

PETYUNIN, P.A.; ZAKALYUZHNYI, M.V.

Amides and hydrazides of oxalic acid. Part 4:Hydrazides of N-substituted oxamic acids. Zhur.ob.khim. 34 no.1:28-32 Ja '64.(MIRA 17:3)

1. Permskiy farmatsevticheskiy institut i Khar'kovskiy farmatsevticheskiy institut.

PETRYANIN, P. A.

~~Heterocyclic XXV. Synthesis of 9-phenylacridine from N-acyl derivatives of 2-aminotriphenylcarbinol. P. A. Petryanin, N. G. Fanticova and N. E. Koshkin (Zh. obshch. Khim., 1936, 28, 2050-2052). 9-Phenylacridine (I) (useful for protecting Ag from corrosion) may be prepared in ~94% yield by heating 1 g. of 2-aminotriphenylcarbinol (II) with 1.8 g. of *m*-dinitrobenzene in 8 ml. of chlorobenzene (cf. *ibid.*, 159). I may also be prepared via *N*-acyl deriv. of II. Thus, the *N*-benzoyl deriv. (III) is produced by heating II with benzoyl chloride in pyridine. III is heated with nitrobenzene to obtain I (71% yield); reaction products also included 1 : 1 : 3-triphenyl-2 : 4 : 1-benzoxazine. A. I. H.~~

Chd

6
4E2ij

PM aug

PETUNIA, P. A.

USSR/Organic Chemistry. Synthetic Organic Chemistry.

Abs Jour: Ref Zhur-Khimiya, No 6, 1957, 19143

Author : Berdinskiy I. S., Petyunin P. A.

Inst :

Title : Substituted Hydrazides of Hydroxy Carbonic Acids. I.
Synthesis of Arylhydrazides of Diarylglycolic Acids.

Orig Pub: Zh. obshch. khimiyi, 1956, 26, No 9, 2592-2595

Abstract: The preparation of $\text{ArNHNHCOCCAr}'_2\text{OH}$ (I) by the interaction of $\text{ArNHNHCOCCOCC}_2\text{H}_5$ (II) with the corresponding $\text{Ar}'\text{MgBr}$ is described. In this way from II, where $\text{Ar} = \text{C}_6\text{H}_5$ (a), $n\text{-BrC}_6\text{H}_4$ (b) or $-\text{C}_{10}\text{H}_7$ (c), are synthesized I, where $\text{Ar} = \text{C}_6\text{H}_5$, $\text{Ar}' = \text{C}_6\text{H}_5$ (a); $\text{Ar} = \text{C}_6\text{H}_5$, $\text{Ar}' = n\text{-CH}_2\text{C}_6\text{H}_4$ (b); $\text{Ar} = \text{C}_6\text{H}_5$, $\text{Ar}' = o\text{-CH}_2\text{OC}_6\text{H}_4$ (b); $\text{Ar} = \text{C}_6\text{H}_5$, $\text{Ar}' = \alpha\text{-C}_{10}\text{H}_7$ (d); $\text{Ar} = \text{C}_6\text{H}_5$, $\text{Ar}' = \beta\text{-C}_{10}\text{H}_7$, $\text{Ar}' = \text{C}_6\text{H}_5$ (g). Analogically from ethyl ether of α,β -diphenylhydrazide of succinic acid (III) is obtained

Card : 1/2

PETYUNIN, P. A.

Chemistry of heterocycles. XXVI. New methods of preparation of *o*-phenylacridine. P. A. Petyunin and N. O. Panterova (Pharm. Inst., Moscow); *Zh. Obshch. Khim.* 26, 2191-3 (1956); cf. *C.A.* 51, 8078a. — Refluxing

1 g. *o*-C₆H₄NHCOO.CPh₃ [cf. Inagaki, *J. Pharm. Soc. Japan*, 53, 181-4 (1933)] in 10 ml. PhNO₂, 2 hrs. gave 64.0% *o*-phenylacridine (I), m. 182-5.5°; also obtained in 70.38%

yield by similarly heating 3 g. *o*-C₆H₄N.CMe.O.CPh₃ [cf. Bayer and Villiger, *Ber.* 37, 2191 (1904)] in 3 ml. PhNO₂. The above reactions are believed to proceed through an ionic reaction with intermediate formation of 10-acetyl-*o*-phenyl-4a,10-dihydroacridine. Heating *o*-H₂NC₆H₄C(OH)Ph₃ in PhNO₂ rapidly gave 87-91% I; while similar reaction of its *N*.Ac deriv. gave more slowly 77% I.
G. M. Kosolapoff

79-2-43/58

AUTHORS: Petyumin, P. A. and Konshin, M. Ye.

TITLE: Study of the Chemistry of Heterocycles. Part 27. Synthesis and Properties of Monohalogeno Derivatives of 9-Phenylacridine (Issledovaniye v oblasti khimii geterotsiklov. XXVII. Sintez i Svoystva monogaloidoproizvodnykh 9-fenilakridina)

PERIODICAL: Zhurnal Obshchey Khimii, 1957, vol 27, No 2, pp. 475-480 (U.S.S.R.)

ABSTRACT: This report is devoted to the development of a method for the derivation of monohalogeno derivatives of 9-phenylacridine and a study of their properties. It was established that the acridine cycle closes easier in halogeno-substituted 2-aminotriphenylcarbinol than in acetyl derivatives. Experiments with 5-iodo-2-aminotriphenylcarbinol showed that the new method cannot be applied for the synthesis of iodo-derivatives of 9-phenylacridine because of the intensive dehalogenation. Good results during the halogenation of methylantranilate were obtained by application of the chloramide method. It was established that N-chloracetamide offers satisfactory results during the bromination but not during the chlorination of methylantranilate. Chlorination is smooth only during the application of N,N-dichlorourea.

Card 1/2

79-2-44/58

AUTHORS: Petyunin, P. A. and Tetyuyeva, L. A.

TITLE: Reactions of Magnesylamines. Part 2. About a New Reaction of Aldehydes (Reaktsii magnezilaminov. II. O novoy reaktsii aldegidov)

PERIODICAL: Zhurnal Obshchey Khimii, 1957, vol 27, No 2, pp. 480-482 (U.S.S.R.)

ABSTRACT: Report describes the results obtained from the reaction between N, N'-bis-(magnesium halide)-arylamines and benzaldehyde. It was assumed that the named magnesylamines with aldehydes will react like free amines, i. e., forming Schiff's bases; this assumption was not confirmed experimentally; the reaction led instead to the formation of N-arylamides of benzoic acid. Under the effect of N, N-bis-(magnesium halide)-arylamines, two benzaldehyde molecules are converted into benzyl alcohol and arylamide of benzoic acid. The reaction investigated was found to be similar to the known Cannizzaro-Tishchenko oxidation-reduction reaction differing from it only by the structure of one of the final reaction products. Using the reaction between benzaldehyde and N,N-bis-(magnesium bromide)-aniline, the authors investigated the effect of the heating time and the ratio of the reagents on the yield of benzanilide and the results are described.

Card 1/2

PETUNIN, P.A.; SHKLYAYEV, V.S.

Research data on the chemistry of heterocyclic compounds. Part 28:
Synthesis and properties of 1-phenyl-3,3-diaryloxindoles. Zhur. ob.
khim, 27 no.3:731-734 Mr '57. (MLRA 10:6)

1. Molotovskiy farmatsevticheskiy institut.
(Oxindole) (Glycolic acid)

Petyunin, P. A. 2/2/73

Chemistry of heterocycles. XIX. *N*-alkyl derivatives of 3,3-dichlorodolan. P. A. Petyunin, V. S. Shklyarev and A. S. Fess (Pharm. Inst. Moscow). *Zhur. Obshch. Khim.* 1958 (1957), **24**, 47, 7489; **51**, 16628A. Addn. of 23.8 g. SnO₂·Cl₂ to 16 g. PhNHMe in 30 ml. dry pyridine with cooling, gave after treatment with H₂O and extra. with H₂O 81.7%. EI *N*-methylacetamide (I), b.p. 157-8° at 1.5160. *d*₄²⁰ 1.1276. Similar reaction of PhNHMe with EtO gave 74%. EI *N*-ethylacetamide (II), b.p. 168-9.5°. PhNHMe gave 72%. EI *N*-methylacetamide (III), b.p. 158-9° *d*₄²⁰ 1.0708. *n*_D²⁰ 1.5050. I (6.2 K.) and 2-MeC₆H₄MgBr from 10.5 g. RBr gave 33.8% *p*-toler acid *N*-methylacetamide, m. 74-5°; similarly was prepd. 40% *p*-toler acid *N*-methylacetamide, m. 126-5.5°. Similarly, II and PhMgBr gave 88.0% benzoic acid *N*-ethylacetamide, m. 98.5°; thus was prepd. 77.1% *p*-toler acid *N*-ethylacetamide, m. 111-12° and 44% dimethylacetamide *N*-ethylacetamide, m. 97.5°. III gave 66.7% benzoic acid *N*-ethylacetamide, m. 80.6-1.5°. Treatment of these anilides with AcOH congd. 1 mL H₂SO₄ gave: 61% 1-methyl-3,3-di(*p*-toler)acetamide, m. 120-20.5°; 52.5% 1-methyl-3,3-di(*p*-toler)acetamide, m. 146.5-8°; 92% 1-ethyl-3,3-diphenylacetamide, m. 158-9°; 85.3% 1-ethyl-3,3-di(*p*-toler)acetamide, m. 119.5°; 77.5% 1-ethyl-3,3-di(*p*-toler)acetamide, m. 104-0°; 89% 2-ethyl-3,3-diphenylacetamide, m. 110-12°. XIX. 2,4-Dibuto-derivatives of 3-phenylacridine/ P. A. Petyunin and M. Z. Kossile. *Izv. Akad. Nauk SSSR Ser. Khim. Nauk*, 1958, 1038-9. To 1.85 g. Me 6-chloroanthranilate in 10 ml. 80% AcOH was added 0.8 ml. H₂SO₄, 1.03 g. NaBr in little H₂O and 0.64 g. H₂NCONCl₂ at 25-30° yielding 64.4%. Me 3-bromo-5-chloroanthranilate (I), m.p. 76-8.5°; heated with AcO this gave the *N*-Ac deriv., m.p. 117-19°. Chlorination of Me 5-bromoanthranilate gave 49.3% Me 1-bromo-5-bromoanthranilate, m. 70-0.5°. *N*-Ac deriv., m. 120-523°. Bromination of Me 5-bromoanthranilate gave 88.8%. Me 3,5-dibromoanthranilate, m. 85.5-87°. I and PhMgBr gave 64.4%. 3-bromo-5-chloro-3-aminoanthranilate, m. 115-14.5°. *N*-Ac deriv., m. 100-3°.

