1ST AND 2ND ORDERS

PROCESSES AND PROPERTIES INDEX

3RD AND 4TH ORDERS

BC

a-3

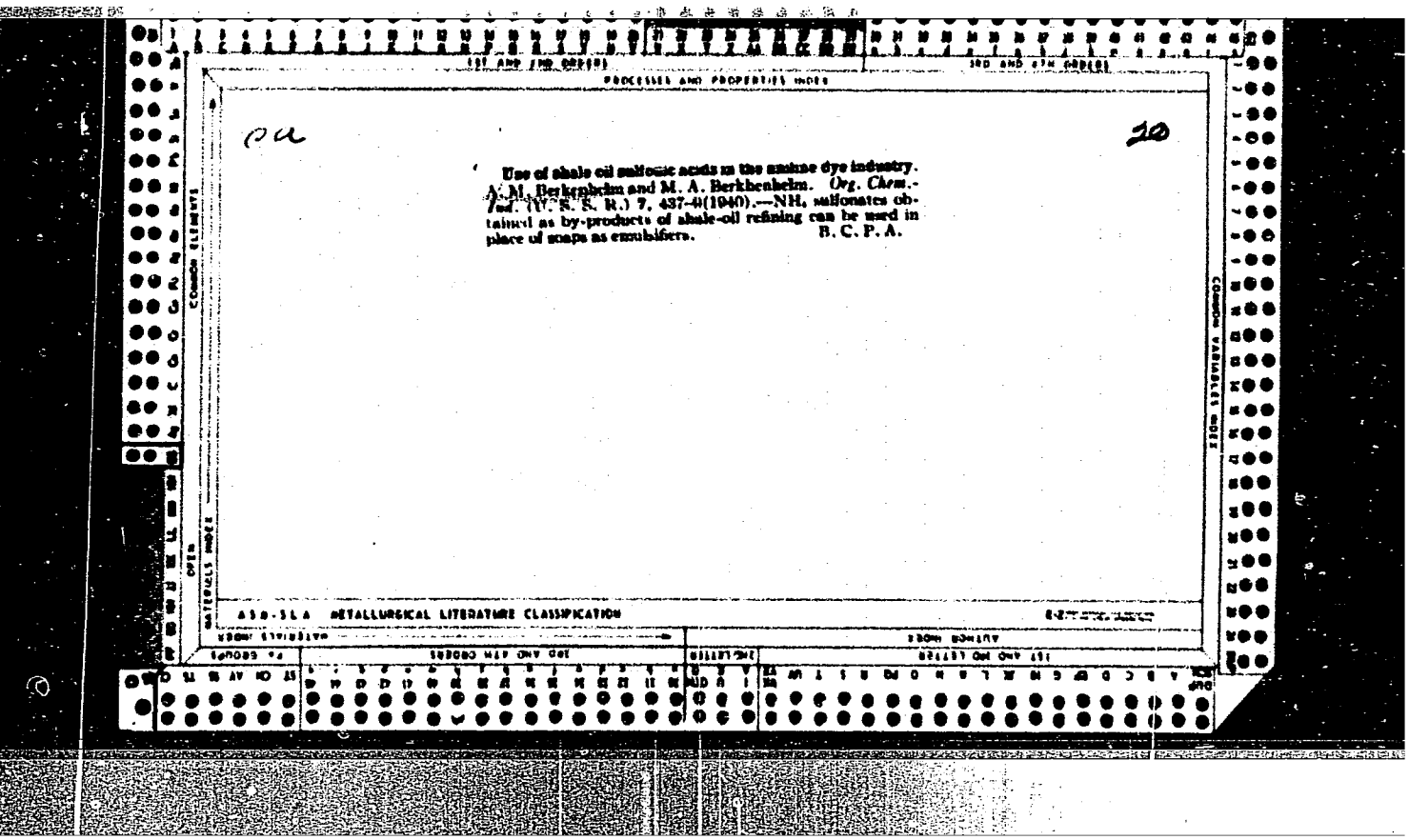
[illegible] of [illegible] of hydrogen bromide [illegible] II. A. M. [illegible] [illegible] J. Gen. Chem. Russ. 1950, [illegible] (I) and quinoline [illegible] % yield; an [illegible], and this with NaOH [illegible] N [illegible] m.p. 150– [illegible] (I) and NPhMe [illegible] at 170–180° as [illegible] C_6H_5Br + NPhMe, HBr (II); [illegible] NHPhMe,HBr [illegible] (I) [illegible] 1-phenyl-2-methyl [illegible]. (I) and KOH in [illegible] OH give [illegible] yield, but the chief product is [illegible] OH, together with the [illegible]. With KOH–EtOH [illegible] gives [illegible] in 60% and C_6H_5OH in 17% yield. R. T.

ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION

MATERIALS INDEX

AUTHOR INDEX

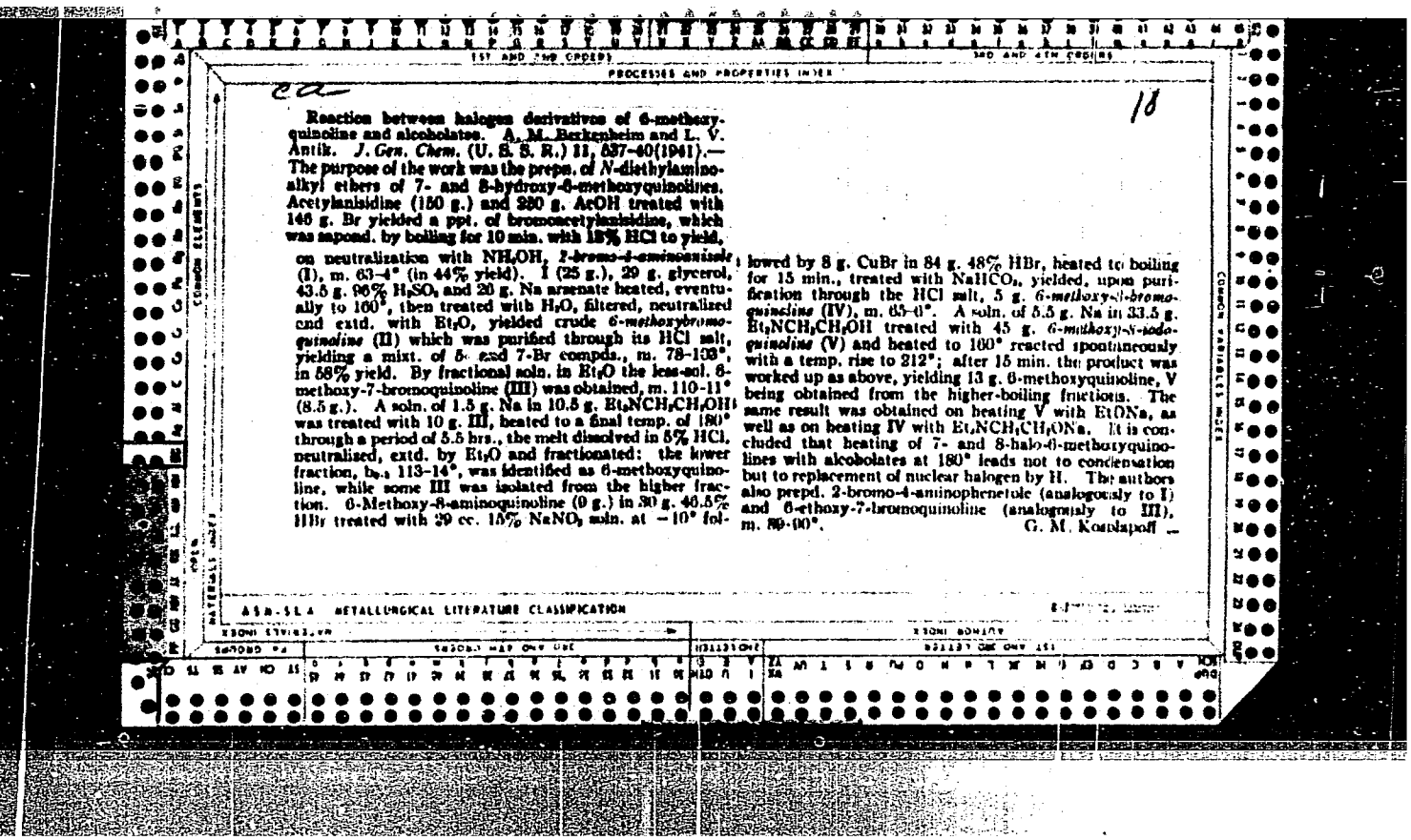
1ST AND 2ND LETTER



PROCESSES AND PROPERTIES INDEX

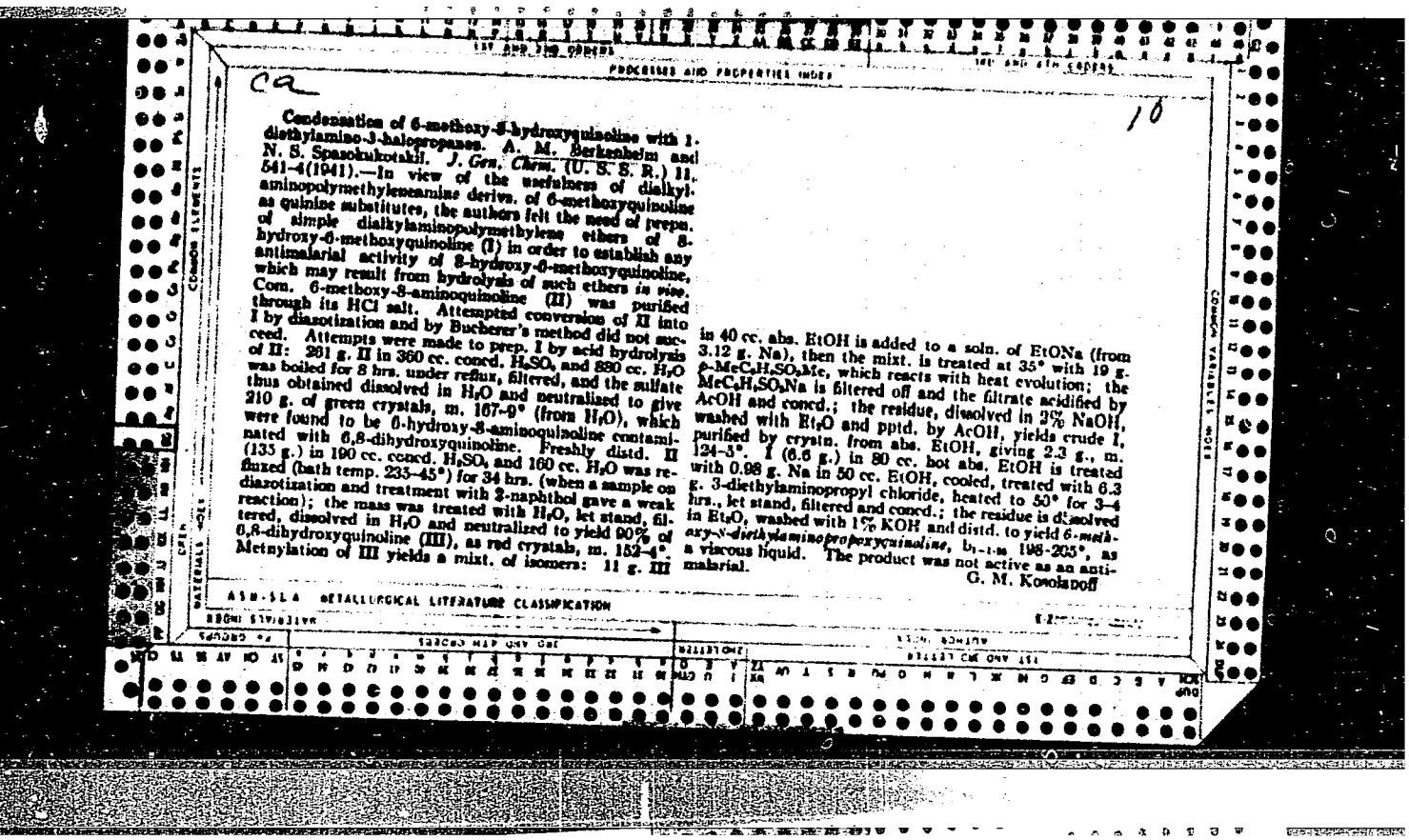
Use of shale oil sulfonic acids in the azoinc dye industry. A. M. Berkenheim and M. A. Berkhenheim. *Org. Chem.-Ind. (U. S. S. R.)* 7, 437-40(1940).—NH, sulfonates obtained as by-products of shale-oil refining can be used in place of soaps as emulsifiers. B. C. P. A.

A 50-51 A METALLURGICAL LITERATURE CLASSIFICATION



Reaction between halogen derivatives of 6-methoxyquinoline and alcoholates. A. M. Berkenheim and L. V. Antik. *J. Gen. Chem.* (U. S. S. R.) **11**, 537–40(1941).—The purpose of the work was the prepn. of *N*-diethylaminoalkyl ethers of 7- and 8-hydroxy-6-methoxyquinolines. Acetylanisidine (150 g.) and 280 g. AcOH treated with 140 g. Br yielded a ppt. of bromoacetylanisidine, which was saponf. by boiling for 10 min. with 15% HCl to yield, on neutralization with NH_4OH, *2-bromo-4-aminoanisole* (I), m. 63–4° (in 44% yield). I (25 g.), 29 g. glycerol, 43.5 g. 96% H_2SO_4 and 20 g. Na arsenate heated, eventually to 160°, then treated with H_2O, filtered, neutralized and extd. with Et_2O, yielded crude *6-methoxybromoquinoline* (II) which was purified through its HCl salt, yielding a mixt. of 8- and 7-Br compds., m. 78–138°, in 58% yield. By fractional soln. in Et_2O the less-sol. 6-methoxy-7-bromoquinoline (III) was obtained, m. 110–11° (8.5 g.). A soln. of 1.5 g. Na in 10.5 g. $Et_2NCH_2CH_2OH$ was treated with 10 g. III, heated to a final temp. of 180° through a period of 5.5 hrs., the melt dissolved in 5% HCl, neutralised, extd. by Et_2O and fractionated: the lower fraction, $b_{4.5}$ 113–14°, was identified as 6-methoxyquinoline, while some III was isolated from the higher fraction. 6-Methoxy-8-aminoquinoline (9 g.) in 30 g. 46.5% HBr treated with 29 cc. 15% $NaNO_2$ soln. at −10° followed by 8 g. CuBr in 84 g. 48% HBr, heated to boiling for 15 min., treated with $NaHCO_3$, yielded, upon purification through the HCl salt, 5 g. *6-methoxy-8-bromoquinoline* (IV), m. 65–6°. A soln. of 5.5 g. Na in 33.5 g. $Et_2NCH_2CH_2OH$ treated with 45 g. *6-methoxy-8-iodoquinoline* (V) and heated to 180° reacted spontaneously with a temp. rise to 212°; after 15 min. the product was worked up as above, yielding 13 g. 6-methoxyquinoline, V being obtained from the higher-boiling fractions. The same result was obtained on heating V with EtONa, as well as on heating IV with $Et_2NCH_2CH_2ONa$. It is concluded that heating of 7- and 8-halo-6-methoxyquinolines with alcoholates at 180° leads not to condensation but to replacement of nuclear halogen by H. The authors also prepd. 2-bromo-4-aminophenetole (analogously to I) and 6-ethoxy-7-bromoquinoline (analogously to III), m. 89–90°.

