POLAND / Organic Chemistry--Synthetic Organic Chemistry G-2

Abs Jour: Ref Zhur-Khimiya, No 8, 1959, 27503

Abstract: $CH_3CH(NO_2)CH_2OH$ (X). The reaction of IX with RCH_2NO_2 leads to the synthesis of the HC of VII. 0.1 mol III is treated with 0.15 mol IV, 0.5 gm $NaHCO_3$, and 0.1 mol II; at the termination of the exothermic reaction the solution is heated for 3 hrs at 60-65° and the resinous mass is washed with water; I are obtained (the product, yield in %, mp in °C (from alc), and the mp in °C of the hydrochloride (HC) are listed in that order): Ia, ~30, 50-51, 182 (decomp); b, 55, 59-60, 187 (decomp); c, 60, 69-70, 179 (decomp). 2 gms of I in 200 ml 80% alcohol are treated with 10 ml conc HCl, the solution is heated to boiling, and the solvent is distilled off, the last part of

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112

POLAND / Organic Chemistry--Synthetic Organic Chemistry G-2

Abs Jour: Ref Zhur-Khimiya, No 8, 1959, 27503

Abstract: the distillation being carried out under vacuum; the HC of V is obtained. One gm of the HC of V in 15 ml water is treated with a calculated amount of NaHCO, and V is isolated (the product, mp in $^{\circ}$C (from alc), and the mp in $^{\circ}$C (from 3:1 alc-acetone) of the HC and of the dibenzoyl derivative (from aqueous alc) are listed in that order): a, 68-70, 169(decomp); 106-107; b, 77-79, 170 (decomp), 101-102; c, 79-81, 167 (decomp), 140-142. One gm of V is treated with a calculated amount of 2% VI and then with an excess of alcoholic HCl at 0°, the solvent is distilled off under vaccum in the cold, and the HC of VII is isolated (the product and the mp in $^{\circ}$C (decomp) are given): VIIa, 148; VIIb, 160;

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POLAND / Organic Chemistry--Synthetic Organic Chemistry G-2

Abs Jour: Ref Zhur-Khimiya, No 8, 1959, 27503

Abstract: VIIc, 162. 0.5 gm of the HC of VII is treated with a small quantity of water and a calculated amount of $NaHCO_3$, is added; VIII is separated (crystallization from ether) (the product and mp in °C (decomp) are given): VIIIa, 61-63; b, 95-97; c, 97-99. The action of 1 ml conc HCl on 0.1 gm VIII liberates NO_2; evaporation to dryness yields the HC of VIII. 5 mmols VII in 50% alc are treated with 15 mmols IV, the solution is made alkaline with $NaHCO_3$, and allowed to stand a few days; I is obtained. 0.03 mol IIIa or IIIb is treated with 2 ml CH_3OH or dioxane, 0.03 mol II is added, and the solution is allowed to stand a few days at ~20°; Vb or Vc is

Card 5/6

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POLAND / Organic Chemistry--Synthetic Organic Chemistry G-2

Abs Jour : Ref Zhur-Khimiya, No 8, 1959, 27503

Abstract: obtained, yield 80-90%. 0.01 mol X in CH_3OH is treated with a calculated amount of IX and the solution is allowed to stand in the cold for a few hours; Va is obtained, yield ~20° [sic]. 0.05 mol IX and 0.05 mol nitroparaffin in 5 ml dioxane are allowed to stand for several hrs at ~20°, the solvent is evaporated, the residue is dissolved in acetone, and alcoholic HCl is added; the HC of VII is obtained in yields of ~80-85%. -- V. Skorodumov

Card 6/6

URBANSKI, T. ; PIOTROWSKI, A.,

On Aliphatic Nitrocompounds, Part XXXVII by T. URBANSKI and A. PIOTROWSKI, Page 455, Przemysl Chemiczny, No. 8, 1957.

URBANSKI, T.

J. Alkiewicz, Z. Eckstein, H. Halweg, P. Krakowka, T. URBANSKI: "Fungistatic Activity of Some Hydroxamic Acids," Nature, Vol. 180, No. 4596, (London) 30 November 1957, pp. 1204-1205. Published from the Department of Dermatology, Municipal Hospital No. 1, Poznan; Department of Chemistry, Institute of Technology, Warsaw; and, Laboratory of Mycology, Institute of Tuberculosis, Warsaw.

URBANSKI, TADEUSZ.

TECHNOLOGY

URBANSKI, TADEUSZ. Chemie a technologie vybusin. Prel. Zdenek Dolezel a Dusan Jakes. Praha, Statni nakl. technicke literatury. Vol. 2, 1958. 285 p.

Monthly List of East European Accessions (EEAI) LC, Vol. 8, no. 3, March, 1959. Uncl.

7

Distr: 4E2c(j)/4E3d

Intramolecular hydrogen bonding in o-nitroaniline. T.
Urbanski and U. Dabrowska (Polish Acad. Sci., Warsaw).
~~Chem.~~ & Ind. (London) 1958, 1206.—The infrared absorp-
tion spectra of the 3 isomeric $NO_2C_6H_4NH_2$ (I) in 0.06%
CCl_4 soln. in the frequency ranges 2.5–4 μ (N–H stretching)
and 7.0–8.0 μ (NO_2 sym. stretching vibrations) were examd.
with a single-beam spectrophotometer with NaCl prism.
It has previously been shown that in aliphatic nitro compds.
the H bonds reduce both frequencies of the nitro group
vibrations. The frequencies (for the 3 isomeric I were
(2 N–H, and NO_2 sym. frequencies in cm.$^{-1}$ given); o-,
3510, 3390; 1350; m-, 3510, 3450; 1350; p-, 3510, 3450;
1340. Since the frequencies of the N–H stretching vibra-
tions agree with those reported and those of the nitro group
sym. vibrations, with data for a free, unbonded nitro group,
there is no evidence of a H bond between the amino and
nitro groups of o-I.
Blanche B. White

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2-May
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Distr: 4E2c(j)/4E3d

6
2-MAY
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Stereochemistry of some 1,5-diazacycloöctane derivatives. R. Kolinski, H. Piotrowska, and T. Urbański (Polish Acad. Sci., Warsaw). J. Chem. Soc. 1958, ~~2319-22~~; cf. C.A. 51, 14718a.—$EtC(CH_2OH)(NO_2)CH_2OH$ (15 g.) and 34 ml. 25% aq. NH_3 kept 1 hr. on the steam bath, the solid sepd., and dissolved in alc. HCl gave the less-sol. *trans*-3,7-diethyl-3,7-dinitro-1,5-diazacycloöctane-HCl, m. 172-3° (decompn.) and 0.07 g. of the more-sol. *cis hydrochloride* (I), m. 169-71° (decompn.). I in H_2O neutralized with aq. NaOH gave the *base*, m. 94-5°. I (0.2 g.) in aq. HCl and $NaNO_2$ gave 0.1 g. *N-nitroso compd.*, m. 139-40° (EtOH). The stereochemistry of these compounds is discussed.

Harry L. Yale

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2-May

Distr: 4E2c(j)

Isomerization of nitroparaffins. T. Urbański (Inst.
Technol., Warsaw). *Tetrahedron* 2, ~~[illegible] C.A. 46,~~
7994c.—In the presence of basic catalysts primary nitro-
paraffins are isomerized under the influence of Ac_2O or
$H_2C:CO$ into hydroxamic acids. Practical applications
of this isomerism were investigated. Concd. H_2SO_4 (3.5 g.)
stirred at 100° with portionwise addn. of 2 g. 1,2-dinitro-
ethane (I) (cf. Levy, *et al.*, *C.A.* 41, 2388a) and the mixt.
cooled to 5–10°, dild. with 8–10 ml. alc. and the product
washed with alc. and Et_2O gave 79% $(HONH_2)_2.H_2SO_4$ [cf.
Polish 40,008 (1956)]. AcOH (10 g.) and 10 g. I added
dropwise in 20 min. to 35 g. concd. H_2SO_4 at 120–5° (bath
temp., 120°) and the mixt. treated dropwise with 12-5 g.
cyclohexanone in 24 min. at 120°, excess AcOH evapd. and
the residue neutralized below 50° with cold aq. 25% NH_4OH,
the org. layer taken up in Et_2O and the dried (anhyd. Na_2-
SO_4) ext. evapd. yielded 72% caprolactam $b_{0.4}$ 138-9°
[cf. Polish 40,009(1956)]. C. R. Addinall

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URBANSKI, T.

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2 may
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New unsymmetrical isomeric derivatives of tetranitro-
azoxybenzene. T. Urbański and J. Urbański (Politech.,
Warsaw). *Bull. acad. polon. sci., Sér. sci., Chim. géol. et*
géograph. 6, 305-6(1958)(in English); cf. preceding abstr.—
4-Hydroxy-4'-methoxy-3,3',5-trinitroazoxybenzene treated
with tosyl chloride, nitrobenzene, and diethylaniline and
the product nitrated at 80° with 2:1 HNO_3-H_3PO_4 gave 4-
chloro-4'-methoxy-3,3',5,5'-tetranitroazoxybenzene, m.
185-6°, which hydrolyzed with aq. HBr in AcOH at 110°
afforded 4-chloro-4'-hydroxy-3,3',5,5'-tetranitroazoxy-
benzene (I), m. 198-201°. I was treated with MeOH,
NaOH, and AcOEt and the product treated with tosyl
chloride, nitrobenzene, and diethylaniline to give 4-meth-
oxy-4'-chloro-3,3',5,5'-tetranitroazoxybenzene, m. 203-4°,
which hydrolyzed with HBr in AcOH at 120° gave 4-hy-
droxy-4'-chloro-3,3',5,5'-tetranitroazoxybenzene, m. 214-
17°. Existence of these different isomers is a proof of the
Angeli theory of the asym. azoxy group. The 4'-MeO
group (in ring adjacent to azoxy group) is more reactive
than the 4-MeO group. J. Stecki

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Distr: 4E2c(j)/4E3d

URBANSKI, T.

Distr: 4E2c(j)/4E3d

Products of nitration of 4,4'-bis(dimethylamino)azoxybenzene. T. Urbański and J. Urbański (Politech., Warsaw). *Bull. acad. polon. sci., Ser. sci., chim. géol. et géograph.* 6, 307-8(1958)(in English); cf. preceding abstr.—4,4'-Bis(dimethylamino)azoxybenzene was nitrated to 4,4'-bis(methylnitroamino)-3,3',5,5'-tetranitroazoxybenzene (I), m. 208-9° (decompn.), also prepd. by the following sequence of reactions. Tetranitroazoxyanisole (cf. 2nd preceding abstr.) (2,2',6,6'-tetranitro-4,4'-azoxybianisole) was treated with HBr and AcOH to give *4,4'-dihydroxy-3,3',5,5'-tetranitroazoxybenzene*, m. 186-7°, which treated with tosyl chloride, nitrobenzene, and diethylaniline afforded the *4,4'-dichloro deriv.*, m. 226-8°. This was treated with $MeNH_2$ in EtOH to give the *4,4'-bis(dimethylamino) deriv.*, m. 260-1°, which nitrated afforded I. On Cl for MeNH group exchange the *4-Cl-4'-MeNH deriv.*, m. 206-8°, was produced. Owing to greater Cl mobility, the MeNH group was substituted into the C_6H_4 ring attached to azoxy group.