Distr: 4E1j/4E3a/4E2c(j)

1/2

Petyunin, P. A., Shklyayev, V. S., and ...
 Similarly were prepd.: 66.2% 2-chloro-5-bromo-2-amino-
 triphenylcarbinol, m. 116-18° (N-Ac deriv., m. 192-3°);
 3,6-dichloro-2-amino-triphenylcarbinol, 61.8%, m. 112,6-
 13,8° (N-Ac deriv., m. 170-80°); 64.00% 3,5-dibromo-2-
 aminotriphenylcarbinol, m. 112-13° (N-Ac deriv., m. 200-
 7°). Heating 3-bromo-5-chloro-2-amino-triphenylcarbinol
 in PhNO, 0.5 hr. gave 79% 2-chloro-4-bromo-9-phenylacridi-
 nine, m. 228-9°, also prepd. in 81.5% yield by refluxing the
 carbinyl acetyl deriv. in PhNO, 4 hrs. Similarly were
 prepd.: 55-68% 2-bromo-4-chloro-9-phenylacridine, m. 214-
 15°; 53.6-81.1% 3,6-dichloro-9-phenylacridine, m. 213-
 13.6°; 3,5-dibromo-9-phenylacridine, 63-6.8%, m. 232-3°.

G. M. Kosolapoff

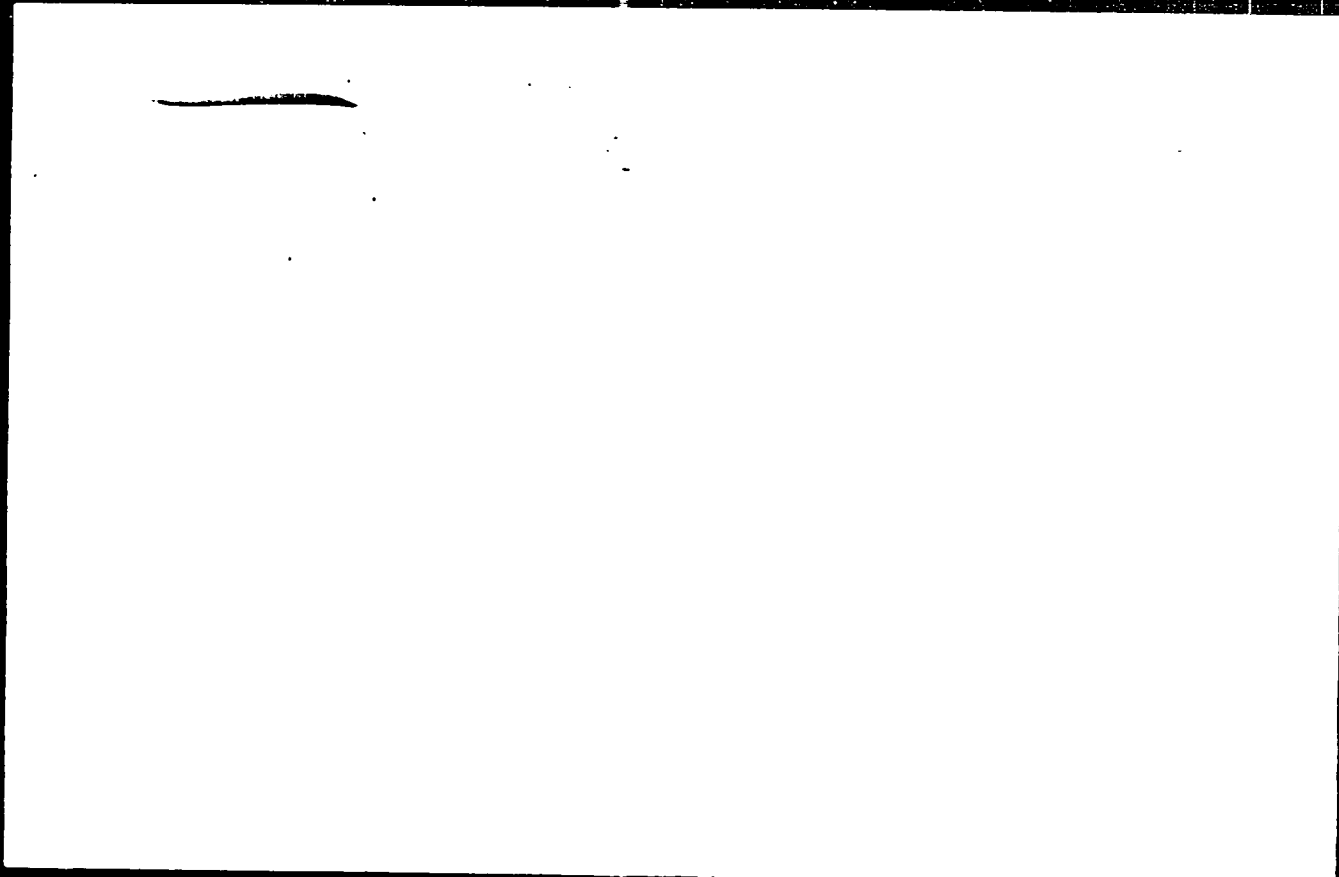
8
2 may
3

2/2

PM

"APPROVED FOR RELEASE: 06/15/2000

CIA-RDP86-00513R001240710013-2



APPROVED FOR RELEASE: 06/15/2000

CIA-RDP86-00513R001240710013-2"

PETYUNIN, P. A.

Distr: 4E4j/4E3d/4E2c(j)

Chemistry of heterocycles. XXI. Synthesis of 3,3-diphenylindoles and 1-methyl-3-oxo-3,4-diphenyltetrahydroisoquinoline based or arylamides of diphenylchloroacetic and diphenylalkoxyacetic acids. P. A. Petyunin, I. S. Berginell, and N. G. Panterova (Pharm. Inst., Moscow). *Zhur. Obshch. Khim.* 27, 1901-3 (1967); *ibid.* C. A. 40, 18035e; 52, 37031. To 5.1 g. p-ClC₆H₄NH₂ in 20 ml. Et₂O was added 5.3 g. Ph₂CClCOCl in Et₂O; the amide-HCl ppt. was sepd. and the filtrate gave 70.4% Ph₂CClCONHC₆H₄-Cl-p (I), m. 124-5°, which (1.2 g.) in 10 ml. dioxane and 1 ml. 10% NaOH was heated to form a soln., cooled, and poured into H₂O, yielding 87.7% Ph₂C(OH)CONHC₆H₄-Cl-p (IA), m. 210-12°. I dissolved in warm MeOH and cooled, gave 90% Ph₂C(OH)CONHC₆H₄-Cl-p (II), m. 182-3°. To 1.2 g. I in 10 ml. AcOH was added slowly H₂SO₄ until the disappearing red-brown coloration ceased; the mass was poured into cold H₂O yielding 98.1% 5-chloro-3,3-diphenylindole, m. 283-5° (AcOH); this formed in 85% yield on similar treatment of IA, and in 94.4% similar treatment of II. Similarly were prepd. Ph₂CClCONHR (R shown): *p*-tolyl, 93.0%, m. 82-3°; *p*-BrC₆H₄, 83.7%, m. 127-8°; *i*-C₆H₅, 89.7%, m. 130-1°; PhMe, 92.9%, m. 79-80°. These were converted to Ph₂C(OAc)CONRR' (R and R' shown, resp.): *o*-MeC₆H₄, II, 75.8%, m. 105-9°; *p*-BrC₆H₄, II, 90%, m. 174-5°; *i*-C₆H₅, II, 86.7%, m. 133-5°; Ph, Et, 90%, m. 158-9°. The representatives of these groups were converted as above to: 3,3-diphenylindole, 83-6%, m. 225°; 7-methyl-3,3-diphenylindole, 85-7%, m. 254-5°; 6-bromo-3,3-diphenylindole, 94.5-7.8%, m. 284°; 1-ethyl-3,3-diphenylindole, 95.8%, m. 160-60°; 3,3-diphenyl-6,7-benzoxindole, 94.4-6.7%, m. 254°; and 1-methyl-3-oxo-3,4-diphenyltetrahydroisoquinoline, 84.5%, m. 272°. G. M. Kerschpoff

3
2
3 may

10-10-10, 22

AUTHORS: Petyurin, P. A. , Bernerskiy, I. S.

FILE: Reactions of Magnesiums. II. Synthesis and Properties of the Arylamides of β -Oxyfluorene-9-Carboxylic Acid. (Kislov, P. A. ; Petyurin, P. A. ; Bernerskiy, I. S. ; Sviridov, V. I. ; Sviridov, V. I. ; 9-oksiflyuoren - - - - - kisloty)

PERIODICAL: Zhurnal Obshchey Khimii, 1967, V 1. 27, Nr 11, p. 2111-1116 [USSR]

ABSTRACT: It is known that the interaction of aromatic amines with acids or compound esters belongs to the fundamental methods of the production of the arylamides of carboxylic acids, but they do not always yield positive results. Thus Liebig on heating β -naphthoic acid with aromatic amines instead of the expected arylamides of this acid only obtained a number of high-molecular compounds of unknown structure. The reaction between aniline and the amide ester of β , β -diphenyl- β -oxypropionic acid also took a new course. In these cases the synthesis of the arylamides can be realized with the aid of magnesiums. The authors had to perform the synthesis of arylamides of β -oxyfluorene-9-carboxylic acid. As far as this acid like the above-mentioned ones possesses a hydroxyl group, the synthesis of their arylamides is not possible by the use of dimagnesiums (see the scheme with three structure-for-

Card 1/2

Reactions of Magnesylamines. II. Synthesis and Properties of the Arylamides of 9-Oxyfluorene-9-Carboxylic Acid

mulae). The experiments showed that the arylamines are of a very weakly basic character so that they do not even give colored solutions in concentrated sulfuric acid. Thus a convenient method with respect to preparation was worked out for the production of arylamides of 9-oxyfluorene-9-carboxylic acid, and a number of hitherto unpublished arylamides was obtained. There are 11 references, 3 of which are Slavic.

