FOLDI, Mihaly, dr.; ZOLTAN, Ors Tamas, dr.

Effect of hyaluronidase on the dispersion and resorption of radioactive proteins injected subcutaneously. Orv. hetil. 103 no.14:636-637 Ap '62.

1. Szegedi Orvostudomanyi Egyetem, II Belklinika es Budapesti Orvostudomanyi Egyetem, I Belklinika.

(PROTEINS metab) (HYALURONIDASE pharmacol)

SOLTI, Ferenc, dr.; FOLDI, Mihaly, dr.; Technikai munkatars: BRAUN, Erzsebet

Effect of hyason on low-voltage ECG tracings. Orv. hetil. 103 no.15: 681-684 15 Ap '62.

1. Budapesti Orvostudomanyi Egyetem, I Belklinika.

(ELECTROCARDIOGRAPHY pharmacol)
(HYALURONIDASE pharmacol)

FOLDI, Mihaly, dr.; THURANSZKY, Karoly, dr.; VARGA, Laszlo, dr.

Recent studies on the role of the lymphatic circulation in the pathomechanism of cardiac edema. Orv. hetil. 103 no.16:727-729 22 Ap '62.

1. Szegedi Orvustudomanyi Egyetem, II Belgyogyaszati Klinika es Gyogyszertani Intezet.

(HEART FAILURE CONGESTIVE etiol)
(LYMPHATIC SYSTEM dis)

SZEGHY, Gergely, dr.; CSANDA, Endre, dr.; FOLDI, Mihaly, dr.

Effect of sympathetic block on papillary and retinal edema. Orv. hetil. 103 no.33:1553 19 Ag '62.

1. Szegedi Orvostudomanyi Egyetem, Szemeszeti, Ideg- es Elmekortani es II. Belklinika.

(PAPILLEDEMA ther) (RETINA dis)
(ANESTHESIA CONDUCTION)

FOLDI, M., dr.; KUKAN, F., dr.; SZEGHY, G., dr.; GELLERT, A., dr.; KOZMA, M., dr.; POKORAI, M., dr.; ZOLTAN, O.T., dr.; VARGA, L., dr.

Anatomical, histological and experimental data on the fluid circulation of the eye. Orv. hetil. 103 no.38:1789-1792 23 S '62.

1. Szegedi Orvostudomanyi Egyetem, II. Belklinika, Szemklinika es Anatomiai Intezet.
(EYE) (EYE PROTEINS) (LYMPHATIC SYSTEM)

FOLDI, M

HUNGARY

OBAL, Ferenc, MADARASZ, Istvan, ZOLTAN ORS, Tamas, CSANDA, Endre, FOLDI, Mihaly: Medical University, 2nd Clinic of Internal Medicine, Institute of Physiology and Clinic of Neurology and Psychiatry (Orvostudomanyi Egyetem II. sz. Belklinikaja, Elettani Intezete es Ideg-Elmekortani Klinikaja), Szeged.

"Effect of Cerebral Lymph Node Insufficiency on the Disposition toward Cardiazole Induced Spasms."

Budapest, Kiserletes Orvostudomany, Vol 15, No 2, Apr 63, pp 196-199.

Abstract: [Authors' Hungarian summary] Lymphedema, following after the ligation of the lymph nodes and vessels of the neck, results in an enhanced disposition toward cardiazole-induced spasms. Of 4 references, one is Hungarian, the rest is Western.

1/1

FOLDI, M.

Sodium retention and oedema. Acta med. acad. sci. Hung. 19: Suppl:55-69 '63.

1. Second Department of Medicine, University Medical School, Szeged.

(EDEMA) (DOSIUM) (ALDOSTERONE)

HUNGARY

SZEGHY, G., ZOLTAN, O.,T., FOLDI, M.; Medical University of Szeged, Ophthalmic Clinic and II. Medical Clinic (Szegedi Orvostudomanyi Egyetem, Szemklinika es II. Belklinika).

"The Role of Lymphatic Fluid Circulation in the Absorption of a Protein Solution From the Cornea."

Budapest, Orvosi Hetilap, Vol 104, No 43, 27 Oct 63, page 2035.

Abstract: The current view, that the lymphatic system plays no role in the fluid circulation of the cornea, is disproven by the experiments of the authors. The rate of absorption of 0.1 ml homologous serum added to the cornea was found to be very significantly decreased after the lymphatic vessels and nodes of the neck of the animals have been tied off. No references.

1/1

SZONTAGH, Ferenc,; VARGA, Laszlo; BARDOCZY, Arpad; FOLDI, Mihaly.

Effect of oral gestagens on the anaphylactic reaction in rats. Kiserl. orvostud. 16 no.2:132-135 Ap'64

1. Szegedi Orvostudomanyi Egyetem Szuleszeti es Nogyogyaszati, valamint II. sz. Belklinikaja.

*

FOLDI, Mihaly, dr.

Some problems of lymph circulation in the kidney. Orv. hetil. 105 no.3:104-108 19 Ja'64.

1. Szegedi Orvostudomanyi Egyetem, II. Belgyogyaszati Klinika.

FOLDI,M.; CSANDA, E.; TOTH,K.; OBAL,F.; MADARASZ, I.; ROMHANYI, Gy.; VARGA, L.; WAGNER,A.

Melkersson-Rosenthal-Miescher syndrome. Orv. hetil. 105 no.6: 245-250 9 F'64.

1. Szegedi Orvostudomanyi Egyetem, II. Belklinika, II. Fogaszati Klinika, Elettani Intezet es Ideg-elmekortani Klinika; es Pecsi Orvostudomanyi Egyetem, Korbonctani Intezet.

SZEGVARI, M.; LAKOS, A.; SZONTAGH, F.; FOLDI, M.

The active function of the subcutaneous lymphatic vessels of the human lower extremity. Acta med. Acad. sci. Hung. 20 no.2:209-213 '64

1. Department of Gynecology and Obstetrics, and Second Department of Medicine, University Medical School, Szeged.

HUNGARY

FOLDI, Mihaly, Dr of med. sci., THURANSZKY, Karoly, SZABO, Mihaly, ZOLTAN, O., Tamas, SAGI, Istvan; Medical University of Szeged, II. Medical Clinic and Institute of Pharmacology (Szegedi Orvostudomanyi Egyetem, II. Belklinika es Gyogyszertani Intezet)

"The Effect of Butylsympathon (BON) on the Volume of Plasma Flow Through the Kidney and on Renal Function in Hemorrhagic Hypotension"

Budapest, A Magyar Tudomanyos Akademia V. Orvosi Tudomanyok Osztalyanak Kozlemenyei, Vol XVII, No 1, 1966, pages 89-92

Abstract: [Authors' Hungarian summary] In the presence of hemorrhagic hypotension, an elevation was noted in the rate of diuresis, sodium excretion, PAH clearance and glomerular filtration in response to BON administration. These results are not changed, in principle, by the fact that, because of the high degree of oliguria in cases of untreated hemorrhagic hypotension, PAH and creatinine are unreliable indicators of the renal plasma flow and of glomerular filtration. On the basis of the results, the compound, which is practically free of side effects, should be tried out in human shock therapy in combination with fluid replacement, 3 Eastern European, 1 Western references. [Manuscript received 13 Jul 65.]

1/1

Anatomy

HUNGARY

FOLDI, Mihaly, Dr of med. sci., GELLERT, Albert, Cand. of med. sci., KOZMA, Marta, POBERAI, Maria, ZOLTAN, O., Tamas, OSANDA, Endre, Cand. of med. sci., Medical University of Szeged, II. Medical Clinic, Institute of Anatomy, and Neurological and Psychiatric Clinic (Szegedi Orvostudomanyi Egyetem, II. sz. Belklinika, Anatomiai Intezet es Ideg-Elmekortani Klinika).

"Recent Data on the Anatomy of the Connection Between the Brain and Lymphatic System"

Budapest, A Magyar Tudomanyos Akademia V. Orvosi Tudomanyok Osztalyanak Kozlemenyei, Vol XVII, No 1, 1966, pages 93-100

Abstract: [Authors' Hungarian summary] By the method of experimental lymphatic edema produced by "self-injection with lymphatic fluid," the lymphatic vessels in the substance of the dura mater at the skull base and their connection with the tr. lymphaticus cervicalis were demonstrated. In contrast to the uncertainties and inadequacies found in the liaterature, this observation provides a morphological confirmation of the lymphatics in the area of the dorsal sulcus and also explains the severe morphological and functional changes seen after radical ligation of the cervical lymphatic ducts. All 9 references are Western. [Manuscript received 13 Jul 65.]

1/1

HUNGARY

FOLDI, Mihaly, Dr of med. sci., ZOLTAN, Ors, Tamas; Medical University of Szeged, II. Medical Clinic and Institute of Biochemistry (Szegedi Orvostudomanyi Egyetem, II. Belklinika es Biokemiai Intezet).

"Mechanism of the 'Barbiturate Resistance' of the Pasteur Effect in 'Cerebral Lymphedema'."

Budapest, A Magyar Tudomanyos Akademia V. Orvosi Tudomanyok Osztalyanak Kozlemenyei, Vol XVI, No 4, 1965, pages 377-384.

Abstract: [Authors' Hungarian summary] 1) The aerobic glycolysis of the gray matter homogenate of both normal cats and cats with "cerebral lymphedema" is slower than that of the semihomogenate. 2) A statistically significant inhibition is produced by the gray matter homogenate of anaesthetized normal cats on the aerobic glycolysis of the gray matter semihomogenate of anaesthetized normal cats. 3) The inhibitory effect of the gray matter homogenate of anaesthetized cats with "cerebral lymphedema" on the glycolysis of the gray matter semihomogenate of anaesthetized normal cats is more pronounced, to a statistically significant degree, than that of the gray matter homogenate of the normal cat. 4) It appears that in "cerebral lymphedema" the brain tissue contains some "inhibitory" substance. 4 Hungarian, 9 Western references. [Manuscript received 24 Jun 65.]

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(2)

HUNGARY

VARGA, Laszlo, Dr., PIUKOVICH, Istvan, Dr., ZOLTAN, O. Tamas, Dr., CABOR, Miklos, Dr., and FOLDI, Mihaly, Dr., Second Clinic for Internal Medicine (II. Belklinika)(Director: FOLDI, Mihaly) and Clinic for Obstetrics and Gynecology (Szuleszeti es Nogyogyaszati Klinika)(Director: SZONTAGH, Ferenc, Dr.) at the Medical University (Orvostudomanyi Egyetem) in Szeged.

"Investigation of the Concentration of Carbohydrate Bound with Serum- and Lymph-Proteins in Experimental Inflammations"

Budapest, Orvosi Hetilap, Vol 107, No 26, 26 Jun 1966, pp 1203-1206.

Abstract: The protein-sugar level and the concentration of carbohydrate bound with the protein of the ductus thoracicus showed an increase in animals experimentally subjected to turpentine inflammation. On the other hand, the glycoprotein content in the truncus cervicalis from the inflamed area was significantly lower, even after 24 or 48 hours, than in the serum or in the ductus thoracicus. It was assumed that the organism retains glycoproteins in the inflamed areas for use in the regeneration processes. 28 references, including 2 German, 1 Hungarian, and 25 Western.

1/1

HUNGARY

FOLDI, Mihaly, THURANSZKY, Karoly, ZOLTAN, O., Tamas; Medical University of Szeged, II. Medical Clinic and Institute of Pharmacology (Szegedi Orvostudomanyi Egyetem, II. sz. Belklinika es Gyogyszertani Intezet).

"Behavior of the Blood Pressure and of the Exteroceptive Blood Pressure Reflex in Cases of Lymphogenous Encephalopathy."

Budapest, Kiserletes Orvostudomany, Vol XVIII, No 5, Oct 66, pages 471-476.

Abstract: [Authors' Hungarian summary] 1) After cervical lymph blockade, statistically significant fluctuations in blood pressure can be observed. 2) In lymphogenous encephalopathy, higher than normal blood pressure increase and a decreased blepharospasm-time can be noted in response to the introduction of a drop of pain-inducing material (capsaicine) into the eye. 3) This phenomenon is interpreted by the authors as the result of an upset in the central autonomic equilibrium and of morphological damage to certain central nervous systemic structures. 8 Hungarian, 13 Western references. [Manuscript received 29 Sep 65.]

1/1

FOLDI, Pal

New products of the Beloiannisz Telecommunication Factory.
Radiotechnika 14 no.8:302-303 Ag '64.

FOLDI, Pal, okleveles gepeszmernok

Analysis of new products from the point of view of standardization.
Szabvany kozl 16 no.7:109-113 Jl '64.

1. Beloiannisz Telecommunication Factory, Budapest.

FOLDI, Pal

Dependability in electronics. Radiotechnika 14 no.12:2 of cover D '64.

POIDI, Fel

New products of the Beloiannisa Telecommunication Engineering Factory.
Radiotekhnika 14 no.9:330-331 S '59.

FOLDI, Pal

Report on the conference on semiconductor and electron tube manufacture. Radiotechnika 14 no.11:406-407 N '64.

FOLDI, Pal

An account of the conference on durable electronic devices designed for general use. Radiotechnika 5 no.5:170 My '65.

FOLDI, Pal

Conference on transformer, reactor and ferrite production.
Radiotechnika 15 no.1:2 of cover Ja '65.

FOLDIAK, Gabor

Nuclear chemistry research and applying radioactive isotopes in the chemical industry in Hungary. Magy kem lap 19 no.8: 397-399 Ag '64.

1. Isotope Institute, National Atomic Energy Commission, Budapest.

FOLDI, TAMAS

Asvanyolajternekek kendioxidos extrakcioja; irodalmi osszefoglalo

Veszprem, Hungary, 1952, 104 p.

Monthly List of East European Accessions (EEAI) LC, Vol. 8, No. 6, June 1959
Uncl.

FOLDI, TAMAS

Laboratorium forro kontakt kiserletek; zarojelentes

Veszprem, Hungary, 1953, 80 p.

Monthly List of East European Accessions (EEAI) LC, Vol. 8, No. 6, June 1959
Uncl.

FOLDI, TAMAS

Repulomotorolajok eloallitasa folytonos uzemu oldoszeres finomito keszukekekben; osszefoglalo jelentes.

Veszprem, Hungary, 1955, 30 p.

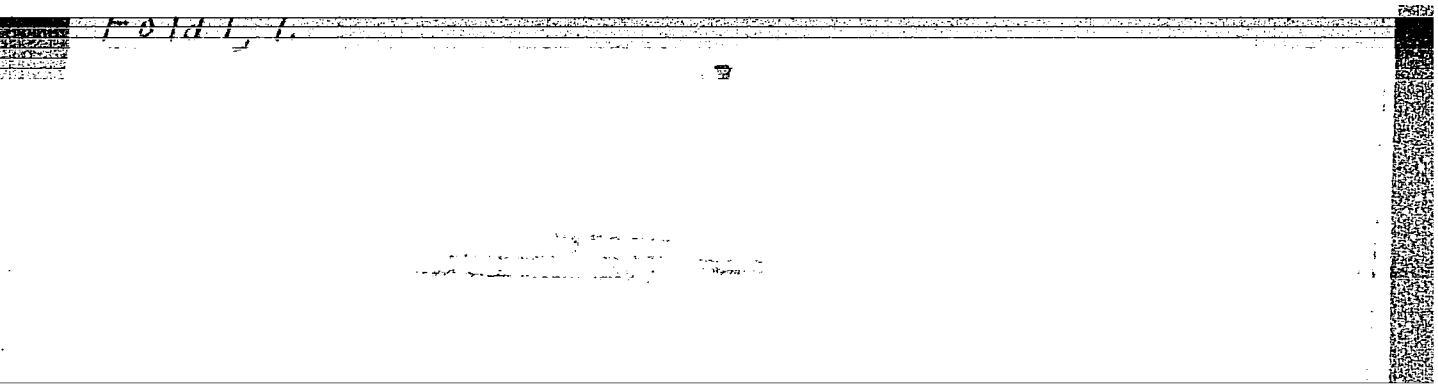
Monthly List of East European Accessions (EEAI) LC, Vol. 8, No. 6, June 1959
Uncl.

FOLDI, TAMAS

Trikrezifoszfat mint uzemanyag adalek; irodaimi osszefoglalas.

Veszprem, Hungary, 1955, 46 p.

Monthly List of East European Accessions (EEAI) LC, Vol. 8, No. 6, June 1959
Uncl.