G. M. Kondakoff



PROCESSES AND PROPERTIES INDEX

Ca

10

Condensation of 6-methoxy-8-hydroxyquinoline with 1-diethylamino-3-halopropanes. A. M. Berkenheim and N. S. Spasokukotskii. *J. Gen. Chem.* (U. S. S. R.) 11, 541-4(1941).—In view of the usefulness of dialkylaminopolymethyleneamine derivs. of 6-methoxyquinoline as quinine substitutes, the authors felt the need of prepn. of simple dialkylaminopolymethylene ethers of 8-hydroxy-6-methoxyquinoline (I) in order to establish any antimalarial activity of 8-hydroxy-6-methoxyquinoline, which may result from hydrolysis of such ethers *in vivo*. Com. 6-methoxy-8-aminoquinoline (II) was purified through its HCl salt. Attempted conversion of II into I by diazotization and by Bucherer's method did not succeed. Attempts were made to prep. I by acid hydrolysis of II: 261 g. II in 360 cc. concd. H_2SO_4 and 880 cc. H_2O was boiled for 8 hrs. under reflux, filtered, and the sulfate thus obtained dissolved in H_2O and neutralized to give 210 g. of green crystals, m. 167–9° (from H_2O), which were found to be 6-hydroxy-8-aminoquinoline contaminated with 6,8-dihydroxyquinoline. Freshly distd. II (135 g.) in 190 cc. concd. H_2SO_4 and 160 cc. H_2O was refluxed (bath temp. 233–45°) for 34 hrs. (when a sample on diazotization and treatment with 2-naphthol gave a weak reaction); the mass was treated with H_2O, let stand, filtered, dissolved in H_2O and neutralized to yield 90% of 6,8-dihydroxyquinoline (III), as red crystals, m. 152–4°. Methylation of III yields a mixt. of isomers: 11 g. III in 40 cc. abs. EtOH is added to a soln. of EtONa (from 3.12 g. Na), then the mixt. is treated at 35° with 19 g. p-$MeC_6H_4SO_2Me$, which reacts with heat evolution; the $MeC_6H_4SO_3Na$ is filtered off and the filtrate acidified by AcOH and concd.; the residue, dissolved in 2% NaOH, washed with Et_2O and pptd. by AcOH, yields crude I, purified by crystn. from abs. EtOH, giving 2.3 g., m. 124–5°. I (6.6 g.) in 80 cc. hot abs. EtOH is treated with 0.98 g. Na in 50 cc. EtOH, cooled, treated with 6.3 g. 3-diethylaminopropyl chloride, heated to 50° for 3–4 hrs., let stand, filtered and concd.; the residue is dissolved in Et_2O, washed with 1% KOH and distd. to yield *6-methoxy-8-diethylaminopropoxyquinoline*, $b_{1-1.5}$ 198–205°, as a viscous liquid. The product was not active as an antimalarial.

G. M. Kosolapoff

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

PERKENGEYM, P. P.

PERKENGEYM, P. P. "Investigation of the Tanning of Thin Gelatinous Layers with a 'Hydrotypical' Process." Min Culture USSR. Leningrad Inst of Cinema Engineers. Leningrad, 1956. (Dissertation for the Degree of Candidate in Technical Science)

So: Knizhnaya Letopis', No. 19, 1956.

BERKENGEYM, B. M. DECEASED

Chemistry see IIC

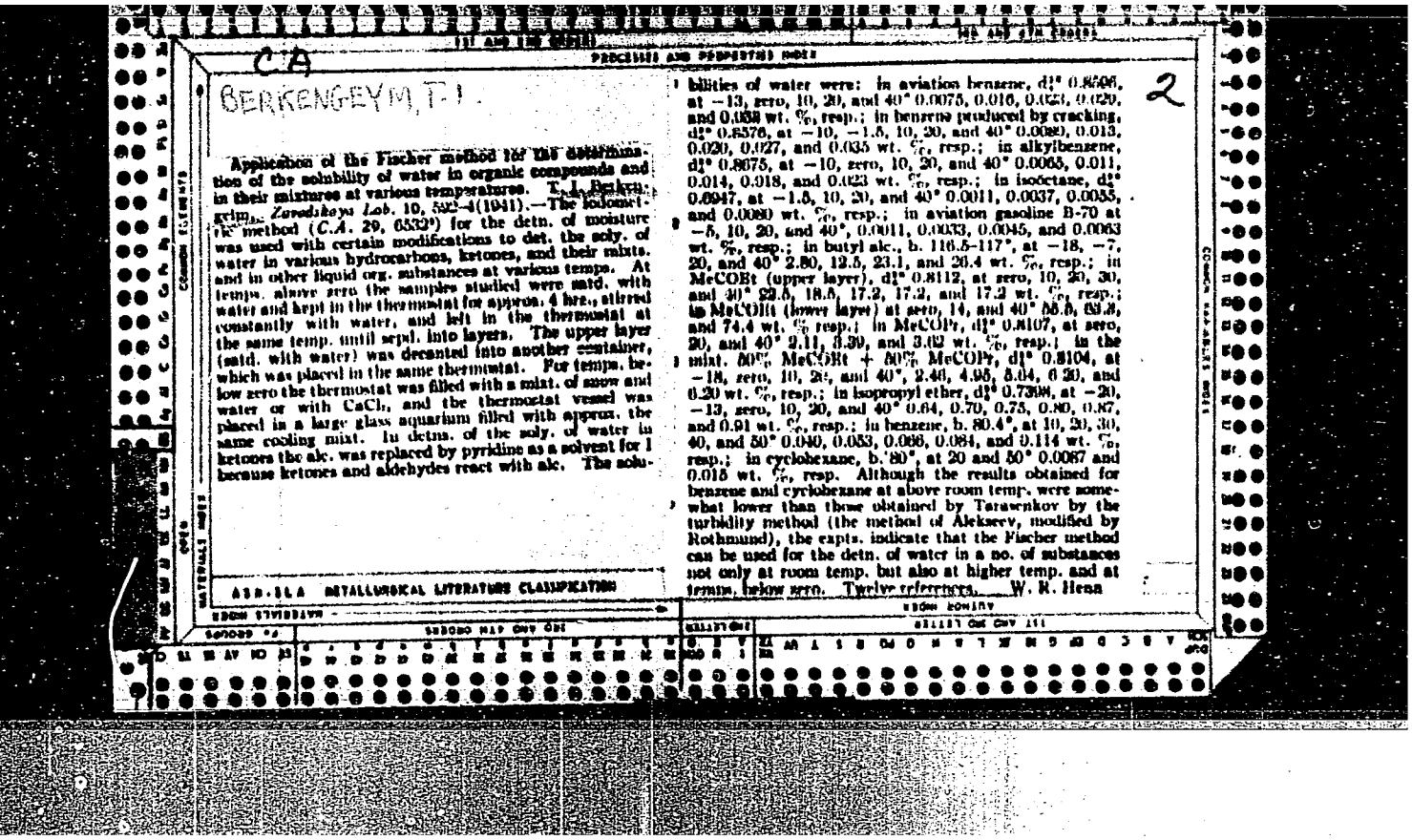
BERKENGEYM, G.B.

Use of novocaine solutions in polyvinyl-pyrrolidone for prolonged local anesthesia. Trudy 1-go MMI 3:175-184 '57. (MIRA 14:5)
(NOVOCAINE) (VINYL COMPOUNDS)
(PYRROLIDINONE) (LOCAL ANESTHESIA)

KOCHETKOVA, V.A.; BERKENGEYM, G.B.; SIDEL'KOVSKAYA, F.P.

Prolongation of the effect of penicillin and streptomycin with the aid of aqueous solutions of polyvinylpyrrolidone. Antibiotiki 8 no.12:1100-1105 D '63. (MIRA 17:10)

1. Gosudarstvennyy nauchno-issledovatel'skiy onkologicheskiy institut imeni Gertsena i Institut organicheskoy khimii imeni Zelinskogo AN SSSR.



CA

BERKENGEYM, T. I.

Application of the Fischer method for the determination of the solubility of water in organic compounds and in their mixtures at various temperatures. T. I. Berkengeim. *Zavodskaya Lab.* 10, 532–4(1941).—The Fischer method (*C.A.* 29, 6532[9]) for the detn. of moisture was used with certain modifications to det. the solv. of water in various hydrocarbons, ketones, and their mixts. and in other liquid org. substances at various temps. At temps. above zero the samples studied were satd. with water and kept in the thermostat for approx. 4 hrs., stirred constantly with water, and left in the thermostat at the same temp. until sepn. into layers. The upper layer (satd. with water) was decanted into another container, which was placed in the same thermostat. For temps. below zero the thermostat was filled with a mixt. of snow and water or with $CaCl_2$, and the thermostat vessel was placed in a large glass aquarium filled with approx. the same cooling mixt. In detns. of the solv. of water in ketones the alc. was replaced by pyridine as a solvent for I because ketones and aldehydes react with alc. The solubilities of water were: in aviation benzene, $d_4^{t°}$ 0.8596, at −13, zero, 10, 20, and 40° 0.0075, 0.016, 0.023, 0.029, and 0.038 wt. %, resp.; in benzene produced by cracking, $d_4^{t°}$ 0.8576, at −10, −1.5, 10, 20, and 40° 0.009, 0.013, 0.020, 0.027, and 0.035 wt. %, resp.; in alkylbenzene, $d_4^{t°}$ 0.8675, at −10, zero, 10, 20, and 40° 0.0065, 0.011, 0.014, 0.018, and 0.023 wt. %, resp.; in isooctane, $d_4^{t°}$ 0.6947, at −1.5, 10, 20, and 40° 0.0011, 0.0037, 0.0055, and 0.0080 wt. %, resp.; in aviation gasoline B-70 at −5, 10, 20, and 40°, 0.0011, 0.0033, 0.0045, and 0.0063 wt. %, resp.; in butyl alc., b. 116.5–117°, at −18, −7, 20, and 40° 2.80, 12.5, 23.1, and 26.4 wt. %, resp.; in MeCOBt (upper layer), $d_4^{t°}$ 0.8112, at zero, 10, 20, 30, and 40° 29.5, 18.6, 17.2, 17.2, and 17.2 wt. %, resp.; in MeCOBt (lower layer) at zero, 14, and 40° 55.5, 69.8, and 74.4 wt. % resp.; in MeCOPr, $d_4^{t°}$ 0.8107, at zero, 20, and 40° 2.11, 3.39, and 3.62 wt. %, resp.; in the mixt. 80% MeCOBt + 20% MeCOPr, $d_4^{t°}$ 0.8104, at −18, zero, 10, 20, and 40°, 2.46, 4.95, 8.04, 6.20, and 0.20 wt. %, resp.; in isopropyl ether, $d_4^{t°}$ 0.7308, at −20, −13, zero, 10, 20, and 40° 0.64, 0.70, 0.75, 0.80, 0.87, and 0.91 wt. %, resp.; in benzene, b. 80.4°, at 10, 20, 30, 40, and 50° 0.040, 0.053, 0.066, 0.084, and 0.114 wt. %, resp.; in cyclohexane, b. 80°, at 20 and 50° 0.0087 and 0.015 wt. %, resp. Although the results obtained for benzene and cyclohexane at above room temp. were somewhat lower than those obtained by Tarasenkov by the turbidity method (the method of Alekseev, modified by Rothmund), the expts. indicate that the Fischer method can be used for the detn. of water in a no. of substances not only at room temp. but also at higher temp. and at temps. below zero. Twelve references. W. R. Hess

A38-51A METALLURGICAL LITERATURE CLASSIFICATION

2

BERKENGEYM, T. I.

PA 196T15

USSR/Chemistry - Oxidants Nov 51

"Theory of the Combined Action of Catalysts in Solution. III. Intermediate Products Under Catalysis of H_2O_2 With Salts of Calcium and Wolfram," G. A. Bogdanov, T. I. Berkengeym, Moscow

"Zhur Fiz Khim" Vol XXV, No 11, pp 1313-1317

Studied gasometric kinetics of catalytic decompn of H_2O_2 in simultaneous presence of Ca salts and wolframates. Established that process is case of ideal catalysis in which intermediate products form momentarily and reversibly.

196T15

USSR/Chemistry - Oxidants (Contd) Nov 51

Kinetic curves indicated formation of 2 active intermediate products. Worked out methods for prepn of intermediate products: yellow-green $CaWO_8$ and colorless $CaWO_6$.

196T15

BERKENGEYM, T. I.

PA 242T13

USSR/Chemistry - Hydrogen Peroxide Nov 52

"The Role of Intermediate Products in Catalysis by Means of a Deposit," G. A. Bogdanov and T.I. Berkengeym

"Zhur Fiz Khim" Vol 26, No 11, pp 1659-1663

Investigated the joint action of barium chloride and sodium tungstate in the form of a deposit on the decompn of H_2O_2. Determined that the kinetic course of the catalytic reaction is very complex: at a relatively high initial concn of the substrate there was a zero-order reaction, then a quite abrupt decrease in the rate, a zero order reaction, and a slowing down of the rate at the end of the expt; at a relatively low initial concn of the substrate, there was a very abrupt decrease of the rate, a zero-order reaction, and a slowing down of the rate at the end of the process. This change in the order of the reaction brings with it also an unexpectedly abrupt decrease in the vol and a change in the color of the deposit. The authors surmise that the observed effects are caused by the formation of certain intermediate compds of different properties and compn. As a result of this work, they isolated hitherto unknown barium pertungstates, established their compn, and developed a method for obtaining them.

242T13

-Berkengeym, T.I

B 9

Category: USSR

Abs Jour: Zh--Kh, No 3, 1957, 7526

Author: Bogdanov, G. A., Berkengeym, T. I., and Sherbinin, V. A.