ASSOCIATION: Perm' Pharmaceutical Institute
(Permskiy farmatsevticheskiy institut)

SUBMITTED: November 9, 1959

AVAILABLE: Library of Congress

1. Arylamides-Synthesis 2. Magnesylamines-Chemical reactions

Card 2/2

AUTHORS: Tetyayeva, L. A., ~~Petyanin, P. A.~~

TITLE: Reactions of Magnesium Amines (Reaktsii magnesi Aminov
IV. Aramidation of Aromatic Aldehydes by Means of N,N-
Bis-(Haloid-Magnesium)-Arylamines (IV Aramidirovaniye
aromaticheskikh al'degidov s pomoshch'yu N,N-bis
(galoidmagniy)-arilaminov)

PERIODICAL: Zhurnal Obshchey Khimii, 1958, Vol. 28, Nr. 3,
pp. 739-742 (USSR)

ABSTRACT: Based on the work (Ref. 1) on the aramidation of benzal-
dehyde by means of dimagnesium amines (see foot-note on
page 739!) the authors tried to extend this reaction
also to other aromatic aldehydes. At the same time it
was necessary to find such conditions where the yields
of reaction products could be increased, which in the
above mentioned work amounted only to 15-18%. In
the reactions of N,N-di (bromomagnesium) aniline and
N,N-bis (bromomagnesium-p-toluidine) on the one hand
and benzaldehyde on the other hand it was shown that
the nature of the solvent (table 1) exercises great

Card 1/3

Reactions of Magnesiumamines IV Aramidation 79-28
of Aromatic Aldehydes by Means of N,N-Bis-(Haloid-Magnesium)
-Arylamines

influence on the yield of arylamides. From table 1 can be seen that the yield of arylamides increases with the rise of the boiling temperature of the solvent. The highest yields of arylamides of benzoic acid were obtained when carrying out the experiments in pyridine and trioxane. It is possible that in the latter case the basic properties of these two solvents exercise a favorable influence on the yields of benzarylamides. The heating of the reaction mass also shows effects on the yield of arylamides. The best results were obtained within 15 minutes duration, while longer heating the reaction products resinify. Furthermore it was found by the experiments that the aramidation reaction of the aldehydes with magnesiumamines can successfully be extended to various aromatic aldehydes (table 2). As can be seen, the yield of arylamides is 50-90% and more, which puts this reaction on the same footing with the usual methods of preparative organic chemistry. The arylamides (I-IX) have not yet been described in publications. There are 2 tables and 5 references, 1 of which is Soviet.

ASSOCIATION: Permskiy farmatsevticheskiy institut (Pharmaceutical
Institute, Perm)

Card 2/3

7-11-1986

AUTHORS: Konshin, M. Ye., Betyunina, I. A.

TITLE: Investigation in the Field of the Chemistry of the Heterocycles (Issledovaniye v oblasti khimii heterotsiklov) XXXII. Di- and Polyhalogen Derivatives of the 9-Phenylacridine, Having the Position of the Haloids in Different Benzene Nuclei (XXXII. Di- i poligaloidoproizvodnyye 9-fenilakridina s polozheniyem galoidov v razlichnykh benzol'nykh yadrakh)

PERIODICAL: Zhurnal Obshchey Khimii, 1958, Vol. 28, Nr 4, pp. 974-978 (USSR)

ABSTRACT: In the previous papers (Zhurnal Obshchey Khimii, 1957, Vol. 27, pp. 475, 1958) the authors have described the methods of obtaining mono- and dihalogen derivatives of the 9-phenylacridine on the basis of the 2-aminotriphenylcarbinol and its N-acyl derivatives. As 9-phenylacridine represents a polynuclear heterocycle, the authors applied this method for the synthesis of the di- and polyhalogen derivatives of the 9-phenylacridine, having the position of the haloids in different benzene nuclei. The very fact that the latter never before have been described in publications

Card 1/3

73-28-1 28-1

Investigation in the Field of the Chemistry of the Heterocycles. IV. Di- and Polyhalogen Derivatives of the 2-Phenylacridine, Having the Effect of the Haloids in Different Benzene Nuclei

made this necessary. The initial di- and polyhalogen derivatives of the 2-aminotriphenylcarbinol were obtained from the interaction between the bromo-*p*-chloro-phenylmagnesium and the corresponding halogen substituents of the methyl ester of the anthranilic acid with satisfactory results. Structure and properties of the compounds obtained are given in the Table (I - V). They are crystalline substances with weak basic properties. They do not dissolve in diluted mineral acids and in concentrated hydrochloric acid. It must be emphasized that the basic properties of the halogen derivatives of the 2-aminotriphenylcarbinol are to a high degree depending on the position of the haloids. Introducing halogen into aniline residue of the 2-aminotriphenylcarbinol has the greatest effect, and less effect when introduced into the other benzene nuclei. From the table it becomes evident that the melting points of halogen derivatives of the 2-phenylacridine steadily increase with the number of halogen atoms. There is 1 table.

Card 2,3

Investigation in the Field of the Chemistry of the Heterocycles. XXXII. Di-
and Polyhalogen Derivatives of the 9-Phenylacridine, Having the Position
of the Halogens in Different Benzene Nuclei

79-23-4-23/60

ASSOCIATION: Permskiy farmatsevticheskiy institut
(Perm' Institute for Pharmacy)

SUBMITTED: April 2, 1960

Card 3/3

AUTHORS: Petyukov, I. A.; Petyukova, L. A.

TITLE: Reactions of Magnesylamines (Reaktsii magnezilaminov).
V. On the Reaction Mechanism of Arylamidation of Aromatic Aldehydes with the Aid of N,N-di-(Magnesium Halide)-Arylamines (V O mekhanizme reaktsii aramidirovaniya aromatischeskikh al'degidov s pomoshch'yu N,N-bis-(gali)magnezilaminov)

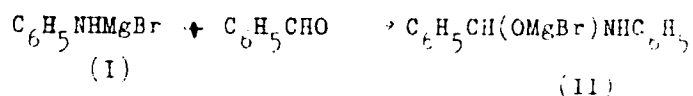
PERIODICAL: Zhurnal Obshchey Khimii, 1958, Vol. 28, Nr 4, pp. 1105-1108 (USSR)

ABSTRACT: In order to clear the reaction mechanism of the arylamidation of aromatic aldehydes with the aid of N,N-di-(magnesium halide)-arylamines above all the connection between magnesylamines and aldehydes had to be investigated. First experiments were carried out with monomagnesylamines. Here was found that phenyl bromomagnesylamine (I) reacts vehemently with benzaldehyde; after the decomposition of the reaction mass, however, only aniline, benzaldehyde, and a small quantity of benzanilide is found.

Card 1/5

Reactions of Magnesyamines V. On the Reaction
Mechanism of Arylamidation of Aromatic Aldehydes With
the Aid of N,N-di-(Magnesium Halide) Arylamines

79-28-4-56/60



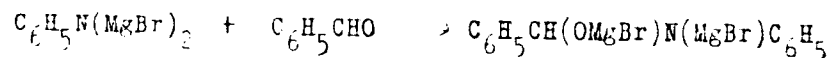
The structure of a magnesium bromide alcoholate of an oxyamine can be ascribed to the magnesium-organic complex of the formula II which is formed according to this reaction. The halide magnesium alcoholate nature of this complex results from its hydrolysis to aniline and benzaldehyde and also from its incapability of reacting with ethyl benzoate. By these experiments it was furthermore proved that monomagnesyamines cannot catalyse at all the arylamidation of aldehydes, and the same is the case with the organo-magnesium complex of the formula II. This fact was confirmed by experiments also in the reaction with N-ethyl aniline. N-ethyl aniline yields only the monosubstituted derivative with ethyl magnesium bromide which does not form at all N-ethyl amide of the benzoic acid in the reaction with benzaldehyde. In further experiments the rôle of the dimagnesyamines in the arylamidation of aldehydes was explained. In the case of action of N,N-di-(magnesium bromide) aniline

Card 2/5

Reactions of Magnesiylamines V On the Reaction
 Mechanism of Arylamidation of Aromatic Aldehydes
 With the Aid of N-Halides (Magnesium Halide) Arylamines

7-28-1-11-11

(III) or benzaldehyde in equivalent quantities the yield of benzanilide is increased to 3%. The reaction passes according to following scheme:



(III)

(IV)

The complex (IV) formed here has halide magnesium alcoholate- as well as halide magnesiylamine nature. In the hydrolysis it decomposes in aniline and benzanilide. It reacts as halide magnesiylamine derivative with ethyl benzoate. The fact that in the reaction with dimagnesiylamines the yield of benzanilid amounts to the threefold compared to the reaction with mono- magnesiylamines points out clearly that the arylamidation of aldehydes passes at the cost of the dimagnesiylamines.

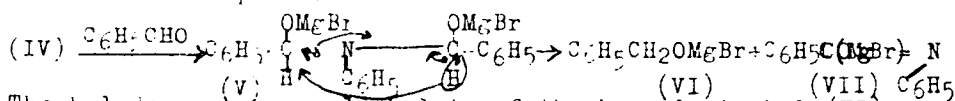
Already earlier (Ref 1) it was shown that the arylamidation of aldehydes is most successful if 1 mole of dimagnesiylamine corresponds to two moles benzaldehyde. On the strength of its

Card 3/5

Reactions of Magnesiylamines V. On the Reaction Mechanism of Arylamination of Aromatic Aldehydes With the Aid of N,N-dialkylmagnesium Halide)-Arylamines

79-28-4-56/6c

halide magnesylamine nature the complex IV reacts with a second aldehyde molecule under formation of the halide magnesium alcoholate of a dioxyamine (V) in which then a redox reaction passes:



The halide magnesium alcoholate of the benzyl alcohol (VI) formed here and the halide magnesium derivative of the lactim form of the benzanilide (VII) decompose with water in benzanilide and benzyl alcohol. In a special experiment the resulting benzyl alcohol was isolated and identified. Thus the assumption that the reaction investigated is a redox reaction is confirmed experimentally. Probably also here a dissociation of the bond in the complex V takes place homolytically, like in the case of the Cannizaro reaction (Ref. 2). The boiling point and the chemical nature of the solvent in which the reaction is carried out exercise a great influence on the redox transformation of the complex V. The experiments given here are described in detail in an experimental part. There are 5 references, 4 of which are Soviet.