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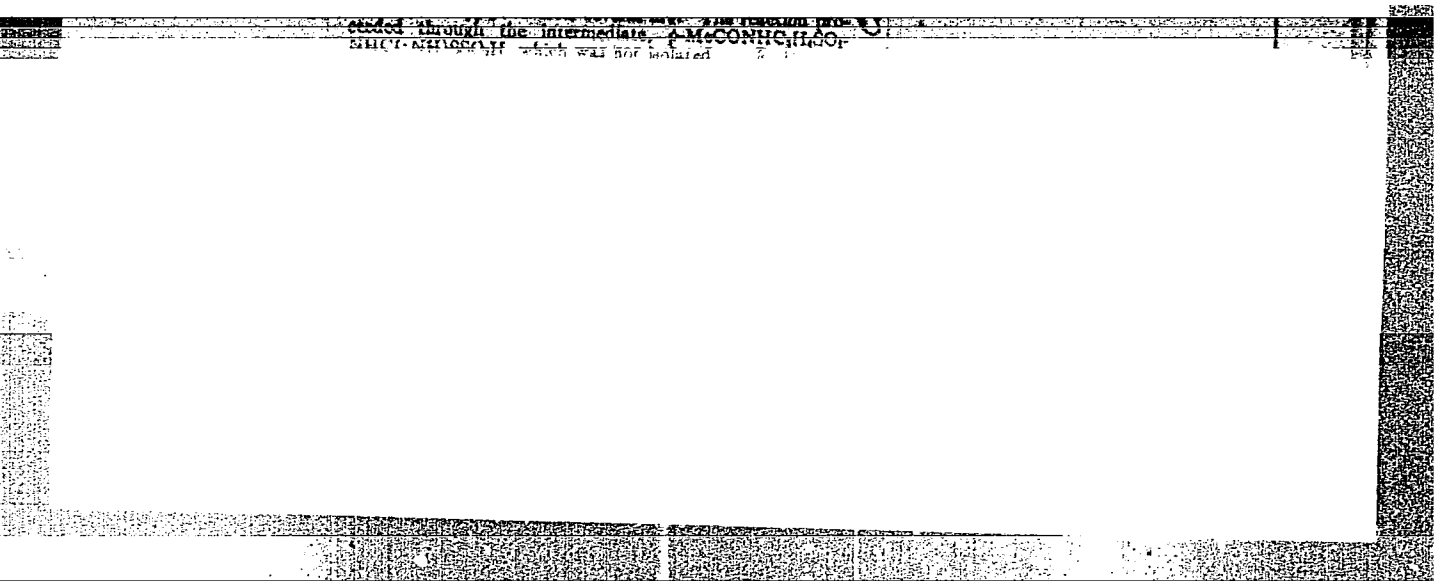

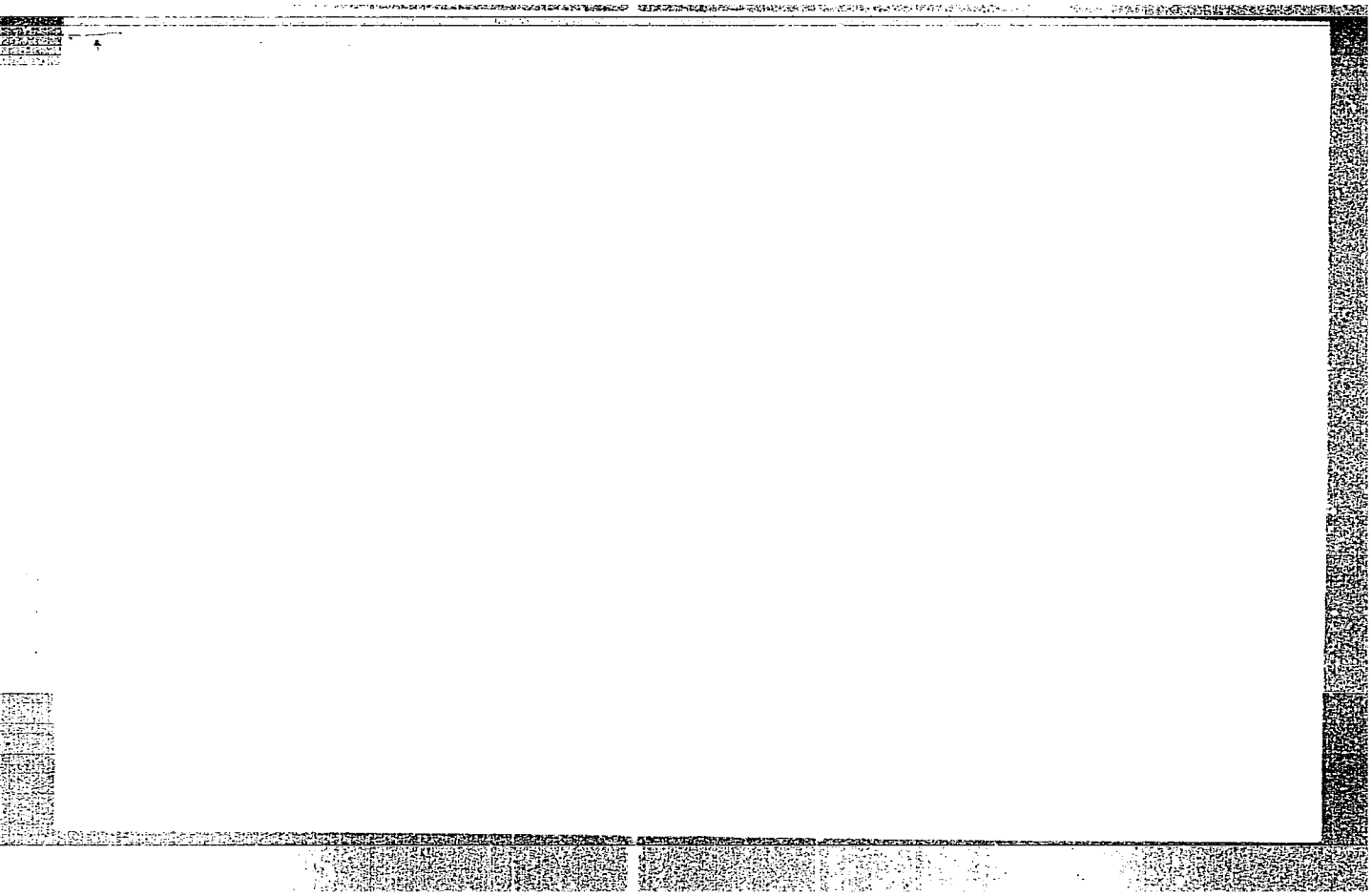

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F-2-D-, T.

HUNGARY/Organic Chemistry. Naturally Occurring Substances and Their Synthetic Analogs. G-3

Abs Jour: Ref Zhur-Khim., No 13, 1958, 43495.

Author : Foldi Z., Foldi T., Foldi A.
Inst : Hungarian ~~Academy~~ of Sciences.
Title : Conformation of Psi-Ephedrine; Copper Chelates of 2-Amino-Alcohols.

Orig Pub: Acta chim. Acad. sci. hung., 1957, 11, No 3-4, 339-348.

Abstract: In connection with elucidation of the question concerning the presence of an intramolecular hydrogen bond in Psi-ephedrine (Psi-I) and ephedrine (I), a study was made of copper chelates of I, Psi-I, and other 2-amino-alcohols. It is shown that (+)-Psi-I forms a copper chelate [(+)-Psi-II], MP 209-210° (decomposes;

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HUNGARY/Organic Chemistry. Naturally Occurring Substances and Their Synthetic Analogs. G-3

Abs Jour: Ref Zhur-Khim., No 13, 1958, 43495.

from CH_3OH), insoluble in water and most organic solvents, soluble in alcohols, and containing (like the other investigated Cu-complexes) two molecules of amino-alcohol per aton of Cu (II). Under the same conditions there is formed from (±)-I a chelate hydrate [(±)-III], MP 165° (decomposes). By the action of cold acetone (±)-III is converted to the complex (±)-IV, MP 169-171° (decomposes) (see preliminary communication, RZhKhim, 1956, 65067). For (±)-III ther is known a solvate with one molecule of C_6H_6, MP 157-158° (decomposes), soluble in organic solvents. The authors note that the data obtained are somewhat in conflict with the assumption (Fodor G. et al., J. Organ. Chem., 1949, 337), that intra-

Card : 2/6

nolecular hydrogen bond is possible only in Psi-I, but not in I. The assumption is made that, probably, Cu^{II} -- a strong complexer, impels internal complexing of I notwithstanding the spatial hindrance. This is confirmed by lesser stability of (±)-III and (±)-IV in comparison with (+)-Psi-II. (±)-IV decomposes in organic solvents, 4 N aqueous solution of NH_3, in solutions of alkali tartrates, in aqueous solution of $(NH_4)_2S$, in which (+)-Psi-II is not decomposed or is decomposed more slowly. Psi-I reacts with $CuSO_4$ more rapidly than I, since on interaction of a mixture of (±)-Psi-I and (±)-I with an insufficient amount of $CuSO_4$ there is formed (±)-Psi-II, MP 206-207°. The authors note that by

HUNGARY/Organic Chemistry. Naturally Occurring Substances and Their Synthetic Analogs. G-3

Abs Jour: Ref Zhur-Khim., No 13, 1958, 43495.

means of Cu-complexes it is possible to separate also other diastereo-isomeric 2-amino-alcohols. Thus, threo- (±)-2-amino-1-(p-nitrophenyl)-propandiol-1,3 [threo-(±)-V] forms a complex, MP 153-154° (decomposes), of the type (+)-Psi-II, while erythro-(±)-V forms an ionic complex, MP 123-123.5° (decomposes), of the type of (±)-III (without water of crystallization). From threo-(±)-V was obtained a complex of the type (+)-Psi-II with two molecules of water of crystallization, MP 133-134° (decomposes), which on treatment with CH_3OH is converted to the more stable, anhydrous, trans-form, MP 162-163° (decomposes). Moreover, from threo- (+)-V there was obtained a complex of

Card : 4/6

Abs Jour: Ref Zhur-Khim., No 13, 1958, 43495.

MP 270°. It is shown that 2-amino-alcohols with a tertiary amino-group also form Cu-complexes, for example, a Cu-complex of type (+)-Psi-II from (±)-N-methyl-ephedrine, MP 176-177° (decomposes). It was found that amino-alcohols with a primary amino-group form insoluble complexes only if at the C-atom linked to the OH-group are present bulky substituents [Cu-complex of dimethyl ether of (±)-noradrenalin, of the (±)-III type, MP 165-166.5° (decomposes)]. Ethanolamine (VI) forms with $CuSO_4$ only a colored solution; benzal-ethanolamine does not react at all (a partial coloration of the solution is due to hydrolysis to VI). No reaction whatever takes place with 2-phenyl-5-(3',4'-dimethoxy-

Abs Jour: Ref Zhur-Khim., No 13, 1958, 43495.

phenyl)-oxazolidine and 3-amino-alcohols, for example, 2-methyl-4-amino-5-(hydroxymethyl)-pyrimidine, tropine and Psi-nortropine. It is shown that 3 molecules of (±)-Psi-I form a complex with $Co^{II}(CoCl_2)$, which does not melt up to 270°. All the investigated complexes are decomposed by H_2S with liberation of the corresponding amino-alcohol. (+)-Psi-II is obtained on grinding 1.65 g (+)-I with 10 ml water and 1.25 g $CuSO_4.5H_2O$, adding 10 ml 1 N NaOH, and separating the resulting product after 2 hours; yield 99%.

Distr: 4E2c(j)/4E3d

40. Addition of hydrogen sulphide to the nitrile group of arylsulphonyl cyanamides by means of thiosulphuric acid. (In English) Z. Földi, T. Földi, A. Földi. *Acta Chimica Academiae Scientiarum Hungaricae*. Vol. 13, 1957, No. 1—2, pp. 111—116

A new reaction is described in the course of which free thiosulphuric acid is added to the CN group of arylsulphonyl cyanamides whereby very favourable yields of arylsulphonyl thioureas form. The known decomposition of thiosulphuric acid into sulphurous acid and elementary sulphur could be completely repressed by the addition of sulphurous acid to the reaction mixture at the start. The properties of acetyl sulphanilyl cyanamide and sulphanilyl cyanamide are discussed and the assumed new reaction mechanism presented.

Foldi, Z.

Country : Hungary G-3
Category : Organic Chemistry. Natural Compounds and their Synthetic Analogues.
Abs. Jour. : Ref. Zhur.-Khimiya No. 6, 1959 19592

Author : Foldi, Z.; Foldi, T.; Foldi, A.
Institut. : Hungarian Academy of Sciences
Title : Chelates and Conformation of Cinchona Bases.

Orig Pub. : Acta chim. Acad. scient. hung., 1958, 16, No 2, 185-192

Abstract : Confirmation of the previously determined configurative relationship between quinine (I), quinidine (II), cinchonine (III), cinchonidine (IV), and ephedrine (V), and the relationship between epi-I, epi-II, epi-III, epi-IV and Ψ-V, on the basis of data concerning the formation by the above-stated alkaloids of chelate compounds (ChC) with Cu^{2+}. I-IV do not form ChC and are configuratively related to V, epi-I - epi-IV form ChC and have a configuration analogous to that of Ψ-V. The capacity of forming ChC and hindered rotation about the $C_{(8)} - C_{(9)}$ linkage in the epi-bases suggest the assumption of the existence of a rigid hydrogen bridge -O-H···N ← and therefore of the existence of a five-

Card: 1/5

Country : Hungary G-3
Catogory= :

Abs. Jour. : 19592

Author :
Institut. :
Title :

Orig. Pub. :

Abstract : membered ring which constitutes an additional asymmetry in epi-I - epi-IV (N atom -- new center of symmetry) as compared with I - IV. Capacity of forming ChC in the case of epi-I - epi-IV indicates apparently that configuration of quinuclidine ring, in the epi-series, is represented by the formula A. This shift in the quinuclidine ring approximates the OH at $C_{(9)}$ to $C_{(10)}$ and renders possible the formation in iso-quinidines and iso-cinchonines of a new seven-membered ring by the action of acidic agents. 0.648 g epi-II are ground in a mortar with 5 ml 0.2 M solution of $CuSO_4$, 2 ml of 1 N NaOH are added, after 2 hours there is filtered off a

Card: 2/5

G-37

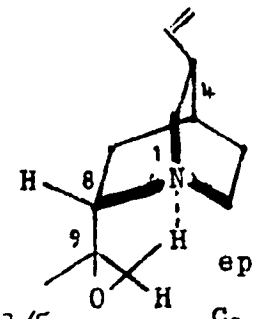
Country : Hungary G-3
Category :

Abs. Jour. : 19592

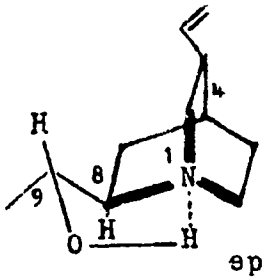
Author :
Institut. :
Title :

Orig Pub. :

Abstract :



epi-I



epi-II

A

Card:3/5

C_9 atom is linked to residue of 6-methoxy-quinoline

Country : Hungary G-3
Category :

Abs. Jour. : 19592

Author :
Institut. :
Title :

Orig. Pub. :

Abstract : ChC of composition $(C_{20}H_{23}O_2N_2)Cu \cdot 1.5H_2O$, yield 0.7 g, decomposition point 150-190°. Analogously from epi-I was obtained ChC of epi-I, decomposition point 160-180° and from the dihydrochloride of the double salt epi-I·epi-II the mixed ChC of epi-I·epi-II, MP 125-160° (decomposes). 0.648 g I are ground for 40 minutes with 20 ml 0.1 N $AgNO_3$, after 10 minutes (60°) there is obtained a molecular compound of composition $C_{20}H_{24}N_2O_2 \cdot AgNO_3 \cdot 2H_2O$, yield 0.94 g, decomposition point 202-205°. Epi-II forms an analogous compound, MP 180° (decomposes). 0.648 g I are ground with 20 ml 0.1 N $AgNO_3$ at 20°, then 10 minutes at 70°, after

Card: 4/5

G-38

Country : Hungary G-3
Category :

Abs. Jour. : 19592

Author :
Institut. :
Title :

Orig Pub. :

Abstract : 1 hour added 2.1 ml 1 N NaOH and after 5 hours there are obtained 0.882 g ChC of composition $C_{20}H_{23}N_{22}O_2Ag \cdot H_2O$, MP 165°. Epi-II yields under analogous conditions a ChC of decomposition point 170-180°. Epi-II, dibenzoyl-d-tartrates of epi-II and epi-I give a violet coloration with a solution of $CuSO_4$ in NH_4OH and C_6H_5CH. Preliminary communication see RZhKhim, 1957, 74559. -- Ye. Tsvetkov.