Inst : Not given

Title : Additional Materials on the Theory of the Joint Action of Catalysts in Solution. I. Intermediate Products of the Decomposition of H_2O_2 Catalyzed by Calcium and Molybdenum Salts

Orig Pub: Zh. Fiz. Khimii, 1956, Vol 30, No 4, 889-895

Abstract: The gasometric method (G. A. Bogdanov, Zh. fiz. khimii, 1950, Vol 24, 1450; 1951, Vol 25, 323) has been applied to the investigation of the homogeneous catalytic decomposition of H_2O_2 using a mixture of $CaCl_2$ and Na_2MoO_4. The rate of decomposition vs. H_2O_2 concentration curve passes through a maximum independently of the temperature and the H ion concentration. The shape of the

-8-

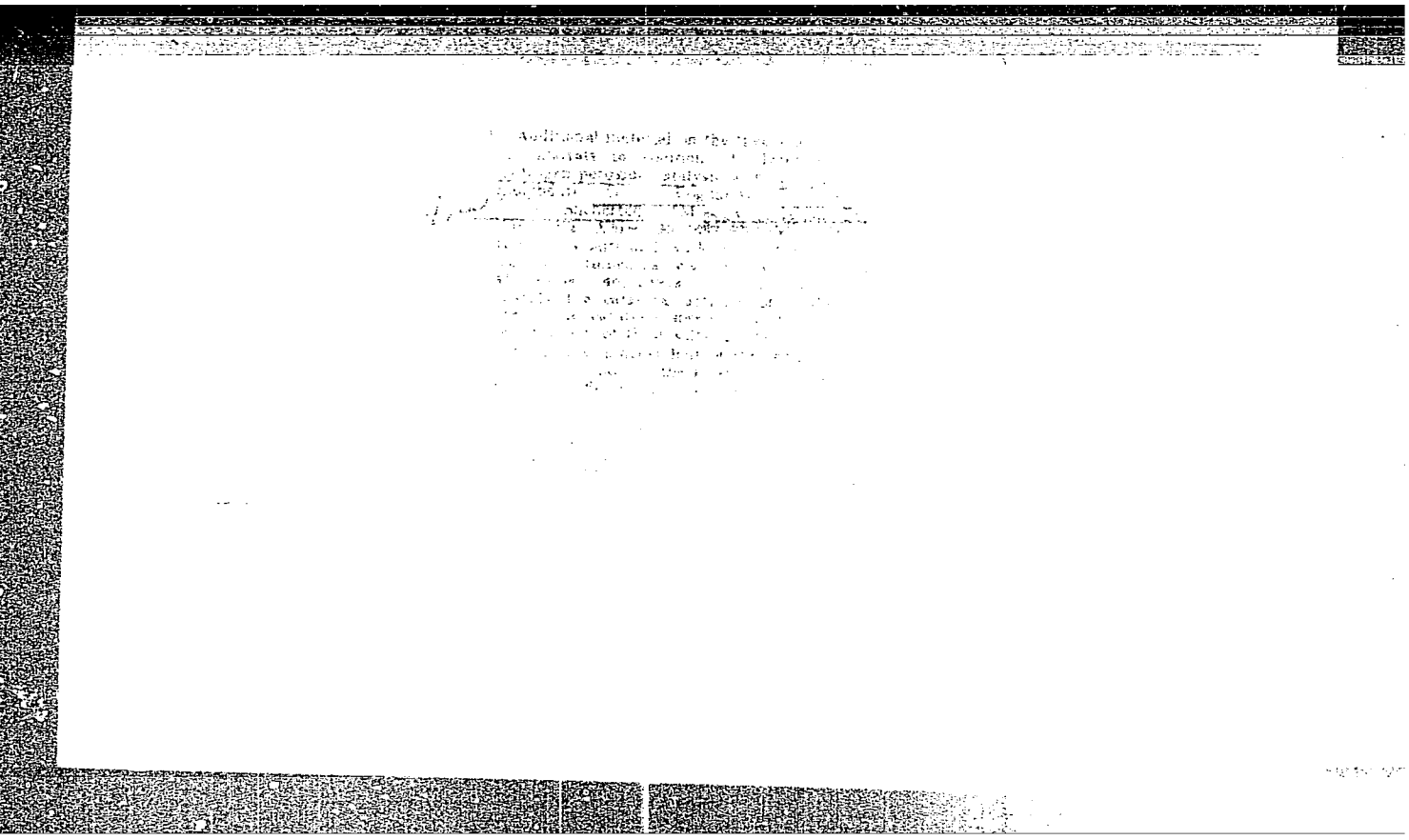
Card : 1/2

Category: USSR

Abs Jour: Zh--Kh, No 3, 1957, 7526

kinetic curves remains unchanged in the absence of $CaCl_2$ but a sharp increase is observed in the reaction rates. The authors explain the relationships observed by the formation of two intermediate substances of varying peroxide oxygen content. Two salts with the following compositions have been isolated from the reaction mixture: $Ca_2Mo_2O_{13} \cdot 9H_2O$ and $CaMoO_8 \cdot nH_2O$.

Card : 2/2



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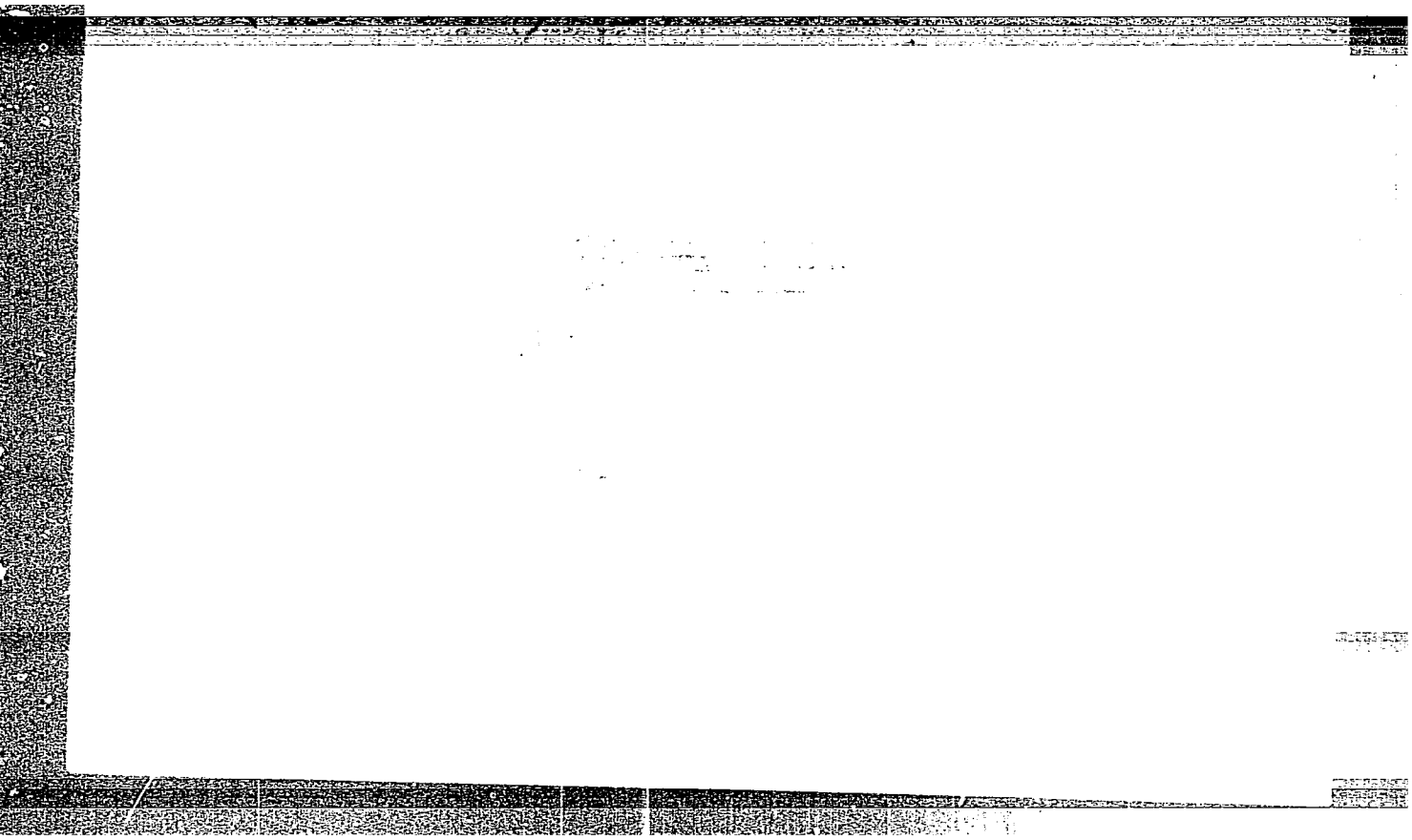


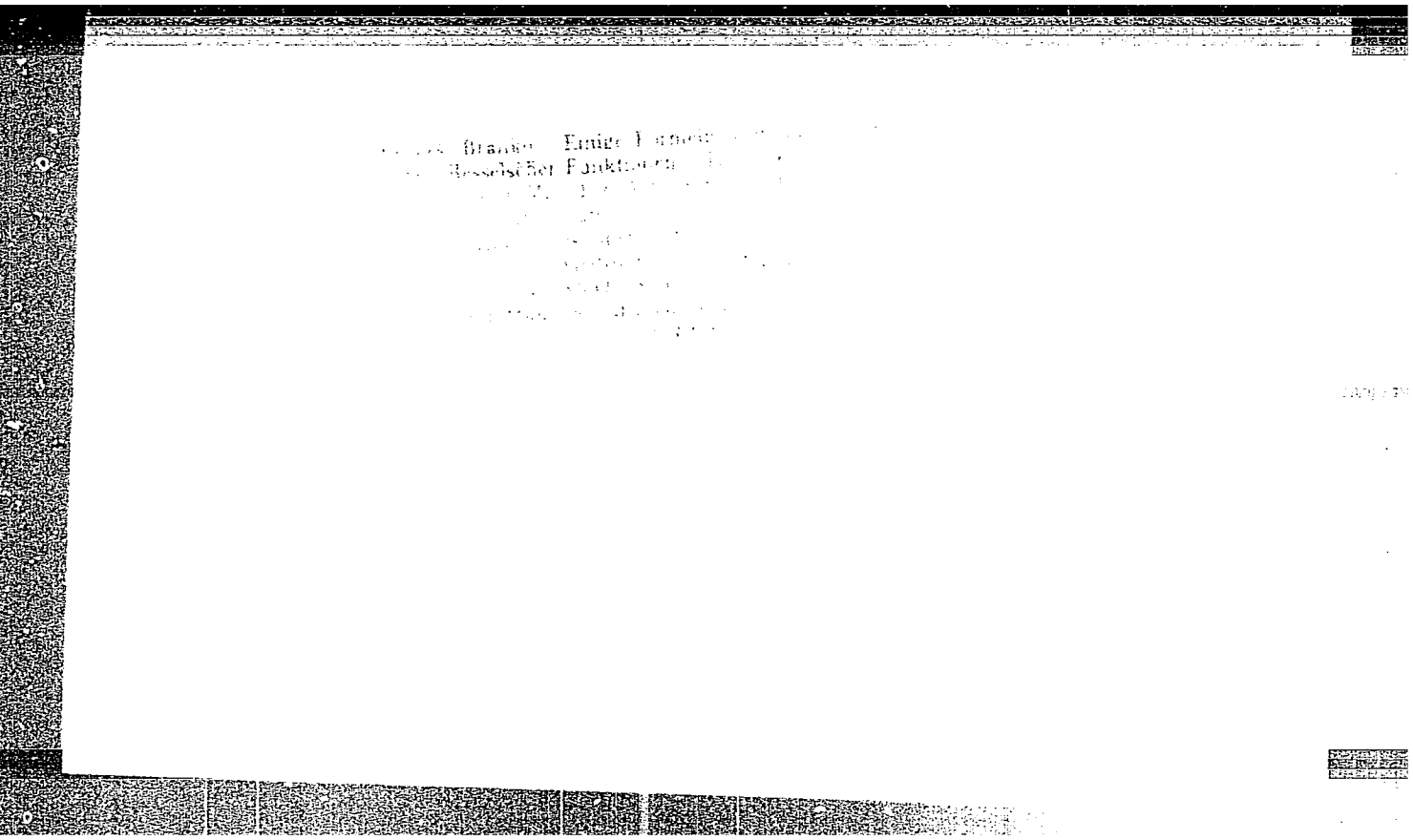
APPROVED FOR RELEASE: 06/08/2000 CIA-RDP86-00513R000204920012-1"

BERKENGEYM-SHCHEKINA, A.S.

Organizational aspects of complete deratization in Moscow; summary of a report. Trudy probl. i tem.sov. no.5:88-92 '55. (MLRA 8:12)

1. Tsentral'naya kontrol'no-issledovatel'skaya laboratoriya Mosgordezstantsii

(Moscow--Rodent control)



BERKES, B.

"Galvanometers. II" (To be contd.) p. 282
(ELEKTROTEHNIŠKI VESTNIK, Vol. 21, no. 9/10, 1953, Ljubljana, Yugoslavia)

SO: Monthly List of East European Accessions, LC, Vol. 3, no. 5, May 1954/Uncl.

BURKES, B.

"Galvanometers. III." P. 327
(ELEKTROTEHNISKI VESTNIK, Vol. 21, no. 11/12, 1953, Ljubljana, Yugoslavia)

SO: Monthly List of East European Accessions, LC, Vol. 3, no. 5, May 1954/Uncl.

BERKES, B.

Computation of intermediate-frequency filters.

p. 237
Vol. 23, no. 7/8, 1955
ELEKTROTEHNISKI VESTNIK
Ljubjana

So; East European Accessions List (EEAL), LC. Vol. 5, no. 2, Feb. 1956

BERKES, B.

Parallel oscillating circuit. I. (To be contd.) p. 24. ELEKTROTEHNISKI VESTNIK. (Institut za elektrisko gospodarstvo, Fakultata za elektrotehniko in Institut za elektrozveze) Ljubljana. Vol. 24, no. 1/3, Jan./Mar, 1956.

So. East European Accessions List Vol. 5, No. 9 September, 1956

BERKES, B.

Optimal number of windings of a loaded coil with induction current. In German. p. 191.

GLASNIK MATEMATICKO-FIZICKI I ASTRONOMSKI. PERIODICUM MATEMATICO-PHYSICUM ET ASTRONOMICUM. (Drustvo matematicara i fizicara Hrvatske i Prirodoslovno-matematicki fakultet Sveucilista u Zagrebu) Zagreb, Yugoslavia. Vol. 13, no. 3, 1958.

Monthly List of East European Accessions (EEAI), LC, Vol. 9, no. 2, 1960. Uncl.

BERKES, Branko, Ing. (Zagreb)

Direct-current voltage stabilizers with a high stability factor.
Elektr vest 27 no.9/10:316-318 S-O '59. (EEAI 9:10)

1. Institut "Ruder Boskovic", Zagreb
(Voltage stabilizers)

YUGOSLAVIA

Lj. POLJAKOVIC, J. ROSIC and I. BERKES, Department of Biochemistry (Institut za Biohemiju) School of Pharmacy (Farmaceutski Fakultet) Belgrade.

