ERMICH, Stefan; TABENSKI, Zbigniew

Free skin transplantation in the treatment of large varicose leg ulcers. Polski przegl. chir. 26 no.9:825-836 Sept 54.

1. Z Oddzialow Chirurgicznych Szpitala Miejskiego w Gliwicach. Ordynatorzy: dr. S.Ermich & dr. Z.Tabenski

(VARICOSE VEINS, ulcers
surg. skin grafts)
(SKIN TRANSPLANTATION
free graft in ther. of varicose ulcers)

ERMICH, Stefan; TABENSKI, Zbigniew

Surgical indications in gastric and duodenal ulcers. Polski tygod. lek. 11 no.28:1252-1257 9 July 56.

1. Gliwice Plac Wolnosci 8/3.
(PEPTIC ULCER, surgery,
indic. (Pol))

TABENSKI, Zbigniew; ERMICH, Stefan

Comparative evaluation of methods of treating myelitis.
Polski przegl. chir. 28 no.11:1155-1161 Nov 56.

1. Z Oddzialow Chirurgicznych Szpitala Miejskiego w Gliwicach.
I. Gliwice, pl. Wolnosci 8, m. 3.
(MYELITIS, ther.
penicillin & surg. (Pol))
(PENICILLIN, ther. use
myelitis (Pol))

ERMICH, Stefan; ZAWISLAK, Mieczyslaw

Acute inflammation of the tail of the pancreas. Polski przegl. chir. 33 no.7/9:974-975 '61.

1. Z Oddzialu Chirurgicznego Ogolnego Szpitala Miejskiego w Gliwicach Ordynator: dr S. Ermich.
(PANCREATITIS)

ERMICH, Stefan; LEJANKA, Maria; KANIEWICZ, Zbigniew

Section of Oddi's sphincter. Pol. przegl. chir. 35 no.7/8: 806-807 '63.

1. Z Oddzialu Chirurgii Ogolnej Szpitala Miejskiego w Gliwicach Ordynator: dr S. Ermich.
(VATER'S AMPULLA) (SURGERY, OPERATIVE)

ERMICH, Stefan, dr.;RUTKOWSKI, Boleslaw, dr.

Diagnostic and prognostic value of tongue picture in acute abdominal diseases. Pol. przegl. chir. 37 no.2:103-109 F '65.

1. Z Oddzialu Chirurgicznego Ogolnego Szpitala Miejskiego w Gliwicach (Ordynator: dr. S. Ermich) i z Oddzialu Anestezjologicznego Szpitala Miejskiego w Gliwicach (Ordynator: dr. B. Rutkowski).

SHANIN, Yu.N.; BURMISTROV, M.I.; BALYUZEK, F.V.; ERMILOV, N.I.

Surgery on the open heart with the D. Milrose apparatus. Vest. khir. 84 no.1:129-132 Ja '60. (MIRA 13:10)
(PERFUSION PUMP (HEART))

L 23144-66 EWP(j)/T/EWP(t)/ETC(m)-6 IJP(c) JD/WW/RM
ACC NR: AP6010708 SOURCE CODE: CZ/0034/65/000/004/028R/0289

AUTHOR: Styblo, Karel (Engineer); Ermis, Frantisek; Pivoda, Petr (Graduate chemist); Kovarik, Milos

ORG: VZU NHKG VZKG, Ostrava

TITLE: Determination of gases, and oxygen particularly, by means of the instrument exhalograph EA-1

SOURCE: Hutnicke listy, no. 4, 1965, 288-289

TOPIC TAGS: steel, aluminum, metal chemical analysis, laboratory instrument

ABSTRACT: The instrument is supplied by Balzers of Liechtenstein. Description of the instrument is given. Operation of the apparatus is described. The results are reproducible, and obtained in 3 minutes. In samples of steel stilled with Al (up to 0.05% Al) the time required is 5-6 minutes; when 0.5 Al is present the time needed is 10-12 minutes. At higher Al contents, up to 20 minutes is needed for the analysis. Orig. art. has: 2 figures and 1 table. [JPRS]

SUB CODE: 11, 07 / SUBM DATE: none / OTH REF: 006

Card 1/1 UDC

A Study of Electrolytically Isolated Carbides from Low-Alloy Boiler Plate. M. Richa, A. Smirlova, and F. Ermis. (*Hutnicki Listy*, 1955, 10, (2), 149–152). [In Czech.] The separation and micro-analysis of the carbides are described. Chemical and electron-diffraction methods were used for the identification. Carbides in vanadium steels were found to stabilize sooner than in molybdenum steels of similar compositions. The mode of carbide stabilization is described on the basis of data obtained in experiments carried out in the range 500–550° C. over periods of 8000–125,000 hr.—E. V.

RADOMIROV, P., prof.; ERMOLAEV, Iv.; KOZAROVA, M.; KHRISTOV, G.; STOIMENOVA, St.; NEDEVA, D.

Molybdenum as microfertilizer in Bulgaria. Selskostop nauka 2 no.9:1153-1160

EKNUSH, N. ; KALNINS, A.

Antisepticization of open-air wooden constructions. p. 139.

BIOLOGICHESKAIA NAUKA. SELSKOMU I LESNOMU KHOZIAISTVU. (Latvijas PSR Zinatnu akademija. Bioloģijas zinatnu nodala) Riga, Latvia, No. 3, 1957.

Monthly list of East European Accessions (EEAI), LC, Vol. 8, No. 8, August 1959.
Uncla.

BELYAKOV, G. (Riga); ERMUSH, N.[Ermusa, N.] (Riga); KALNIN'SH, A. [Kalnins, A.](Riga)

Possibilities of utilizing pitch-hydrophobized sand. Vestis Latv ak no.3:85-90 '61. (EEAI 10:9)

1. Akademiya nauk Latviyskoy SSR, Institut lesokhozaystvennykh problem i khimii drevesiny.

(Concrete) (Sand)

ERMUSH, N. [Ermusa, N.]

New developments in the field of wood protection. Vestis Latv ak no.9: 139-140 '61.

GROMOV, V.S., kand. khim. nauk, otv. red.; DOMBURG, G.E., kand. khim. nauk, red.; IYEVIN'SH, I.K.[Ievins, I.], kand. tekhn. nauk, red.; KAL'NINA, V.K.[Kalnina, V.], kand. tekhn. nauk, red.; RUPAYS, Ye.A.[Rupais, E.], kand. khim. nauk, red.; SERGEYEVA, V.N., doktor khim. nauk, red.; ERMUSH, N.A.[Ermus, N.], st. nauchn. sotr., red.; YUKNA, A.D.[Jukna, A.], kand. tekhn. nauk, red.; LEVI,S., red.; SHKLENNIK, Ch., red.

[Chemical processing and preserving of wood] Khimicheskaia pererabotka i zashchita drevesiny. Riga, Izd-vo AN Latv.SSR, 1964. 238 p. (MIRA 18:1)

1. Latvijas Padomju Socialistiskas Republikas Zinatnu Akademija. 2. Institut khimii drevesiny AN Latviyskoy SSR (for Gromov, Sergeyeva, Ermush).

USSR/Medicine - Synthomycin Jan/Feb 52

"Dermatitis Produced by Synthomycin," A. V. Ermyan, Moscow Clinical Hosp of Infectious Diseases.

"Vest Venerol i Dermatol" No 1, p 51

Synthomycin, a synthetic prepn identical with the antibiotic chloromycetin, is being used in the treatment of typhus, typhoid, and dysentery. Author describes the reaction to this drug observed in various cases. Predominating reactions after the injection of synthomycin were skin eruption resembling the rash of measles, itching of the epidermis, formation of papules over the body and extremities, erythemia with symptoms of measles, headache, and general weakness upon an application of synthomycin paste removal of the dressing revealed papules and itching. In the author's experience, these symptoms disappear within 48 hours after discontinuation of the synthomycin treatment.

222T16

ERMYAN, A. V.

222T16

ERN, O. S.

ERN, O.S.

Practical work in preparing soil mixtures and peat-humus pots.
Biol.v. shkole no.2:87-89 Mr-Ap '57. (MLRA 10:5)

1.Chelyabinskiy pedagogicheskiy institut.
(Vegetable gardening--Study and teaching)

ERN, O.S.

Pupils' experimentation in raising corn. Biol.v shkole no.2: 60-61 Mr-Ap '60. (MIRA 13:8)

1. Chelyabinskiy pedagogicheskiy institut.
(Corn (Maize))

SHESTOPALOVA, I.M.; EHN, O.V.

Ceramic products on a base of clay from new deposits in Transcarpathia. Stroi. mat., det. i izd no. 2:115-123 '65
(MIRA 19:1)

1. L'vovskiy filial Gosudarstvennogo nauchno-issledovatel'skogo instituta stroitel'nykh materialov i izdeliy.

R/009/60/000/007/002/003
A124/A026

AUTHOR: Ern, Sergiu, Engineer

TITLE: The Study and the General Diagram for the Selection of Operating Conditions of Automatic Submerged-Arc Welding

PERIODICAL: Metalurgia şi Construcţia de Maşini, 1960, No. 7, pp. 659 - 663

TEXT: Subject article analyses the main, secondary and accidental elements and phenomena which interfere with the thermo-electric welding process. Some of these elements can be mathematically determined, but the others are difficult to be appreciated. The author also deduces a semi-empiric formula for the value of the welding current, graphically represented in a general diagram, which has to contain all elements necessary for the welding conditions. The main elements of the automatic welding process, i.e., thickness of the sheet in mm (t); area of the welding wire in mm^2, (q); area of the section of the material deposed in mm^2, (S); unwinding speed of the wire in m/h (v_d); welding speed in m/h, (v_s); intensity of the welding current in amp, (I); welding tension in v (U); and specific weight of the steel = 7.8 g/cm^3 (γ), are shown in Figure 1. Between S, q, v_d and v_s there is a relation, which can be expressed by (1), or for the gen-

Card 1/3

The Study and the General Diagram for the Selection of Operating Conditions of Automatic Submerged-Arc Welding

eral diagram by (2). The caloric effect can be computed by the relation $K = \frac{U \cdot I}{2.5q \cdot v_d}$ (7). Accomplishing weldings of different sections (S) with wires of different thicknesses (q), and measuring U and I, it has been established that the value of K varies between 7.5 and 12, and presents a discontinuity against $q \cdot v_d$ because of the necessity to vary the tension. The K/U ratio presents a continuous variation being a function of $q \cdot v_d$, since I on the other hand is a function of these 2 factors. The welding current (I) is given in case of a d-c current of 140 - 500 amp by the relation (8), and in case of an a-c current of 224 - 800 amp by the relation (9). The d-c current is composed of the interval (10), and the a-c current of the interval (11). The relations (10) and (11) are represented graphically for the selection of the welding conditions. the total quantity of the heat developed is not a continuous proportion with the quantity of the heat necessary for the melting of the wire at 1,400°C. This fact is due to the variation of the welding tension, which is a function of the value of S. The relation $q \cdot v_d = Sv_s$ (12) determines by its left side, accord-

The Study and the General Diagram for the Selection of Operating Conditions of Automatic Submerged-Arc Welding

ing to (10) and (11), the welding current, and by its right side the tension $U = f(S)$. The welding speed (v_s) has no direct influence on current and tension. The control of the welding current is very important. It has been established that a relation exists between t, S and U: $S = f(t)$, and $U = f(S)$. A few suggestions are made for the treatment of the sheets before the welding operation. The quality of the automatically performed welding seams depends on the correct assembly and cleanness of the sheets. The author then finally presents a diagram for the selection of the welding conditions, which quickly supplies the equilibrium solutions of the seven main elements. The general diagram has been established for the Soviet "TS-17 MU" apparatus, but it can be easily adapted to any other apparatus by notating on the coordinates v_d and v_s the divisions of the respective apparatus. There are 3 tables and 4 figures.

