BYCHKOVSKIY, A.V., kand.tekhn.nauk

"Is it profitable to use weakened field conditions on electric sections?" Elek.i tepl.tiaga 4 no.4:18-19 '60. (MIRA 13:6)
(Electric railway motors)

BYCHKOVSKIY, A.V., kand.tekhn.nauk

Reducing electric power consumption for train traction.
Vest.TSNII MPS 19 no.4:3-6 '60. (MIRA 13:7)
(Electric railroads--Current supply)

PODOL'SKIY, Leonid Romanovich; CHOLOVSKIY, Nikolay Ivanovich; FOMIN, Yuriy Aleksandrovich; BYCHKOVSKIY, A.V., kand. tekhn. nauk, red.; KHITROVA, N.A., tekhn. red.

[Electric meters for registering the consumption of electric power by electrified rolling stock]Schetchiki elektricheskoi energii elektropodvizhnogo sostava. Moskva, Transzheldorizdat, 1962. 115 p. (MIRA 15:10)
(Electric railroads—Current supply) (Electric meters)

YURCHENKO, I.F.; OKUNEV, P.F., starshiy mekhanik; TOLKACHEV, V.P., inzh.; BYCHKOVSKIY, A.V., kand.tekhn.nauk; GORBATYUK, V.A., inzh.; LAGUN, Ya.I., starshiy inzh.; SHALIMOV, V.S., inzh.; DANILOV, V.I., inzh.

Replies to the inquiries of our readers. Elek. i tepl. tiaga 5 no.6:41-43 Je '61. (MIRA 14:10)

1. Nachal'nik Upravleniya truda, zarabotnoy platy i tekhniki bezopasnosti Ministerstva putey soobshcheniya (for Yurchenko). 2. Otdeleniye avtotormoznogo khozyaystva Vsesoyuznogo nauchno-issledovatel'skogo instituta zheleznodorozhnogo transporta Ministerstva putey soobshcheniya (for Okunev). 3. Otdel glavnogo tekhnologa Perovskogo zavoda po remonty elektropodvizhnogo sostava (for Lagun).

(Diesel locomotives)
(Railroads--Rolling stock)

BYCHKOVSKIY, A.V., kand.tekhn.nauk; MIKHNENKO, Ye.F., kand.tekhn.nauk; BESPALOV, I.P., inzh.

Basic results of the traction and power testing of series ChS2(3ΔE) electric locomotives for passenger trains. Vest. TSNII MPS 22 no.8: 3-8 '63. (MIRA 17:2)

BOVE, Yevgeniy Genrikhovich; BORISOV, Nikolay Sergeyevich; VOLKOV, Georgiy Nikolayevich; CHUVERIN, Yuriy Ivanovich; BYCHKOVSKIY, A.V., red.

[Electric devices for preventing slippage of VL22^{M}, VL23, and ChS electric locomotives] Elektricheskie protivobuksovochnye ustroistva elektrovozov VL22^{M}, VL23 i ChS. [By] E.G.Bove i dr. Moskva, Izd-vo "Transport," 1964. 78 p. (MIRA 17:6)

1. Moscow. Vsesoyuznyy nauchno-issledovatel'skiy institut zheleznodorozhnogo transporta. 2. Starshiye nauchnyye sotrudniki Vsesoyuznogo nauchno-issledovatel'skogo instituta zheleznodorozhnogo transporta (for all except Bychkovskiy).

BYCHKOVSKIY, A.V., kand. tekhn. nauk; MIKHNENKO, Ye.F., kand. tekhn. nauk; BESPALOV, I.P., inzh.

Measuring wheel pressure on the rail during the movement of electric locomotives. Vest. TSNII MPS 23 no.6:13-16 '64. (MIRA 17:10)

1. BYCHKOVSKIY, B.
2. USSR (600)
4. Coal Mines and Mining
7. Forty-five meters of completed shaft in one month. Mast. ugl. 1 no. 7, 1952

9. Monthly List of Russian Accessions, Library of Congress, January 1953. Unclassified.

BYCHKOVSKIY, K. P.

"Determination of the Inclination Angle of Aerial Pictures and of the Airplane From Readings of the Statoscope"

Sbornik Statey po Geodezii, No 4, 1953, pp 37-42

W-31098, 26 Nov 54

BYCHKOVSKIY, K.P., kandidat tekhnicheskikh nauk.

Computation of a baric relief by means of barometric readings.
Trudy TSNIIGAIK no.105:65-78 '55. (MLRA 9:6)
(Barometric hypsometry)

BYCHKOVSKIY, K.P., kandidat tekhnicheskikh nauk.

Relation of pressure to the diameter of the tube section connecting the statoscope to the air pressure receiver. Trudy TSNIIGAIK no.105:79-87 '55. (MLRA 9:6)
(Barometer)

BYCHKOVSKIY, K.P., kandidat tekhnicheskikh nauk.

Aneroid aerial photography altitude recorder. Geod. i kart. no.4: 28-36 Ap '57. (MLRA 10:8)

(Altimeter)

BYCHKOVSKIY, K.P., kandidat tekhnicheskikh nauk.

Narrow film comparator. Geod. i kart. no.1:21-24 Ja '57.
(MLRA 10:3)
(Aerial photogrammetry)

SOV/115-59-5-10/27

24(8)

AUTHOR: Bychkovskiy, K.P.

TITLE: Adjustment for Precision Testing of Aneroid Systems

PERIODICAL: Izmeritel'naya Tekhnika, 1959, Nr 5, pp 15-17 (USSR)

ABSTRACT: The usual methods to control the performance of aneroid barometers are described. Up to now, an accuracy of 0.05% relative to the atmospheric pressure was attained. Recently, instruments were developed which work with an accuracy of 0.003%, but it is very difficult to reach such a degree of accuracy. To attain accuracy in the different stages of the atmosphere pressure it is necessary that not only the aneroid system but the whole sensitive joint supplies the demanded accuracy. The following system was developed for this purpose: it consists of a miniature thermo-barometer bulb with a collimator to observe the examined joint; of a device with an optical collimator and an installation for thermal compensation, to which the aneroids are adjusted, which are to be examined; and of a manometer system and the electrical charging. The accuracy reached by this method amounts to tenths of a milli-

Adjustment for Precision Testing of Aneroid Systems

meter WS, which is proportionate to parts of meters on the surface of the earth. Fig.1 shows the optical device of the system. The instrument can be placed anywhere within the effective cross section, which means in this case that it could be somewhere near the object-glass diameter and the direction angle. Fig.2 explains what is said above. Fig.3 shows the manometer system of the set-up and the electrical charging. Fig.4 shows the method of the aneroid block for a range of ±50 mm Ws with an original pressure of 1000 m. The difference between the calculated and the measured angle did not surpass 0.15%. The average, squared error of the coefficient of the sensitive joint amounted to ±0.02 s/m. There are 3 diagrams and 2 graphs.

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23.5000 1138

S/154/60/000/003/007/008/XX
B012/B054

AUTHOR: Bychkovskiy, K. P., Candidate of Technical Sciences

TITLE: Estimation of the Accuracy of Indication of Barometric Instruments During the Flight, and Errors in Some Elements of Orientation of Aerial Photographs

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Geodeziya i aerofotos"yemka, 1960, No. 3, pp. 99-111

TEXT: It is shown that the accuracy of indication of barometric instruments used during the taking of aerial photographs in airplanes can be determined on the basis of aerophotographic data alone, without additional geodetic measurements. First, the author derives formula (10):

$m_{\nu}^2 = \frac{|R^2|}{20(n-1)} - 0.2\, m_{\tau}^2$ which is usually applied to estimate the accuracy of indication of these instruments and has been described in publications in the form of some variants. n is the original number of equations, i.e., the number of points with double α_x values. α_x is the angle of

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Estimation of the Accuracy of Indication of Barometric Instruments During the Flight, and Errors in Some Elements of Orientation of Aerial Photographs

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inclination of the aerial photograph in the vertical plane passing through the base. $R = \delta\Delta\alpha_{x_{i+1}} - \delta\Delta\alpha_{x_i}$. $\Delta\alpha_{x_i}$ is the difference between two α_x values. In this estimation, it is assumed that m_τ is known and all quantities of formula (10) are equal from point to point which in fact, however, is not true. m_τ does not always characterize the actual random errors of the angles. The method of the TsNIIGAiK for determining the elements of mutual orientation of aerial photographs is an approximate one. It is shown that a simultaneous, synchronous taking by means of two aerial cameras must be performed to determine in how far m_τ influences the estimation of the accuracy of indication of barometric instruments. Table 2 gives the results for estimating the accuracy of indication of the aneroid-liquid statoscope and the angles τ determined by the method of the TsNIIGAiK. They were obtained by the joint evaluation of data of a simultaneous and synchronous taking by means of two aerial cameras from one airplane. Table 3 shows the respective data. One of the two aerial cameras was gyrostabilized. On the basis of the data shown in the table, it is stated as follows: The indications of barometric

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Estimation of the Accuracy of Indication of Barometric Instruments During the Flight, and Errors in Some Elements of Orientation of Aerial Photographs

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instruments during the flight are estimated with a very high degree of accuracy by the procedure described. At the same flying height, the accuracy of indications may vary depending on atmospheric conditions. The mean random errors τ also vary in aerial photographs taken in different flights. This applies mainly to the τ obtained by means of the nonstabilized aerial camera. The fluctuations of m_τ are due to an instability of the plate holder. The values of $(m_h)_1$ and $(m_l)_2$ show a small difference due to a certain angle between the optic axes of the aerial cameras. A comparison of data in Tables 2 and 3 shows that the m_τ are acceptable for estimating the accuracy of barometric measurements during the flight from formula (10). A more perfect utilization of barometric measurements and angular elements of orientation of aerial photographs from photogrammetric measurements, however, is only possible if the following three data are available: Δh or $\Delta \nu$, $\Delta \tau_1$, and $\Delta \tau_2$. In such a case, it is possible to determine and eliminate the coarse errors at h, τ_1, and τ_2. Coarse errors

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Estimation of the Accuracy of Indication of Barometric Instruments During the Flight, and Errors in Some Elements of Orientation of Aerial Photographs

S/154/60/000/003/007/008/XX
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can also be avoided by replacing the photograph of the second aerial camera by photographing the point on the horizon in the flying direction. The possibility of using such a photograph has been confirmed by experiments. A shortcoming of this procedure is the necessity of the use of a special camera and the complication in the use of such a unit in super-high-speed airplanes. Special investigations by O. G. Gerasimov are mentioned. The indices 1 and 2 of τ refer to the 1st and 2nd aerial camera, respectively. There are 4 figures, 4 tables, and 2 Soviet references.

ASSOCIATION: Tsentral'nyy nauchno-issledovatel'skiy institut geodezii, aeros"yemki i kartografii (Central Scientific Research Institute of Geodesy, Aerial Sureveying, and Cartography)

SUBMITTED: November 13, 1959

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B012/B054

Таблица 2

Table 2

I			II			III		
Δv	$\Delta\tau_1$	$\Delta\tau_2$	Δv	$\Delta\tau_1$	$\Delta\tau_2$	Δv	$\Delta\tau_1$	$\Delta\tau_2$
−19	−17	−18	+24	+19	+16	−21	−27	−20
+25	+26	+23	+ 6	+20	+18	+16	+43	+12
−65	−58	−66	−27	−33	−37	+42	+43	+34
+25	+31	+31				+54	+67	+51
−27	−33	−37	−20	−17	−17	−31	−14	−25
+10	+17	+17	+12	+22	+24	−29	−10	−25
−14	−12	−14	+ 1	− 5	−10	−71	−78	−67
+23	+24	+22	− 2	− 6	− 6	+16	+38	+16
−17	−22	−25	+19	+32	+28	+26	+23	+10
−12	−14	−19	− 3	− 5	− 2	−68	−36	−59

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Таблица 3

Table 3

Дата полета	Высота полета H в м	Число маршрутов	Число сравнений n, q, k	АФА с f_k=70,8 мм (стабилизирован.)			$\pm m_\tau$ в мин	АФА с f_k=301,3 мм (нестабилизирован.)		
				$b_{ср}$ в мм	$\pm m_\tau$ в мин	$\pm m_h$ в м		$b_{ср}$ в мм	$\pm m_\tau$ в мин	$\pm m_h$ в м
1	2	3	4	5	6	7	8	9	10	11
4. VIII 1952 г.		5	270	41,1	2,1	0,51	1,5	57,0	1,85	0,49
3. VI 1953 г.		2	96	51,1	2,2	0,38	0,9	72,1	2,0	0,37
1. VII 1953 г.	2000	5	168	48,3	2,0	0,38	0,95	66,6	2,0	0,36
2. VII 1953 г.		3	89	52,7	2,4	0,61	1,40	73,0	1,4	0,59
31. III 1955 г.		5	271	43,6	2,9	0,44	1,22	60,7	2,5	0,42
1. IV 1955 г.		4	279	51,2	2,3	0,53	1,26	71,5	2,5	0,52

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Estimation of the Accuracy of Indication of Barometric Instruments During the Flight, and Errors in Some Elements of Orientation of Aerial Photographs

S/154/60/000/003/007/008/XX
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Head of Table 3:

Date of flight	Flying height H in m	Number of routes	Number of comparisons of n, q, k	Aerial camera with f_k = 70.8 mm (stabilized)		
				b_{mean} in mm	$\pm m_\tau$ in min	$\pm m_h$ in m

$\pm m_\nu$ in min	Aerial camera with f_k = 101.3 mm (unstabilized)		
	b_{mean} in mm	$\pm m_\tau$ in min	$\pm m_h$ in m

b is the base length. (q and k refer to the number of equations).