"Determination of Alkali-Resistant Hemoglobin."

Belgrade, Arhiv za Farmaciju, Vol 12, No 5, 1962; pp 309-312.

Abstract [English summary modified]: Hemolysates of erythrocytes of unspecified number of healthy adults were 100% resistant to alkaline denaturation; all of 12 fetal (umbilical cord blood) hemolysates were susceptible to 50 to 70%. Mixing adult and fetal bloods gave results as anticipated except in the 1:4 ratio which gave high error rate. Method is considered reliable and fast enough for clinical use. Four tables, 5 references: 1 German thesis, 4 English.

1/1

BERKES, I.; PEMETER, I.; KOSTKA, P.

""The 1 mv. Van De Graaff accelerator of the Section of Nuclear Physics." p. 209.

MAGYAR FIZIKAI FOLYOIRAT. (Magyar Tudomanyos Akademia). Budapest, Hungary, Vol. 6, No. 3, 1958.

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

HUNGARY/Nuclear Physics - Installations and Instruments. Methods of Measurement and Research C-2

Abs Jour : Ref Zhur - Fizika, No 4, 1959, No 7404

Author : Berkes Istvan, Demeter Istvan, Kostka Pal
Inst : Atomfizikai Osztaly, Hungary
Title : Van de Graaf Accelerator for 1 Mv, of the Division of the Atomic Physics of the Central Research Physics Institute

Orig Pub : Magyar fiz. folyoirat, 1956, 6, No 3, 209-223

Abstract : Description of the power supply and the accelerating portion of the Van de Graaf 1 Mv generator. The generator accelerates electrons to energies of 200-800 kev. The maximum current of the accelerated particles reaches 40 ma. The voltage is measured with the aid of a deflecting magnet with an accuracy of ± 1.2 percent. The maximum current of the deflected beam is 8 ma. It is possible to operate with the beam both in vacuum and in air.

Card : 1/1

BERKES, I.; DEMETER, I.; KOSTKA, P.

"The IMV Van de Graaf generator for the acceleration of electrons."

p. 268 (Energia Es Atomtechnika) Vol. 10, no. 5/6, Aug. 1957
Budapest, Hungary

SO: Monthly Index of East European Accessions (EEAI) LC. Vol. 7, no. 4, April 1958

HUNGARY/Nuclear Physics - Installations and Instruments. C
Methods of Measurement and Research.

Abs Jour : Ref Zhur Fizika, No 12, 1959, 26655

Author : Berkes, I.

Inst : Central Research Institute of Physics, Hungarian Academy of Sciences, Budapest, Hungary

Title : Effect of Magnetic Stray Field on the Location of Image in Nuclear Sprectrometers.

Orig Pub : Acta phys. Acad. scient. hung., 1958, 9, No 1-2, 13-21

Abstract : In transverse magnetic spectrometers of the sector type, the position of the image does not coincide with the calculated value, owing to the action of the tray field. The shift of the image in the transverse direction leads to difficulties in determination

Card 1/2

HUNGARY/Nuclear Physics - Installations and Instruments. C
Methods of Measurement and Research.

Abs Jour : Ref Zhur Fizika, No 12, 1959, 26655

of the momentum of the focuses particles from the value of the magnetic induction and geometric parameters of the spectrometer. In practice this shift is compensated for by a certain change in the intensity of the magnetic field. The author calculates the transverse shift and gives formulas for the value of the change in the field, necessary for its compensation. The results of the calculations were verified against measurements of the conversion line Cs^{137} on the transverse magnetic spectrometer with an angle of rotation of the electron beam by 90°, and was found to be in good agreement with the experiment. -- K.P. Mitrofanov

Card 2/2

BERKES, Istvan; DEMETER, Istvan

Small angle scattering of electrons. Koz fiz kozl MTA 7 no.4:203-217 '59. (EEAI 9:8)

1. A Magyar Tudomanyos Akademia Kozponti Fizikai Kutato Intezete, Atomfizikai Osztaly.
(Electrons)

BERKES, Istvan; SZABO, Ferenc

The 2d Geneva Atomic Energy Conference. Fiz szemle 9 no.2:39-43 F '59.

1. Kozponti Fizikai Kutato Intezet.

BERKES, I.

"The exhibition of nuclear power in Geneva." p. 175.

ENERGIA ES ATOMTECHNIKA. (Energiagazdalkodasi Tudomanyos Egyesulet). Budapest, Hungary, Vol. 12, No. 2/3, Feb./Mar. 1959.

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

[redacted]; DEMETER, Istvan; FODOR, Ilona; KESZTHELYI, Lajos

Voltage calibration of the K-800 cascade generator. Koz fiz kozl MTA 8 no.2/3:167-171 '60. (EEAI 10:4)

1. A Magyar Tudomanyos Akademia Kozponti Fizikai Kutato Intezete, Magfizikai Laboratorium I.
(Cascades)

BERKES, Istvan; KESZTHELYI, Lajos

Measuring the durability of atomic nuclei. Fiz szemle 10 no.9:262-268 S '60.

1. Kozponti Fizikai Kutato Intezet, Budapest. 2. "Fizikai Szemle" szerkeszto bizottsagi tagja (for Keszthelyi).

BERKES, Istvan; DEMETER, Istvan; DEZSI, Istvan; L. FODOR, Ilona; KESZTHELYI, Lajos

Investigations in the field of the background reduction of scintillation counters. Koz fiz kozl MTA 9 no.3:165-169 '61.

1. Magfizikai Laboratorium I.

21.6000

26752
G/016/61/009/004/001/001
B120/B108

AUTHORS: Keszthelyi, L., Berkes, I., Demeter, I., and Fodor, I. (Budapest)

TITLE: Absolute measurement of the number of γ-quanta

PERIODICAL: Experimentelle Technik der Physik, v. 9, no. 4, 1961, 197 - 203

TEXT: The authors applied the γ-γ coincidence method to scintillation counters with electronic rate meter in order to determine their absolute efficiency for 4.43 and 11.67 Mev γ-radiation produced in a $B^{11}(p,\gamma)C^{12}$ reaction. If the absolute efficiency of the detector is known, it is possible to determine the absolute number of γ-quanta emitted per unit time from the number recorded by the detector. This is important for the determination of various capture cross sections and for the evaluation of the cross section of photonuclear reactions. For the measurement, a 1 cm thick B target was placed between two scintillation counters with NaI(Tl) crystal (3 by 3'' and 1.5 by 1.5'', respectively).

Card 1/5

Absolute measurement of the ...

The front side of the one counter was 6 cm, that of the other 4.5 to 24 cm distant from the center of the target. The target was bombarded by 170-kev protons perpendicular to the connecting line of the two counters. Fig. 1 shows the block diagram of the electronic measuring arrangement. The discriminator I was used as an integrating stage. Pulses with amplitudes exceeding 7 Mev were detected in the measurement of the 12-Mev group. The discriminator II was adjusted to the maximum of the amplitude distribution of 4.43 Mev. The delay circuit was empirically adjusted to the maximum coincidence number. The signals from the individual counters were led to a 100-channel analyzer (A I 100-1) with ferrite storage system. At first, two measurements were made in which the counter with the large crystal was 4.5 and 24 cm from the target. The results had to be corrected, since about ± 10% of the 11.7-Mev radiation was also covered in counter II, and some 3% of the 16.1-Mev radiation in counter I. Random coincidences had to be considered, too. The corrected results read as follows (n in pulses/sec, K = coincidence). 4.5 cm distance : $n_I = 2550 \pm 8$, $n_{II} = 338 \pm 18$, $n_K = 7.37 \pm 0.15$. 24 cm distance : n_I 244 ± 11,

Absolute measurement of the ...

$n_{II} = 305 \pm 16$, $n_K = 0.67 \pm 0.027$. According to the anisotropy of the angular correlation of the observed γ-radiation of the 4-Mev and the 12-Mev group, respectively, one finds: $n_I = \omega_I \eta_{I,12} n_o w(\theta_1)$; $n_{II} = \omega_{II} \eta_{II,4} n_o w(\theta_2)$; $n_K = \omega_I \omega_{II} \eta_{I,12} \eta_{II,4} w(\theta_1, \theta_2, \phi)$. ($\omega$ = solid angle of the counter, referred to the radiation source and divided by 4π; η = efficiency; n_o = number of cascade processes/sec; θ_1, θ_2 = polar angles of the two radiations (both 90°); ϕ = angle formed in the horizontal plane by these radiations (180°); $w(\theta_1)$, $w(\theta_2)$, and $w(90°, 90°, \phi)$ were taken from publications. The authors obtained the following results. Distance 4.5 cm: $\omega_I \eta_{I,12} = (1.98 \pm 0.11).10^{-2}$, $\omega_{II} \eta_{II,4} = (2.71 \pm 0.13).10^{-3}$. Distance 24 cm: $\omega_I \eta_{I,12} = (1.98 \pm 0.12).10^{-3}$, $\omega_{II} \eta_{II,4} = (2.55 \pm 0.13).10^{-3}$. The following also holds: $\omega\eta = \frac{1}{2}\int_0^{\alpha_2} \left(1 - e^{-\mu x(\alpha)}\right) \sin\alpha \, d\alpha$. μ denotes the

Card 3/5

Absolute measurement of the ...

absorption coefficient of the NaI crystal for a radiation of given energy, $\alpha_2 = \arctan \frac{r}{t}$, r = radius of the NaI crystal, t = distance between its front plate and the radiation source, $K(\alpha) = t \sec\alpha$ for $0 \leq \alpha \leq \alpha_1 = \arctan \frac{r}{h+t}$, $K(\alpha) = r \operatorname{cosec}\alpha - h \sec\alpha$ for $\alpha_1 < \alpha < \alpha_2$, h = height of the NaI crystal. Fig. 4 shows the curve for 11.7-Mev γ-quanta, obtained by graphical integration of this equation, which agrees within ± 10% with the values obtained at various distances of the counter with the large crystal from the radiation source. There are 4 figures, 2 tables, and 9 references: 1 Soviet-bloc and 8 non-Soviet-bloc. The four most recent references to English-language publications read as follows: Ref.2: T. Nakamura, K. Futumaga, K. Takamatsu and S. Yasumi, Mem. Coll. Sci. Kyoto Univ. 29, 141 (1959); Ref.4: J. L. Putman, Measurement of Disintegration Rate, in K. Siegbahn, Beta and Gamma Ray Spectroscopy, North-Holland Publishing Company, Amsterdam, 1955, 832 pages; Ref.5: F. Ajzenberg-Selove and T. Lauritsen, Nucl. Phys. 11, 1(1959); Ref.9: P. J. Grant, F. C. Flack, J. G. Rutherglen and W. M. Deuchars, Proc. Phys. Soc. A 67, 751(1954).

Card 4/5

26752
G/016/61/009/004/001/001
B120/B108

Absolute measurement of the...

ASSOCIATION: Zentralforschungsinstitut für Physik, Budapest (Central Research Institute of Physics, Budapest)

SUBMITTED: January 24, 1961

Legend to Fig.1: (1) amplifier; (2) discriminator; (3) coincidence; (4) delay circuit; (5) counter; (6) multichannel analyzer; (7) amplifier; (8) delay line.

Card 5/5

BERKES, Istvan; KESZTHELYI, Lajos

Measuring the durability of atomic nuclei. Fiz szemle 10 no.9: 262-268 S '61.

1. Kozponti Fizikai Kutato Intezet, Budapest 2. "Fizikai Szemle" szerkeszto bizottsagi tagja (for Keszthelyi).

35398

H/016/62/000/003/001/003
D249/D301

24,6600 (1057,1482)

AUTHOR: Berkes, István

TITLE: Investigating the structure of atomic nuclei by the scattering of high energy electrons

PERIODICAL: Fizikai szemle, no. 3, 1962, 69-74

TEXT: Research concerning atomic nuclei was based only on the study of nuclear interactions till 1950. These investigations resulted in a well-known relation between the radius and mass, suggesting that protons and neutrons are uniformly mixed in the nuclei. R. Hofstadter and co-workers pioneered the study of the structure of nuclei by investigating the scattering of high energy electron beams. The experimental technique and results of Hofstadter are reviewed. At first the theory of electron scattering is discussed. According to the considerations of classical mechanics the angle of scattering is proportional to the distance between the electron and the nucleus. If the distance is large the field of the electron cloud surrounding the nucleus screens its field and the incident beam

Card 1/4

Investigating the structure of ... H/016/62/000/003/001/003
D249/D301

of electrons is scattered only by a weaker field. The electrons scattered at small angles indicate the change of potential along their path and the distribution of density of the electron cloud. If the incident electron beam passes close to the nucleus, the potential inside the nucleus does not tend to infinity as in an ideal Coulomb field but decreases. Consequently the angle of scattering decreases which was noted in the early experiments. In a quantum mechanical treatment the differential cross section of the effect can be computed from Dirac's equation. Applying the Born approximation, an explicit relation can be obtained between the differential cross section of the elastic scattering and the potential causing the scattering or the charge distribution originating the potential. Two shortcomings of the application of the Born approximation are pointed out: 1) No scattering occurs at certain angles; 2) the Born approximation attributes the same wavelength to the electrons inside the nucleus and outside. In heavy atoms the electronic wavelength decreases inside the nucleus. In case of energies of several hundred MeV and heavier nuclei the radii computed by this approximation are larger than in reality. Consequently numerical techniques are used for computations. Results of the measurements for the charge distribution in nuclei are discussed. As uniform basis of comparison the 'square mean radius' is defined as

Card 2/4

H/016/62/000/003/001/003
D249/D301

Investigating the structure of ...

Eq. 5 $\bar{r}_{nk} = \int_0^\infty r^2 \varrho(r) 4\pi r^2 dr$, r being the radius, p - distribution of charge. Dimensionless coordinate $y = r/r_{nk}$ is introduced and the p(y) charge distributions are discussed. Analytical expressions are given for the following charge distributions: 1) Square, 2) Gaussian, 3) modified Gaussian, 4) exponential, 5) modified exponential, 6) Fermi distribution. With the application of these charge distributions $\sigma(\Theta)$ can be computed where Θ is the angle of scattering. This can be compared with the results of the measurements. In evaluating high energy scattering experiments the charge distribution cannot be obtained by direct computation from the differential cross-section. The numerical results of Hofstadter are reviewed and tabulated. The differential cross-section is computed for scattering by protons. Finally the inelastic scattering of electron beams is reviewed. The application of a magnetic analyzer made it possible to study the energy spectra of the scattered electrons. If inelasticity scattered electrons cause nucleon emission, they will have a somewhat diffuse energy spectrum. The width of the latter depends on the distribution of impulse of the nucleons inside the nucleus. The theoretical

Card 3/4

Investigating the structure of ... H/016/62/000/003/001/003
D249/D301

interpretation of the investigations reviewed above is based on the theory of fields. The problem could arise that in case of very small distances (approximately 10^{-13} cm) the laws of quantum electrodynamics are not applicable any more. There are 7 figures, 2 tables and 5 references: 1 Soviet-bloc and 4 non-Soviet-bloc. The 4 most recent references to the English-language publications read as follows: Lyman, Hansen, Scott, Phys. Rev.. 84,626 (1951); R. Hofstadter, Rev. Mod. Phys. 28,214 (1956); R. Hofstadter, F. Bumiller, MR. Yearian, Rev.Mod.Phys. 30,482 (1958); I. Berkes, I. Demeter, Nucl.Phys., 15, 421, (1960).