Card 4/5

Reactions of Magnesylamines. V. On the Reaction Mechanism of Arylamidation of Aromatic Aldehydes With the Aid of N,N-di-(Magnesium Halide)-Arylamines

ASSOCIATION: Permskiy farmatsevticheskiy institut (Perm^l Pharmaceutical Institute)

SUBMITTED: January 27, 1957

Card 5/5

AUTHORS: Petukhin P. A., Fetyshev V. I. 71-28-6-24/61

TITLE: Reactions of Magnesiylamines (Reaktsii magnezilaminov)
VI. On Spatial Hindrances in the Aramidation Reaction of
Aromatic Aldehydes by Means of N,N-Bis-(Magnesiumhalide)-
Arylamines (VI. O prost'ranstvennykh prepyatstviyakh v
reaktsii aramidirovaniya aromaticheskikh al'degidov s po-
moshch'yu N,N-bis (galoimidmagznyi)-arilaminov)

PERIODICAL: Zhurnal Obshchey khimii. 1958, Vol. 28, Nr 6, pp. 1448-1551
(USSR)

ABSTRACT: For explaining the influence of the spatial hindrances in
the aramidation reaction of aromatic aldehydes by means of
dimagnesiylamines the authors carried out a great number of
experiments with aldehydes and amines, which have different
substituents in the ortho-position. The experiments showed
that these hindrances are especially strong on the part of
the aldehydes: For instance, at the introduction of a sub-
stituent to the ortho position the aldehyde group is blocked
to such an extent that an aramidation of such aldehydes is
practically rendered impossible. This was shown, for instance,
in the conversion of o-tolyl- and o-methoxybenzoic aldehyde

Card 1/3

Reactions of Magnesyamines. VI. On Spatial Hindrances in the Aramidation
Reaction of Aromatic Aldehydes by Means of N,N-Bis-(Magnesiumhalide)-Aryl-
amines

50479-28-0-24/63

with N,N-bis-(bromomagnesium)-aniline. Proceeding from the already assumed reaction scheme (Ref 1) the disproportioning can take place only in the complex (I) as it represents the result of the conversion of two molecules aldehyde with one molecule of dimagnesyamine. The steric hindrances from behalf of the N,N-bis-(bromomagnesium)-arylamines were found in the conversions of the dimagnesyamines (with a substituent in the ortho position) with aldehydes which had no substituent in this position. The results of the experiments are mentioned in the table. From them may be seen that from behalf of dimagnesyamines containing a substituent in the ortho position (Br, Cl, CH₃, OCH₃) no considerable hindrance of the reaction takes place. This fact tends to show that in the presence of a substituent in the ortho position to the (BrMg)₂N-group the formation of the complex (III) is not made difficult and that the disproportioning in this complex takes a normal course. It is, however, different in experiments with dimagnesyamines in which both ortho positions to the (BrMg)₂N-group are occupied by substituents. Thus a number of arylamides not described in

Card 2/3

Reactions of Magnesyamines. VI. On Spatial Hindrances in the Aramidation
Reaction of Aromatic Aldehydes by Means of N,N-Bis-(Magnesiumhalide)-Aryl-
amines

00479-28-6-24/63

papers were synthesized and characterized. There are 1 table
and 1 reference, 1 of which is Soviet.

ASSOCIATION: Permskiy farmatsevticheskiy institut
(Perm' Pharmaceutical Institute)

SUBMITTED: March 5, 1957

1. Aldehydes--Chemical reactions

Card 3/3

PETYUNIN, P.A.; KOZHEVNIKOV, Yu.V.

Reactions of magnesylamines. Part 7: Synthesis and
properties of aryl (alkyl) amides of anthranilic acid. Zhur.
ob.khim. 30 no.6:2028-2030 Je '60. (MIRA 13:6)

1. Permskiy farmatsevticheskiy institut.
(Anthranilic acid)

PETYUNIN, F.A.; KOZHEVNIKOV, Yu.V.

Chemistry of heterocyclic compounds. Part 35: Synthesis of
quinazolone compounds based on aryl amides of anthranilic
acid. Zhur.ob.khim. 30 no.7:2352-2357 J1 '60.
(MIRA 13:7)

1. Permskiy farmatsevticheskiy institut.
(Quinazolinone) (Anthranilic acid)

PERYUNIN, P.A.; KOZHEVNIKOV, Yu.V. . . .

Reactions of magnesyl amines. Part 8: Synthesis and properties of aryl amides of N-aryl (Alkyl)- and N-acyl-substituted anthranilic acids. Zhur.ob.khim. 30 no.8:2453-2457 Ag '60. (MIRA 13:F)

1. Permskiy farmatsevticheskiy institut.
(Anthranilic acid)

ПОСЫЛКА, 1981, 240710013, 13.

Amides and hydrazides of oxalic acid. Part 7: Substituted amides
of N-(4-ethylpiperidyl)oxamic acid. Izv. vys. ucheb. zav.; khim i khim.
tekh. 1981, 5: 181-184 (MIRA 18:1)

1. Kafedra organicheskoy khimii Khark'kovskogo farmatsevticheskogo
instituta.

PETYUNIN, P.A.; RAZUVAYEVA, V.P.

Amides and hydrazides of oxalic acid. Part 8: Synthesis in the hydrozide series of N-substituted oxamic acids. *Izv. vys. ucheb. zav.; khim. i khim. tekhn.* 7 no. 6: 941-944 '64.

(MIRA 18:5)

1. Khar'kovskiy farmatsevticheskiy institut, kafedra organicheskoy khimii.

KONSHIN, M.Ye.; BELYUKH, S.A.

Chemistry of heterocycles. Part 10: Synthesis of 2,4-diamino-5-substituted acridans. Zhur. obshch. khim. 34, no. 11: 2229-31, 1964. (NIIK 1111)

1. Permskiy farmatsevticheskiy institut i Khar'kovskiy farmatsevticheskiy institut.

PETYUNIN, P.A.; KOTHEVNIKOV, Yu.V.

Heterocycles. Part 36: Use of polyphosphoric acid for the
synthesis of quinazoline compounds. Zhur. ob. khim. 34
no. 3:854-856 Mr '62. (MIRA 17:6)

1. Permskiy farmatsevticheskiy institut i Khar'kovskiy farmatsevti-
cheskiy institut.

PETYUNIN, P.A.; KOZHEVNIKOV, Yu.V.; TETYUYEVA, L.A.

Reaction of magnesyl amines. Part 16: Magnesyl amine method
of preparation of amino acid arylides. Zhur.ob.khim. 33 no.4:
1261-1263 Ap '63. (MI:A 16:5)

1. Permskiy farmatsevticheskiy institut.
(Magnesium organic compounds) (Amino acids)

PETYUNIN, P.A.; KHODYREVA, M.S.

Chemical structure and biological activity in the series of
amides of some carboxylic acids. Zhur.ob.khim. 33 no.3:755-761
Mr '63. (MIRA 16:3)

1. Permskiy farmatsevticheskiy institut.
(Amides—Therapeutic use)

PETYUNIN, P.A.; STOROZHEVA, A.V.

Amides and hydrazides of oxalic acid. Part 2: Acyl derivatives
of aryl hydrazides of N-substituted oxamic acids. Zhur.ob.
khim. 33 no.2:400-405 F '62. (MIRA 16:2)

1. Permskiy farmatsevticheskiy institut.
(Oxamic acid) (Hydrazides)

PETYUNIN, P.A.; KUNSHIN, M.Ye.

Use of urotropine in the reaction of bromomethylation of
aromatic hydrocarbons. Izv.vys.ucheb.zav.;khim.i khim.tekh.
5 no.3:505-506 '62. (MIRA 15:7)

1. Permskiy farmatsevticheskiy institut, kafedra organicheskoy
i biologicheskoy khimii.

(Hexamethylenetetramine)

(Bromomethylation)

(Hydrocarbons)

PETYUNIN, P.A.; STOROZHEVA, A.V.

Phenylhydrazides of N-substituted oxamic acids. *Zhur.ob.khim.* 32
no.5:1395-1398 My '62. (MIRA 15:5)

1. Permskiy farmatsevticheskiy institut.
(Oxamic acid)

PETYUNIN, P.A.; TETYUEVA, L.A.

Identification of haloid derivatives. Trudy Perm. farm. inst. no. 1:
63-68 '59. (MIRA 15:1)

1. Permskiy farmatsevticheskiy institut, kafedra organicheskoy khimii.
(HALIDES--ANALYSIS)

PETYUNIN, P.A.; KHODYREVA, M.S.; KONSHIN, M.Ye.

Chemistry of heterocycles. Part 34: Synthesis and properties of
aralkylamides of di(2-thienyl)-glycolic acid. Zhur.ob.khim. 31
no.6:1847-1849 Je '61. (MIRA 14:6)

1. Permskiy farmatsevticheskiy institut.
(Thiophenoglycolic acid) (Amides)

5 3610

27519
S/080/60/033/006/039/041 XX
D228/D302

AUTHORS: Petyunin, P.A., Shklyayev, V.S., and Konshin, M.Ye.