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BYCHKOVSKIY, K.P., kand.tekhn.nauk

Estimation of the precision of readings of aerial barometric instruments and errors met with in orienting pairs of aerial photographs. Izv. vys. ucheb. zav.; geod. i aerof. no.3:99-111 '60. (MIRA 13:10)

1. TSentral'nyy nauchno-issledovatel'skiy institut geodezii, aerosyemki i kartografii.
(Aerial photogrammetry)

BYCHKOVSKIY, K.P.

Automation in photogrammetry; a survey of foreign literature. Geod. i kart. no.1:63-71 Ja '62. (MIRA 15:1)
(Aerial photogrammetry)

BYCHKOVSKIY, K.P.

Regime of the static field of the atmosphere near the aeroplane and its effect on the accuracy of barometric measurements. Trudy TSNIIGAIK no.146:153-163 '62. (MIRA 15:11)

(Aeronautics in surveying) (Barometric hypsometry)

BYCHKOVSKIY, K.P.

Dynamic instrument errors on barometric devices and the possibilities of calculating them. Geod.i kart. no.1:36-41 Ja '63. (MIRA 16:2)

(Barometer)

(N) L 10937-66 FSS-2/EWT(1)/EWT(m)/EEC(k)-2/EIC(p)/EPF(n)-2/EWG(m)/T-2

ACC NR: AP6002515 EWP(t)/EWP(b) IJP(c) SOURCE CODE: UR/0286/65/000/023/0020/0020

DS/JD/WW

INVENTOR: Bychkovskiy, S. K.; Morozenkov, Yu. M.

47
23

ORG: none

TITLE: A device for continuous removal of condensate. Class 13, No. 176593 [announced by All-Union Scientific Research Institute of Electric Power Sources (Vsesoyuznyy nauchno-issledovatel'skiy institut istochnikov toka)]

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 23, 1965, 20

TOPIC TAGS: fuel cell, oxygen hydrogen fuel cell, cell condensate, condensate removal

ABSTRACT: This Author Certificate introduces a device for continuous removal of the condensate, e.g., water from the condensate collector of a fuel cell of the oxygen-hydrogen type, in the presence of excess gas pressure but without gas leak. The device consists of a microporous, liquid-absorbant diaphragm built hermetically into the collector. Orig. art. has: 1 figure. [MS]

SUB CODE: 10/ SUBM DATE: 18Jan65/ ATD PRESS: 4172

UDC: 621.186.6
621.3.035.35

Card 1/1

BYCHKOVSKIY, V.N., Cand Med Sci -- (diss) "Peculiarities of the clinical treatment of dysentery ~~accompanied by~~ with concomitant gastric diseases." Simferopol', 1959, 15 pp (Crimean State Med Inst im I.V. Stalin) 200 copies (KL, 34-59, 117)

BYCHKOVSKIY, V.N:

Henbane poisoning in children (Hyoscyamus niger L.). Vop. okh. mat. i det. 6 no.3:93-94 Mr '61. (MIRA 14:10)

1. Iz kafedry detskikh infektsionnykh bolezney (zaveduyushchiy - prof. M.N.Bessonova) Kuybyshevskogo meditsinskogo instituta (direktor - dotsent S.I.Georgiyevskiy).
(HYOSCYAMUS--TOXICOLOGY)

BYCHKOVSKIY, V.N.

Effectiveness of using oxygen in the treatment of Botkin's disease in children. Gor.zhur. no.12:88 D '63. (MIRA 17:3)

1. Iz kafedry detskikh infektsionnykh bolezney Krymskogo meditsinskogo instituta.

ROZINS'KIY, L.B. [Rozyns'kyi, L.B.]; BICHKOVS'KIY, V.N. [Bychkovs'kyi, V.N.] KHAZANOVA, D. Yu.

Intestinal pneumatosis in children. Ped., akush. i gin. 25 no.1:23-25 '63. (MIRA 16:5)

1. Kafedra dityachikh infektsiynikh khvorob (zav.-dotsent S.M. Gavalov (S.M. Havalov)), Krims'kogo medichnogo institutu (rektor dotsent S.I. Georgiyevs'kiy [S.I. Heorhiievs'kyi]) ta patalogo-anatomichne viddilennya 4-i mis'koi likarni (golovniy likar Ya.I. Vidershayn).

(INTESTINES—DISEASES) (CHILDREN—DISEASES)

BYCHKOVSKIY, V.N.

Effectiveness of using oxygen in the treatment of Botkin's disease in children. Vop. okhr. materin. dets. 8 no.1:88 '63 (MIRA 17:2)

1. Iz kafedry detskikh infektsionnykh bolezney Krymskogo meditsinskogo instituta.

VARUSHA, V.M.; BYCHKOVSKIY, Z.M., inzh.

Practices in introducing bitumen-latex roofing. Transp. stroi. 15 no.4:27-28 Ap '65. (MIRA 18:6)

1. Starshiy inzh. tresta Donbasstransstroy (for Varusha).

OSADCHIY, G.V.; BYCHKOVSKIY, Z.M.

Speedy construction of a storm drain. Transp. stroi. 15 no.3:10-12 Mr '65. (MIRA 18:11)

1. Glavnyy inzh. tresta Donbasstransstroy (for Osadchiy).
2. Starshiy inzh. tresta Donbasstransstroy (for Bychkovskiy).

BYCZWAROW, Marin [Bychvarov, Marin]

Iron and nonferrous metallurgy in Bulgaria. Przegl geogr 34 no.2:333-349 '62.

ACC NR: AT7005565 SOURCE CODE: BU/2506/66/008/000/0123/0151

AUTHOR: Buchvarov, I. --Bychvarov, I.

ORG: none

TITLE: Electromagnetic analog computer for solving Dirichlet and Neumann problems for semispace and certain related problems of applied geophysics

SOURCE: Bulgarska akademiya na naukite. Geofizichniya institut. Izvestiay, v. 8, 1966, 123-151

TOPIC TAGS: analog computer, Dirichlet problem, geophysics, electromagnetic analog computer

ABSTRACT: The electromagnetic analog computer used in the study and solution of Dirichlet's problems in semispace was designed st the Institute of Geophysics, Bulgarian Academy of Sciences. The computer's distinctive features include the following: the integrals can be used for obtaining analogous expressions representing solutions of various boundary-value problems of semispace. The computer is of simple design. It is capable of determining measurements constants, i. e. proportionality coefficients between the effective value of induced voltages and values

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ACC NR: AT7005565

sought. An example is given of processing a potential field map. Orig. art. has: 30 formulas and 18 figures. [AM]

SUB CODE: 09, 20, 08/SUBM DATE: none/ORIG REF: 007/SOV REF: 002/

Card 2/2

S/058/63/000/003/024/104
A062/A101

AUTHORS: Khristov, V., Sakalyan, K., Bychvarov, N.

TITLE: Installation for automatic recording of the activity of wires being activated in a reactor

PERIODICAL: Referativnyy zhurnal, Fizika, no. 3, 1963, 41, abstract 3V291 ("Dokl. Bolg. AN", 1962, v. 15, no. 3, 249 - 252, summary in English)

TEXT: The article describes an automatic installation that permits to carry out, fast and with a good accuracy, a continuous registration and recording of the activity of irradiated wires. The installation comprises a mechanical arrangement for fixing and displacing the wire and a recording device including a photomultiplier FEU-19M with a crystal NaI(Tl) under a lead shield, a pulse amplifier, an intensimeter and a recorder.

A. Kamayev

[Abstracter's note: Complete translation]

Card 1/1

BYCHVAROV, S.

BULGARIA/Cultivated Plants - Potatoes, Vegetables, Melons. M-3

Abs Jour : Ref Zhur - Biol., No 3, 1958, 10811

Author : Bychvarov, S.
Inst : -
Title : The Experience of the Vegetable Gardeners of Gornoryakhovskiy Rayon in Growing Vegetables in Seedbeds.

Orig Pub : Ovoshcharstvo i gradinarstvo, 1956, No 6, 38-41

Abstract : No abstract.

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16

DIMITROV, D.; PAVLOV.TSv.; RUSEV, I.; BYCHVAROV, I.

Rhythm disorders in intracardial V-type ulcerations in the presence of patent ductus arteriosus, aortic coarctation and aneurysm of the pulmonary artery. Kardiologiia no.3:[illegible]65.

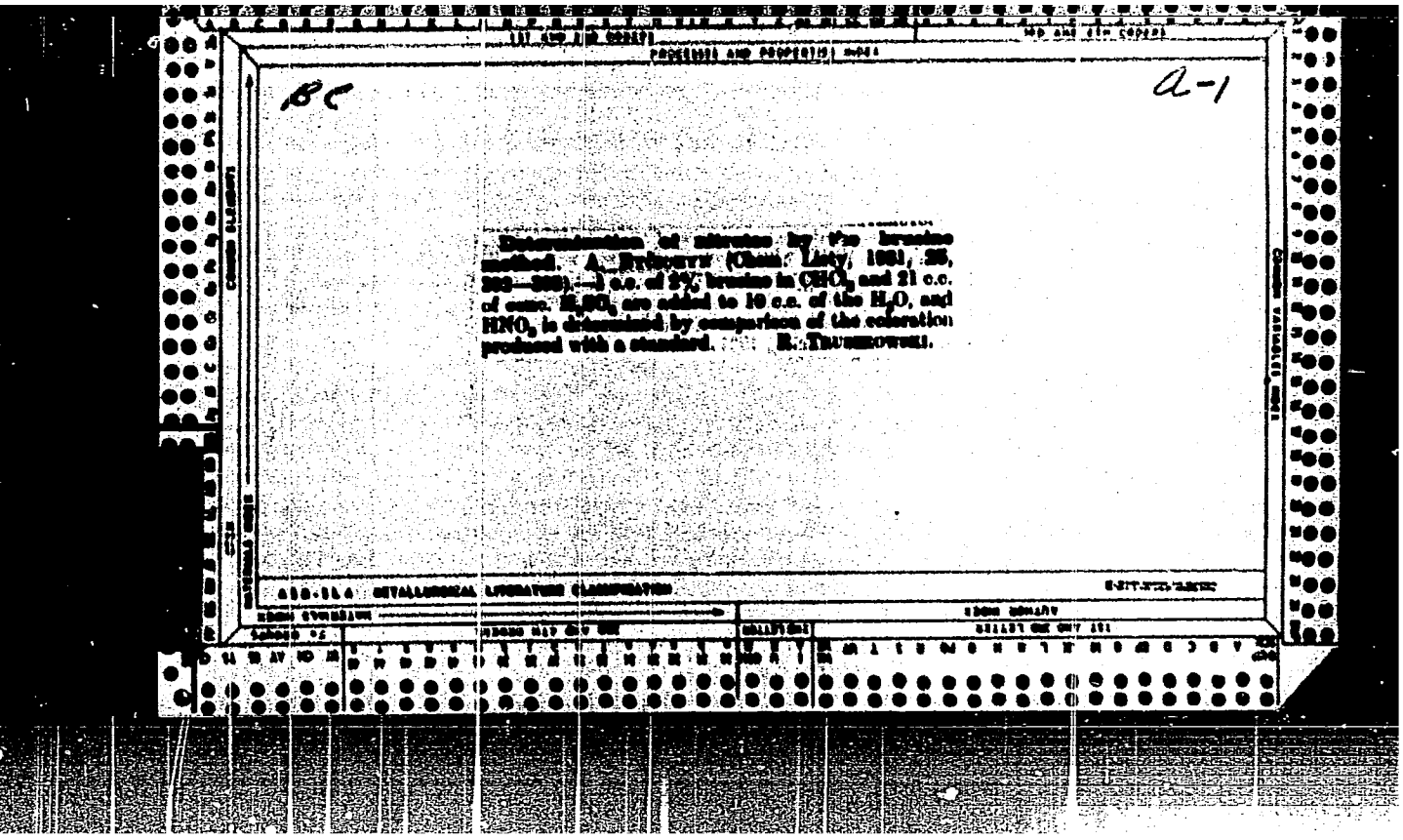
(MIRA 18:10)

1. Kafedra bol'nichnoy khirurgii (zav. - prof. K.A.Stoyanov) klinika serdechno-sosudistoy khirurgii i kardiologo-metodicheskoye otdeleniye Gorodskoy ob"yedinennoy bol'nitsy (glavnyy vrach - doktor M.Mytov), Sofiya.

