

PAVLANSKY, R.

Coxa vara after conservative treatment of congenital hip dis-
location and its treatment. Acta chir. orthop. traum. Cech.
32 no.1:28-39 F'65.

1. Ortopedička katedra UDL v Praze (vedoucí: doc. dr.
R. Pavlansky, ScC.

PAVLANSKY, R.

Unusual occurrence of ganglia in bone. Acta chir. orthop. traum.
cech. 31 no.2:125-130 Ap '64.

1. Ortopedicke oddeleni nemocnice v Praze 8-Bulovka (vedouci doc.
dr.R.Pavlansky, CSc.).

PAVLANSKÝ, Rudolf, Docent MU Lr.

Czechoslovakia

Orthopedic Ward of the Hospital Prague-8-Bulovka --
Prague (Ortopedické oddělení nemocnice Praha 8-Bulovka --
Praha); Chief: R. PAVLANSKÝ, Docent Dr.

Prague, Practický lékař, No 23, 1962, pp 981-984

"Osteomyelitis of the Vertebrae."

PAVLANSKY, Rudolf, MUDr.; NOVAK, Josef

Corset straightening of a spinal deformity caused by
syringomyelitis. Acta chir. orthop. traum. cech. 23 no.
3:162-164 June 56.

1. Orthopedicke oddeleni SON Bulovka, primar MUDr. Rudolf Pavlansky
Vyzkumne oddel. prothetické n. p. Orthopedia-Vysehrad, prednosta
MUDr. Frant. Krivanek.

(SPINAL CORD, dis.

syringomyelitis, causing kyphosis, correction by corset. (Cz))

(KYPHOSIS, etiol. & pathogen.

syringomyelitis, correction by corset. (Cz))

PAVLANSKY, Rudolf, MUDr.; PULPYTEL, Josef, Ing.

Determination of the exact size of the sella turcica. Cesk. neur.
21 no.2:139-141 Mar 58.

1. Ortoned. odd. nemocnice v Praze VIII urad pro vynaalez.
(SELLA TURCICA, radiography
determ. of exact size (Cz))

PAVLANSKY, Rudolf

Evaluation of the results in bloodless therapy of congenital dislocation of the hip joint using various methods. Acta chir. orthop. traum. cech. 26 no.5-6:436-442 Nov 59.

1. Ortopedické oddělení Bulovky v Praze 8, přednosta dr. R. Pavlansky.
(HIP, fract. & disloc.)

PAVLANSKY, Rudolf, Primar MUDr.

Surgical treatment of flatfoot. Acta chir. orthop. traum. cech.
22 no.6:205-208 Nov 55.

I. Z orthopedickeho oddeleni Bulovky.
(FLATFOOT, surgery.)

~~PAVIANSKY, R.; PLIHAL, V.; ULDRICH, J.~~

Paraarticular ossification & nephrolithiasis complicating basilar meningitis after tuberculous epididymitis. Cas. lek. cesk. 97 no.41: 1299-1303

1. Vyzkumny ustav tuberkulosity v Praze, reditel doc. dr. R. Krivinka, Ortopedicke oddeleni nemocnice v Praze 8-Bulovka, prednosta dr. R. Pavlansky, R. P., Praha-Bulovka.

(MENINGITIS, compl.

nephrolithiasis & paraarticular ossification of hip complicating basilar meningitis after tuberc. epididymitis (Cz))

(KIDNEYS, calculi

complicating basilar meningitis after tuberc. epididymitis (Cz))

(HIP, dis.

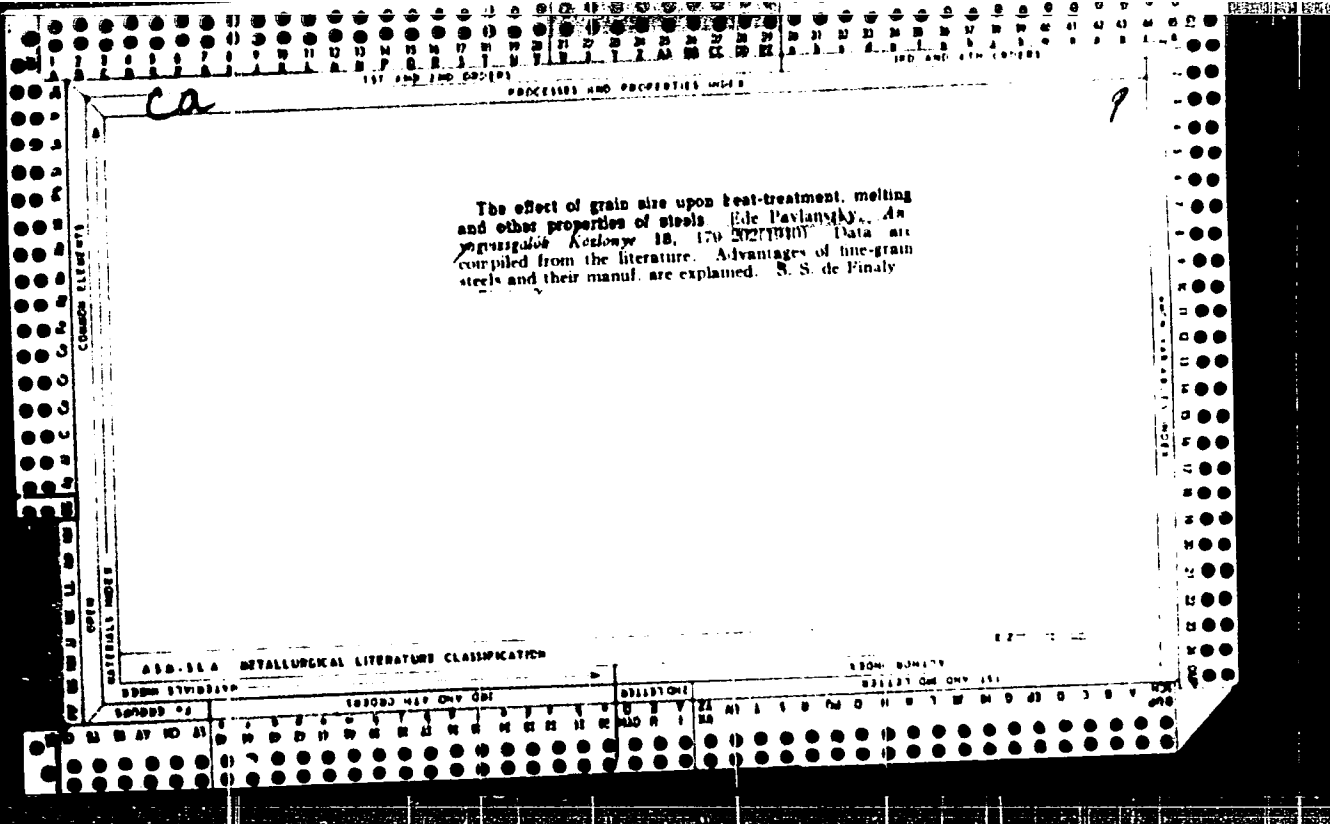
ossification, paraarticular, complicating basilar meningitis after tuberc. epididymitis (Cz))

(EPIDIDYMITIS, compl.

basilar meningitis complicated by nephrolithiasis & paraarticular ossification of hip after tuberc. epididymitis (Cz))

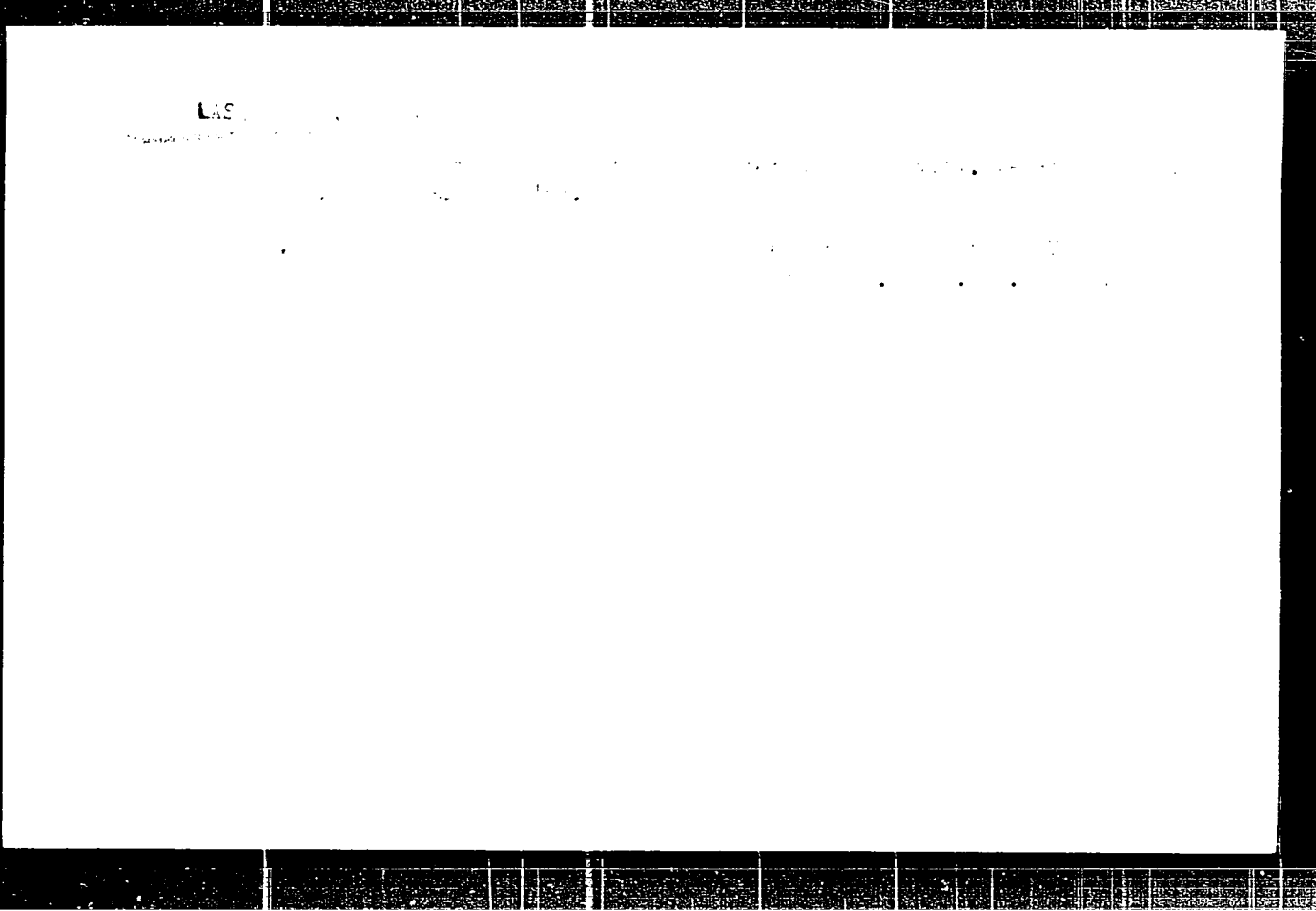
(TUBERCULOSIS, MALE GENITAL, compl.

same)



PAVLAS

"Juice purification in the sugar industry" by J. Dobrzycki. Reviewed
by Pavlas. Listy Mukrovar 79 no.3:74 Mr '63.



PAVLAS, Milan

Traveling speed and time. Letecky obzor 7 no.4:116-118 '63.

