KORMANOVA, Ye.Ye., kand.med.nauk

Kidney function changes in dysentery. Vrach.delo no.5:459-461 My '59. (MIRA 12:12)

1. Kafedra infektsionnykh bolezney (zav. - prof. B.Ya. Padalka) Kiyevskogo meditsinskogo instituta.
(DYSENTERY) (KIDNEYS)

PADALKA, B.Ya.; KORMANOVA, Ye.Ye.; CHERNOMORDIK, A.B.; LUKACH, I.G.; BASS, T.M.

Materials on the etiology, clinical aspects and rational antibiotic therapy of chronic ulcerative colitis. Vrach. delo no.10:99-103 O '63. (MIRA 17:2)

1. Kafedra infektsionnykh bolezney (zav. - prof. B.Ya. Padalka) Kiyevskogo meditsinskogo instituta i otdel antibiotikov (zav. - doktor biologicheskikh nauk A.B. Chernomordik) Kiyevskogo instituta epidemiologii i mikrobiologii.

CHERNAYA, T.T., kand.med.nauk; KORMANOVA, Ye.Ye.

Characteristics of the course of influenza during the epidemic of 1959. Vrach. delo no.1:116-121 Ja '62. (MIRA 15:2)

1. Kafedra infektsionnykh bolezney (zav. - prof. B.Ya.Padalka) Kiyevskogo meditsinskogo instituta.
(INFLUENZA)

KORMANOVA, Ye.Ye.

Clinical and therapeutic aspects of icterohemorrhagic leptospirosis (Vasil'ev-Weil's disease). Zhur.mikrobiol., epid.i immun. 33 no.4: 58-62 Ap '62. (MIRA 15:10)

1. Iz Kiyevskogo meditsinskogo instituta.
(WEIL'S DISEASE)

EWT(m)/EWP(j) Pc-4 RM

ACCESSION NR: AP4047393 S/0062/64/000/010/1748/1755

AUTHOR: Kormanovskaya, G. N.; Vlodavets, I. N.

TITLE: Kinetics of the homogeneous reaction of polyvinyl alcohol with formaldehyde in aqueous solutions

SOURCE: AN SSSR. Izvestiya. Seriya khimicheskaya, no. 10, 1964, 1748-1755

TOPIC TAGS: polyvinyl alcohol formaldehyde reaction, reaction kinetics, formaldehyde butylene glycol reaction, energy of activation

ABSTRACT: The kinetics of polyvinyl alcohol-aldehyde reactions in aqueous solution were studed. The formaldehyde consumption rate in its reaction with polyvinyl alcohol and with 1,3-butylene glycol in aqueous solution was described by a first order equation, based on aldehyde concentration and on alcoholic hydroxyl group concentration. The formaldehyde consumption rate and reaction rate increased with increasing acidity. The increased rate of reaction of formaldehyde with polyvinyl alcohol and with 1,3-butylene glycol in comparison to its reaction

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L 41346-65
ACCESSION NR: AP4047393

3

with monohydric alcohols shows that the protonized formaldehyde can react with materials containing hydroxyl groups in the 1, 3 position; the reaction proceeded [illegible] stage, forming the cyclic acetal and splitting off an oxonium ion. After determining the temperature-H_0 (Hammett acid function) relationship, the [illegible] energy of activation of the reaction of polyvinyl alcohol with formaldehyde was calculated: E = 17.4 kcal/mole. "The authors sincerely thank P. A. Rebinder and M. I. Temkin for the series of valuable advice." Orig. art. has: 8 equations, 3 formulae, 6 figures

ASSOCIATION: Institut fizicheskoy khimii Akademii nauk SSSR (Institute of Physical Chemistry, Academy of Sciences SSSR)

SUBMITTED: 10Jan63 ENCL: 00 SUB CODE: OC, GC

NR REF SOV: 007 OTHER: 006

Card 2/2

ANDREYEVA, Ye.P.; SEGALOVA, Ye.Ye.; KORMANOVSKAYA, G.N.

Effect of calcium chloride on the metastable solubility of di- tricalcium silicates. Koll. zhur. 26 no.4:404-408 Jl-Ag '64. (MIRA 17:9)

1. Moskovskiy universitet, khimicheskiy fakul'tet, kafedra kolloidnoy khimii.

L 54450-65 EWT(m)/EWP(j) Pc-4 RM

ACCESSION NR: AP5012457 UR/0062/65/000/004/0737/0739

AUTHOR: Kormanovskaya, G. N.; Vlodavets, I. N.

TITLE: The kinetics of acetalization of polyvinyl alcohol by aliphat aldehydes in aqueous solutions

SOURCE: AN SSSR. Izvestiya. Seriya khimicheskaya, no. 4, 1965, 737-739

TOPIC TAGS: polyvinyl alcohol, activation energy, aliphatic compound, kinetics

ABSTRACT: The authors previously proposed an equation to express the kinetics of acetalization in the reaction between polyvinyl alcohol and formaldehyde in a heterogeneous aqueous environment (Izv. AN SSSR, Ser. khim. 1964, 1748). The present work is an attempt to test the applicability of this equation in describing the reaction between polyvinyl alcohol and other aldehydes and to determine the activation energies of these reactions. Tests were made with acetaldehyde, propionaldehyde, and butyraldehyde. Concentrations and reactions were measured with their dependence on temperature and reaction time. Results show that the reaction of these aldehydes with polyvinyl alcohol obey the same equation as that previously proposed. The apparent activation energy of the interaction between

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ACCESSION NR: AP5012457

polyvinyl alcohol and the three indicated aldehydes is 14 700 calories, which is lower than the activation energy for formaldehyde (17 400 calories). The authors suggest that the difference is related to lower dipole moment in formaldehyde (as compared with the other aldehydes) and to lower interaction energy between this aldehyde and protons. Orig. art. has: 3 figures, 1 table, and 1 equation.

ASSOCIATION: Institut fizicheskoy khimii, Akademii nauk SSSR (Institute of Physical Chemistry, Academy of Sciences, SSSR)

SUBMITTED: 15Jul64	ENCL: 00	SUB CODE: OC, GC
NR REF SOV: 005	OTHER: 001	

Card 2/2

KORMANOVSKAYA, M. A.

Kormanovskaya, M. A. "Value of grass in the rations of hogs," Trudy Otd. koraléniya (Kazakh. filial Vsesoyuz. akad. s.-kh. nauk im Leniana, In-t zhivotnovodstva), Issuel, 1948, p. 54-57

SO: U-3264, 10 April 53 (Letopis 'Zhurnal 'nykh Statey, No. 4, 1949).

KORMANOVSKAYA, M. A.

Kormanovskaya, M. A. "Methods of producing plant acidophiline and its fodder and prophylac tic value," Trudy Otd. kormleniya (Kazakh. filial Vsesoyuz. akad. s.-kh. nauk im Lenina, In-t zhivotnovodstva), Issuel, 1948, p. 69-86

SO: U-3264, 10 April 53 (Letopis 'Zhurnal 'nykh Statey, No. 4, 1949).

KORMANOVSKAYA, M. A.

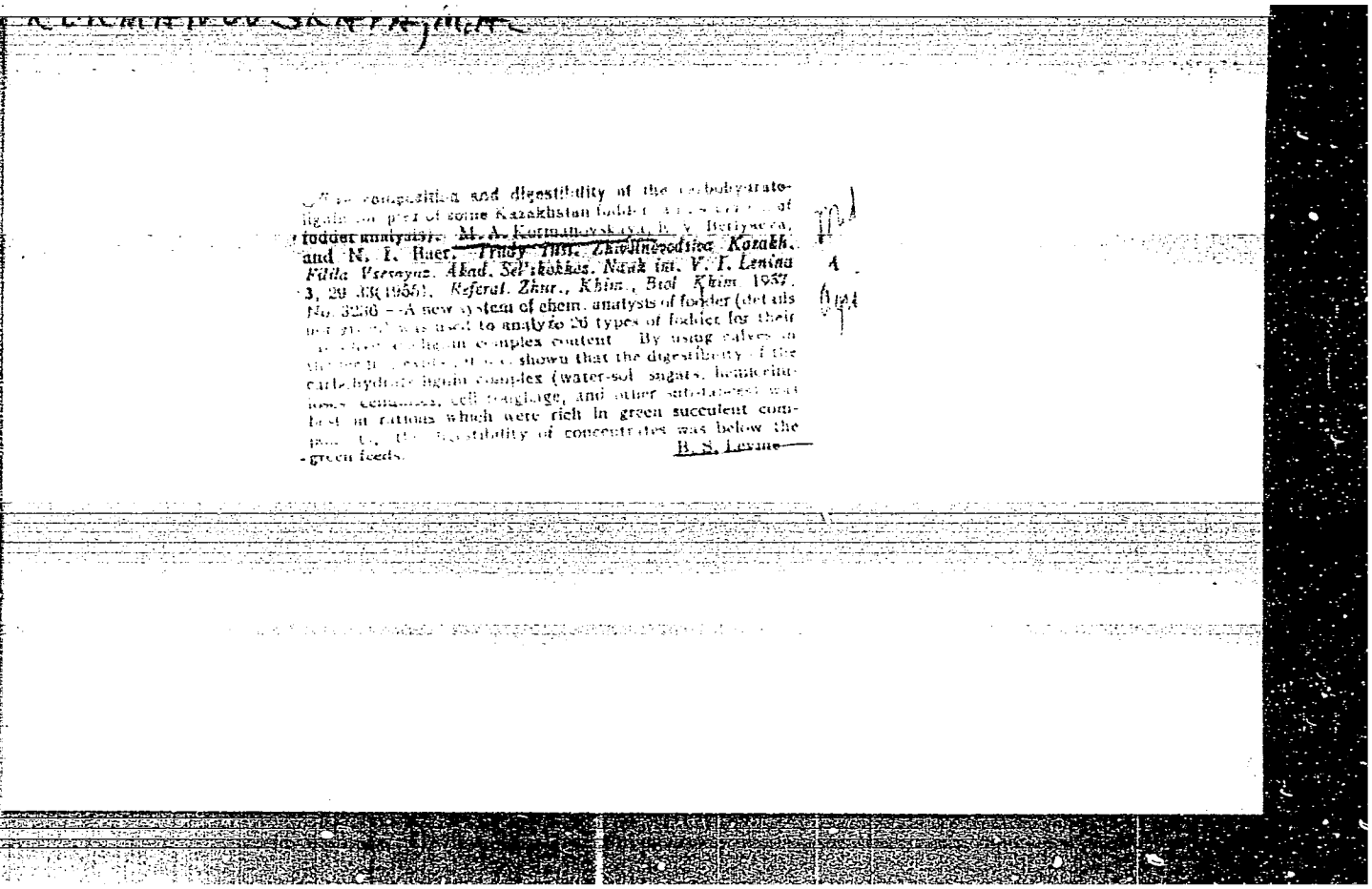
Kormanovskaya, M. A. "Effect of germinated grain on the development of young pegs during the embryological period," Trudy Otd. kormleniya (Kazakh. filial Vsesoyuz. akad. s.-kh. nauk im Lenina, In-t zhivotnovodstva), Issue 1, 1948, p. 87-94

SO: U-3264, 10 April 53 (Letopis 'Zhurnal 'nykh Statey, No. 4, 1949).

KORMANOVSKAYA, M. A.

Kormanovskaya, M. A. "Effect of methods of feed preparation in accelerating the fattening of swine," Turdy Otd. kormleniya (Kazakh. filial Vsesoyuz. akad. s.-kh. nauk im Lenina; In-t zhivotnovodstva), Issue 1, 1948, p. 95-102

SO: U-3264, 10 April 53 (Letopis 'Zhurnal 'nykh Statey, No. 4, 1949).



...e composition and digestibility of the carbohydrate-lignin part of some Kazakhstan fodder ... of fodder analysis. M. A. Kormanovskaya, L. V. Beriyeva, and N. I. Baer. *Trudy Inst. Zhivotnovodstva Kazakh. Filila Vsesoyuz. Akad. Sel'skokhoz. Nauk im. V. I. Lenina* 3, 29-38(1955). *Referat. Zhur., Khim., Biol Khim* 1957, No. 3256.—A new system of chem. analysis of fodder (details not given) was used to analyze 26 types of fodder for their carbohydrate-lignin complex content. By using calves in ... it was shown that the digestibility of the carbohydrate-lignin complex (water-sol. sugars, hemicelluloses, cellulose, cell coatings, and other substances) was best in rations which were rich in green succulent components. The digestibility of concentrates was below the green feeds.

B. S. Levine

KORMANOVSKAYA, M.A., kand. sel'skokhozyaystvennykh nauk; GUSEVA, N.P., red.; ZLOBIN, M.V., tekhn. red.