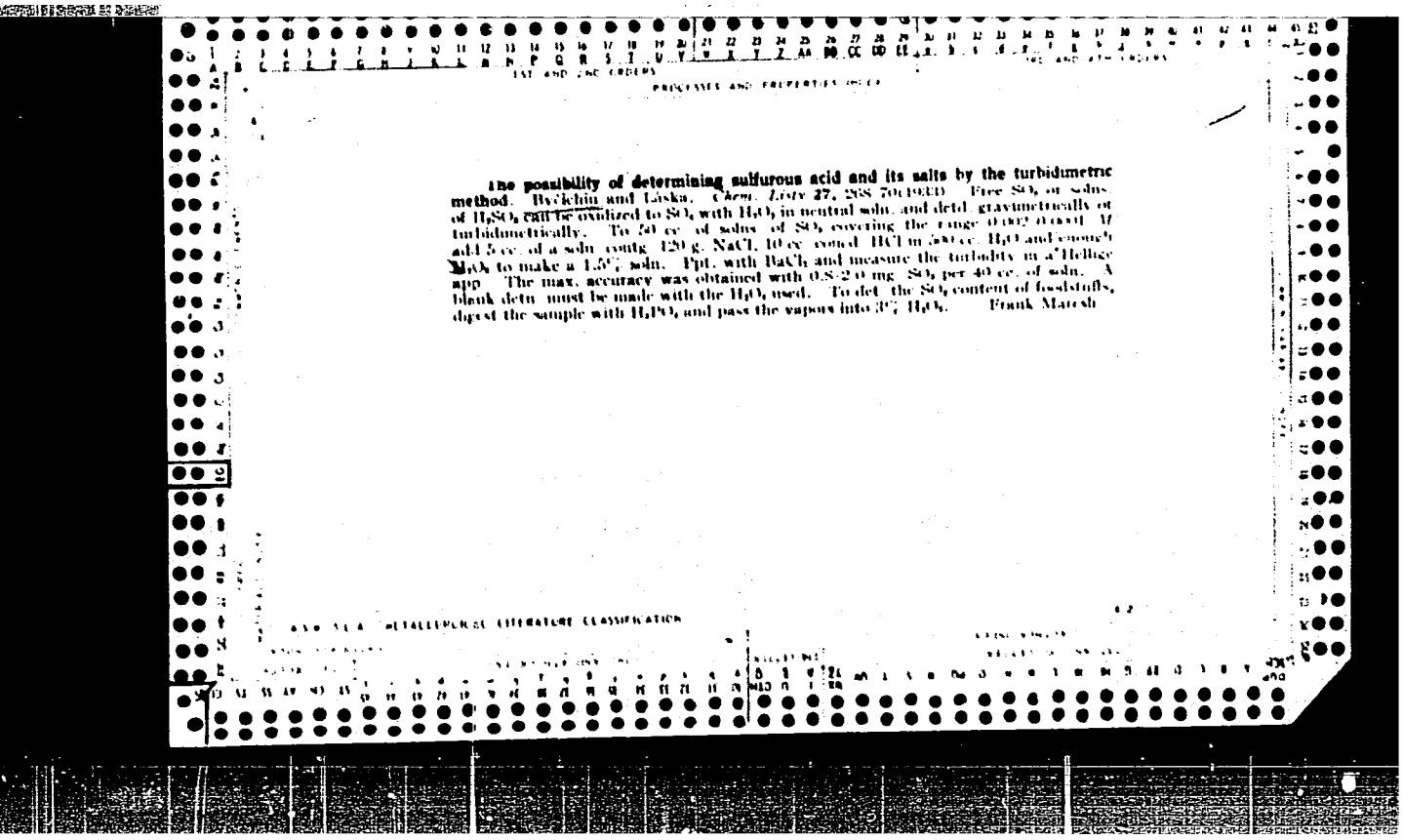
LAMBREV, Zh.; YANKOV, N.; ADZHAROVA, Ye.; BYCHVAROVA, T.

Antibacterial activity of certain plants used in popular medicine. Antibiotiki 4 no.3:50-54 My-Je '59. (MIRA 12:9)

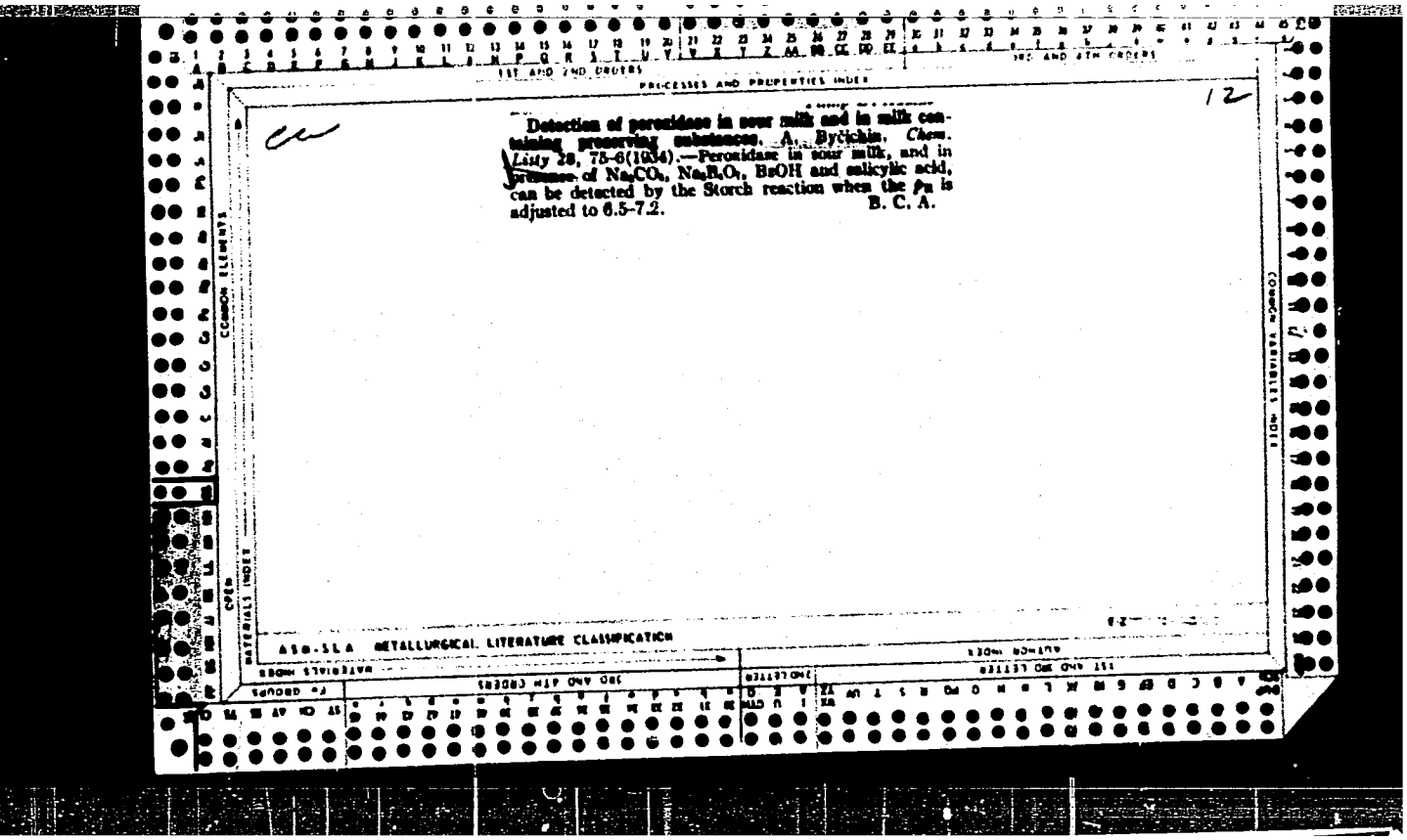
1. Kafedra biologii pri Vysshem meditsinskom institute imeni I.P.Pavlova, Bolgariya, Plovdiv.
(PLANTS,
antibact. eff. of plants used in popular med. (Rus))



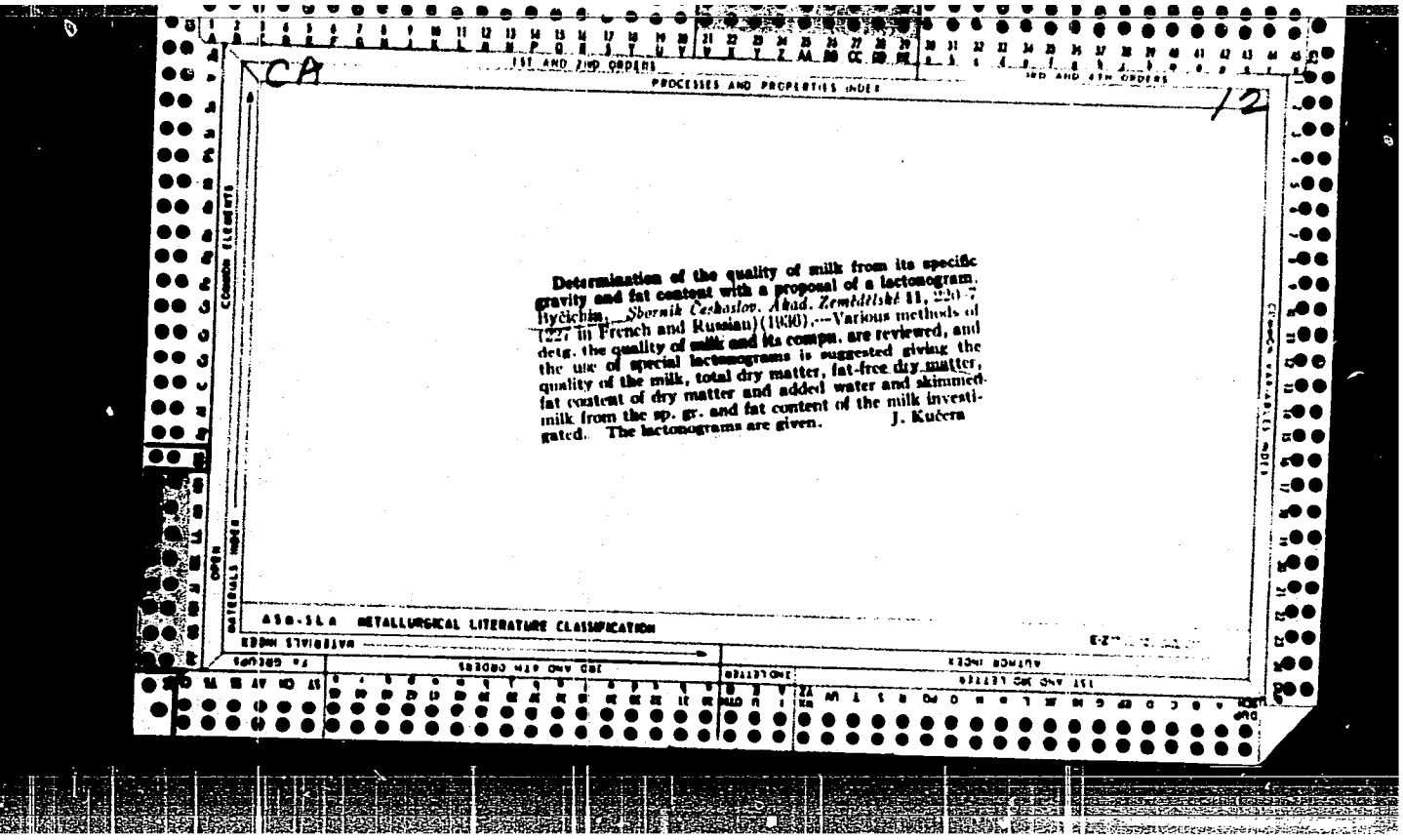
Determination of nitrates by the brucine method. A. Petrowitz (Chem. Listy, 1931, 25, 283—288).—5 c.c. of 2% brucine in $CHCl_3$ and 21 c.c. of conc. H_2SO_4 are added to 10 c.c. of the H_2O, and HNO_3 is determined by comparison of the coloration produced with a standard. R. Truszkowski.