PAVLAS, M.

Agricultural aircraft. Tech praca 16 no. 5: 361-365
My '64.

PAVLAS, Milan

Slow flying by fast aircrafts. Letecky obzor 7 no.9:266-267
8'63.

PAVLAS, Milan

Aircraft crushing barriers. Letecky obzor 7 no.1:20-21 Ja '63.

PAVLAS, Milan

Problems of speed rata. Letecky obzor 9 no.3:72-73 Mr '65.

PAVLAS, Milan

Present state and development of aircraft technology.
Letecky otzor. 1964. 134 p. 16 cm.

PAVLAS, Milan, MV. r.; ROSSI, Leo Id, MVDr.; DOKOPIK, Slavomir, MVDr.

Causes of a new occurrence of cattle tuberculosis in agricultural enterprises freed of tuberculosis. Veter medicina 9 no.1:1-10
Ja '64.

1. Research Institute of Veterinary Medicine, Brno. Director of the Institute: [doc. dr. inz.] J. Vlcek.

FAVLAS, Milan

Conditions for operating one-man streetcars. Doprava n. 11:
100-101 '62.

PAVLAS, Milan

American aircrafts X-15 and Dyna - Soar. Letecky obzor
6 no.8:272-273 '62.

PAVLAS, M.

CZECHOSLOVAKIA

PAVLAS, M., DVM.

Brno

Prague, Veterinarstvi, No 4, 1953, pp 148-152

"Some Suggestions to the Alergen-diagnostic of TB
in Cattle."

PAVLAS, M.

Speed and capacity of aircrafts. Letecky obzor 7 no.2:54-55
F '63.

PAVLAS, Milan

Prospects of gas chromatography. Tech praca 16 no. 1: 15-17
Ja '64.

PAVLAS, Milan

With united forces. Letecky obzor 8 no.1:18 Ja '64.

CELADNIK, M., doc. Dr. Mr. CSc., (Kalinciakova 8, Bratislava), PALAT, K.;
NOVACEK, L.; MATUSKOVA, E.; KUBALA, E.; PAVLAS, M.

Antitubercular agents. Part 4. Cesk. farm. 14, no.6:303-307 Ag '65.

1. Katedra anorganicke a organicke chemie farmaceuticke fakulty
Univerzity Komenskeho, Bratislava, Lecebna tuberkulosity, Kostelec
n. Cernymi Lesy, Lecebna tuberkulosity, Janov u Mirosova a Vyzkumny
ustav veterinarniho lekarstvi, Brno. Submitted November 23, 1964.

STERC, Pavel; PAVLAS, Milan

Designs of commercial aircraft. Tech praca 15 no. 12:
960-964 D '63.

PAVIAS, Milan

Raising interest in gliders. Letecký obzor 6 no.4:110-111 Ap '62.

PAVLAS, Milan

Rockets small and smallest. Letecky obzor 6 no.5:144-145 My '62.

PAVIAS, Milan

The first cosmic five-year plan. Letucky obzor 6 no.10:326-328 '62.

Z/040/63/000/001/004/007
E073/E492

AUTHOR: Pavlas, Milan

TITLE: Aircraft overcome barriers

PERIODICAL: Letecký obzor, no.1, 1963, 20-21

TEXT: Brief popular review of the natural barriers in aviation dealing with the following: sound barrier, heat barrier, barriers imposed by the limit of pilot endurance, first and second exit velocities and, finally, the invariant velocity of light.

Card 1/1

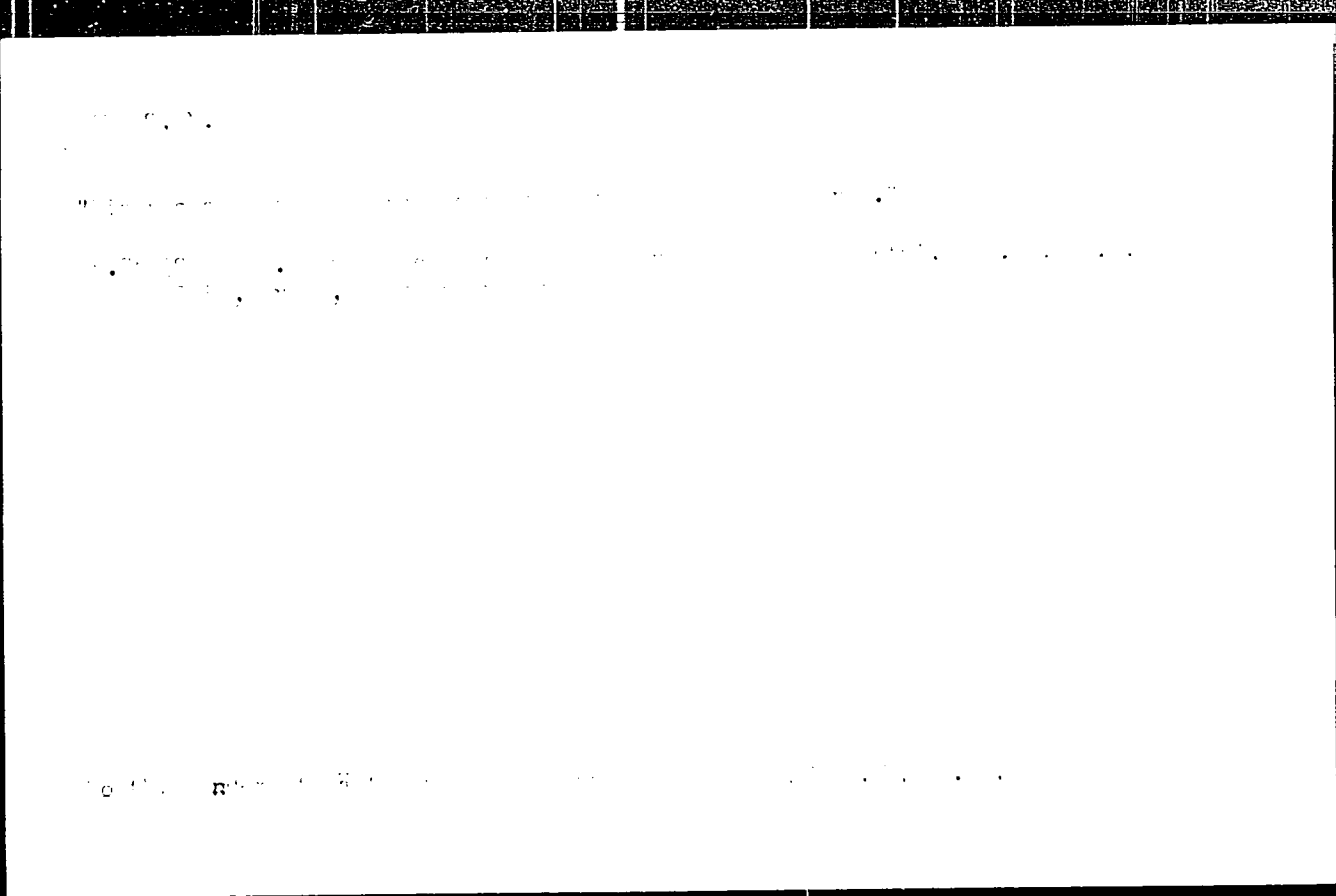
PAVLAS, Milan

Half-century on wings. Letecky obzor 6 no.1:10-12 Ja '62.

PAVLAS, Miroslav, MVDr.

Reliability of the droplet agglutination in the diagnosis of
poultry tuberculosis. Veterinarni medicina 7 no.1:43-52 '62.

1. Infekcni oddeleni, Vyzkumny ustav veterinarni Ceskoslovenske
akademie zemedelskych ved, Brno.



CZECHOSLOVAKIA

PROCHAZKA, Zdenek, Dr of Veterinary Medicine, Candidate of Sciences, and PAVLAS, Milan, Dr of Veterinary Medicine, with technical assistance of STEPLOVA, Svatava, and PATLOKOVA, Vlasta, Department of Radiology and Department of Tuberculosis (Oddeleni radiologie a oddeleni pro tuberculozu), Veterinary Medicine Research Institute (Vyzkumny ustav veterinarniho lekarstvi), Brno, Docent Dr Engr Jan VLCEK, director.

"Influence of Ionizing Irradiation on the Biological Properties of Mycobacterium Tuberculosis Bovis"

Prague, Veterinarni Medicina, Vol 8(XXXVI), No 5, October 1963, pp 369-376.

Abstract [Authors' English summary, modified]: A decrease of the allergogeneous properties was found in guinea pigs after their irradiation with a dose of 500,000 to 1,000,000 r. Any influence on the growth of mycobacteria was found. A decrease could be notice after an irradiation with 300,000 to 600,000 r. A complete devitalization followed after an irradiation with 700,000 to 1,000,000 r. A significant decrease in virulence was found after 400,000 to 500,000 r. Mycobacteria tuberculosis irradiated with 600,000 to 1,000,000 r did not produce any changes in guinea pigs, not even in the place of inoculation. Seventeen references.

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- 6 -

PROCHAZKA, Arnež, M.D. Sc., Praha, Milan, M.D. Sc.

Influence of various forms of treatment on the growth of
Mycobacterium tuberculosis s.s. *intermedius* group
O'Leary.

1. Department of Mycobacteriology and Department of Tuberculosis
the Research Institute of Veterinary Medicine, Prague
the Institute of Mycobacteriology, Prague.

PAVLAS, Milan

Difficulties in reaching the world standard of products. Techn
praca 16 no.12:979-980 D '64.

PAVLAS, Peter; FRANKOVA, Mary

Composition of sugar beets and juices from the 1962/64
campaign. Listy cukrovar AC no.9:239-249 S 1964.

PAVLAS P.

CZECHOSLOVAKIA / Chemical Technology. Chemical Products and Their Application - Carbohydrates and refinement J-12

Abs Jour : Referat Zhur - Khimiya, No 2, 1958, 6131

Author : Pavlas P., Melounova-Hauslerova O.

Inst : Not given

Title : Separation of Amino Acids of Diffusion Juice and Heavy Sirup of 1954/55 Production by Chromatography and Electrophoresis Methods

Orig Pub : Listy cukrovarn., 1956, 72, No 2, 35-37

Abstract : The separation was effected by paper chromatography and by electrophoresis. It was found that the content of amino acids and amides, in the samples, varies depending on the origin and growth conditions of the beets and the time of processing; defecation and saturation eliminate a number of amino acids from the diffusion juice.

Card 1/1

PAVLAS, P. ; MELOUNOVA-HAUSLEROVA, O.

Composition of sugar beets and their juices during the 1956/57 campaign.

P. 199. (LISTY CUKROVARNICKE) (Praha, Czechoslovakia) Vol. 73, no. 2, Sept. 1957

SO: Monthly Index of East European Accession (EEAI) LC Vol. 7, No. 5, 1958

the group which ... only gamma-amino butyric acid was detected. in ...

CZECHOSLOVAKIA/Chemical Technology - Chemical Products and Their Application. Carbohydrates and Refinement. I-11

Abs Jour : Ref Zhur - Khimiya, No 1, 1958, 2785

isolated group of basic amino acids the presence of ornithine was ascertained, together with lysine, histidine and arginine.