[Feeding cows in stables in winter] Kormlenie korov v zimnii stoilovyi period. Alma-Ata, Kazakhskoe gos. izd-vo, 1956. 14 p. (MIRA 11:7)

(Kazakhstan--Dairy cattle--Feeding and feeding stuffs)

SALYUKOV, P.A., kand. biol. nauk; VERNIGOR, V.A., kand. sel'khoz. nauk; KORMANOVSKAYA, M.A., kand. sel'khoz. nauk; GOLODNOV, A.V.; SKOROBOGATOV, Yu.A., mladshiy nauchnyy sotr.; MALLITSKIY, V.A., kand. sel'khoz. nauk; CHASHCHIN, B.V., kand. sel'khoz. nauk; PONOMAREV, P.P., kand. tekhn. nauk; BARMINTSEV, Yu.N., doktor sel'khoz. nauk; NECHAYEV, I.N., mlad. nauchnyy sotr.; POZDNYAKOV, P.M., kand. biol. nauk; KOVIN'KO, D.A., kand. biol. nauk; BALANINA, O.V., kand. sel'-khoz. nauk; MOISEYEV, K.V., kand. sel'khoz. nauk; ROMANOV, P.F., kand. veter. nauk; PAL'GOV, A.A., kand. veter. nauk; ANAN'YEV, P.K., kand. veter. nauk; VASIL'YEV, B.M., kand. sel'khoz. nauk; ABDULLIN, V.A., kand. ekon. nauk; GALIAKBEROV, N., laureat Gos. premii, kand. sel'khoz. nauk, red.; GUSEVA, N., red.; NAGIBIN, P., tekhn. red.

[Reference book for zootechnicians] Spravochnik zootekhnika. Pod red. N.Galiakberova. Alma-Ata, Kazsel'khozgiz, 1963. 492 p. (MIRA 16:5)
(Kazakhstan--Stock and stockbreeding)

NOVIKOV, Vyacheslav Aleksandrovich. Prinimali uchastiye: LEBEDEV, Aleksey Dmitriyevich, kand.khim.nauk; PEYSAKHOVICH, F.Sh.; KORMANOVSKIY, A.P.; RYZHINSKIY, B.I.; GARBAZHIY, G.I.. DANILOVA, V.M., red.; DANILOVA, Ye.M., tekhred.

[Suggestions of efficiency promoters of the Mari A.S.S.R.] Predlozheniia ratsionalizatorov Mariiskoi ASSR. Ioshkar-Ola, Mariiskoe knizhnoe izd-vo, 1959. 52 p. (MIRA 13:5)
(Mari A.S.S.R.--Technological innovations)

KORMANOWA, Zanna, prof.dr.

The "Proletariat"; on the occasion of the 80th anniversary of its founding. Problemy 19 no.11:753-763 '62.

G/006/62/000/010/002/002
D025/D109

9,2110

AUTHORS: Kormány, Therése, and Barna, Heléne (Budapest)

TITLE: Methods for determining the natural service life of electrolytic capacitors

PERIODICAL: Nachrichtentechnik, nó. 10, 1962, 391-392

TEXT: To improve the conventional methods, investigations concerning the service life of electrolytic capacitors were made by the Forschungsinstitut für Fernmeldetechnik, Budapest (Research Institute of Telecommunications). Several hundred electrolytic capacitors of varying capacity, of 350 V nominal voltage, and a volume of 30 cm^3 were tested at a temperature of 70°C at nominal voltage. These capacitors originated from Western Germany, Holland, the USSR and Hungary. The initial values of the capacity, the loss angle, and the residual current of all condensers were measured. The period of time within which the p-factor was $\leq 10^{-6}$, was designated as "useful service life". All capacitors showing a change of capacity $\geq \pm 10\%$, a tan$\delta > 0.225$ and a residual current $> 5 \times C \times U \times 10^{-5}$ mA, and those which broke down or had permanent short circuits, were considered as failures.

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These so-called service life investigations last already 9,000 hrs. At the same time, capacitors of the same types and series were connected to nominal voltages at a surrounding temperature of 20°C and other capacitors were stored at 20°C and 70°C without being connected. These capacitors were also tested every 1,000 hrs. Storage without connection had a greater effect on the capacitors than a connection to nominal voltage. The permanent testing at nominal voltage is not suitable for determining the useful service life. The practical working conditions can be approached by periodical testing methods. The authors conclude the article by expressing their hope to find a suitable testing method on the basis of their investigations. There are 2 tables.

ASSOCIATION: Forschungsinstitut für Fernmeldetechnik, Budapest (Research Institute of Telecommunications).

SUBMITTED: June 15, 1962.

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32034
H/006/62/000/001/001/001
D213/D304

18.8300

AUTHORS: Ambrus, Győző and Kormány, Teréz

TITLE: The corrosive effect of thermosetting plastics on metals

PERIODICAL: Magyar kémikusok lapja, v. 17, no. 1, 1962, 27-29

TEXT: The experiments were aimed at elucidating the causes of the corrosion of metals affected by the decomposition products of plastics, and the selection of construction materials for use under tropical conditions. The tests were carried out by examining the effect of the filings of heathardened test pieces made from phenoplasts and aminoplasts of Hungarian manufacture, on copper and oxidized aluminum foils, at 80°C. To find the corrosive agents among the components of the series examined, first the effect of phenol and cresol on copper and oxidized aluminum foil were studied, by heating the foils in the liquid and vapor phases of phenol and cresol diluted with 5% water, and examining the surface of the foils, and also reweighing the foils to find the increase in weight, owing, presumably to phenolate and cresolate formation. The

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The corrosive effect ...

results have shown that phenol is less active than cresol, that phenol is more active as a corrosive agent in the liquid phase than in the vapor phase whereas with cresol the opposite is true, and that oxidized aluminum foils of German manufacture proved more resilient to corrosion than the Hungarian variety. The pressing powders examined were of the phenoplast and aminoplast groups, the former being based mainly on phenol and cresol resins, the latter on urea type resins. Postulating that in corrosion the residual ammonia content originating from decomposition of hexamethylene tetramine, and chloride content may play a part, the presence of these agents was tested for, and measured. The tests showed a variation in the ammonia content from 0.001% to 0.25%, and between 0.005% and 0.25% for the chloride. The effect of ammonia in phenoplasts was much less than that of phenols, and was thus not directly measurable, but the corrosive effects of chloride in the aminoplasts appear as white stains on oxidized aluminum, as similarly the strongly corrosive effect of aminoplasts on copper foil. For testing heat-hardening plastics, 1 gm of filings from the test pieces was made into a thick mull with a

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The corrosive effect ...

little water and put into a test tube, into which the two test pieces of foils were dipped. The whole assembly was kept for 48 hours in an atmosphere of 90% rel. humidity to avoid condensation on the foils and then with 110 v. d.c. connected to the two test foils the assembly was heated at 80± 5°C for 8 days, the corrosive effect being evaluated by the naked eye and microscope. The degrees of corrosion were correlated with the degrees of coloration of the foil surface, from unchanged to dark brown. The tests were carried out in mulls made with the elctrolytic condenser electrolyte liquid, i.e. boric acid, glycol and ammonium hydroxide, and with dry filings. The conclusions are that: The corrosive effects of cresol, and in certain cases, that of water-soluble chloride has been established. Water plays an important part in promoting corrosion which in aqueous media was always at its highest; the hindering effect of the electrolyte may be due to a lowering of the percentage of water, and perhaps formation of an electrical double layer. The foils of foreign manufacture withstood corrosion much better. There are 3 figures, 4 tables and 3 non-Soviet-bloc references.

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32034
H/006/62/000/001/001/001
D213/D304

The corrosive effect ...

ASSOCIATION: Kåbel-és Müanyaggyår (Cable and Plastics Factory) (G. Ambrus); Tåvközlési Kutato (Long Distance Communications Research Institute) (T. Kormany).

Card 4/4

Gas-chromatographic investigations. Gy. Székely, T. Kormány, Gy. Récz, and Mrs. G. Fráply (Polytech. Univ., Budapest, Hung.). *Periodica Polytech.* 2, 269-74(1958)(in German).—The apparent soly. of CO_2 in acetone absorbed on SiO_2 gel is measured for 456 mm. CO_2 and 90–266 mm. acetone partial pressure at 29.8 ± 0.1°. The unexpectedly high soly. is explained by the formation of localized centers of liquid that are several mol. layers thick. Kurt Mann

KORMASHOV, Vasiliy Andreyevich; MEDVEDEV, I.M., gvardii mayor, redaktor; MYASNIKOVA, T.F., tekhnicheskiy redaktor.

[Navigational slide rule NL-10; manual for flight personnel] Navigatsionnaia schetnaia lineika NL-10; posobie dlia letnogo sostava. Moskva, Voen. izd-vo Ministerstva obor. SSSR, 1956. 99p. (Slide rule) (Navigation (Aeronautics)) (MIRA 9:6)

KORMASHOV, Vasiliy Andreyevich; MEDVEDEV, I.M., gvardii podpolkovnik, red.; KONOVALOVA, Ye.K., tekhn.red.

[The NL-10m navigational slide rule; description and clues for the solution of problems] Navigatsionnaia schetnaia lineika NL-10m; opisanie ustroistva i kliuchi dlia resheniia zadach. Moskva, Voen.izd-vo M-va oborony SSSR, 1961. 119 p. (MIRA 14:12)

(Slide rule) (Aeronautical instruments)

ZINKEVICH, V.I., inzh.-podpolkovnik; KOSHASHOV, V.A., podpolkovnik

Considering air temperature in high altitude flights.
Vest.Vozd.Fl. no.6:46-50 Je '60. (MIRA 13:7)
(Atmospheric temperature)
(Airplanes—Piloting)

KORMASZEWSKI, W.

More physical education in aviation centers. pl 3

Vol 11, no. 19, May 1955, SKRZYDLATA POLSKA

SO:MONTHLY LIST OF EAST EUROPEAN ACCESSIONS, (EEAL), LC, Vol. 4, No. 9, Sept. 1955, Uncl.

KERMENDI, I. [Kormendi, I.]; FERENTSZI, I. [Firenczi, I.]; DIYENESH, L. [Dienes, L.]

Machine for the classification of green peas by the specific weight. Kons.i ov.prom. 17 no.7:40-45 Jl '62. (MIRA 15:6)

1. Nauchno-issledovatel'skiy institut konservnoy i pertsovoy promyshlennosti (for Kermendi). 2. Mashinostroitel'nyy zavod pishchevoy promyshlennosti Vengrii (for Ferentszi, Diyenesh).
(Hungary—Peas, Canned)

KORMENDI, Jozsef

Technologies in the construction of dwelling houses during the 3rd five-year plan. Epites szemle 8 no.3:76-88 '64.

1. Division Chief, Department of Technical Development, Ministry of Building, Budapest.

KORMENDI, Jozsef

Experiences in the application of the block construction method in 1960. Magy ep ip 10 no.2:62-64 '61.

KORMENDY, Imre

Modern evaporators in the food industry. Elelm ipar 13 no.11: 338-343 N '59.

1. Konzerv- es Paprikaipari Kutato Intezet.

KORMENDY, Imre

Up-to-date evaporator equipment in the food industry. Elelm ipar 13 no.11:338-343 N '59.

1. Konzerv- es Paprikaipari Kutato Intezet.

KORMENDY, Imre

Centrifuges in the canning industry. Konzerv paprika no.6: 200-206 N-D '62.

1. Konzerv-Paprikaipari Kutato Intezet.

KORMENDY, Imre

Paring. Konzerv paprika special issue:3-9 '63.

KORMENDY, Imre

Juice extraction. Konzerv paprika special issue:40-44 '63.

KORMENDY, Imre

Measurements on the resistance of flow in a 29, 5% tomato pulp. Konzerv paprika no.3:72-81 My-Je '63.

1. Konzerv- es Paprikaipari Kutato Intezet.

KORMENDI, P.

Exhibition of the Hungarian applianc e industry in Moscow. p.22.
Letter to the editors on some problems of exportation of telecommunication equipment. p.20. MUSZAKI ELET. (Muszaki es Termeszettudomanyos Egyesuletek Szovetsege) Budapest. Vol 11, no. 1, Jan 1956.

SOURCE: EEAL, Vol 5, no. 7, July 1956.

KORMENDY, Agoston

Topics of the International Federation of the Societies of Automobile Engineers. Pt.2. Auto motor 14 no.6:8 Mr '61.

1. Csepel Autogyar Kiserleti Uzemenek vezeto mernoke.

KORMENDY, Agoston

Moszics form the trucks of Geneva Automobile Show. Auto motor 14 no.10:17 My '61.

KORMENDY, Agoston

International Automobile Show, Geneva, March 16-26, 1961. Auto motor 14 no. 8:16-17 Ap'61.

KORMENDY, Imre

State and recent achievements in condensation in the Hungarian canning industry. Konzerv paprika no.4:120-124 Jl-Ag '63.

1. Konzerv- es Paprikaipari Kutato Intezet.

KORMENDY, I. K.