Card 3/3

ERNANDES, A.

The influence of prolonged application of fertilizer and of monoculture on the distribution and nitrogen-fixation activity of Azotobacter in sod-podzolized soils. M. V. Petrov and A. Ernandes. *Izvest. Timiryazev. Sel'skokhoz. Akad.* 1955, No. 1 (Whole No. 8), 145–56.—Prolonged application (more than 40 yrs.) of different combinations of org. and mineral fertilizers show that manure alone or in combination with N-P-K mineral fertilizers stimulates *Azo·bacter* activity. Mineral fertilizer alone, especially K salts, depresses the activity. Continuous monoculture also depresses the *Azotobacter* activity. J. S. Joffe

AG

(1)

ERNANDES, A.

9 Physiological properties of weakened and atypical Azotobacter cultures grown from sodded podzols. M. V. Fedorov and A. Ernandes. *Mikrobiologiya* 24, 170–0(1955).—Prolonged cultivation of *A. chroococcum* in sodded podzol weakens physiol. activity, especially in N fixation. The enzymes of respiration retain their activity; the N fixation enzymes are inactivated, but are readily reactivated by asparagine, yeast autolyzate, or hay infusion, and also by trace elements such as Mo and B. Lack of these elements may even be the weakening factor in podzols or it may be that podzols contain inhibitors of the growth-stimulating action of yeast autolyzate and trace elements, perhaps due to soil acidity or lack of carbohydrate nutrients. In any case the enzyme system for N fixation is evidently exceptionally sensitive to inactivating influences. J. F. S.

(1)

GEL'FAND, I.M.; ERNANDES, L.F.

Automatic control of heat-treating furnaces on a programmed operation. Metallurg 6 no.8:29-31 Ag '61. (MIRA 14:8)

1. Nauchno-issledovatel'skiy institut metiznoy promyshlennosti.
(Furnaces, Heat-treating)
(Automatic control)

ERNAZAROV, E.Yu.

Regeneration of the root system in apple trees. Izv. AN Uz. SSR no.5:17-24 '56. (MIRA 12:5)
(Regeneration (Botany)) (Roots (Botany)) (Apple)

ERNDT, Aleksander

On synthetic plant growth substance derivatives of p-hydroxy-benzophenone. Roczn chemii 36 no.5:921-928 '62.

1. Department of General Chemistry, College of Agriculture, Krakow.

ACC NR: AP6023858 SOURCE CODE: UR/0108/66/021/007/0044/0051

AUTHOR: Erne Ach (Budapest)

ORG: none

TITLE: Methods of information transmission by the codes that carry information plus address or address only 8

SOURCE: Radiotekhnika, v. 21, no. 7, 1966, 44-51

TOPIC TAGS: electronic automatic telephone system, information transmission, multichannel telephone system, signal transmission

ABSTRACT: Extreme difficulties involved in synchronizing a large number of channels, in a pulse-code-modulation signal transmission system, are explained. A nonsynchronization system is suggested in which, at the sending end, a code group r_k that has arisen as a result of testing k-th input is supplemented by an "address code"; the latter is a code group p_f that corresponds to the f-th output, the addressee output. The length of the address group depends on the number of channels used; for a 10023-channel trunk, a 19-bit code word is required. Thus, the number of bits is 2.4 times as high as that required for the synchronized system; however, the latter is practically not feasible for such a large number of channels. To reduce the

Card 1/2 UDC: 621.374.372

ERNE, K.

"Sowing maize with soybeans".

p. 59 (Mezhduna Rodnyi Selskokhoziaistvennyi Zhurnal, Vol. 2, No. 2, 1958, Sofia, Bulgaria).

Monthly Index of East European Accessions (EEAI) LC, Vol. 7, No. 12, Dec. 58.

LIBKOVA, H.; BLASKOVIC, D.; VILCEK, J.; REHACEK, J.; GRESIKOVA, M.; MACICKA, O., ERNEK, E., MAYER, V.

Incidenge of antibodies against tick-borne encephalitis virus in man and domestic animals in a small village in a natural focus of infection. J.hyg.epidem., Praha 4 no.3:327-332 '60.

1. Institute of Virology, Czechoslovak Academy of Sciences, Bratislava.
(ENCEPHALITIS,EPIDEMIC immunol.)

LIBIKOVA, H.; ALBRECHT, P.; ERNEK, E.

Diagnostic horse serum and gama-globulin against viruses of the tick-borne encephalitis (TE) complex. Acta virol.Engl.Ed.Praha 5 no.4:262 Jl '61.

1. Institute of Virology, Czechoslovak Academy of Sciences, Bratislava.

(ENCEPHALITIS EPIDEMIC immunol) (IMMUNE SERUMS)
(GAMMA GLOBULIN)

NOSEK, J.; REHACEK, J.; ERNEK, E.; GRESIKOVA, M.

The importance of small vertebrates as reservoirs of tick encephalitis viruses in a natural focus in the area of Zlate Moravce. Cesk. epidem. 11 no.6:381-385 N '62.

1. Virologicky ustav CSAV v Bratislave.
(ENCEPHALITIS EPIDEMIC) (ENCEPHALITIS VIRUSES)
(VERTEBRATES)

CZECHOSLOVAKIA

ERNEK, E., MACICKA, O. and ILLES, J. [Virology Institute of CSAV, Bratislava.]

"[Tick-Borne Encephalitis Part] 6. Epizootic Situation Among Domestic Animals."

Bratislava, Biologicke Prace, Vol 8, No 9, 1962; pp 52-58.

Abstract [English summary modified]: Data on contagious diseases in domestic animals in the district Zlate Moravce 1954-1960 and serologic epidemiologic study of Q-fever, brucellosis, toxoplasmosis and leptospirosis. Epizootic conditions are considered favorable to reliable vaccination campaign in this area against tick-borne encephalitis. Three tables.

1/1

CZECHOSLOVAKIA

BLASKOVIC, D., LIBIKOVA, H., ERNEK, E., GRESIKOVA, M., MACICKA, O., VILCEK, J., MAYER, V. and REHACEK, J.; [Virologic Institute of CSAV, Bratislava.]

"[Tick-Borne Encephalitis. Part]9. Planning and Actual Implementation of the Vaccination."

Bratislava, Biologicke Prace, Vol 8, No 9, 1962; pp 66-75.

Abstract [English summary modified] : Data on serologic diagnosis before and after vaccination in 500 cows, 500 sheep and 500 goats. Both as regards immunogenicity and absolute cost, the live vaccine is superior to the formolized one and the only minor but important advantage of the inactivated one was its safety. Five tables.

1/1

CZECHOSLOVAKIA

GRESIKOVA, M. and ERNEK, E.; [Virology Institute of CSAV, Bratislava.]

[Tick-Borne Encephalitis Part] 11. Transplacental Transmission of the Antibodies in Vaccinated Domestic Animals."

Bratislava, Biologicke Prace, Vol 8, No 9, 1962; pp 94-99.

Abstract [English summary modified]: Both live and formalized vaccine against tick-borne encephalitis and louping ill cross the placenta in cattle but the percentage of protected calves varies from 18.6 to 75%. Five tables.

1/1

NOSEK, J.; KOZUCH, O.; LICHARD, M.; ERNEK, E.; ALBRECHT, P.

Experimental infection of the great dormouse (Glis glis) with tick-borne encephalitis virus. Acta virol. 7 no.4:374-376 Jl '63.

1. Institute of Virology, Czechoslovak Academy of Sciences, Bratislava.

(TICKS) (ENCEPHALITIS)

KOZUCH, O.; NOSEK, J.; ERNEK, E.; LICHARD, M.; ALBRECHT, P.

Persistence of tick-borne encephalitis virus in hibernating hedgehogs and dormice. Acta virol. (Praha)[Eng] 7 no.5:430-433 S '63.

1. Institute of Virology, Czechoslovak Academy of Sciences, Bratislava.
(ENCEPHALITIS, EPIDEMIC) (ZOONOSES)
(HIBERNATION)

ERNEK, E.; KOZUCH, O.; LICHARD, M.; NOSEK, J.; ALBRECHT, P.

Experimental infection of Clethrionomys glareolus and Apodemus flavicollis with tick-borne encephalitis virus. Acta virol. (Praha)[Eng] 7 no.5:434-436 S '63.

1. Institute of Virology, Czechoslovak Academy of Sciences, Bratislava.
(ENCEPHALITIS, EPIDEMIC)

LIBIKOVA, H.; MAYER, V.; REHACEK, J.; KOZUCH, O.; ERNEK, E.; ALBRECHT, P.; ZEMLA, J.

Study of cytopathic agents isolated from Ixodes persulcatus ticks. Acta virol. (Praha)[Eng] 7 no.5:475 S '63.

1. Institute of Virology, Czechoslovak Academy of Sciences, Bratislava.

(VIRUSES) (TICKS)

CHUMAKOV, M.P.; KARPOVICH, L.G.; SARMANOVA, Ye.S.; SERGEYEVA, G.I.; BYCHKOVA, M.V.; TAPUPERE, V.O.; LIMIKOVA, Ye.O.; Payyer, V.; RZHEGACHEK, R. [Rehacek, R.]; KOZHUKH, O. [Kozuch, O.]; ERNEK,E.

Isolating from the tick Ixodes persulcatus and from sick persons in Western Siberia a virus differing from the pathogen of tick-borne encephalitis. Vop. virus. 8 no.1:98-99 Ja-F'63. (MIRA 16:6)

(VIRUSES) (ENCEPHALITIS—MICROBIOLOGY)

LIBIKOVA, H.; GRESIKOVA, M.; REHACEK, J.; ERNEK, E.; NOSEK, J.

Immunological surveys on natural foci of tick encephalitis.
Bratisl. lek. listy 43 no.1:40-53 '63.

1. Virologicky ustav CSAV v Bratislave, riaditel akademik D. Blaskovic.

(ENCEPHALITIS, EPIDEMIC)
(ARBORVIRUS INFECTIONS)
(NEUTRALIZATION TESTS)
(ANTIBODIES)

LIBIKOVA, H.; REHACEK, [illegible]; MAYER, [illegible]; KOZU[illegible] O.; ERNEK, E.

Tick-borne encephalitis [illegible] by different methods from [illegible] [illegible] [illegible] [illegible] [illegible]

1. Institute of Virology, [illegible] Academy of S[illegible], Bratislava.

*

LIBIKOVA, H., REHACEK,J.; GRESIKOVA, M.; KOZUCH,O.; SOMOGYIOVA,J. Ernek, E.

Cytopathic viruses isolated from ixodes ricinus ticks in Czechoslovakia. Acta virol (Praha) [Engl] 8 no.1:96 Ja'64.

1. Institute of Virology, Czechoslovak Academy of Sciences, Bratislava.

LIBIKOVA, H.; MAYER, V.; KOZUCH, O.; REHACEK, J.; FRNEK, E.; ALBRECHT. P.

Isolation from Ixodes persulcatus ticks of cytopathic agents (Kemerovo virus) differing from tick-borne encephalitis virus and some of their properties. Acta virol. (Praha) [Eng.] 8 no.4:289-301 Jl '64.

1. Institute of Virology, Czechoslovak Academy of Sciences, Bratislava.

ERNEK, E.; LICHARD, M.

Role of the English sparrow (Passer domesticus) in the circulation of tick-borne encephalitis virus. J. hyg. epidem. (Praha) 8 no.3:375-379 '64

1. Institute of Virology, Czechoslovak Academy of Sciences, Bratislava.

GRA[illegible]VA,M.; NOSEK,J.; KUZUCH,J.; [illegible],V.; [illegible],M.