Card: 5/5

FOLDI, Tamas, dr.

"Bibliography of economic planning, statistics and accountancy, 1955-1958" by Mrs.Elemer Hajdu, Bela Hamori, and Gyula Harasztby. Reviewed by Tamas Foldi. Stat szemle 40 no.7:758-759 Jl '62.

1. Magyar Tudomanyos Akademia Kozgazdasagtudomanyi Intezetenek munkatarsa.

FOLDI, Tamas

Acceleration of motor vehicles. I. Jarmu mezo gep 8 no.3:82-85 Mr '61.

1. Magyar Asvanyolaj- es Foldgazkiserleti Intezet kutatomernoke.

FOLDI, Tamas, gepeszmernok

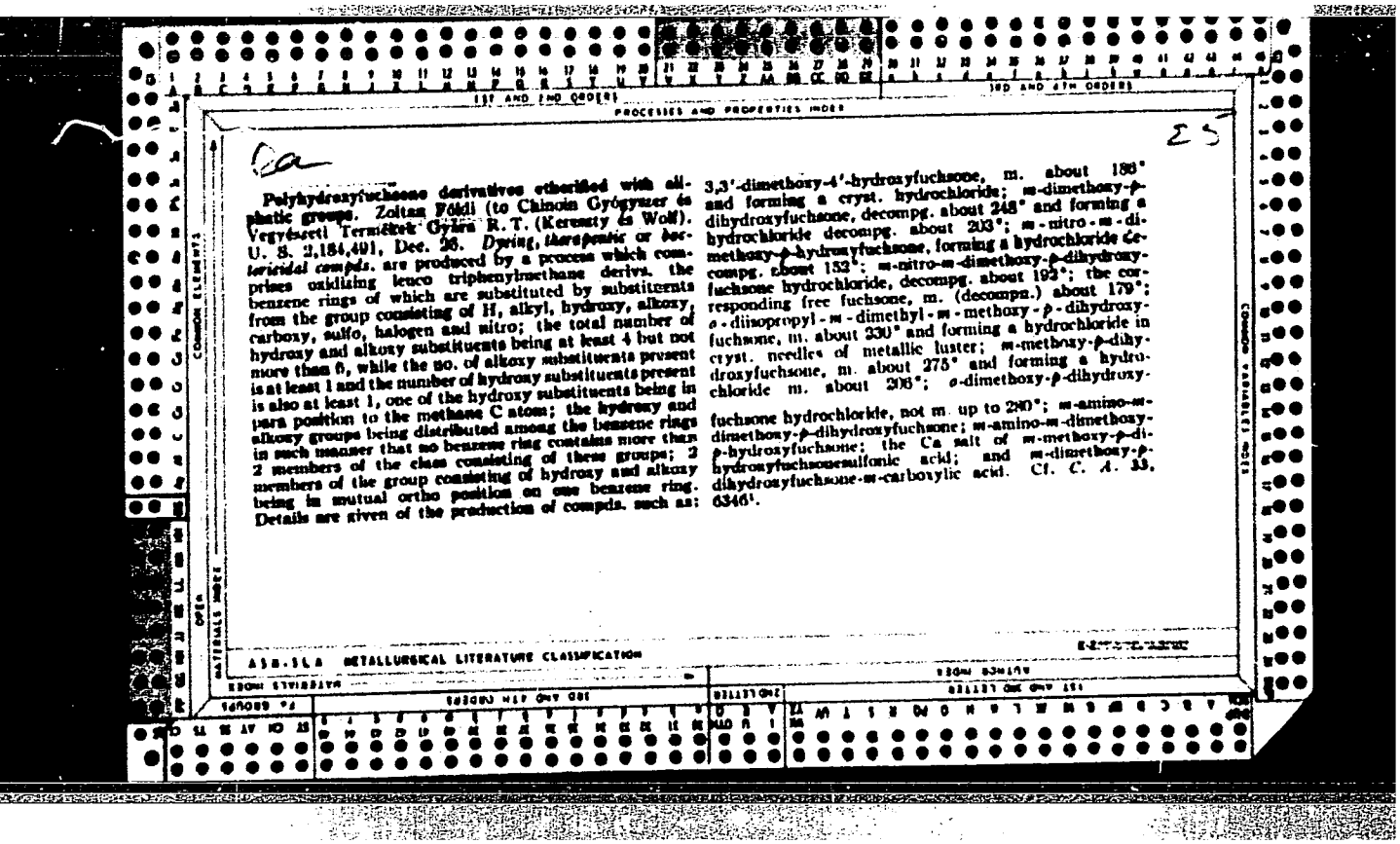
Graphic design of braking forces and locked gripping force diagrams. Jarmu mezo gep 10 no.10:368-373 O '63.

1. MOGURT.

FOLDI, Vilmos

The recreation service of trade unions is 15 years old.
Munka 14 no.5:2-3 My'64.

1. Head, General Directorate of Recreation Centers and Sanatoriums, Central Council of Hungarian Trade Unions.



PROCESSES AND PROPERTIES INDEX

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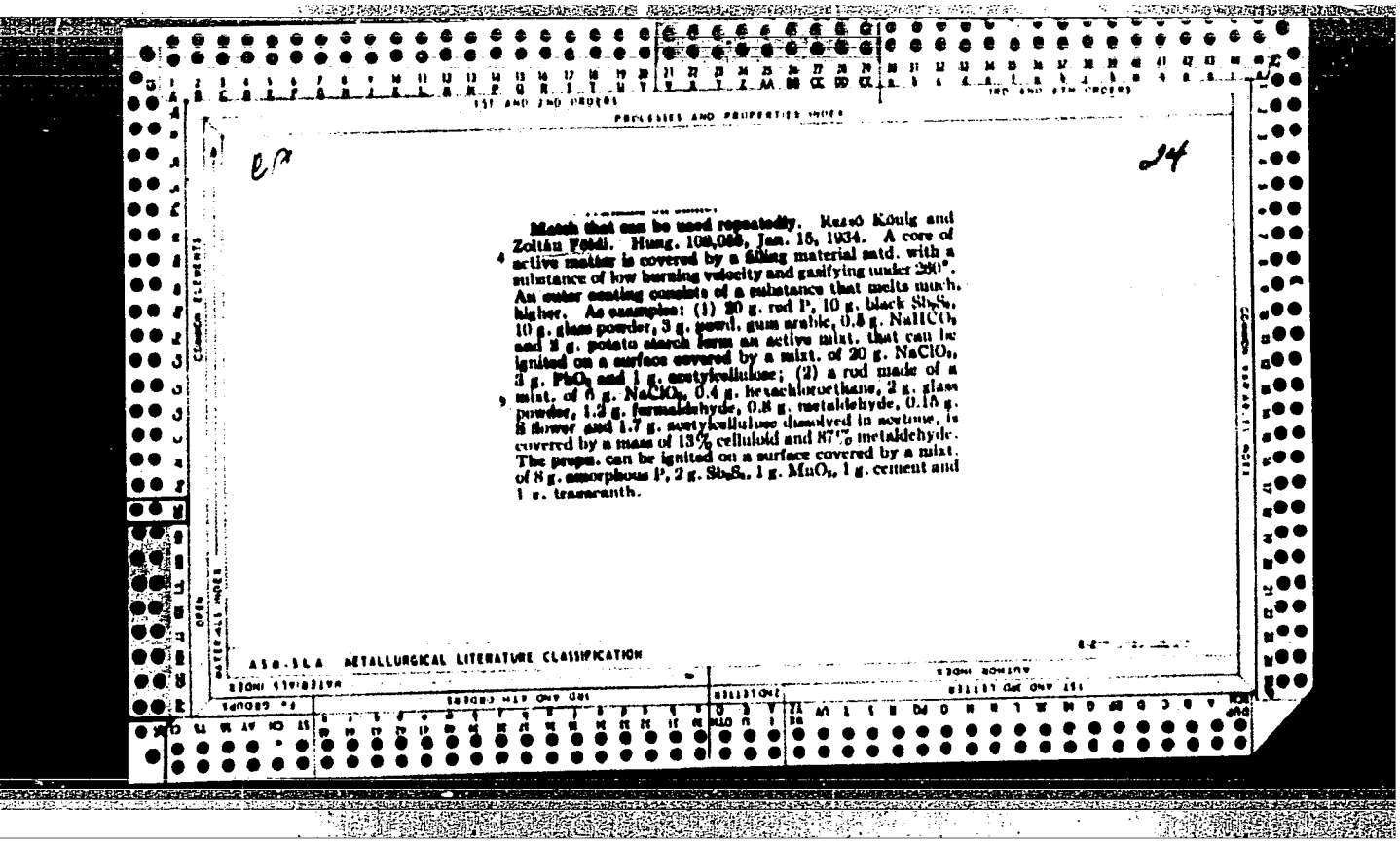
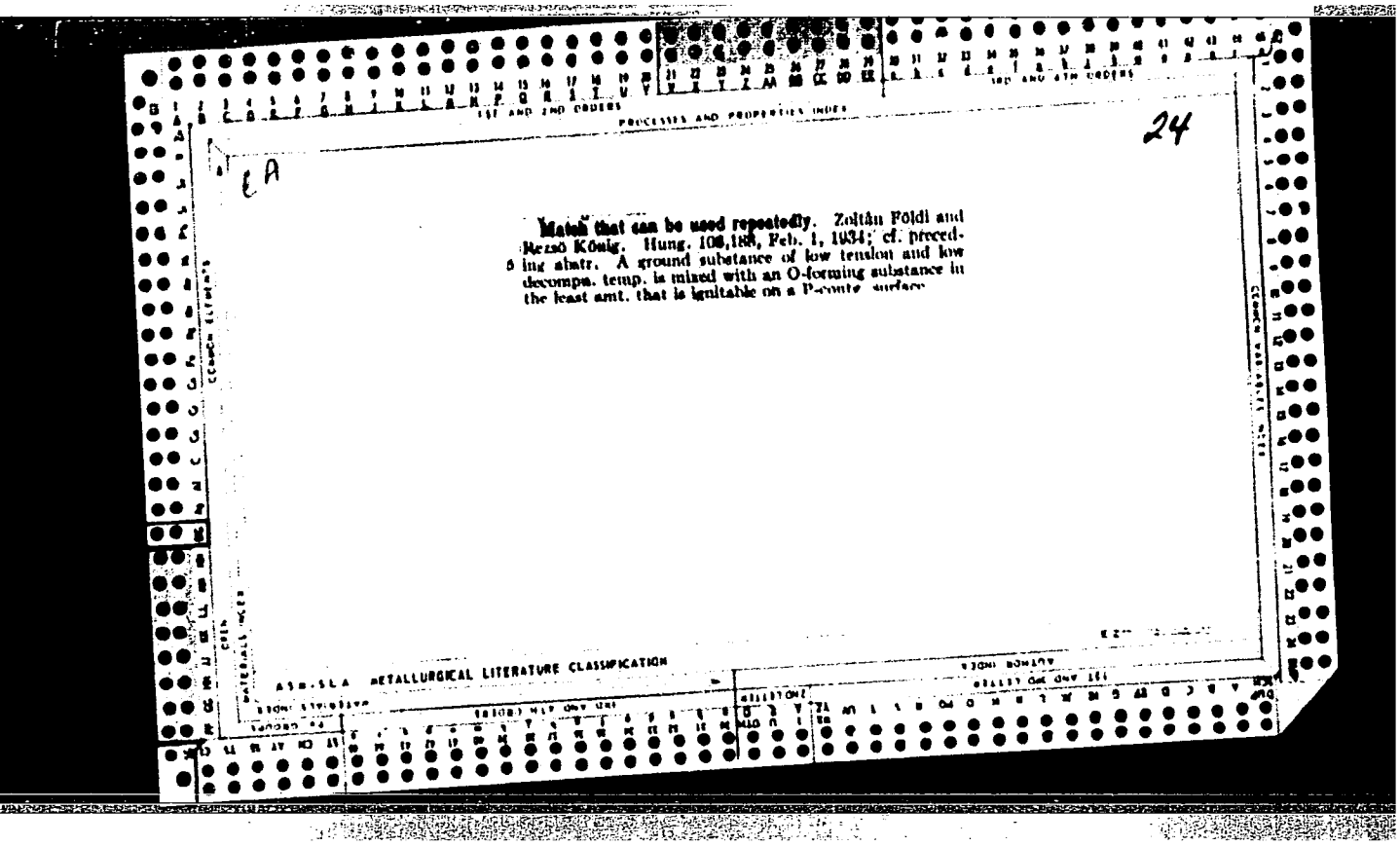
Polyhydroxyfuchsone derivatives etherified with aliphatic groups. Zoltan Földi (to Chinoin Gyógyszer és Vegyészeti Termékek Gyára R. T. (Kereszty és Wolf). U. S. 2,184,491, Dec. 26. *Dyeing, therapeutic or bactericidal compds.* are produced by a process which comprises oxidizing leuco triphenylmethane derivs. the benzene rings of which are substituted by substituents from the group consisting of H, alkyl, hydroxy, alkoxy, carboxy, sulfo, halogen and nitro; the total number of hydroxy and alkoxy substituents being at least 4 but not more than 6, while the no. of alkoxy substituents present is at least 1 and the number of hydroxy substituents present is also at least 1, one of the hydroxy substituents being in para position to the methane C atom; the hydroxy and alkoxy groups being distributed among the benzene rings in such manner that no benzene ring contains more than 2 members of the class consisting of these groups; 2 members of the group consisting of hydroxy and alkoxy being in mutual ortho position on one benzene ring. Details are given of the production of compds. such as: 3,3'-dimethoxy-4'-hydroxyfuchsone, m. about 186° and forming a cryst. hydrochloride; *m*-dimethoxy-*p*-dihydroxyfuchsone, decompg. about 248° and forming a hydrochloride decompg. about 203°; *m*-nitro-*m*-dimethoxy-*p*-hydroxyfuchsone, forming a hydrochloride decompg. about 153°; *m*-nitro-*m*-dimethoxy-*p*-dihydroxyfuchsone hydrochloride, decompg. about 192°; the corresponding free fuchsone, m. (decompn.) about 179°; *o*-diisopropyl-*m*-dimethyl-*m*-methoxy-*p*-dihydroxyfuchsone, m. about 330° and forming a hydrochloride in cryst. needles of metallic luster; *m*-methoxy-*p*-dihydroxyfuchsone, m. about 275° and forming a hydrochloride m. about 208°; *o*-dimethoxy-*p*-dihydroxyfuchsone hydrochloride, not m. up to 280°; *m*-amino-*m*-dimethoxy-*p*-dihydroxyfuchsone; *m*-amino-*m*-dimethoxy-*p*-hydroxyfuchsone; the Ca salt of *m*-methoxy-*p*-dihydroxyfuchsonesulfonic acid; and *m*-dimethoxy-*p*-dihydroxyfuchsone-*m*-carboxylic acid. Cf. *C. A.* 33, 6346[1].