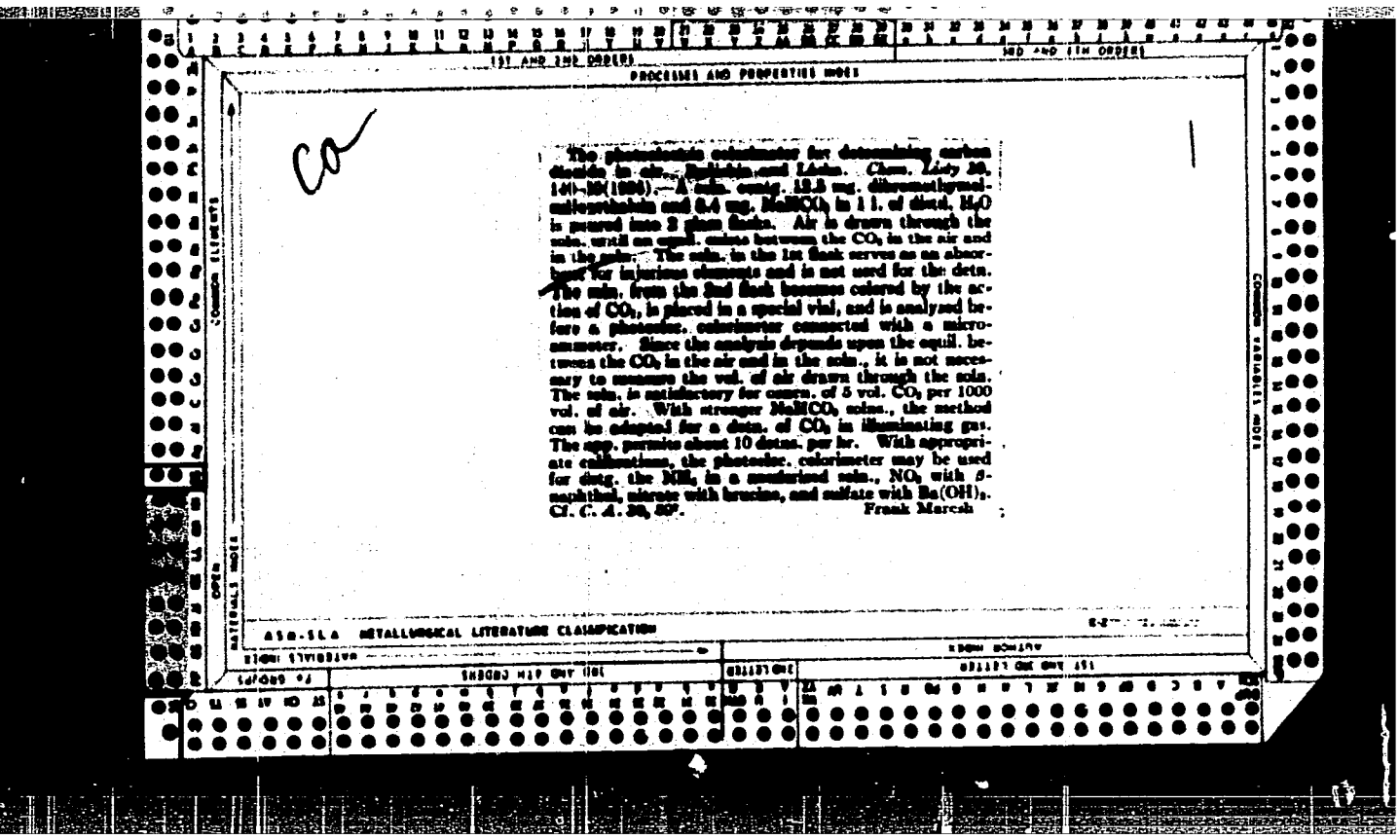


The possibility of determining sulfurous acid and its salts by the turbidimetric method. Bychkin and Liska. *Chem. Listy* **27**, 288-70(1933). Free SO_2 or solns. of H_2SO_3 can be oxidized to SO_3 with H_2O_2 in neutral soln. and detd. gravimetrically or turbidimetrically. To 50 cc. of solns. of SO_2 covering the range 0.032-0.0321 *M* add 5 cc. of a soln. contg. 120 g. NaCl, 10 cc. concd. HCl in 500 cc. H_2O and enough $MeOH$ to make a 1.5% soln. Ppt. with $BaCl_2$ and measure the turbidity in a Hellige app. The max. accuracy was obtained with 0.8-2.0 mg. SO_2 per 40 cc. of soln. A blank detn. must be made with the H_2O_2 used. To det. the SO_2 content of foodstuffs, digest the sample with H_3PO_4 and pass the vapors into 3% H_2O_2. Frank Marsh

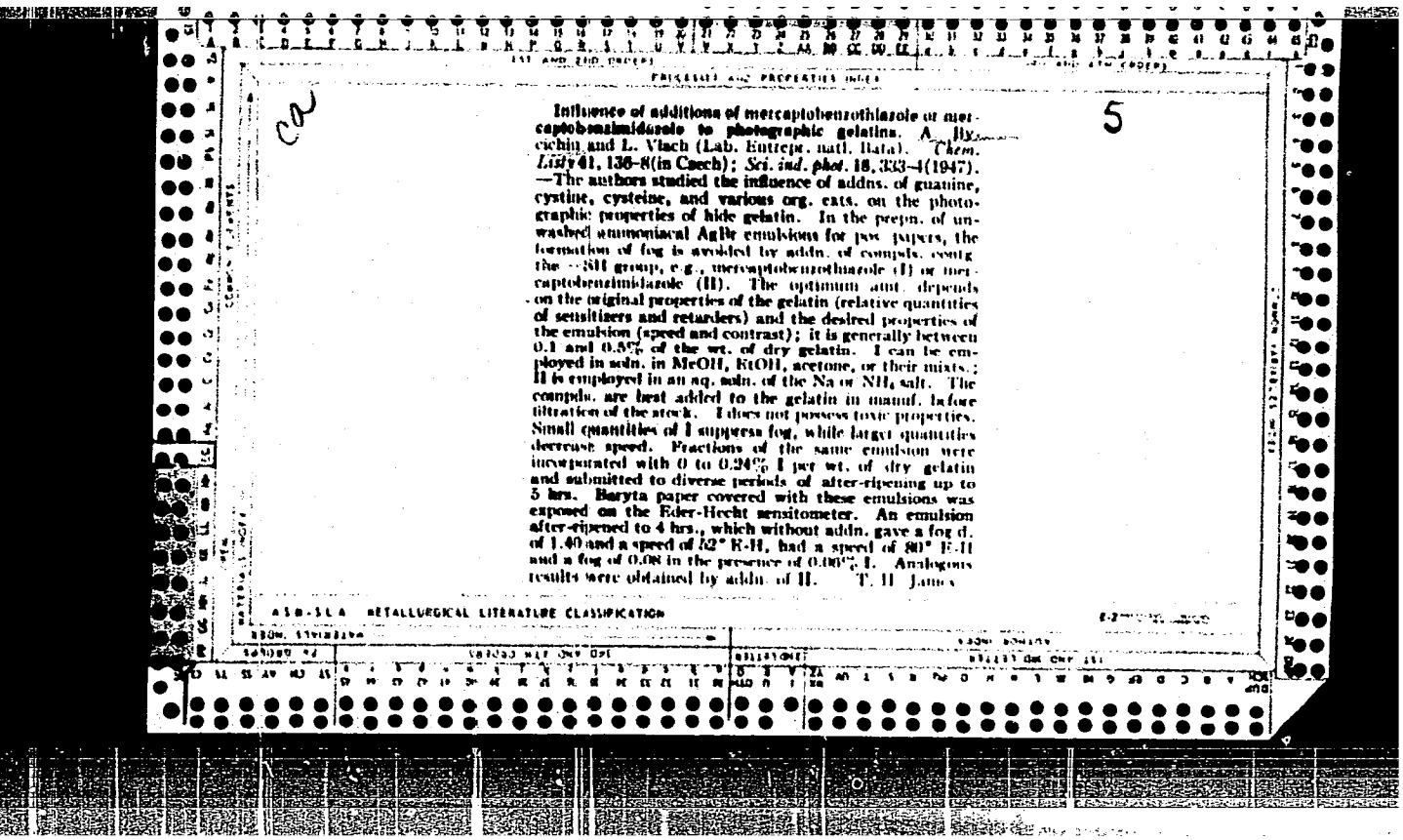


Detection of peroxidase in sour milk and in milk containing preserving substances. A. Bytchin. *Chem. Listy* 28, 75-6(1934).—Peroxidase in sour milk, and in presence of Na_2CO_3, $Na_2B_4O_7$, BzOH and salicylic acid, can be detected by the Storch reaction when the *p*H is adjusted to 6.5-7.2. B. C. A.



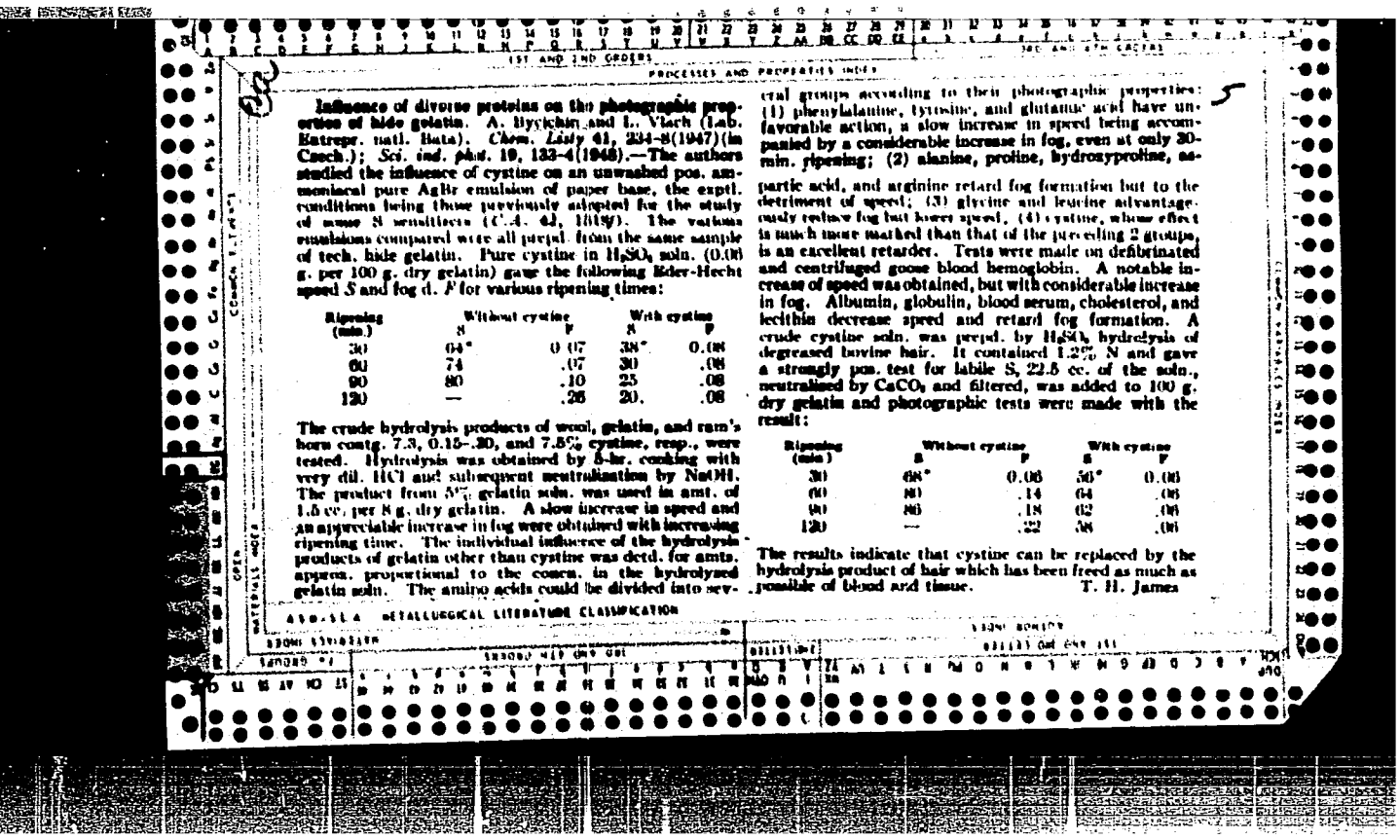


The photoelectric colorimeter for determining carbon dioxide in air. Rudolfs and Lisbon. *Chem. Listy* 30, 141–50(1936).—A soln. contg. 12.5 mg. dibenzanthrylmethylenethalein and 0.4 mg. $NaHCO_3$ in 1 l. of dist. H_2O is poured into 2 glass flasks. Air is drawn through the soln. until an equil. exists between the CO_2 in the air and in the soln. The soln. in the 1st flask serves as an absorbent for injurious elements and is not used for the detn. The soln. from the 2nd flask becomes colored by the action of CO_2, is placed in a special vial, and is analyzed before a photoelec. colorimeter connected with a microammeter. Since the analysis depends upon the equil. between the CO_2 in the air and in the soln., it is not necessary to measure the vol. of air drawn through the soln. The soln. is satisfactory for concns. of 5 vol. CO_2 per 1000 vol. of air. With stronger $NaHCO_3$ solns., the method can be adapted for a detn. of CO_2 in illuminating gas. The app. permits about 10 detns. per hr. With appropriate calibrations, the photoelec. colorimeter may be used for detg. the NH3 in a neutralized soln., NO_2 with *β*-naphthol, nitrate with brucine, and sulfate with $Ba(OH)_2$. Cf. *C. A.* 30, 807. Frank Marcus