Study on the ecology of Tribec virus. Acta virol. (Praha) [Eng.] 9 no.1:83-88 Ja '65

1. Institute of Virology, Czechoslovak Academy of Sciences, Bratislava.

ERNEY, Gyorgy

New nomenclature of gear wheels. Szabvany kozl 13 no.7:158-160 Jl '61.

ERNEY, Gyorgy, okleveles gepeszmernok

Comparing the precision standards of up-to-date cylindrical cogwheels. Gep 16 no.11:415-424 N '64.

LEND'YEL, V.I.; ERNEST, B.M.

Use of analyticity conditions of the scattering amplitude in determining the coupling constant. Dokl. i soob. UzhGU. Ser. fiz.-mat. i ist. nauk no.5:14-16 '62. (MIRA 17:9)

JELEA, Al.; ERNEST, Ilie; PIRVU, V.; NUTA, M.; DIACONU, J.

Contributions to the study of trypsin treatment in bronchopulmonary disease. Rumanian med. rev. no.2:25-28 '62.
(TRYPSIN) (LUNG DISEASES)

JELEA, Al., dr.; ERNEST, Ilie, dr.; PIRVU, V., dr.; NUTA, M., dr.; DIAGONU, J., intern

Contributions to the study of trypsin therapy in bronchopulmonary diseases. Med. intern. 14 no.1:67-72 Ja '62.

1. Lucrare efectuata in Institutul de medicina interna al Academiei R.P.R. si M.S.P.S., director: acad. N.Gh. Lupu.
(LUNG DISEASES therapy) (BRONCHI diseases)
(TRYPSINS therapy)

CAPEK, A.; TADRA, M.; KAKAC, B.; ERNEST, I.; PROTIVA, M.

Microbiological transformation of derivatives of hexahydronaphthoic acid. Folia microbiol. 7 no.4:253-254 '62.

1. Institute of Pharmacy and Biochemistry, Prague 3.
(NAPHTHALENES -- metabolism) (LACTONES - metabolism)
(FUNGI - metabolism) (ACTINOMYCES - metabolism)

ERNEST, I; JÍLEK, O; VEJDĚLEK, Z; PROTIVA, M.

Czechoslovakia

Research Institute of Pharmacy and Biochemistry -- Prague - (for all)

Prague, Collection of Czechoslovak Chemical Communications, No 4, 1963, pp 1022-1029

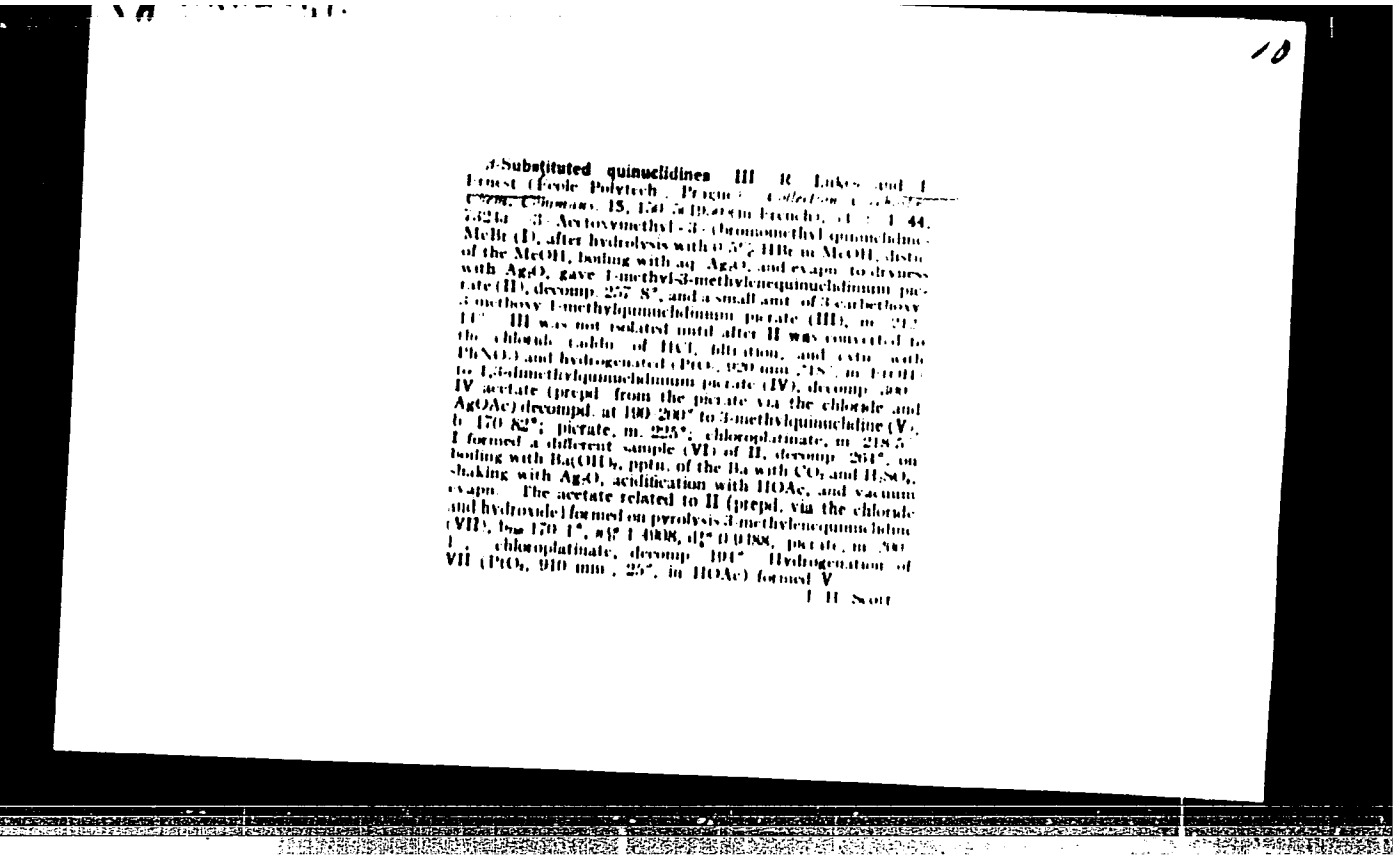
"Synthetic Experiments in the Group of Hypotensively Active Alkloides XXVI. On Some New (-)-Methyl-Reserpate-Ester."

4

ERNEST, I.; KAKAC,B.; PROTIVA,M.

Synthetic experiments in the group of active hypotensive alkaloids. Pt.31. Coll Cz Chem 29 no.1:251-265 Ja'64.

1. Forschungsinstitut fur Pharmazie und Biochemie, Prag.



10

3-Substituted quinuclidines III R Lukes and I Ernest (Czech Polytech, Prague) *Collection Czech. Chem. Commun.* 15, 130-51 (1950) (in French). cf. C.A. 44, 5324i. 3-Acetoxymethyl-3-(bromomethyl)quinuclidine MeBr (I), after hydrolysis with 0.5% HBr in MeOH, distn. of the MeOH, boiling with aq. Ag_2O, and evapn. to dryness with Ag_2O, gave 1-methyl-3-methylenequinuclidinium picrate (II), decomp. 257°, and a small amt. of 3-carbethoxy-3-methoxy-1-methylquinuclidinium picrate (III), m. 212°. III was not isolated until after II was converted to the chloride (addn. of HCl, filtration, and extn. with $PbNO_3$) and hydrogenated (PtO_2, 930 mm., 78°, in EtOH) to 1,3-dimethylquinuclidinium picrate (IV), decomp. 300°. IV acetate (prepd. from the picrate via the chloride and AgOAc) decompd. at 180-200° to 3-methylquinuclidine (V), b. 170-82°; picrate, m. 225°; chloroplatinate, m. 218.5°. I formed a different sample (VI) of II, decomp. 264°, on boiling with $Ba(OH)_2$, pptn. of the Ba with CO_2 and H_2SO_4, shaking with Ag_2O, acidification with HOAc, and vacuum evapn. The acetate related to II (prepd. via the chloride and hydroxide) formed on pyrolysis 3-methylenequinuclidine (VII), b.$_{760}$ 170.1°, n_D^{25} 1.4698, d_4^{25} 0.9188, picrate, m. 201°; chloroplatinate, decomp. 194°. Hydrogenation of VII (PtO_2, 910 mm., 25°, in HOAc) formed V.

I. H. Scott

CA ERNEST, I.

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Proof of the preparation of 3-vinylquinuclidine. I. Ernest *Collection Czechoslov. Chem. Communs.* 15, 322-34 (1950)(in French). The synthesis of 3-(2-hydroxyethyl)-quinuclidine (I) from *3-ethoxal-3-hydroxyquinuclidine* (II) is described. Dehydration of I produces *3-ethylidenequinuclidine* rather than the 3-vinyl deriv. To NaC≡CH (from 28 g. Na and C_2H_2 in 500 cc. liquid NH_3) was added 29 g. quinuclidine in 80 cc. Et_2O, and after evapn. of the NH_3 and decompn. with 200 cc. acidified ice water, the product was made alk. and extd. with $CHCl_3$, giving on removal of the solvent, 30.2 g. colorless crystals of II, m. 191.2°; *picrate*, m. 170.0.5°. II (180 mg.) in 10 cc. EtOH hydrogenated in the presence of 50 mg. 3% Pd/CaCO$_3$ at atm. pressure, yielded *3-ethyl-3-hydroxyquinuclidine* (III), m. 110.5°; *picrate*, m. 150°. Reduction of 28.5 g. II in 500 cc. EtOH with 1.0 cc. II at atm. pressure over 2.5 g. 3% Pd/CaCO$_3$, removal of the solvent, and sublimation of the crude residue gave 27.5 g. *3-exo-3-hydroxyquinuclidine* (IV), m. 80.00.5°. *picrate*, m. 152.8°. IV (28.6 g.) was heated in a sealed tube with a 10% soln. of HBr in AcOH for 2 hrs. at 60.5°, the solvent removed *in vacuo*, the residual syrup heated 2 hrs. with 100 g. KOAc in 750 cc. AcOH, the KBr and AcOH removed, the residue refluxed with 1500 cc. 10% KOH-MeOH, the solvent removed, the residue dissolved in H_2O, extd. with $CHCl_3$, the ext. dried, evapd., and the residual syrup (27.8 g.) dissolved in C_6H_6 and chromatographed over Al_2O_3, giving α-[3-(2-*hydroxyethyl*)-*dihydroquinuclidine*] (V), m. 93.5.5° (*picrate*, m. 123.3.5°), and a β-*isomer* (VI), m. 48.8.5° (*picrate*, m. 151.2°). V (5.4 g.) in 100 cc. EtOH absorbed 703 cc. H_2 in 2 hrs. in the presence of 0.2 g. PtO_2, and gave 5.1 g. I, b$_{20}$ 124.0°, m. 34.0°; *picrate*, m. 91.5.5°. VI (7.8 g.) in 100 cc. EtOH and 0.2 g. PtO_2 absorbed 1150 cc. H_2 and gave 7.4 g. I (1.05 g.) in 10 cc. PhMe was refluxed 30 min. with 10 g. P_2O_5 in PhMe added dropwise, the solvent removed, the residue heated 2 hrs. at 150.60°, decompd. with ice, the remainder of the solvent steam-distd., the residue made alk. and the base steam-distd., from the HCl salt of the distd. base the *picrate*, m. 128.5.0°, of *3-ethylidenequinuclidine* (VII) was prepd.; *chloroplatinate*, m. 170.80°. I (0.5 g.) heated 3 hrs. at 180° with 10 cc. concd. HCl in a sealed tube also gave VI. I (0.35 g.) heated 4 hrs. at 115° in a sealed tube with 10 cc. concd. HCl gave *3-(2-chloroethyl)-quinuclidine* (VIII) isolated as the *picrate*, m. 130.5.7°. I (500 mg.) in 5 cc. xylene was shaken with 135 mg. K dust in 5 cc. xylene, heated 3 hrs. on an oil bath, the dichloride suspension shaken 30 min. with 600 mg. freshly distd. CS_2, 2 cc. Et_2O, and 500 mg. MeI added, the mixt. stirred several hrs., then heated 6 hrs., and the brown ppt. collected, washed with Et_2O, and dissolved in a Hickman still, giving 280 mg. of distillate, which after purification was converted to the *picrate*, m. 101.5.2°, of the *N-methiodide* of *3-ethylquinuclidine*, $C_{14}H_{18}N_4S$ (1.980 mg.) in 100 cc. 33% HBr soln. in AcOH was heated 15 hrs. at 100° in a pressure bottle to give *3-bromoethylquinuclidine-HBr*, m. 166.8°; *picrate*, m. 148.9°. VIII (1.02 g.) refluxed 5 hrs. with 170 cc. 10% KOH in MeOH, steam-distd., and acidified with HCl and pure acid gave the *3-(2-methoxyethyl)-quinuclidine picrate*, m. 128.9°.