A18-51A METALLURGICAL LITERATURE CLASSIFICATION

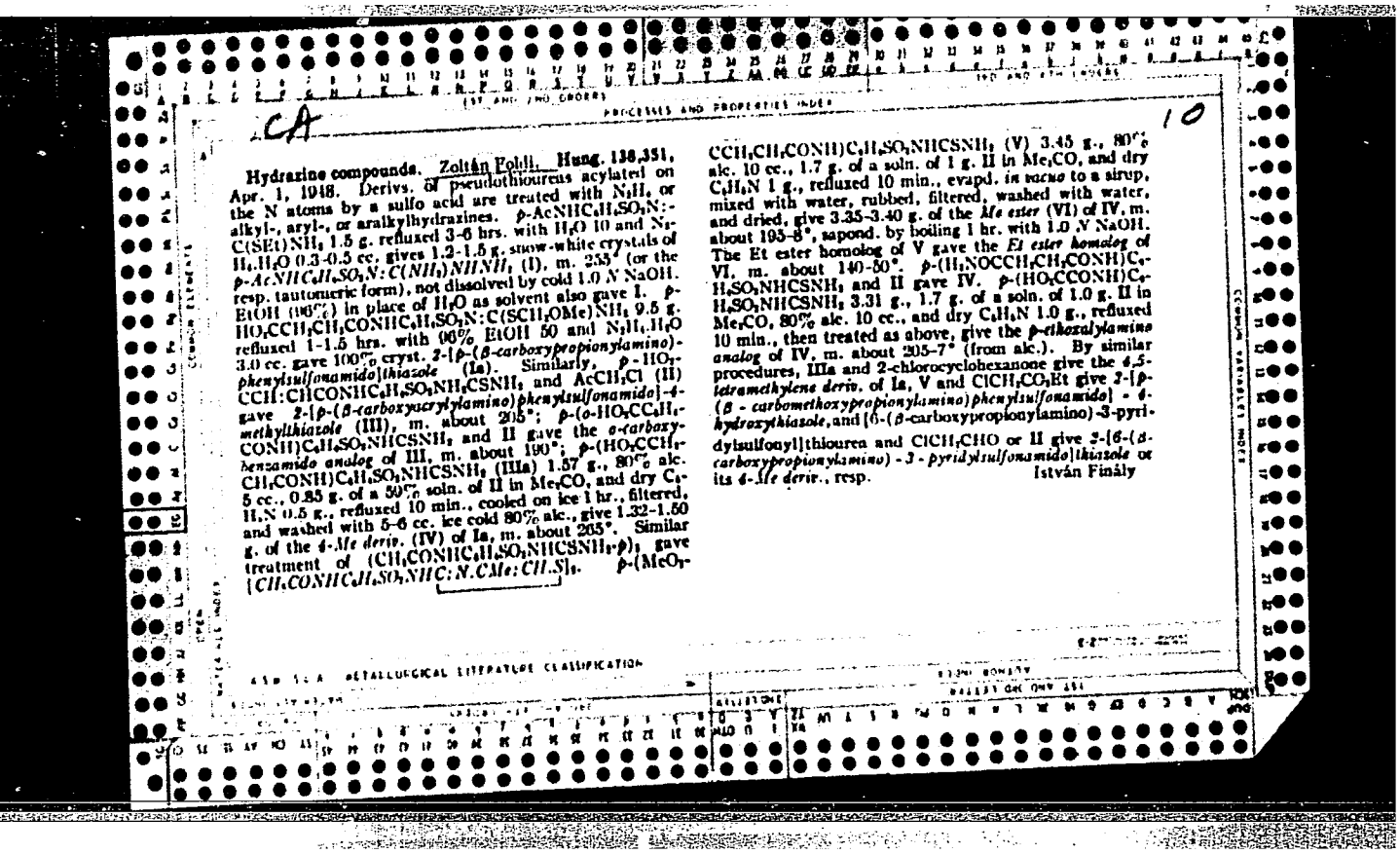


Match that can be used repeatedly. Rezsö König and Zoltán Földi. Hung. 108,085, Jan. 15, 1934. A core of active matter is covered by a filling material satd. with a substance of low burning velocity and gasifying under 200°. An outer coating consists of a substance that melts much higher. As examples: (1) 20 g. red P, 10 g. black Sb_2S_3, 10 g. glass powder, 3 g. powd. gum arabic, 0.8 g. $NaHCO_3$ and 2 g. potato starch form an active mixt. that can be ignited on a surface covered by a mixt. of 20 g. $NaClO_3$, 3 g. PbO_2 and 1 g. acetylcellulose; (2) a rod made of a mixt. of 6 g. $NaClO_3$, 0.4 g. hexachloroethane, 2 g. glass powder, 1.2 g. formaldehyde, 0.8 g. metaldehyde, 0.15 g. S flower and 1.7 g. acetylcellulose dissolved in acetone, is covered by a mass of 13% celluloid and 87% metaldehyde. The prepn. can be ignited on a surface covered by a mixt. of 8 g. amorphous P, 2 g. Sb_2S_3, 1 g. MnO_2, 1 g. cement and 1 g. tragacanth.

A50-51A METALLURGICAL LITERATURE CLASSIFICATION



Match that can be used repeatedly. Zoltán Földi and Rezsö König. Hung. 108,188, Feb. 1, 1934; cf. preceding abstr. A ground substance of low tension and low decompn. temp. is mixed with an O-forming substance in the least amt. that is ignitable on a P-coated surface.



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Hydrazine compounds. Zoltán Földi. Hung. 138,351, Apr. 1, 1948. Derivs. of pseudothioureas acylated on the N atoms by a sulfo acid are treated with N_2H_4 or alkyl-, aryl-, or aralkylhydrazines. *p*-$AcNHC_6H_4SO_2N{:}C(SEt)NH$ 1.5 g. refluxed 3–6 hrs. with H_2O 10 and $N_2H_4.H_2O$ 0.3–0.5 cc. gives 1.2–1.5 g. snow-white crystals of *p*-$AcNHC_6H_4SO_2N{:}C(NH_2)NHNH_2$ (I), m. 253° (or the resp. tautomeric form), not dissolved by cold 1.0 *N* NaOH. EtOH (96%) in place of H_2O as solvent also gave I. *p*-$HO_2CCH_2CH_2CONHC_6H_4SO_2N{:}C(SCH_2OMe)NH$ 9.5 g. refluxed 1–1.5 hrs. with 96% EtOH 50 and $N_2H_4.H_2O$ 3.0 cc. gave 100% cryst. *2-[p-(β-carboxypropionylamino)-phenylsulfonamido]thiazole* (Ia). Similarly, *p*-$HO_2CCH{:}CHCONHC_6H_4SO_2NHCSNH_2$ and $AcCH_2Cl$ (II) gave *2-[p-(β-carboxyacrylylamino)phenylsulfonamido]-4-methylthiazole* (III), m. about 205°; *p*-(*o*-$HO_2CC_6H_4CONH$)$C_6H_4SO_2NHCSNH_2$ and II gave the *o-carboxybenzamido analog* of III, m. about 190°; *p*-$(HO_2CCH_2CH_2CONH)C_6H_4SO_2NHCSNH_2$ (IIIa) 1.57 g., 80% alc. 5 cc., 0.85 g. of a 50% soln. of II in Me_2CO, and dry C_5H_5N 0.5 g., refluxed 10 min., cooled on ice 1 hr., filtered, and washed with 5–6 cc. ice cold 80% alc., give 1.32–1.50 g. of the *4-Me deriv.* (IV) of Ia, m. about 265°. Similar treatment of $(CH_2CONHC_6H_4SO_2NHCSNH_2-p)_2$ gave $[CH_2CONHC_6H_4SO_2NHC{:}N.CMe{:}CH.S]_2$. *p*-(MeO$_2CCH_2CH_2$CONH)$C_6H_4SO_2NHCSNH_2$ (V) 3.45 g., 80% alc. 10 cc., 1.7 g. of a soln. of 1 g. II in Me_2CO, and dry C_5H_5N 1 g., refluxed 10 min., evapd. *in vacuo* to a sirup, mixed with water, rubbed, filtered, washed with water, and dried, give 3.35–3.40 g. of the *Me ester* (VI) of IV, m. about 195–8°, sapond. by boiling 1 hr. with 1.0 *N* NaOH. The Et ester homolog of V gave the *Et ester homolog* of VI, m. about 140–50°. *p*-$(H_2NOCCH_2CH_2CONH)C_6H_4SO_2NHCSNH_2$ and II gave IV. *p*-$(HO_2CCONH)C_6H_4SO_2NHCSNH_2$ 3.31 g., 1.7 g. of a soln. of 1.0 g. II in Me_2CO, 80% alc. 10 cc., and dry C_5H_5N 1.0 g., refluxed 10 min., then treated as above, give the *p-ethoxalylamino analog* of IV, m. about 205–7° (from alc.). By similar procedures, IIIa and 2-chlorocyclohexanone give the *4,5-tetramethylene deriv.* of Ia, V and $ClCH_2CO_2Et$ give *2-[p-(β-carbomethoxypropionylamino)phenylsulfonamido]-4-hydroxythiazole*, and [6-(β-carboxypropionylamino)-3-pyridylsulfonyl]thiourea and $ClCH_2CHO$ or II give *2-[6-(β-carboxypropionylamino)-3-pyridylsulfonamido]thiazole* or its *4-Me deriv.*, resp.

István Finály

FOLDI, Z. 1948

(Res. Labs. Chinoin. Chem. Pharmaceut. Works Ltd. Ujpest, Hungary)

"Investigations Relating to the Synthesis of Patulin."

Jour of the Chemical Society 1948 (sept)
pp. 1295-1299
Abst: Exc. Med. 11, Vol. 11, No. 10, p. 1360

FÖLDI, ZOLTAN

Cyclic thioimidoesters and preparation of tetrazoles. Chinoin Gyógyszer és Vegyészeti Termékek Gyára R.T. (Dr. Kereszty és Dr. Wolf) and Zoltán Földi. Hung. 139,418, Apr. 25, 1949. Cyclic ketoximes, such as cyclohexanone oxime (I) or their esters with sulfonic acids or H_2SO_4 are treated in the presence of mercaptans with a catalyst to cause a Beckmann rearrangement. The thioimidoester formed is sepd. and treated in the presence of a solvent with HN_3. E.g., to 22.6 g. I in 50 cc. dry $CHCl_3$ is slowly added (90 min.) with vigorous stirring and cooling at −10 to −20° 37 g. $PhSO_2Cl$ in 30 cc. dry $CHCl_3$ and 20 cc. dry C_5H_5N, stirring continued 2.5 hrs. at −10°, and the soln. is added under reflux with stirring to 40 cc. EtSH in 30 cc. dry $CHCl_3$, warmed to 45°, boiled on a water bath 8 hrs., evapd. to 120 cc., 130 cc. 20% KOH added, the aq. phase repeatedly shaken with $CHCl_3$, the $CHCl_3$ exts. combined, washed with water, dried with K_2CO_3, filtered, the filtrate distd. at 50 mm., and the residue distd. to yield 26–8 g. colorless liquid, b_{15} 97–101°, with a disagreeable odor, identified as $N{:}C(SEt).(CH_2)_4.CH_2$ (II). $MeC_6H_4SO_2Cl$ may be used in place of $PhSO_2Cl$. II (0.01 mole) is treated with 22 cc. (0.015 mole) HN_3 in 3 vol.-% HCl_3, allowed to stand 42 hrs., then heated to 40° under reflux, kept 1 hr. at 40°, 1 hr. at 65°, and 1 hr. at 70°. The solvent is distd. off, and the residue distd. at 1 mm. and recrystd. from Et_2O gives metrazole (about 0.01 mole). If cyclopentanone oxime is used as the starting material, tetramethylenetetrazole is obtained. If the 2-Me or 4-Me derivs. of I are used as starting materials, the resp. methyltetrazoles are obtained. István Finaly

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β-Alkoxy-α-halo acids and their derivatives. Zoltán Földi. Hung. 139,710, July 15, 1949. α,β-Unsatd. acids or their derivs. are treated in the presence of Pb compds. with hypohalite esters, e.g. MeOBr, or alcs., as MeOH, and halogens. (*1*) $Pb(NO_3)_2$ (17 g.), sifted through a 14,400-mesh/sq. in. sieve and made up with 100 ml. MeOH to a pulp, is mixed (ice cooling) with 10 g. $Me_2C:CHCO_2H$ in 40 ml. MeOH, 5 ml. Br added slowly during several hrs., the mixt. let stand overnight, filtered, the filtrate neutralized with about 70 ml. of 2.5 *N* NaOH, the MeOH distd. off under vacuum, the aq. soln. filtered, acidified with 5 *N* H_2SO_4 to Congo paper, the pptd. $Me_2C(OMe)CHBrCO_2H$ extd. with ether, the ether phase dried with Na_2SO_4, and the ether distd., giving an oily mass (16 g.) which solidifies to a cryst. product. (*2*) The same method applied to crotonic acid gives $MeCH(OMe)CHBrCO_2H$. (*3*) $CH_2:CHCO_2H$ gives $MeOCH_2CHBrCO_2H$. (*4*) Same as (*1*) but with $PbCO_3$ instead of $Pb(NO_3)_2$. (*5*) Same as (*1*) but with Cl instead of Br, giving $Me_2C(OMe)CHClCO_2H$. (*6*) Same as (*1*) but with $Me_2C:CHCO_2Me$. (*7*) When EtOH is used instead of MeOH in any of the above examples, the analogous β-ethoxy-α-halo compds. are obtained. István Finály

FOLDI, Z.

(1)

The chemistry of furan [derivatives]. R. König, A. Geress, and Z. Földi (Chinoin Enterprises, Budapest). *Acta Chim. Acad. Sci. Hung.* 3, 157–63(1953).—2-Chloro-2-acetyloxetane (I) is cleaved by dil. HCl to give mainly the *ether* (II) of $HOCH_2CH_2CHClAc$ (III) (Cf. Stevens and Stein, *C.A.* 34, 6270⁹). However, fractional distn. of the crude II yields a small amt. of a *compd.* (IV), C_4H_7ClO, b_{20} 51–3°, d_4 1.129, corresponding to III less 1 mole of H_2O. II with dry HCl at 0° gives 65% *2-methyl-2,3-dichlorotetrahydrofuran* (V), b_{11} 42–3°, also obtained in 82% yield by heating II with $SOCl_2$. V (15 g.) heated 0.5 hr. with 8 ml. dry pyridine yields 10.2 g. IV; V is also converted to IV by anhyd. NaOBz or anhyd. NaOAc. II (10 g.) treated overnight with 20 ml. concd. HCl yields 8.5 g. *ClCH$_2$CH$_2$CHClAc* (VI), b_7 58°, d_4 1.239; 16.2 g. I heated with 32 ml. concd. HCl gives 7 g. VI. Refluxing 15.5 g. VI 1 hr. with 8.2 g. anhyd. NaOAc in 20 ml. AcOH gives 5.4 g. *AcOCH$_2$CH$_2$CHClAc* (VII), $b_{4.4}$ 75–8°. *2-Methyl-2-ethoxy-3-chlorotetrahydrofuran* (VIII), b_3 53°, is obtained by treating V with NaOEt in EtOH, or by refluxing VII with abs. EtOH. II and IV with $(EtO)_3CH$ and $PhSO_3H$ also give VIII. *2-Methyl-2-methoxy-3-chlorotetrahydrofuran*, b_7 45°, is obtained by boiling IV with MeOH. VI and VII are converted to the corresponding thiazole derivs. with H_2NCSNH_2. J. L. O'B.

Addition of thiol compounds to the double bond. II. Addition of hydrogen sulfide to azlactones. Z. Földi (Chem. Works Chinoin, Budapest). *Acta Chim.* [illegible] *Hung.* 3, [illegible] in [illegible]; cf. *C.A.* 43, 1722*f*. — Addn. of 5.6 g. BzCl and 2[illegible] ml. 2.5*N* NaOH to 2.94 g. Me[illegible]CMe.CH[illegible]CO[illegible]H in 2[illegible] ml. *N* NaOH gave 3.3 g. [illegible] (I), [illegible] needles, m. 164[illegible] [illegible] with 5 ml. Ac[illegible]O gave [illegible] [illegible], m. [illegible] [illegible]. Addn. of 3.5 ml. BzCl and [illegible] $NaHCO_3$ [illegible] HOCMe.CH(NH[illegible])CO[illegible]H in 15 ml. [illegible] gave 1.6 g. *HOCMe[illegible]CH(NHBz)CO[illegible]H* (II), white crystals, m. 144[illegible]. II (0.47 g.), heated for 20 min. on waterbath with 1 ml. [illegible], gave [illegible] g. *2-phenyl-4-isopropylidene-5-oxazolone* (III), yellow needles, m. [illegible]°. To a soln. of 2.01 g. III in 10 ml. C_6H_6 was added 2 ml. Et_2NH, the soln. allowed to stand in a H_2S atm. with occasional shaking, centrifuged after several hrs., the isolated crystals added to 10 ml. *N* HCl at 0°, Et_2O added to convert the [illegible] crystals, which [illegible] washed with H_2O and Et_2O, and dried *in vacuo* to give [illegible] g. $Me_2C:C(NHBz)C(O)SH.H_2O$ (IV), m. [illegible]°; [illegible] H_2O of crystn.; anhyd. IV m. [illegible]. IV [illegible] Na_2CO_3, [illegible], and [illegible], alc. soln. [illegible] ppt. with aq. [illegible] or [illegible](OAc)[illegible], black ppt. with $AgNO_3$, [illegible] ppt. with [illegible], which turns black [illegible], [illegible] red-brown color with $FeCl_3$. IV (0.[illegible] g.), heated with 0.9 ml. Ac_2O for 15 min. in steam, gave 0.2[illegible] g. III. Neutral [illegible] alc. solns. of IV become alk. and slowly revert to III at room temp. To a soln. of 2.01 g. III in [illegible] ml. C_6H_6 was added 0.77 g. Et_2N, the soln. kept in a H_2S atm. for 2 hrs., 0.67 ml. addnl. Et_2N added, the soln. washed with 12 ml. *N* HCl after 24 hrs., extd. with 20 ml. 0.65*N* $NaHCO_3$, the ext. acidified with HCl, the ppt. washed with H_2O and dried *in vacuo* to give 1.83 g. *Me₂C(SH)CH(NHBz)C(O)SH* (V), m. [illegible]°.

