivatives. Zhur. org. khim. 1 no. 12:2181-2186 D '65 (MIRA 19:1)

1. Institut organicheskoy khimii AN UkrSSR. Submitted November 24, 1964.

LOZINSKIY, M.O.; PEL'KIS, P.S.

Synthesis of 1,4-diaryl-1,4-dihydro 1,2,4,5-tetrazines. Zhur. org. khim. 1 no.4:798-799 Ap '65. (MIRA 18:11)

1. Institut organicheskoy khimii AN UkrSSR.

LOZINSKIY, M.O.; PEL'KIS, P.S.

Reactions of condensation and cyclization of arylazochloroacetic acids. Part 5: Chlorides, arylamides, and acyl hydrazides of arylazochloroacetic acids. Zhur. org. khim. 1 no.11:1970-1981 N '65. (MIRA 18:12)

1. Institut organicheskoy khimii AN UkrSSR. Submitted December 11, 1964.

DUBENKO, R.G.; TANCHUK, Yu.V.; PEL'KIS, P.S.

Synthesis and study of trimethylene trisulfone derivatives. Part 6: Reaction of trimethylene trisulfone and its derivatives with unsaturated compounds. Zhur. org. khim. 1 no.11:2046-2050 N '65. (MIRA 18:12)

1. Institut organicheskoy khimii AN UkrSSR. Submitted September 19, 1964.

DUBENKO, R.G.; USENKO, Yu.N.; PEL'KIS, P.S.

Arylhydrazones of the ethyl ester of arylsulfonylglyoxilic acid. Part 1. Zhur.org.khim. 1 no.3:570-572 Mr '65. (MIRA 18:4)

1. Institut organicheskoy khimii AN UkrSSR.

DUBENKO, R.G.; USENKO, Yu.N.; PEL'KIS, P.S.

Aryl hydrazones of ethyl ester of arylsulfonylglyoxilic acid. Part 2: Synthesis of aryl hydrazones of arylsulfonylglyoxilic acid hydrazide and its substituted compounds. Zhur. org. khim. 1 no.6:1047-1051 Je '65. (MIRA 18:7)

1. Institut organicheskoy khimii AN UkrSSR.

BORISEVICH, A.N.; PEL'KIS, P.S.

Arylamides of substituted thioacetic acid. Part 2: Cyclization of arylamides of arylazoacetylacetic acid. Zhur. org. khim. 1 no.6: 1052-1054 Je '65. (MIRA 18:7)

1. Institut organicheskoy khimii AN UkrSSR.

L 52550-65 EWT(m)/EPF(c)/EWP(j)/T/EWA(c) Pc-4/Pr-4 RPL JW/RM

ACCESSION NR: AP5011194 UR/0366/65/001/004/0798/0799

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B

AUTHORS: Lozinskiy, M. O.; Pel'kis, P. S.

TITLE: Synthesis of 1,4-diaryl-1,4-dihydro-1,2,4,5-tetrazines

SOURCE: Zhurnal organicheskoy khimii, v. 1, no. 4, 1965, 798-799

TOPIC TAGS: organic synthesis, amine, acetic acid

ABSTRACT: In studying the reaction of arylazochloroacetic acids with triethylamine, it was found that on heating a mixture of such acids (containing a nitro-group in an aromatic nucleus) with the triethylamine for 3-5 hours, 1-4-diaryl-1,4-dihydro-1,2,4,5-tetrazines are obtained along with 4-phenyl substituted Δ^2-1,3,4-oxadiazolinone-5. The structure of the reaction products has been confirmed by spectroscopic investigation. 1,4-di(o-nitrophenyl)-1,4-dihydro-1,2,4,5-tetrazine has maximums in the ultraviolet absorption spectrum at 228, 333, and 436 mμ (in alcohol), and this agrees with data from the literature. The IR spectrum shows intensive absorption bands at 1590-1610 cm^{-1} (associated with C=N). 1,4-diaryl-1,4-dihydro-1,2,4,6-tetrazines are colored crystalline substances, soluble in dioxane, acetone, chloroform, benzene, glacial acetic acid, alcohol, and ether, but are not soluble in n-hexane or water. 1,4-di(o-nitrophe-