ASSOCIATION: Központi fizikai kutató intézet (Central Institute of Research in Physics)

Card 4/4

BERKES, Istvan

Structural investigation of atomic nuclei by scattering high-power electrons. Term tud kozl 6 no.8:346-349 Ag '62.

1. Kozponti Fizikai Kutato Intezet, Budapest.

BERKES, Istvan

Election irradiation from the point of view of physics. Energia es atom 15 no.6:254-258, 280 Je '62.

1. Kozponti Fizikai Kutato Intezet.

ALMASI, Lajos; SANDOR, Laszlo; KESZTHELYI, Lajos, tudomanyos munkatars; BERKES, Istvan, tudomanyos munkatars; FODOR, Ilona, tudomanyos munkatars. Koz fiz kozl MTA 12 no.4:299-312 '64.

1. Central Research Institute of Physics, Hungarian Academy of Sciences, Budapest.

BERKES, IVAN

(3)

Electrophoresis on paper. I. Influence of the conductivity of the buffer on the degree of separation of the components of a mixture of proteins. Ivan Berkeš and Vinka Karas (Med. Fac., Zagreb, Yugoslavia). *Arhiv Kem.* 24, 73–82 (1952).—The influence of the cond. of the buffer on the mobility of colloid ions on filter paper (Whatman No. 1) has been studied for 4 buffers: Michaelis buffer, veronal-veronal-Na, Sörensen phosphate buffer, and a borate buffer of 12.4 g. H_3BO_3, 56 ml. *N* NaOH, and 150 ml. *M* NaCl. The sepn. of human serum albumin from γ-globulin is used as the basic measure of separability (16 hrs.). For comparison of the buffers this new concept, *the separability* U_R, is defined as $U_R = D/H \cdot h$, where D = distance travelled by the colloid, H = potential drop across the paper in v./cm., and h = time in hrs. The expts. were done at 23°, the paper was 4 × 45 cm. U_R rises if the cond. decreases but shows no obvious relation to the ionic strength. Thus, the suitability of buffers is not detd. by their ionic strength; both phosphate and borate buffers can be used in paper electrophoresis, if the conductivities are adjusted to a corresponding value. If an elec. current passes through a filter paper, the following will occur simultaneously: H_2O evaps. from the paper, the cathode and anode buffer vessel will be emptied by capillary syphoning, the electrophoresis of the colloid takes place, there is an ionophoresis of the cations and anions, and the cond. and current along the paper changes with the potential gradient which gives rise to the other phenomena. Werner Jacobson

BERKES, I.

"Electromigration on paper; electrophoresis and ionophoresis." p. 98. (KEMIJA U INDUSTRIJI, Vol. 2, no. 4, 1953, Zagreb.)

SO: Monthly List of East European Accessions, Vol. 2, #S, Library of Congress August, 1953, Uncl.

BERKES, I.

(D)

Paper electrophoresis of the blood serum and the proteins in urine as a method for differential diagnosis of nephrosis. V. Karas and I. Berkes. *Acta Pharm. Jugoslav.* 3, 103-5(1953)(English summary).—The electrophoresis of nephrotic serum is specific, especially when supported by the electrophoretic pattern of the urine.
V. Mihajlov

BERKES, Ivan

Chemical Abstracts
May 25, 1954
Biological Chemistry

(3)

Fibrinogen determinations by paper electrophoresis. Ivan Berkes and Vinka Karas (Univ. Zagreb, Jugoslavia). *Biochem. Z.* 324, 499–501(1953).—Fibrinogen appears as an independent component in the paper electrophoresis of plasma in phosphate buffer. S. Morgulis

BERKES, I.

BERKES, I.; BRISKI, B. "Parallel analysis of protamines from domestic Mugil and Pagrus species."
Kemija U Industriji, Zagreb, Vol 3, No 6, June 1954, p. 177

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

BERKES, I.

Examination of transudative and exudative liquids. V. Kaitas, T. Dević-Mikac, and I. Berkeš. *Farm. Glasnik* 10, 111–19(1954).—Two types of fluid effusion liquids could be established: the analogous and the selective types. In the former the distribution of protein fractions is analogous to that of the plasma electrophoretic pattern. The selective type shows a specific permeability of cell walls to some protein fractions especially to albumin, α_2- and γ-globulins. The Rivalta reaction was also investigated. The ppt. does not contain any proteins but consists of equimolar parts of glucosamine and glucuronic acid. 27 references.

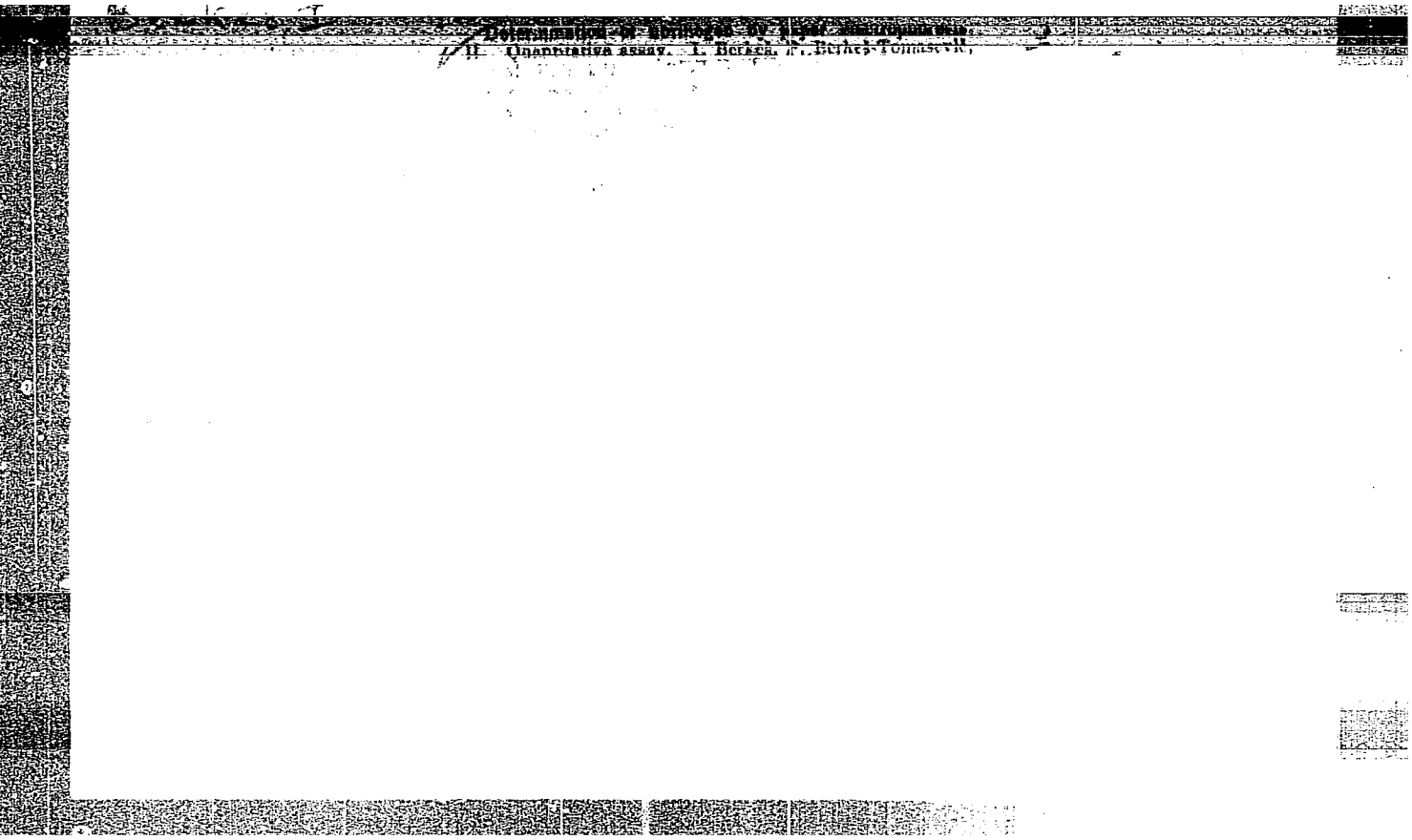
—V. Mihailov

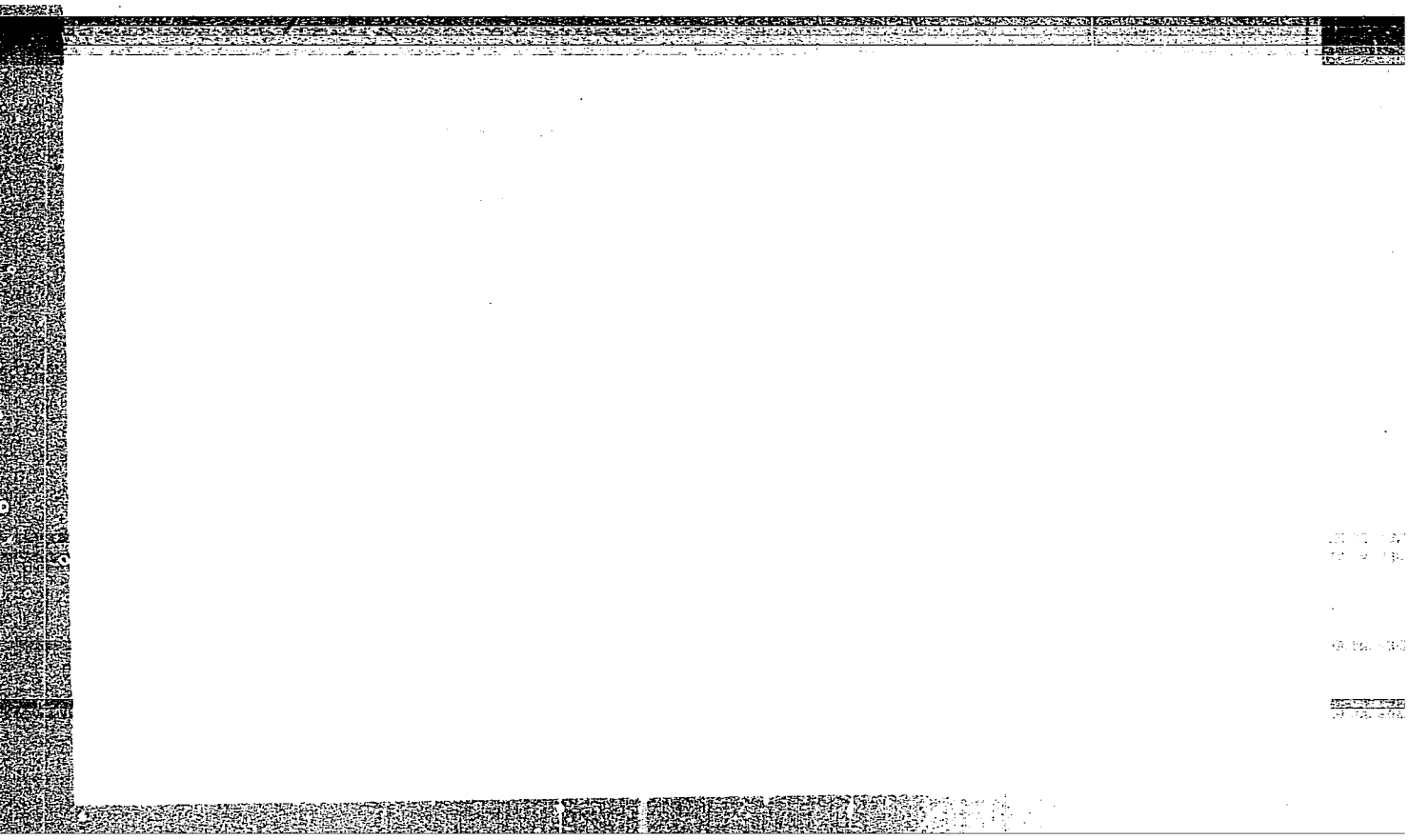
BERKES, I

Paper electrophoretic studies on the internal effusions, classified by the Rivalta reaction. I. Berkés, D. Devič-Mikac, and V. Karas (Univ. Zagreb). *Hoppe-Seyler's Z. physiol. Chem.*, 294, 142-8(1954).—Although all blood-plasma fractions appear in the paper electrophoretic pattern of exudates and transudates, a selective filtration of the globulin fractions with increased α_1 and diminished γ is evident. The Rivalta reaction ppts. a mucopolysaccharide, presumably hyaluronic acid. Among the sepd. fractions only that moving with the albumin and a smaller amt. between the α_2- and α_1-globulin give a pos. Rivalta reaction. In the hydrolyzate of Rivalta-pptd. material hexosamine and glucuronic acid are found in equimol. amts. B. K.