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Further extn. with 10 ml. 0.5*N* NaOH, of the C_6H_6 soln., followed by acidification of the ext., gave a gummy mass which crystd. to give 0.30 g. *2-phenyl-4-(2-mercaptoisopropyl)-2-thiazolin-5-one* (VI), m. 116–18°. V (1 g.) heated with 2.5 ml. Ac_2O 20–30 min., gave 0.82 g. *2-phenyl-4-isopropylidene-2-thiazolin-5-one* (VII), m. 100–1° (from aq. MeOH); a mixt. of VII and III gave a 10° m.p. depression. To a soln. of 1 g. V in 30 ml. EtOH was added 40 ml. H_2O, then 50 ml. 2% aq. $FeCl_3$, slowly and with cooling to give 0.5 g. blue'er, microscopic needles of $S.CMe_2.CH(NHBz).CO.S$ (VIII), m. 124–6° (from hot aq. MeOH). A soln. of 1 g. V in aq. EtOH refluxed 1 hr., the soln. extd. with AcOEt, the ext. evapd. to dryness, and Et_2O added to the residue gave 0.24 g. *$Me_2C(SH)CH(NHBz)CO_2H$*, m. 148–50°. A soln. of 0.7 g. III in 10 ml. alc. *N* NaSH, evapd. to dryness after 24 hrs., acidified with 4 ml. 2.5*N* HCl, and ppt. taken up in AcOEt, gave 0.4 g. VI. V was markedly bacteriostatic against *Staphylococcus aureus*, VI less so, and VIII nearly inactive. J. P. Danehy

FOLDI, Z.

"Addition of Thiol Compounds to the Double Bond." Pt. 3. "Addition of Hydrogen Sulfide to Azlactones." In English, p. 501. Budapest, Vol. 3, no. 4, 1953.

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

✓**Addition of thiol compounds to the double bond. III. Addition of hydrogen sulfide to azlactones.** *Zoltán Földi* (Chinoin Works, Upjest-Budapest). *Acta Chim. Acad. Sci. Hung.* 3, 591–10(1953)(in English); cf. C.A. 49, 10088i.—The addn. of H_2S to azlactones (oxazolones) with an aliphatic substituent in the 2-position was investigated. DL-$Me_2C(OH)CH(NH_2)CO_2H$ (I) yielded with Ac_2O *3-methyl-4-isopropylidene-2-oxazolin-5-one* (II), which was converted by H_2S in neutral alc. soln. to *2,5,5-trimethyl-2-thiazoline-4-carboxylic acid* (III), or in alk. media to the salts of $Me_2C{:}C(NHAc)CO_2SH$ (IV) and $Me_2C(SH)CH(NHAc)COSH$ (V) and an intramol. disulfide, $Me_2C.S.S.CO.CHNHAc$ (VI). I (14.7 g.) and 35 cc. Ac_2O heated until soln. takes place, and the soln. distd. gave 13.9 g. (93%) II, colorless mobile liquid (when melted), b_1 62°, b_3 66°, b_4 75°, m. 42–3° (in some instances, m. 43–6°), readily sol. in the common org. solvents except petr. ether, sparingly sol. in H_2O; the m.p. rises in 2–3 days above 160° when the II is kept over P_2O_5, which is probably the result of a polymerization catalyzed by acids; fractions of II contg. some Ac_2O were more rapidly converted to a product, m. 158–60°, which was sparingly sol. in MeOH or Me_2CO. II (1.39 g.) in 4 cc. Me_2CO heated a few min. with 4 cc. H_2O and the mixt. let stand several hrs. deposited 1.5 g. (nearly 100%) $Me_2C{:}C(NHAc)CO_2H$ (VII), fine lustrous flat needles, m. 190° (decompn.) [recrystd. from aq. Me_2CO, m. 200° (decompn.)]. Dry H_2S passed into 13.6 g. II in 20 cc. MeOH with cooling until 1 mole was absorbed, the mixt. let stand overnight, the MeOH distd. off, the gummy residue kept *in vacuo*, and 0.1 of the resulting cryst. solid triturated with cold Et_2O gave 0.8 g. III, microscopic rhombic crystals, m. 135–6°, sol. in H_2O, giving with $FeCl_3$ a pale greenish color and with $AgNO_3$ a small amt. of pale yellow ppt. which increased on heating and blackened; the remaining 0.9 of the crude product heated 10 min. in 35 cc. H_2O on the water bath and cooled, and the resulting solid washed with H_2O and dried gave 16 g. DL-acetylpenicillamine, $Me_2C(SH)CH(NHAc)CO_2H$ (VIII), m. 187.5° (decompn.), sol. in EtOH, moderately sol. in H_2O, hardly sol. in Et_2O, EtOAc, $CHCl_3$, readily sol. in pyridine, giving ppts. with $HgCl_2$ (white), $AgNO_3$ (pale yellow), and $Pb(OAc)_2$ (white); when boiled with $AgNO_3$ the latter ppt. yellow ppt. blackened; $FeCl_3$ gave a transient blue color followed by the pptn. of a white disulfide; Na nitroprusside in aq. NaOH gave a fuchsin-red color. V (0.05 g.) distd. at 180–90°/0.001–0.0005 mm. gave 0.04 g. pure, sublimed V, m. 191°. V (1 g.) heated 18 hrs. with 8 cc. 2.5 *N* HCl in a sealed tube, the almost colorless soln. evapd. *in vacuo*, the residue dissolved in 3 cc. abs. EtOH, pyridine, and the soln. let stand several days, deposited 0.7 g. DL-penicillamine, $Me_2C(SH)CH(NH_2)CO_2H$, m. 200° (decompn.), giving with Na nitroprusside in alk. soln. a fuchsin-red color, which on standing turned blue, green, and with $FeCl_3$ a blue color. The deacetylation of V could not be effected by heating 1 hr. with 2 *N* NaOH on the water bath. II (1.39 g.) treated with cooling with 10 cc. alc. *N* NaSH, and the mixt. let stand overnight deposited 1.44 g. *Na salt* (IX) of IV, microcryst. rhombohedrons, readily sol. in H_2O with neutral reaction; the aq. soln. gave with $Pb(OAc)_2$ a brown color and on boiling a black ppt., with $HgCl_2$ a pale yellow ppt. which turned snow-white in a few min., and with $FeCl_3$ a transient brownish color. The alc. mother liquor from IX evapd. to dryness *in vacuo*, the amorphous pale yellow residue (1.8 g.) acidified with 5.5 cc. 2.5 *N* HCl, the resulting sticky mass dissolved in EtOAc, the EtOAc evapd., and the residual gummy product (0.8 g.) treated with 3 cc. Me_2CO and some H_2O, and let stand about 1 week yielded 0.32 g. VI, pale lemon-yellow plates, m. 142–3°; additional amt., m. 141–3°, the mother liquors. VI (0.1 g.) heated at [illegible] sublimed without residue to give 0.098 g. pure VI, pale lemon-yellow crystals, m. 143°. VI is slightly sol. in H_2O, sol. in Me_2CO, or EtOAc, insol. in $NaHCO_3$, sol. with partial decompn. in aq. NaOH. VI (0.05 g.) in 2 cc. EtOAc extd. with 1 cc. 0.6 *N* aq. $NaHCO_3$, and the ext. evapd. gave 0.05 g. oil which soon crystd.; the crystals dissolved in 2 cc. EtOAc, extd. with 1 cc. ice-cold *N* NaOH, and the yellow ext. acidified with 1 cc. *N* HCl ppted. only 0.01 recovered

ZOLTÁN FOLDI

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VII, m. 141–5°. VI gave with Na nitroprusside in dil. aq. NaOH a deep violet, in aq. Na_2CO_3 a pink color, and, when heated in alk. soln., blackened aq. $Pb(OAc)_2$; it reduced Fehling soln., and gave a ppt. with $HgCl_2$. II (13.9 g.) in 23 cc. abs. EtOH treated with cooling with 87 cc. abs. alc. 2.3*N* KSH and the mixt. let stand overnight deposited 17 g. *K salt* (X) of IV crystg. with 0.5 mole EtOH, fine, stout, white prisms, readily sol. in H_2O; the cold aq. soln. did not give a ppt. or color with $Pb(OAc)_2$, but pptd. large amts. of PbS on boiling; it did not give an instantaneous color with Na nitroprusside in neutral or alk. soln., but gave the other color reactions and ppts. given by IX. II (13.9 g.) in 23 cc. dry C_6H_6 treated with 16.5 cc. Et_3N, H_2S passed during several hrs. with cooling into the mixt. to a wt. increase of 0.9 g., the mixt. let stand 60 hrs., and the ppt. washed with C_6H_6 yielded 5.8 g. *Et_3N salt* (XI) of IV, m. 90.5°, sol. in H_2O with neutral reaction; in alk. soln. with Na nitroprusside it gave no instant coloration but developed a blue color in about 10–20 sec.; the other color reactions and ppts. were similar to those of IX. IX (1.12 g.) in 2 cc. H_2O treated with cooling with 2.05 cc. 2.5*N* HCl, the mixt. let stand 2 hrs., and the ppt. washed with ice-cold H_2O and dried at 1 mm. and room temp. over H_2SO_4 yielded 0.65 g. IV, m. 103–11°, giving with $FeCl_3$ a transient brownish violet color, with $AgNO_3$ a black and with $HgCl_2$ a white ppt., and blackening a hot alk. Pb salt soln. IV (0.25 g.) triturated 10 min. with 1 cc. H_2O at 70–80°, the heavy colorless oil cooled, and the resulting solid filtered off and dried gave *2-methyl-4-isopropylidene-3-thiazolin-5-one* (XII), m. 36°. IX (0.20 g.) in 0.8 cc. H_2O treated with 0.1 cc. concd. HCl, the pptd. oil cooled, and the resulting crystals filtered off, washed with ice-cold H_2O, and dried at 0.1 mm. gave XII, m. 34.5–35°; the m.p. rose after some weeks to 42°; XII is sol. in MeOH and gave with Na nitroprusside and dil. aq. NaOH a pink or red color. X (10.5 g.) in 50 cc. ice-cold H_2O treated with 20 cc. 2.5*N* HCl, the cryst. ppt. dissolved in 80 cc. ice-cold EtOAc, the aq. layer shaken with ice-cold 0.6*N* $NaHCO_3$, dried with Na_2SO_4, evapd. in vacuo, and the residual oil distd. gave XII, b. 135–7°, 37–8°; the aq. $NaHCO_3$ washings, acidified with ice-cold HCl and extd. with EtOAc gave an addnl. 1.5 g. XII; the filtrate from the addnl. XII let stand overnight and extd. again with EtOAc gave an addnl. 0.4 g. only XII, indicating that the soln. contained free IV. The alk. mother liquors from XI washed with 45 cc. ice-cold 2.5*N* HCl, the extd. with 45 cc. ice-cold 2*N* Na_2CO_3, the aq. Na_2CO_3 layer acidified with HCl, the pale-colored, sticky ppt. dissolved in EtOAc, the soln. dried with Na_2SO_4, evapd. to dryness in vacuo, and the residue (0.6 g.) let stand until crystd. and triturated with cold Et_2O yielded 1.3 g. V, fine white crystals, m. 99°, giving with $FeCl_3$ a brownish red color, with Na nitroprusside in aq. Na_2CO_3 a fuchsin-red color, and in NaOH a deep bluish violet color, and, when boiled with $Pb(OAc)_2$, a *black* ppt. V (1.035 g.) in 5 cc. MeOH and 5 cc. H_2O treated with 75 cc. 0.05*M* aq. $FeCl_3$ in small portions (each portion gave a transient, deep brownish red color) and the cryst. ppt. filtered off and washed with ice-cold H_2O yielded 0.72 g. VI, pale yellowish crystals, m. 140–7°; the mother liquors extd. with EtOAc gave an addnl. 0.24 g. VI, m. 142–3°. I (7.35 g.) heated 15 min. at about 75° with 15 cc. anhyd. HCO_2H, the HCO_2H distd. off *in vacuo*, the residue again heated with 15 cc. HCO_2H, the excess HCO_2H distd. off, the residue heated 20 min. with 15 cc. Ac_2O on the water bath, and the dil. fractionated gave, after removal of the excess Ac_2O, 3.5 g. *4-isopropylidene-2-oxazolin-5-one* (XIII), b_{12} 82°, solidified and m. about 0°. XIII (0.11 g.) in 0.5 cc. Me_2CO gently warmed with 0.35 cc. H_2O until clear and the mixt. let stand several hrs. deposited 0.06 g. *$Me_2C:C(NHOCH)CO_2H$*, fine crystals, m. 184–6° (decompn.).

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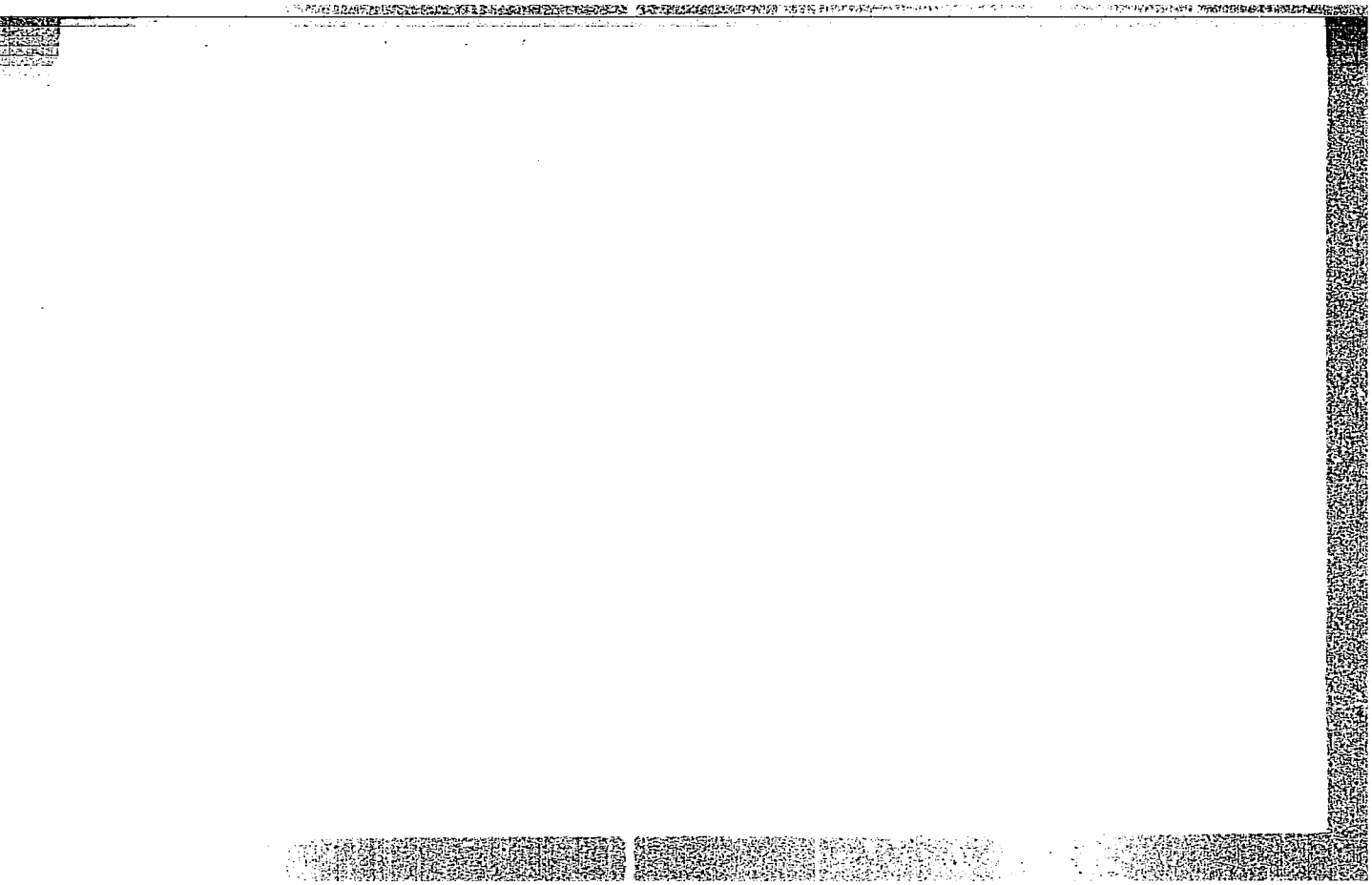