Card 2/2

PAVLAS, P.; ~~MELOUNOVA-HAUSLEROVA, O.~~

TECHNOLOGY

Periodical: LISTY CUKROVANICKE. Vol. 74, no. 8, Aug. 1958

PAVLAS, P.; MELOUNOVA-HAUSLEROVA, O. Composition of sugar beets and their juices from the 1957-1958 campaign. p. 175

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

372.111
PAVLAS , P. : MELOUNOVA- HAUSLEROVA, C.

Chromatographic study on the composition of amino acids from diffusion and thick sugar-beet juices during the 1955/56 production period.

P. 50 (Listy Cukrovarnické) Vol 73, No. 3, March 1957, Czechoslovakia

SO: MONTHLY INDEX OF WEST EUROPEAN ACCESSIONS (EEA) LC. - VOL. 7, NO. 1, JAN. 1958

PAVLAS, Petr; FRANKOVA, Mary

Effect of decolorization by ion exchange resins on the composition of juices and molasses. Listy cukrovar 80 no.2:27-35
F*64 (MIRA 17:7)

Paulas, Petr

4
425d

Participation of amino acids in the formation of melanoidins. *Paulas, Petr and Liska, J. J. (1973) J. Food Sci. Technol. (London) 6: 177-181 (1973)*. All the amino acids (I) present in sugar-beet juice participate in the formation of melanoidins (II). In prepn. of II, molasses was dild. and acidified with HCl. The ppt. formed on the addn. of Na₂SO₄ was washed with acidified water, dried, exhd. with ether and alc., dissolved in NaOH, pptd. with HCl, and washed until free of Cl⁻. The thus obtained raw II were further purified by dissolving in NaOH, pptg. in AcOH, dissolving in LiOH, and pptg. with AcOH. Twelve purified fractions of II were prepd. by similar procedures; NaOH, LiOH, and Li₂CO₃ being used as dissolving, and HCl, AcOH, HF, and MgSO₄ as pptg. agents. All the preparations had solids about 90, ash between 0.06 and 0.25, and N between 8.06 and 0.81%. N was detd. by the Dumas method. All the fractions had acidic properties. Acid salts of Ag⁺, Cu⁺⁺, and Ca⁺⁺ were prepd. by adding Li salt of II to alc. solns. of AgNO₃, CuSO₄, and CaCl₂. II formed achi. and alk. salts. The salts of heavy metals and alk. earths were insol. An increase in pH raised the intensity of color of II solns. Samples of II were hydrolyzed by boiling at 105° in 3N HCl, or by heating at 125° in a satd. soln. of Ba(OH)₂ for 24 hrs. Thus obtained I were sepd. by electrophoresis at pH of 1.6, p.d. of 120 v., and current of 0-10 ma. In all cases aspartic, glutamic, and malic acids, together with neutral and basic I, were identified. Cystine was oxidized to cysteine with H₂O₂ in HCOOH soln. and identified by electrophoresis. Two-dimensional chromatography of acid hydrolyzates (with phenol-water 3:1 and n-butanol-

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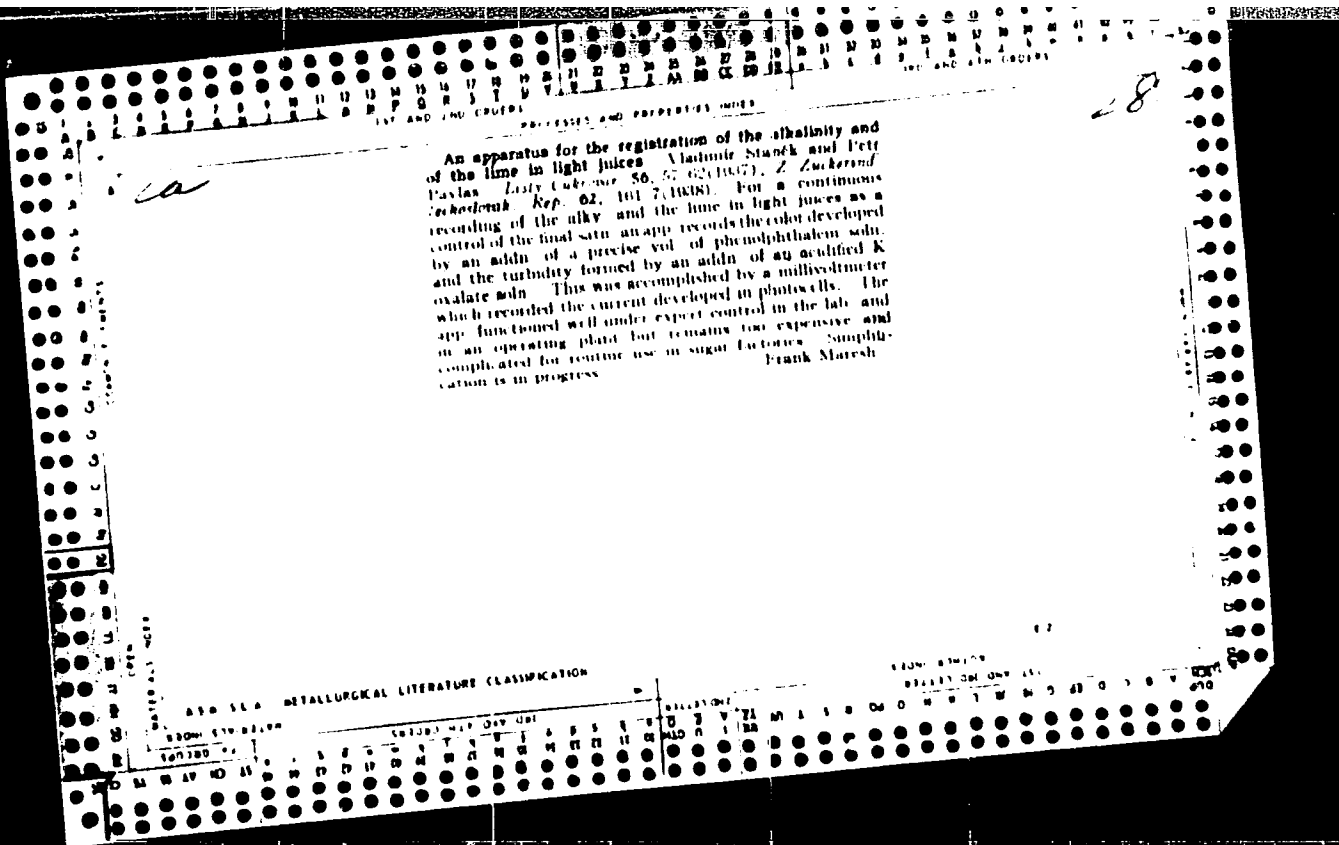
PAYLAS, P. I. R.; MELDENOVA-HAUSIEROVA, OLGA.

44E3d

AcOH-water 4:1:5) showed aspartic, glutamic, γ -amino-lactic acids, serine, glycine, threonine, alanine, tyrosine, lysine, histidine, arginine, proline, methionine, threonine, valine, tryptophan, phenylalanine, leucine, and isoleucine. Serine, threonine, and histidine were absent in the alk. hydrolyzates, but all other I were found in the acid hydrolyzate, plus ornithine, cyathine, and methionine sulfoxide. The proportion of I in II is const. No free I were found in II before hydrolysis.

2-12

DM



PAVLAS, P.

Electrophoretic separation of amino acids in sugar plant products and determination of γ -aminobutyric acid and ornithine. P. Pavlas and O. Biskounova-Havalcikova. *Listy cukrovar. 73, 137-4* (1967). Amino acids in diffusion and thick juices were sep'd. at pH 5.0 by electrophoresis. The neutral acids were eluted, evap'd. in vacuum, and sep'd. by 2-dimensional paper chromatography by using in 1 direction PhOH-H₂O (3:1), and in the other BuOH:AcOH:H₂O (4:1:5) as eluants. Serine, glycine, threonine, alanine, tyrosine, methionine, valine, tryptophan, phenylalanine, leucine, isoleucine, and the amides of asparagine and glutamine were identified. γ -Aminobutyric acid (I) moved farther toward the cathode than the others. The isoelec. point of I was found at 3.33; calcd. from the dissociation constants, $K_1 = 3.7 \times 10^{-4}$ and $K_2 = 1.7 \times 10^{-10}$. The electrophoretic sep'n. at pH 11.5 identified lysine, histidine, arginine, and ornithine.

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PM

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PAVLAS, P

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Chromatography of amino acids in diffusion juices. P. Pavlas and O. Melounová-Hánslerová. *Listy chemické* 77: 23-6 (1955).--The amino acids and the amides were pptd. from the juices by mercuric acetate and CaCO₃. The ppt. was decompd. with H₂S. The filtrate was coned. and subjected to electrophoresis; the anode furnished aspartic and glutamic acids; the cathode, lysine, histidine, and arginine; and the neutral zone, serine, asparagine, glycine, threonine, glutamine, alanine, tyrosine, leucine, phenylalanine, and proline. The individual groups are eluated and the eluates subjected to 2-dimensional paper chromatography.

Jan. Lederm.

JW Adjustment of barometric water by chlorination. *City Engineer*, 71, 239-40 (1956). -- Barometric waters are frequently used for diffusion. The NH_4OH content is undesirable owing to transfer of nicotine from sugar beet molasses to diffusion juices. To obviate this difficulty, condenser waters are chlorinated like potable waters and the excess Cl_2 is added by the *o*-toluidine reaction in the presence of HCl . The Cl_2 also has bactericidal effect.
J. Lederer

PAVLAS, Petr

Standardized technological process of continuous juice
purification. Listy cukrovar 79 no. 4114-120 My 1963.

PAVLAS, Petr; SCHUSTEROVA, Mary

Composition of sugar beet and juices in the 1961/62 campaign.
Listy cukrovar 79 no.8:200-209 Ag'63

PAVLAS, Petr

Chromatographic studies of amino acids from sugar-beet
 proteins. Petr Pavlas and Olga Melounová-Hánslerová.
Listy Cukrovar. 72, 247-53 (1956); cf. *C.A.* 50, 13487a.
 By paper chromatography were identified aspartic, glu-
 tamic, and γ -aminobutyric acids, cysteine, serine, glycine,
 threonine, alanine, hydroxyproline, tyrosine, lysine, histi-
 dine, arginine, proline, valine, methionine, tryptophan,
 phenylalanine, leucine, and isoleucine. Pressed juice was
 treated with 3% Cl_2CO_2 (I) giving a residue (II) repre-
 senting 0.368% of the original juice (fraction A). The
 washings from II were divided into the ether (fraction C)
 and ether-alc. fraction (fraction B, 0.002% of I). Fraction
 A was washed 5 times with I, the washings were brought to pH
 of 4 with NH_4OH , and the residue from this treatment gave
 fraction D, 0.008% of I. The filtrate (III) from fraction A
 was likewise brought to pH of 4; the white-grayish residue
 fraction E, was 0.654% of II. One hundred ml. of III and
 fraction E were transferred into 800 ml. of 90% alc. The
 sediment (fraction F) gave 0.016% of II. The acid hy-
 drolysis was carried out with 6N HCl and heating at 105°
 for 24 hrs. The humic substances were filtered off, and the
 filtrate was evapd. in vacuum over KOH. The alkali hydroly-
 sis was done with hot aq. $\text{Ba}(\text{OH})_2$ at 125° for 24 hrs. Ba
 was pptd. with H_2SO_4 (the filtrates were evapd. as above.
 Two-dimensional chromatograms were carried out on What-
 man No. 1 filter paper with phenol-water (3:1) for elution
 in one, and butanol-AcOH-water (4:1:5) in the other direc-
 tion. One-dimensional chromatograms were eluted with
 the latter mixt. Mixt. of pure amino acids were used for
 identification. In fraction A were found 17 amino acids
 (IV). Cysteine was identified by oxidation to cysteic acid

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Pavlov, Petr, Molodtsov, G. G., Gousterova, Olga

and by electrophoresis. Histidine was acid with Pauly reagent. The alkali hydrolyzate of fraction A gave 18 IV. Fraction B had similar compn. as fraction A. Fraction C had more IV with high R_f . Fractions D and E were similar to fraction A, but the former did not show cystine. In fraction F were found IV with predominantly low R_f . Aspartic and glutamic acids, alanine, valine, leucine, and isoleucine were the major components; cystine, γ -aminobutyric acid, methionine, phenylalanine, and tryptophan were present only in small amts. One fraction showed hydroxyproline. Two IV with very low R_f could not be identified.