MD

(2)





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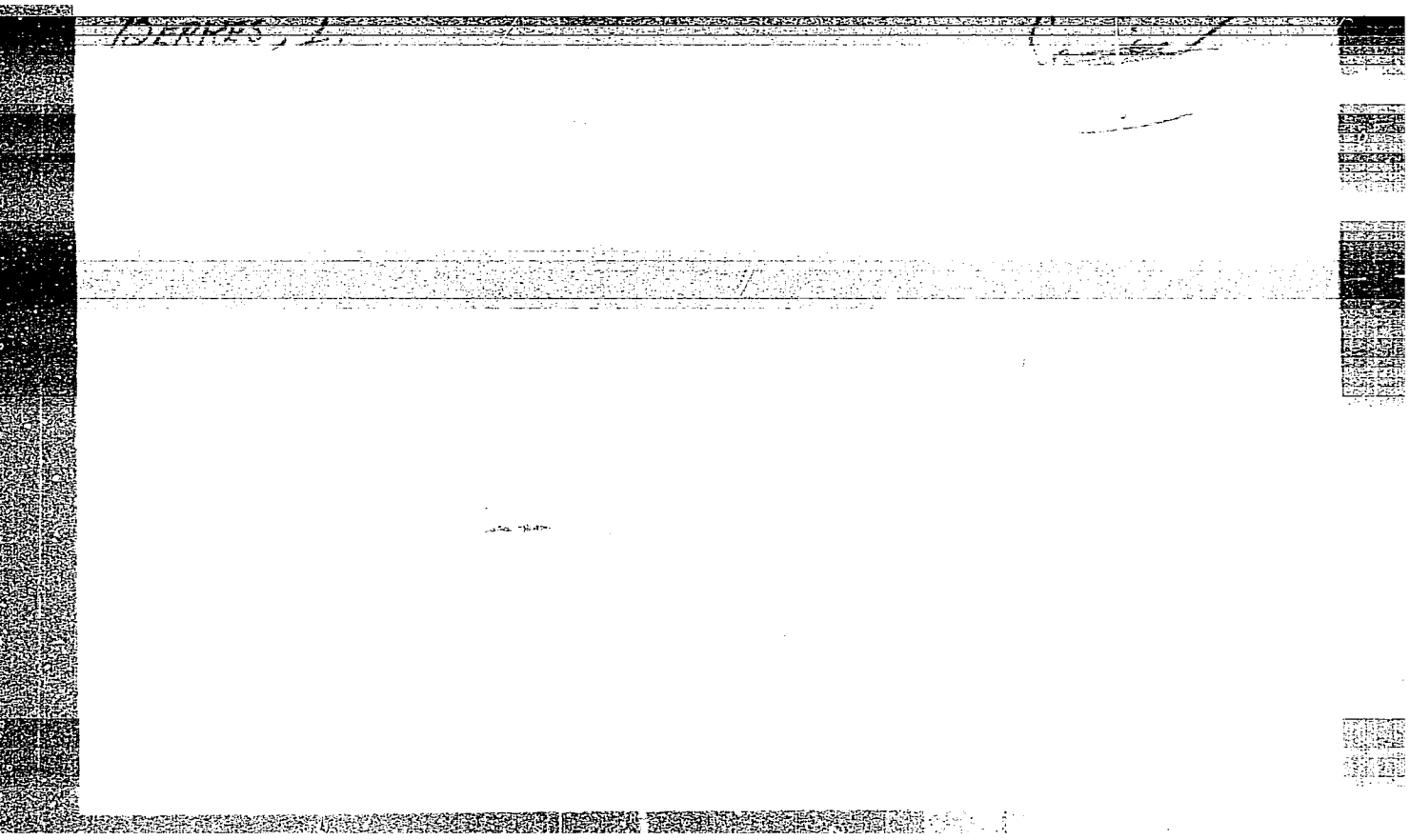

DUKIC-TADIC, Mirjana; BERKES, Ivan; POLJAKOVIC, Ljubica; PETRONIJEVIC, Aleksandar

Histamine and pregnandiol excretion in normal and complicated pregnancy with special reference to puerperium. Srpski arh. celok. lek. 92 no.12:1183-1189 D '64.

1. Ginekolosko-akuserska klinika Medicinskog fakulteta Univerziteta u Beogradu (Upravnik: prof. dr. Bosiljka Milosevic) i Biohemijski institut Farmaceutskog fakulteta Univerziteta u Beogradu (Upravnik: prof. dr. Ivan Berkes).

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SO: Letopis' Zhurna.'nykh Statey, Vol. 47, 1948

VYLTSAN, Mikhail Avgustovich; BERKHIN, I.B., doktor istor.nauk, otv.red.; DANILOV, V.P., red.izd-va; ASTAF'YEVA, G.A., tekhn.red.

[Consolidating the material and technological base of the collective farm system in the second five-year plan, 1933-1937] Ukreplenie material'no-tekhnicheskoi bazy kokhoznogo stroia vo vtoroi piatiletke, 1933-1937 gg. Moskva, Izd-vo Akad.nauk SSSR, 1959. 142 p. (MIRA 13:1)

(Collective farms)

BERKHIN, Il'ya Borisovich; KIM, M.P., otv.red.; VYSOTSKAYA, V.B., red.izd-va; KASHINA, P.S., tekhn.red.

[Lenin's program for the building of socialism] Leninskii plan postroeniia sotsializma. Moskva, Izd-vo Akad.nauk SSSR, 1960. 126 p. (MIRA 13:4)

(Lenin, Vladimir Il'ich, 1870-1924)
(Russia--Economic policy)

KOLDOBSKIY, A.G.; MEDVEDEV, S.I.; PISKOPPEL', F.G.; YAKOBSON, M.G. Prinimali uchastiye: BERKHIN, I.B.; OSLIKOVSKAYA, Ye.S.; PEREKISLOVA, A.M.; LITVIN, V.M.; PARKHOMENKO, Ye.V.; STOTIK, A.M.; SHAPIRO, T.I.; STRUMILIN, S.G., akad., glav. red.; ALEKSENKO, G.V., red.; ANISIMOV, N.I., red.; VOLODARSKIY, L.M., red.; GERSHBERG, S.R., redaktor; red.; PETROV, A.I., red.; POSVYANSKIY, S.S., red.; BAZAROVA, G.V., kand. ekonom. nauk, starshiy nauchnyy red.; KISEL'MAN, S.M., starshiy nauchnyy red.; LIVANSKAYA, F.V., kand. ekonom. nauk, starshiy nauchnyy red.; GLAGOLEV, V.S., nauchnyy red.; NEDBAYEV, V.I., nauchnyy red.; TUMANOVA, N.L., nauchnyy red.; TOVMASYAN, M.E., red.; BLAGODARSKAYA, Ye.V., mladshiy red.; SHUSTROVA, V.M., mladshiy red.; ZENTSEL'SKAYA, Ch.A., tekhn. red.

[The economic life of the U.S.S.R.; chronicle of events and facts, 1917-1959] Ekonomicheskaia zhizn' SSSR; khronika sobytii i faktov 1917-1959. Glav. red. S.G.Strumilin. Chleny red. kollegii: Aleksenko i dr. Moskva, Gos. nauchn.izd-vo "Sovetskaia entsiklopediia," 1961. 779 p. (MIRA 14:10)

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(Russia--Economic conditions)

KHAKUASHEV, Yevgeniy Tikovich; BERKHIN, I.B., red.

[Kabardino-Balkaria in the years of the reconstruction of the Soviet national economy, 1921-1925] Kabardino-Balkariia v gody vostanovleniia narodnogo khoziaistva SSSR, 1921-1925 gg. Nal'chik, Kabardino-Balkarskoe knizhnoe izd-vo, 1962. 135 p. (MIRA 16:12)
(Kabardino-Balkar A.S.S.R.--Economic conditions)

BERKES, L.

"Electromigration on paper; electrophoresis and ionophoresis." (To be contd.) p. 62. (KEMIJA U INDUSTRIJI, Vol. 2, no. 3, 1953, Zagreb.)

SO: Monthly List of East European Accessions, Vol. 2, #8, Library of Congress August, 1953, Uncl.

BERKES, L.

"Problems of Quality of Sawmill Products", P. 88, (FAIPAR, Vol. 4, No. 3, Mar. 1954, Budapest, Hungary)

SO: Monthly List of East European Accessions, (EEAL),LC, Vol. 3, No. 12, Dec. 1954, Uncl.

BERKES, Laszlo; VOSZKA, Rudolf

Effect of heat treatment on the quality of the NaI(Tl) scintillators. Magy fiz folyoir 12 no.1:59-61 '64.

1. Institute of Medical Physics, Budapest.

TARJAN, Imre; VOSZKA, Rudolf; BERKES, Laszlo

The effect of decoloration of natrium chloride crystals roentgenized for photoconductivity. Magy fiz folyoir 8 no.6:519-524 '60.
(EEAI 10:5)

1. Orvosi Fizikai Intezet, Budapest.
(Salt) (X rays) (Photoconductivity)

BERKES, Laszlo, okl.mernok

Short history of the reconstruction of the Danube Bridge at Dunafoldvar. Melyepitestud szemle 12 no.4:152-164 Ap '62.

1. Konnyuipari Tervezo Iroda osztalyvezetoje.

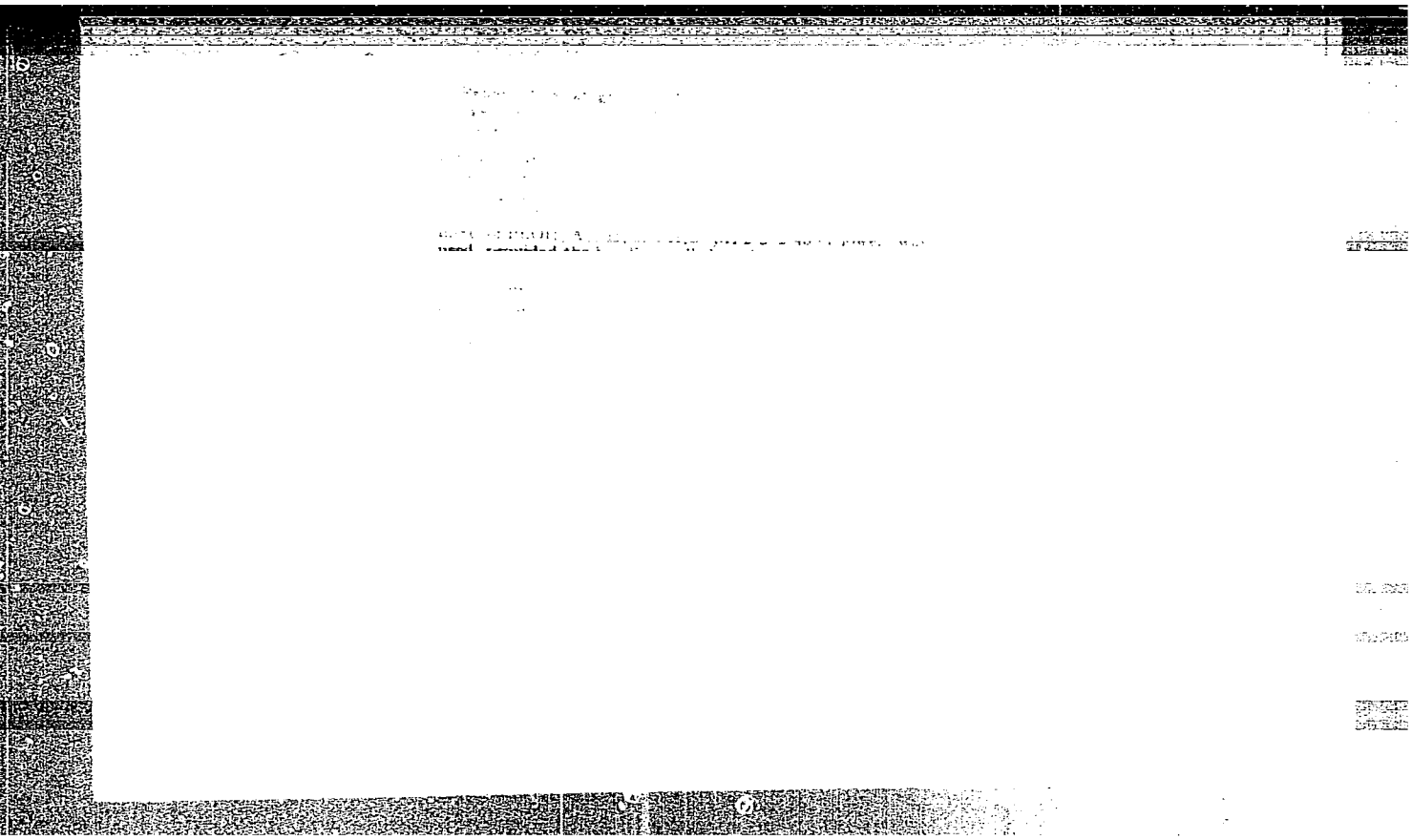
HERRMANN, K., Dr. (Köln); BERKES, Milan, mr ph. [translator]

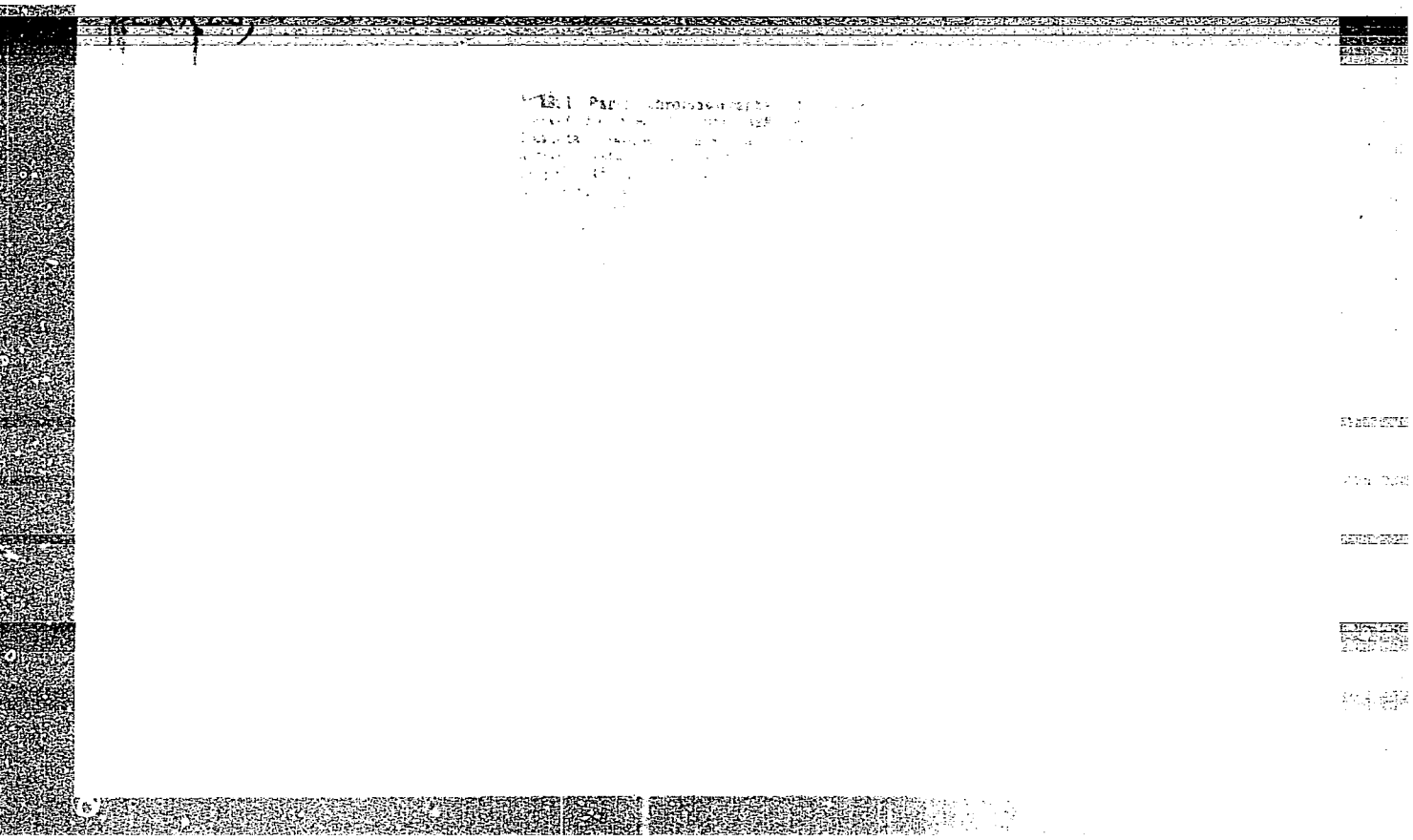
Phenolic constituent elements in tobacco. Kem ind 12 no.1: 15-17 Ja '63.