J. Stecki

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URBANSKI, TADEUSZ

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Distr: 4E2c(j)/4E3d
Aliphatic nitrocompounds. XXXV. Infrared absorption
spectra of amino-nitro compounds derived from nitro-
paraffins. Tadeusz Urbański (Politech., Warsaw). Rocz-
niki Chem. 32, 241-54(1958)(English summary 251-4);
cf. *C.A.* 52, 8045*h*, 9971*i*.—Infrared absorption spectra
were examd. of tetrahydro-5-ethyl-5-nitro-1,3-oxazine-HCl
(I), its 3-(2-ethyl-2-nitro-1-hydroxypropyl) deriv. (II), 5,7-
diethyl-5,7-dinitro-3-hydroxymethyl-1-oxa-3-azacyclooctane
(III), bis(2-ethyl-2-nitro-1-hydroxypropyl)ammonium chlo-
ride (IV), bis(2-methyl-2-nitropropyl)ammonium chloride
(V), and morpholine (VI). All the compds. show strong
bands of the NH-group stretching vibrations at 3 μ, and de-
formation vibrations ν (in the 6-μ region). There is no free
NH group band in the spectrum of IV and V. This confirms
the previous hypothesis (*C.A.* 51, 12650*d*) that there exist
H bonds between NH and NO_2 groups. The C-N stretch-
ing ν seem to lie at 1209-1190 (I, II, IV), and 1047-1031
and 1224-1215 cm.$^{-1}$ (all compds.). It is suggested that
strong bands 3448 and 3509 cm.$^{-1}$ in II and III, and 6807,
7143 and 6803 cm.$^{-1}$ in II, III, and IV, resp. are due to OH
groups, and at 1016 cm.$^{-1}$ to C-O stretching or O-H defor-
mation. The C-O-C stretching ν of I, II, and III is found
to lie at 1111 cm.$^{-1}$, and that corresponding to cyclic ether
bond at 1042, 1053, and 1034 cm.$^{-1}$, resp., with overtone ν
at 4000, 3846, and 3922 cm.$^{-1}$, resp. This was proved by
examn. of morpholine, showing bands at 1099, 1942, and
4000 cm.$^{-1}$, and confirms the structure of VI and III derivs.
The values of ν found in the 6.4-μ region correspond to free
NO_2 group, or that bonded with only one OH or NH group
(IV). They are little affected by H bonds as in nitroalc.
(*loc. cit.*). The stretching ν between C and N of the
NO_2 group may be assigned to 1087 (I), 1075 (II and IV),
1073 (III), and 1058 cm.$^{-1}$ (in IV), in agreement with previ-
ous results. A. Kreglewski

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Distr: 4E2c(j)

Nitration with dilute nitric acid. Tadeusz Urbański (Politech., Warsaw). *Roczniki Chem.* 32, 415-17(1958)(English summary).—8-Hydroxyquinoline (I) can be nitrated with 25% HNO_3 to yield 5,7-dinitro deriv. (II) of I (*C.A.* 48, 4546*h*). The same product can be obtained with 25% HNO_3 on 8-hydroxyquinoline-5-sulfonic acid (III) or 8-hydroxy-5-(hydroxyamino)quinoline-*N*-sulfonic acid (IV). The present expts. show that I and IV may be nitrated with 15, 10, or even 7.5% HNO_3. The rate of nitration decreased with lowering of concn. The yield of II was 67-87%. It has so far been noticed that prior to formation of II, NO_2 is evolved. This suggests that NO_2 is an essential intermediate (similar to nitration of phenols). A. Kreglewski

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URBANSKI, T.

"The chemotherapy of tuberculosis"

p. 225 (Kosmos, Seria B; Przyroda Nieozywiona, Journal on natural sciences with the exception of biology issued by the Copernicus Society of Polish Naturalists, Vol. 4, no. 3, 1958, Warsaw, Poland)

Monthly Index of East European Accessions (EEAI) LC, Vol. 8, No. 1, Jan. 59.

Urbanski, T.

POLAND/Organic Chemistry. Organic Synthesis. G-2

Abs Jour : Ref Zhur-Khimiya, No 9, 1959, 31392

Author : Szyc-Lewanska, K., Urbanski, T.
Inst : AS Poland.
Title : Contribution to Chemistry of Cyclonite. On Nitration of Hexamethylenetriperoxidediamine (HMTDA).

Orig Pub : Bull. Acad. polon. sci. Ser. sci. chim., geol. et geogr., 1958, 6, No 3, 165-167, XIII.

Abstract : With a view to confirm the assumption concerning the formation of trimethylenetrinitramine (cyclonite) (I) in the nitrolysis of compounds containing the CH_2N group, a similar reaction was carried out with hexa-

Card : 1/3

POLAND/Organic Chemistry. Organic Synthesis. G-2

Abs Jour : Ref Zhur-Khimiya, No 9, 1959, 31392

methylenetriperoxidediamine (II). CH_2O (III) and HCOOH (IV) together with I were revealed in the products of nitrolysis of II, and the absence of O_2 was proved. Accordingly, the summary reaction equation must be as follows: II + NH_4NO_3 (V) + $2NO_2$ $\rightarrow$ I + III + IV + $2H_2O$. 2.5 g of II and 4.2 g of V are added in small amounts to the solution of 3.5 g of II in 25 g of HNO_3 (d = = 1.5), the mixture is allowed to stand (several minutes at 80-82° and 12 hours at 0°), and I is filtered off, yield of I 26 percent, melt. p. 203-205°. III and IV are separated from the filtrate as the 2,4-dinitrophenylhydrazone and benzylthiouronic salt respectively.

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POLAND/Organic Chemistry. Organic Synthesis. G-2

Abs Jour : Ref Zhur-Khimiya, No 9, 1959, 31392

The absence of O_2 in the separating gases is determined by the negative reaction with safranine. -- S. Gurvich

Card : 3/3

POLAND/Chemical Technology. Chemical Products and Their Applications. Pesticides. H

Abs Jour : Ref Zhur-Khimiya, No 6, 1959, 20704

Author : Eckstein, Z., Halweg, H., Krakowka, P., Urbanski, T.

Inst : AS Poland.

Title : The Fungistatic Activity of 3,4-Dichlorophenoxyacethydroxamic Acid on Pathogenic Fungi in Vitro.

Orig Pub : Bull. Acad. polon. sci. Ser. sci. chim. geol. et geogr., 1958, 6, No 4, 235-238, XVIII

Abstract : Tests of the fungicidal activity of hydroxamic acids by the method of "cylinders" with Candida albicans 102, Cryptococcus neofor-

Card : 1/3

POLAND/Chemical Technology. Chemical Products and Their Applications. Pesticides. H

Abs Jour : Ref Zhur-Khimiya, No 6, 1959, 20704

mans 38, Trichophyton gypseum 768, T. rubrum 3346, T. violaceum 3905, T. schoenleini III 1 F and Penicillium 45 showed that 2,4- and 2,5-dichlorphenoxy- and 2-methyl-4-chlorphenoxyacethydroxamic acids inhibit the growth of all tested species except C. albicans; alpha and beta-naphtoxyacethydroxamic acids suppresed the growth of fungi of the Trichophyton family; 5-nitro-2,4-dichlorphenoxyacethydroxamic acid is active against the latter three species; 2,4,6-trichlorphenoxyacethydroxamic acid is non-active. 3,4-dichlorphenoxyacethydroxamic acid (I) in concentrations of 0.005-0.25 ml/g suppresses the growth of

Card : 2/3

H-93

POLAND/Ch

POLAND / Organic Chemistry. Synthesis.

G

Abs Jour: Ref Zhur-Khimiya, No 7, 1959, 23268

Author : Urbanski, T.; Tarantowicz, W.
Inst : Academy of Sciences, Poland
Title : On the Preparation and Some Properties of Butyne-2-Diol-1,4-Dinitrate.

Orig Pub: Bull. Acad. polon. sci. Ser. sci. chim., geol. et geogr., 1958, 6, No 5, 289-292, XXIII.

Abstract: $NO_2OCH_2C\ CCH_2ONO_2$ (II) was synthetized by nitrating $OHCH_2C\ CCH_2OH$ (I) and converted into I acetate (III). 20 g of I is added to 83 ml of the mixture (2 : 3) of HNO_3 ($d = 1.50$) and concentrated H_2SO_4 at 18-22°; 20 min. later it is cooled to 5° and poured into 750 g of ice, and II is extracted with ether, yield 70-75%, $n^{25}D = 1.4732$, $d_{20} = 1.408$. 6 g of

Card 1/2

POLAND / Organic Chemistry. Synthesis. G

Abs Jour: Ref Zhur-Khimiya, No 7, 1959, 23268

Abstract: Zn dust is added to 2 g of II in 25 ml of $(CH_3CO)_2O$ in the duration of 45-60 min. letting dry HCl to pass through, all is poured out on ice, and III is obtained, melt. p. 30° (from ether). II causes a strong headache, and it explodes if stricken or if it gets on a hot surface (245-380°); as far as the force of explosion is concerned, III does not differ from nitrates containing the same relative amount of O_2. -- V. Tynyankina

Card 2/2

G-1

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Country : POLAND
Category : Organic Chemistry. Synthetic Organic Chemistry

Abs. Jour : Ref Zhur - Khim., No 5, 1959, No. 15339

Author : Urbanski, T.; Urbanski, J.
Institut. : Polish AS
Title : On Products of Nitration of p,p'-Azoxyanisole

Orig Pub. : Bull. Acad. polon. sci. Ser. sci. chim., geol. et geogr., 1958, 6, No 5, 299-303, XXIII

Abstract : Nitration of p,p'-azoxyanisole (I), m.p. 116°, was studied. A mixture of 40% HNO_3, 55% CH_3COOH and 5% water nitrates I at 20° to 3,3'-dinitroazoxy-4,4'-anisole (II), yield 60%, m.p. 210-212°; mixture of 64% HNO_3, 34% CH_3COOH and 20% water at 85° nitrates I to 3,5,3'-trinitroazoxy-4,4'-anisole (III), yield 60%, m.p. 179-180°. Mixture of HNO_3 (d 1.50) and 85% H_3PO_4 (1:1) at 30° nitrates I to III, yield 80%, and at 85° to 3,5,3',5'-tetranitroazoxy-4,4'-anisole

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G - 16

POLAND / Organic Chemistry. Synthesis. G

Abs Jour: Ref Zhur-Khimiya, No 7, 1959, 23335

Author : Urbanski, T.; Urbanski, J.
Inst : Academy of Sciences, Poland
Title : On Some New Unsymmetrical Isomeric Derivatives of Tetranitroazoxybenzene.

Orig Pub: Bull. Acad. polon. sci. Ser. sci. chim., geol. et geogr., 1958, 6, No 5, 305-306, XXIV

Abstract: The preparation of two pairs of isomeric asymmetric derivatives of 3,5,3',5'-tetranitroazoxybenzene $RR'(NO_2)-C_6H_2N(O)=NC_6H_2(NO_2)_2R''$ (I. R = 5-NO_2, a R' = OCH_3, R'' = Cl; b R' = Cl, R'' = OCH_3; c R' = OH, R'' = Cl; d R' = Cl, R'' = OH) is described. Their existence is a new confirmation of the theory of Angeli (Angeli A., Jazz. chim. ital., 1916, 46, (2), 67) concerning the asymmetric

Card 1/3

POLAND / Organic Chemistry. Synthesis. G

Abs Jour: Ref Zhur-Khimiya, No 7, 1959, 23335

Abstract: structure of the azoxy group. I (R = 5-H, R' = OCH_3, R" = OH) is treated with p-$CH_3C_6H_4SO_2Cl$ in the presence of $C_6H_5NO_2$ and $C_6H_5N-(C_2H_5)_2$, the produced I (R = 5-H, R' = OCH_3, R" = Cl) (Ie) is nitrated (80°) with a mixture of HNO_3 and H_3PO_4 (2:1), and Ia (melt. p. 185-186°) is obtained. By the saponification (HBr acid, CH_3COOH, 110°) of Ia, Ic is produced melt. p. 198-201°. Ic is treated with NaOH solution in CH_3OH in the presence of ethylacetate, and Ib (melt. p. 203-204°) is obtained from the produced I (R = 5-NO_2, R' = OH, R" = OCH_3) similarly to Ie. Id, melt. p. 214-217°, is obtained by saponification of Ib similarly

Card 2/3

G-6

G

POLAND / Organic Chemistry. Synthesis.