Distr: 4E2c(3)/4E3d

The reactions of polyamines with phthalimidoalkyl halides. I. K. Kormendy (L. Eötvös Univ., Budapest, Hung.). *Acta Chim. Acad. Sci. Hung.* 17, 255–64(1958)(in German).—The synthesis of polyamines from haloalkylphthalimides gave satisfactory yields only in the case of aromatic amines, secondary aliphatic amines, and primary aliphatic amines with substituents of increased steric requirement, such as Me_3CNH_2. Primary aliphatic amines provoked a cleavage of the phthalimido ring, and the formed phthalamide was converted into a deriv. of oxazoline or phthalamidine. The formation of polyamine was ascribed in the case of primary aliphatic amines to the liberation of

halide alkylamines. Thus, 25.4 g. o-C_6H_4.CO.N(CH_2CH_2Br).CO (I) in 120 ml. warm alc. carefully cooled, 0.11 mole $EtNH_2$ in 30% aq. soln. added, and the mixt. cooled and filtered gave 10–15 g. *N*-ethyl-*N'*-(β-bromoethyl)-phthalamide (II), m. 127° (C_6H_6). I (25.4 g.) in 40 ml. warm alc. treated with 10.7 g. $PhCH_2NH_2$ in 50 ml. cold alc., and treated as above gave 25 g. *N*-benzyl-*N'*-(β-bromoethyl)phthalamide (III), needles, m. 138–9° (aq. alc.). I (2.54 g.) in 8 ml. warm alc. treated with 3 ml. iso-$PrNH_2$ and gradually cooled gave 1.5 g. *N*-isopropyl-*N'*-(β-bromoethyl)phthalamide (IV), m. 164–5° (aq. MeCO). IV in 1–2 ml. alc. heated 4 hrs. in a sealed tube at 100°, then cooled gave 0.5 g. *N,N'*-diisopropylphthalamide, needles, m. 204–5° (aq. alc.). An alc. soln. of equimolar amts. I and cyclohexylamine refluxed, cooled, filtered, the filtrate concd., and the residue extd. with dil. HCl gave *N*-cyclohexylphthalimide, needles, m. 163°. o-C_6H_4.CO.NPh.CO (2.23 g.) and 1.07 g. $PhCH_2NH_2$ in 20 ml. alc. refluxed 30 min., the mixt. cooled, and heated 1 hr. at 200–10° gave 2.1 g. o-C_6H_4.CO.N(CH_2Ph).CO, needles, m. 148° (alc.). o-C_6H_4.CO.N(CH_2CH_2NHPh).CO (1.33 g.) and 0.54 g. $PhCH_2NH_2$ refluxed 2 hrs. with 5 ml. alc., and the solvent removed gave 0.75 g. *N*-benzyl-*N'*-(β-anilinoethyl)phthalamide, m. 176° (alc.). Na (0.23 g.) in 10 ml. abs. alc. heated 2–3 min. on a H_2O bath with 2.09 g. II, the mixt. filtered, dild. with cold H_2O, kept several hrs. in ice, filtered, and crystd. from aq. alc. gave phenyloxazoline-o-carboxylic acid ethylamide (V), prisms, m. 107° (CCl_4). V (1 g.) in 4 ml. H_2O and 0.4 ml. cold HCl warmed gave 0.79 g. o-C_6H_4.CO.NEt.CO, m. 78°. Evapn. *in vacuo* of the aq. soln. and trituration of the residue with abs. alc. and Et_2O gave $HO(CH_2)_2NH_2$.HCl, m. 76–8°. Benzoylation of the aq. soln. in alk. medium gave 1.19 g. $HO(CH_2)_2NBz_2$, needles, m. 99–1° (aq. alc.). Na (0.005 mole) in 5 ml. abs. alc. warmed 2 min. with 1.6 g. IV, H_2O added, and the mixt. extd. with C_6H_6 gave phenyloxazoline-o-carboxylic acid isopropylamide. III (3.6 g.) heated 2 min. with 0.23 g. Na in 10 ml. abs. alc. and H_2O added gave 2.1 g. phenyloxazoline-o-carboxylic acid benzylamide, needles, m. 99–101° (ligroine). I (3.8 g.) heated 4 hrs. at 100° in a sealed tube with 2.2 g. anhyd. $MeCNH_2$, dild. 10-fold with H_2O, the alc. and excess amine expelled *in vacuo*, the mixt. shaken with Et_2O, concd. under reduced pressure, the product heated 5 hrs. with 20 ml. HCl and 5 ml. H_2O, filtered, evapd., the residue dissolved in H_2O, treated with solid alkali, the sepd. oil heated 1 hr. at 100°, shaken with excess BzCl, dissolved in Et_2O, the ext. washed with H_2O, dried, and the solvent evapd. gave 3 g. dibenzoyl-*iso*-butylethylenediamine (VI). Br$CH_2CH_2NH_2$.HBr (10.3 g.) in 10 ml. H_2O refluxed 2½ hrs. with 18 g. Me_3CNH_2 in 60 ml. H_2O, the mixt. made alk., the oil formed dehydrated with solid alkali, and distd.

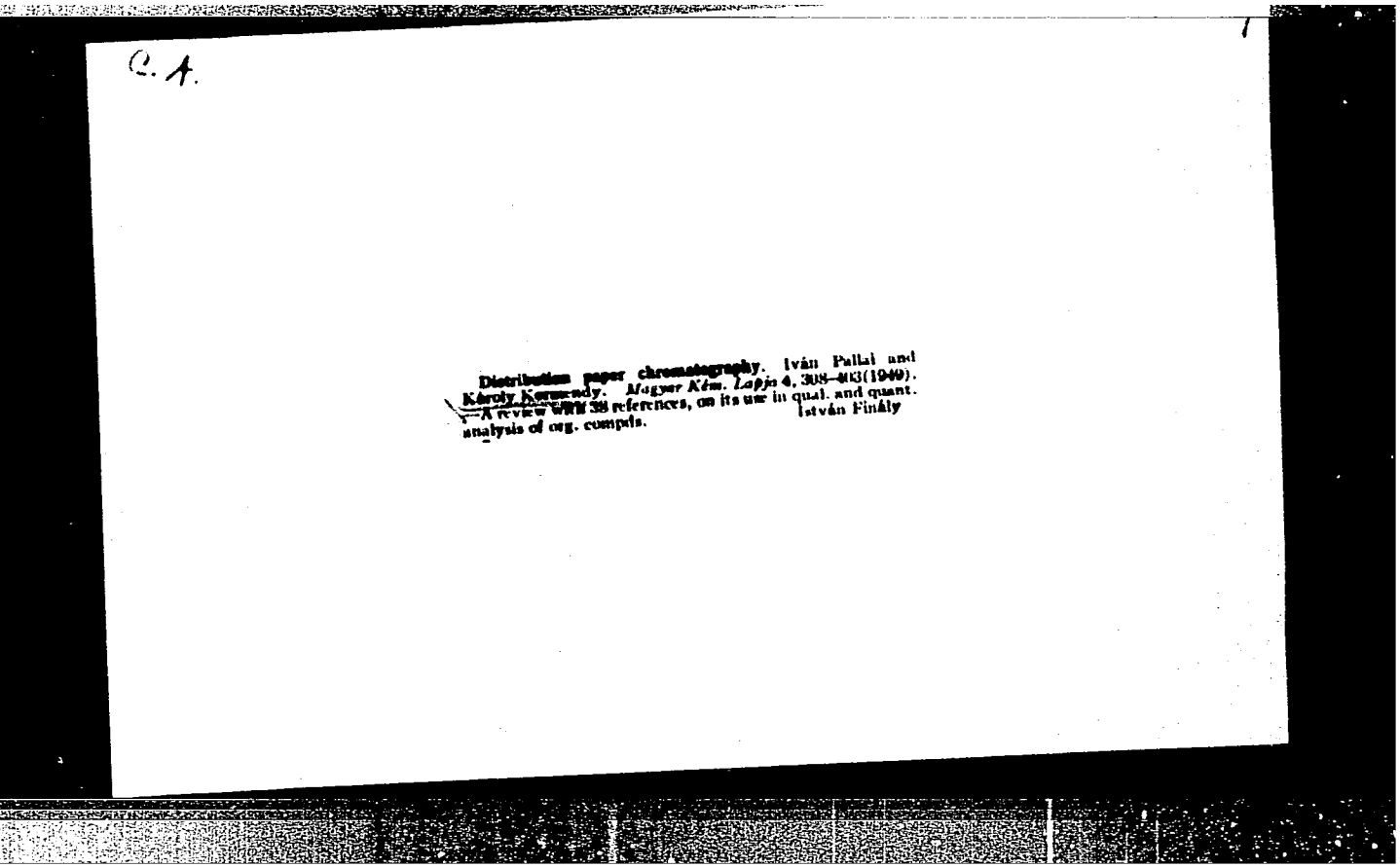
The Reactions of Polyamines With Phthalimidoalkyl Halides

gave 2.5 g. $Me_2CNH(CH_2)_2NH_2$, b. 154–6°; oxalate, needles, decomp. 260° (aq. alc.). Thermal decompn. of VI gave $BzNH(CH_2)_2NHBz$, m. 245°. *o*-C_6H_4.CO.N-(CH_2Ph).CO (2.5 g.), 50 ml. xylene, and 2.5 g. powd. P_2S_5 heated 2 hrs. with a drop of $PhNH_2$, the soln. decanted, cooled, filtered, and freed of xylene at reduced pressure gave 1.8 g. 2-benzyl-3-thiophthalimide, orange-red needles, m. 82–3° (alc.). III (21.6 g.) refluxed 3 hrs. with 11.2 g. $PhNH_2$ in 60 ml. alc. and cooled gave 13.5 g. 2-benzyl-3-phenylphthalamidine (VII), yellow needles, m. 139–40° (alc.). VII was also prepd. from *N*-benzylthiophthalimide. Hydrogenation of 3.1 g. VII in 150 ml. EtOAc at room temp. and atm. pressure (224 ml. H taken up) gave 2.6 g. 2-benzyl-3-anilinophthalide, prisms, m. 172–3°. Prepd. similarly to VII were the following phthalamidines (substituents given): 2-benzyl-3-(*o*-tolyl), yellow prisms, m. 112–13°; 2-benzyl-3-(*p*-tolyl), yellow needles, m. 128–9°; 2-benzyl-3-(*p*-iodophenyl), yellow needles, m. 160–1°; 2-benzyl-3-(*o*-anisyl), yellow needles, m. 124–5°; 2-benzyl-3-(*p*-anisyl), yellow needles, m. 127–8°; 2-benzyl-3-(*m*-xylyl), yellow prisms, m. 98–9°; 2-benzyl-3-(α-naphthyl), orange prisms, m. 113–14°; 2,3-dibenzyl, needles, m. 101–2°.

Jane N. McShane

BOHONYEY, Janos; KORMENDY, Jozsef

Hungarian panel systems. Magy ep ipar 11 no.2:55-59 '62.



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Distribution paper chromatography. Iván Pallai and Károly Kormendy. *Magyar Kém. Lapja* 4, 308–313(1949). —A review with 38 references, on its use in qual. and quant. analysis of org. compds. István Finály