BERKES, P.; STRAUS, B.; FISER, M.

Determination of normal blood protein levels with paper electrophoresis. Acta med. iugosl. 9 no.2-3:206-212 1955.

1. Zavod za klinicku kemiju Farmaceutskog fakulteta Sveucilista u Zagrebu.
(BLOOD PROTEINS, determ.
electrophoresis, filter paper technic. (Ser))





BERKES, S.

(2)

Examination of the content of a cyst. M. Fiser-Herman and S. Berkes. *Acta Pharm. Jugoslav.* 3, 119–29(1953) (German summary).—The content of an ovarian and peritoneal pseudomyxoma was exami. for its chem. compn. and homogeneity. The material contained 9% of dry matter, ⅓ of which could be pptd. with AcOH. The ppt. possessed characteristics of a mucoprotein but could not be classified as a pseudomucin according to Hammarsten. The ppt. existed in the cyst in the form of an acid salt. Electrophoresis showed that the mucoprotein was not homogeneous but contained at least 2 components. The nonpptd. part possessed the characteristics of a carbohydrate. 19 references. V. Mihailov

BERKES-TOMASEVIC, P.; MATVEJEVA, L.

Biochemical changes in alcoholism. Acta med. iugosl. 15 no.2: 208-213 '61.

(ALCOHOLISM blood)

YUGOSLAVIA

P. BERKES-TOMASEVIC, J. ROSIC and M. IGNJATOVIC, Department of Chemistry of Veterinary Faculty (Hemijski institut Veterinarskog fakulteta) and Department of Biochemistry of the Faculty of Pharmacy (Biohemijski Institut Farmaceutskog fakulteta) , Belgrade.

"Quantitative Starch Gel Electrophoresis."

Belgrade, Arhiv za Farmaciju, Vol 13, No 1, 1963; pp 9-17.

Abstract [English summary modified]: Description of method using domestic starch requiring 3 - 4 hours' hydrolysis; thin layer permits both quantitation by densitometry as for paper electrophoresis and storage for record; 100 pathologic human sera were so studied with excellent results. Diagram of apparatus, 6 electrophoresis patterns and 4 curves; 20 Western references.

APPROVED FOR RELEASE: 06/08/2000 CIA-RDP86-00513R000204920012-1"

YUGOSLAVIA

Persida BERKES-TOMASEVIC and Vera TERZIC, Department of Chemistry of Veterinary Faculty of University (Hemijski institut Veterinarskog fakulteta Univerziteta) Head Docent Dr Eng Persida BERKES-TOMASEVIC, Belgrade.

"Standardization of Hemoglobinometry."

Belgrade, Srpski Arhiv za Celokupno Lekarstvo, Vol 91, No 2, Feb 63; pp 149-156.

Abstract [English summary modified]: Authors worked up the cyanmethemoglobin method and determined its suitability on 52 blood specimens. Precise technical details of method are given as recommended for standard adoption in Yugoslavia. Formulae, table, graph; 35 Western references.

1/1

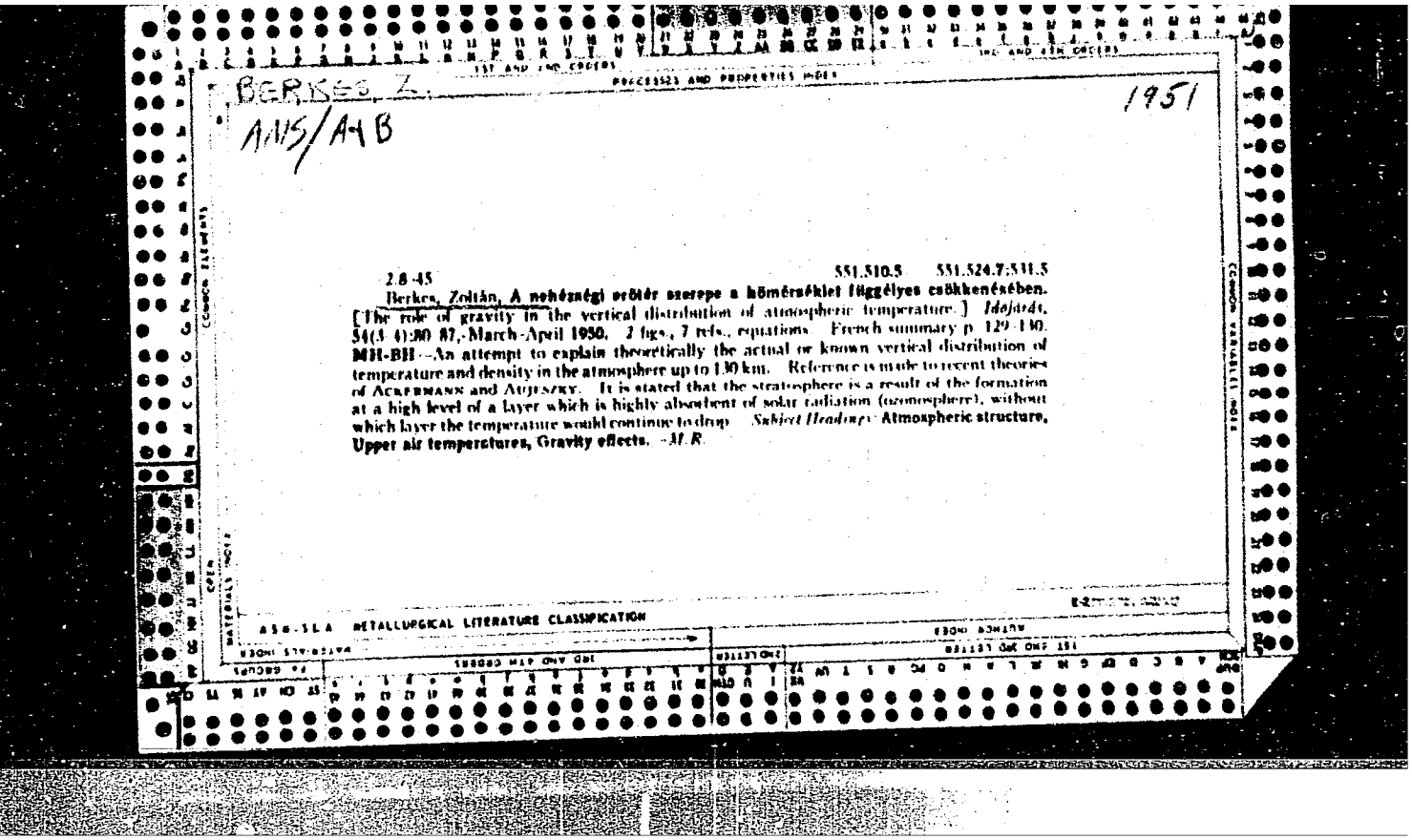
BERKES, Z.

3
(2) Geo

Meteorological Abst.
Vol. 4 No. 10
Oct. 1953
Part 2
Bibliography on
Auroras

551.594.5(439.1)

4J-120 Berkes, Zoltan and Florian, Endre, Sarkifeny Magyarorszagon 1938, januar 25-26-an. [Aurora in Hungary on Jan. 25-26, 1938.] Idojaras, 42 (5/6): 117-123, May 1938. 4 figs., 4 refs. German summary p. 145. DLC--This contribution to the rich observational material available for the intense auroral activity of Jan. 25-26, 1938 comes from a country where auroras are rarely seen. In a summary, based on some 200 individual eye-witness reports, drawings and photographs, the general development of the phenomenon is described. From 8:14 p.m. Jan. 25 to 3:30 a.m. Jan. 26 a total of 7 displays were observed, two of them with a luminosity unprecedented in Hungary since 1870. The location of the aurora is put between 50 and 55°N lat at a height of 200-300 km. Accompanying magnetic disturbances, radio propagation anomalies and static are mentioned. Earlier observations of auroras in Hungary are listed. Auroral theory is reviewed briefly. Subject Headings: 1. Aurora of Jan. 25-26, 1938 2. Low latitude auroras 3. Hungary.--C.T.



BERKES, Z.

ANS/A-4B

1951

2.8-45 551.510.5 551.524.7:551.5

Berkes, Zoltán, **A nehézségi erőtér szerepe a hőmérséklet függélyes csökkenésében.** [The role of gravity in the vertical distribution of atmospheric temperature.] *Időjárás*, 54(3-4):80-87,-March-April 1950. 2 figs., 7 refs., equations. French summary p 129-130.

MH-BH—An attempt to explain theoretically the actual or known vertical distribution of temperature and density in the atmosphere up to 130 km. Reference is made to recent theories of ACKERMANN and ATJEZKY. It is stated that the stratosphere is a result of the formation at a high level of a layer which is highly absorbent of solar radiation (ozonosphere), without which layer the temperature would continue to drop. *Subject Headings:* **Atmospheric structure, Upper air temperatures, Gravity effects.** —*M.R.*

A56-5LA METALLURGICAL LITERATURE CLASSIFICATION

BERKES, ZOLTAN

551.590.21 523.74

5.6-272

Berkes, Zoltán, A napfoltok és az időjárás [illegible] *Természet és Technika*, Budapest, 111(7):444-445, July 1952. DLC [illegible]

spring of 1952 is interpreted as a function of [illegible]

[illegible] place [illegible] with [illegible]

brought warm air [illegible]

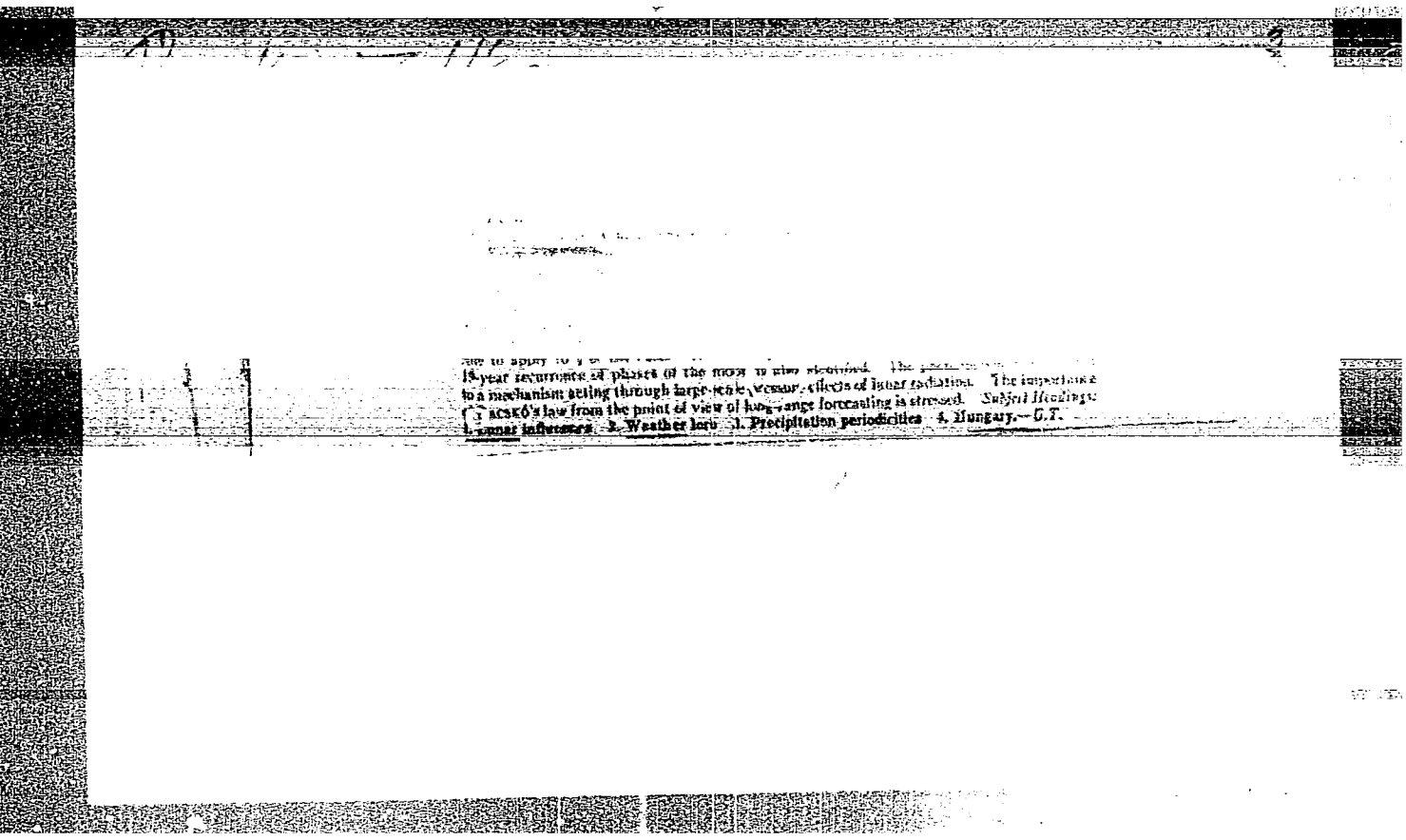
explains [illegible]

[illegible]

atmosphere [illegible]

among other factors [illegible]