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nyl)-1,4-dihydro-1,2,4,5-tetrazine forms cherry-brown crystals, with a yield of 21%. The melting point is 166-168C, the formula $C_{14}H_{10}N_6O_4$. 1,4-di(2'-methoxy-5'-nitrophenyl)-1,4-dihydro-1,2,4,5-tetrazine forms gray-green crystals, with a yield of 11%. The melting point is 212-214C (from a 2:1 mixture of dioxane and alcohol), the formula $C_{16}H_{14}N_6O_6$. 1,4-di(2'-methoxy-4'-nitrophenyl)-1,4-dihydro-1,2,4,5-tetrazine forms light brown crystals, with a yield of 10%. The melting point is 197-198C (dioxane-alcohol-water, 2:2:1), the formula $C_{16}H_{14}N_6O_6$. Orig. art. has: 1 formula.

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

SUBMITTED: 15Oct64 ENCL: 00 SUB CODE: OC, GC

NO REF SOV: 003 OTHER: 003

Card 2/2

NESYNOV, Ye.P. [Nesynov, IE.P.]; PEL'KIS, P.S.

Syntheses in the series of carbohydrazide derivatives. Dop.
AN URSR no.8:1080-1082 '62. (MIRA 18:2)

1. Institut organicheskoy khimii AN UkrSSR.

LOZINSKIY, M.O.; SANOVA, S.N.; PEL'KIS, P.S.

1,5-Diaryl-3-(arylsulfonyl) formazans. Zhur.org.khim. 1 no.2:314-318 F '65. (MIRA 18:4)

1. Institut organicheskoy khimii AN UkrSSR.

DUBENKO, R.G.; PEL'KIS, P.S.

Series of aryl hydrazones of substituted phenylglyoxylic acid chloride. Part 3: Synthesis of aryl hydrazones of p-nitrophenylglyoxylic acid chloride and nucleophilic exchange reactions. Zhur. ob. khim. 34 no.10:3481-3484 O '64. (MIRA 17:11)

1. Institut organicheskoy khimii AN UkrSSR.

NESYNOV, Ye.P.; PEL'KIS, P.S.

Reduction of 1,5-diaryl tetrazolium betaines. Zhur. ob. khim. 34 no.8:2672-2676 Ag '64. (MIRA 17:9)

1. Institut organicheskoy khimii AN UkrSSR.

LOZINSKIY, M.O.; PEL'KIS, P.S.; SANOVA, S.N.

Preparation of arylazochloroacetic acids and 4-phenyl-substituted Δ^2-1,3,4 -1,3,4-oxadiazolin-5-one. Ukr. khim. zhur. 30 no.1:68-72 '64. (MIRA 17:6)

1. Institut organicheskoy khimii AN UkrSSR.

DUBENKO, R.G.; TANCHUK, Yu.V.; PEL'KIS, P.S.

Synthesis and investigation of trimethylenetrisulfone derivatives. Part 2: Arylhydrazono-and aryl azo derivatives of trimethylenetrisulfone. Zhur. ob. khim. 34 no. 5: 1636-1638 My '64. (MIRA 17:7)

1. Institut organicheskoy khimii AN UkrSSR.

GORODETSKIY, Aleksey Afanas'yevich, prof.; PEL'KIS, Petr Solomonovich, doktor khim. nauk, prof.; RYABOVA, Era Zinov'yevna; DUBENKO, Roza Grigor'yevna; YANKOVSKAYA, Z.B., red.

[Radiation-protective properties of arylamides and arylhydrazides of thiocarboxylic acids] Protivoluchevye svoistva arilamidov i arilgidrazidov tiokarbonovykh kislot. Kiev, "Naukova dumka," 1964. 110 p. (MIRA 17:8)

1. Chlen-korrespondent AN Ukr.SSR (for Gorodetskiy).

DUBENKO, R.G.; PEL'KIS, P.S.

Aryl hydrazones of substituted phenylglyoxilic acid chloride. Part 2: Reaction of aryl hydrazones of substituted phenylglyoxilic chloride with nucleopnilic agents. Zhur.ob.khim. 34 no.2:679-682 F '64.
(MIRA 17:3)

1. Institut organicheskoy khimii AN UkrSSR.