KORMENDY, KAROLY

Dimeric propenyl phenol ethers. XVII. The hydrocarbon analog of the cyclic dimers. Alexander Müller and Károly Kormendy (Univ. Budapest, Hung.). *J. Org. Chem.* 18, 1257–63 (1953); cf. *C.A.* 47, 6891*d*.—The structure of methronole (I), a cyclic dimer of PhCH:CHMe (II), has been established as 1-phenyl-2-methyl-3-ethylindan (III). Dehydration of 89 g. PhCH(OH)CHMeEt gives 30 g. II, b_{18} 75–8°, n^{25}_D 1.5484, 11 g. I, b. 322–3°, n^{25}_D 1.5713, and 39 g. of more highly polymerized products. PhCH:CMeCO$_2$H (100 g.) refluxed in 1 l. 40% H_2SO_4 30 hrs., the mixt. extd. with ether, the washed (*N* NaOH) ext. steam-distd., the distillate extd. with ether, and the residue of the last ether ext. distd. gives 25 g. crude I, which, shaken in 250 cc. C_6H_6 with 100 cc. concd. H_2SO_4 and washed with H_2O and 6% Na_2CO_3, yields 15 g. I, b_{18} 182–3°, n^{25}_D 1.5720, showing a slight violet fluorescence, probably because of the presence of traces of 9,10-diethyl-9,10-dihydroanthracene. I, hydrogenated with 5% Pd-C (IV) at 250–60°, is recovered unchanged. Adding 40 g. 1-phenyl-2-methyl-Δ^1-indenone, (the Ph group in this and the following substituted indenes is at C-1.) in 300 cc. ether to EtMgBr (from 7 g. Mg and 45.5 g. EtBr) in 150 cc. ether, refluxing the mixt. 1 hr., and decompg. it with iced NH_4Cl give 31.5 g. *1-phenyl-2-methyl-3-ethyl-Δ^1-inden-3-ol* (V), large prisms, m. 119°. Hydrogenation of 25 g. V in 150 cc. EtOH with 0.8 g. IV 5 hrs. gives 22 g. *1-phenyl-2-methyl-3-ethylindan-3-ol* (VI), b. 197–8°, solidifying at 20°. Refluxing 20 g. VI in 40 cc. Ac_2O 2 hrs., pouring the mixt. into H_2O, keeping it overnight, and extg. with ether give 15 g. *1-phenyl-2-methyl-3-ethyl-Δ^2-indene* (VII), b_4 165–6°. Hydrogenation of 13.5 g. VII in 100 cc. EtOH 1.5 hrs. gives *1-phenyl-2-methyl-3-ethylindane* (*cis, cis-racemate*) (VIII), b_{18} 170–80° b_{18} 322–3°, n^{25}_D 1.5777, which is not changed when heated 3 hrs. with IV at 270–80°. Adding dropwise 35 g. PhCH:CMeCOPh in 50 cc. ether to EtMgBr (from 14 g. EtBr) in 100 cc. ether with ice-NaCl cooling gives 25 g. *2-benzoyl-3-phenylpentane* (IX), pale yellow oil, b_{12} 187–8°, n^{25}_D 1.5853. Adding 7.3 g. $LiAlH_4$ in 200 cc. ether to 50 g. IX in 80 cc. ether and working up the mixt. in the usual way give 19 g. viscous yellow oil which, refluxed 4 hrs. with 200 cc. 20% H_2SO_4 and the mixt. extd. with C_6H_6, give 17 g. viscous oil, b_{18} 195–8°, n^{25}_D 1.5725. Steam-distn. of the oil and extn. with C_6H_6 give 4.7 g. 1-phenyl-2-methyl-3-ethylindan (*trans, trans-racemate*) (X), b_{12} 180–3°, b_{18} 322°, n^{25}_D 1.5714, uncharged when heated with IV. Refluxing 17 g. $PhCH_2COMe$ and 142 g. MeCHBrCO$_2$Et with 51.2 g. amalgamated Zn foil in 500 cc. C_6H_6 in the presence of Cu bronze or a few crystals of iodine 5 hrs. gives 97–109 g. $PhCH_2C(OH)MeCHMeCO_2Et$, b. 178°, n^{25}_D 1.4952, which (60 g.) mixed with $KHSO_4$, heated 2 hrs. at 150°, cooled, extd. with C_6H_6, and the residue of the washed and dried ext. distd., gives 71 g. yellow oil (XI), b_{12} 142–5°, and 20 g. higher-boiling residue. Hydrogenation of 14.8 g. XI in 100 cc. EtOH with 0.8 g. 10% IV 3 hrs. gives 9 g. $PhCH_2CHMeCHMeCO_2Et$, b_{12} 144–8°, n^{25}_D 1.4983, saponif. with alc. KOH to 7 g. free acid (XII), b_{12} 167–8°, n^{25}_D 1.5123. XII is converted into 3,4-dihydro-2,3-dimethyl-1(2*H*)-naphthalenone (XIII), b_{12} 144–6°, b_{18} 160–2°, n^{25}_D 1.5438, m. 7°. Refluxing 2.7 g. Mg and 18 g. PhBr 0.5 hr. with 10 g. XIII in 100 cc. ether and decompg. the mixt. with iced NH_4Cl give 3.2 g. *1-phenyl-2,3-dimethyl-3,4-dihydronaphthalene* (XIV), b_{12} 175–7°, n^{25}_D 1.6016. Hydrogenation of 2.5 g. XIV in 70 cc. EtOH with 10% IV gives *1-phenyl-2,3-*

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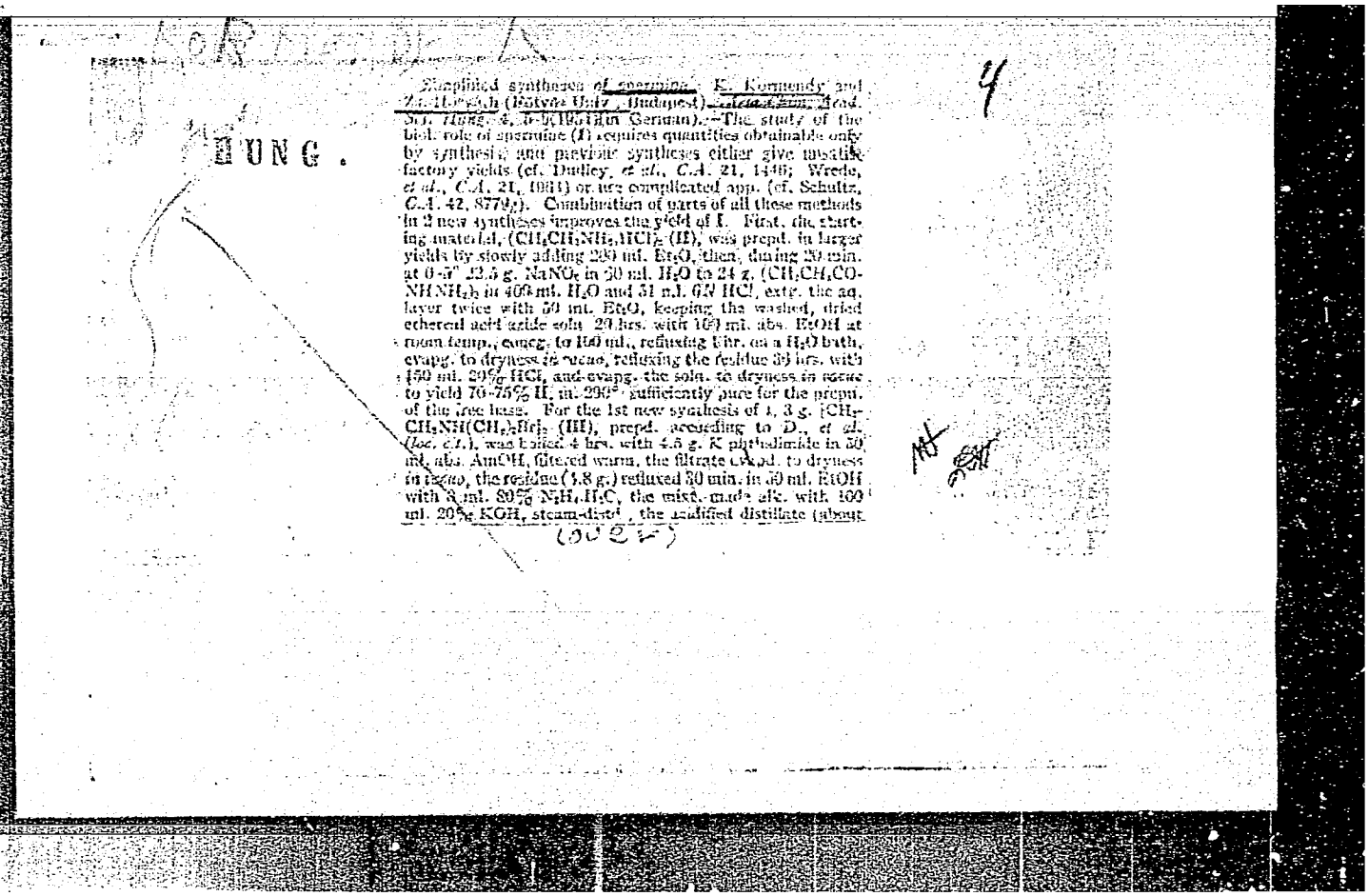
dimethyl-1,2,3,4-tetrahydronaphthalene[trans(?)-racemate] (XV), b_4 170–5°, $n^{25}D$ 1.5016. Heating 0.8 g. XIV with 0.2 g. 10% Pd within 2 hrs. to 260°, maintaining this temp. 2 hrs., and distg. at 12 mm. give 0.47 g. *2,3-Me₂-C₆H₃CH:CPh*, m. 85–6° (*picrate*, orange-yellow needles, m. 112°). Refluxing 25 g. 1-phenyl-2-methyl-Δ^1-indenene in 300 cc. ether 1 hr. with 5 g. Mg and 30 g. MeI in 100 cc. ether and decompg. the mixt. with iced NH_4Cl give 25.2 g. *1-phenyl-2,3-dimethyl-Δ^1-inden-3-ol*, large prisms, m. 112°, which (23 g.), hydrogenated in EtOH, gives 21 g. *1-phenyl-2,3-dimethylindan-3-ol* (XVI), b_4 184–5°, m. 63°. Refluxing 20 g. XVI in 40 cc. Ac_2O gives 17 g. *1-phenyl-2,3-dimethyl-Δ^1-indene* (XVII), glistening needles, m. 71°, which on standing decomp. to a resin. Hydrogenation of 16 g. XVII in EtOH 1.5 hrs. gives 13.5 g. *1-phenyl-2,3-dimethylindan* (*cis, cis*-racemate), b_4 158–9°, $n^{25}D$ 1.5760. 1-Phenylindan-3-one (XVIII), prepd. from $Ph_2CHCH_2CO_2H$, large prisms, m. 78° (*phenylhydrazone*, pale yellow needles, m. 133°; *2,4-dinitrophenylhydrazone*, red needles, m. 212°). Adding dropwise 45 g. XVIII in 300 cc. warm ether to 10 g. Mg and 60 g. MeI in 200 cc. ether, heating the mixt. 1 hr. on a steam bath, and decompg. it with iced NH_4Cl give 35 g. *1-phenyl-3-methylindan-3-ol*, large clusters, m. 85–6°, which (22 g.), dehydrated with Ac_2O, gives 20 g. *1-phenyl-3-methyl-Δ^2-indene* (XIX), needles, m. 65°. Hydrogenation of 17 g. XIX in 100 cc. AcOH 2 hrs. gives 12 g. *1-phenyl-3-methylindan* (XX), b_{11} 175–7°, $n^{25}D$ 1.5795. Cyclic distyrene (XXI), b_5 118–20°, was prepd. from crude distyrene according to Risi and Gauvin (*C.A.* 30, 7549) by oxidation with CrO_3 and purification with concd. H_2SO_4; b_{11} 175–7°, b_{760} 290–301°, $n^{25}D$ 1.5700. The ultraviolet absorption curves of I, VIII, X, XV, XX, and XXI are given.

F. E. Braun



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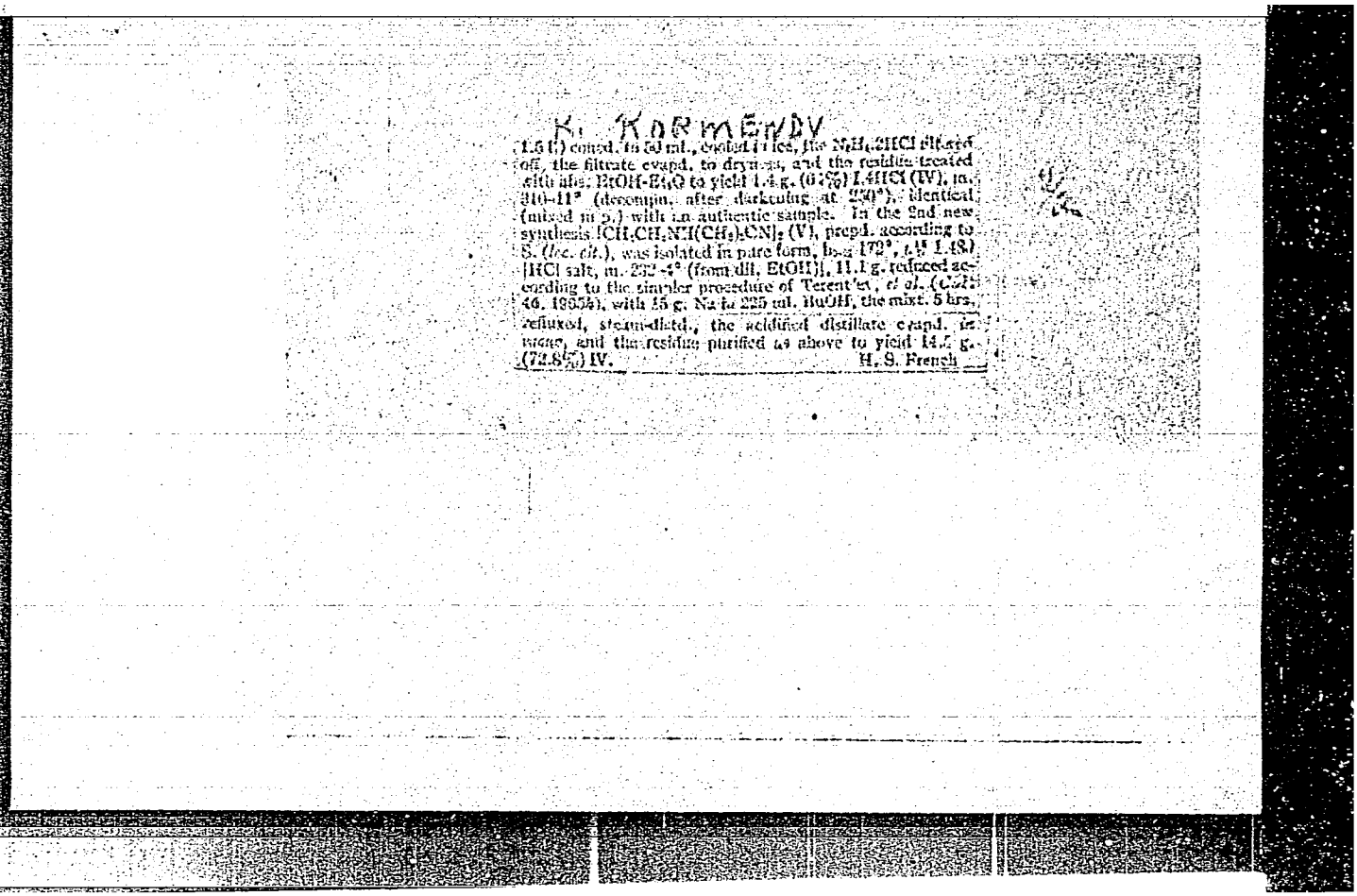
Simplified synthesis of spermine. E. Kennedy and Z. Horváth (Polytech. Univ., Budapest). *Acta Chim. Acad. Sci. Hung.* 4, 5-9(1954)(in German).—The study of the biol. role of spermine (I) requires quantities obtainable only by synthesis, and previous syntheses either give unsatisfactory yields (cf. Dudley, *et al.*, *C.A.* 21, 1446; Wrede, *et al.*, *C.A.* 21, 1981) or are complicated appl. (cf. Schultz, *C.A.* 42, 8779g). Combination of parts of all these methods in 2 new syntheses improves the yield of I. First, the starting material, $(CH_2CH_2NH_2.HCl)_2$ (II), was prepd. in larger yields by slowly adding 200 ml. Et_2O, then, during 30 min. at 0-5°, 23.5 g. $NaNO_2$ in 50 ml. H_2O to 24 g. $(CH_2CH_2CO\text{-}NHNH_2)_2$ in 400 ml. H_2O and 51 ml. 6*N* HCl, extr. the aq. layer twice with 50 ml. Et_2O, keeping the washed, dried ethereal azide soln. 20 hrs. with 100 ml. abs. EtOH at room temp., concg. to 100 ml., refluxing 1 hr. on a H_2O bath, evapg. to dryness *in vacuo*, refluxing the residue 30 hrs. with 150 ml. 20% HCl, and evapg. the soln. to dryness *in vacuo* to yield 70-75% II, m. 290° sufficiently pure for the prepn. of the free base. For the 1st new synthesis of I, 3 g. $[CH_2\text{-}CH_2NH(CH_2)_3Br]_2$ (III), prepd. according to D., *et al.* (*loc. cit.*), was boiled 4 hrs. with 4.6 g. K phthalimide in 50 ml. abs. AmOH, filtered warm, the filtrate evapd. to dryness *in vacuo*, the residue (4.8 g.) refluxed 30 min. in 50 ml. EtOH with 3 ml. 80% $N_2H_4.H_2O$, the mixt. made alk. with 100 ml. 20% KOH, steam-distd., the acidified distillate (about