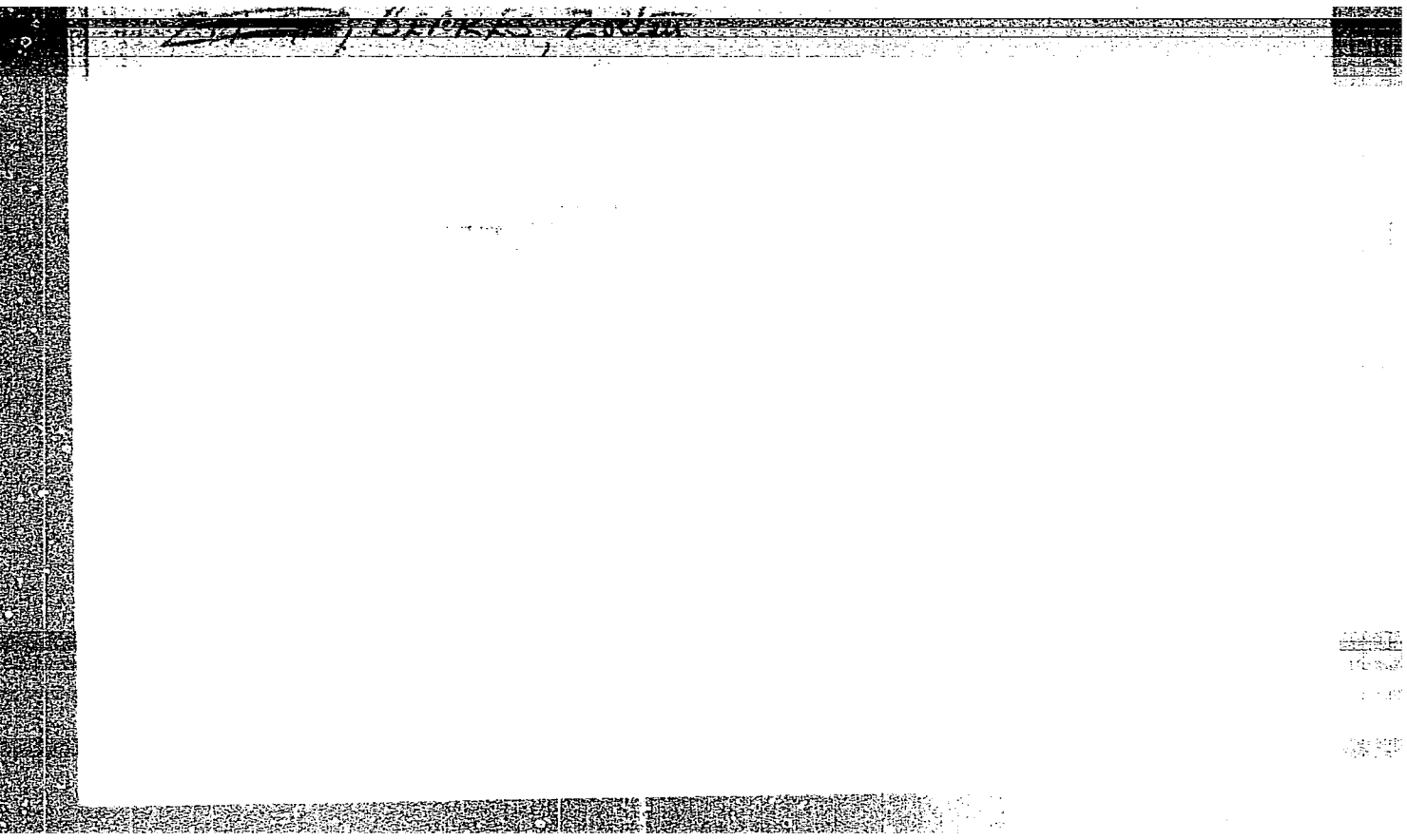
weather.--G.T.

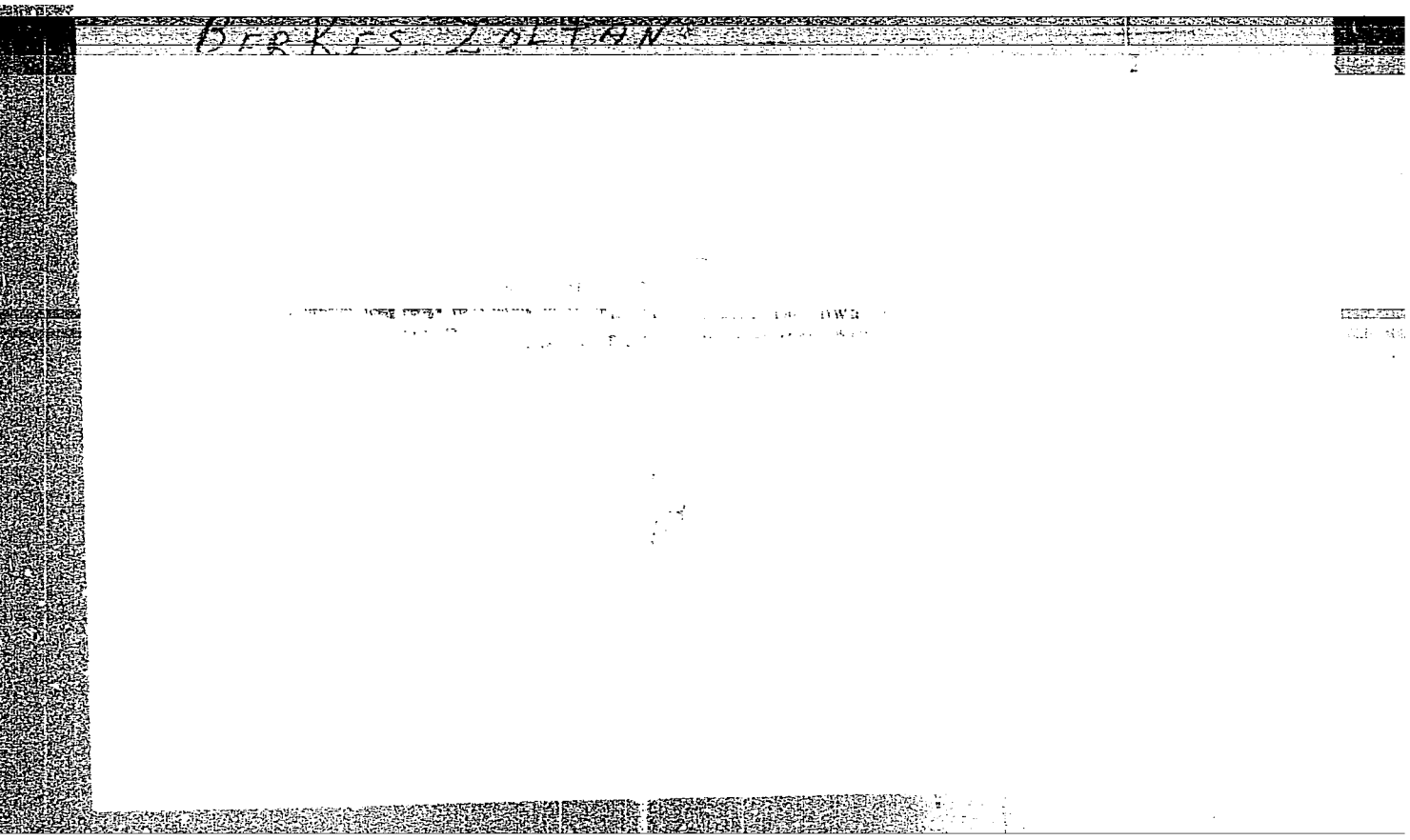


[illegible] BERKES, Z.

[illegible]

[illegible] Távidőjárás kutatásának kérdése [illegible]
[illegible] 181-182, May-June 1954. MH-B/l [illegible]
[illegible] in Hungary has been improved recently [illegible] present [illegible]
[illegible] forecasts and 58% for half month anomaly forecasts [illegible]
[illegible] forecasting method [illegible]
[illegible] mechanism of the [illegible]
[illegible] movements of cyclone [illegible]
[illegible] the author finds that [illegible] solar corpuscular radiation [illegible]
[illegible] triggered [illegible] solar corpuscular radiation [illegible]
[illegible] connected with changes in the [illegible] should be the primary [illegible]
[illegible] weather changes its accurate prediction should be the primary [illegible] correlation existing [illegible]
[illegible] range weather forecasters. The author also mentions the correlation existing between [illegible] to solar corpuscular radiation [illegible]
[illegible] the moon and cyclone activity, and attributes it to solar corpuscular radiation [illegible] 2. Solar influences
[illegible] the moon. *Subject Headings:* 1. Long range forecasting 2. Solar influences
[illegible] influences [illegible] Hungary.—G.T.





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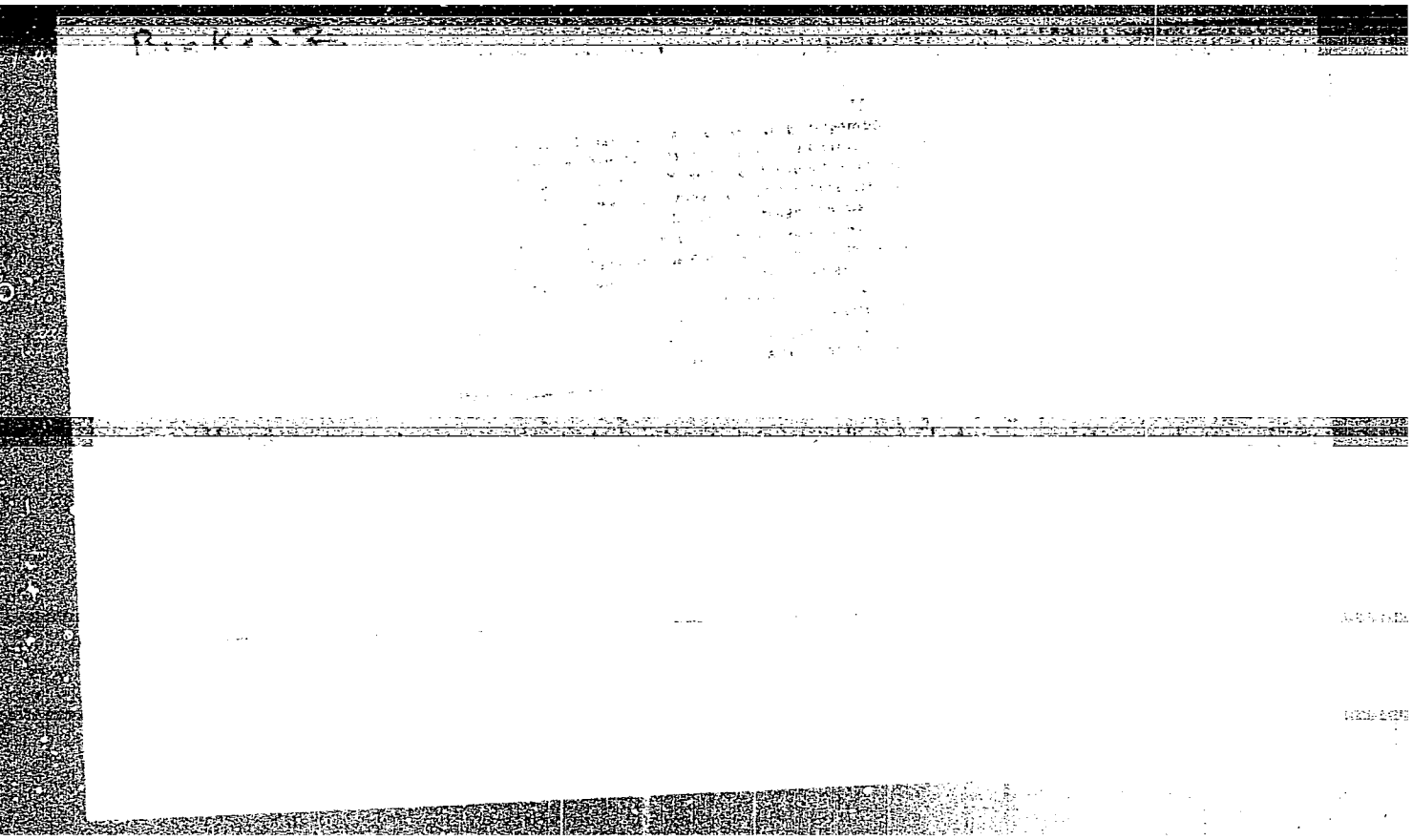

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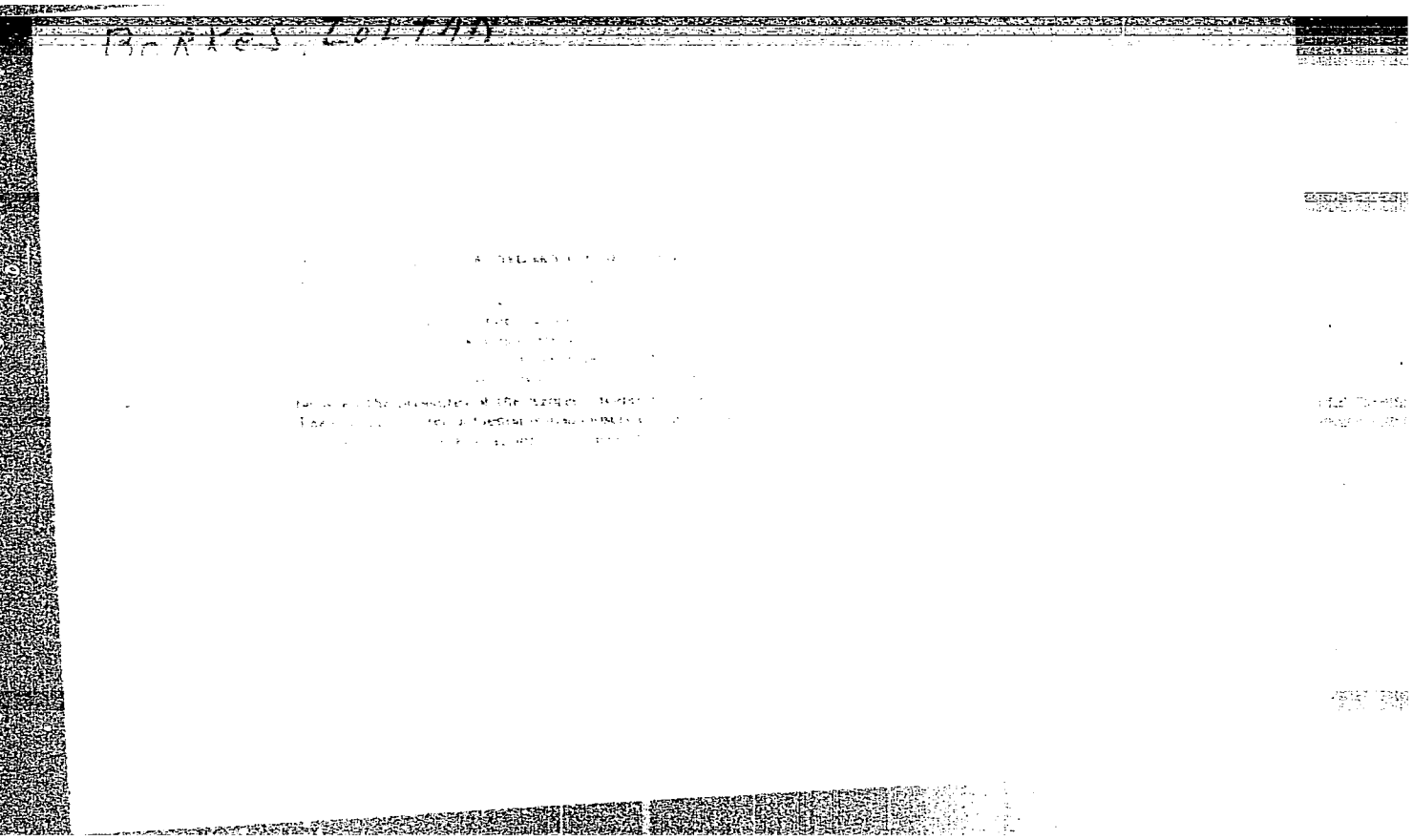

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