Abs Jour: Ref Zhur-Khimiya, No 7, 1959, 23335

Abstract: to Ic (120°). The great reaction capacity of the OCH_3 group in Ia as compared with Ib is noted.
-- V. Zaretskiy

Card 3/3

URBANSKI, T.; URBANSKI, J.

On products of nitration of bis-4,4'-(dimethylamine)-azoxybenzene.
(EEAI 9:7)
Bul Ac Pol chim 6 no.5:307-308 '58.
(Bisdimethylaminoazoxybenzene)
(Nitration)

G

POLAND / Organic Chemistry. Synthesis.

Abs Jour: Ref Zhur-Khimiya, No 7, 1959, 23323

Author : Semenczuk, A.; Urbanski, T.
Inst : Academy of Sciences, Poland
Title : On Preparation of N,2,4,6-Tetranitromethylaniline with Fuming Nitric Acid in Presence of Inert Organic Solvents.

Orig Pub: Bull. Acad. polon. sci. Ser. sci. chim., geol., et geogr., 1958, 6, No 5, 309-311, XXIV.

Abstract: The nitration of $C_6H_5N(CH_3)_2$ (I) by the action of HNO_3 (d = 1.52) (II) in the presence of the solvents $CHCl_3$, CH_2Cl_2, CCl_4 or $C_2H_2Cl_4$ proceeds smoothly and results in N,2,4,6-tetranitromethylaniline (III). The solution of 6 g of I in 75 g of $CHCl_3$ is added dropwise to the solution of 75 g

Card 1/2

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POLAND / Organic Chemistry. Synthesis.

Abs Jour: Ref Zhur-Khimiya, No 7, 1959, 23323

Abstract: of II in 75 g of $CHCl_3$ and the mixture is heated to 40°. After the separation of NO_2 has discontinued, the temperature is raised to 61° and, after the distillation of the solvent, to 80° (until the color of the substance becomes light-orange). 50 ml of water is added and III is obtained, yield 98%, melt. p. 129°. If the nitration has been carried out in $C_2H_2Cl_4$, the solution of III in II is separated by decantation, yield of III = 92%. -- V. Zaretskiy

G-2

Card 2/2

Urbanski, T.

POLAND/Physical Chemistry - Molecule. Chemical Bond. B-4

Abs Jour: Referat Zhur - Khim, No. 9, 1959, 30152

Author : Eckstein, Z., Kraczkiewicz, T., Sacha, A., Urbanski, T.

Inst : Polish Academy of Sciences

Title : Note on the absorption Spectra of 2-Nitro-2-(1'-cyclohexenyl)- and 2-Nitro-2-(1'-cycloheptenyl)-1-p-chlorophenylethylene

Orig Pub: Bull Acad Polon Sci, Ser Sci Chim, Geol, et Geograph, 1958,6 No 5, 313-318, XXIV-XXV

Abstract: The absorption spectra of 2-nitro-2-(1'cyclohexenyl)- (I) and 2-nitro-2-(1'-cycloheptenyl)-1-p-chlorophenylethylene (II) have been investigated in the UV region (2000-4500 A) and in the IR region (2-14μ). The spectra of I and II are very similar. The 3030 (2985) cm-1

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POLAND/Physical Chemistry - Molecule. Chemical Bond. B-4

Abs Jour: Referat Zhur - Khim, No. 9, 1959, 30152

has been correlated with the intraplanar deformation vibrations of the ethylenic CH group. The 826 cm^{-1} band, which is characteristic for the deformation vibrations of the CH group in trisubstituted cis-ethylenes, confirms the cis-configuration of I and II. This configuration is apparently stabilized by the presence of the olefinic rings in both molecules. The synthesis of II is described. -- V. Koryazhkin

Card 3/3

SLOPEK,S.; MORDARSKA, H.; MORDARSKI,M.; URBANSKI,T.; SKOWRONSKA-SERAFIN,B.; DABROWSKA,H.

On antineoplastic activity of some guanidine derivatives in vitro. Bul Ac Pol chim. 6 no.6:355-359 '58. (EEAI 9:6)

1. Institute of Immunology and Experimental Therapy, Polish Academy of Sciences. Institute of Organic synthesis (Warsaw), Polish Academy of Sciences, Institut of Tuberculosis, Warsaw. Presented by T.Urbanski.

(Guanidine) (Antigens and antibodies)
(Tumors) (Cells)

SLOPEK,S.; MORDARSKA,H.; MORDARSKI,M.; URBANSKI,T.; GURNE,D.

On antineoplastic activity of some 1,3-oxazine derivatives in vitro. Bul Ac Pol chim. 6 no.6:361-363 '58. (EEAI 9:6)

1. Institute of Immunology and Experimental Therapy (Wroclaw), Polish Academy of Sciences. Institute of Organic Synthesis (Warsaw), Polish Academy of Sciences. Institute of Tuberculosis, Warsaw. Presented by T.Urbanski.

(Oxazine) (Antigens and antibodies)
(Tumors) (Cells)

URBANSKI,T.; SKOWRONSKA-SERAFIN,B.; STEFANIAK,L.; VENULET,J.; JANOWIEC,M.:
JAKIMOWSKA,K.; URBANSKA,A.

On iso-nicotinoylhydrazone of ethyl acetylacetate and its anti-tuberculous activity. Bul Ac Pol chim. 6 no.8:475-479 '58.
(EEAI 9:6)

1. Institute of Tuberculosis, Warsaw. Technical University (Politechnika), Warsaw. Communicated by T.Urbanski.
(Isonicotinoylhydrazone) (Ethyl acetoacetate)
(Tuberculosis)

URBANSKI, T; SIKORSKA, A.

On the sensitiveness of 2,4,6-trinitrotoluene to impact. Bul Ac Pol chim 6 no.10:617-620 '58. (EEAI 9:6)

1. Department of Organic Technology, Technical University (Politechnika), Warsaw. Presented by T.Urbanski.
(Trinitrotoluene) (Explosives)

ECKSTEIN,Z; SACHA,A.; SOBOTKS,W.; Urbanski,T.

On preparation and properties of 1-cyclooctenylnitromethane. Bul
Ac Pol chim 6 no.10:621-624 '58. (EEAI 9:6)

1. Institute of Organic Synthesis, Polish Academy of Sciences.
Institute of Pharmacy, Warsaw. Presented by T.Urbanski.
(Nitromethane) (Cyclooctene)
(Cyclooctanone) (Olefins)

URBANSKI, T.

COUNTRY : Poland
CATEGORY :

ABS. JOUR. : RZhKhim., No. 21 1959, No. 75947

AUTHOR : Eckstein, Z., Halweg, H., Krakowka, P., and *
INST. : Not given
TITLE : On the Fungistatic Activity of 3,4-dichlorophenoxy-acetohydroxamic Acid on Patnogenic Molds in vitro

ORIG. PUB. : Med Doswiad i Mikrobiol, 10, No 4, 487-492 (1958)

ABSTRACT : See RZhKhim, 1959, 6, 20704.

CARD: 1/1 * Urbanski, T.

240

POLAND/Physical Chemistry - Molecule. Chemical Bond. B

Abs Jour : Ref Zhur Khimiya, No 19, 1959, 67057

Author : Urbanski, Tadeusz
Inst : -
Title : Aliphatic Nitro Compounds. XXXV. Concerning the Infrared Spectra of Amino Nitro Compounds Derived from Nitroparaffins.

Orig Pub : Roczn. chem., 1958, 32, No 2, 241-254

Abstract : Infrared absorption spectra of certain derivatives of 1- and 2-nitropropane containing sec- and tert-amino groups and hydroxyl groups. Study of the valence-vibration absorption region of N-H bonds confirms the earlier stated assumption that a hydrogen bond may arise between the nitro and amino groups. The latter hydrogen-bond

Card 1/2

USSR/Physical Chemistry - Molecule. Chemical Bond. B

Abs Jour : Ref Zhur Khimiya, No 19, 1959, 67057

formation has little effect on the frequency of asymmetric and symmetric valence vibrations of NO_2. The small decrease in the NO_2 (symm.) is explained by steric factors. A band of the C-O-C group at 1111 cm^{-1} was identified in the spectra of compounds containing the 1,3-oxazine or the 1-oxa-3-azacyclooctane ring. See Communication XXXIII in RzhKhim, 1959, No 8, 27503. -- V. Aleksanyan

Card 2/2

Country : POLAND G
Category : Organic Chemistry. Synthetic Organic Chemistry

Abs. Jour : Ref Zhur - Khim., No 5, 1959, No. 15351

Author : Mikulski, J.; Eckstein, Z.; Urbanski, T.
Institut. : -
Title : On the Problem of Synthesis of Herbicides. VI. Synthesis of 2-Aryloxyethylamines and Their Derivatives
Orig Pub. : Roczn. chem., 1958, 32, No 3, 661-666

Abstract : As a result of further search of active herbicides (report V, see Ref Zhur-Khim, 1958, 32402), a series of $ArOCH_2CH_2NHCOR$ (I) was synthesized. By the interaction of ArONa and $BrCH_2CH_2Br$ (II), $ArOCH_2CH_2Br$ (III) is obtained. By the urotropine method, III is transformed into $ArOCH_2CH_2NH_2$ (IV); under the influence of $RCOOC_2H_5$ (V), I is obtained from IV. 1.1 moles of NaOH in 180 ml. of water are slowly poured

Card: 1/6

G - 27

Country :
Category :

G

Abs. Jour : Ref Zhur - Khim., No 5, 1959, No. 15351

Author :
Institut. :
Title :

Orig Pub. :

Abstract cont'd. : into 1.1 moles of $2,5\text{-}Cl_2C_6H_3OH$ in 400 ml. of water and 1.2 moles of II during boiling, and boiled for five hours; III is extracted with ether, $Ar = 2,5\text{-}Cl_2C_6H_3$ (IIIa), yield 45%, b.p. 150-152°/3 mm. III is obtained analogously (Ar, yield in %, b.p. in °C./mm., $n^{20}D$, d^{20} are given): C_6H_5, 42, 112-113/4, 1.5525, 1.3555; $2\text{-}CH_3C_6H_4$ (IIIb), 61, 118-120/3, 1.5444, 1.2900; $2\text{-}CH_3\text{-}4\text{-}ClC_6H_2$, 40, 138-140/3.5, 1.5600, 1.3166; $2,4\text{-}Cl_2C_6H_3$, 60, 147-149/4,

2/6

G

Country :
Category :

Abs. Jour : Ref Zhur - Khim., No 5, 1959, No. 15351

Author :
Institut. :
Title :

Orig Pub. :

Abstract cont'd. : 1.5785, 1.5929; 2,4,5-$Cl_3C_6H_2$, 45, 158-160/2, -, -. 1.05 moles of IIIb in 200 ml. of $CHCl_3$ are added to 1.1 moles of $(CH_2)_6N_4$ (VI) in 600 ml. of $CHCl_3$ at 50°, and heated for four hours at 45°; 90% of IIIb·VI is separated out, m.p. 172-173° (from chloroform). Similarly, with slight alterations, IIIa·VI is obtained, yield 80%, m.p. 176-179° (from chloroform). 0.56 mole of IIIb·VI is poured into 460 g. of concentrated HCl and 700 ml. of CH_3OH, mixed