Influence of additions of mercaptobenzothiazole or mercaptobenzimidazole to photographic gelatins. A. Hychichin and L. Vlach (Lab. Entrepr. natl. Bata). *Chem. Listy* 41, 136–8(in Czech); *Sci. ind. phot.* 18, 333–4(1947). —The authors studied the influence of addns. of guanine, cystine, cysteine, and various org. cmpds. on the photographic properties of hide gelatin. In the prepn. of unwashed ammoniacal AgBr emulsions for pos. papers, the formation of fog is avoided by addn. of compds. contg. the —SH group, e.g., mercaptobenzothiazole (I) or mercaptobenzimidazole (II). The optimum amt. depends on the original properties of the gelatin (relative quantities of sensitizers and retarders) and the desired properties of the emulsion (speed and contrast); it is generally between 0.1 and 0.5% of the wt. of dry gelatin. I can be employed in addn. in MeOH, EtOH, acetone, or their mixts.; II is employed in an aq. addn. of the Na or NH_4 salt. The compds. are best added to the gelatin in manuf. before filtration of the stock. I does not possess toxic properties. Small quantities of I suppress fog, while larger quantities decrease speed. Fractions of the same emulsion were incubated with 0 to 0.24% I per wt. of dry gelatin and submitted to diverse periods of after-ripening up to 5 hrs. Baryta paper covered with these emulsions was exposed on the Eder-Hecht sensitometer. An emulsion after-ripened to 4 hrs., which without addn. gave a fog d. of 1.40 and a speed of 52° E-H, had a speed of 80° E-H and a fog of 0.08 in the presence of 0.00% I. Analogous results were obtained by addn. of II. T. H. James

A 50-51 A METALLURGICAL LITERATURE CLASSIFICATION



Influence of diverse proteins on the photographic properties of hide gelatin. A. Hyvichin and L. Vlach (Lab. Ústrego. natl. Bata). *Chem. Listy* 41, 234–8(1947)(in Czech.); *Sci. ind. phot.* 19, 133–4(1948).—The authors studied the influence of cystine on an unwashed pos. ammoniacal pure AgBr emulsion of paper base, the exptl. conditions being those previously adopted for the study of mono S sensitizers (*C.A.* 42, 1015*g*). The various emulsions compared were all prepd. from the same sample of tech. hide gelatin. Pure cystine in H_2SO_4 soln. (0.01 g. per 100 g. dry gelatin) gave the following Hder-Hecht speed *S* and fog d. *F* for various ripening times:

Ripening (min.)	Without cystine S	F	With cystine S	F
30	64°	0.07	38°	0.08
60	74	.07	30	.08
90	80	.10	25	.08
120	—	.26	20	.08

The crude hydrolysis products of wool, gelatin, and ram's horn contg. 7.3, 0.15–.20, and 7.5% cystine, resp., were tested. Hydrolysis was obtained by 5-hr. cooking with very dil. HCl and subsequent neutralization by NaOH. The product from 5% gelatin soln. was used in amt. of 1.5 cc. per 8 g. dry gelatin. A slow increase in speed and an appreciable increase in fog were obtained with increasing ripening time. The individual influence of the hydrolysis products of gelatin other than cystine was detd. for amts. approx. proportional to the concn. in the hydrolyzed gelatin soln. The amino acids could be divided into several groups according to their photographic properties: (1) phenylalanine, tyrosine, and glutamic acid have unfavorable action, a slow increase in speed being accompanied by a considerable increase in fog, even at only 30-min. ripening; (2) alanine, proline, hydroxyproline, aspartic acid, and arginine retard fog formation but to the detriment of speed; (3) glycine and leucine advantageously restrain fog but lower speed; (4) cystine, whose effect is much more marked than that of the preceding 2 groups, is an excellent retarder. Tests were made on defibrinated and centrifuged goose blood hemoglobin. A notable increase of speed was obtained, but with considerable increase in fog. Albumin, globulin, blood serum, cholesterol, and lecithin decrease speed and retard fog formation. A crude cystine soln. was prepd. by H_2SO_4 hydrolysis of degreased bovine hair. It contained 1.2% N and gave a strongly pos. test for labile S, 22.5 cc. of the soln., neutralized by $CaCO_3$ and filtered, was added to 100 g. dry gelatin and photographic tests were made with the result:

Ripening (min.)	Without cystine S	F	With cystine S	F
30	68°	0.08	50°	0.08
60	80	.14	64	.08
90	86	.18	62	.08
120	—	.22	58	.08

The results indicate that cystine can be replaced by the hydrolysis product of hair which has been freed as much as possible of blood and tissue. T. H. James

Photographic Abstracts

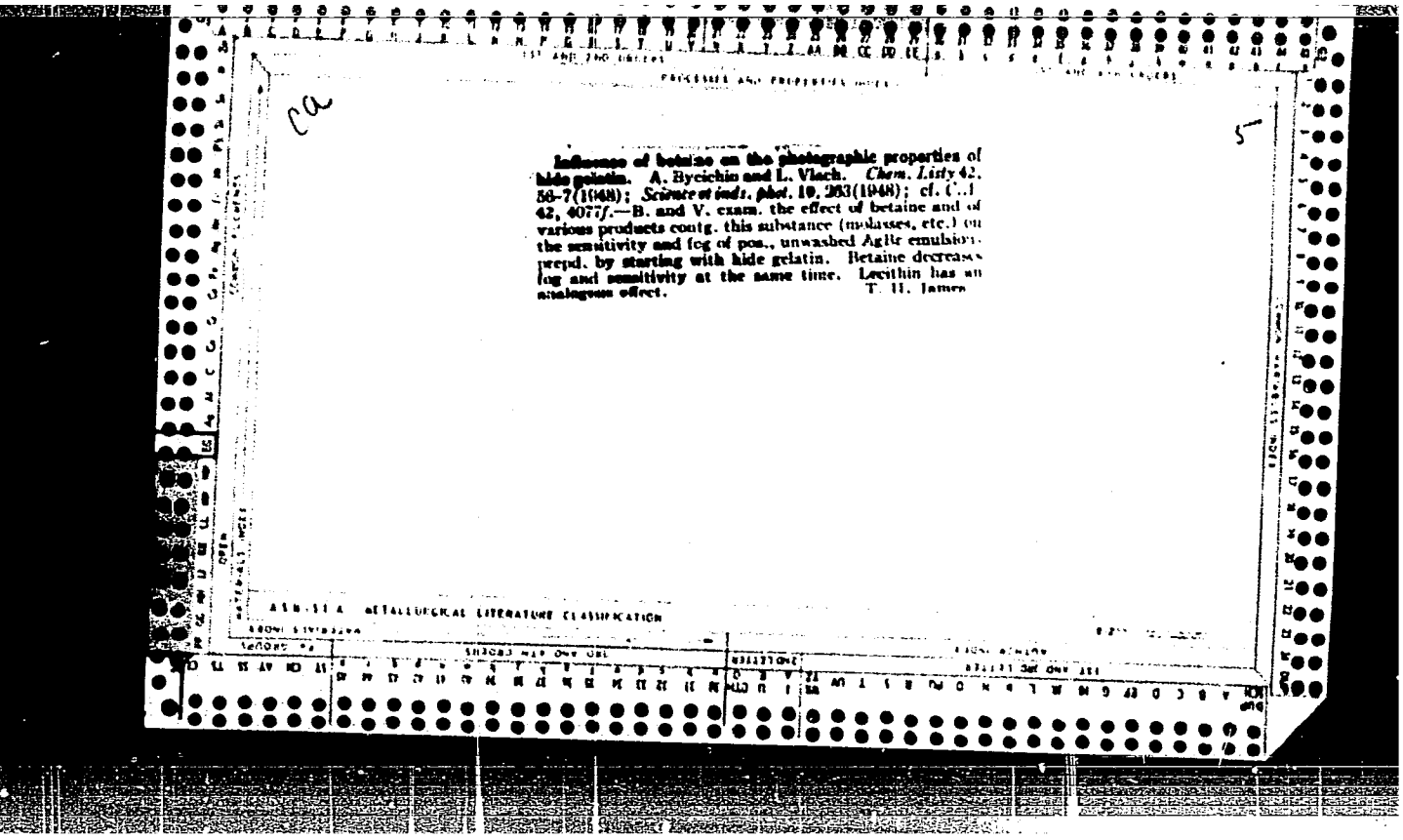
Sensitive Materials, Supports and Other Layers

558

771.31

The Influence of Various Proteins on the Photographic Properties of Silver Gelatins. A. BUCHMAN and L. VLACH. *Chem. Listy*, 40, 234-238, 1947 : *S. afr. J.*, 10, 133-134, Apr., 1948.—Experiments were made with cystin, as a ripening retarder, as an addition to an unwashed, ammoniacal bromide emulsion of the paper positive type. Fog remained at a low, constant figure while speed continuously decreased, with increase of ripening time, the untreated control giving an increase in both properties. Further work was done on the crude products obtained by hydrolysis of wool, gelatin, etc. (use of very dilute hydrochloric acid, followed by neutralizing with caustic soda), numerous other aminoacids being present. The hydrolysis product from gelatin resulted in a slight increase in speed and an appreciable increase of fog. Thereafter, a study was made of the individual influence of the principal products from the hydrolysis of gelatin, the pure material being employed. The photographic properties imparted by various groups of aminoacids are given. The best retarder was cystin. Other bodies being known to be present in the hydrolyzed gelatin product in small amount, it was decided to investigate other materials such as haemoglobin, etc. This latter gave a marked increase in speed and considerable build-up of fog. Albumin, globulin, cholesterin, etc., led to decreased speed and retardation of fog increase. Sulphuric acid hydrolysis of cattle hair was also tested. The experiments indicate that cystin may be replaced by the hydrolysis product of hair, and also that in the manufacture of photographic gelatin great care should be taken to free the raw materials from the remains of blood and tissues.