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Synthesis of 3-vinylquinuclidine. I. Ernest (Tech. Univ., Prague). *Collection Czech. Chem. Communs.* 15, 490-9(1950)(in English); cf. *C.A.* 43, 3818e.—When 3-(2 hydroxyethyl)quinuclidine (*C.A.* 43, 3848e) is heated 30 min. with o-$C_6H_4(CO)_2O$ and $PhSO_2H$, 3-ethylidenequinuclidine (I) alone is formed, but if the heating is shorter, a mixt. of I and *3-vinylquinuclidine* (II) results. These were sepd. by fractional crysts. of the styphnates. The picrates formed an isomorphic mixt. II, liberated from the acid styphnate, bp 96° (bath temp.), d_4^{20} 0.9409, n_D^{20} 1.4989; *picrate*, m. 150.1°; *acid styphnate*, $C_{14}H_{16}N_4O_8$, m. 152°; *normal styphnate*, $C_{28}H_{32}N_8O_{15}$, m. 186.7°. The infrared spectra are given.

Alfred Hoffman

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Decomposition of bis(diazo ketones) with cupric oxide. Ivan Ernest and Jiří Hoffman (Tech. Univ., Prague, Czech.). *Chem. Listy* 48, 201–4(1954).—Bis(diazo ketones) give, on decompn. with CuO, unsatd. cyclic diketones. The dichloride (I) of 2-carbonylcyclopentaneacetic acid (IA) was prepd. by refluxing 7.2 g. IA 4 hrs. with 20 g. PCl_5 in 25 ml. xylene, stripping off the xylene and $POCl_3$ in vacuo, and distg. the crude I (6.7 g., b. 97–112°, 1.5 g. b. 114–37°); redistn. yielded 5.9 g. I, b.$_{3.5}$ 89°. With $SOCl_2$, IA gave mostly the anhydride, b. 114–15°, which yielded I with PCl_5. $(CH_2COCl)_2$, $CH_2(CH_2COCl)_2$, and I treated with a 6-mol. excess of CH_2N_2 in ether gave the bis(diazo ketones), 1,6-bisdiazo-2,5-hexanedione (II), 1,7-bisdiazo-2,6-heptanedione (III), and 1-diazoacetyl-2-(3-diazoacetonyl)cyclopentane, probably the *cis*-isomer (IV), resp. II could not be isolated, by distg. off the ether (it decomposed even at room temp.), but its soln. in CCl_4 was stable. III (9 g.) from 10 g. $CH_2(CH_2COCl)_2$, yellow needles from ether, m. 63–4.5°, decomp. at 108°. IV, yellow oil, decomp. above 100°, stable in CCl_4. II (3 g.) with HCl in 300 ml. ether gave 1,6-dichloro-2,5-hexanedione (V), white crystals, m. 87.5–8° (from EtOH). III (2 g.) gave similarly 2 g. crystals m. 73–5° (76° after recrystn. from 1:2 EtOH-petr. ether mixt.). III (1 g.) treated with 13 ml. 20% NaOH in 45 ml. dioxane at 60–70° in the presence of 2.2 ml. 10% $AgNO_3$ and the dioxane distd. off after 45 min. gave 0.4 g. pimelamblo, m. 170–3° (174–5° after recrystn. from EtOH), hydrolyzed to the acid. IV (0.55 g.) with HCl in 70 ml. ether yielded 0.45 g. *cis*-1-chloroacetyl-2-(3-chloroacetonyl)cyclopentane (VI), colorless liquid, b.$_{0.4}$ 124–5°; bis(2,4-dinitrophenylhydrazone), reddish crystals, m. 176–7° (from EtOH-EtOAc). The bis(diazo ketones) were decompd. by refluxing with equal amts. of CuO in CCl_4. II (prepd. from 9 g. $(CH_2COCl)_2$) in 2 l. CCl_4 was refluxed 3 hrs. with 9 g. CuO, the soln. filtered, evapd. to 50 ml., the resinous material removed, and the filtrate chromatographed over Al_2O_3, yielding 0.35 g. cryst. V (CCl_4 fraction) and 2 undefined fractions in ether (0.075 g.) and MeOH (0.75 g.). No cyclic ketone was obtained. III (8 g.) similarly gave 0.115 g. CCl_4 fraction and 0.170 g. yellow ether fraction. The CCl_4 fraction yielded the bis-(2,4-dinitrophenylhydrazone), m. 250–60° (decompn.) (from EtOH-C_5H_5N). of 2-cycloheptene-1,4-dione. Similar decompn. of $(CH_2CH_2COCHN_2)_2$ prepd. from $(CH_2CH_2COCl)_2$ gave no individual ketone on chromatography. IV (prepd. from 2.8 g. I) in 250 ml. CCl_4 was refluxed 3 hrs. with 3 g. CuO, the CuO removed, the soln. evapd. to 50 ml., treated with 300 ml. ether, the resinous ppt. filtered off, the filtrate evapd., and the residue extd. with ether, yielding 1 g. of a sirupy material which on chromatography over Al_2O_3 No. 2 gave 0.1 g. CCl_4 fraction and 0.045 g. ether fraction (no individual ketone). The CCl_4 fraction yielded by another chromatography over Al_2O_3 No. 1 0.0175 g. of bicyclo[3.3.0]-3-decene-2,5-dione; bis(2,4-dinitrophenylhydrazone), m. 253° (decompn.) (from EtOH-EtOAc).

M. Hudlický

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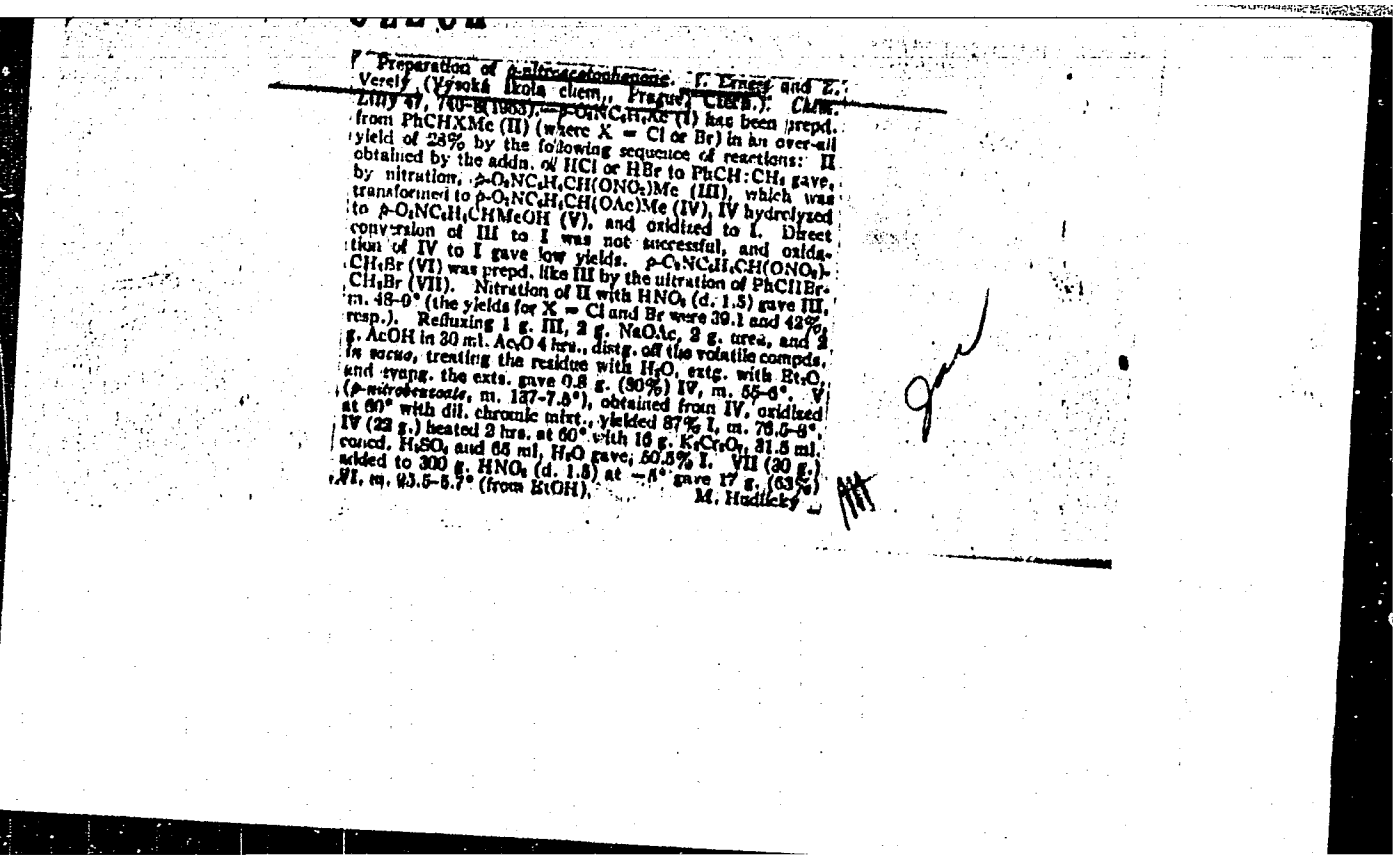
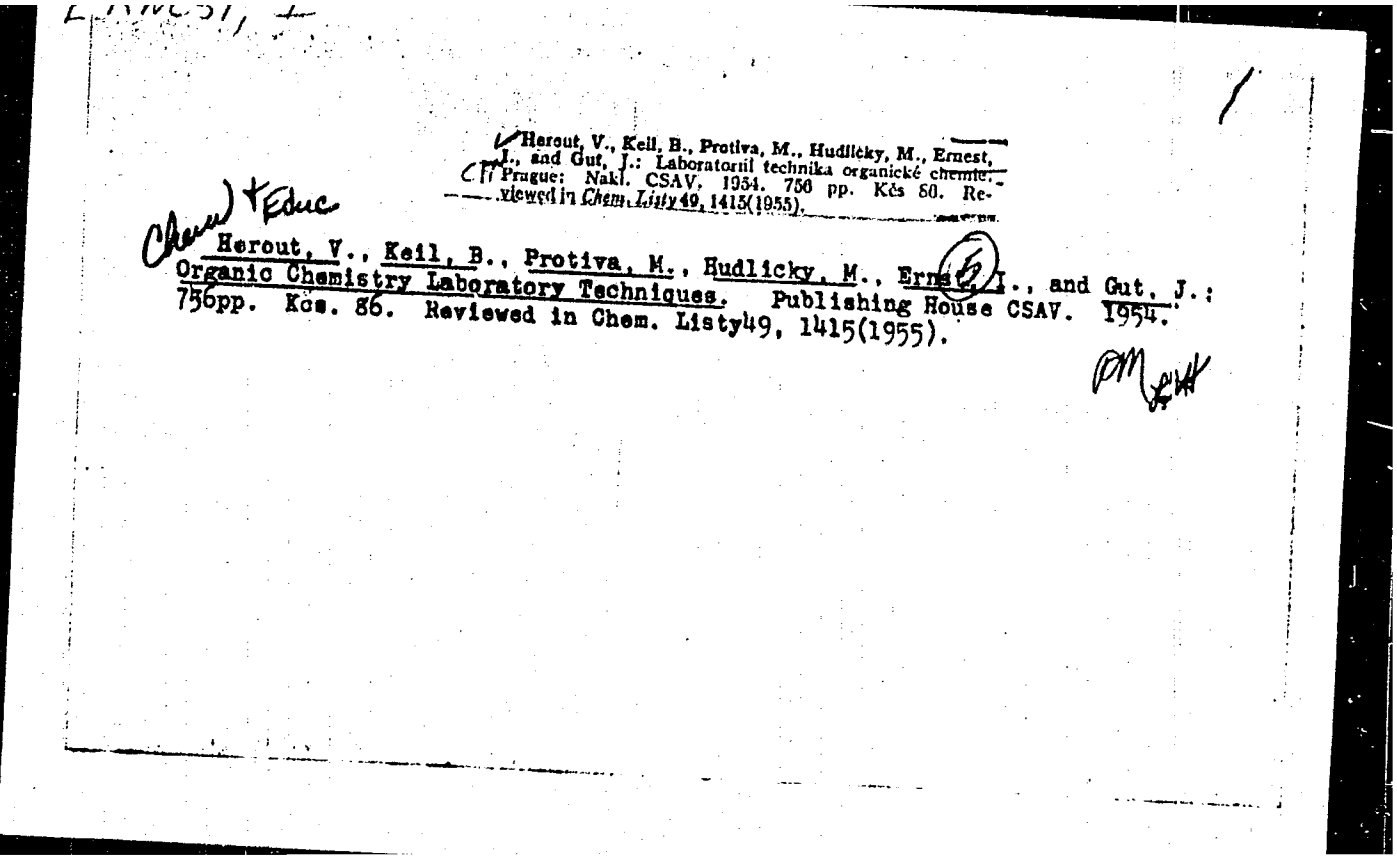
Allylic rearrangement. Ivan Ernest. (Tech. Univ., Prague, Czech.). *Chem. Listy* 46, 58-61(1952).—A review with 73 references. M. Hudlicky