T. Jurack

7/2

PAVLAŠ, P.

11

Proteins from thick juice and their degradation products formed during the purification process. P. Pavlas and O. Melounová-Häuslerová. *Časopis pro výzkum a užití cukrov. 71, 183-8 (1958).*

—Proteins in sugar-beet processing juices were pptd. with 3% CH_3COOH (I) and 10% tannin (II) solns. The amt. of degradation products was calcd. from the difference (II - I). The av. values were: in diffusion juice 16.6, and II 50.6; in thick juice (III) I 1.2, and II 8.0; removed by defecation and settn. 97.7 of I ppt., and 91.4 of total proteins (all values in mg./100 g. of sugar). For isolation of pro-

teins 1 l. of III was dild. with 1 l. of distd. water and 60 g. of I was added, left overnight, and then filtered. The filtrate was neutralized with ammonia to pH of 6; and II was added. A part from II pptn. was dissolved in 10% EtOH . Paper chromatograms were carried out as in previous work (preceding abstr.). The following amino acids were identified: aspartic, glutamic, and γ -aminobutyric acids, cystine, serine, glycine, threonine, alanine, hydroxyproline, tyrosine, methionine, valine, tryptophan, phenylalanine, leucine, isoleucine, proline, lysine, histidine, and arginine. Proteins were degraded during processing into albumins, peptones, peptides, and amino acids. In the products from alkali treatment were found peptides, aspartic and glutamic acids, serine, glycine, lysine and arginine. N was detd. by the Kjeldahl method.

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PAVLAS, P.

Czechoslovakia

CA:47:11773

with O. MELOUNOVA-HAUSLEROVA

"Chlorination and return of pulp-press and diffusion waste waters."
Listy Cukrovar. 68, 105-8 (1952); Sugar Ind. Abstr. 14, 136 (1952)

PAVLAS, P

Czechoslovakia

CA:47:11772

with O. MELOUNOVA-HAUSLEROVA

"Purification of pulp-press water by liming and saturation."

Listy Cukrovar. 66, 135-7 (1949-50); Sugar Ind. Abstr. 12, 85-6 (1950)

PAVLAS, P.

Czechoslovakia

CA:47:11766-767

with O. MELOUNOVA-HAUSLEPOVA

"Purification of pulp-press waters by liming and saturation, in
sugar factories."

Listy Cukrovar. 68, 129-31(1952) Sugar Ind Abstr. 11, 136-7 (1952)

1973, 1.

Cochran, v. K. L.

: 13

with C. L. 1973, 1-13, 1-13

"Determination of invert sugar by the method of Lelander, et al. (1931), and of other in the presence of starch."

Misty Lake var. 10, 1973, 1-13, 1-13; 1-13, 1-13, 1-13, 1-13.
following instr; 1, 1-13, 3692; 1, 1-13, 1-13, 1-13.

FOY 13, P.

Czechoslovakia

14-00000

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"Determination of residual amount by the method of Lachmann, F. J. and J. J. of Ciner."

Listy Akad. (6, 64-7 (1949-50); Transl. Int. J. Pharm. 1, 1950; cf. preceding abstr.

PAVLASEK, M.; DUBEN, M.

"Czechoslovak automatic and semiautomatic submerged arc welders."

p. 17 (Czechoslovak Heavy Industry, no. 5, 1958, Praha, Czechoslovakia)

Monthly Index of East European Accessions (EEAI) LC, Vol. 7, n. 9
September 1958

PAVLAS, Petr

Chromatographic and electrophoretic proof of the presence of
 α -aminoadipic acid and colamine in sugar juices. Listy
cukrovar 79 no.8:209-213 Ag'63

PAVLASEK, Frantisek, inz., kandidat technickych ved

"Electric rotary machines for automation" by K.Dusek, J.Micka,
B.Pospisil. Reviewed by Fr. Pavlasek. El tech obzor 52 no.11:
626-627 N°63.

PAVLASEK, Fr., inz.

A simple method of measurement of the moment characteristics
of asynchronous motors. El tech obzor 51 no.8:415-416
Ag '62.

KUNCOVA, Zdenka; PAVLASKOVA, Irena; TREFNY, Zdenek; TROCHOVA, Katerina

Seaside treatment of asthmatic children. Cesk.pediat. 15 no.9:
778-781 S '60.

1. Detske oddeleni Fakultni polikliniky v Praze 2, prednostka
MUDr. Zdenka Kuncova.
(ASTHMA in infancy & childhood)
(CLIMATE ther.)

KUNCOVA, Z.; HALIKOVA, M.; MULLEROVA, A.; PAVLASKOVA, I.; SOMMROVA, V.;
TEOCHOVA, K.

Experiences with the treatment of asthmatic children. Cesk. pediat.
15 no.9:782-784 \$ '60.

1. Detské oddelení Fakultní polikliniky v Praze 2, přednostka
MUDr. Zdenka Kuncova.
(ASTHMA in infancy & childhood)

PAVLAS, P.

The composition of sugar beet and juices from 1953-4 harvest. P. Pavlas and O. Melounová-Häualerová. *Zitý MG*
Cukrovár. 71: 119-120 (1956).—The atm. pptn. in 1953 was only 6% below the 34 years av., also it came at the (desirable time. Thus the growth, sugar content, and sugar recovery were good. Jos. Linderger

①

PAVLAS P

2
The composition of sugar beets and juices from the campaign 1954-55. P. Pavlas and O. Melounovi-Häuslerová. *Časopis Československé Akademie věd, 71, 281-7(1958)*.—The composition is given. The composition of sugar beets and juices from the campaign 1955-1956. *Ibid.* 72, 106-11(1958).—The results of analyses of domestic sugar beets are tabulated. T. Jurecic

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CA

PROCESSES AND PROPERTIES INDEX

1ST AND 2ND ORDERS

3RD AND 4TH ORDERS

LITERATURE

The composition of beets and juices in the 1946-47 season. R. Pavlas and O. Hájeková. *Listy Cukrovar* 64, 221-5(1948); *Tř. Č.A.* 41, 6423. — Samples from 15 different sugar establishments showed the beet root to have an av. wt. of 0.52 g. and a sugar content of 17.00%. For diffusion juices the av. values were: apparent dry substance 17.04, polarization 15.61, quotient 91.62%, non-sugars 9.16 parts per 100 parts of sugar, sulfate ash 2.65, invert sugar 0.485, blue no. 209. For heavy liquors the av. values were: apparent dry substance 59.26, polarization 56.19, quotient 94.81, alk. 0.035% as CaO, Ca salts 0.039% as CaO, color 21.28° St., and, in parts per 100 parts of sugar: non-sugars 5.48, sulfate ash 1.58, invert sugar 0.085, blue no. 81. For comparison the sep. corresponding av. values for the preceding 3 yrs. as well as the total av. value for the preceding 27 yrs. are included. The results agree with the predictions made upon the rainfall during the growing season.
Frantisek Mareš

METALLURGICAL LITERATURE CLASSIFICATION

3RD ORDER

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PAVLASEK, Frantisek, inž., kandidát technických ved

Measurement of starting characteristics of synchronous motors with salient poles. *El. tech. ožxor* 51 no.9:477-484 S '62.

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001239520008-1"

I. ~~České~~ vysoké učení technické, Praha.

PAVLASEK, F.

Dynamic measurement of the moment characteristic. p. 468.

ELEKTROTECHNICKY OBZOR. (Ministerstvo tezkho strojirenstvi a
Ceskoslovenske vedecka technicka spolecnost pro elektrotechniku pri
Ceskoslovenske akademii ved) Praha, Czechoslovakia. Vol. 48, no. 9, Sept. 1959.

Monthly list of East European Accessions (EEAI) LC, vol. 9, no. 1, Jan. 1960.

Uncl.

PAVLASEK, F.

Transient moments of an asynchronous motor with a blocked rotor. p. 410.

ELEKTROTECHNICKY OBZOR. Praha, Czechoslovakia. Vol. 48, no. 8, Aug. 1959.

Monthly list of East European Accessions (EEAL) LC, Vol. 9, no. 2, Feb. 1960.

Uncl.

PAVLASEK, M.; BABSEK, A.

New universal SMT 1000 welding tractor. n. 591. (STRAJKA-STVA, Vol. 7,
No. 3, Aug 1957, Praha, Czechoslovakia)

SO: Monthly List of East European Accessions (REAL) 10, Vol. 6, No. 12, Dec 1957. Incl.

PAVLASEK, M.

Welding machines; automatic electric arc welding machines.

P. 3 (Strojirenska Vyroba. Vol. 5, no. 8, Aug. 1957, Praha, Czechoslovakia)

Monthly Index of East European Acquisitions (FIAI) LC. Vol. 7, no. 2,
February 1958

BRABENEK, A., inz., PAVLASEK, M., inz.

Equipment for welding wheels of commercial vehicles on
an assembly line. Zvarante 13 no. 12: 961-367 D 151.

1. Zavody tepelnych zarizeni, Chotebor.

PAVLASEK, M.

Special equipment for oxyacetylene cutting.

P. 380 (Strojirenska Vyroba. Vol. 5, no. 8, Aug. 1957, Praha, Czechoslovakia)

Monthly Index of East European Accessions (FFAI) Lⁿ. Vol. 7, no. 2,
February 1958

SOV/112-59-5-9259

8(0)

Translation from: Referativnyy zhurnal. Elektrotehnika, 1959, Nr 5, p 118 (USSR)

AUTHOR: Pavlašek Miloslav, and Duben Miroslav

TITLE: Czechoslovak Automatic and Semiautomatic Welding Machines for Flux-Type Welding

PERIODICAL: Chekhosl. tyazh. prom-st', 1958, Nr 5, pp 17-27

ABSTRACT: The following types of automatic machines are examined: (1) A type STK1000 welding tractor with an independent wire-feed rate. One 3-phase 3x42-v induction motor feeding the wire and driving the transport mechanism is a special feature of the design. The rate of wire feed can be changed in 25 steps between 52 and 100 m/hr. DC or AC welding with a 1.6-5-mm wire can be performed at currents up to 1,000 amp. The tractor weighs 45 kg. (2) A type SHK1500 welding automatic machine with an automatic flux circulation. The rate of feed of 3-6.5-mm wire can be adjusted by changeable pinions from 30 to 250 m/hr. The machine is equipped with an injector type suction. The welding speed is 10-103 m/hr. The welding can be performed on DC up to 600

Card 1/2

SOV/112-59-5-9259

Czechoslovak Automatic and Semiautomatic Welding Machines for Flux-Type

amp, or on AC up to 1,500 amp. The tractor weighs 160 kg. (3) Type SUM1000 welding tractor. Its principal advantages are: light weight (42 kg); wide range of wire feed (1:7) which is ensured by a magnetic amplifier and a single pair of interchangeable pinions; controlling the speed of the motor driving the vibroregulator carriage, which secures the transport-speed range of 5-200 m/hr. A 1.6-5-mm diameter wire is used. DC or AC welding current can be as high as 1,000 amp. A hose-type SPK600 semiautomatic machine for 1.6-2-mm wire is briefly described, as are specialized automatic machines SRK300 for 17-32-mm boiler work and SNK500 used for welding 30-110-mm solids of revolution to boilers.