1949-50

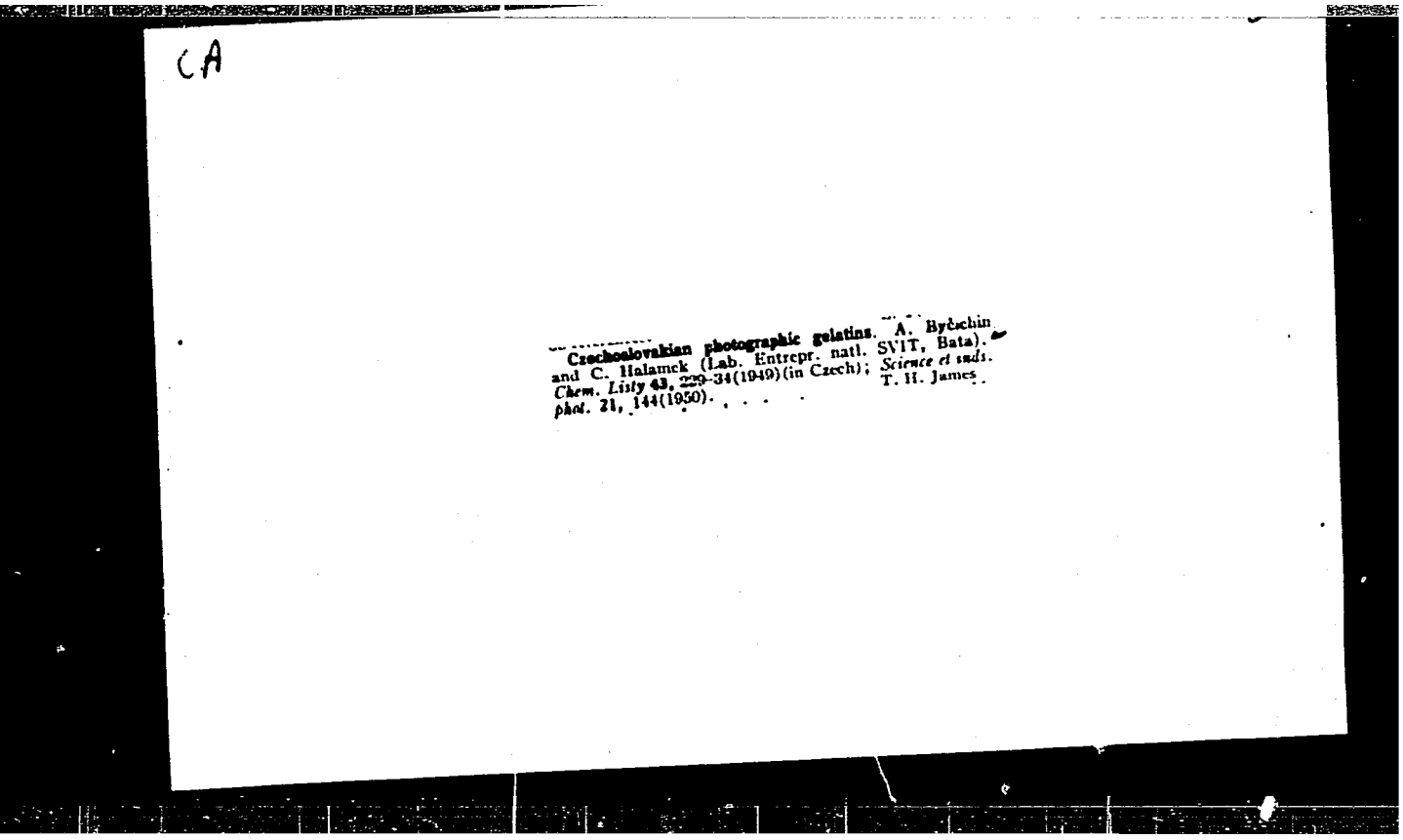


Influence of betaine on the photographic properties of hide gelatin. A. Bycichin and L. Vlach. *Chem. Listy* 42, 58-7(1948); *Science et ind. phot.* 19, 263(1948); cf. C.A. 42, 4077*f*.—B. and V. exam. the effect of betaine and of various products contg. this substance (molasses, etc.) on the sensitivity and fog of pos., unwashed AgBr emulsions prepd. by starting with hide gelatin. Betaine decreases fog and sensitivity at the same time. Lecithin has an analogous effect. T. H. James

CH

14

Effect of waste waters on the town of Gottwaldov on the quality of water in the Morava River. Alexej Bylichin and Kamil Prokůpek. *Palivo a voda* 29, 304–6(1949).—It has been shown by chem. analysis that the effluent from this industrial city is no longer objectionable two miles downstream. A. Langer



CA

Czechoslovakian photographic gelatins. A. Byčechin and C. Halamek (Lab. Entrepr. natl. SVIT, Bata). *Chem. Listy* **43**, 229-34(1949)(in Czech); *Science et inds. phot.* **21**, 144(1950). T. H. James.

CA

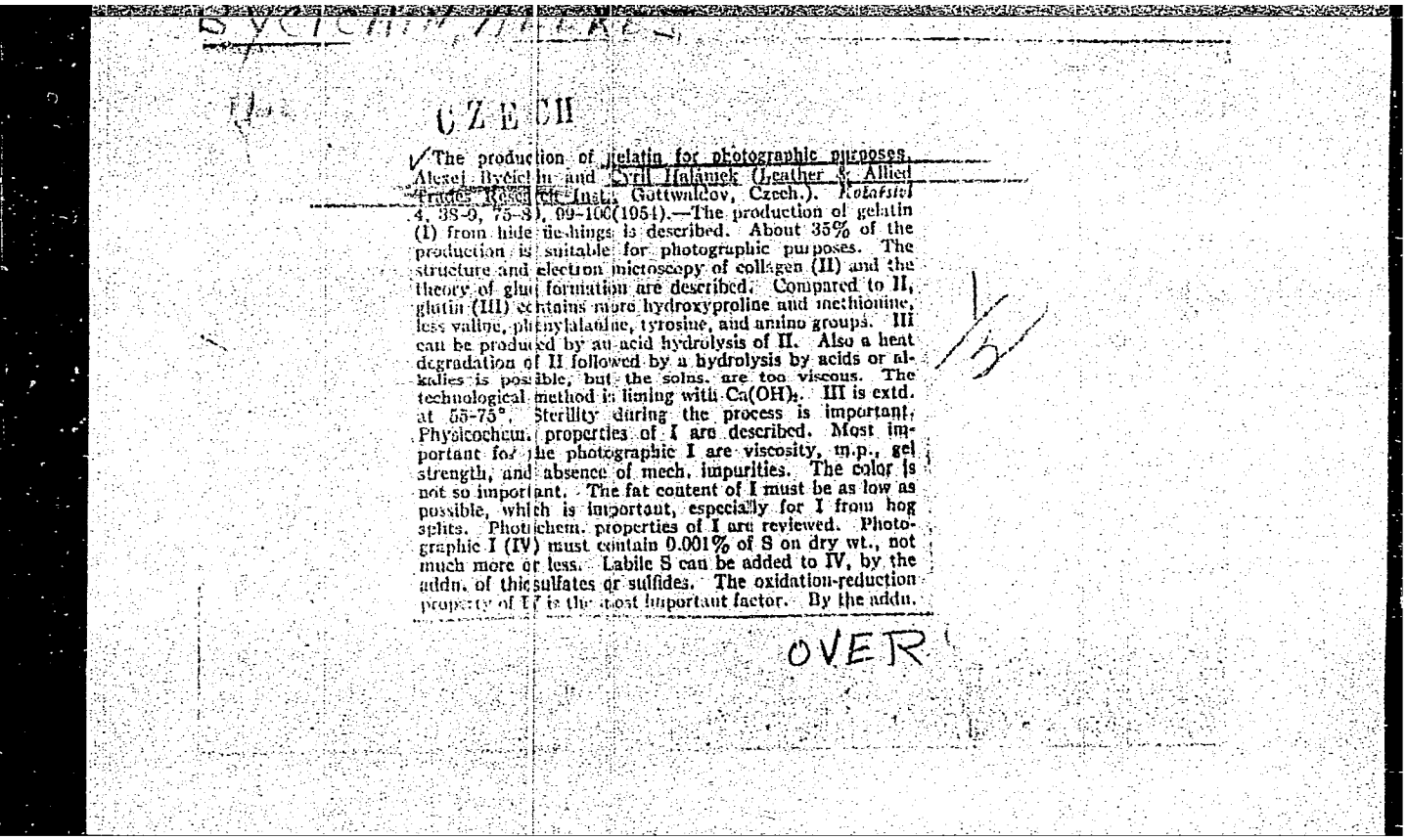
29

The color of commercial hide gelatin. A. Bytichin, C. Hulámek, and K. Hlaváček. *Chem. Listy* **44**, 130–8(1950); cf. *C.A.* **44**, 9714*e*.—The brownish coloration of com. gelatin is attributed to the oxidation products of certain amino acids of the phenylalanine type. The browning of solns. of such acids with time and by oxidizing agents was investigated. The influence of Fe was followed. No decisive results were obtained.
M. Hudlický

BYCICHIN AND OTHERS

"Effects of Ozone on Gelatin." p. 224 (PRUMYSL POTRAVIN, Vol. 4, No. 5, 1953) Praha, Czechoslovakia

SO: Monthly List of East European Accessions, Library of Congress, Vol. 3, No. 4, April 1954. Unclassified.



CZECH

The production of gelatin for photographic purposes. Alexej Bydel'ka and Cyril Halamek (Leather & Allied Trades Research Inst., Gottwaldov, Czech.). *Kožařství* 4, 38-9, 75-8), 99-100(1954).—The production of gelatin (I) from hide trimmings is described. About 35% of the production is suitable for photographic purposes. The structure and electron microscopy of collagen (II) and the theory of glu formation are described. Compared to II, glutin (III) contains more hydroxyproline and methionine, less valine, phenylalanine, tyrosine, and amino groups. III can be produced by an acid hydrolysis of II. Also a heat degradation of II followed by a hydrolysis by acids or alkalies is possible, but the solns. are too viscous. The technological method is liming with $Ca(OH)_2$. III is extd. at 55-75°. Sterility during the process is important. Physicochem. properties of I are described. Most important for the photographic I are viscosity, m.p., gel strength, and absence of mech. impurities. The color is not so important. The fat content of I must be as low as possible, which is important, especially for I from hog splits. Photochem. properties of I are reviewed. Photographic I (IV) must contain 0.001% of S on dry wt., not much more or less. Labile S can be added to IV, by the addn. of thiosulfates or sulfides. The oxidation-reduction property of I is the most important factor. By the addn.

OVER

of H_2O_2 oxidative IV is produced. Desensitizers of IV
are discussed. Impurities of IV are eliminated by dialysis,
electrodialysis, adsorption on active C or better on Al-
$(OH)_3$. Oxidation properties of IV are little known.
Perhaps HCHO cystine may be of some influence. The re-
quired properties of IV can be best attained by the choice of
raw materials and by a controlled washing and liming.
During the production, oxidation with H_2O_2 can be used.
Such IV has a low sensibility, matures slowly, and does not
easily emul. More active IV is produced by the addn. of
SO_2 or thiosulfates, giving quicker maturing. SO_2 is also a
disinfectant. In case oxidative IV is needed, a small
quantity of pure phenol is added. $Na_2S_2O_4$ is often used
for disinfection of IV. Larger quantities of uniform IV are
produced by mixing of individual production charges.
The product is photographically tested. IV is further ad-
justed by the producers of photographic material. Special
products diminish the formation of yellow veil. Hydro-
lyzed egg albumin, Rh, Cd, Pb, and Au salts are sometimes
added.

L. Masner

BYCICHIN, ALEXEJ

3

Thermal treatment of fleshings. Alexej Bydichin, Jaroslav Ličák, and Bořivoj Němec (Leather & Allied Trades Research Inst., Gottwaldov, Czechoslov.). *Kožařství* 6, 50–2.—The usual liming of fleshings (I) for gelatin (II) production takes 3–6 months. The vol. changes of I (cf. Kuntzel, *C.A.* 32, 9546⁹; 36, 6885⁵) by immersion in water for 2 min. at 15, 53, 57, 62, 60, 72, and 70° were 0.0, +9, +5, −6, −22, −25, and −27%. Steer and pig I gave similar results. Immersion of I for 30, 150, and 600 sec. in boiling water changed their wt. from 100 to 83, 83, and 85 g.; this decrease was caused by shrinkage as only 2 g. of II was dissolved. I was limed for 7 days after immersion for 5 min. in boiling water. The extn. of photographic II at 70° proceeds 8 times quicker than normally. The quality was normal, but II contains more fat. Cutting of I to uniform size before heat treatment is essential. The no. of liming pits in II manuf. can be considerably reduced.

J. Masuer

BYCKOVSKY, V.

Certain faults in the designing and building of brick structures. p. 329. (POZEMNI STAVBY, Vol. 2, nol.11, Nov. 1954, Praha)

SO: Monthly List of East European Accession,(EEAL), LC, Vol. 4, No. 11, Nov. 1955, Uncl.

RYCKOVSKY, V
~~RYCHOVSKY, V.~~

Some useful remarks on the execution of masonry and plastering work during the winter season. p.16. POZEMNI STAVBY. (Ministerstvo stavebnictvi) Praha. Vol. 3, no. 1. Jan. 1955.

SOURCE: East European Accessions List (EEAL), Library of Congress, Vol. 4, No. 12, December 1955.

BYCKOVSKY, V.

Hardened cement mortar. p. 86. POZEMNI STAVBY. (Ministerstvo stavebnictvi) Praha. Vol. 3, no. 2, Feb. 1955.

SOURCE: East European Accessions List (EEAL), Library of Congress, Vol. 4, No. 12, December 1955.

BYCKOVSKY, V.