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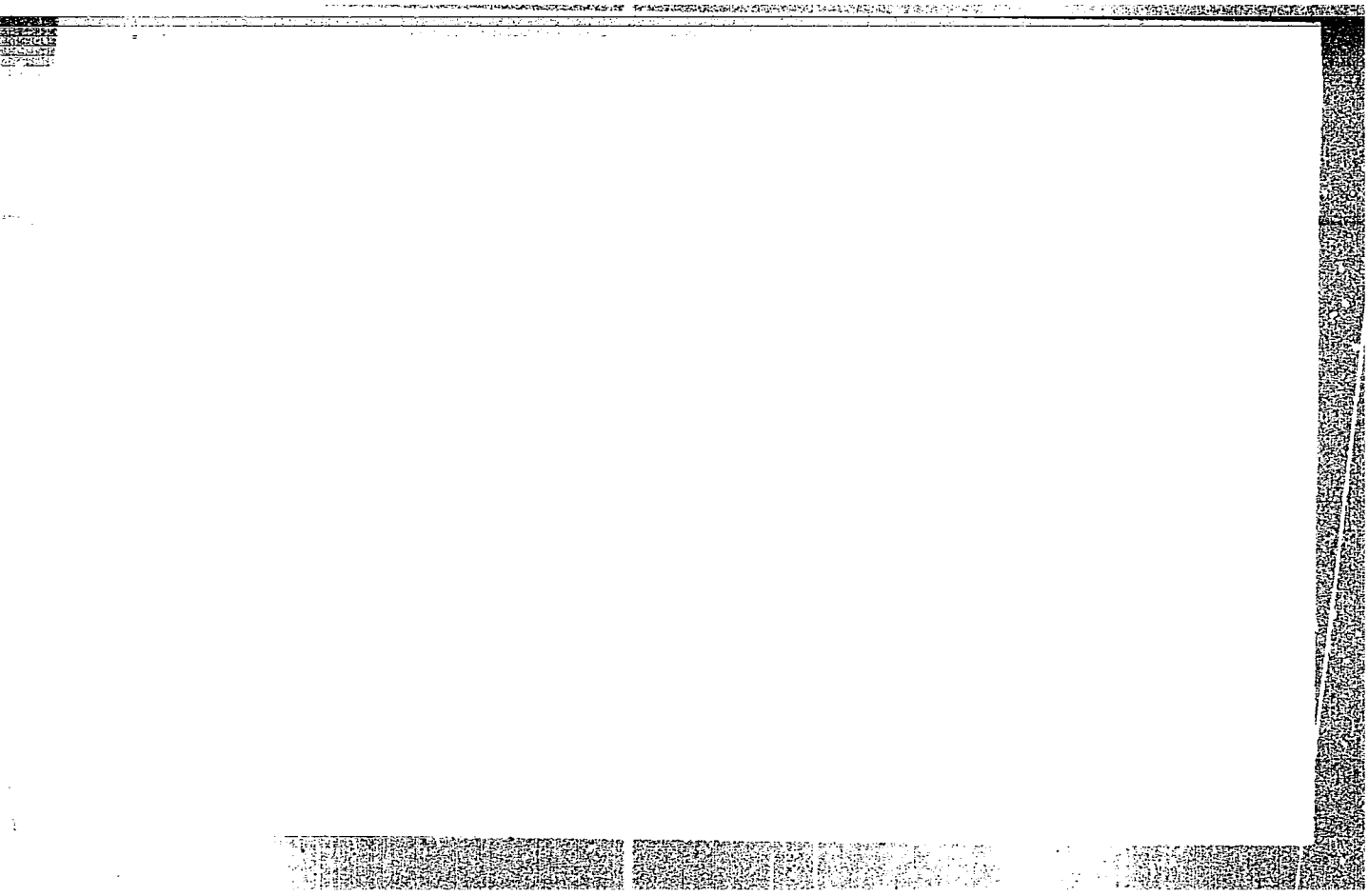

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Foldi, Zoltan

Acetalcleavage; strength of C—O—C bonds. Zoltán Földi (Chem. Lab., Budapest). *Acta Chim. Acad. Sci. Hung.* 6, 191–207(1955)(in German)(English summary); cf. *C.A.* 22, 4520.—A new dehydration reagent, SO_3, changed $PhCH(OH)CH_2R$ (I) to about 87% $PhCH:CHR$ (II) and small yields of $[Ph(CH_2R)CH]_2O$ (III). Passing 280 g. SO_3 into 1 kg. I (R = Me), letting the mixt. stand overnight, and distg. yielded 963 g. colorless distillate, from which 119 ml. H_2O sepd., and the dried org. layer yielded 755 g. II (R = Me), b_{20} 69–71°, d_4^{15} 0.913, and 43 g. unchanged I (R = Me), b_{20} 103–7°. III remained as residue from the first distn., b. about 300°. Similar results were obtainable from I (R = Et or Pr). Yields were reversed when 200 g. $PhCH_2OH$ (IV) was similarly treated with 57 g. SO_3. The 1st distillate yielded 21.6 g. unchanged IV, whereas the 140 g. yellow oily residue yielded 79 g. $(PhCH_2)_2O$ (V), $b_{0.3}$ 134–40°, b_{20} 297–8°, d_4^{15} 1.020, and 16 g. (probably) $PhCH_2OCH_2C_6H_4CH_2Ph$, $b_{0.3}$ 196–210°, d_4^{15} 1.078. The mechanism of these reactions and steric problems related to II (R = Me), and its addn. compds. with Br and with $PhSO_2NBrMe$ (*C.A.* 25, 687) are discussed. Both diastereomers of $PhCHBrCHBrMe$ (VIa and VIb) were prepd. by the slow addn. of 2.6 kg. Br in 3.5 l. CCl_4 to 2 kg. ice-cold II (R = Me) in 3 l. CCl_4, removal of CCl_4 *in vacuo*, and crystn. of the residue from 1.8 l. petr. ether to yield 3.59 kg. VIa, m. 64–7°, and 899 g. oily VIb, b. about 120–5°. To contrast the thermostability of the C—O—C bond in ethers with the instability of the similar bond in acetals, III (R = Me),

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Arylalkylcarbinols:

2,4-$(MeO)_2C_6H_3CH_2]_2O$ (VII), [3,4-$(CH_2O_2)C_6H_3CH(Et)]_2O$ (VIII), $PhCH[OCH(Et)Ph]_2$ (IX), $PhCH(OCH_2Ph)_2$ (X), and $PhCH(OCH_2CH_2Ph)_2$ (XI) were synthesized. Catalytic reduction [Pd-($BaSO_4$)] of 3,4-$(MeO)_2C_6H_3CHO$ yielded 12% VII, m. 72–3.5°, b. 315–25°, b_5 about 220°. EtMgBr with 3,4-$CH_2O_2C_6H_3CHO$ yielded 10–15% VIII, m. 84.5–5.5°. Heating 11 g. $PhCH(OEt)_2$ and 30 g. I (R = Me) 30 min. in an oil bath at 140–50°, distg. off 4.6 g. EtOH, fractionating the residual oil *in vacuo*, and redistg. at atm. pressure gave a mixt. of BzH, II (R = Me), I (R = Me), b. up to 200°, and 7.3 g. III (R = Me), b. 202–4°, b_{20} 150–5°, d_{25} 0.991. Adding 16.1 g. $PhCHCl_2$ to 100 g. I (R = Me) with which 5 g. Na had reacted, letting the mixt. stand overnight, heating several hrs. on a H_2O bath, adding C_6H_6 and H_2O to the cooled mixt., distg. off the solvent from the org. layer, and fractionating the residual oil *in vacuo* yielded 73 g. unchanged I (R = Me) and 13 g. IX, $b_{0.05-0.1}$ 140–56°, d_{25} 1.041. PhCH:NHPh (18.1 g.), 4.9 g. 100% H_2SO_4, and 23 g. IV were allowed to stand several days in ether, filtered, washed with petr. ether, and the solvent distd. off to leave 24 g. oil, twice fractionated *in vacuo* to yield 7 g. X, $b_{0.1}$ about 168°. A similar procedure with $PhCH_2CH_2OH$ in place of IV yielded 25% XI, $b_{0.4}$ 165–80°. The ethers (VII, VIII, and III) distd. without decompn., whereas the acetals (IX–XI) when distd. at atm. pressure decompd. into BzH, II, and the parent carbinol, or into IV, II, and the ketone

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Arylethylamines. I

derived from the ...ent carbinol. For example, fractionation of the distillate (723 g.) from 765 g. IX gave mixts. *A* (282 g.), b_{20} 67–75°, and *B* (241 g.), b_{20} 100–20°. *A* was freed from its BzH by shaking with 10% $NaHSO_3$ and yielded 129 g. II (R = Me), b. 168–71°, d_4 0.898, which gave VIa and VIb with Br. Repeated fractionation of *B in vacuo* gave 31 g. II (R = Me) and 194 g. I (R = Me), b_{20} 100–1°, d_4 1.007, contg. a trace of BzBr. Mol. models show the rigid structure of the acetals as compared with the ease of rotation of the ethers around the C—O—C bonds, and to this difference is ascribed the decompn. of the acetals within the same temp. range (280–320°) in which the ethers distil undecompd. By-products during this investigation were the half-acetal PhCH(OH)OCHEtPh, $b_{0.05}$ 111–13° [14.5 g. from 11 g. BzH, 30 g. II (R = Me), and 5 g. 100% H_2SO_4]; the bromo acetal $PhCH(OCHPhCHBrMe)_2$ (25.8 g. from 5.7 g. BzH and 21.5 g. MeCHBrCHPhOH) (too unstable for purification); and the ether MeCHBrCHPhOMe, $b_{0.1}$ 65–8° [190 g. (crude) from 300 g. VI, 600 ml. MeOH, and 12 ml. concd. H_2SO_4].

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FOLDI, Z.

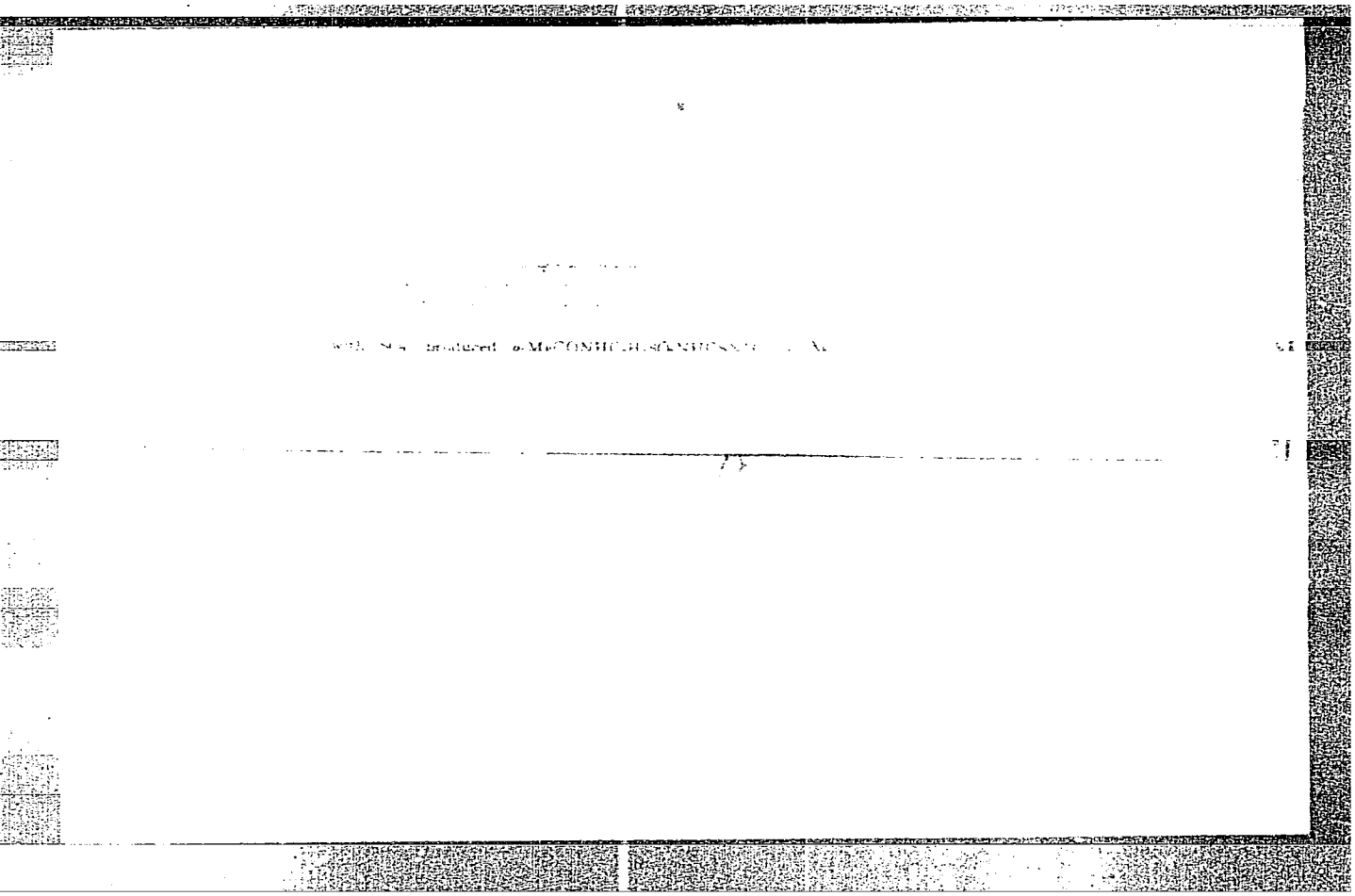
14. Synthesis of alpha-oxo-beta-acyl-gamma-butyrolactone derivatives. (In English) Z. FOLDI. *Acta Chimica Academiae Scientiarum Hungaricae*, Vol. 6, 1955, No. 3—4, pp. 307—321

In the course of earlier experiments carried out with the object to synthesize the compound patulin, its isomeric compound was obtained instead. This work was undertaken to establish the position of the bromine atom in the molecule of the monobromo derivative of this isomeric compound. The compound alpha-oxo-beta-acetyl-gamma-butyrolactone was selected as a model substance for this purpose and yielded upon bromination alpha-oxo-beta-bromo-acetyl-butyrolactone. This product reacted with pyridine or quinoline by forming unstable salts or betain-like compounds and thiazole derivatives were produced by its interaction with thiourea or sulphanilyl thiourea. The monobromo compound was transformed into hydrazine-thiazole through the action of thiosemicarbazide in acetone solution. Starting from this monobromo derivative a three-membered condensed ring system of a new type — identified as a furo-thiazolo-pyran — was prepared. The Beckmann-rearrangement of the iso-patulin oxime yielded a new type two-membered condensed ring system which was identified as an oxazepofuran derivative.

FOLDI, Zoltan Hungary

Ueber aryl-Alkyl-Carbinole---Festigkeit von C-O-C Bindungen

SO: Chemische Technik, March 1956, Uncl.