Preparation of *p*-nitrocatechol. F. Ernest and Z. Vereš (Výzkumná škola chem., Prague). *Chem. Listy* 47, 740–8(1953).—*p*-O₂NC₆H₄Ac (I) has been prepd. from PhCHXMe (II) (where X = Cl or Br) in an over-all yield of 28% by the following sequence of reactions: II obtained by the addn. of HCl or HBr to PhCH:CH₂ gave, by nitration, *p*-O₂NC₆H₄CH(ONO₂)Me (III), which was transformed to *p*-O₂NC₆H₄CH(OAc)Me (IV), IV hydrolyzed to *p*-O₂NC₆H₄CHMeOH (V), and oxidized to I. Direct conversion of III to I was not successful, and oxidation of IV to I gave low yields. *p*-O₂NC₆H₄CH(ONO₂)-CH₂Br (VI) was prepd. like III by the nitration of PhCH₂Br. CH₂Br (VII). Nitration of II with HNO_3 (d. 1.5) gave III, m. 48–9° (the yields for X = Cl and Br were 39.1 and 42%, resp.). Refluxing 1 g. III, 2 g. NaOAc, 2 g. urea, and 2 g. AcOH in 30 ml. Ac_2O 4 hrs., distg. off the volatile compds. *in vacuo*, treating the residue with H_2O, extg. with Et_2O, and evapg. the exts. gave 0.8 g. (80%) IV, m. 55–6°. V (*p*-nitrobenzoate, m. 137–7.5°), obtained from IV, oxidized at 60° with dil. chromic mixt., yielded 87% I, m. 76.5–8°. IV (22 g.) heated 2 hrs. at 60° with 16 g. $K_2Cr_2O_7$, 31.5 ml. concd. H_2SO_4 and 65 ml. H_2O gave, 50.5% I. VII (30 g.) added to 300 g. HNO_3 (d. 1.5) at −5° gave 17 g. (63%) VI, m. 93.5–5.7° (from EtOH). M. Hadlicky



Herout, V., Keil, B., Protiva, M., Hudlicky, M., Ernest, I., and Gut, J.: Laboratorní technika organické chemie. Prague: Nakl. CSAV. 1954. 756 pp. Kčs 80. Reviewed in *Chem. Listy* 49, 1415(1955).

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Herout, V., Keil, B., Protiva, M., Hudlicky, M., Ernest, I., and Gut, J.: Organic Chemistry Laboratory Techniques. Publishing House CSAV. 1954. 756pp. Kcs. 86. Reviewed in Chem. Listy49, 1415(1955).

ERNEST, IVAN

CZECH

Decomposition of diazo ketones by cupric oxide. II Decomposition of ω-diazoacetylcarboxylic esters. A new method for the preparation of higher paraffin-α,ω-dicarboxylic acids. Ivan Ernest (Výzkl. Ústav chem., Prague). *Chem. Listy* 48, 847-57(1954); *Collection Czechoslov. Chem. Communs.* 19, 1178-99(1954) (in German); cf. *C.A.* 46, 7048*h*.—ClCO(CH$_2$)$_n$CO$_2$Et (I) (n = 0,1,2,3,5,8), were transformed to N$_2$CHCO(CH$_2$)$_n$CO$_2$Et (II) the decompn. of which with CuO gave :CHCO(CH$_2$)$_n$CO$_2$Et]$_2$ (III). Hydrogenation of III (n = 2,3,4,5,8) yielded [CH$_2$CO(CH$_2$)$_n$CO$_2$Et] (IV), which were hydrolyzed to [CH$_2$CO(CH$_2$)$_n$CO$_2$H]$_2$ (V). Three of the IV (n = 4,5,8) were transformed to the corresponding [CH$_2$C(SCH$_2$CH$_2$S)(CH$_2$)$_n$CO$_2$Et]$_2$ (VI) the desulfuration of which with Raney Ni gave [CH$_3$CH$_2$(CH$_2$)$_n$CO$_2$Et]$_2$ (VII). [CH$_2$CH$_2$(CH$_2$)$_n$CO$_2$H]$_2$ (VIII) were obtained from VII by alk. hydrolysis. Refluxing V (n = 4) 60 min. with 25% aq. NH$_3$ gave pyrrol-α,α'-divaleric acid (IX), m. 158-60.5° (from H$_2$O). I were prepd. by heating the corresponding acid-esters with excess SOCl$_2$ (n, and b.p. are given): *0*, 129.5-30.5°; *1*, b$_{10}$ 60-60.5°; *2*, b$_{11}$ 80-90°; *3*, b$_{10}$ 102.5-3.5°; *4*, b$_{10}$ 117°; *5*, b$_7$ 117-18°; *8*, b$_5$ 148-51°. Adding 0.1 mole I in 200 ml. Et$_2$O during 60 min. at 0° to a soln. of 0.3-0.36 mole CH$_2$N$_2$ (prepd. from 42 g. NH$_2$CONMeNO) in 500 ml. Et$_2$O, allowing to stand 60-90 min. at room temp., and distg. off Et$_2$O, *in vacuo*, at 30-40° yielded Et$_2$O soln. of II. N$_2$CHCOCO$_2$Et was isolated in 69% yield by cooling the soln. (evapd. to 200 ml. vol.) to −15°, m. 72.5-4°. The homologous II were evapd., dissolved in Et$_2$O to 50-70 ml., the solns. did. with 100-150 ml. C$_6$H$_6$, and distd. *in vacuo* to the original vol. Repeating this action substituted C$_6$H$_6$ for Et$_2$O, and the solns. thus obtained were used for further

reactions. Pure *II* obtained by distg. of the ester *in vacuo* are unstable, orange liquids. Refluxing 0.1 mole *II* in 250 ml. C_6H_6 with 5 g. powdered CuO 20–30 min. (for $n = 0$, 60–90 min.), filtering off the CuO, and evapg. the solvent *in vacuo* gave crude *III* mostly cryst. (except for $n = 3$). First crops were obtained by filtration, addnl. crops by chromatography of the mother liquors. Results of the prepn. of *III* are as follows: n, yield (based on *I*) in %, m.p. (from petr. ether): *0*, 2.2, 133–4.5°; *1*, 0.9, 100 (from C_6H_6–EtOH); *2*, 20.8, 62–3° (*dioxime*, m. 111–12°); *3*, 52.6, 35–5.5° (*bis-p-nitrophenylhydrazone*, m. 221, decompn.); *4*, 42.4, 57–8.3° (*dioxime*, m. 118°; *bis-p-nitrophenylhydrazone*, m. 161° (decompn.); *5*, 23.1, 50.5–2°; *8*, 35, 74–5.5° (*bis-p-nitrophenylhydrazone*, m. 140–2°, decompn.). *III* was hydrogenated in EtOH-C_6H_6 soln. at 1 atm., 20°, and 5% Pd-$CaCO_3$. 1.14–1.24 moles H per mole *II* was consumed. The following *IV* are prepd. (n, yields in %, and m.p. given): *3*, 71.8, 26°; *4*, 65.8, 50.5–1°; *5*, 66.7, 46.5–8°; *8*, 84.6, 67–9°. Heating *IV* with concd. HCl 60–90 min. at 100° (the ester $n = 8$ was refluxed 2 hrs. with HCl) gave *V* (m.p.): *2*, 155–6°, *3*, 134–5°, *4*, 128–9.5°, *5*, 132.3–3.5°, *8*, 133–4.5°. Treatment of *IV* with $(CH_2SH)_2$, Na_2SO_4, and $ZnCl_2$ in a dioxane soln. yielded *VI* (n, m.p.): *4*, 60–1.5° (64.6%); *5*, 30.5–9°; *8*, liquid. Refluxing *VI* with ten fold amt. of Raney Ni 8 hrs. yielded *VII* (n, yield in %, m.p.): *4*, 84.2 (based on *VI*), 27.5–9°; *5*, 53.5 (based on *VI*), 37–9°; *8*, 72.6 (based on *V*), 61–2.5°. Free acids *VIII* obtained by sapon. with 10% aq.-alc. NaOH were crystd. from C_6H_6 (n, m.p.): *4*, 125–6°, *5*, 124.5–5°, *8*, 125.5–6.5°.