I. N. G.

Card 2/2

PAVLASHA

HUNG.

Synthesis of organic fluorine compounds. VI. Derivatives of 2-fluoroethyl and of isocyanic acid. Gy. Olah and P. Pálfi (Tech. Univ. Budapest), *Acta Chim. Acad. Sci. Hung. 3, 81-97 (1957) in English*; *cf. C.A. 49, 2383d*. Derivatives of $\text{FCH}_2\text{CH}_2\text{OH}$ (I) (*cf. C.A. 48, 7532e*) should be more practical as insecticides than I itself, because of their lower volatility. Dry HCl gas passed into a cold suspension of 4.5 g. $(\text{CH}_3\text{O})_2\text{C}$ (II) in 30 g. $\text{CH}_2\text{ClCH}_2\text{Cl}$ (III) (E.I. *cf. C.A. 44, 6833j*), gave 0.5 g. $\text{CH}_3\text{OCH}_2\text{CH}_2\text{F}$ (IV), b. $102-4^\circ$. A similar procedure with $(\text{Ac})_2\text{O}$ in place of II yielded, from 30 g. I, 10.5 g. $\text{MeCH}(\text{OCH}_2\text{CH}_2)_2$ (IV), b. $93-7^\circ$. An ether soln. of $\text{NaOCH}_2\text{CH}_2\text{F}$ (from 7.2 g. Na and 20 g. I) refluxed 3 hrs. with 25 g. $\text{CICH}_2\text{CH}_2\text{OH}$ gave 11 g. $\text{FCH}_2\text{CH}_2\text{OCH}_2\text{CH}_2\text{O}_2\text{C}$ (V); b. $5-39^\circ$. Dry HCl gas passed into a cooled suspension of 0.5 g. II in 3 g. V and the mixt. allowed to stand 70 hrs. at room temp. yielded 2.1 g. $\text{CH}_3\text{OCH}_2\text{CH}_2\text{OCH}_2\text{CH}_2\text{F}$ (VI), b. 120° . Esters and methanes were prepd. by the usual methods (reactants and their wts. (g.), temp. of mixing, time and temp. of reaction, yield of product and its h.p. given): 119 g. SOCl_2 with 87.5 g. I, cold, 3 hrs.; 110 g. 64 g. $\text{SO}(\text{OCH}_2\text{CH}_2)_2$ (VII), b. $125-16^\circ$ (by-product, 22 g. $\text{FCH}_2\text{CH}_2\text{Cl}$, b. $51-5^\circ$); 10 g. SO_2Cl_2 with 10 g. I, cold, 8 hrs. at 60° ; 5.8 g. SO_2Cl_2 with $\text{C}_2\text{H}_5\text{F}$ (VIII), b. $42-4^\circ$; 9.8 g. AcCl with 8.4 g. I, room temp., boiling on H_2O bath; 4.9 g. $\text{AcOCH}_2\text{CH}_2\text{F}$ (IX), b. $115-16^\circ$; 69 g. COCl_2 with 30 g. I, -5° , room temp.; while N removes the excess COCl_2 , 42 g. $\text{ClCO}_2\text{CH}_2\text{CH}_2\text{F}$ (X), b. $65-60^\circ/36$ (lacrimatory effect); 12.8 g. X with 7 g. I.

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at room temp., 4 hrs. at 130-30°, 11.3 g. $\text{OC}(\text{OCH}_2\text{CH}_2\text{F})_2$
 (XI), b. 65-8°/10; 24 ml. 28% NH_4OH with 12.8 g. X, 1 hr.
 at room temp., 0.5 hr. at 40°, 3.8 g. $\text{Et}_2\text{NCO}_2\text{CH}_2\text{CH}_2\text{F}$
 (XII), b. 93°/2; 8.5 g. MeNH_2HCl with 6.4 g. X, 1 hr. cold,
 48 hrs. at room temp., 4.9 g. $\text{MeNHCO}_2\text{CH}_2\text{CH}_2\text{F}$ (XIII), b.
 71-1°/3; 50 g. 23% aq. Me_2NH with 12 g. X, 1 hr. cold, 24
 hrs. at room temp., 11.5 g. $\text{Me}_2\text{NCO}_2\text{CH}_2\text{CH}_2\text{F}$ (XIV), b.
 55-8°/2; 12.8 g. $\text{Et}_2\text{NH.HCl}$ with 12.8 g. X, 1 hr. cold, 48
 hrs. at room temp., 12.5 g. $\text{Et}_2\text{NCO}_2\text{CH}_2\text{CH}_2\text{F}$ (XV), b.
 40-9°/2; 13 g. morpholine with 6.4 g. X, 1 hr. cold, 24 hrs.
 at room temp., 7 g. $\text{FCH}_2\text{CH}_2\text{O}_2\text{CN}(\text{CH}_2)_2\text{OCH}_2\text{CH}_2$
 (XVI), b. 101-4°/3; 11.3 g. piperidine with 6.4 g. X, 1 hr.
 cold, 24 hrs. at room temp., 7 g. $\text{FCH}_2\text{CH}_2\text{O}_2\text{CNC}_2\text{H}_5$
 (XVII), b. 84°/8. The effectiveness of I and III-IX on plant
 lice was shown to be comparable to that of nicotine. The
 general effect on mice and the contact effect on leaf lice, resp.,
 of X-XVII were tested and their suitability as insecticides
 and rodenticides was proved. VII. Fluorinated insecti-
 cides containing sulfur. 1953. 111-18.—Data are less avail-
 able on the insecticide effect of F than of Cl-substituted
 aromatic compds. contg. S; the prepns. of several such
 derivs. are reported. The dropwise addn. of 100 g. 10%
 oleum to 54 g. PhF [cf. Michael, *et al.*, *Ann.* 581. 238(1953)],
 stirring the mixt. 1 hr. at 70°, and pouring it into sat. NaCl
 soln. at -15° yielded 34.2 g. (78%) $p\text{-FC}_6\text{H}_4\text{SO}_2\text{H}$ (I); m.
 87°, identified by its chloride (II) and amide (III), prepd. by
 other methods. PhF (73 g.) added dropwise to 380 g.
 H_2SO_4 (IV) in the cold and the mixt. stirred 1 hr. at 60°
 poured onto 2 kg. ice yielded 144 g. crude II, purified by
 distn. *in vacuo*, b. 93-6°, m. 35° (cf. Huntress and Carter,
C. 4. 34. 2803). A change in the ratio of reactants to 50 g.

Black GY

PhP and 29 g. IV gave 45 g. (70%) (*p*-FC₄H₃SO₂ (V), m. 98-7° (from H₂O). Hydrolysis of 10 g. II by boiling 3 hrs. with 15 ml. 10% HCl gave 8 g. I. II (2 g.) and 10 g. (NH₄)₂CO₃ mixed, slowly heated to 80-90°, stirred 10 min.; at that temp., and treated with 50 ml. H₂O yielded 1.7 g. (84.5%) III, m. 126° (from EtOH). Reducing II with H₂CN₂CH₂Cl according to Chino and Perkin (C.A. 15, 2127) or Sakita and Maruy (C.A. 27, 853) gave 7% or 80%, resp., *p*-FC₄H₃SO₂CH₂Cl (VI), b. 152°, whereas a similar procedure with the analogous H₂CN₂CH₂P on II yielded 67% *p*-FC₄H₃SO₂OCH₂CH₂P (VII), b. 153°. Under conditions slightly different from those used by Zulu and Zubet (C.A. 48, 1297e), addn. of 35 g. II to 400 g. ice and 65 ml. concd. H₂SO₄ followed by reduction by 10 g. Zn dust, yielded 18 g. (78.5%) *p*-FC₄H₃SH (VIII), b. 107-8°/760 and 64.5°/12. VIII in EtOH gave with AgNO₃ a yellow ppt., with HgCl₂ a pale yellow, and with Cu(NO₃)₂ a yellowish brown ppt. Oxidation of 5.5 g. VIII in alkali (1.0 g. NaOH in 15 ml. EtOH) by 5.0 g. iodine gave 4.5 g. (82%) *p*-FC₄H₃S, b. 110-51°. The F analog of "New Lauroto" was prepd. by the reduction of 14.6 g. II by 10 g. Na₂SO₃ in 40 ml. H₂O (pH kept at 9 by the addn. of the necessary amt. of 45% aq. NaOH) to yield 11 g. crude *p*-FC₄H₃(SO₂)Na (IX), which was dissolved in 80 ml. H₂O, stirred 2 hrs. at 45° with 7.3 g. Cl₂CHCO₂Na (the pH kept const. with acid), and the mixt. allowed to stand 12 hrs. to yield 4.1 g. *p*-FC₄H₃SO₂Cl₂Cl (X), m. 88-9° (from EtOH). Attempts to improve the yield of X led to 2 methods of formation of (*p*-FC₄H₃)SO₂ (XI), m. 79°: 1st, by 60% H₂SO₄ on IX, and 2nd, by HCl, SO₂, and AlCl₃ on PhF.

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HUNG

Olak, G.

It was assumed that 2 mols. $p\text{-FC}_6\text{H}_4\text{SO}_3\text{H}$, first formed, combine with liberation of SO_2 and H_2O to give XI, which was identified by H_2O oxidation in glacial AcOH to V (mixed m.p.). The insecticide activities of I-III and V-VIII are recorded and show the promoter but less durable effect of F over Cl-cont. compds. VII. Preparation of chlorofluoromethanes (compounds of the Freon type) (preliminary communication). *Ibid.* 119-22.—A reactor is described suitable for the prepn. of compds. of the Freon type on a lab. scale at 350° from CCl_4 or CHCl_3 by the method previously reported (*C.A.* 48, 75438) for the halogen exchange by alk. fluoride under ultraviolet irradiation. The alk. fluoride remains active up to a conversion of 30%, and the operation may be continuous. Three photographs of the app. are included. CCl_3F , CCl_2F_2 , and CHClF_2 were prepd. in the reactor.
H. S. French—

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TOMASHKOVA, Yana [Tomaskova, Jana], doktor; PAVLASKOVA, Lidiya
[translator]; BRZHIZOVA, Ioza [Brizova, Joza], otv. red.

[Health and beauty care] Zabota o zdorov'e i krasote. Prague,
Izd-vo "Pratse," 1961. 118 p. (MIRA 15:4)
(BEAUTY CULTURE) (WOMEN—HEALTH AND HYGIENE)

L 12928-66

ACC NR: AF6005637

SOURCE CODE: CZ/0079/65/007/002/0143/0143

AUTHOR: Pavlaskova, I.; Kuncova, Z.; Ronova, R.