Mixing mortars for mechanical plastering and for transport. p. 16.

Vol. 4, no. 1, Jan. 1956
POZEMNI STAVBY
Praha, Czechoslovakia

Source: East European Accession List. Library of Congress
Vol. 5, No. 8, August 1956

Byckovsky, V.

Byckovsky, V. Economical construction of vertical supporting structural elements of brick. p. 59.

Vol. 5, no. 2, Feb. 1957.
POZEMNI STAVBY
TECHNOLOGY
Czechoslovakia

So. East European Accessions, Vol. 6, No. 5, May 1957

BYCZKOWSKA, Wanda

Blood supply of the digestive system in Perca fluviatilis L. Pol. morph., Warsz. 5 no.4:273-286 1954.

1. Z Zakladu Anatomii Porownawczej im. H. Hoyera, Uniwerwytetu Jagiellonskiego w Krakowie. Kierownik: prof. dr Z Grodzinski.

(GASTROINTESTINAL SYSTEM, blood supply, in Perca fluviatilis)
(FISH, Perca fluviatilis, gastrointestinal blood supply)

RYCZKOWSKA Z. Odd. chor. zawod., Inst. med. pracy, III Klin. Chor. wewn, Akad. med., Lodz. Zatrucia chlorkiem metylu w przemysle chlodniczym Methyl chloride poisoning in the freezing industry Polsk. Tyg. lek. 1953, 8/23 (627-630)
The 4 cases observed had a moderately severe course. They showed signs of damage of the liver and the myocardium, with acceleration of the ESR. The prevention of this poisoning in industry is discussed and administration of a special diet to the workers is recommended.
Polanowicz - Lodz

SO: EXCERPTA MEDICA, Vol. 8 No. 2, Section VI, February 1954

BYCZKOWSKA, Z.

Methyl chloride poisoning in refrigeration plant workers. Polski tygod. lek. 8 no.23:827-830 8 June 1953. (CLML 25:1)

1. Of the Department of Occupational Diseases of the Institute of Industrial Medicine at the Third Internal Clinic (Head--Prof. W. Markert, M.D.) of Lodz Medical Academy.

BYCZKOWSKA, Z.; WIERZBOWSKA, A.

Panmyelophthisis caused by occupational poisoning with lead compounds. Med. pracy 6 no.4:243-248 1955.

1. Z III Kliniki Chorob Wewnetrznych Akademii Medycznej i z Dzialu Chorob Zawodowych I.M. w Lodzi. Kierownik: prof. dr. W.Markert.

(LEAD POISONING, complications
panmyelophthisis, occup.)
(BONE MARROW, diseases
panmyelophthisis, caused by occup. lead pois.)
(OCCUPATIONAL DISEASES
lead pois. causing panmyelophthisis)

BYCZKOWSKA, Z.

POLAND/Safety Engineering - Sanitary Engineering. Sanitation. L.

Abs Jour : Ref Zhur - Khimiya, No 2, 1957, 7010

Author : Byczkowska, Z., Wierzbowska, A.
Inst :
Title : Bone Marrow Disorder as a Sequela of Occupational Poisoning with Lead Compounds.

Orig Pub : Med. pracy, 1955, 6, No 4, 243-248

Abst : Description of a rare case of fatal poisoning with Pb, involving total impairment of bone marrow, in a 17 year old painter who worked in a building with paints containing Pb. Ancillary investigations revealed damage to erythro-, leuco- and thromboblastic system. Porphyrinuria and increased excretion of Pb with the urine in combination with blue line on the gums confirmed the diagnosis of Pb-intoxication. It is assumed that severe disruptions of organic junctions were caused by individual, increased sensitivity to Pb.

Card 1/1

EXCERPTA MEDICA Sec. 17 Vol. 3/10 Public Health Oct. 57

3246. BYCZKOWSKA Z., GANCZARSKI A. and ULIŃSKA I. 3 Klin. Chor. Wewn. A.M., Łódź; Zakł. Bakteriol. A.M., Łódź; Wojewódzkiej Stacji Sanit.-Epidemiol., Kielcach; Inst. Med. Pracy, Łódź. *Masowe zatrucie pokarmowe wywołane spożyciem ciastek zakażonych gronowcem złocistym. Mass food

(Z III Kliniki Chorob Wewnetrznych A. M. w Lodzi; Kierownik: prof. dr. w. Markert; z Zakladu Bakteriologii A. M. w Lodzi; Kierownik: prof. dr. Z. Szymanowski; z Wojewodzkej Stacij Sanitarno-Epidemiologicznej w Kielcach I Instytutu Medycyny Pracy w Lodzi; Dyrektor: doc. j. Nofer) Adres: Lodz: Zachodnia 80 m 11.

BYCZKOWSKA, Zofia.

3296

poisonings, caused by consumption of pastries infected with M. pyogenes aureus POL. TYG. LEK. 1956, 11/43 (1829-1832)
M. pyogenes aureus is a common cause of food poisoning. The resistance of staphylococcal enterotoxin to high sugar and salt concentration and to high and low temperatures contribute to its permanence in food. While food poisonings usually have a mild course, fatal cases nevertheless occur. In a case described the staphylococcal carrier-state in a confectioner was the cause of the epidemic. Epidemiological investigations which were carried out revealed the source. Bacteriological investigations showed that a pathogenic strain of M. pyogenes aureus was implicated. The carrier-state did not disappear after removal of tonsils. Treatment with chloramphenicol, however, was successful.

Country : POLAND
Category: Pharmacology. Toxicology. Narcotics and Hypnotics

V

Abs Jour: RZhBiol., No 6, 1959, No 27656

Author : Byczkowska, Zofia
Inst : -
Title : Intoxication with Trichloroethylene.

Orig Pub: Med. pracy, 1957, 8, No 3, 191-203

Abstract: No abstract.

Card : 1/1

BYCZKOWSKA-SMYK, Wanda (Krakow)

Plastids. Wszechswiat no.7/8:178-181 Jl-Ag '62.

BYCZKOWSKA-SMYK, Warda

Lysozomes. Kosmos biol 11 no.4:401-405 '62.

*

BYCZKOWSKA-SMYK, Wanda

"A textbook of histology" by W.Bloom-Don. Reviewed by Wanda Byczkowska-Smyk. Kosmos biol 12 no.2:168-170 '63.

HYCZKOWSKA-SMYK, Wanda; NOWINSKI, Marian

Review of books and publications. Kosmos biol 13 no.2:157-166 '64.

BYCZKOWSKA-SMYK, Wanda

Problem of gas exchange in fish. Przegl zool 8 no.4:335-341 '64.

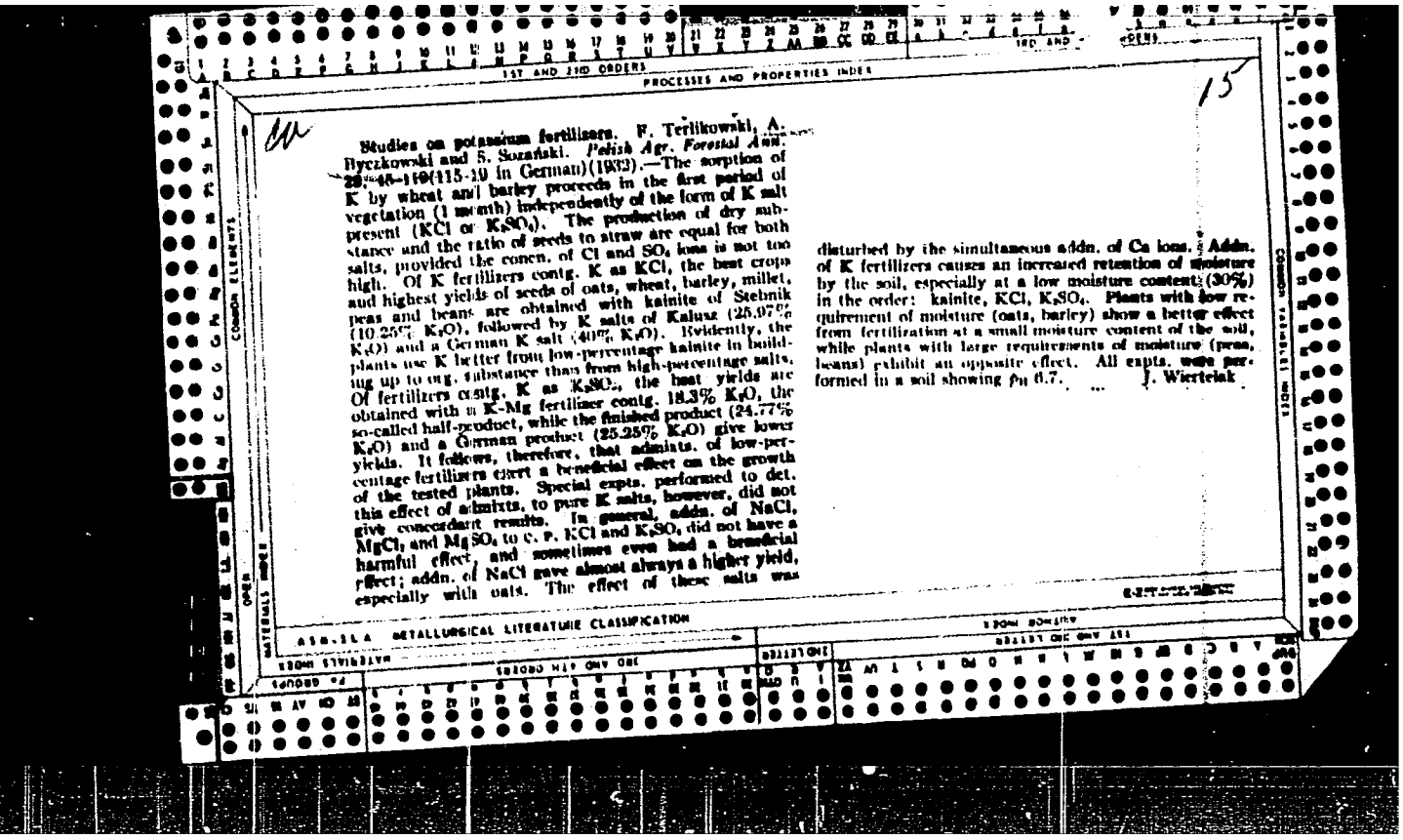
1. Institute of Comparative Anatomy of the Jagiellonian University, Krakow.

BYCZKOWSKA-SMYK, Wanda

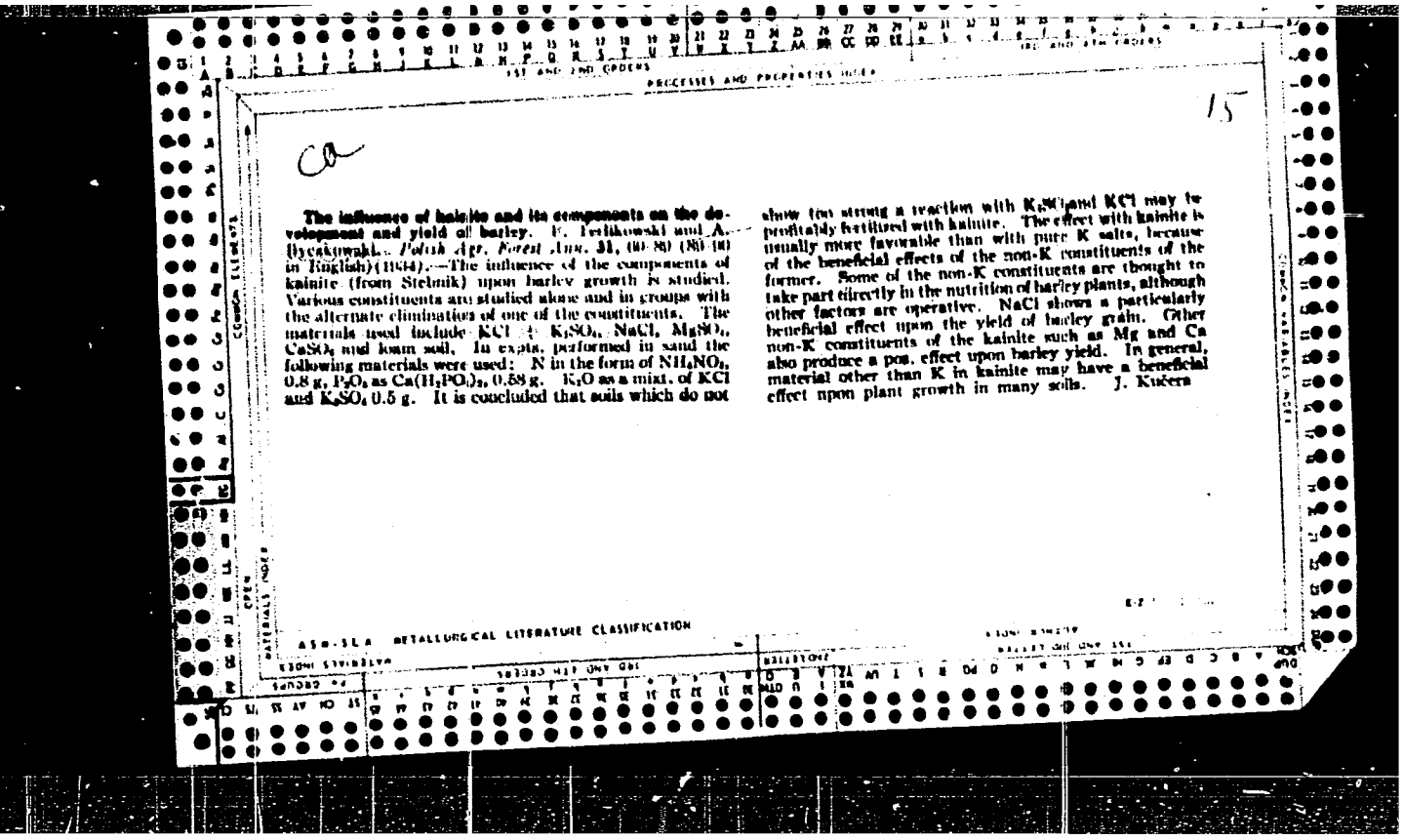
Third European Congress of Electron Microscopy, Prague, August 26-September 3, 1964. Kosmos biol 14 no.1:107-108 '65.