TITLE: Synthesis of the N-alkylanilines

PERIODICAL: Zhurnal prikladnoy khimii, v. 33, no. 6, 1960,
1428 - 1430

TEXT: According to N.N. Vorozhtsov (Ref. 1: Osnovy sinteza promezhutochnykh produktov i krasiteley (Bases of the Synthesis of Intermediate Products and Dyes), Goskhimizdat, 438, 324, 360, 1955), N-alkylarylamines are best prepared from the alkylation of aromatic amines with alcohols and halogenoalkyls or from the alkylation of certain benzene derivatives. Therefore, since anthranilic acid is readily decarboxylized to form aniline, the authors decided to utilize it as the basis of a method for synthesizing N-alkylanilines. In this respect they note that A.F. Bekhli (Ref. 4. Zh. org. khimii, 27, 701, 1957) also used the decarboxylation of anthranilic acid derivatives to obtain the β -proprionitriles. The experimental procedure comprises the following stages: Neutraliza-
Card 1/3

Synthesis of the N-alkylanilines

27519
S/080/60/033/006/039/04. XX
D228/D302

tion of a solution of 0.1 mole anthranilic acid in 40-50 ml. H₂O with conc. KOH; addition of 0.1 mole halogenoalkyl to the filtrate; boiling of the solution for 10 - 12 hr; methylation with methyl iodide or the methyl ether of toluenesulfonic acid; and crystallization of the N-alkylanthranilic acids from suitable solvents. On heating above their melting points (81 - 153°) these acids are converted into the corresponding mono-alkylanilines through the loss of CO₂. Advantageous features of the method include the ease of the decarboxylation reaction, the high yield (87 - 98 %) and the formation of individual amines which obviates the necessity of having to separate them by laborious techniques. In view of the labile nature of these compounds it is advisable to prepare them as required from the more stable alkylanthranilic acids. The authors conclude by noting that the alternative use of the derivatives of n-aminobenzoic acid is less satisfactory, as in this case the yields are lower and intermediate products have higher melting points. There are 2 tables and 9 references: 5 Soviet-bloc and 4 non-Soviet-bloc. The references to the English-language publications read as follows: H. Gilman et al, J. Amer. Chem. Soc. 62, Card 2/3

LX

PETYUNIN, P.A.

Reactions of magnesyloximes. Part 9: Synthesis and conversion of
mandelic arylides. Zhur. ob. khim. 30 no.12:4042-4044 D '60.
(MIRA 13:12)

1. Permskiy farmatsevticheskiy institut.
(Mandelic acid) (Grignard reagents)

PETYUNIN, P.A.; SHKLYAYEV, V.S.; KONSHIN, M.Ye.

Synthesis of N-alkylanilines. Zhur. prikl. khim. 33 no.6:1428-1430
Je '60. (MIRA 13:6)

1. Permskiy farmatsevticheskiy institut.
(Aniline)

ANDRIASYAN, G.K.; PETYUSHKIN, A.F.; TRUSHKIN, A.M.; VOLODINA, K.D.; TIKHONOV, A.S.

Treating patients with skin diseases with highly concentrated
Matsesta baths under polyclinical conditions. Vest.derm.i ven.
35 no.1:49-52 Ja '61. (MIRA 14:3)

1. Iz kurortnoy polikliniki No.2 (glavnyy vrach L.I. Kuznetsova)
Kurortnogo upravleniya Sochi - Matsesta Ministerstva zdravookhra-
neniya RSFSR.
(SKIN--DISEASES) (MATSESTA--MINERAL WATERS, SULFUROUS)

PETZ, Aladar, dr.

Pathology and operative treatment of the annular pancreas. *Magy. sebeszet* 7 no.1:69-73 Feb 54.

1. A Gyori Megyei Korhaz sebeszeti osztalyanak kozlemenye.

Foovos: Petz Aladar, dr.

(PANCREAS, abnorm.

annular, surg.)

(ABNORMALITIES

annular pancreas, surg.)

PETZ, Aladar, dr.

A new apparatus for suturing of the duodnum. *Magy.sebeszet* 8
no.145-208:190-191 June 55.

1. A gyori kozkorhaz sebeszeti osztalyanak kozlomenye. *Foorvos:*
Petz Aladar dr.

(SURGERY, appar. and instruments,
suturing appar. in duodenal surg.)

(DUODENUM, surg.,
suturing appar.)

YUGOSLAVIA/Pharmacology and Toxicology. Analipina

V-4

Abs Jour : Rev Zhur - Bi L. N. 19, 1958, No 41 -

Author : Bujas Z., Pitz E.

Inst : -

Title : THE EFFECT OF PHENAZINE UPON THE ABILITY TO ENDURE IN STRESSFUL
Work

Orig Pub : Arhiv. hig. rad. 1958, 2, No 3, 205-206

Abstract : Eighteen men supporting a load of 8.5 kg. were receiving 15 mg. of phenazina (P). In the control experiments, the same persons were receiving a quinine suspension or chalk instead of P. Under the influence of P, the endurance of the tested men increased by 12.4%. P had no effect on metabolism. The authors are of the opinion that physiological stimulants mobilize the forces of the organism, while the preparations of the P type increase the working power of man at the considerable expense of the reserves of the organism, prolonging by the same the process of exhaustion and the possibility of the restoration of the working capa-

Card : 1/1 city.--T.Ya. Cherikovskaya

~~PETZ, B.~~

Statistical analysis of accidents. Arh. hig. rada 8 no.1:25-38 1957.

1. Institut za medicinska istrazivanja Jugoslavenske akademije znanosti i umjetnosti Zagreb (Priljeno 2 Iv. 1957)

(ACCIDENTS, INDUSTRIAL, statist.

observed incidence in relation to Poisson's & negative binomial distribution (Ser))

1949, 15.

Influence of phenamine on the economy of static work. Z. Bujas and B. Petic (Inst. Ind. Hyg., Zagreb). *Arhiv Hig. Rada 6*, 205-8 (1955) (English summary).—Eighteen adult males drank 180 cc. H₂O in which 15 mg. phenamine (I) was suspended; others drank plain H₂O or H₂O with suspended CaCO₃ as a placebo. The O consumption and the static endurance, i.e., ability to maintain a load of 8.5 kg. (static), were measured for all. The men receiving I showed a 12.4% increase of the static endurance over the other men; the O consumption per se was the same in each group. In the group receiving I the O debt became higher; this means that under the influence of I the body increases its working capacity at the expense of the reserves but does not work more economically, i.e. there is a forced mobilization of the body to increase the work output, but the reserves which stop fatigue are used up. Werner Jacobson.

0.10

①

PETZ, B.

BUJAS, A.; PETZ, B.; KRKOVIC, A. "Electric Activity of the Brain During Prolonged Mental Work." p. 125. (Arhiv Za Higijenu Rada. Vol. 4, no. 2, 1953. Znpred.)

SO: Monthly List of East European Accessions, Vol. 3, No. 6, Library of Congress, Feb. 1954, Uncl.

B. PNTZ

" Research on Material* for Ear Plugs. p. 48. (AR IN LA NIGERIAN JOURNAL
Vol. 4, No. 1, Zaria, Nigeria)

SO: Monthly List of European Accessions, L.C., Vol. 2, No. 11, Nov. 1953, p. 1.

PETZ, B.

The economy of work under the influence of psychological stimulators. Arh.hig.rada 5 no.3-4:321-329 1954.

1. Odjel za psihologiju i fiziologiju rada Instituta za medicinska istraživanja Jugoslavenske Akademije, Zagreb.

(WORK,

output in relation to motivation(Ser))

(PSYCHOLOGY,

incentives in determ. of work output (Ser))

PETZ, B.

Effect of the number and length of rest pauses on work output
in static effort. Arb. Hig. rada 15 no.2:183-188 '64.

1. Institute of Psychology, Faculty of letters, University of
Zagreb, Zagreb.

BUJAS, Z.; PETZ, B.; KRKOVIC, A.; SOROKIN, B.

Factor analysis of intellectual work during and without fatigue.
Arh hig rada 11 no.3:203-220 '60.

1. Institut za medicinska istrazivanja i medicinu rada, Zagreb.

(FATIGUE) (INTELLIGENCE TESTS)

PETZ, B.; VIDACEK, S.

Analysis of absenteeism in a factory in Zagreb. Arh hig rada 11 no.4:
289-297 '60.

1. Institut za medicinska istrazivanja i medicinu rada, Zagreb.

(INDUSTRIAL MEDICINE)

PETZ, Boris, dr., docent. (Zagreb, Cesarceva 2)

Basic duties and problems of an industrial psychologist in our industry. Tehnika Jug 17 no.1:185-189 Ja '62.

1. Filozofski fakultet Sveucilista u Zagrebu.

(Psychology, Industrial)

PETZ, Erno, tanarseged

Questions relating to the development of constructing power plants at the Madrid world conference of power. Energia es atom 14 no.4/5:174-177 My '61.

1. Budapesti Muszaki Egyetem.

PETZ, Roman; ROTH, Zdenek; STERBA, Otakar

Statistical evaluation of the results of biological experiments using a punched-card system and a sorting machine "analyzer". *Biologia* 18 no.8:635-640 '63.

1. Ustav hematologie a krevni transfuze v Praze, Dny prace
a odbor z povolani v Praze.

... ..

... ..
... ..
... ..
... ..

... ..
... ..

... ..

... ..
... ..

to facilitate ...

to establish ...

burns and ...

Western and ...

3 + 3 + 3

From Annotated Bibliography
on the Use of Organolithium
Compounds in Organic Synthesis.
January 1948.

Meis, Fr., Fetscher, E., Wagner, K., and Segitz, A.
Soluble behavior of alkali-alkyls in metal alkyls as solvents.
Zeitschrift für anorganische und Chemie
141, 161-227 (1924).

Ethyllithium was prepared by the action of lithium on diethylmercury.
Methylithium, phenyllithium and benzylithium were prepared from ethyllithium
and the corresponding mercury compounds by metal-metal interconversion reactions.

9.3120 (1003, 1137, 1140)

S/109/60/005/008/013/024
E140/E355

AUTHOR Petzel, B

TITLE Investigation of the Secondary Emission of KCl
and KBr

PERIODICAL Radiotekhnika i elektronika 1960 Vol 5
No 8 pp 1284 - 1290

TEXT The variation of secondary emission factor as a function of temperature and primary electron energy in alkali haloid compounds is studied. The energy distribution of secondary electrons was measured in a spherical condenser. Measurements were carried out using the single pulse method. The monocrystal targets were prepared by facturing large monocrystals drawn from the melt. Measurements were carried out in sealed-off devices at primary beam currents 10^{-9} to 10^{-8} A. The signal/noise ratio was better than 30:1. Two methods of removing charge accumulated on the target during each measurement were tested: either the target was heated to 120 - 150 °C, after which the working potentials were applied and the target permitted to cool, or the target

Card 1/3

S/109/60/005/00b/0.3/0.4
E140/E355

Investigation of the Secondary Emission of KCl and KH:
and collector were grounded and the target bombarded by
electrons for several seconds by a diffuse beam. The results
obtained by the first method were well reproducible whereas
with the second there was a strong scatter. Therefore for the
definitive results only the method of heating was employed.
Certain of the results indicated that the assumption that
interaction occurs only with phonons is not completely justified.
Crystal defects whose concentration depends on temperature must
be taken into account in the interpretation of the results.
The secondary-emission factor as a function of primary electron
energy agrees fairly well with the curve calculated by La
and Pecker (no reference) on the basis of a semi-empirical
theory. Acknowledgments are made to Professor Doctor
O. Hachenberg for his interest in the work and participation
in the discussion.