(900 ml.)



K. KORMENDY

1.5 l.) cooled, in 50 ml., cooled ice, the NH_4Cl filtered off, the filtrate evapd. to dryness, and the residue treated with abs. EtOH-Et_2O to yield 1.4 g. (61%) I.4HCl (IV), m. 310–11° (decompn. after darkening at 250°), identical (mixed m.p.) with an authentic sample. In the 2nd new synthesis $[CH_2CH_2NH(CH_2)CN]_2$ (V), prepd. according to S. (*loc. cit.*), was isolated in pure form, b. 172°, n_D^{15} 1.48) [HCl salt, m. 252–4° (from dil. EtOH)], 11.1 g. reduced according to the simpler procedure of Terent'ev, *et al.* (*C.A.* 46, 1955h), with 15 g. Na in 225 ml. BuOH, the mixt. 5 hrs. refluxed, steam-distd., the acidified distillate evapd. in vacuo, and the residue purified as above to yield 14.7 g. (72.8%) IV.

H. S. French

Country : Hungary
Category= : Organic Chemistry. Synthetic Organic Chemistry C

Abs. Jour. : Ref Zhur-Khimiya, No.12, 1959, No.42386

Author : T. Körmendy, K.
Institut. : Not Given
Title : Reactions during the Synthesis of Polyamines from Phthalimidoalkylhalides.

Orig. Pub. : Acta chim. acad. scient.hung. 1958, 17, No.2, 255-264

Abstract : This study deals with some reactions of over-acylation and ring formation which may occur while synthesizing polyamines in the presence of an interaction between phthalimidoalkylhalides and amines. The action of RNH_2 on $o\text{-}C_6H_4(CO)_2NR'$ (I), depending on the basicity of RNH_2 and I and on steric hindrances, produces $o\text{-}C_6H_4(CO)_2NR$ or $o\text{-}RNHCOC_6H_4CONHR'$ (II). In an alkaline medium, II ($R'=CH_2CH_2Br$) (IIa) undergoes cyclization into $o\text{-}RNHCOC_6H_4C=NCH_2CH_2O$ (III) where $R=C_2H_5$ (IIIa),

Card: 1/8

Country : Hungary
Category : Organic Chemistry. Synthetic Organic Chemistry

Abs. Jour. : Ref Zhur-Khimiya, No.12, 1959, No.42386

Author :
Institut. :
Title :

Orig Pub. :

Abstract : $R=iso\text{-}C_3H_7$ (IIIb) and $R=C_6H_5CH_2$ (IIIa). I ($R'=CH_2CH_2Br$) (Ia) produces, upon the action of $tert\text{-}C_4H_9NH_2$, $tert\text{-}C_4H_9NHCH_2CH_2NH_2$ (IV) the benzoyl derivative (V) which forms dibenzoylethylenediamine when heated to 200°. V is also obtained from $BrCH_2CH_2NH_2 \cdot HBr$. When P_2S_5 acts on I ($R'=CH_2C_6H_5$) (Ib), 2-benzyl-3-thiophthalamide (VI) is obtained which is condensed with aromatic amines, producing 2-benzyl-3-arylphthalamidines (VII). C.11 mole 30%

Card: 2/8

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

Abs. Jour. : Ref Zhur-Khimiya, No.12, 1959, No. 42386

Author :
Institut. :
Title :

Orig Pub. :

Abstract : 30 minutes 1.5-1.6 g of IIa (R=iso-C_3H_7) are obtained; the melting point is 164-165°. 0.5 g of II (R=R'=iso-C_3H_7) are formed upon heating the reacting mixture for 4 hours at 100°; the melting point is 204-205°. Boiling the alcohol solution of Ia with cyclo-$C_6H_{11}NH_2$ produces I (R'=C_6H_{11}-cyclo); the melting point is 168°. I (R'=C_6H_5) produces Ib upon being heated with $C_6H_5CH_2NH_2$ (for one hour at 200-210°). Boiling the alcohol solution together with Ib produces

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Country : Hungary
Category : Organic Chemistry. Synthetic Organic Chemistry

Abs. Jour. : Ref Zhur-Khimiya, No.12, 1959, No. 42386

Author :
Institut. :
Title :

Orig. Pub. :

Abstract : II ($R=C_6H_5$, $R'=CH_2C_6H_5$). The solution of 0.05 mole I ($R'=CH_2CH_2NHC_6H_5$) and 0.05 mole $C_6H_5CH_2-NH_2$ in 5 ml. of alcohol is boiled for 3 hours. This produces 0.75 g of II ($R=CH_2C_6H_5$, $R'=CH_2-CH_2NHC_6H_5$); the melting point is 176°. A solution of 0.01 g-atoms of Na in 10 ml. of absolute alcohol and 0.01 mole IIa ($R=C_2H_5$) is boiled for 2-3 minutes and IIIa is separated; the melting point is 107° (from CCl_4). IIIb and IIIc are obtained in a similar manner; the melting point

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G

Country : Hungary
Category : Organic Chemistry. Synthetic Organic Chemistry

Abs. Jour. : Ref Zhur-Khimiya, No.12, 1959, No. 42386

Author :
Institut. :
Title :

Orig Pub. :

Abstract : of both is 99-101° (from ligroin). I ($R'=C_2H_5$) and $HOCH_2CH_2NH_2$. HCl were separated upon hydrolysis of IIIa with aqueous HCl. 0.015 mole Ia and 0.03 mole tert-$C_4H_9NH_2$ are heated in a sealed tube for 4 hours at 100°; V is separated; the yield is 62%. 10.3 g of $BrCH_2CH_2NH_2$. HBr and 18 g of tert-$C_4H_9NH_2$ in 60 ml. of water are boiled for 24 hours; IV is obtained; yield 43%; the melting point is 154-156°; the melting point of the dioxalate is 260°. The mixture of 2.5 g of Ib, 50 ml. of xylol, 2.5 g of P_2S_5 and 1 drop of aniline is boiled for 2 hours; 1.8 g of VI

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KORMENDY, K.

SCIENCE

PERIODICAL: MAGYAR KEMIAI FOLYOIRAT, Vol. 64, no. 7/8, July/Aug. 1958

Kormendy, K. Investigation into the reaction mechanism of polyamine synthesis starting from halogenalkyl phthalimide. p. 306.

Monthly list of East European Accessions (EEAI) LC, Vol. 8, No. 2, February 1959, Unclass.

KORMENDY, K.

Preparation of N-alkylated diacridylium salts. In German. p. 83.

ACTA CHIMICA. (Magyar Tudpmanyos Akademia) Budapest, Hungary.
Vol. 21, No. 1, 1959.

Monthly List od East European Accessions (EEAI), LC, Vol. 9, No. 2, Feb. 1960.

Uncl.

KORMENDY, K

Distr: 4E3d

Simple synthesis of pentacene. V. Bruckner, A. Karczag Wilhelms, K. Kormendy, M. Meszaros, and I. Tomasz (L. Eötvös Univ., Budapest, Hung.). *Tetrahedron Letters* 1960, No. 1, 5-6.—Pentacene-6,13-quinone [50 g., obtained in 78% yield from cyclohexane-1,4-dione and o-$C_6H_4(CHO)_2$ according to Ried and Anthofer (*CA* 48, 12731*b*)] refluxed 48 hrs. with 50 g. Al in 1000 ml. $C_4H_{11}OH$ gave 21–3 g. pentacene, purified without loss by washing with $C_4H_{11}OH$, hot AcOH, concd. HCl and H_2O. It was assumed that similar redn. of quinone or diquinones with Al alcoholates may be successfully employed for the prepn. of the corresponding hydrocarbons.

C. R. Addinall

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BRUCKNER, Viktor (Gyozo), prof. (Budapest); KARCZAG (Wilhelms), Adrienne (Budapest); KORMENDY, Karoly (Budapest); MESZAROS, Miomir (Budapest); TOMASZ, Jeno (Budapest)

A simple and productive synthesis of pentacene. Acta chimica Hung 22 no.4:443-448 '60. (EEAI 10:2)

1. Institute of Organic Chemistry, Lorand Eotvos University, Budapest. (Pentacene)

KORMENDY, Karoly

Reactivity of oxazolinium ion. Magy kem folyoir 68 no.6: 274-276 Je '62.

1. Eotvos Lorand Tudomanyegyetem Szerves-Kemiai Tanszeke, Budapest.

KORMENDY, Karoly (Budapest VIII., Muzeum korut 4/b); VOLFORD, Janos (Budapest VIII., Muzeum korut 4/b)

The product formed from N-bromoethylphthalimide on the effect of alkali. Acta chimica Hung 32 no.1:115-120 '62.

1. Institut fur Organische Chemie der L. Eotvos Universitat, Budapest.

KORMENDY, Karoly (Budapest VIII., Muzeum korut 4/b); VOLFORD, Janos (Budapest VIII., Muzeum korut 4/b)

Data on the reactions in polyamine syntheses with phthaliminoalkyl haloids. II. Formation of phthalamide. Acta chimica Hung 32 no.1:121-127 '62.

1. Institut fur Organische Chemie der L. Eotvos Universitat, Budapest.

KOMENDY, Karoly, dr.; (Budapest, VIII., Muzeum korut 4/b);
SOHAR, Pal, dr. (Budapest, VII., Rottenbiller u. 26);
VOLFORD, Janos (Budapest, XIV., Telepes u. 53)

Heterocyclic spiro compounds. Pts. 1-2. Acta chimica Hung 39 no.1:93-128 '63.

1. Department of Organic Chemistry, L. Eotvos University, Budapest, and Research Institute of Pharmaceutical Industry, Budapest, and Isotope Laboratory, Manufacturing Company for Fine Chemicals, Budapest.

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KORMENDY, Karoly; TORKOS, Laszlo; SOHAR, Pal

N-bromalkyl-phthalimide products formed on the effect of alkalies. Pt.2. Acta chimica Hung 40 no.3:333-341 '64.

1. Institut fur organische Chemie der Lorand Eotvos Universitat, Budapest, VIII., Muzeum korut 4/b (for Kormendy and Torkos).
2. Forschungsinstitut fur Pharmazeutische Industrie, Budapest, VII., Rottenbiller utca 26(for Sohar).

SOHAR, Pal; KORMENDY, Karoly

Anomalous displacement of the amide-I-band in the infrared spectrum of diacyl-"spiroxazons." Magy kem folyoir 70 no. 1: 20-27 Ja '64.