Card: 3/6

G

Country :
Category :

Abs. Jour : Ref Zhur - Khim., No 5, 1959, No. 15351

Author :
Institut. :
Title :

Orig Pub. :

Abstract cont'd. : at 40° for four hours, the solvent is distilled off, the residue is alkalized by NaOH and IV is extracted with ether, Ar = 2-$CH_3C_6H_4$, yield 62%, b.p. 90-91°/2 mm.; hydrochloride (HC), m.p. 212-213°. Analogously, from the corresponding III•VI, IV is synthesized (Ar, yield in %, b.p. in °C./mm., m.p. in °C. of HC are given): C_6H_5, 45, 101-103/4, 215-216; 2-CH_3-4-ClC_6H_3, 58, 136-138/2, 165; 2,4-$Cl_2C_6H_3$, 51, 164-165/3, 188-191; 2,5-$Cl_2C_6H_3$, 42, 162-164/4, 253-254;

Card: 4/6

G

Country :
Category :

Abs. Jour : Ref Zhur - Khim., No 5, 1959, No. 15351

Author :
Institut. :
Title :

Orig Pub. :

Abstract cont'd. : 2,4,5-$Cl_3C_6H_2$, 49, 168-171/5, 244-246. 0.02 mole of V, R = Cl_2CH or Cl_3C, in 5 ml. of alcohol, is added to 0.015 mole of IV in 5 ml. of alcohol, heated at 60-70° for two hours, and I is separated out (Ar, R, yield in %, m.p. in °C. are given): C_6H_5, $CHCl_2$, 75, 85-86; C_6H_5, CCl_3, 77, 63-64; 2-$CH_3C_6H_4$, $CHCl_2$, 90, 93-94; 2-CH_3-C_6H_4, CCl_3, 90, 74-75; 2-CH_3-4-ClC_6H_3, CCl_3, 67, 86-87; 2,4-$Cl_2C_6H_3$, $CHCl_2$, 70, 106-107;

Card: 5/6

Country	:	G
Category	:	
Abs. Jour	: Ref Zhur - Khim., No 5, 1959, No. 15351	
Author	:	
Institut.	:	
Title	:	
Orig Pub.	:	
Abstract cont'd.	: 2,4-$Cl_2C_6H_3$, CCl_3, 75, 67-68; 2,5-$Cl_2C_6H_3$, $CHCl_2$, 90, 120-121; 2,5-$Cl_2C_6H_3$, CCl_3, 95, 97-98; 2,4,5-$Cl_3C_6H_2$, $CHCl_2$, 80, 137-138; 2,4,5-$Cl_3C_6H_2$, CCl_3, 78, 116-117.-- V. Skorodumov	

G

Country : Poland
Category : Organic Chemistry. Synthetic Organic Chemistry

Abs. Jour. : Ref Zhur-Khimiya, No.12, 1959, No.42375

Author : Belżecki, Czeslaw; Urbański, Tadeusz
Institut. : Not given
Title : Thiosemicarbazones of Keto Acids. II.
Thiosemicarbazones of Aroylaliphatic Acids.

Orig. Pub. : Roczn. chem. 1958, 32, No.4, 769-778

Abstract : A series of $NH_2CSNHN=C(C_6H_4R\text{-}4)(CH_2)_nCOOR'$ (I) was synthesized for the purpose of producing tuberculostatically active compounds. 0.1 mole $NH_2CSNHNH_2$ in 10 ml. of boiling water is added to a boiling solution of 0.1 mole $4\text{-}RC_6H_4CO(CH_2)_nCOOR'$ (II) in 10 ml. of alcohol. The mixture is boiled for 0.5-0.6 hours with a few drops of HCl added; (I) is then obtained. (The article cites R,R',n, yield in % and melting point in C° (from alcohol) as follows):

Card: 1/6

G

Country : Poland
Category : Organic Chemistry. Synthetic Organic Chemistry

Abs. Jour. : Ref Zhur-Khimiya, No.12, 1959, No.42575

Author :
Institut. :
Title :

Orig Pub. :

Abstract : CH_3CONH, H, 0, 85, 199 (decomposition); CH_3O, H, 0, 75, 163-164 (decomposition); NH_2, C_2H_5, 1, 65, 182 (decomposition); CH_3CONH, C_2H_5, 1, 63, 152 (decomposition); CH_3O, C_2H_5, 1, 62, 123-124 (decomposition); NH_2, H, 2, 35, 126 (decomposition); CH, H, 2, 48, 224-225 (decomposition); NH_2, H 8 (Ia), 54, 127; CH_3O, H, 8 (Ib), 42, 113, 0.1 mole $4\text{-}NO_2C_6H_4COCH_2COOC_2H_5$ in 500 ml. of absolute CH_3CH are hydrogenated for 4 hours over 0.3 g of PtO_2 at 40-45°; the filtrate is

Card: 2/6

Country : Poland G
Category : Organic Chemistry. Synthetic Organic Chemistry

Abs. Jour. : Ref Zhur-Khimiya, No.12, 1959, No.42375

Author :
Institut. :
Title :

Orig. Pub. :

Abstract : evaporated; the residue is diluted with 300 ml. of water; 20 ml. of concentrated HCl are added; the filtrate is cooled to 5°; 50 ml. of 20% NaOH are added; the yield of II is 54% ($R=NH_2$, $R'=C_2H_5$, $n=1$), the melting point is 83-84 (from benzol); acetyl derivative, yield 82%, the melting point 97-98° (from dilute alcohol). II ($R=CH_3O$, $R'=C_2H_5$, $n=1$), yield is 48%, boiling point 175-182°/8 mm. The pulverized mixture of 0.5 mole $C_6H_5NHCOCH_3$ and 0.5 mole of sebacic

Card: 3/6

G

Country : Poland
Category : Organic Chemistry. Synthetic Organic Chemistry

Abs. Jour. : Ref Zhur-Khimiya, No.12, No.42375

Author :
Institut. :
Title :

Orig Pub. :

Abstract : polyanhydride is poured into the suspension of 1.5 moles $AlCl_3$ in CS_2 at 0-5°; the temperature is raised to about 40°; the mixture is stirred for 3 hours and then set out for 48 hours at about 20°; the reaction product is decomposed with ice and HCl; the residue is dissolved in 70 g of $NaHCO_3$ in 1.2 liters of water; the filtrate is acidified with CH_3COOH; the residue is boiled for 15 minutes with 200 ml. of 10% HCl; 50 ml. of saturated CH_3COONa are added

Card: 4/6

G

Country : Poland
Category : Organic Chemistry. Synthetic Organic Chemistry

Abs. Jour. : Ref Zhur-Khimiya, No.12, No.42375

Author :
Institut. :
Title :

Orig. Pub. :

Abstract : upon cooling; II is separated ($R=NH_2$, $R'=H$, $n=8$), the yield is 3%; the melting point is 134° (from benzoyl). All (I) products in the concentrations of 1.5-12.5% mg are active against Mycobacteria BCG or H37Rv, but are inactive against M. smegmatis. The tuberculostatic activity of compounds containing the CH_3O group is somewhat higher than the tuberculostatic activity of compounds containing the NH_2 group. The length of the aliphatic chain apparently has no

Card: 5/6

Country : Poland G
Category : Organic Chemistry. Synthetic Organic Chemistry

Abs. Jour. : Ref Zhur-Khimiya, No.1., 1959, No.42375

Author :
Institut. :
Title :

Orig Pub. :

Abstract : decisive significance. However Ia, b have a high tuberculostatic activity. Introduction of the COOH group considerably lowers (to about 1/300) the tuberculostatic activity in vitro. See report I in Ref Zhur-Khimiya, 1958, No.10, 32371. -- V. Skorodumov.

Country : Poland G-2
Category :

Abs. Jour : 45885

Author : Belzecki, C. and Urbanski, T.
Institut. : Not given
Title : Thiosemicarbazones of Keto Acids. III. Thiosemicarbazones of Ethyl Esters of Aroylacetic Acids and Their Derivatives.
Orig Pub. : Roczniki Chem, 32, No 4, 779-787 (1958)

Abstract : In the course of the search for new antitubercular agents the authors have synthesized a series of compounds having the structure $RCSNHN{=}C(R)CH_2COO{-}C_2H_5$ (I). When I are heated or dissolved in NH_4OH cyclization to 1-thioformamido-3-aryl-5-pyrazolones (II) occurs. A number of 3-aryl-5-parazolones (III) and 3-aryl-5-isooxazolones (IV) have also been prepared. 0.1 mol $RCOCH_2COOC_2H_5$ (V) in hot alcohol is treated rapidly with 0.1 mol $NH_2CSNHNH_2$ (VI) in 10 mol water, the solution is

Card: 1/8

Country : Poland G-2
Category :

Abs. Jour : +5885

Author :
Institut. :
Title :

Orig Pub. :

Abstract : refluxed 0.5-6 hrs with the addition of several drops of HCl (acid), and the I which separates is recrystallized from alcohol (method A). A mixture of V and VI (0.1 mol each) is ground in a mortar, fused at 105-115° until the foaming stops, the melt is mixed with water, and the precipitate is recrystallized from alcohol (method B). The following I were obtained (R, the method used, and the decomp temp in °C are given in that order): 4-$NO_2C_6H_4$, A, 170-172; 4-$NH_2C_6H_4$,

Card: 2/8

Country : Poland G-2
Category :

Abs. Jour : 45885

Author :
Institut. :
Title :

Orig. Pub. :

Abstract : B, 162; 4-$CH_3CONHC_6H_4$, B, 152; 4-$CH_3OC_6H_4$ (Ia), A, 123-124; 4-BrC_6H_4 (Ib), A, 172-173; -pyridyl, A, 153; -pyridyl, A, 169-170. V and VI (0.1 mol each) are ground and fused by method A, at first at 105° and then, when the foaming has ceased, the temperature is raised to 10-15° below the mp of the given I; the increase in temperature is accompanied by renewed foaming; the temperature is raised an additional 10-20° and maintained at that level until the complete

Card: 3/8

Country : Poland G-2
Category :

Abs. Jour : 45885

Author :
Institut. :
Title :

Orig Pub. :

Abstract : cessation of foaming, and the melt is ground with water and II and recrystallized from alcohol. When method B is used, 0.1 mol I in a ten-fold excess of liquid paraffin is heated to a temperature 5-10° above the mp of the given I; at the completion of the melting of I and the termination of the reaction, II separates out; the latter is isolated and washed with ether. The aryl group, method, and decomp temp in °C are given in that order for the following II:

Card: 4/

Country : Poland

Category : G-2

Abs. Jour : 45885

Author :

Institut. :

Title :

Orig Pub. :

Abstract : 4-$NO_2C_6H_4$, B, 264-268; 4-$NH_2C_6H_4$, A, 224-226; 4-$CH_3CONHC_6H_4$, A, 259-261; 4-$CH_3OC_6H_4$, B, 165; 4-BrC_6H_4, B, 251; β-pyridyl, A, 256; γ-pyridyl, A, 222-223. 0.1 mol V in a ten-fold excess of alcohol is treated with 0.5 mol $N_2H_4 \cdot H_2O$ and heated for 15 min to give III, yield 50-75% (the aryl group and the decomp temp in °C (from alc) are given in that order): 4-$NO_2C_6H_4$, 238-239; 4-$NH_2C_6H_4$, 255-256; 4-$CH_3CONHC_6H_4$, 261-263; 4-$CH_3OC_6H_4$, 222-223; 4-BrC_6H_4, 248-249; β-pyridyl,