Card 2/3

109/26/00 2006/01/02
109/26/00

Investigation of the secondary emission of KCl and KBr
There are 6 figures

ASSOCIATION G. Hertz Institut German Academy of Sciences
Berlin

SUBMITTED December 21 1959

Card 3/3

PIETZELT, B.

Two new Czech polarographs. B. Pietzelt and L. Serák (Lab. physico-chem. and Polarographic Inst. Czech. Acad. Sci. Prague, Czechoslovakia). *Coll. Czech. Chem. Commun.*, 1958, 21 (8), 783-785. Two new polarographs of conventional type, soon to be commercially available, are described. The first is a small portable instrument, the curves being drawn manually on translucent paper by following the galvanometer spot. The second is a photographic instrument designed to meet all the needs of polarographic analysis. It combines accuracy and reliability with simplicity of control. P. S. Strass

2

M

NEMEC, Ladislav; PETZELT, Bedrich

Universal gas chromatograph Chrom II. Chem listy 57
no.4:364-371 Ap '63.

1. Polarograficky ustav, Ceskoslovenska akademie ved, Praha
(for Nemeč). 2. Laboratorni pristroje, n.p., Praha (for
Fetzelt).

PETZEROWA, Teresa (Warszawa, Nowogrodzka 40 m.27)

Case of Debre-Mollaret disease in a 10-year-old girl during the course of chronic appendicitis. *Pediat. polska* 29 no.3:290-291 Mr '54.

1. Z Kliniki Terapii Chorob Dzieci Odd. Pediatr. Akademii Medycznej w Warszawie. Kierownik: prof. dr med. T.Chrapowicki.
(APPENDICITIS, in infant and child,
*compl., cat-scratch dis.)
(CAT-SCRATCH DISEASE, in infant and child,
*compl., appendicitis)

L 38704-66 EWP(1) LJP(c) BB/GG/GD

ACC NR: AT6017133

SOURCE CODE: UR/0000/65/000/000/0159/0166

AUTHOR: Petzhikovski, T.

ORG: Institute of Mathematical Machines, Warsaw (Institut matematicheskikh mashin)

TITLE: Electronic digital computers of the ZAM family

SOURCE: Sovet ekonomicheskoy vzaimopomoshchi. Postoyannaya komissiya po koordinatsii nauchnykh i tekhnicheskikh issledovaniy. Sredstva i metody mekhanizatsii podgotovki i poiska nauchno-tekhnicheskoy informatsii, inzhenernogo i upravlencheskogo truda (Means and methods for mechanizing the preparation and research of scientific and technical information and of engineering and control work); lektsii, pročitannyye na vystavke "Inforga-65" v maye-iyune 1965 g. Moscow, 1965, 159-166

TOPIC TAGS: digital computer, data processing system, ferrite core memory, silicon transistor / ZAM 51 digital computer, ZAM 41 digital computer, ZAM 31 digital computer, ZAM 21 digital computer, ZAM 11 digital computer

ABSTRACT: A family of five Polish semiconductor, binary, multiprogramming digital computers is described. The multiprogramming facility is obtained by a special program (DYRYGENT), stored permanently in the ferrite memory. There is only one arithmetic unit, and DYRYGENT controls the simultaneous processing of up to five different programs.

Card 1/3

L 38704-66
ACC NR: AT6017133

All ZAM computers work with a basic word length of 24 bits, easily doubled to 48. The maximum capacity of the ferrite memory is 32K for standard operation, and up to 262K for special operation. The fixed point addition time for computers, ZAM 21 to 51, is 20 μ sec, fixed point multiplication 130 μ sec, floating point addition 80 to 450 μ sec, floating point multiplication 240 to 850 μ sec. ZAM 11 is 5 to 10 times slower. The machines can perform about 40,000 operations per second. Unified programming exists for all five computers; this applies both to autocode programs, e. g., ALGOL, and programs written in machine language. The ZAM computers may also be used in hybrid systems. The basic properties of the existing five types are: 1. ZAM 51--(a) Automatic transfer of groups of words between fast memory and I/O units, while the arithmetic unit is working; (b) Internally installed, fast, floating point commands; (c) Used for scientific as well as data processing computations. 2. ZAM 41--(a) Automatic transfer of groups of words between fast memory and I/O units, while the arithmetic unit is working; (b) Floating point operations accomplished automatically by economic arithmetic unit; (c) Used mainly for data processing. 3. ZAM 31--(a) Programmed transfer of data between fast memory and I/O units; (b) Automatic transfer of groups of words between fast memory and I/O units, while the arithmetic unit is working; (c) Used mainly for scientific and technical computations. 4. ZAM 21--(a) Programmed transfer of data between fast memory and I/O units; (b) Floating point operations accomplished automatically by programmed commands, which are slower, but permit a more economic arithmetic unit; (c) Used in scientific computations and process control. 5.

Card 2/3

L 38704-66

ACC NR: AT6017133

ZAM 11—Most economic construction, with the majority of operations performed by programmed commands. Used for special purposes, like process control. Each computer can be connected to a practically unlimited number of I/O devices.

SUB CODE: 09/ SUBM DATE: none

[14]

Card 3/3

PROCESSES AND PROPERTIES INDEX

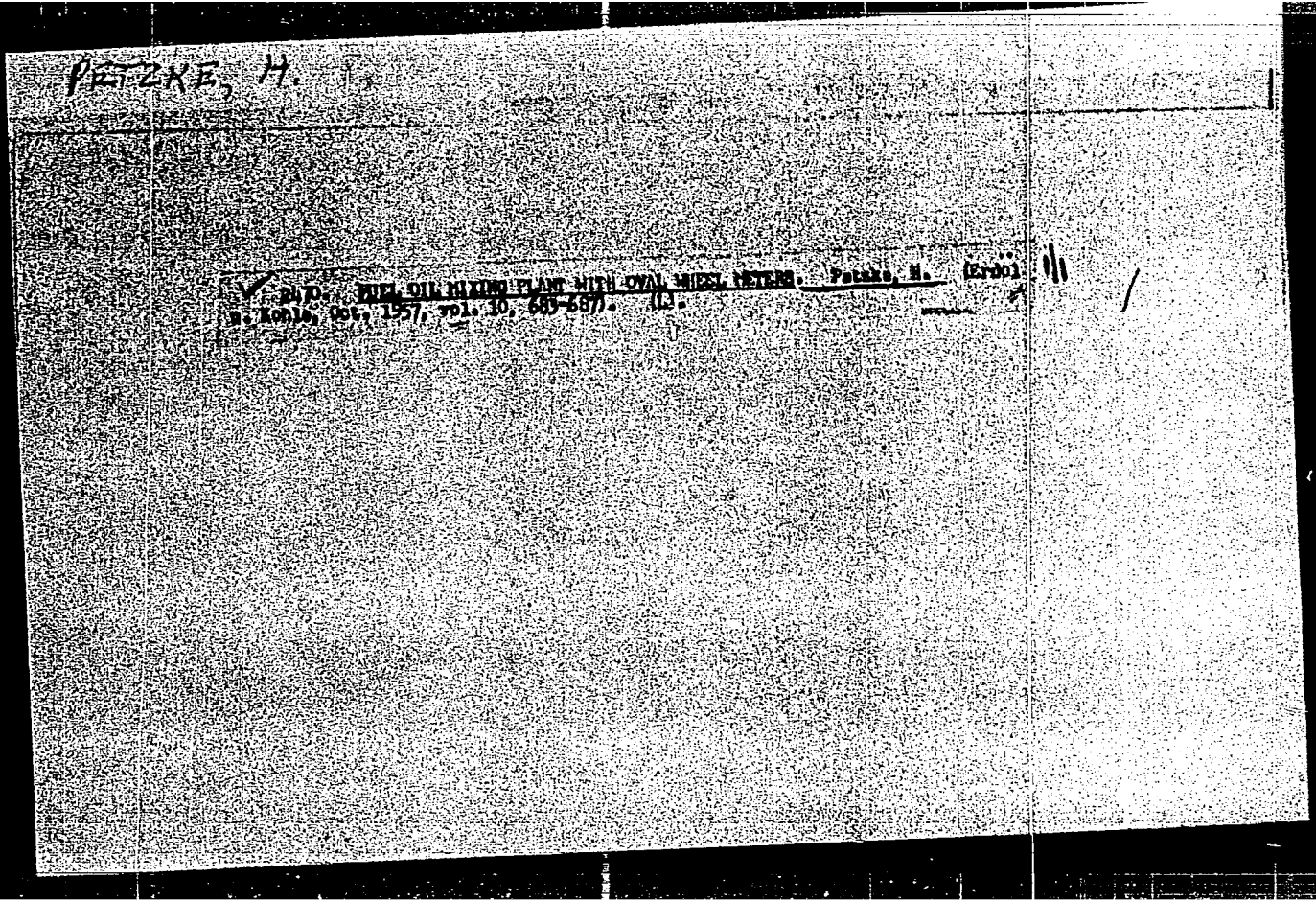
17

CA

Rapid method for determinations of quinine in pills, tablets, ampoules and quinine compounds. A. D. Petzatis. *Praktika (Akad. Athenon)* 9, 172-7 (1934). The method proposed requires only small amts. of sample and extg. solvent, saves time and yields results as good as the official method of the Greek Pharm. **Pills and tablets.**—Est. 25 of either 3 times with petr. ether in a conical flask on a water bath at 30° for 10 min. to remove any paraffin. Free from solvent and put the material in a 250-cc. volumetric flask with 200 cc. H₂O, a few drops of concd. HCl and heat to 60°. Soln. is complete in 1/2 hr. Cool, make up to 250 cc. with H₂O and then add 2.4 cc. H₂O (for the vol. of starch present) and filter. Remove 18 cc. of the clear liquid and place in a Gottlieb-Rose app., add 3 cc. of phenolphthalein indicator and enough NaOH soln. to produce a faint red color, then add 0.3 cc. of 20% NaOH for the sepn. of the quinine and 52 cc. of Et₂O. Shake constantly and carefully for 10 min., let stand 45 min. and measure the Et₂O layer. Remove 25 cc. with a pipet and rinse. Evap. in a tared glass dish, dry 1/2 hr. at 100-102° and weigh. The wt. of the quinine and the vol. of the Et₂O layer give the data necessary for calcg. the content of the original no. of pills or tablets. **Ampoules.**—Mix well the contents of 5 1-cc. ampoules and place 2 cc. in a Gottlieb-Rose app. with 10 cc. H₂O. Add 3 drops of indicator, neutralize with NaOH and then add 0.4 cc. of 20% NaOH. Complete as before. **Quinine salts.**—Introduce 2.5 g. of the salt into a 125-cc. volumetric flask with 100 cc. of H₂O heated to 40-45°. Shake until soln. is complete and place in a water bath at 50° (quinine sulfate is changed to bisulfate, but if the material is quinine valerate the temp. must be 65°). Cool and proceed as before. By this method the variations of quinine found in each pill or tablet with a salt content of 0.2 g. range from 0.0001 to 0.001 g., for each 1-cc. ampoule of 0.25, 0.4 or 0.5 g. salt content it is from 0.0001 to 0.0005 g. Lucien V. Drydenforth

E2

METALLURGICAL LITERATURE CLASSIFICATION



Petzold, A.