1. Gyogyszeripari Kutato Intezet, Budapest, es Eotvos Lorand Tudomenyegyetem Szerves-Kemiai Tanszeke, Budapest.

L 33737-66 EWT(j) RM

ACC NR: AT6025190 SOURCE CODE: HU/2502/65/045/004/0333/0356

AUTHOR: Sohar, Pal--Shokhar, P. (Doctor); Kormondy, Karoly--Kormondi, K. (Doctor) 35 B+

ORG: Research Institute for Pharmaceutical Chemistry, L. Eotvos University, Budapest; Institute of Organic Chemistry, L. Eotvos University, Budapest

TITLE: Spirocyclic hetero-compounds. V. Infrared spectra of some alkyl- and aryl-substituted derivatives of spiroxazone

SOURCE: Academia scientiarum hungaricae. Acta chimica , v. 45, no. 4, 1965, 333-356

TOPIC TAGS: IR spectrum, nonmetallic organic derivative, tautomerism, organic azine compound

ABSTRACT: Infrared spectroscopic investigations have elucidated the structures of spiro-(1,2'-oxazolidine-1,2,3,4-tetrahydrophthalazine)-4-one (spiroxazone), its monoalkyl- and aryl derivatives, and of the nitroso-, mono- and diacyl derivatives. It has been ascertained that all these compounds are 2-N-substituted derivatives of spiroxazone, and most probably amide tautomers. With monoacylates of the 2-N-substituted spiroxazones it was possible to investigate the steric structure of the molecules. Orig. art. has: 6 figures and 5 tables. [Orig. art. in Eng.] [JPRS: 33,906]

SUB CODE: 07 / SUBM DATE: 02Nov64 / ORIG REF: 007 / OTH REF: 007

Card 1/1 LS

0976 0353

L 46046-66 EWP(j) RM

ACC NR: AT6034090 SOURCE CODE: HU/2502/65/044/003/0327/0340

AUTHOR: [illegible] Sohar, Pal-Shokhar, P. (Doctor) 22 B+

ORG: Institute of Organic Chemistry, Eotvos Lorand University (Eotvos Lorand Tudomanyegyetem, Szerves Kemiai Intezet); Pharmaceutical Research Institute, Budapest (Gyogyszeripari Kutato Intezet)

TITLE: Heterocyclic spiro compounds IV. Preparation of 2-N-alkyl-, and aryl-spiroxazone derivatives

SOURCE: Acta chimica academiae scientiarum Hungaricae, v. 44, no. 3, 1965, 327-340

TOPIC TAGS: alkylation, heterocyclic base compound

ABSTRACT: [English article, authors' English summary modified] When treated with primary and secondary alkyl-halogenides in the presence of an equivalent amount of sodium ethoxide, a 2-N-alkyl derivative is formed from spiroxazone, a compound of acidic character, with a loss of solubility in alkaline media. Alkylation does not take place with tertiary butyl bromide or ethylene bromide because of a predominance of a side reaction which consumes sodium ethylate. On treatment with tetramethylene bromide, sodium spiroxazonate yields 2-N-bromo-butyl-, and α,δ-tetramethylene-bis-spiroxazone. On nitrosation, the NH group of the oxazolidine ring undergoes reaction to form 3'-nitrosamine. 2-N-Alkyl-(aryl)-spiroxazone is converted into the 4-O-mono-acylated when acylated in pyridine, and yields the 3'-N,4-O-diacetate when boiled with acetic anhydride. The products obtained by the alkylation of spiroxazone and by synthesis from the mono-substituted hydrazine were found to be identical. Orig. art. has: 4 tables. [JPRS: 33,540]

SUB CODE: 07 / SUBM DATE: 16Oct64 / ORIG REF: 007

Card 1/1 LC

KORMENDY, L.

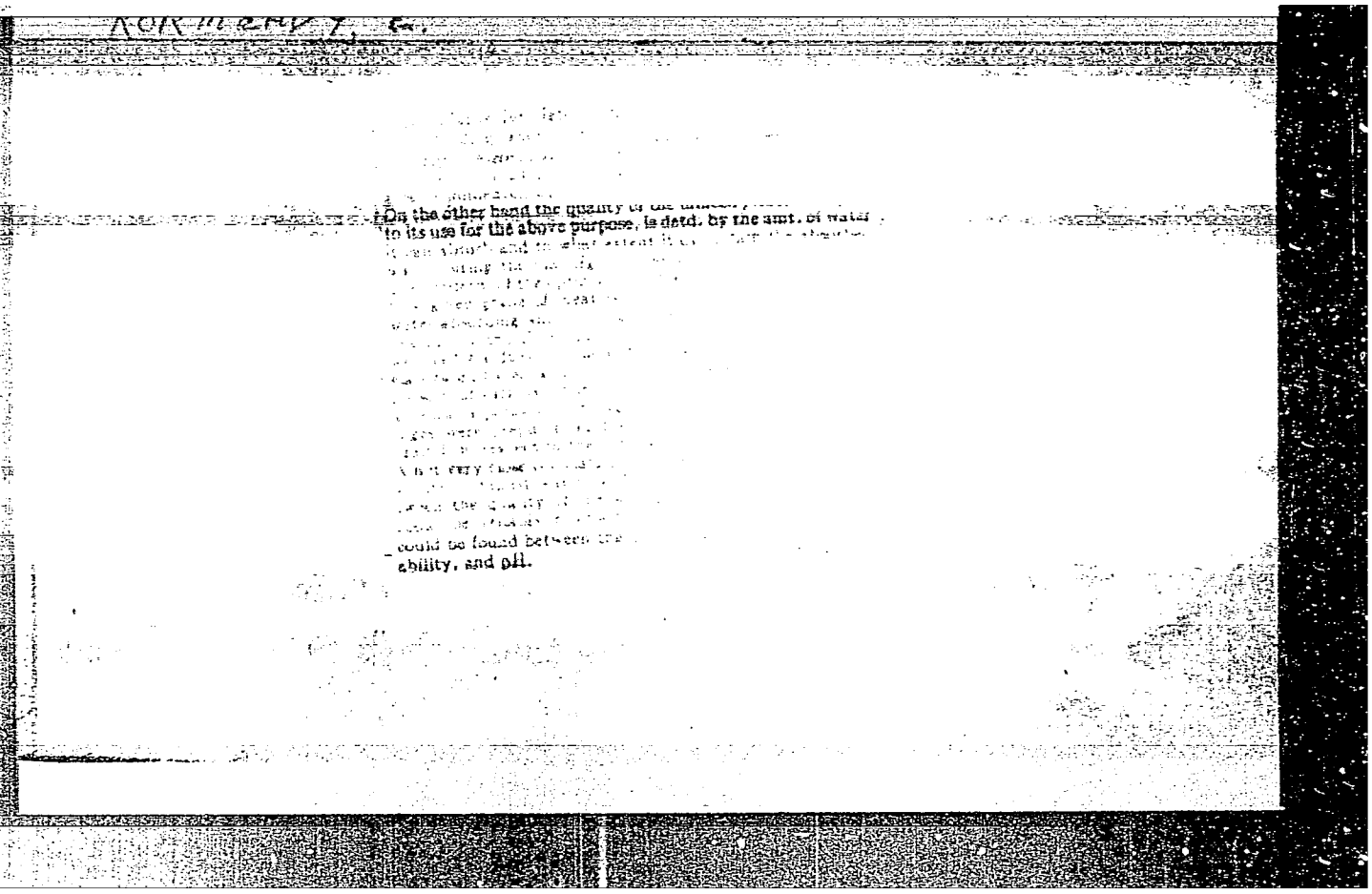
iii. Experiments for the quality control of organotherapeutic slaughterhouse products -- *Kísérletek a vágóhidi organoterápiás anyagok minősítésére* -- L. Kormendy. (Food Industry - *Élelmezési Ipar* -- Vol 7, 1953, No 9, pp 284 - 286 Vol 8 1954 No 1 pp 21 - 25. 2 figs., 3 tabs.)

The adequate [illegible] supplied for the pharmaceutical industry by slaughterhouses is of great importance. If raw material is improperly collected or stored and then processed, the prepared extract might decrease in activity, quality, or possibility or even the whole raw material may become unsuitable for organotherapeutic preparations. From this point of view the determination of the adrenaline content of adrenal glands is important. Several methods cited in literature were tested, finally the Euler method - modified by Lembock and Obrecht -- was found the most reliable it is simple, reproducible and the results obtained are in fair agreement with the biological values. No appreciable change was found in the adrenaline value [illegible] of adrenaline and noradrenaline present) determined by this method either in fresh adrenal glands or those showing signs of decomposition. Experiments showed that active substance isolated from inadequately stored (decomposed) adrenal glands was of satisfactory quality and identical with the material prepared from fresh adrenal glands both chemically and biologically. Nevertheless it is not advisable to process raw material in a decomposed state although a decrease in the quality of the active substance is not always experienced. however, material in a state of decomposition may cause serious difficulties in the process of isolation. It is obvious that the collection and storage of adrenal glands used for the production of adrenaline may be solved by simpler means than that of other sensitive protein-cocoid endocrine glands.

KORMENDY, L.

"Experiments in controlling the quality of raw materials for organotherapeutics from slaughterhouses. II. Changes in the effective substance of suprarenal glands during storage." Elemezesi Ipar, Budapest, Vol. 8, No. 2, Feb. 1954, p. 23.

SO: Eastern European Accessions List, Vol. 3, No. 11, Nov. 1954, L.C.



On the other hand the quality of the
to its use for the above purpose, is detd. by the amt. of
could be found between
ability, and pH.

KORMENDY, L.

KORMENDY, I. Factors affecting the water retention and binding capacity of meats.
I. Investigating processes. p. 252.

Vol. 9, No. 8, Aug. 1955
ELKLMEZESI IPAR.
TECHNOLOGY
Budepest, Hungary

So: East European Accessions, Vol. 5, No. 5, May 1956

KORMENDY, L.

Factors affecting the water retention and binding capacity of meats. II. Effect of common salt. p. 283. Vol 9, no. 9, Sept. 1955. ELELMEZESI IPAR. Budapest, Hungary

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

KORENDY, L.

KORENDY, L.
Factors affecting the water retention and binding capacity of meats.
III. 1.Effect of freezing. 2.Water binding capacity of meats of various animals. p. 345

Vol. 9, No. 11, Nov. 1955 Budapest, Hungary ELELEZESI IPAR

SO: Monthly List of East European Accessions, (EEAL), LC, Vol. 5
No. 3, March, 1956

KORMENDY, L.

96 Factors influencing the water absorbing capacity and the water retaining capacity of meat. The action of phosphates.

[illegible] Kormendy [illegible] Vol [illegible] No [illegible] pp 7-10 9 figs

[illegible] influence of monobasic sodium [illegible] sodium [illegible] sodium phosphate, sodium [illegible] and pyrophosphate and of [illegible] polyphosphate preparation) on the swelling properties of [illegible] investigated. It was established that [illegible] investigated phosphate compounds increase the water binding capacity of meat. However, [illegible] caused by the simple phosphates [illegible] phosphate and dibasic sodium phosphate) differed appreciably from the action of the meta- pyro- and polyphosphates (Plasmal). The consistency of the meat [illegible] caused by the action [illegible] respects with the freshly prepared meat preparations obtained from beef stored for 24 hours [illegible] increasing its pH and by the addition [illegible] different products.

KORMENDY LASZLO

HUNGARY/Chemical Technology. Chemical Products and Their Application, Part 3. - Food Industry. H

Abs Jour: Referat. Zhurnal Khimiya, No 21, 1958, 72371.

Author : Ferenc Lorincz, Laszlo Kormendy.
Inst :
Title : Qualitative Study of Meat Broth in Natural Canned Meat.

Orig Pub: Elelm. ipar., 1956, 10, No 9, 275-281.

Abstract: A close dependence of the refraction index on the protein content in meat broth was established. The ratio of meat to broth in canned food depends on various factors (moisture state of meat, specific surface, addition of salt or of fat tissue, washing). The authorsdo not consider it correct that the melted

Card : 1/2

127

MAGONY, Jozsef, Dr.; KORMENDY, Laszlo, Dr.

Posttraumatic removal of a 390 cm portion of the small intestine.
Magy. sebeszet 10 no.5-6:343-344 Oct-Dec 57.

1. Kalocsai Varosi Tanacs Korhaza Sebeszeti osztalyanak kozlemenye
Igazgato: Deak Bela dr., foorvos Hollosy Karoly dr.
(INTESTINE, SMALL, rupt.
traumatic, surg., removal of 390 cm portion (Hun))

KORMENDY, L.

Modern evaporation equipment in the food industry. p. 538

ELELMEZESI IPAR. (Mezogazdasagi es Elemiszeri-pari Tudomanyos Egyesulent) Budapest, Hungary. Vol. 13, no. 11, Nov. 1959.

Monthly list of East European Accession (EEAI) LC vol. [illegible]
9, no. 2, Feb. 1960

Uncl.