M. Hudlický

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Decomposition of diazo ketones by cuprous oxide. III. Synthesis of hexatetracontane-1,46-dioic acid. Věra Hněvsová, Václav Smělý, and Ivan Ernest (Tech. Univ., Prague). *Chem. Listy* 50, 573-9(1956); cf. *C.A.* 49, 9570a.—*Mono-Me sebacate* (I), m. 38.5°, obtained in a 72.3%-yield by treating a soln. of 289.2 g. di-Me sebacate in 400 ml. C_6H_6 with 178.2 g. $Ba(OH)_2.8H_2O$ in 1200 MeOH, liberating the monoester by shaking with 10% HCl and extg. with C_6H_6, was converted in a 161-g. yield to the *acid chloride* (II), b_1 127° by heating 151 g. I in ligroine with 150 ml. $SOCl_2$ to 70° for 7 hrs. A soln. of 50 g. II in 250 ml. Et_2O was dropped into a soln. of 26.8 g. CH_2N_2 in 2000 ml. Et_2O, the mixt. evapd., and the resulting soln. of Me diazoacetylpelargonate dild. with C_6H_6 to 600 ml. and heated on a steam bath with 10 g. powd. CuO yielding [illegible] g. *di-Me docos-11-ene-10,13-dione-1,22-dioate* (III), m. [illegible]°. III (28.5 g.) gave on hydrogenation with [illegible] MeOH-C_6H_6 [illegible] g. [illegible] *Me decosan-10,1*[illegible] (IV), m. [illegible]° (from MeOH). Treatment of [illegible] g. IV with 28 ml. [illegible] in 250 ml. dioxane in the presence of 40 g. [illegible] and 40 g. fused [illegible] g. IV [illegible], m. 92-3° (from [illegible]), which [illegible] by refluxing [illegible] Raney Ni [illegible] *di-Me docosane-1,22*[illegible] m. 71-2°. [illegible] V (16.3 g.) was conv[illegible] 12.2 g. yield [illegible] with a MeOH [illegible] (cf. [illegible] *C.A.* 41, 6196, [illegible]ponding [illegible] VI), m. 88-9° (from [illegible]). The *acid* [illegible] refluxing 10.2 g. VI [illegible] ml. C_6H_6 6 hrs. [illegible] $SOCl_2$ was without [illegible] converted [illegible] *Me 21-diazoacetyl*[illegible] VII), m. 78[illegible] with 3.8 g. CH_2[illegible] of VII [illegible] with 1 g. powd. [illegible] ml. C_6H_6 ga[illegible] *Me hexatetracont*[illegible]*diene-1,46-dioate* VIII [illegible] 111.5-12.2° (from [illegible]), which was

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hydrogenated at 50° with PtO_2 in C_6H_6 yielding 2.03 g. *di-Me hexatetracontane-22,25-dione-1,40-dioate* (IX), m. 107.5–108° (from MeOH-C_6H_6). IX (1.52 g.) was converted by treatment with 2.5 ml. $(HSCH_2)_2$ and 1.5 ml. BF_3-Et_2O to the corresponding *bis(ethylenemercaptole)*, m. 63–77°. Desulfuration by boiling in C_6H_6-MeOH (1:1) 8 hrs. with Raney Ni W4 gave 883 mg. of a product m. 93–7° which on subsequent hydrogenation with PtO_2 yielded 706 mg. *di-Me hexatetracontane-1,46-dioate* (X), m. 100–1.2° (from C_6H_6-MeOH). X was also obtained in 70-mg. yield by a shorter alternative synthesis including treatment of 600 mg. VIII with $(HSCH_2)_2$ and BF_3-Et_2O, subsequent desulfuration and hydrogenation. Alk. hydrolysis of 300 mg. X by boiling with 5% methanolic KOH gave 212 mg. *free acid*, m. 128.5–9.5°. Similarly, treatment of *Me β-diazoacetylpropionate* ($b_{0.1}$ 77–8°, prepd. from the Me ester chloride of succinic acid and CH_2N_2) with CuO gave *di-Me dec-5-ene-4,7-dione-1,10-dioate*, m. 120–1.5°, in a 33.5% yield, while Me δ-diazoacetylvalerate, [illegible], prepd. from the Me ester chloride of adipic acid and CH_2N_2 was decompd. to *di-Me tetradec-7-ene-6,9-dione-1,14-dioate*, m. 94.5° in 22.2% yield. IV. Selective reduction of unsaturated 1,4-diketones. Ivan Ernest. *Ibid.* 581–5.— Desulfuration of the *bis(ethylenemercaptole)* (I) of *di-Et dodec-6-ene-5,8-dione-1,12-dicarboxylate* (Ia) depends considerably on the activity of the used Raney Ni. I was prepd. by dissolving [illegible] Ia and 20 mg. hydroquinone in 4 ml. $(HSCH_2)_2$ and dropping into the cooled soln. 4 ml. BF_3-Et_2O. After [illegible] the mixt. was shaken with C_6H_6 and [illegible] soln. of K_2CO_3 and the C_6H_6 was evapd., leaving [illegible] viscous liquid of I. Desulfuration of I by boiling [illegible] abs. EtOH with 25 ml. suspension of Raney Ni W4 [illegible] C.A. 40, 6703[3]) gave 330 mg. *di-Et* [illegible] (II), $b_{0.01}$ 135–6°, m. 27°, as the sole product. Alk. hydrolysis of II gave the *free acid* (III), m. 125–6°. Analogous procedure with a catalyst

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HAEFSOVÁ, V., SMELÝ, V., FREST, I.

that has been deactivated by boiling 2 hrs. with Me_2CO gave a fraction which was identified as a mixt. of 58% II and 41% of the corresponding unsatd. ester, probably *di-Et dodec-6-ene-1,12-dicarboxylate* (IV), characterized by coulometric analysis and by hydrogenation, yielding II. When a 12-hr. inactivation was used, desulfuration of 0.5 g. I gave a 660-mg. fraction, $b_{0.6}$ 135–45°, which on alk. hydrolysis yielded crystals, m. 125–7°, probably of $HO_2C(CH_2)_4CH_2CH{:}CHCO(CH_2)_4CO_2H$, whereas a 6-hr. inactivated catalyst produced a fraction, $b_{0.6}$ 133–7°, apparently of IV, identified by hydrogenation which gave II and after alk. hydrolysis yielded III. A parallel expt. from 4.7 g. I gave a 1.18-g. fraction, $b_{0.6}$ 124–7°, which was chromatographed on Al_2O_3 yielding by alk. hydrolysis of the ligroine eluate 40 mg. cryst. *dodec-6-ene-1,12-dicarboxylic acid*, m. 107–9°, confirmed by coulometric analysis. Attempts were made at overcoming difficulties encountered in the prepn. of unsatd. dicarboxylic acids of the type $RO_2C(CH_2)_4COCH{:}CHCO(CH_2)_4CO_2R$ (V) by prepg. addn. compds. of V with anthracene (VI), however, without success. The adduct of Ia and VI obtained by heating 5 hrs. powd. mixt. of 3.0 g. VI with 6.8 g. V (n = 4, R = Et) forms crystals, m. 78–9° (from cyclohexane-C_6H_6), yielding on saponn. crystals, m. 183–4° (from C_6H_6-AcOH). Similarly was prepd. the adduct of *di-Me cis-4-ene-3,6-dione-1,8-dicarboxylate* with VI from 0.7 g. VI and 1.0 g. V (n = 2, R = Me), forming needles, m. 136.5° (from C_6H_6), and yielding on saponn. crystals m. 213–14° (decompn.) (from AcOH).

L. J. Urbánek

CZECHOSLOVAKIA / Organic Chemistry. Synthetic Organic Chemistry G-2

Abs Jour : Ref. Zhur. Khimiya, No 3, 1958, 7975

Abstract : 29.2 gm ethyl oxalate and KOC_2H_5 (out of 7.02 gm of K and 8.65 gm of alcohol in 85 ml of ether). The benzylisothio salt of II has a m.p. of 148°C (in CH_3OH-ether). II and an alcoholic solution of HCl (~20 C, 2 days) react to yield ethyl ' -(2-pyridyl)- ,, -diethoxyvalerate, b.p. 136°C/ 1 mm Hg, n^{20} D 1.4842. By hydrogenating the Ba salt of II in an aqueous solution at 25°C and 730 mm Hg over PtO_2, -(2-pyridyl)- -oxyvaleric acid (III), m.p. 137-139°C (in alcohol) was prepared; the ethyl ester of the latter acid had a b.p. of 150-155°C (bath temperature)/1 mm Hg, n^{20}D 1.5040. A mixture of both sterioisomers of ethyl ' -(2-piperidyl)- - oxyvalerate, b.p. 123-129°C/ 2.5 mm Hg, m.p. 66-80°C (in petroleum ether) was separated by hydrogenating free II (water, PtO_2, 19°C, 965 mm Hg) and esterifying the product with alcoholic HCl. The racemate (m.p. 92-93°C) was

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ERNEST, I.; PITHA, J.

SCIENCE

Periodical COLLECTION OF CZECHOSLOVAK CHEMICAL COMMUNICATIONS. SBORNIK CHEKHOSLOVATSKIKH KHIMICHESKIKH RABOT. Vol. 23, no. 1, Jan. 1958.

ERNEST, I.; PITHA, J. Quinolizidine derivatives. I. Catalytic hydrogenation of δ-(2-pridyl)-α-oxovaleric acid. In German. p. 125.

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

CZECHOSLOVAKIA/Organic Chemistry. Synthetic Organic Chemistry. G

Abs Jour: Ref Zhur-Khim., No 2, 1959, 4619.

CuO, are cyclized by the action of strong acids in CH_3COOH medium to form unsaturated 2,5-disubstituted derivatives of furan of the type OCR=CHCH=CCH=CHR'. The reaction in all probability proceeds by a mechanism similar to that of the opening of the furan ring according to Marckwald. Preparation: 60 gms of butyl chloride on treatment with diazomethane in ether solution at -20° give 1-diazopentanone-2; the ether is distilled off and the product is decomposed by refluxing for 15 min with 6 gms CuO in 2 liters of C_6H_6, giving 5-decene-4,7-dione (I), yield 28.5%, mp 55-56.5° (from CH_3OH). Using a similar procedure, dihydrocinnamyl chloride gives a 27.3% yield of 1,8-diphenyl-4-octene-3,6-dione (II), mp 85-85.5° (from alc). 2 gms of the methyl

Card : 2/9

chromatography on Al_2O_3 (elution with benzene); the free acid (Mp 101°; from aqueous alcohol) on oxidation with $KMnO_4$ gives suberic acid and sebacic acid. I yields 2-propenyl-5-propylfuran, bp 47-50°/0.4 mm, $n^{20}D$ 1.5008; the methyl ester of 4-heptene-3,6-dione-1-carboxylic acid gives 5-methyl-2-(α -carbomethoxyvinyl)-furan (IV), yield 74%, mp 36-37°, bp 65-70°/2mm; the free acid (V) has an mp of 154° (from water). 5-ethyl-2-(β -carbomethoxyvinyl)-furan (VI), mp 47-48°, bp 75-80°/1.5mm, was also synthesized from the methyl ester of 4-octene-3,6-dione-1-carboxylic acid. THe UV spectra of III-VI are given.