ORG: none

TITLE: Development of children placed in day nurseries [This paper was presented at the Third Interdisciplinary Conference on Experimental and Clinical Study of Higher Nervous Functions held in Marianske Lazne from 19 to 23 October 1964.]

SOURCE: Activitas nervosa superior, v. 7, no. 2, 1965, 143

TOPIC TAGS: psychology, man

ABSTRACT: 82 infants admitted at ages between 2 and 12 months were studied; adaptations to new conditions, and influence of the negative signs of adaptation on the general psychosomatic development are discussed. The group of 9-12 months had the poorest adaptability, the group 3 - 6 months the best. Psychomotor development was very good. The best physical growth and development were observed in children admitted to the nursery school at 9-12 months. [JPRS]

SUB CODE: 05 / SUBM DATE: none

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PAVLISOVA, E.

Determination of aureomycin in meat and meat products. p. 322.

PRUMYSL POTRAVIN. (Ministerstvo potravinarskeho prumyslu) Prava, Czechoslovakia,
Vol. 10, no. 6, June 1959.

Monthly list of East European Accessions (EEAI) LC, Vol. 8, No. 11,
November 1959.

uncl.

PAVLAT, Bretislav; ZUREK, Oldrich; KLECKA, Antonin

Technology of large and complex molds for steel castings.
Slevarenstvi 10 no.8:295-300 Ag '62.

1. Vitkovicke zelezarny Klementa Gottwalda.

PAVLAT, Jiri, inz.

The SAXBY R-58 rail brake. Zel dop tech 12 no.9:248-249 '64.

PAVLAT, Vaclav

"New tool to evaluate green pellets" by C.L. Stevenson,
B.H. Bergstrom. Reviewed by Vaclav Pavlat. Rudy 11
no.3:95-96 Mr '63.

PAVLAT, Jiri, inz.

Modernization of French railroads. Doprava 7 no.2:151-154 '66.

H. PAVELIATZ

Synthesis of organic fluorine compounds. I. A new method for the preparation of aliphatic fluorine compounds. G. Osh and H. Paveliatz (Tel. Univ., Budapest). *Acta Chem. Acad. Sci. Hung.* 6, 191-7 (1963). A new method for prep. aliphatic F compds. involves halogen interchange between alkali fluorides and aliphatic halides effected by irradiation with ultraviolet rays, at ordinary temps. and pressures. Thus, 64 g. ClCO_2Et in 60 g. dry CH_2Cl_2 stirred with 41 g. dry KF 6 hrs. at 60° with ultraviolet irradiation, the mixt. filtered, and the filtrate fractionated, gives 23.5 g. (51.2%) FCO_2Et , b. 66-60°. In the same way were prepd. the following compd. (reactants and their wts. (g.), solvent (C = cyclohexanol, A = CH_3CO_2), time, yield of product, and its b.p. given): $\text{BrCH}_2\text{CO}_2\text{Me}$ 46, KF 30, C, 3 hrs., 5.5 g. (33%) FCO_2Me , 97-108° (in A, 43.2%); $\text{ClCH}_2\text{CO}_2\text{Et}$ 64, and KF 34, C, 10 hrs., 4.5 g. (13.5%) $\text{FCH}_2\text{CO}_2\text{Et}$, 118-24°; $(\text{CH}_3\text{Cl})_2$ 100, KF 90, 3 hrs., 4.5 g. (6.5%) $\text{CICH}_2\text{CH}_2\text{F}$, 50-6° (in A, 17%); $(\text{CH}_3\text{Br})_2$ 61, KF 26, 6 hrs., 10 g. (25%) $\text{BrCH}_2\text{CH}_2\text{F}$, 70-4° (in A, 68%). Abs. HCO_2H (48 g.) and 60 g. KF, treated dropwise during 15 min. 140 g. EtCl under ultraviolet light gave 4 g. (10%) HCOF , trapped in cold (-28°) abs. Et_2O . AcCl (39.2 g.) added dropwise to a suspension of 37.6 g. KF in 90 ml. glacial AcOH and 36 ml. Ac_2O gives 14.5 g. (62%) AcF , b. 20-2°. Freshly distd. PCL (43 g.) added dropwise under a stream of N_2 at 55° to 56.5 g. abs. iso- PrOH in 40 ml. abs. CCl_4 , then dry Cl_2 added 2.5 hrs., dry air passed through app. after another hr., and the soln. treated with 83 g. NaF and 140 ml. abs. PhMe 8 hrs. with stirring and irradiation gives 41 g. (80%) FPO(CHMe)_2 , b. 80-2°. II. The preparation of 2-fluorocyclohexanol. *Ibid.*, 199-202. Dry $\text{CH}_2\text{Cl}_2\text{OH}$ (32 g.)

added dropwise to 24 g. KF in 70 g. glycerol at 80-85°, the mixt. refluxed 2 hrs. under ultraviolet light, 10 g. KF added, and heating continued 1 hr. gives 12.5 g. (50%) $\text{FCH}_2\text{CH}_2\text{OH}$ (I), b. 101-4°, also obtained in 40% yield by dropwise addn. (45 min.) of 14.5 g. $\text{FCH}_2\text{CO}_2\text{Me}$ in 100 ml. abs. Et_2O to 120 ml. M LiAlH_4 in abs. Et_2O . III. The preparation of fluoromethanol. *Ibid.*, 203-7. FCO_2Et (10.3 g.) in 50 ml. abs. Et_2O added dropwise (1 hr.) to 85 ml. M LiAlH_4 in abs. Et_2O and the excess LiAlH_4 decompd. with CO_2 gives 4 g. FCH_2OH (II), b. 51° (some decompn.), also prepd. in 1.28-g. yield by trapping HCOF (prepd. as in Part I above) in 175 ml. of M LiAlH_4 in abs. Et_2O with cooling and decompn. the excess LiAlH_4 with CO_2 . II (1.8 g.) treated in 10 ml. abs. C_6H_6 with 1 g. ZnCl_2 1 hr. at 40-50°, and the resulting liquid fractionated gives 2 g. (60.7%) PhCH_2F (III), b. 140°. The formation of III from II confirms, by analogy, the transitory formation of unstable CICH_2OH in chloromethylation reactions.
R. W. Ralford, Jr.

Pavlaty, A.

10. Synthesis of organic fluorine compounds. II.
The preparation of 2-fluoro-ethanol (In English) -
Gy. Olti. and A. Pavlaty. (Acta Chemica Academiæ
Scientiarum Hungaricæ - Vol. 3, 1953, No. 2, pp. 199-
201)

Two methods, independent of each other, have been evolved for the production of 2-fluoro-ethanol. The first affects halogen exchange by treating glycol chlorohydrin with potassium fluoride at the reflux temperature of the former, under the simultaneous application of ultraviolet irradiation at a yield of 50 per cent. This process is suitable for the industrial production of 2-fluoro-ethanol. The other method prepares 2-fluoro-ethanol by treating methyl fluoroacetate in absolute ether with lithium aluminium hydride and attains a yield of 40 per cent. It creates new possibilities of producing fluoroalcohols from fluoro-carboxylic esters by reduction with lithium aluminium hydride. This reduction does not affect the C-O bond.

PavlaTh, A.

20. Synthesis of organic fluorine compounds, III. The preparation of fluoro-methanol (in English) — Gy. Olah and A. Pavlath, (Acta Chimica Academiae Scientiarum Hungaricae — Vol. 3, 1953, No. 2, pp. 203-207)

The reduction of ethyl fluoroformate by lithium aluminum hydride resulted in the successful production of the first known halogenated methanol derivative, fluoro-methanol. The identification of the compound was confirmed by another method of preparation independent of the first process. This reaction corroborated the authors' opinion of the reactivity of acid fluorides in presuming an increased reactivity of the carbonyl group which does not affect the stability of the C-F bond. As a further proof of the synthesis of fluoro-methanol it was condensed with absolute benzene and the formed benzyl fluoride was identified. This reaction — providing that the authors succeed in simplifying the production of fluoro-methanol — creates the possibility for the practical utilization of fluoromethylation.

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(Synthesis of organic fluorine compounds. IV. Fluoromethylation. G. Nagy (Mag. and Anna Pavlath (Tech. Univ. Budapest). *Acta Chim. Acad. Sci. Hung.* 3, 425-9 (1953) (in English); cf. C.A. 48, 7533).—The investigation of the fluoromethylation by paraformaldehyde and anhyd. HF proved that FC_2H_4OH , which forms as an intermediate in this reaction, condenses with aromatic compds. with formation of a FC_2H_4 group. The $PhCH_2F$ formed reacts further under the conditions applied to yield series of Ph_2CH_2 and resinous polymerization products. The condensation of FC_2H_4OH with PhF in the presence of traces of pyridine yielded $p-FC_2H_4CH_2F$, thus confirming that the fluoromethylations take place through the intermediate FC_2H_4OH . FC_2H_4OH (3 g.) refluxed 0.5 hr. at 30-40° with 8 g. dry CaH_2 and 1 g. anhyd. $ZnCl_2$ in the presence of a few drops pyridine, and the mixt. refluxed gently 15 min. and then distd. *in vacuo* yielded 3.35 g. (58.6%) $PhCH_2F$, b_p 139°, d_4 48-50°, colorless liquid with a characteristic smell. CaH_2 (80.0 g.) and 8.0 g. paraformaldehyde added with stirring and cooling to 3.5 g. anhyd. HF (prepd. by heating dry KHF_2), the mixt. stirred 2 hrs., then 1 hr. with 3 g. dry $ZnCl_2$, refluxed gently 0.5 hr., let stand overnight, the resinous material filtered off, the filtrate washed with dil. Na_2CO_3 , dried, distd., and the cryst. residue recrystd. yielded 8 g. CH_2Ph , m , 25-7° (from EtOH). A mixt. of FC_2H_4OH (0.5 g.), 2.0 g. PhF, and 0.3 g. $ZnCl_2$, refluxed on the water bath 1 hr. at 40-50°, cooled, fractionated, and the unreacted PhF distd. off gave 0.6 g. $p-FC_2H_4CH_2F$, b_p 53-

8°, instantaneously polymerized by concd. H_2SO_4 . HF (3.5 g.), 24 g. PhF, 50 cc. CCl_4 , and 7.5 g. paraformaldehyde stirred 2 hrs., the mixt. treated with 8 g. $ZnCl_2$, gently refluxed 1 hr., let stand overnight, filtered from resinous material, the excess PhF and the CCl_4 distd. off, and the residue recrystd. from EtOH gave $p-FC_2H_4CH_2Cl$ (I), m , 50-1°. PhF (19 g.) and 9 g. $AlCl_3$ in 50 cc. CS_2 treated dropwise with stirring with 10 g. $p-FC_2H_4CH_2Cl$, the mixt. stirred 45 min. at 40°, cooled, poured on ice, the org. layer dried, the CS_2 and excess PhF distd. off, and the residue recrystd. from EtOH gave 11 g. I, m , 60-1°. V. Preparation of fluoromethylaldehyde hydrate. *Ibid.* 431-6 (in English).— FC_2H_4CHO (II) was prepd. by the oxidation of $HOCH_2CH(OH)CH_2F$ (III) and $FC_2H_4CH_2O$ (IV), resp., with HIO_3 and $Pb(OAc)_2$. III was prepd. from the corresponding chlorohydrin by halogen exchange with LiF, in ultraviolet light. II could be isolated only as its hydrate. The further oxidation of H_2O results mainly in the splitting of the weakened C—O bond; a similar phenomenon was also observed in the oxidation of $FC_2H_4CH_2OH$. $HOCH_2CH(OH)CH_2Cl$ (20% g.) heated 4 hrs. with 17 g. LiF with vigorous stirring and irradiation with ultraviolet light at 140-60°, the mixt. treated with another 17 g. LiF, refluxed 4 hrs., this procedure repeated with a 3rd portion of 17 g. LiF, the mixt. cooled, distd. with 100 cc. abs. EtOH, filtered, the EtOH distd. off, and the residue fractionated yielded 72 g. (52%) III, b_p 110-22°, and 42 g. recovered chlorohydrin. Anhyd. KF (175 g.) and 250 g. anhyd. glycerol heated with