Single-coat white enamelling of steel. A. Petzold (Glar-Email-
Keram.-Tech., 1956, 7, 113-116; 164-166). Practical details
are given with special reference to use of Ti alloy steels. It is anti-
cipated that single-coating of ordinary steels will soon be achieved.
I. A. Suvayev

Metals

of

SOVIET ZONE OF GERMANY/Chemical Technology - Chemical
Products and Their Application, Part 1. - Safety
and Sanitation Techniques. H-6

Abs Jour : Ref Zhur - Khimiya, No 14, 1958, 47261

Author : Armin Petzold, Ingeborg Lange

Inst : -

Title : Proposed Revision of Nonpoisonousness Tests of Enameled
Utensils.

Orig Pub : Silikattechnik, 1955, 6, No 4, 153-157

Abstract : No abstract.

Card 1/1

PETZOLD, A.

1468. The viscosity of molten enamels. II. The effect of some milled batches on the fusion viscosity of enamels. — A. PETZOLD (Silikat Tech., 4, 413, 1953). The influence of various mill additions on the viscosity of a vitreous enamel was investigated. It was found that the addition of clay in the mill considerably increases the melting viscosity. W. Machu's statement that clay can lower the melting point of enamels is considered erroneous. Bentonite, which is often added in the U.S.A. in addition to clay, also increases the viscosity during melting although to a less extent than clay; SnO₂ also increases the melting viscosity, but NaSbO₃ decreases it. (8 figs.)

gaw

FRITZOLD, A.

②

J. of Am. Cer. Soc.
I Feb. 1954
Enamels & Refractory
Coatings for metals

Manufacture of firmly adhering ground enamels with mineral
stibnite. A. FRITZOLD AND H. BERTNER, Silbstehtech., 4 [7] 297-98
(1953).—The antimony sulfide found in Oberböhmadorf (Ger-
many) can be successfully used as an adhering agent in place of Ni
or Co oxide. The ground frit had the composition quartz 14,

feldspar 30, soda 7, fluorspar 4, sodium nitrate 2, and borax 43%;
the enamel with 0.25% Sb_2S_3 was smoothly melted after 2.5 min.
at 880° to 900°C. and adhered well. A longer firing time had no
effect and only darkened the enamel. More than 0.50% Sb_2S_3
did not improve adherence. The impact strength (on sheets 0.5
mm. thick) was equal to that of good Co ground enamels. A
thinner cover coat can be applied, as the Sb_2S_3 enamel is more
colorless than the Co enamel. 14 references.

M.H.A. 10-11-54
mlg

F. E. BROWN, Hans

Drugs and...
AM...
90...
...
...

PTACID, H. 111,
P. 1111, H. anal. chem. 135, 337-40 (1964)

Power as a Function of the Torque Angle in Three-Phase Synchronous Machines

By E. PIZZOLATI From *Electrotechnica und Maschinenbau*, Vol. 67, No. 10, October, 1966, pp. 304-306, 3 illustrations

This article investigates the power variations of the three-phase synchronous machine under sudden load variations. The variation amplitudes and power fluctuations are determined by a step-by-step method.

The machine subjected to a sudden load variation can be regarded as a vibrating system with a mass m , a stiffness k and a damping coefficient γ . If JP is the load impulse acting on the system, the equation of motion will be

$$m\ddot{x} + \gamma\dot{x} + kx = JP \quad (1)$$

where x = amplitude of half wave swing. The two partial solutions are

$$x_1 = e^{-\gamma t/2m} \cos \omega t \quad (2)$$

and

$$x_2 = e^{-\gamma t/2m} \sin \omega t \quad (3)$$

The amplitude is therefore

$$x = x_1 + x_2 = e^{-\gamma t/2m} (\cos \omega t + \sin \omega t) \quad (4)$$

Thus, x is the maximum amplitude of the damped vibration at time t . The constant damping is $\gamma = \gamma_0(2m)$ and the angular velocity of the vibration is given by $\omega = \sqrt{k/m - \gamma^2/4m^2}$. If γ is small, we can regard the frequency as being determined by $\omega = \sqrt{k/m}$, so that the period of half vibrations will be $T = 2\pi \sqrt{m/k}$.

The boundary conditions $x(0) = 0$ and $\dot{x}(0) = v$, in conjunction with eq. (4) give the solution

$$x = \frac{v}{\omega} e^{-\gamma t/2m} \sin \omega t \quad (5)$$

so that $\dot{x} = v e^{-\gamma t/2m} (\cos \omega t - \frac{\gamma}{2m\omega} \sin \omega t)$

The first term in the brackets can be omitted since γ is small, and we then have

$$\dot{x} = v e^{-\gamma t/2m} \sin \omega t \quad (6)$$

It will be useful to express the time t as a fraction or multiple of the period T of the vibration by writing

$$t = nT \quad \text{and} \quad t = 2n\pi/\omega$$

where n is a positive number such as $0.5, 1, 1.5, \dots$

Furthermore, if $\lambda = \gamma T/2\pi$ denotes the logarithmic decrement, we can then rewrite eqs. (5) and (6) as follows

$$x = \frac{v}{\omega} e^{-\lambda n} \sin 2\pi n \quad (7)$$

$$\dot{x} = v e^{-\lambda n} \sin 2\pi n \quad (8)$$

S/081/62/000/003/072/075
E171/B144

AUTHORS: Lotzold, Werner, Rivier, Arthur

TITLE: Plasticizers for natural and synthetic rubbers

REFERENCE: Referativnyi zhurnal. Khimiya, no. 7, 1961, 650, abstract
3446 (Eastern German patent 21286, May 13, 1961)

TEXT: Polyesters, obtained by polycondensation of castor oil acids at high temperature are used as plasticizers and softeners for natural and synthetic rubbers. These also improve the resistance of vulcanizates to ageing. [Abstracter's note: Complete translation.]

Card 1/1

Petzolk, J.

Safe starting with both hands of eccentric and crank presses by electric buttons. p. 122 ELEKTROTECHNIK. (Ministerstvo strojirenstvi) Praha. Vol. 11, no.4, Apr. 1956.

Source: EPAL LC Vol. 5, No. 10 Oct. 1956

PETZOLT, E.

Czechoslovak machines at the National Agricultural Exhibition. p. 353.
Vol 2, o. 12, Dec. 1955. JARMUVEK MEZOGAZDASAGI GEPEK. Budapest, Hungary.

So: Eastern European accession. Vol 5, no. 4, April 1956

ROMANIA / Physical Chemistry. Surface Phenomena. F

Abs Jour: Ref Zhur-Khimiya, No 16, 1958, 53144.

Author : Isechesku, Peuchesku, Furnike.

Inst : Not given.

Title : Organic Ion Exchangers and Separators of Ions and Molecules. I. A Preparation of Phenolformaldehyde Resins with Sulfonic and Carboxylic Groups. Influence of Certain Factors Upon Exchanging Capacity.

Orig Pub: Studii si certari chim., 1957, 5, No 2, 355-366.

Abstract: Sulfo and carboxyphenolformaldehyde cationates were prepared by the polycondensation of phenol or its derivatives (at a ratio of 1 mole of phenol:

Card 1/3

RUMANIA / Physical Chemistry. Surface Phenomena.
Adsorption. Chromatography. Ion Exchange.

Abs Jour: Ref Zhur-Tsimiya, No 16, 1953, 5311...

Abstract: (1.05-2 mole of formaldehyde) with an acidic or basic catalysts without the application of either pressure or distillation. The o-sulfophenyl-formaldehyde resins were obtained contrary to opinion established in the literature as to the impossibility of preparing them from o-sulfophenol. A study was conducted on their degree and rate of ion exchange in regard to pH, temperature, nature and concentration of electrolyte as well as the time of contact between a solution and the resin. When titrated potentiometrically in solutions of NaCl or CH_3COOH a delay in neutralization was observed resulting in a pH decrease (when set aside for 30 minutes after the neutralization point has been reached). The authors ascribe

Card 2/3

ROMANIA / Physical Chemistry. Surface Phenomena.
Adsorption. Chromatography. Ion Exchange.

Abs Jour: Ref Zhur-Khimiya, No 16, 1958, 53144.

Abstract: this phenomenon to the action of the phenol OH-
group rather than to that of CO₂ adsorption from
the air. A comparison between the potentiometric
curves plotted just after the Na-salts addition
and that after 30 minutes might be used as a
criterion for the ion exchange properties of a
resin.

Card 3/3

PEUCHEV, V.; GURDEVSKI, M.

A case of placenta in creta. Akush. ginek. (Sofia) 3 no. 1:71-73
1964.

*

PEUHL, L.; FRANK, M.

Types of congenital heart defect in children up to 2 years of age, therapeutic and diagnostic comments. Cesk. pediat.19 no.3:223-227 Mr'64

1. Katedra patologické anatomie a dětská klinika lékařské fakulty KU v Hradci Králové (prednosta: prof.dr. A.Fingerland DrSc., a prof.dr. J.Blecha, DrSc).