VI. Esters of asymmetric unsaturated diketocarboxylic acids for the syntheses reported in the preceding

fold excess of VIII is used, the yield [sic] is increased to 33%. Using a similar procedure, VII and 1-diazo-2-butanone give the methyl esterof 4-octene-3,6-dione-1-carboxylic acid, yield 15.5%, bp 125-130°/2mm, mp 47-48° (from petroleum ether) (the product was separated by distillation after the removal of 1,2-dipropionyl ethylene, yield 53%, bp 80-85°/3mm, mp 52-53° (from petroleum ether)); VIII and the methyl ester of ω -diazoacetylvalerianic acid after distillation of IX (47%) and crystallization of the methyl ester of dodecene-6-5,8-dione-1,12-dicarboxylic acid (yield 14%, mp 93-94° (from CH_3OH)) give the methyl ester of 6-nonene-5,8-dione-1-carboxylic acid, yield 21%, bp 120-140°/2 mm, mp 53-54° (from petroleum ether).

benzoic acid (X), yield 98%, mp 70-71°; the ethyl ester of p-diazoacetylbenzoic acid (XI) yield 99%, mp 65-66°. The following compounds were prepared by refluxing X or XI for 15 min with CuO in C_6H_6: 33.5% 1,2-bis-(m-carbethoxybenzoyl)-ethylene, mp 131-132° (from ethyl acetate) (XII); 36.5% 1-2-bis-(p-carbethoxybenzoyl)-ethylene (XIII), mp 194-195° (from benzene). 1,2-bis-(o-carbethoxy-benzoyl)-ethylene, mp 160° (decomp; from alc-benzene) was obtained by a similar procedure from the acid ethyl ester of phthalic acid without the separation of intermediate products. The hydrogenation of XIII to XII over Pt (from PtO_2) at 22° and at normal pressure yields 1,2-bis-(p-carbethoxylbenzoyl)-ethane, mp 157-158° (from alc); similarly 1,4-bis-

COUNTRY : [illegible]
CATEGORY : Organic Chemistry. [illegible]
Their Synthetic Analogs
ABS. JOUR. : RZhKhim., No. [illegible] 1959, No. [illegible]

AUTHOR : [illegible]the, J.; [illegible]
INST. : -
TITLE : Synthetic [illegible]
Series. VI. [illegible]
γ-(2-[illegible])-[illegible]
ORIG. PUB. : Chem. Listy, [illegible] No 10, [illegible]

ABSTRACT : [illegible]
-none-2 (I) [illegible]
one-2 (II) [illegible]
[illegible]
in the position [illegible]
or to [illegible] (IV). [illegible]
basis of mutual correlation, [illegible]
[illegible] data, the authors [illegible]
of H under $C_{(4)}$ and $C_{(10)}$ are in the [illegible]

CARD: 1/7

C-37

AUTHOR :
CATEGORY :

ABS. JOUR. : RZKhim., No. 23 1959, No. 80136

TITLE :
INST. :
TITLE :

CITE. PUB. :

ABSTRACT (cont'd) : Likewise, from the products of hydrogenation of δ-(pyridyl-3)-α-acetovalerolactone (V), it was possible to prepare a small quantity of piperidylpiperidinecarboxylic-4 acid (VII), identical with the acid described in the previous report (see abstract 1e 80136). Since both IV (substance obtained in the present work, and alloisopinine described in the previous report) are identical, the described dif-

CARD: 3/7

SUBJECT	:
CATEGORY	:
AUG. JOUR.	: RZKhim., No. 22 1959, No. 82136
AUTHOR	:
INST.	:
TITLE	:
ORIG. PUB.	:
ABSTRACT (cont'd)	: above), 95% oil is obtained which, after chromatography on Al_2O_3, gives IV, b.p. 37.5-40°, n_D^{20} 1.5118; picrate, m.p. 61° (from water), 141.5-123.5° (after drying in vacuum); hydrochloride, m.p. 240° (from petroleum-ether fraction). The other fraction produced a small quantity of the substance, isomeric IV, with m.p. below 30°, the structure of which was not determined. Hydrochloride of IV is

CARD: 5/7

COUNTRY : C
CATEGORY :

ABS. JOUR. : RZKhim., No. 23 1959, No. 82230

AUTHOR :
INST. :
TITLE :

ORIG. PUB. :

ABSTRACT : of esters, an ethyl ether, VI (6%), is separated chromatographically; picrate, m.p. 130.5-132°.-- Jan Kovar

CARD: 7/7

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ERNEST, I.

Decomposition of diazoketones with cupric oxide. VIII. Preparation of aliphatic β-acrylacrylic acids.[1] I. Ernest and H. Jelínková (Vysoká škola chem. technol., Prague). *Collection Czechoslov. Chem. Communs.* 24, 3341-7(1959)(in German); cf. *C.A.* 52, 11806b.—Decompn. of the mixt. of diazoketones RCOCHN$_2$, Me (I) or Et (II) diazoacetate and CuO powder in C$_6$H$_6$ at 70–80° gave alkyl β-acylacrylates RCOCH:CHCO$_2$R′ (III) (possessing probably the trans configuration as shown by the absorption max. at 982 cm.$^{-1}$ of the Et esters), (R, R′, m. or b.p., n^{20}_D, and % yield given): Pr, Me (IV), m. 37.5°, —, 8; Bu, Et, b$_3$ 90–3°, 1.4522, 19; Am, Et, b$_3$ 99.5–100°, 1.4532, 14; *n*-C$_5$H$_{11}$, Et, b$_3$ 110–12°, 1.4542, 19; *n*-C$_7$H$_{15}$, Et (V), b$_3$ 127–9°, 1.4567, 16. Me (VI) or Et (VII) fumarates and sym. diketones RCOCH:CHCOR were obtained as by-products in some cases; if fractionation failed, hydrolysis of the crude mixt. was applied. Heating 30 g. *n*-C$_7$H$_{15}$COCHN$_2$, 20.7 g. II, 1000 ml. C$_6$H$_6$, and 2 g. CuO powder with agitation in a water bath at 70° led to a violent decompn.; refluxing then the mixt. 15 min., sepg. the CuO, and evapg. the filtrate *in vacuo* gave a residue from which was isolated 5.2 g. dicapryloylethylene, m. 80.5° (MeOH) and 34.5 g. liquid; the latter was fractionated to give 6.2 g. VII and 6.3 g. V. Analogous decompn. of 13 g. PrCOCHN$_2$ (VIII) and 12.1 g. II gave a mixt. of VII and PrCOCH:CHCO$_2$Et (could not be sepd. by distn.) whereas 21 g. VIII, 18.7 g. I, 800 ml. C$_6$H$_6$, and 1 g. CuO gave on fractionation of the crude product (27.5 g.) 5.2 g. VI, m. 102°, and 2.45 g. IV, m. 37.5° (MeOH at −20°). Decompn. of EtCOCHN$_2$ and I gave a mixt. which could not be sepd. by distn. Decompn. of 10 g. N$_2$CHAc, 13.5 g. II, 500 ml. C$_6$H$_6$, and 1 g. CuO gave 1.3 g. AcCH:CHAc, m. 74–6.5° [bisdinitrophenylhydrazone m. 290–1° (C$_5$H$_5$N–EtOH)] and AcCH:CHCO$_2$Et (dinitrophenylhydrazone m. 146°). Decompn. of 12 g. BzCHN$_2$, 9.5 g. II, 500 ml. C$_6$H$_6$, and 1 g. CuO gave BzCH:CHCO$_2$Et isolated as 110 mg. dinitrophenylhydrazone, m. 219° (C$_5$H$_5$N–EtOH) (decompn. at 225°). Hydrolysis of III with 10:1 (vol.) AcOH-concd. HCl by 1 hr. reflux gave RCOCH:CHCO$_2$H (R, m.p., and % yield given): Pr, 99° (cyclohexane), 98; Bu, 98–9.5° (aq. AcOH), 81; Am, 110° (aq. AcOH), 90; *n*-C$_5$H$_{11}$, 107° (aq. AcOH), 93; *n*-C$_7$H$_{15}$, 114° (AcOH), 81. Breusch and Keskin (cf. *C.A.* 43, 8785a; 45, 2904d) gave surprisingly higher m.p. values. Hydrogenation of III in EtOH on PtO$_2$, Pd–CaCO$_3$, and Pd–BaSO$_4$, resp., gave RCOCH$_2$CH$_2$CO$_2$Et (IX) in 90–6% yields (R given): Bu, b$_3$ 78–80°; Am, b$_3$ 90–2°; *n*-C$_5$H$_{11}$, b$_3$ 99.5–100°; *n*-C$_7$H$_{15}$, b$_3$ 109–10°. Analogously to that of III hydrolysis of IX gave RCOCH$_2$CH$_2$CO$_2$H (R, m.p. (cyclohexane), and % yield given): Bu, 52–3°, 80; Am, 74°, 76; *n*-C$_5$H$_{11}$, 70.5°, 83; *n*-C$_7$H$_{15}$, 77–9°, 98.

Jiří Pumi—

ERNEST, IVAN

1.

Esters of unsaturated dioxo carboxylic acids. Ivan Ernest and Zdenka Linhartová. Czech. 88,300, Jan. 15, 1959. Heating a soln. of an alkyl diazomethyl ketone with an ω-diazoacetic ester in a hydrocarbon solvent in the presence of CuO gives title compds., $RCOCH{:}CHCO(CH_2)_nCO_2R'$ (I), besides $RCOCH{:}CHCOR$ (II) and $RO_2C(CH_2)_nCOCH{:}CHCO(CH_2)_nCO_2R$ (III) as side products. I show bacteriostatic and fungicidal activity. Me ω-diazolevulinate (IV) from 7.5 g. $MeO_2C(CH_2)_2COCl$ (cf. *C.A.* 50, 13749b) heated with stirring with 4 g. $MeCOCHN_2$ and 3 g. powd. CuO in 1 l. C_6H_6 to boiling, the evolution of N completed by refluxing 15 min., the catalyst filtered off, and the solvent distd. off *in vacuo* gives on standing 1.8–2.2 g. III (R = Me, n = 2), m. 120–1° (MeOH). The liquors fractionated *in vacuo* give 1 g. II (R = Me), b_4 80–5°, m. 74°, and 2 g. I (R = R' = Me, n = 2), b_3 119–20° (solidifies at −20°). Similarly, IV and $EtCOCHN_2$ give II (R = Et), b_3 80–5°, m. 52–3° (petr. ether), and 15.5% I (R = Et, n = 2, R' = Me), and Me ω-diazoacetylvalerate with $MeCOCHN_2$ gives II (R = Me) and 21% I (R = R' = Me, n = 4), b_3 130–5°. L. J. Urbánek

ERNEST, IVAN

Distr: 4E3d

Unsaturated 2,5-disubstituted furan derivatives. Ivan Ernest and Jan Stanek. Czech. 88,760, Feb. 15, 1959. Treating solns. of $R^1COCH:CHCO(CH_2)_2R^2$ (I) in an anhyd. polar solvent with strong mineral acids gives title compds.

$R^1CH:CH.C:CH.CH:CR^1.O$ (II), which show bacteriostatic effect. Letting stand a soln. of 2 g. I (R^1 = $CH_2CH_2CO_2Me$, R^2 = CO_2Me) in 100 ml. AcOH with 4 drops concd. HCl 24 hrs. at 20° and evapg. the AcOH and HCl at 60° in *vacuo* gives on cooling 1.85 g. II (R^1 = $CH_2CH_2CO_2Me$, R^2 = CO-Me), m. 59° (MeOH). Similarly, 1 g. I (R^1 = CH_2CH_2Ph, R^2 = Ph) gives 720 mg. II (R^1 = CH_2CH_2Ph, R^2 = Ph), m. 60–1° (cyclohexane), and 305 mg. I (R^1 = Me, R^2 = CO_2Me) gives 200 mg. II (R^1 = Me, R^2 = CO_2Me), b_3 65–70°, m. 36–7°.

L. J. Urbánek

ERNEST, I.