FENYES, Tamas; KORMENDY, Laszlo; ZUKAL, Endre

Mathematical examination of the light caused fading process in corned beef. Pt. 1. Mat kut kozl MTA 8 Series B no.4:529-540 '63(publ. '64).

1. National Meat Industry Research Institute, Budapest (for Kormendy and Zukal).

ORBAN, Imre; KORMENDY, Melinda

Calorimetric examination of the fluid absorption capacity of Aerosil. Acta pharm. Hung. 36 no.1:20-26 J '66.

1. Submitted September 3, 1965.

KORMENDY, T.

"Long-Distance Heating Conduits" (To be contd.) p. 301 (Magyar Energiagazdasag, Vol. 6, No. 10, October, 1953, Budapest)

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

KORMENDY, V., inz.

Calculation centers and their efficiency in the Soviet Union.
Podn org 19 no.1:42-43 Ja '65.

KORMENDY, V., inz.

Conference on the mutual cooperation of the sale service and development service in machine factories. Podn org 19 no.4: 167-168 Ap '65.

KORMENDY, V., inz.

Automation of engineering work in the Soviet Union.
Podn org 18 no.10:478-479 O '64.

KORMER, I. M. - tekhnik i, RATNER, S. I. - inzh.

Nauchno-issledovatel'skiy institut po stroitel'stvu Ministerstva neftyanoy promyshlennosti

RAZRABOTKA TEKHNOLOGII PROIZVODSTVA I IZGOTOVLENIYA GIPSOVYKH ISDELIY METODOM NASTSHCHENIYA GIPSA BODOY POD DAVLENIYEM Page 110

SO: Collection of Annotations of Scientific Research Work on Construction, Completed in 1950, Moscow, 1951

KORMER, I.M.

Stonecutting tool for use in laboratories. Biul. stroi. tekh. 12 no.1:19 Ja '55. (MIRA 11:12)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut po stroitel'stvu ob"yektov neftyanoy i gazovoy promyshlennosti.
(Stonecutting--Equipment and supplies)

KORMER, I.M.

96-58-2-21/23

AUTHORS: Anan'in A.V., Kormer, I.M. and Eygel', L.Ia., Engineers

TITLE: Measurement of the Surface Temperature of Thermal Insulation on Pipes by Means of Resistance Thermometers (Izmereniye temperatury poverkhnostey teploizolyatsii truboprovodov pri pomoshchi termometrov soprotivleniya)

PERIODICAL: Teploenergetika, 1958, No 2, pp 93-94 (USSR)

ABSTRACT: Heat Losses in power stations are higher than they should be mainly because systematic checking of thermal insulation is made difficult by the absence of convenient and accurate methods of measurement. In power stations, the practicable method of assessing thermal insulation is based on measurements of its surface temperature and for many years surface thermocouples have been used for this purpose. The temperature distribution round the surface of the insulation on a horizontal steam pipe is shown in Fig.1. This indicates that measurements made at a single point cannot represent the true mean temperature. The temperature distribution is especially distorted when the insulation is defective. Since portable instruments of high accuracy have to be used with surface thermocouples, alternative use of resistance thermometers has been found advantageous.

Card1/2 The main component of the equipment developed by ORGRES, which

96-58-2-21/23

Measurement of the Surface Temperature of Thermal Insulation on Pipes by Means of Resistance Thermometers

is illustrated diagrammatically in Fig.2, is a small, exposed resistance thermometer. Photographs of the resistance thermometer and portable measuring bridge are shown in Fig.3. The heat capacity of the resistance thermometer causes some error when it is applied to insulation. As indicated in Fig.4, heat flowing through the insulation cannot compensate for that lost to the thermometer. This error was estimated by comparison with a known instrument. The magnitude of the correction depends on the difference between the temperature measured by the instrument and the ambient air temperature and is determined from the graph given in Fig.5. Experience shows that by increasing the dimensions of the measuring element, the necessary correction is reduced and a single measurement may be made to obtain the mean temperature. Therefore, resistance thermometers have been made in the form of a tape, as shown in Fig.6. This is clipped around the insulated pipe. A comparison between average temperatures obtained in this way and by conventional methods is tabulated and good agreement is claimed.

Card2/2 There are 6 figures,1 table and 2 Russian references.

1. Temperatures-Measurement 2. Pipes-Insulation

ZALKIND, I.Ya., kand. tekhn. nauk; KOHNER, I.M., inzh.

Effect of aluminum lining on heat-protection properties in heat-insulating structures. Elek. sta. 29 no.10:29-30 O '58. (MIRA 11:11)
(Electric power plants)

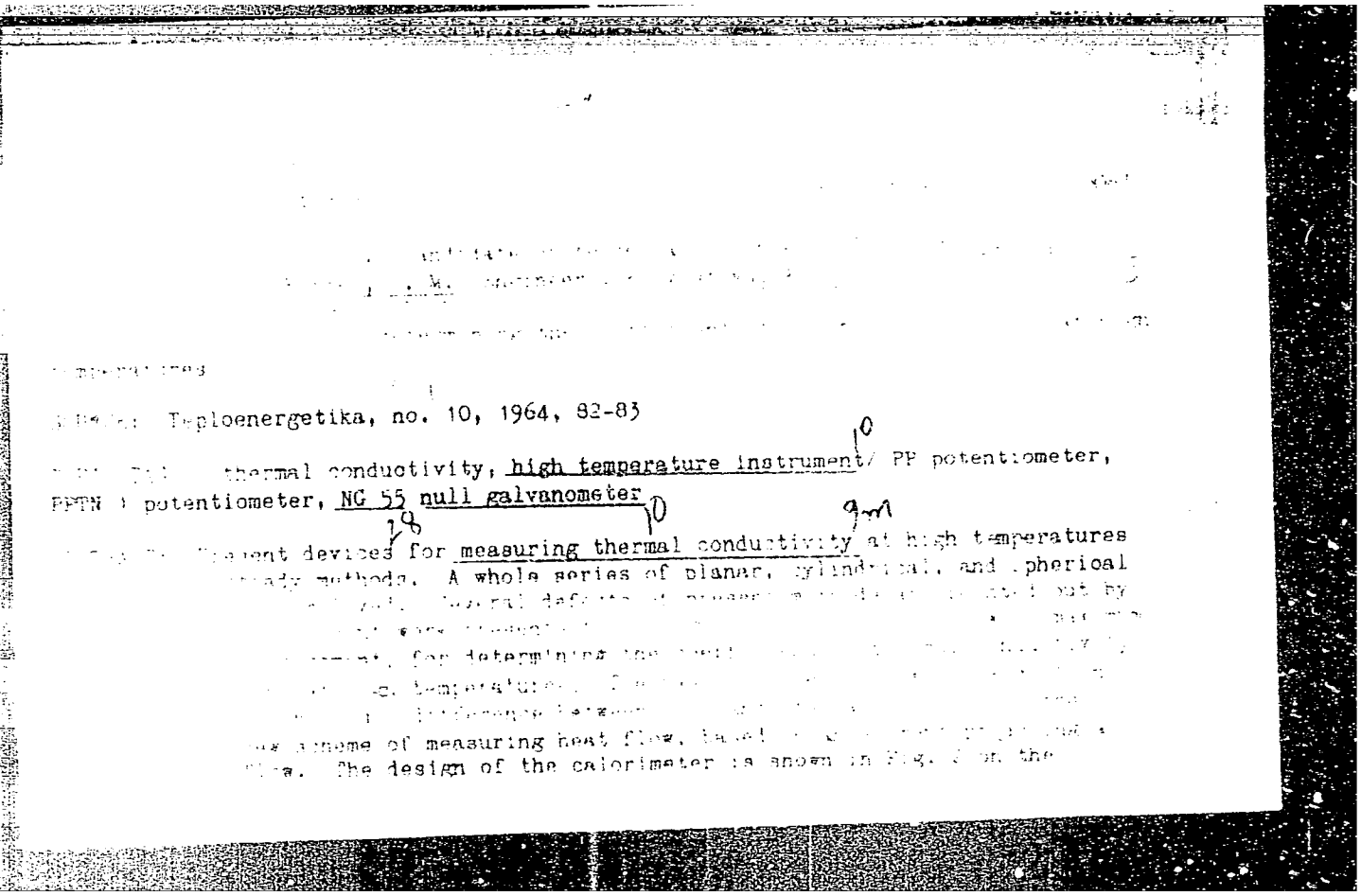
ZALKIND, I.Ya., kand.tekhn.nauk, ANAN'IN, A.V., inzh., KORMER, I.M., inzh.

Heat measuring instrument with low inertness developed by the State Trust for the Organization and Efficiency of Electric Power Plants. Teploenergetika 7 no.7:87-89 Jl '60. (MIRA 13:7)

(Heat--Radiation and absorption)
(Heat engineering--Equipment and supplies)

VORONKOV, S.T., inzh., KORNER, I.M., inzh.

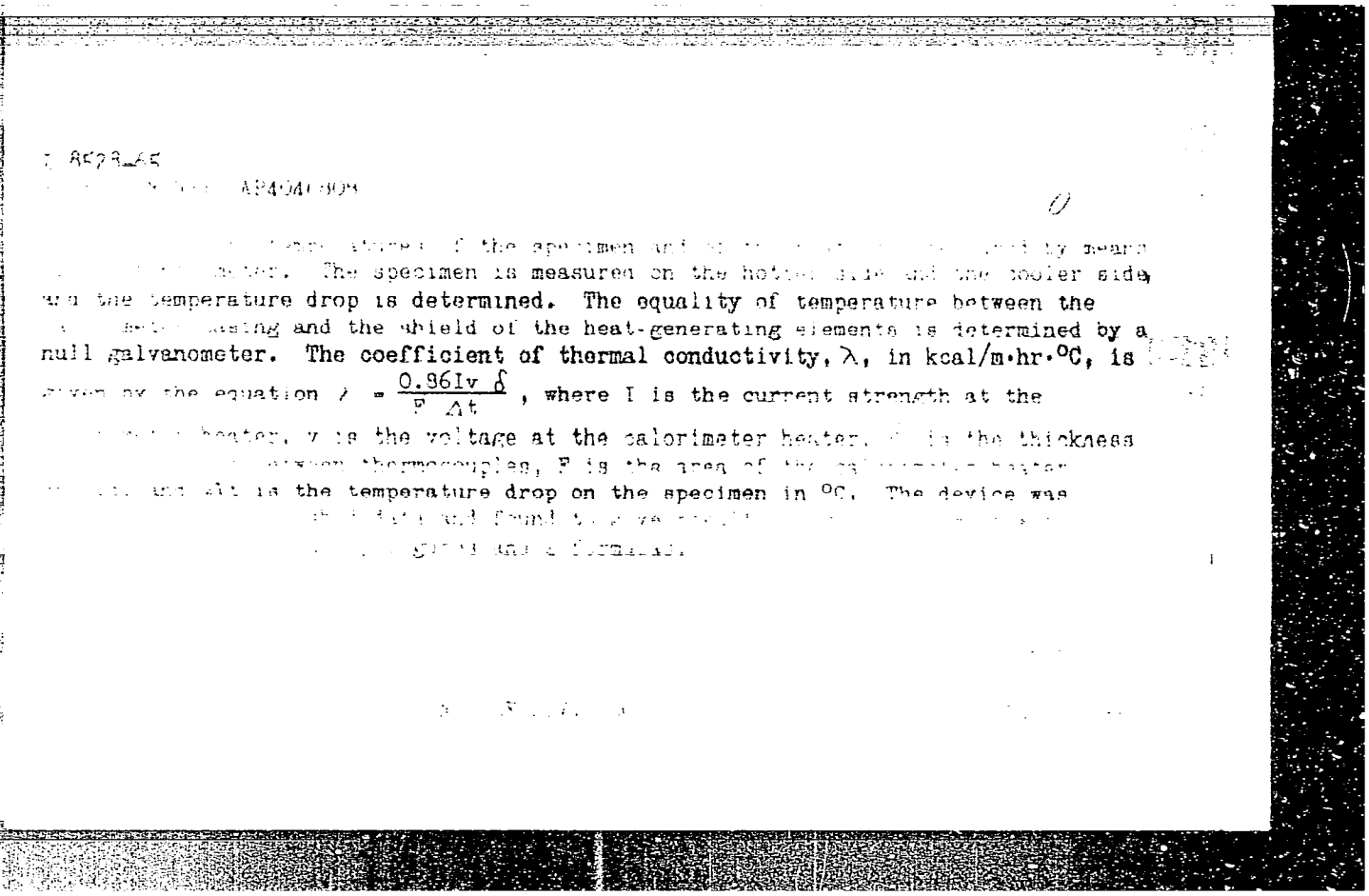
Thermal insulation for steam pipes. Energetik 8 no.4:11-14 Ap '60. (MIRA 13:8)
(Steampipe coverings) (Insulation (Heat))



Teploenergetika, no. 10, 1964, 82-83

thermal conductivity, high temperature instrument/ PP potentiometer, PPTN potentiometer, NG 55 null galvanometer

ment devices for measuring thermal conductivity at high temperatures
steady methods. A whole series of planar, cylindrical, and spherical
for determining the
temperature
scheme of measuring heat flow,
flow. The design of the calorimeter is shown in Fig. 2 on the



[illegible] the specimen [illegible] by means [illegible] meter. The specimen is measured on the hot [illegible] and the cooler side, and the temperature drop is determined. The equality of temperature between the [illegible] heating and the shield of the heat-generating elements is determined by a null galvanometer. The coefficient of thermal conductivity, λ, in kcal/m·hr·°C, is given by the equation $\lambda = \frac{0.861 v \delta}{F \Delta t}$, where I is the current strength at the [illegible] heater, v is the voltage at the calorimeter heater, δ is the thickness [illegible] between thermocouples, F is the area of the [illegible] heater [illegible] and Δt is the temperature drop on the specimen in °C. The device was [illegible] and found to give [illegible] and a formula.