Card: 5/8

Country : Poland G-2

Category :

Abs. Jour : 45865

Author :

Institut. :

Title :

Orig Pub. :

Abstract : 259-260; γ-pyridyl, 278-279. 0.1 mol V in 100 ml CH_3OH is refluxed and 0.15 mol NH_2OH in 100 ml CH_3OH are added quickly, the solution is allowed to stand 24 hrs in the refrigerator, the Na salt of the enol-form of IV is washed with CH_3OH, dissolved in water, and the solution is acidified with dil CH_3COOH to give 20-40% IV (the aryl group and decomp temp in °C (from alc) are given): 4-$NO_2C_6H_4$, 161-165; 4-$NH_2C_6H_4$, 182; 4-$CH_3CONHC_6H_4$, 190; 4-$CH_3OC_6H_4$, 145; 4-BrC_6H_4, 141-143; β-pyri-

Card: 6/8

Country : Poland G-2
Category :

Abs. Jour : 45885

Author :
Institut. :
Title :

Orig Pub. :

Abstract : dyl, 151-153; γ-pyridyl, 199. The results from the tests of the tuberculostatic activity (TSA) in vitro on M. tuberculosis strains H37Rv and BCg as well as on M. smegmatis are reported. Among the I prepared, Ia and Ib were found to be most accurate. The compounds IIa, b were found to be more active than the correspondingly substituted I. A decrease in TSA is observed when the NH_2CS group is removed; No correlation could be made between the effect of the p-substituent

Card: 7/8

Country : Poland G-2

Category :

Abs. Jour : 45685

Author :

Institut. :

Title :

Orig Pub. :

Abstract : and the TSA of III. The activity of IV is analogous to that of III. For Communication II see RZhKhim, No 12, 1959, 42375.

V. Skorodumov

Card: 8/8

G-2

Country : Poland

Category : 45876

Abs. Jour :

Author : Urbanski, T., Serafinowa, B., and Stefaniak, L.

Institut. : Not given

Title : The Preparation of Diacylhydrazines from Acylhydrazines

Orig Pub. : Roczniki Chem, 32, No 4, 957-961 (1958)

Abstract : The hydrazone $RCONHN=C(CH_3)CH_2COOC_2H_5$ (I, R = γ-C_5H_4N), obtained by the reaction of isonicotinic acid hydrazide (II) with acetoacetic ester (III), on refluxing in water (2 hrs) is converted to 1,2-diisonicotinoylhydrazine (IV), yield 93%, mp 260-261°; the reaction is accompanied by the formation of small quantities of 4',5'-dimethylpyrazolo-(4',3'-5,6)-α-pyrone, mp 245-246° (from alc). IV is also prepared in 70-78% yields by refluxing an equimolar mixture of II and III

Card: 1/2

[illegible] Vitkovskiy

G

Country	: Poland
Category	: Organic Chemistry. Synthetic Organic Chemistry
Abs. Jour.	: Ref Zhur-Khimiya, No.12, 1959, No.42379
Author	: Sobótka, Wieslaw; Eckstein, Zygmunt; Urbański, T.
Institut.	: Not given
Title	: Contribution to the Problem of Synthesizing Herbicides. VII Esters of Aryloxyacetic Acids with Aliphatic Nitroalcohols.
Orig. Pub.	: Roczn. chem., 1958, 32, No.4, 963-970

Abstract : The following three groups of the esters of aryloxyacetic acids and aliphatic nitroalcohols were synthetized: (2, 4, 5-$Cl_3C_6H_2$-OCH_2COOCH_2)-$_2C(NO_2)R$ (I), substitution 1,3-dioxane (II) and $RCH_2COOCH(CCl_3)CH_2NO_2$ (III). (I) is obtained by the action of $ROCH_2COCl$ (IV), where R= =2,4,5-$Cl_3C_6H_2$(IVa), on $RC(NO_2)$ (V) in $CHCl_3$ in the presence of pyridine (method A). (II) is synthetized by the action of IV on the corresponding alcohols in pyridine (method B).

Card: 1/6

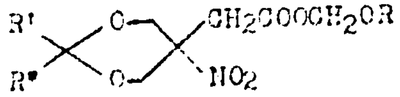
Country : Poland G
Category : Organic Chemistry. Synthetic Organic Chemistry

Abs. Jour. : Ref Zhur-Khimiya, No.12, 1959, No.42379

Author :
Institut. :
Title :

Orig Pub. :

Abstract :



II

III cannot be obtained by methods A and B but is formed by the reaction of $ROCH_2COCl$ (VI) with $NO_2CH_2CH(CCl_3)OH$ (VII). (II) ($R=2,4,5-Cl_3C_6H_2$, $R'=R"=CH_3$) (IIa) under the action of alcohol. HCl opens the ring, forming $2,4,5-Cl_3C_6H_2OCH_2-COOCH_2C(NO_2)(CH_2OH)_2$ (VIII). 0.02 mole V and 0.04 mole IVa in 40 ml. of $CHCl_3$ and 12 ml. of C_5H_5N are heated at 50° for 30 minutes; the

2/6

G

Country : Poland
Category : Organic Chemistry. Synthetic Organic Chemistry
Abs. Jour. : Ref Zhur-Khimiya, No.12, 1959, No.42379

Author :
Institut. :
Title :

Orig. Pub. :

Abstract : (The article cites R, yield in %, and the mel-
ting point in C^o (from alcohol) as follows):
2,4,5-$Cl_3C_6H_2OCH_2$,20,108; Cl, 25, 113; Br, 22,
105; CH_3, 17, 138; C_2H_5, 17, 125. 0.03 mole IV
is added to 0.02 mole 5-nitro-5-oxymethyl-2,2-
-dimethyl (or 2-phenyl)-1,3-di-dioxane in 15 ml.
of C_5H_5N at 0°. The mixture is heated for 30
minutes at 60-65°, then poured into 200ml. of
water with ice; II is separated. (The article
cites R,R', R", yield in % and the melting

Card: 3/6

G

Country : Poland
Category : Organic Chemistry. Synthetic Organic Chemistry

Abs. Jour. : Ref Zhur-Khimiya, No.12, 1959, No.42379

Author :
Institut. :
Title :

Orig Pub. :

Abstract : point in C° (from alcohol) as follows): 2,4,5-$Cl_3C_6H_2$, H, C_6H_5, 20,115; 2,4-$Cl_2C_6H_3$, H, C_6H_5, 30, 148; 2-CH_3-4-ClC_6H_3, H, C_6H_5, 38, 103; 2,4,5-$Cl_3C_6H_2$, CH_3, CH_3, 25, 128; 2,4-$Cl_2C_6H_3$, CH_3, CH_3, 31, 105; 2-CH_3-4-ClC_6H_3, CH_3, CH_3, (IIb), 10,98. 4 g of absolute $AlCl_3$ are gradually added to the mixture of VI and VII in the amounts of 0.04 mole of each in 20 ml CCl_4. The mixture is heated at about 100° until the separation of HCl has stopped; the solvent is

Card: 1/6

G

Country : Poland
Category= : Organic Chemistry. Synthetic Organic Chemistry

Abs, Jour. : Ref Zhur-Khimiya, No.12, 1959, No. 42379

Author :
Institut. :
Title :

Orig. Pub. :

Abstract : removed in vacuum; the residue is extracted with ether; the extract is flushed with water; III is separated. (The article cites R, yield in % and the melting point in C° (from petroleum ether ethylacetate) as follows):2,4-$Cl_2C_6H_3$, (IIIa), 28, 65 (2,4-$Cl_2C_6H_3OCH_2COOC_6H_3Cl_2$-2',4' is obtained together with IIIa);2,4,5-$Cl_3C_6H_2$, 30, 80. 14 moles of IIa in 30 ml. of alcoholic HCl are boiled for 5 minutes, then poured into 300 ml. of $NaHCO_3$; the yield is one g of VIII,

Card: 5/6

G

Country	:	Poland
Category	:	Organic Chemistry. Synthetic Organic Chemistry
Abs. Jour.	:	Ref Zhur-Khimiya, No.12, 1959, No.42379
Author	:	
Institut.	:	
Title	:	
Orig Pub.	:	
Abstract	:	the melting point is 80-82° (from chloroform). IIb and IIIa proved to be most significant from the standpoint of herbicide activity. See Report VI in Ref Zhur-Khimiya, 1959, No.5, 15351. -- V. Skorodumov.

Card: 6/6

G-1

COUNTRY : Poland
CATEGORY : Organic Chemistry - Theoretical Organic
Chemistry
ABS. JOUR. : RZKhim., No. 24 1959, No. 86436

AUTHOR : Kolinski, R.; Piotrowska, H.; Urbanski, T.
INST. :
TITLE : Reactions of Aliphatic Nitrocompounds. XXXVIII
On Stereochemistry of Derivatives of
1,5-Diazacyclo-Octane.
ORIG. PUB. : Roczn. chem., 1958, 32, No 6, 1289-1300

ABSTRACT : 3,7-Dialkyl-3,7-dinitro-1,5-diazacyclo-octanes
(I) form only monochlorides (MC) and mono-N-nitroso-deriva-
tives (MN). This is due to the presence of internal hydrogen
bond, which is confirmed by infrared spectrum. Calculations
and measurements of magnitude of dipole moments (DM) show
that in cis-, as well as in trans-I (where alkyl = C_2H_5; Ia
and Ib, respectively) the eight-membered ring of 1,5-diaza-
cyclo-octane has the form of a "crown". Calculations and
measurements of DM also show that the molecule of 3,7,10-
triethyl-3,7,10-trinitro-1,5-diazabicyclo-(3,3,3)-undecane
(II), consisting of two combined rings of 1,5-diazacyclo-
octane, has the form of a "double chair". Infrared spectrum

CARD: 1/3

COUNTRY : Poland
CATEGORY :

ABS. JOUR. : RZKhim., No. 1959, No. 8436

AUTHOR :
INST. :
TITLE :

ORIG. PUB. :

ABSTRACT : data are given for Ia, b, I, where R = CH_3 or C_3H_7, and II, and also MDM for the "crown" form of different conformations. Synthesis of Ia, its HC, and HB has been carried out. 0.1 mole $C_2H_5C(NO_2)(CH_2OH)_2$ in 0.5 mole of 25% NH_4OH, is heated 1 hour at about 100°, the tarry reaction product is dissolved in alcoholic HCl and kept in refrigerator for 1-3 days, mixture of HC of Ia, b, is separated by recrystallization from alcohol, and there are isolated 6.7% of less soluble Ib and 0.5% Ia, MP 169-171°. 2 g II and 15 ml alcoholic HCl are heated at about 100°, as previously reported (see Communication XXX, RZhKhim, 1959, No 4, 11737), to get 1.3 g of mixture of HC of Ia, b, from which

CARD: 2/3

131

COUNTRY : Poland [illegible]
CATEGORY :

ABS. JOUR. : RZhKhim., No. 1959, No. [illegible]

AUTHOR :
INST. :
TITLE :

ORIG. PUB. :

ABSTRACT : are isolated [illegible] Ia. From HC of Ia is obtained the Ia base, MP 94-95° (from alcohol and ether). 0.2 g HC of Ia, in a small amount of water, are acidified with 10% solution of HCl, a 20% solution of $NaNO_2$ is added, and ether is used to extract 0.1 g ND of Ia, MP 139-140° (from alcohol). On heating of ND of Ia with concentrated HCl, at 60°, there is obtained HC of Ia. Preceding communication see RZhKhim, 1959, No 19, 67057. -- V. Skorodumov.