*

PEUKER, Zygmunt; TAICHMAN, Salomon

Some remarks on the proportion of wages. Praca i zarobki 1954
no. 4: 22-26. Apr 1954.

PEUKER, Zygmunt; TAJCHMAN, Salomon

Dynamics of wages in Poland and the formation of wages as seen in
the system of several Voivodeships. Praca zabezp spol 5 no.3:27-36
Mr '63.

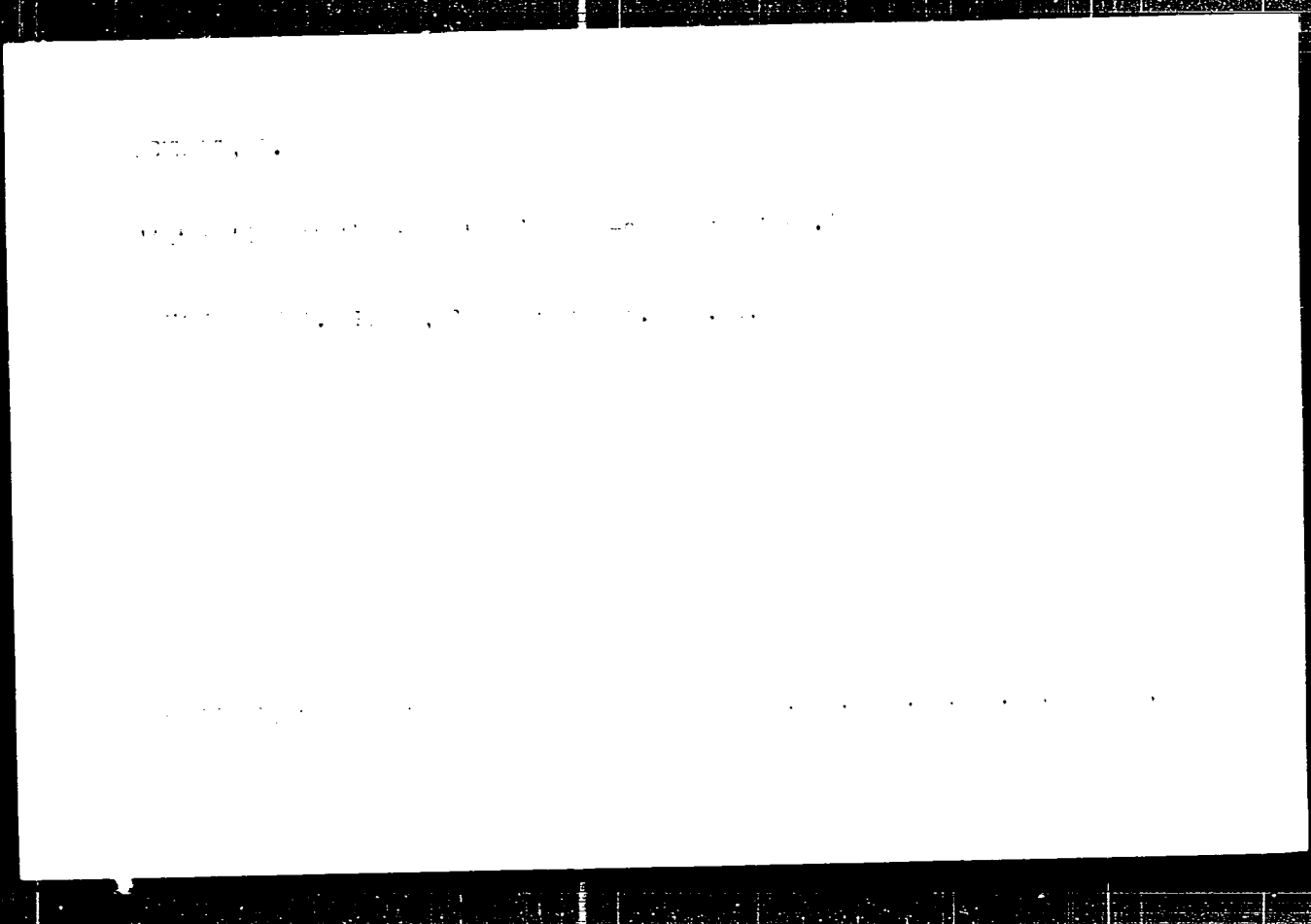
* PEUKER, Zygmunt: TAJCHMAN, Salomon

The educational level of workers. Praca zacezp spoi 3 no. 8/9:
30-35 '61.

PEUKERT, O., inz.

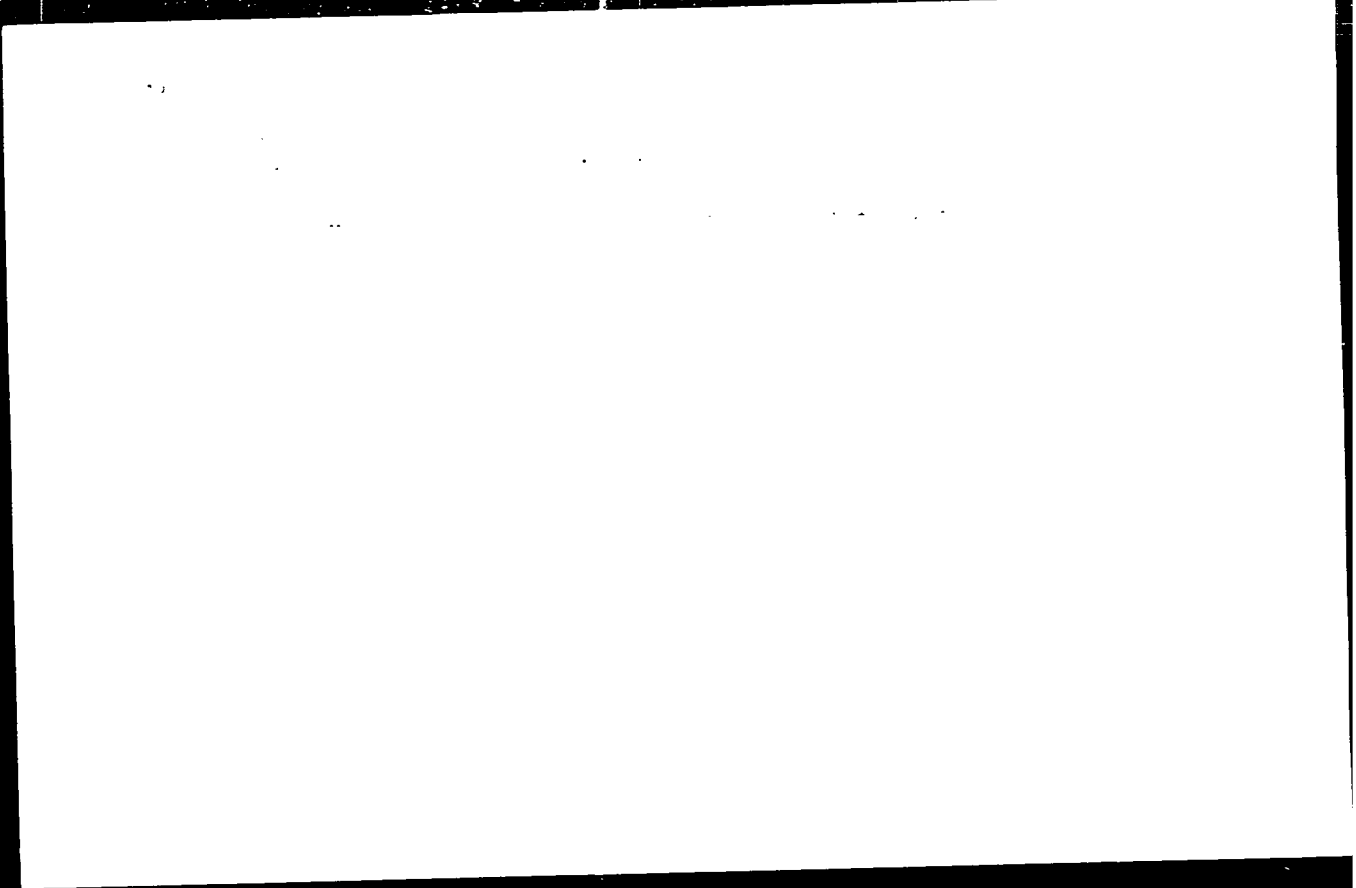
Electric hand tools for small mechanization. Nova technika no.2:
76-77 '60.

(Power tools)



"APPROVED FOR RELEASE: 06/15/2000

CIA-RDP86-00513R001240710013-2



APPROVED FOR RELEASE: 06/15/2000

CIA-RDP86-00513R001240710013-2"

FEUKERT, O.: Stechmiller, R.

"Industrial Schools Help Our Production" p. 781 (STROJIRENSTVI, Vol. 3, No. 10, October-1953, Praha, Czechoslovakia).

SO: Monthly List of East European Accessions, LC, Vol. 3, No. 5, May 1954, Unclassified

PEUKERT, O.

"History of the Tatra Automobile Plant." p. 380, Praha, Vol. 4, no. 5, May 1954.

SO: East European Accessions List, Vol. 3, No. 9, September 1954, Lib. of Congress

PEUN, R.; MERKUSH, N.

Secretary activity of the stomach in chronic liver diseases.
Rev. sci. med. 7 no.1/2:111-114 '62.
(LIVER DISEASES) (GASTRIC JUICE)

SYRBU, P. [Sirbu, P.]; BUTNARU, I. [Bitnaru, I.]; PEUNESCU, V. [Peinescu, V.],
student

Interadnexal hysterectomy with preservation of the endometrial
flap in the treatment of multiple fibroma of the uterus. Akush.
i gin. 37 no.1:76-79 '61. (MIRA 14:6)

1. Iz rodil'nogo doma Zyuleshty (Bukharest).
(UTERUS--TUMORS) (HYSTERECTOMY)

1. PEUNKOV, S. I.
2. USSR (600)
4. Kumiss - Uzbekistan
7. Production of kumiss in range herding in Uzbekistan, Konevodstvo, 23, no. 3, 1953.

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

1. PEUNKOV, S. I.
2. USSR (600)
4. Uzbekistan--Kumiss
7. Production of kumiss in range herding in Uzbekistan, Konevoastvo, 23, No. 3, 1953.

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