ENCLOSURE : 01

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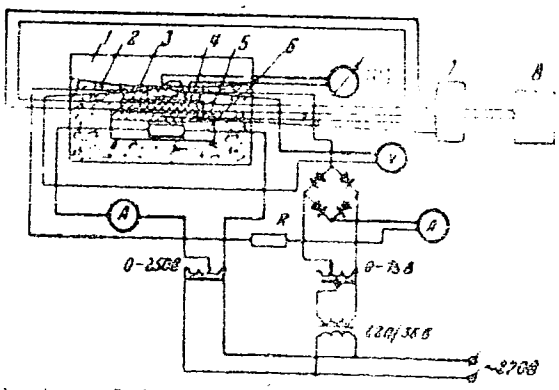

Basic design of device.

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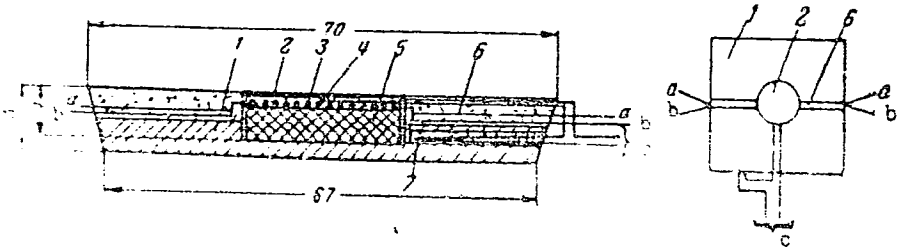
ACCESSION NR: AP4046808

ENCLOSURE: 02



Design of calorimeter.
- casing of calorimeter; 2 - shield of heat-generating element;
- heater; 4 - thermocouple under shield of heat-generating element;
- insulating cover of generating element; 6 - heat-resistant
- thermocouple for measuring of
- calorimeter heater; b - leads for measuring voltage at heater;
- leads for differentially combined thermocouples.

VASIL'YEVA, G.N., inzh.; ZALKIND, I.Y., inzh.; ISEROV, D.Z., inzh.; KORMER, L.M., inzh.; KUZ'MIN, A.I., inzn.; LAKHMANLOS, A.I., inzh.; SHAKHSUVAROV, K.V., inzh.

Determination of heat losses of boilers to an ambient media. Elek. sta. 36 no.2:2-6 F '65. (MIRA 18:4)

15(8), 24(8) SOV/2o-122-1-12/44

AUTHORS: Zel'dovich, Ya. B., Academician, Kormer, S. B., Sinitsyn, M. V., Kuryapin, A. I.

TITLE: The Temperature and the Specific Heat of Plexiglass Compressed by a Shock-Wave (Temperatura i teployemkost' pleksiglasa szhatogo udarnoy volnoy)

PERIODICAL: Doklady Akademii nauk SSSR, 1958, Vol 122, Nr 1, pp 48-5o (USSR)

ABSTRACT: Compression by a shock wave is a means of obtaining high pressures and high temperatures which cannot be obtained by other methods. The investigation of transparent bodies permits an immediate determination of temperature by measuring the brightness of the body compressed by the shock wave. After an intense compression (by which a temperature of some thousands of degrees is attained) an initially transparent substance becomes opaque and radiates intensely. This phenomenon is caused by a displacement of the electron levels and by an excitation of the electrons. The radiation of the front of the shock waves was observed through a layer of

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The Temperature and the Specific Heat of Plexiglass Compressed by a Shock-Wave

the not yet compressed transparent substance and it was recorded by photochronographs in 2 parts of the spectrum: λ = 4020 Å (blue) and red (λ = 6000 Å). The authors determined the temperature in polymethyl metacrylate $(C_5H_8O_2)_n$ (plexiglass) of an initial density of 1,18 g/cm^3. The velocity of the shock wave was 16,5 km/sec. In the compressed state, the density was equal to 3,15 g/cm^3, pressure was 2.10^{12} dyne/cm. By 3 experiments the following quantities were determined: the brightness temperature deduced from the intensity of the radiation in the red part of the spectrum (8500 $\pm$ 500°K) and the color temperature, deduced from the ratio of the intensities in the red and in the blue parts of the spectrum (11 000 $\pm$ 1 000°K). For the energy of the compressed plexiglass, the value $E = P(V_o - V)/2 = 0,53.10^{12}$ erg/g was found. Thermal pressure is equal to $\sim 1,3.10^{12}$ dyne/cm^2 and the thermal energy of the atoms amounts to $\sim 0,31.10^{12}$ erg/g. The elastic pressure was determined as being the difference between the total and the thermal pressures, i.e. $0,7.10^{12}$ dyne/cm^2. An expression is then given for the elastic energy. The compression causes a thorough destruction

Card 2/3

The Temperature and the Specific Heat of Plexiglass Compressed by a Shock-Wave

of the molecules, but the energy is not sufficient to cause a total interruption of all the chemical bonds. The conception of single molecules cannot be applied to densities of ~ 3 g/cm^2. The optical investigations of the transparent bodies are continued. The authors thank L. V. Al'tshuler, Y. Sh. Model', and Yu. P. Rayzer for their constant interest in this paper. There are 4 references, all of which are Soviet.

SUBMITTED: June 4, 1958

Card 3/3

82415
S/056/60/038/03/14/033
B006/B014

Equation of State for Aluminum, Copper, and Lead in the High-pressure Range

S/056/60/038/03/14/033
B006/B014

Alekseyev). Ansatzes for the equation of state and internal energy have the form $P = P_{int} + P_{therm} + P_{exc}$ and $E = E_{int} + E_{therm} + E_{exc}$ (2). The first terms of these sums characterize the interaction of atoms at $0^{\circ}K$, the second terms are thermal ones determined by lattice vibrations, and the third terms are determined by the thermal excitations of electrons. In the following, the various terms are written down explicitly; and finally, the following explicit expressions are obtained for pressure and temperature:

$P = P_{int} + \frac{\gamma_p C_{vp}}{v}\left[T-T_o+E_o/C_{vp}\right] + \frac{1}{4}\rho_o\beta_o (v_o/v)^{1/2}T^2$ and

$E = \int_{v}^{v_{ok}} P_{int}dv + E_o + C_{vp}(T-T_o) + \frac{1}{2}\beta_o(v/v_o)^{1/2}T^2$. According to equation (1) for the dynamic adiabatics $P_G = \sum a_k(\sigma - 1)^k$, dynamic experiments permitted a determination of pressure P_G and also of energy $E_G = E_o + \frac{1}{2}P_G(v_o - v)$. Results of computations for aluminum are given in Table 5, for copper in Table 6, and for lead in Table 7. As is shown by Figs. 1 and 2, thermal

Card 2/3

83715

S/056/60/038/004/008/048
B019/B070

1.1210
24.4100

AUTHORS: Al'tshuler, L. V., Kormer, S. B., Brazhnik, M. I., Vladimirov, L. A., Speranskaya, M. P., Funtikov, A. I.

TITLE: The Isoentropic Compressibility of Aluminum, Copper, Lead, and Iron at High Pressures

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, 1960, Vol. 38, No. 4, pp. 1061-1073

TEXT: New methods of investigation of the properties of materials at high pressures depend on the application of shock waves. Two parameters are determined: the velocity of propagation of the shock waves, and the particle velocity at the front, which enable the pressure and the density of the shock compression to be determined. Another important kinematic parameter is the velocity of sound in the shock compressed material. This quantity characterizes the velocity of propagation of small disturbances in the compressed material. These small disturbances are weak shock waves and discharge waves, and are of importance in geophysical and other similar investigations. In the present paper, a method is suggested for

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83715

The Isoentropic Compressibility of Aluminum, Copper, Lead, and Iron at High Pressures

S/056/60/038/004/008/048
B019/B070

the measurement of the velocity of sound in the front of strong shock waves, and results of investigations for aluminum, lead, and iron for the pressures between $4 \cdot 10^5$ and $3.5 \cdot 10^6$ atm are given. In the first section a method of measuring the velocity of sound is given which depends on measurement with the discharge waves. In this method the decrease of pressure due to the superposition of the discharge and dilatation waves in the zone of the boundary of the sample in the form of a stepwise built cylinder is measured photochronographically. In the second section, elastic and plastic discharge waves are discussed. In the third part, a method of measurement is discussed in which the collision of a plate and a sample from a material of known dynamic adiabatics is studied. This method leads to an experimental determination of the trajectories of the shock waves, and to the measurement of the particle velocities at one or more points of these trajectories. In the fourth part, the data given in Tables 2, 3, 4, and 5 are discussed in detail. In the last two sections, the isoentropic compressibility of the metals, and the upper limit of "cold" compression are studied on the basis of the results obtained here; and an estimate of the thermal energy and the temperature is made. In the present paper, the existence of two sound velocities corresponding to the

Card 2/3

AL'TSHULER, L.V.; KORMER, S.B.

Internal structure of the earth. Izv. AN SSSR. Ser. geofiz. no.1:33-37 Ja '61. (MIRA 14:1)
(Earth—Internal structure)

25699
S/181/61/003/007/021/023
B104/B203

1.1210

AUTHORS: Kormer, S. B., Urlin, V. D., and Popova, L. T.

TITLE: The interpolation equation of state and its application in the description of experimental data on the shock compression of metals

PERIODICAL: Fizika tverdogo tela, v. 3, no. 7, 1961, 2131 - 2140

TEXT: It was shown that the equation of state with elastic curves in the simple form of F. D. Murnaghen (Am. J. Math., 59, 235, 1937) and Lenard-Jones (M. Born and Huang K'un, Dinamicheskaya teoriya kristallicheskikh reshetok (Dynamic theory of crystal lattices), I, IL, M., 1958; R. Fürth, Proc. Roy. Soc., A183, no. 992, 87, 1944) does not permit a description of experimental data on shock compression of metals in a wide pressure range with an accuracy close to that of the experimental data. The authors suggest an interpolation equation for an elastic curve in the form of a series of $\delta^{1/3}$, and a method of finding the unknown parameters contained therein. The resulting equation permits the elastic curve to be described with sufficient accuracy as a function of pressure in the range

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The interpolation...

of 10^{14} - 10^{15} dyne/cm^2 after making one correction on the shock abiabatic. The equation of state with electron components (L. V. Al'tshuler et al., ZhETF, 38, no. 3, 790, 1960) and the resulting elastic curve describes the shock adiabatic in a pressure range of up to $5 \cdot 10^{12}$ dyne/cm^2 with an accuracy of ±3%. The equations of state considering the electron terms read as follows:

$$p = p_x(\delta) + \gamma(\delta) c_v \rho_k \delta \left(T - T_0 + \frac{E_0}{c_v}\right) + \frac{\rho_k}{4} \beta_k \delta^{1/3} T^2, \quad (2),$$

$$E = E_x(\delta) + c_v \left(T - T_0 + \frac{E_0}{c_v}\right) + \frac{\beta_k}{2} \delta^{-1/3} T^2, \quad (3),$$

In a pressure range of 0 - 10^{15} dyne/cm^2 at T = 0°K, $p_x = \sum_{i=1}^{n} a_i \delta^{i/3+1}$ (1), where $\delta = \rho/\rho_k$, $E_x = \int_1^{\delta} p_x d\delta/\rho_k \delta^2$ the inner energy at T = 0°K, E_0 the inner energy under normal conditions (p=0, T=T_0=300°K), β_k is the coefficient of the electron heat conductivity at $\rho = \rho_k$, and

$$\gamma = \frac{1}{3} + \frac{\delta}{2} \frac{\frac{d^2 p_x}{d\delta^2}}{\frac{dp_x}{d\delta}} \quad (4).$$

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The interpolation...

the computations carried out on a "Strela" computer, and Academician Ya. B. Zel'dovich for a discussion and valuable remarks.

Ya. B. Zel'dovich, A. S. Kompaneyets, L. V. Al'tshuler, A. A. Bakanova, and R. F. Trunin are mentioned. There are 5 figures, 1 table, and 19 references: 9 Soviet-bloc and 10 non-Soviet-bloc.

SUBMITTED: January 28, 1961 (initially), and
March 7, 1961 (after revision)

Card 4/5