CARD: 3/3

H-18

POLAND/Chemical Technology. Chemical Products and Their
Application. Pesticides.

Abs Jour: Ref Zhur-Khim., No 2, 1959, 5860.

Author : Eckstein, Zygmunt; Hetnarski, Bodumil; Urbanski, Tadeusz.
Inst :
Title : Chemical Means of Control of Fungi. II. Concerning Some Derivatives of N-Allyl- and -Phenylmercurobenzoxazolone and 6-Chlorobenzoxazolone.

Orig Pub: Przem. chem., 1958, 37, No 1, 44-46.

Abstract: N-allyl- or N-phenylmercurobenzoxazolones and corresponding derivative 6-halidebenzoxazolones, as well as corresponding derivatives of 6-halidebenzoxazolones of the general formula (I) are prepared by the action of RHgHal or $C_6H_5HgOCOCH_3$ on Na or Ag salts of benzoxazolone (II) and 6-halidebenzoxazole. 0.01 mole of II is added to

Card : 1/4

POLAND/Chemical Technology. Chemical Products and Their Application. Pesticides. H-18

Abs Jour: Ref Zhur-Khim., No 2, 1959, 5860.

the solution of 0.01 mole of C_3H_7HgCl (or C_3H_7HgBr),

Card : 2/4

POLAND/Chemical Technology. Chemical Products and Their Application. Pesticides.

H-18

Abs Jour: Ref Zhur-Khim., No 2, 1959, 5860.

stirred for 15 min., 25 ml of water is added, and I ($R = C_3H_7$, $Y = H$) is obtained; yield 60.9%, melt. p. 105 - 107° (from 50% alcohol). The following were prepared in a similar way (Ys, Rs, yield in % and melting points in °C are enumerated): H, CH_3, 42.9, 156 - 158; H, C_2H_5, 50.6, 133.5 - 135.5; H, $n-C_4H_9$, 56.4, 96 - 98; H, $n-C_5H_{11}$, 48.8, 92-93.5; Cl, CH_3, 10.5, 193 - 195; Cl, C_2H_5, 52.5, 161 - 163; Cl, $n-C_3H_7$, 65.9, 117.5 - 119; Cl, $n-C_4H_9$, 44.2, 95 - 97; Cl, $n-C_5H_{11}$, 34.5, 83.5 - 84.5; Br, $n-C_4H_9$, 53.2, 111 - 112; I, $n-C_4H_9$, 44.2, 108.5 - 110. 1.7 g of 6-chlorobenzoxazolone and later 3.4 g of $CH_3COOHgC_6H_5$ in 20 ml of absolute alcohol are added to the solution of 0.2 g of Na in 25 ml of absolute alcohol. After stirring,

Card : 3/4

POLAND/Chemical Technology. Chemical Products and Their Application. Pesticides. H-18

Abs Jour: Ref Zhur-Khim., No 2, 1959, 5860.

15 ml of water is added and I (R = C_6H_5; Y = Cl) is obtained, yield 73.3%, melt. p. 216 - 218° (from the mixture alcohol : water : acetone = 43 : 7 : 25). I (R = C_6H_5, Y = Cl) /sic!/ was obtained in a similar way, yield 70.7%, melt. p. 200 - 202°. N-alkyl derivatives in the concentration of 0.00005% suppress the growth of Fusarium culmorum, Alternaria tenuis and Rhizoctonia solani. The N-phenyl derivatives are less active. See RZhKhim, 1958, 15568 for part I. - A. Grapov.

Card : 4/4

POLAND/Chemical Technology - Chemical Products and Their Application. Pesticides. H.

Abs Jour : Ref Zhur - Khimiya, No 10, 1959, 36163

Author : Eckstein, Z., Hetnarski, B., Urbanski, T.

Inst : -

Title : Chemical Means in the Struggle Against Fungi. III. Concerning Certain S-Alkyl- and S-Phenylmercury Derivatives of 2-mercaptobenzimidazole and 2-mercaptobenzoxazole.

Orig Pub : Przem. chem., 1958, 37, No 3, 160-161.

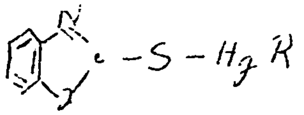
Abstract : 2-(S-alkylmercurmercapto)-benzimidazole and -benzoxazole of the general formula (I) - where R is CH_3, C_2H_5, n-C_3H_7, n-C_4H_9, n-C_5H_{11}, C_6H_5, and Z is NH, O - are obtained by the action of RHgX (where X = Cl, Br, I or CH_3COO) on the Na salt of 2-mercaptobenzimidazole or 2-mercaptobenzoxazole (II). To a solution of CH_3ONa, obtained from 0.013 mol of Na and 40 ml of CH_3OH,

Card 1/3

POLAND/Chemical Technology - Chemical Products [illegible]
Application. Pesticides.

Abs Jour : Ref Zhur - Khimiya, No 10, 1959, 361[illegible]

0.01 mol of n-C_5H_{11}HgCl or n-C_5H_{11}HgBr are added, stirred with activated C for 10 minutes, and I is obtained (R - n-C_5H_{11}; Z - NH); yield, 37.7%; melting point, 134-135.5° from CH_3OH). Analogously,



(I)

there are synthesized (Z, R, yield in percentages, melting point in centigrades are indicated): NH, n-C_4H_9, 48.8, 146-148; 0, CH_3, 54.1, 114-115.5; 0, C_2H_5, 60.5, 64-65; 0, n-C_3H_7, 33.8, 56-58; 0, n-C_4H_9, 36, 6, 38-39.5. To a solution of C_2H_5ONa from 0.2 g of Na and 25 ml of absolute alcohol, 1.5 g of II are added, and then

Card 2/3

Distr: 4E3d/4E3b

Tetryl and other aromatic amines. Skarb Państwa, Ministerstwo Obrony Narodowej (by A. Semeńczuk and T. Urbański). Pol. 41,964, June 2, 1959. A safe method of prepg. tetryl is described, based on the nitration of Me_2NPh (I) with HNO_3 in a solvent inert towards the latter at 80°. Suitable solvents are CH_2Cl_2, $CHCl_3$, CCl_4, $CHCl_2CHCl_2$, and aliphatic hydrocarbons. For example, an 8% tetryl soln. in $CHCl_3$ is introduced with const. stirring to a 60% I soln. (d. = 1.61) in $CHCl_3$ at <20°. The I:HNO_3 ratio should be 1:12. The mixt. is heated at 30°. When the evolution of N oxides stops, the temp. is raised to >60°, total nitration takes place, and $CHCl_3$ is distd. off. The remaining soln. of tetryl in I is dild. with 3 parts H_2O and cooled. Tetryl of high purity crystallizes, m. 129-30°. The total yield is 98%. When CCl_4 is used as a solvent, the I:HNO_3 ratio should be 1:16. K. Bojanowska

3

1- [illegible]

2

URBANSKI, T.

4E3d

4E2c

The stereochemistry of some tetrahydro-1,3-oxazine derivatives. D. Gürne and T. Urbański (Polish Acad. Sci., Warsaw). *J. Chem. Soc.* 1959, 1012-13; cf. *C.A.* 42, 175a.—Dipole moments of five 5-alkyl derivs. of tetrahydro-3-cyclohexyl-5-nitro-1,3-oxazine (I) indicated that the ring is in the chair form with the nitro and cyclohexyl groups in the axial and equatorial conformation, resp. $NaHCO_3$ (0.5 g.) and 9.9 g. cyclohexylamine added dropwise to 16.3 g. $Me_2CHC(NO_2)(CH_2OH)_2$ (prepd. from $Me_2CHCH_2NO_2$ and H_2CO) and the mixt. stirred 3 hrs. at 60-5° gave 33% 5-isopropyl deriv. of I, m. 55-7° (EtOH). 5-Butyl deriv. of I, m. 57-9° (EtOH), was obtained similarly in 53% yield from $BuC(NO_2)(CH_2OH)_2$ (prepd. from $BuCH_2NO_2$). Dipole moments in benzene for 5-alkyl derivs. of I were (substituent given): Me, 4.45; Et, 4.42; Pr, 4.41; iso-Pr, 4.56; Bu, 4.40 D. The calcd. value for the proposed conformation is 4.37 D., whereas those for the other possible conformations are considerably lower. R. H. Loeppert

2

Hydrogen bonds between the nitro group and the hydroxyl or amino groups in substituted nitroparaffins. T. Urbánski (Inst. Technol., Warsaw). *Tetrahedron* 6, ~~1-9(1959); cf.~~ *C.A.* 49, 11414*d*.—The ultraviolet absorption spectra of many nitroparaffin derivs. contg. HO or NH_2 groups do not show a max. (260-70 mμ) typical of the NO_2 group. This is attributed to the formation of 6-membered chelate rings by internal H bonds between the NO_2 and HO or NH_2 groups. Two HO groups or one secondary NH_2 group are necessary to transform the normal max. of the NO_2 group into an inflexion. This is considered as new evidence for the mainly electrostatic nature of the H bond. H bonds between NO_2 and HO or NH_2 groups also produce a bathochromic effect with a shift of the corresponding max. or shoulders toward longer wavelengths (270-85 mμ). C. R. Addinall

201 ny

4E2c (j)

4E3d

1/1

19

Distr: 4E3d 1

Nitration of dimethylaniline in the presence of acetic acid or acetic anhydride. T. Urbański and A. Semeńczuk (Wojsk. Akad. Tech., Warsaw). *Bull. acad. polon. sci., Sér. sci., Chim., Géol. et géograph.* 7, 91-2(1959)(in English); cf. *CA* 52, 19991e.—Dimethylaniline (6 g.) in 60 ml. $CHCl_3$ was slowly introduced to 60 ml. $CHCl_3$, either 60 ml. Ac_2O or 60 ml. AcOH, and 60 ml. HNO_3 (d. 1.50), the temp. being kept below 0°. The mixt. was left aside until 40° was reached spontaneously and the temp. began to fall, warmed on a water bath to 80°, cooled after about 8 hrs. when it became light-orange, and dild. with 100 or 150 ml. H_2O to afford 90% *N*,2,4,6-tetranitromethylaniline, contrary to Orton (*CA* 1, 1274). Other proportions of HNO_3 and Ac_2O or AcOH gave poorer results. J. Stecki

4
1-BW (BW)
1-[illegible] (NB)
1

21

Distr: 4E3d

Effect of the conjugation on the position of the infrared
band of the nitro group in some aromatic nitro compounds.
T. Urbański and H. Dabrowska (Politechnika, Warsaw).
Bull. acad. polon. sci., Sér. sci., Chim., géol. et géograph. 7,
235-7(1959).—Infrared absorption spectra of *o*-, *m*-, and *p*-
substituted benzenes were examd. The following fre-
quencies were found (compd. and concn. in wt. % in the
CCl_4 soln., given): nitrobenzene, 1347, 0.02; *o*-nitrotoluene,
1348, 0.02; *m*-nitrotoluene, 1346, 0.02; *p*-nitrotoluene,
1345, 0.02; *o*-nitroaniline, 3550 and 3430, 0.05, and 1343,
0.02; *m*-nitroaniline, 3515 and 3425, 0.05, and 1348, 0.02;
p-nitroaniline, 3530 and 3435, 0.05, and 1332, 0.02; *o*-
nitrophenol, 3250 and 1320, 0.02; *m*-nitrophenol, 3615
and 3400, 0.05, and 1349, 0.02; *p*-nitrophenol, 3605 and
3415, 0.05, and 1339, 0.02; *o*-nitroanisol, 1352, 0.02; *m*-
nitroanisol, 1347, 0.02; and *p*-nitroanisol, 1341 cm.$^{-1}$,
0.02%; resp. The lowering of the frequency of the sym.
stretching mode in *p*-substituted compds. is attributed to a
strong conjugation. The lack of the frequency lowering
in *o*-nitroaniline, exhibited by other *o*-compds., is thought
to suggest the absence of H linkage between NO_2 and NH_2
groups. J. [illegible]

4

1BW(BW)

1JAS(NB)

1

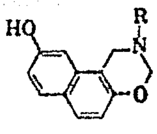
URBANSKI, T.