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György Oláh

vigorous stirring to 180°, 185 g. $\text{CICH}_2\text{CH}_2\text{CH}_2\text{O}$ (V) added dropwise with vigorous stirring and dist. of the IV as it is formed, and the residue heated with 50 cc. AmOH , gave, after distn. of the condensate, 41 g. IV, b. 82-7°; 50 g. unreacted V was recovered. III (47 g.) added dropwise in 1 hr. with stirring to 32 g. H_2O in 135 cc. H_2O at 20°; the mixt. stirred 1.5 hrs., let stand overnight, neutralized with Na_2CO_3 to methyl orange, the ppt. filtered off, and the filtrate fractionated yielded 15 g. distillate, b. 60-98°, which, refractionated repeatedly, gave 7 g. distillate, b. 85-95°, cong. 50% II, detd. as the 2,4-dinitrophenylhydrazon; II showed a slow color test with fuchsin-aldehyde reagent. III (28 g.) slowly added to 150 g. $\text{Pb}(\text{OAc})_2$ suspended in 170 g. glacial AcOH with vigorous stirring below 30°, the mixt. stirred 4 hrs. at 35°, let stand overnight, filtered, and the filtrate distd. at 100 mm. pressure gave 7 g. distillate which on redistn. yielded 2.5 g. H_2O , b. 87-85°. IV (17 g.) added dropwise to 17.5 g. H_2O in 70 cc. H_2O with continuous stirring at 20°, the mixt. stirred 3 hrs., neutralized with Na_2CO_3 , filtered, and the filtrate fractionated gave 3 g. H_2O , b. 87-95°. $\text{PCH}_2\text{CH}_2\text{OH}$ (23 g.) treated with 39.5 g. KMnO_4 in a satd. aq. soln. then dropwise with 34 cc. 50% H_2SO_4 , the mixt. heated 6 hrs. on the water bath, filtered from the pptd. MnO_2 , and the filtrate distd. gave 5 g. distillate cong. 10% II.

F. W. Hoffmann

(Summary by H. D. Schmidt)

Hungary (Germany, East Zone)/Chemistry - Fluorine Organic Compounds Oct 53

"Synthesis of Organic Fluorine Compounds," G. Glah, A. Pavlath (Summary by H. D. Schmidt)

Acta Chim Acad Sci Hung, 1953, pp 191-207 (Chem Technik, Vol 5, No 10, pp 191-207).

To polarize the C-Cl bond and make the reaction with KF possible, ClH₂C.COOH was irradiated with UV light. This was a preliminary expt in work on the synthesis of freons. It showed that heating is not necessary to induce polarization and halogen exchange. Diisopropylfluorophosphoric ester (DIPF) was synthesized by this method with an 80% yield from the

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corresponding chloro-ester. 2-fluoroethanol (I) was prepd by exposing 2-chloroethanol + KF to UV light. I was also prepd by reducing F₂C.COOCH₃ with LiAlH₄. Reduction of formyl fluoride or fluoroformic acid ethyl ester with LiAlH₄ led to fluoromethane (II). II is to be used in industrial fluoromethylations.

PAULATH, A.

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Syntheses of organic fluorine compounds. VI. Derivatives of 2-fluoroethanol of insecticidal effect. G. Ollik and A. Paulath (*Acta chim. Hung.*, 1954, 4, 85-98) → 2-Fluoroethanol from methylene and HCl gives di-2-fluoroethylmethylal, b.p. 162-164° in 45% yield. The acetal has d.p. 93-97°/3 mm. The following compounds are prepared: 2-fluoroethyl 2-hydroxyethyl ether, b.p. 30°/2-3 mm., di-(2-fluoroethoxyethyl)methane, b.p. 120°/3 mm., di-(2-fluoroethyl) sulphide, b.p. 125°/15 mm., and sulphate, b.p. 82-84°/2 mm. 2-fluoroethyl acetate, b.p. 115-116°, chloroformate, b.p. 55-60°/36 mm., aminoformate, b.p. 83°/2 mm., methylaminoformate, b.p. 71-74°/2 mm., diethylaminoformate, b.p. 55-56°/2 mm., diethylaminoformate, b.p. 45-49°/2 mm., morpholine-N-carboxylate, b.p. 101-104°/3 mm., piperidine-N-carboxylate, b.p. 80°/8 mm., di-2-fluoroethyl carbonate, b.p. 95-98°/16 mm. The compounds are useful as insecticides and rodenticides. H. WERN.

PAULATH, A.

Synthesis of organic fluorine compounds. VII. Fluorinated aromatic insecticides containing sulphur. G. Olah and A. Paulath (*Acta chim. hung.*, 1954, 4, 111-117).—In general, the insecticide effect of F deriv. is more prompt than that of the corresponding Cl deriv., but the durability of the effect is shorter owing to the greater volatility of the F compounds. PhF and 10% oleum at 70° afford *p*-C₆H₄F·SO₂H (78%), m.p. 87° [chloride, m.p. 35°, b.p. 95-98°/2.2 mm., amide, m.p. 126°]. PhF and ClSO₂H at 0° and then at 40° afford 4:4'-difluorodiphenyl sulphone (70%), m.p. 96-107°. Reduction of *p*-C₆H₄F·SO₂Cl by Zn and aq. H₂SO₄ affords *p*-fluorothiophenol (78.5%), b.p. 161-163°/760 mm., 14-65°/2 mm., oxidised by I and alkali to 4:4'-difluorodiphenyl disulphide (82%), b.p. 149-151°/3.5 mm. 2-Chloroethyl, b.p. 163°/2.2 mm., and 2-fluoroethyl *p*-fluorobenzene sulphonate, b.p. 153°/2.3 mm., *p*-fluorophenyl chloromethyl sulphone, m.p. 88-89°, and 4:4'-difluorodiphenyl sulphoxide, m.p. 71° are described. H. W. R. S.

PAVLATH, A

Synthesis of organic fluorine compounds. VIII. Preparation of chlorofluoromethanes (compounds of the Proton type). G. Diák and A. Pavlath (*Acta chim. Hung.*, 1954, 4, 119-122).--A laboratory apparatus is evolved for the prep. of chlorofluoromethanes from CHCl_3 or CCl_4 by halogen exchange with NaF , KF , CaF_2 or natural cryolite under the influence of a.v. irradiation. Up to 80% exchange occurs readily but thereafter the reaction is hindered by the metallic chloride which is formed. The apparatus is suitable for use at $\sim 350^\circ$. H. WARR.

① [Handwritten initials]

Paula Th. A. Hill

~~Organic Syntheses, Vol. VII, Preparation of 2-methoxy-1-methyl-4-piperidylamine, György Olah and Attila Favalik (Magyar Tudományos Akadémia Kémiai Kutató Intézete, Budapest), *Angew. Chem.* 73, 111-12 (1961); *J. Org. Chem.* 26, 1009-10 (1961).—Reduction to $\text{C}_8\text{H}_{17}\text{N}$ (I) of $\text{C}_8\text{H}_{15}\text{NO}$ (II) (cf. Bacon, *et al.*, *C.A.* 42, 8777e) by LiAlH_4 (III); 3.8 g. II in the thimble of a Soxhlet app. extd. 20 hrs. with a soln. of 2.1 g. III in 100 ml. Et_2O , 20 hrs., the ext. filtered, the Et_2O removed from the crude product (2.5 g., b. 38-42°) by careful fractionation, and dry HCl added gave a very hygroscopic, cryst. salt which, recrystd. from Et_2O and disid. from solid caustic alkali, yielded 47% I, b. 38-42°; picrolonate, m. 240-1°. $\text{p-MeC}_6\text{H}_4\text{SO}_2\text{NHCH}_2\text{CH}_2\text{F}$ was prepd. by shaking 1 g. $\text{p-MeC}_6\text{H}_4\text{SO}_2\text{Cl}$ in 8 ml. Et_2O and 1 g. I and 1 g. NaOH in 8 ml. water 1 hr., allowing to stand overnight, and acidifying the aq. phase with concd. HCl ; white crystals, m. 103-4° (from aq. alc.). *Eber Wiener*~~

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M.A. YUUTZ
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Paulath, Altila

Chem / Synthesis of organic fluorine compounds IX. Unimolecular reduction of nitrofluorobenzenes. Altila Paulath, and Istvan Kudo. Hung. Acad. Sci. Publ. Chem. Div. Acad. Sci. Hung. 7, 63-6 (1955) (in English); cf. C.A. 49, 6091a. (Unless otherwise stated, the isomers in the following series of compounds are given in the order *p*-, *m*-, and *o*-). A vigorously stirred suspension of 14.1 g. $FC_6H_4NO_2$ (I) in 200 ml. H_2O treated with 7 g. $AlCl_3$ and 5 g. pulverized Zn added over a 15-min. interval, and the mixt. refluxed in a 3-necked flask at 60° , filtered hot, and acid. with 75 g. $NaCl$ gave $FC_6H_4NH_2$ (m.p. shown): 90° (from gasoline); 51.5° (from Et_2O); 50° (from C_6H_6). I (2.85 g.) and 1.25 g. $AlCl_3$ in 40 ml. H_2O treated with 2.0 g. pulverized Zn as above, the filtrate stirred into a soln. of 5.5 g. $FeCl_3$ in 134 g. ice , allowed to stand, and the yellow ppt. recrystd. from alc. and steam distd. in a Pozzi-Escott app. gave white cryst. FC_6H_4NO , m. $30^\circ-31^\circ-10^\circ$. The $FC_6H_4NH_2$ (II) (bz. $87-9^\circ$, bz. 181° , bz. $77-8^\circ$, bz. 180° ; bz. $87-9^\circ$, bz. $182-3^\circ$) were prepd. by the Schulmann-Pillarsky method (S. *et al.*, C.A. 24, 1837). II HCl salts (14.5 g.) in 15 ml. concd. H_2SO_4 and 18 ml. H_2O diazotized with 3.9 g. $NaNO_2$ in 20 ml. H_2O , dild. with 1000 ml. H_2O satd. with SO_2 , allowed to stand, 1 hr., evapd. on a H_2O bath; the residual sirup refluxed with 100 ml. $EtOH$, filtered hot and allowed to stand, yielded $FC_6H_4NHNH_2 \cdot HCl$. The free bases were liberated from an aq. soln. of the HCl salt, the soln. treated with B_2O_3 , dried with K_2CO_3 and distd. *in vacuo* to give the base. $FC_6H_4NHNH_2 \cdot HCl$, m. $108-9^\circ$, $244-6^\circ$, $184-5^\circ$. $FC_6H_4NHNH_2$, bz. $89-91^\circ$, m. 35° ; brown needles, bz. $83-5^\circ$, m. $27-6^\circ$; light-sensitive crystals, bz. $70-0^\circ$, m. $43-0^\circ$. X. Bimolecular reduction of nitrofluorobenzenes. Ibid. 71-84. -- $NaOH$ (0.35 mols) in 50