Distr: 4E2c(j)/4E3d

Addition of metalloörganic compounds to unsaturated pyridine bases. V. Hněvsová and I. Ernest (Vysoká škola chem.-technol., Prague). *Collection Czechoslov. Chem. Communs.* 25, 1468–74(1960)(in German).—PhLi, lutidyllithium, and EtMgBr added unsatd. 2- and 2,6-substituted pyridine bases having a double bond conjugated with the pyridine nucleus in the side chain. The org. component of the reagent was attached to the β-C atom of the side chain. 2-Methyl-6-styrylpyridine (I) (5 g.) added with stirring to PhLi (from 0.7 g. Li, 5.7 g. PhBr, and 80 ml. Et_2O), the mixt. stirred 1 hr., decompd. with aq. NH_4Cl soln., the basic products extd. with dil. HCl (1:1), basified and extd. with Et_2O gave 3.0 g. 2-methyl-6-(β,β-diphenylethyl)pyridine, b_2 177–9°, m. 66.5–7.5° (cyclohexane); picrate m. 184.5–6.5° (EtOH). Similarly, 10 g. I allowed to react with PhLi from 11.5 g. PhBr in 70 ml. Et_2O and 3 g. EtCHO in 100 ml. Et_2O added dropwise gave 4.05 g. 2-methyl-6-(α-benzhydryl-β-hydroxybutyl)pyridine, m. 169.5–70.0° (EtOH); picrate, m. 177–8° (EtOH); *O*-Ac deriv. m. 110.5–11.5° (EtOH). Analogously the treatment of 2-butenylpyridine (Ia), 2-methyl-6-butenylpyridine (II), 2-styrylpyridine (III), and 2,6-distyrylpyridine with 40–50% excess of 0.5–0.6*M* PhLi soln. in Et_2O gave, resp., 50.8% 2-(β-pyrido[1,2-*a*:1′,2′-*d*]pyrazine-6,12-diol (VIII), m. 172–80° (alc.), yield 11.8%. IV and V give VIII. PhMgBr with III in Et_2O-anisole yielded after decompn. with HCl 19.8% α,α-diphenyl-2-piperidinemethanol (IX), m. 81–2°, (cf. Tilford, *et al.*, *CA* 43, 2205*g*). IX was also obtained by reaction of 5.4 g. Mg and 36.2 g. bromobenzene and addn. of 15.4 g. II in 100 ml. Et_2O in 16.3-g. yield; (EtOH–AcOEt)]. The origin of 1,1,3-triphenyl-2,4-bis(2-pyridyl)butane, m. 183–5.5° [dipicrate, m. 138–40° (both from EtOH)], as a side product of V was explained by the reaction of the intermediary organolithium deriv. with another mol. of III. The above addn. reaction failed in the case of 2-vinylpyridine, because of fast polymerization of the unsatd. base, and also in the case of bases having an unsatd. side chain in position 4, e.g. in 4-styrylpyridine, which was recovered unchanged. 2,6-Lutidyllithium yielded with II 49.2% 1,3-bis(6-methyl-2-pyridyl)-2-ethylpropane, b_1 134.5–5.0°; dipicrate m. 168.5–70.0° (EtOH–Et_2O). In certain cases the above addn. of Li compds. had an analogy in the behavior of Grignard reagents, since I allowed to react with EtBr and Mg in Bu_2O gave IV, whereas reaction of EtMgBr with Ia, II, and III gave complicated mixts. of products. From the reaction mixt. of Ia and EtMgBr was isolated 26.4% 2,4-diethyl-1,3-bis(2-pyridyl)hexane, $b_{1.5}$ 160–70° [dipicrate m. 173–4.5° (Me_2CO)], and from that of II and EtMgBr was obtained 43% 2,4-diethyl-1,3-bis(6-methyl-2-pyridyl)hexane, $b_{1.5}$ 155–70° [dipicrate m. 204–5° (Me_2CO–Et_2O)]. 2-(β-Hydroxybutyl)pyridine, b_{15} 117.5°, was obtained in 35.3-g. yield by adding dropwise a soln. of 27.5 g. EtCHO in 100 ml. Et_2O to the reagent from 49.8 g. 2-picoline and 1 l. 0.6*M* PhLi soln. in Et_2O, stirring 2 hrs., decompg. with 10% NH_4Cl soln. and working up as usual; metho-*p*-toluenesulfonate m. 121–4° (EtOH–Et_2O).

L. J. Urbánek

COUNTRY : CZECHOSLOVAKIA
CATEGORY : Organic Chemistry. Synthetic Organic Chemistry

ABS. JOUR. : RZKhim., No. 1 1960, No.1138

AUTHOR : Ernest, I.; Stanek, J.
INST. : -
TITLE : Decomposition of Diazoketones with Cupric Oxide. V. A New Reaction of Aliphatic Unsaturated γ-Diketones
ORIG. PUB. : Collect. Czechosl. Chem. Communs, 1959, 24, No 2, 530-535
ABSTRACT : No abstract
See RZhKhim., No 2, 1959, No 4619.

CARD: 1/1

ADLEROVA, E.; BLAHA, L.; BOREVICKA, M.; ERNEST, I.; JILEK, J.O.; KAKAC, B.; NOVAK, L.; RAJSNER, M.; PROTIVA, M.

Synthetic experiments in the group of hypotensive alkaloids. VI. Some notes on the preparation of alicyclic components in the synthesis of compounds of the reserpine type. Coll Cz Chem 25 no.1: 221-236 Ja '60. (EEAI 9:12)

1. Forschungsinstitut fur Pharmazie und Biochemie, Prag.
(Alkaloids) (Hypotension)
(Alicyclic compounds) (Reserpine)

HNEVSOVA, V.; ERNEST, I.

Lobelia

Synthesis experiments in the series of lelobine alkaloids; synthesis and reactions of 2-styryl-6-butenylpyridine. Coll Cz chem 25 no.3: 748-755 Mr '60. (EEAI 9:12)

1. Institut fur organische Chemie, Technische Hochschule fur Chemie, Prag.

(Alkaloids) (Lelobine) (Butenylstilbazole)

HNEVSOVA, V.; ERNEST, I.

Addition of metallo-organic compounds to unsaturated pyridine bases. Coll Cz Chem 25 no.5:1468-1474 My '60.

1. Institut fur organische Chemie, Technische Hochschule fur Chemie, Prag. 2. Jetzige Adresse: Forschungsinstitut fur Pharmazie und Biochemie, Prag (for Ernest).

NOVAK, L.; JILEK, J. O.; KAKAC, B.; ERNEST, I.; PROTIVA, M.

Synthetic experiments in the group of hypotensive alkaloids. IX. A new method for splitting racemates in the total synthesis of reserpine. Coll Cz Chem 25 no.8:2196-2206 Ag '60. (EEAI 10:9)

1. Forschungsinstitut fur Pharmazie und Biochemie, Prag.

(Alkaloids) (Hypotension) (Tartaric acid)
(Reserpine)

ADLEROVA, E.; ERNEST, I.; HNEVSOVA, V.; JILEK, J.O.; NOVAK, L.; POMYKECEK,J.; RAJSNER, M.; SOVA, J.; VEJDELEK, Z.J.; PROTIVA, M.

Experiments on synthesis in the group of hypotensive alkaloids. VIII. Syntheses of some tryptomine derivatives, substituted in positions 5,6, and 7. Coll Cz chem 25 no.3:784-796 Mr '60. (EEAI 9:12)

1. Forschungsinstitut fur Pharmazie und Biochemie, Prag.
(Alkaloids) (Aminoethylindole) (Hypotension)

IOTA, C.G.; RUNCAN, V.; CHITESCU, Elena; SUTEANU, St.; ERNEST, I.

The neruovegetative syndrome in chronic hepatitis. I. Preliminary investigations. Stud. cercet. med. intern. 2 no.2:203-217 '61.
(HEPATITIS, INFECTIOUS complications)
(AUTONOMIC NERVOUS SYSTEM diseases)

JILEK, J. O.; ERNEST, I.; NOVAK, L.; RAJSNER, M.; PROTIVA, M.

Synthetic experiments in the group of hypotensive action alkaloids. XII. Contribution to the terminal phases of total synthesis of reserpine and deserpidine. Coll Cz Chem 26 no.3:687-700 Mr '61. (EEAI 10:9)

1. Forschungsinstitut fur Pharmazie und Biochemie, Prag.

(Reserpine) (Deserpidine) (Alkaloids)

SKODA, J.; ERNEST, I.; STANEK, J.; HABERMANN, V.

The relationship between structure and antibacterial effect of unsaturated γ-diketones. Coll Cz Chem 26 no.3:874-880 Mr '61. (EEAI 10:9)

1. Institute of Organic Chemistry and Biochemistry, Czechoslovak Academy of Science, Prague, Department of Organic Chemistry, Institute of Chemical Technology, Prague, and the Institute for Clinical Chemistry, Medical Faculty of the Charles University, Plzen. 2. Present Adress: Research Institute for Pharmacy and Biochemistry, Prague (for Ernest)

(Ketones) (Bactericidal action) (Unsaturated compounds)

ERNEST, I.; STANEK, J.

Decomposition of diazoketone with copper (II) oxide. Part 9: Kinetics of cyclization of unsaturated γ-diketone. Coll Cz Chem 26 no.4: 1039-1047 Ap '61.

1. Institut fur organische Chemie, Technische Hochschule fur Chemie, Prag (for Stanek) 2. Forschungsinstitut fur Pharmazie und Biochemie, Prag (for Ernest)

(Diazo compounds) (Copper oxides) (Ketones)

ERNEST, I.; PROTIVA, M.

Synthetic tests in the group of hypotensive active alkaloids. Part 14: (±)-methyl-O-(O-carbathoxysyringoyl)-10-methoxydeserpidat. Coll Cz Chem 26 no.4:1137-1144 Ap '61.

1. Forschungsinstitut fur Pharmazie und Biochemie, Prag.

(Alkaloids)

ERNEST, I.

"Electronic Theories of Organic Chemistry" by J. W. Baker. Reviewed by I. Ernest; Coll Cz Chem 26 no.4:1215-1216 Ap '61.

(Baker, J. W.) (Chemistry, Organic)
(Electronics)

ERNEST, I.; JILEK, J.O.; VEJDELEK, Z.J.; PROTIVA, M.

Sythetic experiments in thegroup of active hypotensive alkaloids. Pt. 26. Coll Cz Chem 28 no.4:1022-1030 Ap '63.

1. Forschungsinstitut fur Pharmazie und Biochemie, Prag.

ERNEST, I.

Rules of carotenoid nomenclature. Chem listy 57 no.4:348-349 Ap '63.

ERNEST, I.; HEBKY, J.

Discussion on teaching chemistry in secondary and higher schools.
Chem listy 58 no.9:1129-1130 S '64.

ERNEST, I.; KAKAC, B.

Synthetic tests on the group of blood pressure reducing alkaloids. Pt.34. Chem Cz Chem 29 no.11:2663-2680 N '64.

1. Forschungsinstitut fur Pharmazie und Biochemie, Prague.

PROTIVA, M., inz. dr. DrSc. (Praha 3, Kourimska 17); NOVAK, L.;
VEJDELEK, Z.J.; ERNEST, I.

Sympathetic ganglionic blocking agents. Pt.14. Cesk. farm.
14 no.7:346-351 S '65.

ERNEST, I.

"Organic chemistry" by R.Lukes. Reviewed by I.Ernest. Coll Cz Chem 30 no.3:920 Mr '65.

ERNEST, I.; HEBKY, J.

Discussion on the work with small quantities in organic chemistry.
Chem listy 59 no.5:633-634 My '65.

CZECHOSLOVAKIA

ERNEST, I; KAKAC, B.

Research Institute for Pharmacy and Biochemistry (Forschungs-institut fur Pharmazie und Biochemie), Prague

Prague, Collection of Czechoslovak Chemical Communications, No 1, January 1966, pp 279-290

"Experiment with synthesis in the group of hypotensive active alkaloids. Part 38: Synthesis of the ± apoiohimbine and some additional iohimbane derivatives."

JIRKOVSKY,I.; PROTIVA,M.; ERNEST,J.

Synthetic experiments in the group of active hypotensive alkaloids. Pts.29-30. Coll Cz Chem 28 no.11:3096-3112 N'63.

1. Forschungsinstitut fur Pharmazie and Biochemie, Prag.