Distr: 4E3d

1

5
1-Gu(EU)
1-JRJ(AS)
1

Derivatives of 3,4-dihydro-2*H*-1,3-benzoxazine condensed with aromatic rings in the 5,6-positions. B. Gac-Chylińska and T. Urbański (Zaklad Syntezy Org. PAN, Warsaw). *Bull. acad. polon. sci., Sér. sci. Chim., géol. et géograph.* 7, 635-7(1959)(in English).—A primary amine added to an alk. soln. of CH_2O in MeOH and the resulting soln. mixed with a phenolic compd. gave the following derivatives of 3,4-dihydro-2*H*-1,3-benzoxazine (substituents, m.p. or b.p./mm., and m.p. of hydrochloride given): 3,7,8-$(PhCH_2)Me_2$, 71-3°, 150-3°; 3,6,7-$(PhCH_2)Me_2$, 87-8°, —; 3,5,7-$(PhCH_2)Me_2$, 94-7°, —; 3,7,6-Me_2Cl, 172-4°, 222-5°; 3,5,8-$(PhCH_2)$(iso-Pr)Me, 174/3.5, 206-7°; 3,8,5-Me_2(iso-Pr), 98°/0.2, —; 3,7,5-$(PhCH_2)$MeEt, 39-41°, —. Similarly, 2,7-dihydroxynaphthalene (I), CH_2O, and an amine (1:2:1 molar ratio) gave the following II (R and m.p. given): $PhCH_2$, 139-40° (hydrochloride m. approx. 240°); Me, approx. 210° (decompn.); and Et, approx. 190° (decompn.). Similarly, I, CH_2O, and an amine (1:4:1 molar ratio) gave the following III (R and m.p. given): $PhCH_2$, 123-4°; Me, 171-3° (decompn.); and Et, 133-5°. Similarly, the *N*-benzyl derivs. of IV, V, VI, and VII (m. 234-5°, 131-2°, 73-5°, and 97-9°, resp.) were prepd.



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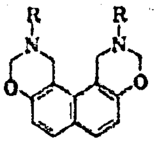

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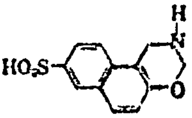

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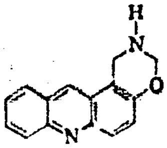

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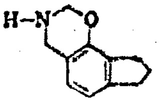

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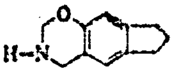

(VII)

J. Steckl

CM

URBANSKI, T.; SZYC-LEWANSKA, K.; KALINOWSKI, P.

On products of nitration of methylene blue. Bul Ac Pol chim 7 no.3: 147-149 '59. (EEAI 9:7)

1. Technical Military College, Warsaw. Communicated by T.Urbanski.
(Methylene blue) (Nitration)

K

POLAND/Optics - Spectroscopy.

Abs Jour : Ref Zhur Fizika, No 4, 1960, 9953

Author : Urbanski, T., Kuczynski, W., Hofman. W., Urbanik, H., Witanowski, M.

Inst : -

Title : The Infrared Absorption Spectra of Extracted Coals

Orig Pub : Bull. Acad. polon. sci. Ser. sci. chim., geol. et geogr., 1959, 7, No 4, 207-214

Abstract : In the region 750 -- 4500 cm^{-1}, the authors have investigated the infrared absorption spectra of several natural coals with different degree of carbonization: brown coal (I), hard coal (III), and anthracite (III) after extraction with a mixture of benzene (70%) with ethanol (30%). It is noted that as the increase of the carbon contents in the specimens of the coal increases, the overall background of their spectral absorption increases, particularly in the short wave region, this being explained

Card 1/2

POLAND/Optics - Spectroscopy. K

Abs Jour : Ref Zhur Fizika, No 4, 1960, 9953

by the graphitization of the structure of the coal. In spectra of I, an intense absorption band near approximately 3350 cm^{-1} is observed, corresponding to the vibrations of the hydroxyl groups. Its intensity decreases with carbonization of the coal. In addition, bands are observed in the spectra near 1690 cm^{-1} (carbonyl group of aromatic ketones) a group of bands in the region of 1150 -- 1280 cm^{-1} (valent vibrations of the C -- O bonds in phenols and ethers and deformation vibrations of the OH groups) and many absorption bands of silicate impurities. The intensities of the bands of absorption of organic impurities decreases upon going from spectra of I to the spectra of II and III. Bibliography, 11 titles. -- A.N. Sidorov

Card 2/2

POLAND/Optics - Spectroscopy. K

Abs Jour : Ref Zhur Fizika, No 4, 1960, 9948

Author : Urbanski, T., Hofman, N., Witanowski, M.
Inst : [illegible]
Title : Infrared Absorption Spectra of Some Polycyclic Vat Dyes Deriving from Antraquinone

Orig Pub : Bull. Acad. polon sci. Ser. sci. chim. geol. et geogr., 1959, 7, No 4, 215-221

Abstract : In the region 750 -- 4500 cm^{-1}, infrared spectra were obtained for the absorption of polycyclic vat dyes derived from antraquinone. An interpretation of the absorption bands is given.

Card 1/1

POLAND/Optics - Spectroscopy. K

Abs Jour : Ref Zhur Fizika, No 4, 1960, 9929

Author : Urbanski, T., Dabrowska, U.
Inst :
Title : The Influence of the Conjugation on the Position of the Infrared Band of the Nitro Group in Some Aromatic Nitro Compounds

Orig Pub : Bull. Acad. polon. sci. Ser. sci. chim. geol. et georgr., 1959, 7, No 4, 235-237

Abstract : The authors have measured the position of the absorption band, corresponding to a symmetrical valent vibration of the nitro group in ortho, meta, and para nitro derivatives of toluol, aniline, phenol, anisol, and also in nitro benzene. To reduce the inter-molecular interactions, the investigated compounds were dissolved in carbon tetrachloride, (concentration 0.02 -- 0.25% by weight). It was found that the conjugate nitro groups with the benzene ring

Card 1/2

POLAND/Optics - Spectroscopy. K

Abs Jour : Ref Zhur Fizika, No 4, 1960. 9929

lead to a reduction in the frequency of the absorption band of the nitro group. The para derivatives are absorbed in the region 1332 -- 1345 cm^{-1}, and the meta derivatives -- in the region 1346 -- 1349 cm^{-1}. In the ortho derivatives the conjugation is difficult owing to the space obstacles and the frequencies of the nitro group frequencies of the same order of magnitude as in the meta derivatives (1343 -- 1352 cm^{-1}). An exception is ortho nitro phenol (1320 cm^{-1}), owing to the presence of intermolecular hydrogen bond between the nitro group and the hydroxyl group. -- A.N. Sidorov

Card 2/2

ECKSTEIN, Z.; GROCHOWSKI, E.; URBANSKI, T.

On the fungicidal activity of derivatives of 2-nitropropanediol-1,3.
Bul Ac Pol chim 7 no.5:289-294 '59. (EEAI 9:9)

1. Institute of Organic Synthesis, Polish Academy of Sciences.
Presented by T.Urbanski.
(Nitropropanediol) (Fungicides)

URBANSKI, T.; HOFMAN, W.; OSTROWSKI, T.; WITANOWSKI, M.

Infrared absorption spectra of products of carbonization of cellulose. Bul.Ac.Pol.chim. 7 no.12:851-859 '59. (EEAI 9:5)

1. Laboratory of organic synthesis, Polish Academy of Sciences. Department of Organic Technology, Warwaw Technical University.
(Absorption spectra) (Spectrum, Infrared) (Carbonization) (Cellulose)

URBANSKI, T.; HOFMAN, W.; WITANOWSKI, M.

Infrared absorption spectra of products of carbonization of lignin.
Bul.Ac.Pol.chim. 7 no.12:861-859 '59. (EEAI 9:5)

1. Laboratory of Organic Synthesis, Polish Academy of Sciences.
Department of Organic Technology, Warsaw Technical University.
(Absorption spectra) (Spectrum, Infrared) (Carbonization)
(Lignin)

Distr: 4E3d

Preparation of tetryl by nitration of dimethylaniline with fuming nitric acid in inert organic solvents. Antoni Serienczuk and Tadeusz Urbański. *Biul. Wojskowej Akad. Tech. im. Jarosława Dąbrowskiego* 8, No. 1, *Prace Chem.*, 103-8(1959); cf. *CA* 52, 10091e.—$PhNMe_2$ (6 g.) in 60 cc. $MeNO_2$ (I) was added dropwise to 60 cc. fuming HNO_3 in 60 cc. I at about 0° with cautious stirring, heated to 45° till N oxides were removed, and at 80° till the soln. clarified completely. The mixt. was dild. with water, shaken, the I phase washed repeatedly with water, and I distd. partially under reduced pressure at about 60° to allow the crystn. of 11.8 tetryl, m. 129°. A. Szafrański

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1-BW(BW)
2-JoJ(NEEX...)
1

1/1

Distr: 4E3d

5

1-EW (EW)

2-JAJ (NG)(MAY)

Nitration of dimethylaniline with a mixture of nitric acid and acetic anhydride or acetic acid in chloroform. Antoni Semeńczuk and Tadeusz Urbański. *Biul. Wojskowej Akad. Tech. im. Jarosława Dąbrowskiego* 8, No. 1, *Prace Chem.*, 109–11(1959; cf. *CA* 52, 19991e.—$PhNMe_2$ (6 g.) in 60 cc. $CHCl_3$ was added dropwise to 60 cc. fuming HNO_3, 60 cc. Ac_2O and 60 cc. $CHCl_3$ at 0° with vigorous stirring and kept at room temp. When N oxides ceased to evolve, the mixt. was heated at 80° 8 hrs. till the soln. cleared completely, cooled and dild. with water. The tetryl produced (12.8 g.) m. 129° (Me_2CO). A. Szafrański

Distr: 4E3d

5

1-BW(BW)

1-JAJ(NB)

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Explosive properties of nitromethane. Tadeusz Urbański and Marian Pawelec. *Biul. Wojskowej Akad. Tech. im. J. Dąbrowskiego* (Warsaw) 8, No. 6, 120-4(1959)(English and Russian summaries).—Velocity of detonation by the Dautriche method (*CA* 1;357) is 6190–6360 m./sec., whereas measured with a time-recording oscillograph (Nahmani and Manheimer, *CA* 50, 11671*d*) is av. 6405 m./sec. Trauzl lead block test (picric acid as 100%) for $MeNO_2$ with azide-tetryl booster is 110%. Time of ignition (temp. given) 3.2 (570), 3.8 (560), 4.45 (550), 5.6 (540), 6.3 (530), 6.8 (520), 7.0 (510), 7.5 (500), 8.4 (490), 9.8 (480), 13.8 (470), and 186.6 sec. (460°); activation energy over the range 460–570° is 45,000 cal./mole. A review of data on $MeNO_2$ with 13 references.