J. M. YOUTZ
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Diab. Gvrc. 4

ml. H₂O added to 0.1 mole $p\text{-FC}_6\text{H}_4\text{NO}_2$ (I) in 15 ml. EtOH, the cooled mixt. stirred, 30 g. pulverized Zn added in small portions through a closed feed device, then 170 ml. EtOH, the mixt. kept on a hot H₂O bath 5 min., filtered, and the filtrate allowed to stand deposited $(p\text{-HOC}_6\text{H}_4\text{N})_2$, yellow lamellar crystals, m. 162°; $(m\text{-FC}_6\text{H}_4\text{N})_2$ (II), orange lamellar crystals, m. 65.5°; and $(o\text{-FC}_6\text{H}_4\text{N})_2$, m. 149-50°. I (0.030 mole) treated with 0.033 mole As_2O_3 in a soln. of 1.2 mole NaOH in 18 ml. H₂O with vigorous stirring, the brown mixt. refluxed 3 hrs., cooled, dild. with H₂O, filtered, and the product recrystd. from EtOH gave $(p\text{-FC}_6\text{H}_4\text{N})_2\text{N}_2\text{O}$ (III), m. 83°; $(m\text{-FC}_6\text{H}_4\text{N})_2\text{N}_2\text{O}$ (IV), yellow, m. 51°; acidification of the filtrate from *o*-I gave $(o\text{-HOC}_6\text{H}_4\text{N})_2\text{N}_2\text{O}$ (V), m. 151°. NaOH (15 g.) in 50 ml. H₂O added to 0.082 mole I, the mixt. stirred 30 min. at 45-50°; treated with 0.06 mole glucose in 30 min., heated 30 min. on a H₂O bath, steam distd., then refrigerated, and the ppt. filtered and recrystd. from EtOH gave III, IV, and V, resp. $p\text{-FC}_6\text{H}_4\text{NH}_2\text{HCl}$ diazotized, 9 g. AcONa and 9 g. aniline added, and the mixt. allowed to stand overnight gave yellow $p\text{-FC}_6\text{H}_4\text{N}_2\text{N}^+\text{K}^-$ (VI), m. 67°. PhNH_2HCl (2.5 g.) added to 4.25 g. VI in 15 g. aniline, the soln. stirred 1 hr. on the H₂O bath at 50°, cooled, treated with 20 ml. 50% AcOH, and allowed to stand 15 min. gave red crystals of *o*-*is*-*o*-*o*-aminazobenzene (VII), m. 233°. VII treated by the Schiemann method gave orange $(p\text{-FC}_6\text{H}_4\text{N})_2$ (VIII), m. 101° (from EtOH). Pulverized Mg (3 g.) added to 5 g. I in 250 ml. abs. MeOH, the soln. refluxed 3 hrs. after the initial reaction subsided, boiled 1 hr. after the Mg had completely dissolved, most of the MeOH removed

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Olan, C. G. G. G.

is treated, and the residue treated with a soln. of 100 ml. H_2O and 40 ml. concd. HCl in small portions gave III, IV, and (*o*- $FC_6H_4NH_2$) (IX), m. 48.5°, resp. A 0.5M H_2O soln. (22 ml.) of $LiAlH_4$ added dropwise to 1 g. I in 15 ml. well-cooled abs. Et_2O , the dark brown mixt. allowed to come slowly to room temp. with stirring, refluxed 30 min., allowed to stand overnight, treated with 1 ml. H_2O , filtered by suction, the ppt. washed with Et_2O , the combined filtrate and washings: evapd., and the residue recrystd. from $MeOH$ gave VIII, IV, and IX, resp. The previous procedure, applied to 5 g. I in 30 ml. Et_2O and 72 ml. $LiAlH_4$ soln., the mixt. refluxed 1 hr., 6 ml. H_2O added, and the Et_2O soln. dried and evapd. yielded VIII, II, and (*o*- $FC_6H_4NH_2$) (X), m. 71°. The $LiAlH_4$ soln. (5 ml.) added to 1 g. III, IV, or IX in 10 ml. Et_2O by the above method (with addn. of only 0.5 ml. H_2O) and the product recrystl. from $EtOH$ produces VII, II, or X, resp. III (0.5 g.) in 25 ml. $EtOH$ and 40 g. 1.2% $Na-Hg$ refluxed in a N atm. until the color disappeared; the soln. decanted hot into ice; 2 ml. of SO_2 -satd. H_2O added immediately, and the mixt. filtered gave white crystals of (*p*- $FC_6H_4NH_2$) (XI), m. 84°. V gave (*m*- $FC_6H_4NH_2$) (XII), m. 67°. IX gave (*o*- $FC_6H_4NH_2$) (XIII), m. 52.5°. VIII (0.5 g.) in 15 ml. $EtOH$ and 20 g. 1.2% $Na-Hg$ treated as above yielded XI, II gave XII, and X gave XIII. An aq. soln. of $NaOBr$ (prepd. from 1.5 g. $NaOH$, 20 ml. H_2O , and 2 g. Br) added to 1.1 g. XI in 40 ml. Et_2O ; the mixt. shaken 10 min.; the Et_2O layer sepdl., dried, the Et_2O distd., and the residue recrystd. from $EtOH$ produced VIII; XII treated as above yielded II, and XIII gave X. VIII (1 g.) in 15 ml. glacial $AcOH$ added to 3 g. 10% H_2O ; and the mixt. refluxed 2 hrs. and poured into ice produced III; oxidation of I as above gave IV, and I gave IX. Acid rearrangement of the difluorohydrozobenzenes was effected

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Oláh, György

as follows: 1.1 g. XII, 8 ml. H₂O, and 8 ml. concd. HCl was heated 30 min. on a H₂O bath, then to boiling, cooled, the pptd. HCl salt filtered by suction, and the 2,4-F(H₂N)-C₆H₃, m. 114-15°, liberated by adding 20 ml. 20% NaOH and filtering. Treatment of XIII as above produced 3,4-F(H₂N)-C₆H₃, m. 105°; from XI no benzidine was obtained but repeated recrystn. gave some VIII, and steam distn. gave p-FC₆H₄NH₂. All mps. are unclear. On the basis of exptl. results a hypothetical mechanism of reaction for the reduction of I with LiAlH₄ is developed as a simple S_N2 type. XI. Preparation of several aromatic fluorine derivatives. *Ibid.* 85-92. Dry HCl led 2 hrs. into a stirred mixt. of 160 g. Ph² (I), 15 g. paraformaldehyde, and 15 g. anhyd. ZnCl₂, and the org. phase sepd., washed with H₂O, a 5% soln. of NaHCO₃, and again H₂O, dried with CaCl₂, and fractionated *in vacuo* gave p-FC₆H₄CH₂Cl (II), b_p 96-8° also obtained from 107 g. I, 30 g. paraformaldehyde, and 50 g. ZnCl₂, refluxed at 60°, dry HCl introduced for 8 hrs., and the org. layer sepd. after 1 hr. and treated as above. (p-FC₆H₄)₂CH₂, b. 133-4°, was also obtained. Boiling p-FC₆H₄Me (11 g.) irradiated with ultraviolet light in the presence of 0.2 g. PCl₅ and fractionated *in vacuo* gave p-FC₆H₄CO₂ (III), b_p 95-7°. II chlorinated in the presence of PCl₅ as described above gave III, b_p 98-101°. III (8 g.) refluxed 1 hr. with 9 g. KOH in 20 ml. H₂O, dild. with 20 ml. H₂O, acidified hot by a few drips of concd. HCl in the presence of Congo red, filtered hot and allowed to cool gave white needles of p-FC₆H₄CO₂H (IV), m. 182-3° (from hot H₂O). NaCN (40 g.) in 60 ml. H₂O and 85 ml. EtOH treated with 95 g. II dropwise with stirring, in 10 min., the mixt. refluxed and stirred 2 hrs., cooled, filtered, the filtrate

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washed with 200 ml. conc. aq. NaOH soln., and the residue
 phase dried with anhyd. Na_2SO_4 , gave $p\text{-FC}_6\text{H}_4\text{CONH}_2$ (V),
 b.p. 117-18°. V (30 g.), 40 ml. concd. H_2SO_4 , 40 ml. glacial
 AcOH, and 40 ml. H_2O treated under slow reflux with 25 ml.
 concd. H_2SO_4 , and the mixt. boiled 1 hr. and allowed to
 stand overnight gave $p\text{-FC}_6\text{H}_4\text{CH}_2\text{CO}_2\text{H}$ (VI), m.p. 85-86°, and
 more was obtained when the mother liquor was poured on
 ice. KOH (5.3 g.) in 30 ml. EtOH boiled 2 hrs. with 11.5
 g. VI, the mixt. filtered, and the filter cake washed with H_2O
 and dried with CaCl_2 yielded $p\text{-FC}_6\text{H}_4\text{CH}_2\text{OEt}$ (VII), b.p. 188-89°.
 $p\text{-FC}_6\text{H}_4\text{CH}_2\text{Br}$ (9.46 g.) and 15.8 g. K_2CO_3 in 100 ml. H_2O
 refluxed 12 hrs., cooled, extd. 3 times with 25-ml. portions
 of EtO, and the exts. dried with Na_2SO_4 and distd. gave
 $p\text{-FC}_6\text{H}_4\text{CHOH}$ (VIII), b.p. 98-99°. By a Sommelet reaction
 $p\text{-FC}_6\text{H}_4\text{CHO}$ (IX), b.p. 170-80°, and $p\text{-FC}_6\text{H}_4\text{CH}_2\text{NH}_2$ (X),
 m.p. 75-80°, were obtained from VIII. By a Friedel-Crafts reac-
 tion I gave $p\text{-FC}_6\text{H}_4\text{CO}$ (VII), m.p. 104-4° (from EtO).
 A Coleman-Byis reaction (C.A. 41, 189c) with the oxime of
 VII, m.p. 137-8° (from PhMe), gave VI and $p\text{-FC}_6\text{H}_4\text{NH}_2$,
 $p\text{-FC}_6\text{H}_4\text{Ac}$ (VIII), b.p. 106-7°, prepd. by the method of
 Lutz, et al. (C.A. 42, 1221f), gave $p\text{-FC}_6\text{H}_4\text{CH}_2\text{CONH}_2$ (IX),
 m.p. 163-4° (from hot H_2O), by the Willgerdt reaction.
 Acid hydrolysis of IX gave V. Pulverized Zn (20 g.) added
 with stirring to 24 g. VII and 20 g. NaOH in 200 ml. 91%
 EtOH, the mixt. heated to 65-70°, stirred at this temp. 2
 hrs., the ppt. filtered, washed with a few tal. of EtOH, and
 the filtrate poured into 5 times the quantity of ice mixed with
 40 ml. of concd. HCl gave white cryst. $(p\text{-C}_6\text{H}_4)_2\text{CHOH}$, m.p.
 34-5° (from EtOH). VIII (100 g.), 1200 ml. EtOH, and
 130 g. NaOH vigorously stirred, treated with 130 g. pul-
 verized Zn in small portions, stirred 2 hrs. at 70°, filtered