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5-Aryl oxazolidines. Z. Foldi. *Acta Chim. Acad. Sci. Hung.* 10, 1-18(1956)(In German).—The following 5-(3,4-dimethoxyphenyl)oxazolidines were prepd.: 2-phenyl (I), m. 92.5–93° (aq. MeOH); 2-(4-methoxyphenyl) (II), m. 112.5° (aq. MeOH); 2-(2-hydroxyphenyl) (III), yellow, m. 119° (EtOH); 2-(3-methoxy-4-hydroxyphenyl) (IV), yellow, m. 161–1.5° (EtOH); 2-(3,4-methylenedioxyphenyl) (V), m. 133.5–34° (1:2 $CHCl_3$-MeOH); 2-furyl (VI), brownish yellow, m. 107° (aq. EtOH); 2-styryl (VII), pale yellow, m. 154° (8:3 benzene-$CHCl_3$); 2,2-pentamethylene (VIII), b_1 160–5°; 2,2-(1-carbethoxytetramethylene) (IX), m. 133–4° (benzene); 2-methyl-2-(2-hydroxypropyl) (X), m. 104.5° (9:1 H_2O-MeOH); 2-(4-nitrophenyl) (XI), (pale yellow), m. 140° (EtOH). Also six 5-phenyloxazolidines were prepd.: *dl*-2-(4-nitrophenyl)-3,4-dimethyl (XII) yellow oil from benzene; *dl*-2-(3-nitrophenyl)-3,4-dimethyl (XIII), yellow oil from benzene; *dl*-2-(2-hydroxyphenyl)-3,4-dimethyl (XIV), m. 93.5–94° (aq. EtOH); *dl*-2-phenyl-3,4-dimethyl (XV), $b_{0.05}$ 140–5°, m. 42–5°; *l*-2-phenyl-3,4-dimethyl (XVI), m. 68–8.5° (10:1.6 EtOH-H_2O), $[\alpha]_D^{25}$ −45.27° (*c* 7.5, abs. EtOH); *dl*-2-(3-methoxy-4-hydroxyphenyl)-3,4-dimethyl (XVII), m. 141.5° (benzene-petr. ether). I was prepd. from 23.3 g. of 1-(3,4-dimethoxyphenyl)-2-aminoethanol-HCl (XVIII.HCl) in 20 ml. H_2O with 8 ml. 40% NaOH and 11 g. BzH. After standing 4 hrs. a thick oil sepd. which was washed with H_2O and dried at room temp. at 0.1 mm. to const. wt. to yield 28.2 g. (crude) I, m. 90–1° (aq. MeOH). II, IV, V, VI, VII, VIII, IX, X, and XI were prepd. in a similar manner from XVIII.HCl and the corresponding aldehyde or ketone. III was prepd. from XVIII and salicylaldehyde. XII, XIII, XIV, XV, XVI, XVII were prepd. from the appropiate ephedrine-HCl and free base, resp. The trichlorostannite of I was prepd. by addn. of 1 ml. of a 2*M* soln. of $SnCl_2$ in concd. HCl to 142.5 mg. I to ppt. yellow crystals which were washed with concd. HCl, dried over NaOH at 0.1 mm., and over P_2O_5 to const. wt. to yield 228.5 mg. orange compd., $C_{11}H_{15}O_3NH_2.SnCl_3$, m. 195–200°. The tetrachlorostannite of XVIII (116.8 mg.) was prepd. by adding 113.1 mg. $SnCl_4.2H_2O$ in 0.2 ml. concd. HCl, allowing to stand overnight, adding a further 0.25 ml. of 2*M* $SnCl_2$ soln. to sep. crystals, washing with 0.1 ml. concd. HCl, and drying to yield 140.3 mg., m. 235–6° (decompg. to a black mass). I (4 g.) in 4 ml. hot abs. EtOH with 8*N* abs. ethanolic HCl plus 10 ml. abs. ether gave a yellow mixt. which was filtered to yield 3 g. XVIII.HCl, m. 164°. When 112.6 mg. I in 1 ml. dry benzene was satd. with dry HCl, an orange-yellow mass (152.1 mg.) was obtained which on drying over P_2O_5 at 0.1 mm. resulted in a wt. loss and decrease in Cl content from 25.6 to 18.00% after 3 days; $C_{11}H_{15}O_3N.3HCl$ requires 26.96% Cl, $C_{11}H_{15}O_3N.2HCl$ requires 19.83%. A benzoate of I was prepd. by adding 1.5 g. BzCl in 5 ml. of $CHCl_3$ portionwise to 2.8 g. I in 5 ml. of $CHCl_3$ and 7.5 ml. 5*N* NaOH. Petr. ether was added and the $CHCl_3$ layer sepd. overnight to yield 2.9 g. solid. This was recrystd. from 1:5 benzene-ethanol to yield 2 g. monobenzoate, m. 137–8°. I dibenzoate was prepd. by the method of Kindler (*C.A.* 26, 3785), m. 144.5–5.5° (Kindler reported 141°). In a methylation of XV with Me_2SO_4 and methanolic NaOH on a water bath for 20 min., XV was recovered unchanged. Reduction of 16.8 g. I in 60 ml. EtOH was carried out with 0.25 g. $PdCl_2$ on 2.5 g. pptd. $BaSO_4$ at room temp. and usual pressure in about 40 min. The mixt. was filtered and evapd. to give 15.3 g. 1-(3,4-dimethoxyphenyl)-2-benzylaminoethanol (XIX), m. 87° (2:3 MeOH-H_2O). An ethanolic soln. of XIX was weakly alk. to litmus and strongly alk. with addn. of H_2O. The XIX.HCl m. 170.5°; XIX dibenzoate m. 135.5° (MeOH). Reduction of 7.7 g. II in 77 ml. warm EtOH with 0.2 g. $PdCl_2$ on C for about 65 min. gave 5.1 g. 1-(3,4-dimethoxyphenyl)-2-(*p*-anisylamino)-ethanol (XX), m. 111.5°, depressed on mixt. with II;

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XX.HCl m. 204.5° (expanding to an intense yellow melt). Reduction of 10 g. XI in 100 ml. EtOH with 0.15 g. $PdCl_2$ on 1.5 g. C for about 40 min. followed by treatment with EtOH-HCl gave 7.6 g. orange 1-(3,4-dimethoxyphenyl)-2-(4-aminobenzylamino)ethanol-2HCl (XXI.2HCl), softening at 147°. Treatment of 7 g. III in 70 ml. EtOH with 0.08 g. $PdCl_2$ on C with H at usual pressure and room temp. for about 410 min. gave after treatment with abs. ethanolic HCl and abs. ether 0.55 g. XVIII.HCl, m. 165°. III (10 g.) in 75 ml. 0.4*N* NaOH and 60 ml. EtOH was treated with 0.15 g. $PdCl_2$ on C as before for about 46 min. and the mixt. neutralized with concd. HCl, filtered, and dried *in vacuo*. The product was treated with EtOH to remove NaCl but 1-(3,4-dimethoxyphenyl)-2-(2-hydroxybenzylamino)ethanol-HCl could not be obtained in cryst. form. Reduction of 10 g. IV in 130 ml. EtOH with 0.15 g. $PdCl_2$ on C for 140 min. gave 10.1 g. product which gave on treatment with ethanolic HCl 4.4 g. 1-(3,4-dimethoxyphenyl)-2-(3-methoxy-4-hydroxybenzylamino)ethanol-HCl (XXII.HCl) with 1-(3,4-dimethoxyphenyl)-2-(3-methoxy-4-hydroxybenzylamino)ethane-HCl. The latter compd. was a hydrate, m. 120°, then above 220°; its free base was obtained as glistening fine needles from dil. EtOH, m. 107°. Treatment of 10 g. III as above, except in 100 ml. 0.33*N* NaOH, with 0.15 g. $PdCl_2$ on C for about 70 min. followed by HCl gave 8.2 g. XXII.HCl, m. 177° (abs. EtOH). Reduction of 10 g. V in 450 ml. warm EtOH with 0.15 g. $PdCl_2$ on C for 10 min. gave 5.3 g. 1-(3,4-dimethoxyphenyl)-2-piperonylaminoethanol (XXIII), m. 82–3° (aq. MeOH); HCl salt, m. 182°. Reduction of 6 g. VI in ethanol with 0.12 g. $PdCl_2$ on C for 130 min. gave 5.8 g. of product, which was dissolved in dil. HCl, extd. with ether, then made alk. An oil sepd. which crystd. on standing. On recrystn. from aq. MeOH, 3.6 g. 1-(3,4-dimethoxyphenyl)-2-furylaminoethanol was obtained, m. 90°. Reduction of 5 g. VII in 50 ml. EtOH with 0.075 g. $PdCl_2$ on C for 170 min. gave on evapn. 4.8 g. bright rose powder. Addn. to ethanolic HCl gave 3.8 g. 1-(3,4-dimethoxyphenyl)-2-(3-phenylpropylamino)ethanol-HCl, m. 172–3°; free base, m. 100–1°. Reduction of 3.1 g. VIII yielded 2.2 g. 1-(3,4-dimethoxyphenyl)-2-cyclohexylaminoethanol, m. 94–4.5°. 2,5-Diphenyloxazolidines such as I and VI are considered to be in a dynamic equil. with the Schiff base or iminoethanol structure but VIII, IX, and oxazolidines of the ephedrine and pseudoephedrine series are considered to be chiefly the oxazolidine. In a compd. like XV the *N*-methyl and 2-phenyl groups are probably trans, from steric considerations. In the case of VIII and IX, where the 5- and 6-membered rings exist as a spiro linkage, 6 boat and 2 chair forms yield possible 8-*d*- and 8-*l* forms. However, in the cyclohexyl ring, steric requirements of the *N*-H and especially the *N*-Me group, may permit only 3 boat forms and one chair form (equatorial N). D. W. G.

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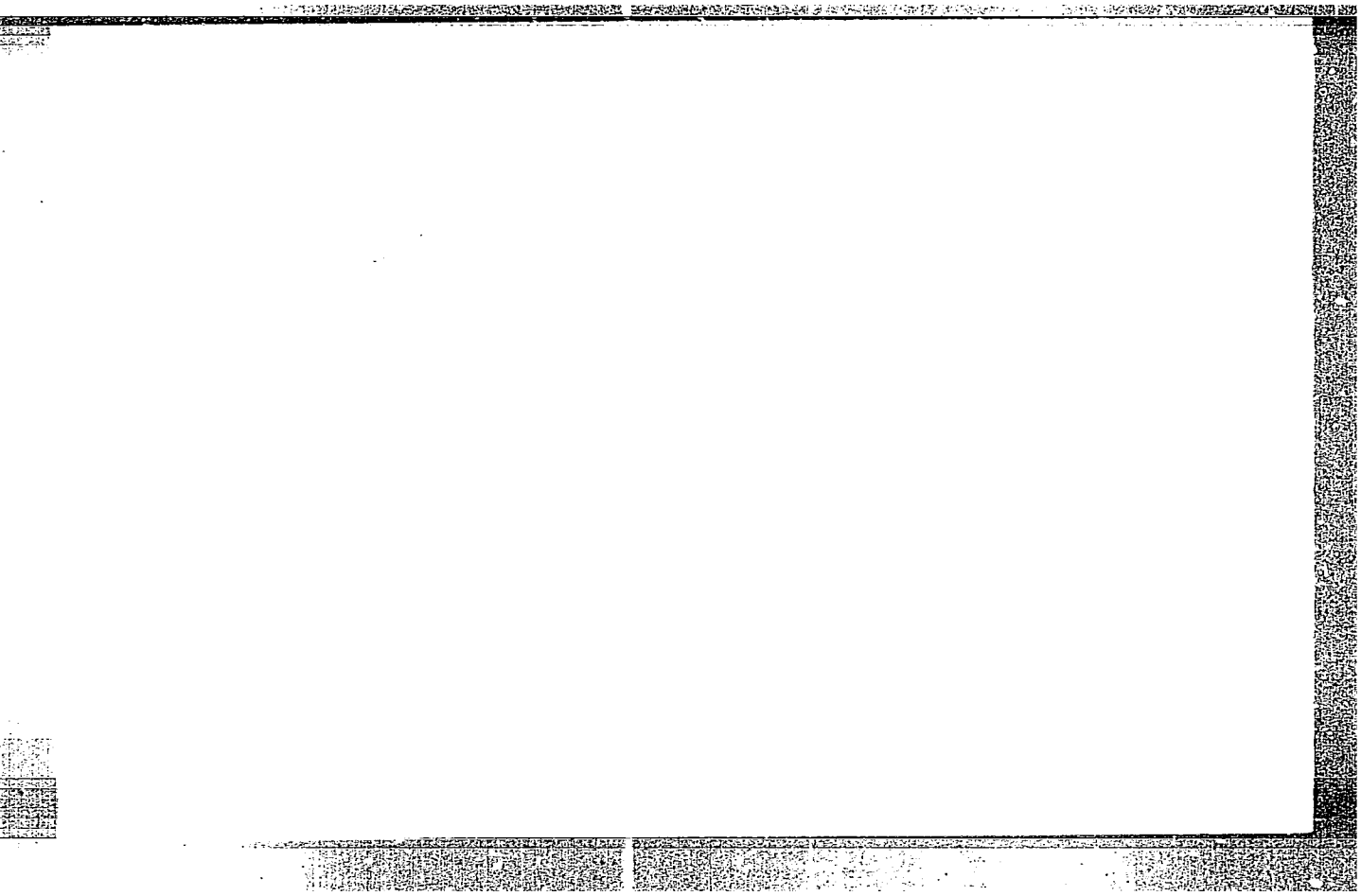

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HUNGARY/Organic Chemistry. Naturally Occurring Substances and Their Synthetic Analogs. G-3

Abs Jour: Ref Zhur-Khin., No 13, 1958, 43495.

Author : Foldi Z., Foldi T., Foldi A.
Inst : Hungarian Academy of Sciences.
Title : Conformation of Psi-Ephedrine; Copper Chelates of 2-Amino-Alcohols.

Orig Pub: Acta chin. Acad. sci. hung., 1957, 11, No 3-4, 339-348.

Abstract: In connection with elucidation of the question concerning the presence of an intramolecular hydrogen bond in Psi-ephedrine (Psi-I) and ephedrine (I), a study was made of copper chelates of I, Psi-I, and other 2-amino-alcohols. It is shown that (+)-Psi-I forms a copper chelate /(+)-Psi-II/, MP 209-210° (decomposes;

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HUNGARY/Organic Chemistry. Naturally Occurring Substances and Their Synthetic Analogs. G-3

Abs Jour: Ref Zhur-Khim., No 13, 1958, 43495.

from CH_3OH), insoluble in water and most organic solvents, soluble in alcohols, and containing (like the other investigated Cu-complexes) two molecules of amino-alcohol per aton of Cu (II). Under the same conditions there is formed from (±)-I a chelate hydrate [(±)-III], MP 165° (decomposes). By the action of cold acetone (±)-III is converted to the complex (±)-IV, MP 169-171° (decomposes) (see preliminary communication, RZhKhim, 1956, 65067). For (±)-III ther is known a solvate with one molecule of C_6H_6, MP 157-158° (decomposes), soluble in organic solvents. The authors note that the data obtained are somewhat in conflict with the assumption (Fodor G. et al., J. Organ. Chem., 1949, 337), that intra-

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molecular hydrogen bond is possible only in Psi-I, but not in I. The assumption is made that, probably, Cu^{II} -- a strong complexer, impels internal complexing of I notwithstanding the spatial hindrance. This is confirmed by lesser stability of (±)-III and (±)-IV in comparison with (+)-Psi-II. (±)-IV decomposes in organic solvents, 4 N aqueous solution of NH_3, in solutions of alkali tartrates, in aqueous solution of $(NH_4)_2S$, in which (+)-Psi-II is not decomposed or is decomposed more slowly. Psi-I reacts with $CuSO_4$ more rapidly than I, since on interaction of a mixture of (±)-Psi-I and (±)-I with an insufficient amount of $CuSO_4$ there is formed (±)-Psi-II, MP 206-207°. The authors note that by

Abs Jour: Ref Zhur-Khim., No 13, 1958, 43495.

means of Cu-complexes it is possible to separate also other diastereo-isomeric 2-amino-alcohols. Thus, threo- (±)-2-amino-1-(p-nitrophenyl)-propandiol-1,3 [threo-(±)-V] forms a complex, MP 153-154° (decomposes), of the type (+)-Psi-II, while erythro-(±)-V forms an ionic complex, MP 123-123.5° (decomposes), of the type of (±)-III (without water of crystallization). From threo-(±)-V was obtained a complex of the type (+)-Psi-II with two molecules of water of crystallization, MP 133-134° (decomposes), which on treatment with CH_3OH is converted to the more stable, anhydrous, trans-form, MP 162-163° (decomposes). Moreover, from threo- (+)-V there was obtained a complex of

Abs Jour: Ref Zhur-Khim., No 13, 1958, 43495.

MP 270°. It is shown that 2-amino-alcohols with a tertiary amino-group also form Cu-complexes, for example, a Cu-complex of type (+)-Psi-II from (±)-N-methyl-ephedrine, MP 176-177° (decomposes). It was found that amino-alcohols with a primary amino-group form insoluble complexes only if at the C-atom linked to the OH-group are present bulky substituents [Cu-complex of dimethyl ether of (±)-noradrenalin, of the (±)-III type, MP 165-166.5° (decomposes)]. Ethanolamine (VI) forms with $CuSO_4$ only a colored solution; benzal-ethanolamine does not react at all (a partial coloration of the solution is due to hydrolysis to VI). No reaction whatever takes place with 2-phenyl-5-(3',4'-dimethoxy-

Abs Jour: Ref Zhur-Khim., No 13, 1958, 43495.

phenyl)-oxazolidine and 3-amino-alcohols, for example, 2-methyl-4-amino-5-(hydroxymethyl)-pyrimidine, tropine and Psi-nortropine. It is shown that 3 molecules of (±)-Psi-I form a complex with $Co^{II}(CoCl_2)$, which does not melt up to 270°. All the investigated complexes are decomposed by H_2S with liberation of the corresponding amino-alcohol. (+)-Psi-II is obtained on grinding 1.65 g (+)-I with 10 ml water and 1.25 g $CuSO_4.5H_2O$, adding 10 ml 1 N NaOH, and separating the resulting product after 2 hours; yield 99%.