A. Szafrański

2/b

1/1

2/b

Distr: 4E3d

7-J2a2b(4B/0W)

V **Properties of tetranitromethane. I. Thermal analysis of binary systems including tetranitromethane.** Tadeusz Urbański, Mieczysław Piskorz, Władysław Cetner, Mirosław Maciejewski. *Biul. Wojskowej Akad. Tech. im. J. Dąbrowskiego* (Warsaw) 8, No. 42, 24-36(1959)(English and Russian summaries).—Systems of tetranitromethane (I), b. 25–7°, m. above 13.9°, d. 1.644, with (m.p. given) benzene (above 5.4°) (II), nitrobenzene (above 5.5°) (III), *p*-nitrotoluene (above 51.0°) (IV), α_1- and β_1 *o*-dinitrotoluenes (−10 and −4°) (α-V, β-V), 1-nitronaphthalene (58.8°) (VI), 1,3-dinitrobenzene (90.1°) (VII) 2,4,6-trinitrotoluene (80.5°) (VIII), and Tetryl (129.5°) (IX), were examd. to find admixts. depressing the m.p. of I without affecting other properties. The eutectics (% of I given) were: I (70)-II, eutectic temp. −16.1°, I(57)-III −19.1°, I (82.5)-IV 1.5°, I(42.5)-α-V −24.0°, I(47.5)-β-V −28.5°, I(90)-VI 9.3°, I(97)-VII 11.3°, and I(97)-VIII 12.3°, did not meet the stoichiometric O requirement for a propellant, and I sepd. as liquid phase. I-IX showed from I 25 to 92% a limited soly. I heated with Hexogen or 2,4-dinitroaniline to temps. above its b.p. underwent evapn. and decompn. **II. The explosive properties of binary mixtures of tetranitromethane with some combustible or explosive substances.** Tadeusz Urbański, Mieczysław Piskorz, Mirosław Maciejewski, Władysław Cetner. *Ibid.* 37-41.—Velocity of detonation (*V* in m./sec.) according to Dautriche and Trauzl lead block enlargement (*E* in cc.), and brisance (Hess test on 25-g. sample with Pb cylinders: (*a*) according to Hess or (*b*) 22 mm. thick and 50 mm. in diam. (Meyer, *CA* 23, 4344) (*B* in mm.)) were: I-(86.25)-II d. of cartridge 1.47, *V* 7180 (and 9180) *E* 519, *B* 22.0 (cylinder *b*), I (76.85)-III d. 1.53, V 7430, *E* 472 *B* 19.0 (cylinder *b*), I (78.70)-IV d. 1.52, *V* 8170, *E* 496, *B* 22.0 (cylinder *b*), I (78.70)-V d. 1.52, *V* 7730, *E* 479, *B* 18.0 (cylinder *b*), I (80.30)-VI d. 1.57, *V* 8160, *E* 489, *B* deformation of cylinder *a*, I (65.95)-VII d. 1.53, *V* 6870, *E* 649, *B* 9.0 (cylinder *a*), I (65.95)-VIII d. 1.58, *V* 6670, *E* 564, *B* 9.5 (cylinder *a*), I (49.00)-IX, d. 1.63, *V* 7100, *E* 569, *B* deformation of cylinder *a*, VIII itself d. 1.50, *E* 351, *B* 13.0 (cylinder *b*), and diethylene glycol dinitrate *E* 492. Sensitivity to impact as detd. by the Kast falling wt. test, expressed as work in kg. m. required to cause 50% of explosions, was: I (60.15)-VII 12, VII 19.5, I (65.95)-VIII 7, VIII 11–13, I (49.00)-IX 3, and IX 6.5–8 kg. m. Time required to ignite the explosive fastened to the end of a pendulum deflected by α degrees, was: II 0 sec. at α 45–50°, I (66.25)-II 0 sec. at α 25°, I-II of varying compn. 0 sec. at α 13°, other systems 50 sec. at α 0°.

A. Szafrański

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✓ **Comparison of some properties of salts of methylenediisonitroamine and methylenedinitroamine.** Mieczysław Piskorz and Tadeusz Urbański. *Biul. Wojskowej Akad. Techn. im. Jarosława Dąbrowskiego* (Warsaw) 8, No. 84, 112-15(1959).—Ignition points for Ba, Ag, H, Na, and Pb(II) salts of $CH_2(NHNO_2)_2$ (I) were: 162 (slow combustion), 195 (explodes), 195 (burns with crackling), 108 (decompn.), and 238°, resp., for Ba, Ag, Hg, Na, Pb(II), and Tl salts of $CH_2(N_2O_2H)_2$ (II): 295, 181, 195, 290, 250, and 208°, resp. Heights necessary to cause 50% of explosions in the falling-wt. test (2 kg.) for Pb, Hg, Ag salts of I were 12, 10, 10 cm., resp.; for Pb, Ba, and Na salts of II 65, 75, and 75 cm., resp. The Ba and Na salts of I were insensitive to shock caused by the wt. falling from 100 cm.

A. Szaf~~rański~~

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Distr: 4E3d

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1-BW(BW)
2-Jo-J(NBX may)
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/ Absolute configuration of β-hydroxy-β-phenylpropionic acid. K. Balenović, B. Urbas, and A. Deljac (Univ. Zagreb, Yugoslavia). *Croat. Chem. Acta* 31, 153-5(1959)(in English).—(+)-PhCH(OMe)CH_2CO_2Me (I) was prepd. from L(+)-PhCH(OH)CO_2H (II) and (+)-PhCH(OH)-CH_2CO_2H (III). II was converted to (+)-PhCH(OMe)-CO_2H (IV) with MeI and Ag_2O. IV (3 g.) heated 2 hrs. with 20 ml. $SOCl_2$ gave crude PhCH(OMe)COCl, which was dissolved in 50 ml. C_6H_6, dropped into a soln. of CH_2N_2 (from 35 g. MeNHCONHNO), kept overnight at 0° and evapd. *in vacuo* to give 3.3 g. PhCH(OMe)$COCHN_2$ (V), $[\alpha]_D^{23}$ −83° (*c* 3.5, EtOAc). V (3.3 g.) was dissolved in 15 ml. abs. MeOH and 15 ml. MeCN, 0.3 g. CuI added at 35°, kept 3 hrs., heated 1 hr. at 50°, the mixt. filtered, poured into 100 ml. H_2O, extd. with C_6H_6, and evapd. *in vacuo* to give 3.1 g. greenish oil which was chromatographed in C_6H_6 on neutral Al_2O_3 to give 2.28 g. I, $b_{0.05}$ 50-60°, $[\alpha]_D^{21}$ 40° (*c* 2.57, C_6H_6). III with MeI and Ag_2O gave also I, $b_{0.03}$ 50-5°, $[\alpha]_D^{18}$ 61.0° (*c* 2.935, C_6H_6). B. Urbas (CCA)

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Urbanski, T.

SCIENCE

PERIODCIAL: ROCZNIKI CHEMII, Vol. 31, No. 2, 1959

URBANCSKI, T. Aliphatic nitro compounds. XXXI. Ther preparation of alcohols from primary nitroparaffins and formaldehyde. p. 695

Monthely List of East European Accessions (EEAI) LC Vol. 8, No. 4.
April 1959, Uncalss

URBANSKI, T.

4

4E3d

3,4(NB)

4E2c gp

Derivatives of azoxybenzene. I. Products of nitration of *p,p'*-azoxyanisole. Tadeusz Urbański and Jerzy Urbański (Politechnika, Warsaw). *Roczniki Chem.* 33, 669-85 (1959)(English summaries).—Evidence was given by Angeli (*C.A.* 11, 1156) that the azoxy group in aromatic compds. possesses an unsym. structure, N(O):N. The authors suggest that, denoting two aromatic rings by A and B, the ring nearest the N(O) moiety would be called the B ring. The substituents of the B ring would bear customary notions *o'*, *m'*, *p'*, or 2', 3', 4'. It is shown by nitration of *p,p'*-azoxyanisole (I) under different conditions that the B ring is less readily nitrated than the A ring. The following compds. are obtained: tetranitro deriv. of I (m. 235-40°), 4,4'-dimethoxy-3,3'-dinitro- (m. 210-12°) and -3,5,3'-trinitroazoxybenzene (m. 170-80°), *N,N'*-diacetylaminoanisole (m. 203-6°), 2,6-diacetylamino-4-hydroxyanisole (m. 230-34°), 4-acetylhydroxyanisole (m. 198-202°), 4-acetoxyanisole (m. 197-207°), and trinitro deriv. of I. **II. Position isomers of unsymmetrical derivatives of 3,5,3',5'-tetranitroazoxybenzene.** *Ibid.* 687-92.—The lack of symmetry of trinitroazoxyanisole, producing different mobilities of the methoxy groups, enables one to obtain a no. of pairs of position isomers of derivs. of 3,5,3',5'-tetranitroazoxybenzene (I). The following ones are obtained: 4-chloro-4'-methoxy- (m. 185-6°), 4-methoxy-4'-chloro- (m. 203-4°), 4-chloro-4'-hydroxy- (m. 198-201°), and 4-hydroxy-4'-chloro deriv. of I (m. 214-17°). Their existence can only be explained as due to the unsym. structure of the azoxy group according to the Angeli hypothesis. The reactivity of the OMe group attached to the B ring is higher than of the group when on the A ring. **III. Products of nitration of *p,p'*-azoxydimethylaniline.** *Ibid.* 693-702.—Nitration of 4,4'-bis(dimethylamino)azoxybenzene with 80% HNO_3 gave 4,4'-bis(methylnitroamino)-3,5,3',5'-tetranitroazoxybenzene (I), m. 208-9° (decompn.). The structure of azoxytetryl, analogous to that of tetryl, the product of nitration of dimethylaniline, is postulated for I. Attempts to prove it by prepn. of I from tetranitroazoxyanisole (II) give the following products. Heating of II with HBr in AcOH yields 4,4'-dihydroxy- (III) (m. 186-7°), and chlorination of III with *p*-toluenesulfonyl chloride gives 4,4'-dichloro-3,5,3',5'-tetranitroazoxybenzene (IV) (m. 226-8°). IV with methylamine (V) in EtOH, gives 4,4'-dimethylamino (VI) (m. 260-1°) and in toluene soln. VI and 4-chloro-4'-methylamino deriv. (VII) (m. 207-8°). The formation of VII is an addnl. proof of the unsym. structure of the azoxy group. Nitration of VI gives I. A. Kręglewski

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Distr: 4E3d

/ **Exchange reactions of halogen for halogen in some α-chloro acids.** Tadeusz Urbański and Przemysław Głuziński (Politechnika, Warsaw). *Roczniki Chem.* **33**, 1031–7 (1959)(English summary).—Heating α-bromo-β-(p-nitrophenyl)propionitrile (I) with 20% HCl gave α-chloro-β-(p-nitrophenyl)propionic acid (II) and only hydrolysis with 48% HBr yielded α-bromo-β-(p-nitrophenyl)propionic acid (III). Hydrolysis of II nitrile with HBr gave III. The same results were obtained for corresponding amides. II heated with HBr gave III and vice versa. In order to find whether the halogen atom in α-nitriles can be exchanged without hydrolysis of the nitrile group I and II nitrile were heated with satd. KCl or KBr solns., resp.; 30% of Br deriv. was transformed into Cl deriv. and 17% of Cl deriv. to Br deriv.

A. Kreglewski

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1 – 9-9 (dB)
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bs
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cw

URBANSKI, T.; LANGE, J.

Preparation of derivatives of phenylsuccinic acid. I. Preparation of p-halophenylsuccinic acids. p. 197

ROCZNIKI CHEMII. (POLska Akademia Nauk) Warszawa, Poland, Vol. 33, no. 1, 1959.

Monthly List of East European Accessions (EEAI) LC, Vol. 8, no. 9, September 1959.
Uncl.