Card : 6/6

Z. Földi

Distr: 4E2c(j)/4E3d

40. Addition of hydrogen sulphide to the nitrile group of arylsulphonyl cyanamides by means of thiosulphuric acid. (In English) Z. Földi, T. Földi, A. Földi. *Acta Chimica Academiae Scientiarum Hungaricae*. Vol. 13, 1957, No. 1—2, pp. 111—116

A new reaction is described in the course of which free thiosulphuric acid is added to the CN group of arylsulphonyl cyanamides whereby very favourable yields of arylsulphonyl thioureas form. The known decomposition of thiosulphuric acid into sulphurous acid and elementary sulphur could be completely repressed by the addition of sulphurous acid to the reaction mixture at the start. The properties of acetyl sulphanilyl cyanamide and sulphanilyl cyanamide are discussed and the assumed new reaction mechanism presented.

Distr: 4E2c(1) 7

A novel reaction of alkylpyridines. Zoltan Földi (Chinoin Works, Budapest, Hung.). *Chem. & Ind.* (London) 1958, 684–5.—Benzenesulfonyl chloride (I) and *N*-methylephedrine (II) were mixed in dry C_5H_5N or γ-EtC_5H_4N and the HCl salt of II pptd. From the filtrate was obtained *1-(γ-pyridyl)-1-benzenesulfonylethane* (III), m. 107°. Et_3N and I also gave $Et_3N.HCl$ and III; I and γ-MeC_5H_4N gave *1-(γ-pyridyl)-1-benzenesulfonylmethane*, m. 201.5°; γ-EtC_5H_4N and *p*-toluenesulfonyl chloride gave *1-(γ-pyridyl)-1-(p-toluenesulfonyl)ethane*, m. 143.5°. The structures of the new arylsulfonyl compds. were proved by direct synthesis. This reaction is novel in that an alkylpyridine acts as a proton donor and undergoes *C*-arylsulfonation without the presence of a catalyst, the benzenesulfonyl group migrating from the N atom to the *p*-substituent. M. H. Ramsden

3
2-May
1

Country : Hungary G-3
Category : Organic Chemistry. Natural Compounds and their Synthetic Analogues.
Abs. Jour. : Ref. Zhur.-Khimiya No. 6, 1959 19592

Author : Foldi, Z.; Foldi, T.; Foldi, A.
Institut. : Hungarian Academy of Sciences
Title : Chelates and Conformation of Cinchona Bases.

Orig Pub. : Acta chim. Acad. scient. hung., 1958, 16, No 2, 185-192

Abstract : Confirmation of the previously determined configurative relationship between quinine (I), quinidine (II), cinchonine (III), cinchonidine (IV), and ephedrine (V), and the relationship between epi-I, epi-II, epi-III, epi-IV and Ψ-V, on the basis of data concerning the formation by the above-stated alkaloids of chelate compounds (ChC) with Cu^{2+}. I-IV do not form ChC and are configuratively related to V, epi-I - epi-IV form ChC and have a configuration analogous to that of Ψ-V. The capacity of forming ChC and hindered rotation about the $C_{(8)} - C_{(9)}$ linkage in the epi-bases suggest the assumption of the existence of a rigid hydrogen bridge -O-H···N ← and therefore of the existence of a five-

Card: 1/5

Country : Hungary G-3
Category :

Abs. Jour. : 19592

Author :
Institut. :
Title :

Orig. Pub. :

Abstract : membered ring which constitutes an additional asymmetry in epi-I - epi-IV (N atom -- new center of symmetry) as compared with I - IV. Capacity of forming ChC in the case of epi-I - epi-IV indicates apparently that configuration of quinuclidine ring, in the epi-series, is represented by the formula A. This shift in the quinuclidine ring approximates the OH at $C_{(9)}$ to $C_{(10)}$ and renders possible the formation in iso-quinidines and iso-cinchonines of a new seven-membered ring by the action of acidic agents. 0.648 g epi-II are ground in a mortar with 5 ml 0.2 M solution of $CuSO_4$, 2 ml of 1 N NaOH are added, after 2 hours there is filtered off a

Card: 2/5

G-37

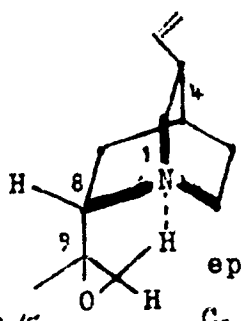
Country : Hungary G-3
Category :

Abs. Jour. : 19592

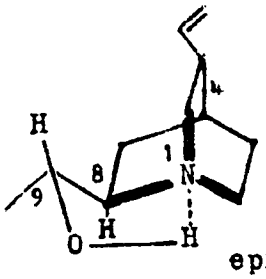
Author :
Institut. :
Title :

Orig Pub. :

Abstract :



epi-I



epi-II

A

Card:3/5

C_9 atom is linked to residue of 6-methoxy-quinoline

Country : Hungary G-3
Catogory= :

Abs. Jour. : 19592

Author :
Institut. :
Title :

Orig. Pub. :

Abstract : ChC of composition $(C_{20}H_{23}O_2N_2)Cu \cdot 1.5H_2O$, yield 0.7 g, decomposition point 150-190°. Analogously from epi-I was obtained ChC of epi-I, decomposition point 160-180° and from the dihydrochloride of the double salt epi-I·epi-II the mixed ChC of epi-I·epi-II, MP 125-160° (decomposes). 0.648 g I are ground for 40 minutes with 20 ml 0.1 N $AgNO_3$, after 10 minutes (60°) there is obtained a molecular compound of composition $C_{20}H_{24}N_2O_2 \cdot AgNO_3 \cdot 2H_2O$, yield 0.94 g, decomposition point 202-205°. Epi-II forms an analogous compound, MP 180° (decomposes). 0.648 g I are ground with 20 ml 0.1 N $AgNO_3$ at 20°, then 10 minutes at 70°, after

Card: 4/5

G-38

Country : Hungary G-3
Category :

Abs. Jour. : 19592

Author :
Institut. :
Title :

Orig Pub. :

Abstract : 1 hour added 2.1 ml 1 N NaOH and after 5 hours there are obtained 0.882 g ChC of composition $C_{20}H_{23}N_{22}O_2Ag \cdot H_2O$, MP 165°. Epi-II yields under analogous conditions a ChC of decomposition point 170-180°. Epi-II, dibenzoyl-d-tartrates of epi-II and epi-I give a violet coloration with a solution of $CuSO_4$ in NH_4OH and C_4H_6CH. Preliminary communication see RZhKhim, 1957, 74559. -- Ye. Tsvetkov.

Card: 5/5

FÖLDI, Z.

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547.821.2

26/60 A novel reaction of alkyl-pyridines. (In English) Z. Földi. *Acta Chimica Academiae Scientiarum Hungaricae*, Vol. 19, 1959, No. 2—3, pp. 205—216

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1-pg(NS)

A new reaction was found according to which alkyl pyridines (*e.g.* γ-picoline, γ-ethylpiridine) with aryl sulphonyl chlorides (*e.g.* benzenesulphonyl chloride, *p*-tosyl chloride) give fair yields of C-aryl sulphonyl derivatives under mild conditions without the use of catalysts. The arylsulphonyl group is linked to the α-positioned C atom of the side chain. The position of this bond was proved by independent syntheses of the new compounds. A series of new compounds is described, *e.g.* 1-benzenesulphonyl-1-(γ-pyridyl)-ethane (m.p. 107°C), 1-(*p*-tosyl)-1-(γ-pyridyl)-ethane (m.p. 142°C), γ-(benzenesulphonyl-methyl)-pyridine (m.p. 201°C), α-amino-γ-ethylpyridine (m.p. 69—70°C) *etc.* It was found moreover that, in the course of a side reaction, aryl sulphonyl chlorides are capable of cleaving the pyridine ring while coloured glutacone dialdehyde derivatives are formed. A mechanism is presented for the interpretation of the migration of the arylsulphonyl group from the nitrogen atom (*i.e.* from the primary side of attack) to the side chain.

CRP

ERDEY-GRUZ, Tibor, akademikus (Budapest); CHOLNOKY, Laszlo; SZABO, Zoltan; SZEKER, Gyula, kandidatus; FOLDI, Zoltan; LANGYEL, Sandor, a tudomanyok doktora; TAKACS, Pal, kandidatus

An account of the 1960 work of the Section of Chemical Sciences, Hungarian Academy of Sciences. Kem tud kozl MTA 15 no.4:401-460 '61.

1. Osztalytitkar, Magyar Tudomanyos Akademia Kemiai Tudomanyok Osztalya, Budapest es Szerkeszto, Magyar Tudomanyos Akademia Kemiai Tudomanyok Osztalyanak Kozlemenyei(for Erdey-Gruz) 2.Lev.tag, Magyar Tudomanyos Akademia Kemiai Tudomanyok Osztalyanak Kozlemenyei(for Cholnoky, Szabo, Foldi) 3.Szerkesztobizottsagi tag, Magyar Tudomanyos Akademia Kemiai Tudomanyok Osztalyanak Kozlemenyei(for Lengyel)

(Hungarian Academy of Sciences) (Hungary—Chemistry)

FOLDI, Zoltan, dr. (Budapest IV., Ujpest, To u. 1-5); HEIDT-LANYI, Dorottya[Mrs] (Budapest IV., Ujpest, To u. 1-5); SZANTO, Tamas (Budapest IV., Ujpest, To u. 1-5)

Condensation of p-nitrobenzaldehyde with hydantoine. Acta chimica Hung 29 no.3:373-381 '61.

1. Chinoin Works, Ltd.

(Condensation products(Chemistry))
(Nitrobenzaldehyde) (Hydantoin)

ERDEY-GRUZ, Tibor, akademikus; BRUCKNER, Gyozo, akademikus; LENGYEL, Bela; TELEGDY-KOVATS, Laszlo, a tudomanyok doktora; HARDY, Gyula, kandidatus; GERECS, Arpad, akademikus; FOLDI, Zoltan; WOLKOBER, Zoltan; TUDOS, Ferenc, kandidatus; PURMAN, Jeno; KRAUSZ, Imre, kandidatus; ERDEY, Laszlo, akademikus; SCHAY, Geza, akademikus

An account of the 1961 work of the Section of Chemical Sciences, Hungarian Academy of Sciences. Kem tud kozl 18 no.3:343-394 '62.

1. Magyar Tudomanyos Akademia Kemiai Tudomanyok Osztalyanak titkara, es "A Magyar Tudomanyos Akademia Kemiai Tudomanyok Osztalyanak Kozlemenyei" szerkesztoje (for Erdey-Gruz). 2. Akademiai levelezo tag (for Lengyel and Foldi). 3. "A Magyar Tudomanyos Akademia Kemiai Tudomanyok Osztalyanak Kozlemenyei" szerkeszto bizottsagi tagja (for Bruckner, Erdey, Foldi, Gerecs, Hardy, Lengyel, Schay, Tudos).

HUNGARY

FOLDI, Zoltan, Dr, LANYI, Dorottya, PALOSI, Endre, SZINNYEI, Eva, Dr; Chinoin Works, Ltd, Budapest [original language version not given].

"The Bromination of Benzo-Dihydrothiadiazine-Dioxides and Related Compounds; A Novel Reaction. Preliminary Communication."

Budapest, Acta Chimica Academiae Scientiarum Hungaricae, Vol 38, No 2, 1963, pages 147-149.

Abstract: [English article] The bromination of various benzo-dihydrothiadiazine dioxides is reported. Carried out in a water-tetrachloro methane mixture at room temperature, the insoluble products have been filtered off. Some hetero-aromatic compounds resisted bromination, others reacted nearly quantitatively with one molecule of bromine. The bromination in homogeneous medium using dry diethyl formamide as solvent and 1,3-dibromo-4,4-dimethyl hydantoin (DDH) as brominating agent, was successful with compounds which resisted bromination with elementary bromine. It is noteworthy that the $H_2N \cdot O_2S$ group was the one removed by the DDH. The fate of the sulfamyl cation is subject to a speculation in the article. 1 Western reference.

1/1

FOLIADOV, V. B.

Cand Chem Sci - (diss) "Chlorination of dipentene and synthesis, on the basis of its monochloride, of derivatives of the homoterpene series." Leningrad, 1961. 15 pp; (Leningrad Order of Lenin State Univ imeni A. A. Zhdanov); 180 copies; free; (KL, 5-61 sup, 177)

FOLDIAK, Gabor, dr., okleveles vegyeszmernok, a kemiai tudomanyok kandidatusa, kulso munkatars; BOGNAR, Istvan, okleveles gepeszmernok, tudomanyos munkatars

The method of the In ernational Electrotechnical Commission for the aging of transformer oils. Elektrotechnika 56 no.10:444-448 O '63.

1. Villamosipari Kutato Intezet, Budapest, XIII., Lehel ut 23.

FOLDIAK, GABOR

Kenoolajok tapadokepessege; irodalmi osszefoglalas.

Veszprem, Hungary, 1952, 14 p.

Monthly List of East European Accessions (EEAI) LC, Vol. 8, No. 6, June 1959
Uncl.

RUM G

17. Calculation of product yield in extraction processes — G. Földiák. (*Magyar Kémikusok Lapja* — Vol. 9, 1954, No. 4, pp 118 –120, 2 figs.)

The yields of batch or continuous extraction processes in equilibrium are calculable without determining the amount of the products, as a measure in process control, by the following equations:

$R\% = \frac{100 \cdot b - E}{b - a}$ or $R\% = \frac{(a - x) \cdot c}{y - x}$ where

$R\%$ = amount of raffinate product, percentage by weight; a = weight ratio of solvent to solvent-free extract in the raffinate solution; b = weight ratio of solvent to solvent-free extract in the extract; x = amount of solvent in the raffinate solution, percentage by weight; c = amount of raffinate in the raffinate solution, percentage by weight; y = amount of solvent in the extract solution, per-

G Foldiak

centage by weight; d = amount of extract in the extract solution, percentage by weight (% ... f = amount of solvent mixed to the feed, percentage by weight; r = weight ratio of solvent to feed. Hence it is necessary to know the ratios of solvent to feed and raffinate to solvent, i. e. the ratios of extract to solvent of the samples taken simultaneously by the proper method. The latter is easily established by laboratory distillation especially if there is a marked difference between the boiling points of the solvent and the feed. The method was found useful for calculations in connection with the refining of lubricating oils by a solvent extraction process on a pilot plant scale.

FOLDIAK, GABOR

FURFUROLOS FINOMITAS KESERLETI UZEMBEN: ZAROJELENTES

Veszprem, Hungary, 1953, 88 p.

Monthly List of East European Accessions (EEAI) LC, Vol. 8, No. 6, June 1959
Uncl.

[illegible], G.
[illegible].; [illegible], V.

"Soviet Standards in the Mineral Oil Industry", P. 172, ([illegible], Vol. 5, No. 10/11, Oct./Nov. 1953, Budapest, Hungary)

SO: Monthly List of East European Accessions (EEAL), LC, Vol. 4, No. 3, March 1955, Unc.

FOLDIAK, GABOR

A nagylengyeli koolaj termikus hobontasa; osszefoglalo jelentes.

Budapest, Hungary, 1955, 136 p.

Monthly List of East European Accessions (EEAI) LC, Vol. 8, No. 6, June 1959
Uncl.

"Calculation of output in connection with extraction processes."
Magyar Kemikusok Lapja, Budapest, Vol 9, No 4, Apr. 1954, p. 118

SO: Eastern European Accessions List, Vol 3, No 10, Oct 1954, Lib. of Congress

Foldiak, G.

HUNGARY / Chemical Technology. Chemical Products and Their Application. Processing of Natural Gases and Petroleum. Motor and Rocket Fuels. Lubricants. H

Abs Jour: Ref Zhur-Khimiya, No 9, 1959, 32844.

Author : Foldiak, G.
Inst : Not given.
Title : Lubricating Materials for Atomic Reactors.

Orig Pub: Technika (Magyar.), 1958, 2, No 4, 4.

Abstract: A brief exposition of the problems originating during the lubrication of atomic reactor components, especially those units which are particularly subject to radiation. Data are submitted on the resistance to radiation by mineral lubricants of different origin and composition (para-

Card 1/2

245

HUNGARY / Chemical Technology. Chemical Products and Their Application. Processing of Natural Gases and Petroleum. Motor and Rocket Fuels. Lubricants. H

Abs Jour: Ref Zhur-Khimiya, No 9, 1959, 32844.

Abstract: ffin, aromatic, etc.); about the behavior under reactor conditions of certain synthetic lubricants (octadecylbenzene, polypropylene oxides, silicones) and consistent lubricants. -- S. Rozenfol'd.

Card 2/2