BYCZKOWSKA-SMYK, Wanda (Krakow)

Action of low temperatures on live tissue and organisms.
Wszechswiat no.5:118-123 My '65.



Studies on potassium fertilizers. F. Terlikowski, A. Byczkowski and S. Sozański. *Polish Agr. Forestal Ann.* 29 [48-110(115-20 in German)(1933).—The sorption of K by wheat and barley proceeds in the first period of vegetation (1 month) independently of the form of K salt present (KCl or K_2SO_4). The production of dry substance and the ratio of seeds to straw are equal for both salts, provided the concn. of Cl and SO_4 ions is not too high. Of K fertilizers contg. K as KCl, the best crops and highest yields of seeds of oats, wheat, barley, millet, peas and beans are obtained with kainite of Stebnik (10.25% K_2O), followed by K salts of Kalusz (25.07% K_2O) and a German K salt (40% K_2O). Evidently, the plants use K better from low-percentage kainite in building up to org. substance than from high-percentage salts. Of fertilizers contg. K as K_2SO_4, the best yields are obtained with a K-Mg fertilizer contg. 18.3% K_2O, the so-called half-product, while the finished product (24.77% K_2O) and a German product (25.25% K_2O) give lower yields. It follows, therefore, that admixts. of low-percentage fertilizers exert a beneficial effect on the growth of the tested plants. Special expts. performed to det. this effect of admixts. to pure K salts, however, did not give concordant results. In general, addns. of NaCl, $MgCl_2$ and $MgSO_4$ to C. P. KCl and K_2SO_4 did not have a harmful effect, and sometimes even had a beneficial effect; addn. of NaCl gave almost always a higher yield, especially with oats. The effect of these salts was disturbed by the simultaneous addn. of Ca ions. Addn. of K fertilizers causes an increased retention of moisture by the soil, especially at a low moisture content (30%) in the order: kainite, KCl, K_2SO_4. Plants with low requirement of moisture (oats, barley) show a better effect from fertilization at a small moisture content of the soil, while plants with large requirements of moisture (peas, beans) exhibit an opposite effect. All expts. were performed in a soil showing p_H 6.7. J. Wierteiak



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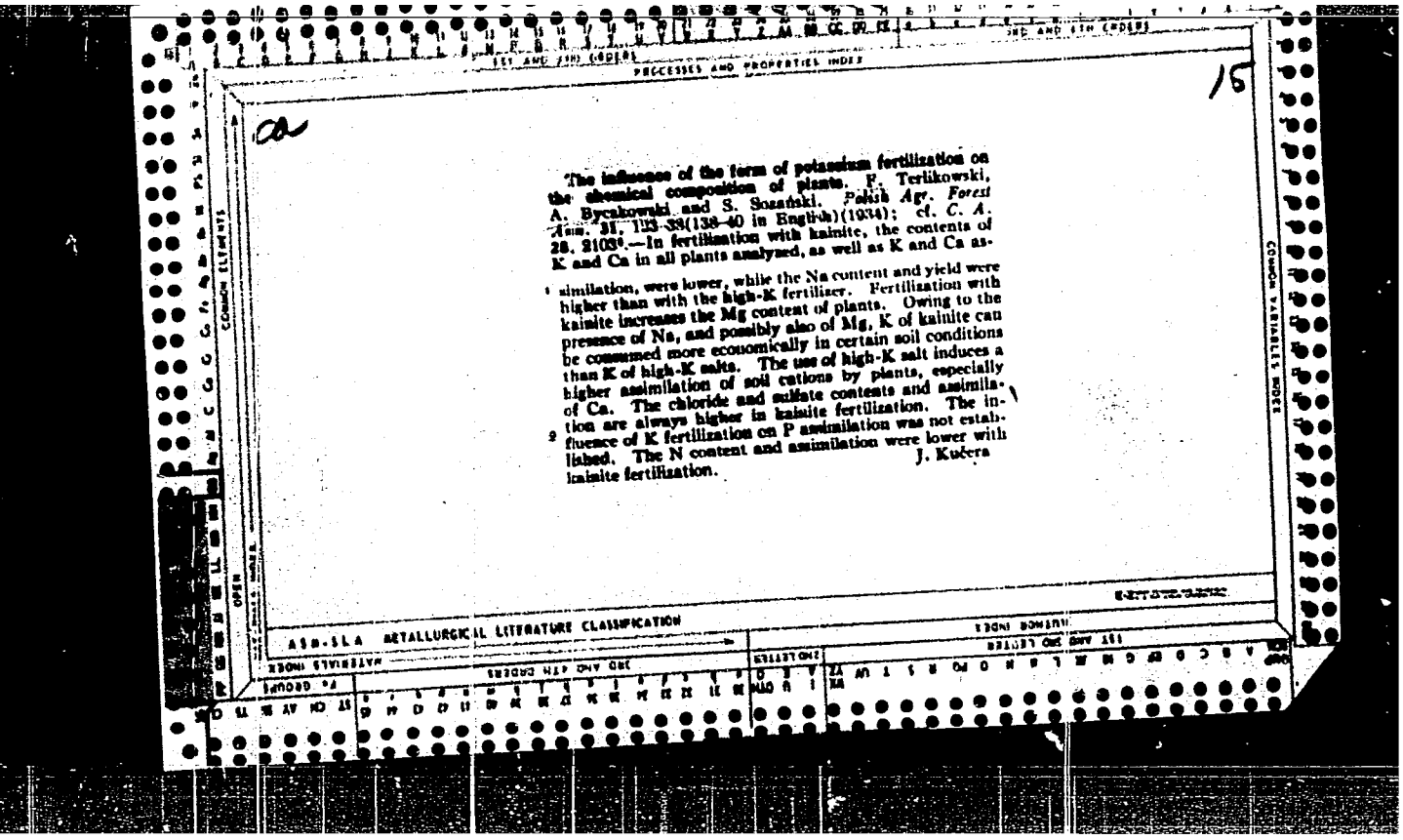
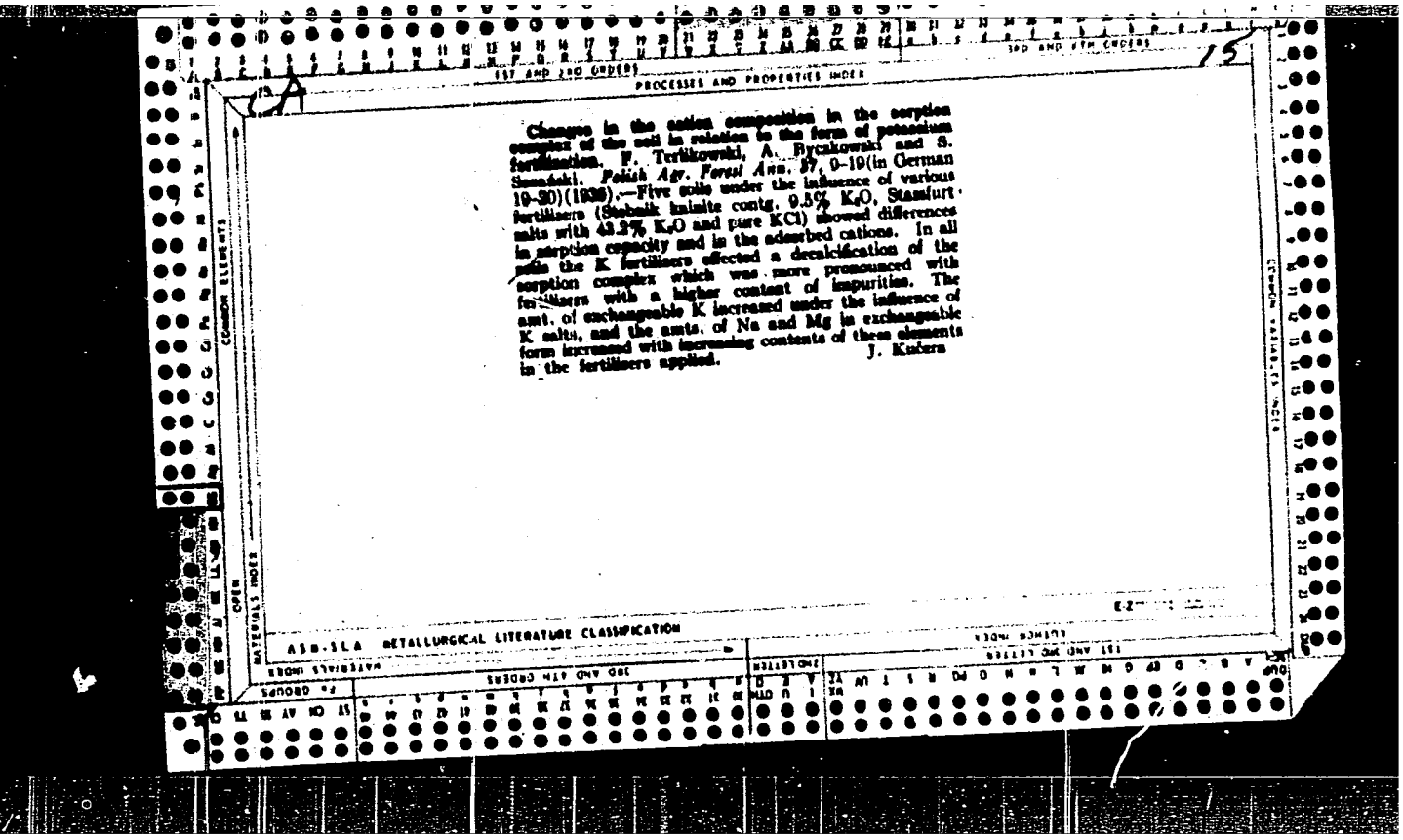
Ca

The influence of kainite and its components on the development and yield of barley. F. Terlikowski and A. Hyczkowski. *Polish Agr. Forest Annu.* 31, (80-88) (80-10) in English) (1954).—The influence of the components of kainite (from Stebnik) upon barley growth is studied. Various constituents are studied alone and in groups with the alternate elimination of one of the constituents. The materials used include KCl + K_2SO_4, NaCl, $MgSO_4$, $CaSO_4$ and loam soil. In expts. performed in sand the following materials were used: *N* in the form of NH_4NO_3, 0.8 g, P_2O_5 as $Ca(H_2PO_4)_2$, 0.58 g. K_2O as a mixt. of KCl and K_2SO_4 0.5 g. It is concluded that soils which do not show too strong a reaction with K_2SO_4 and KCl may be profitably fertilized with kainite. The effect with kainite is usually more favorable than with pure K salts, because of the beneficial effects of the non-K constituents of the former. Some of the non-K constituents are thought to take part directly in the nutrition of barley plants, although other factors are operative. NaCl shows a particularly beneficial effect upon the yield of barley grain. Other non-K constituents of the kainite such as Mg and Ca also produce a pos. effect upon barley yield. In general, material other than K in kainite may have a beneficial effect upon plant growth in many soils. J. Kuéera

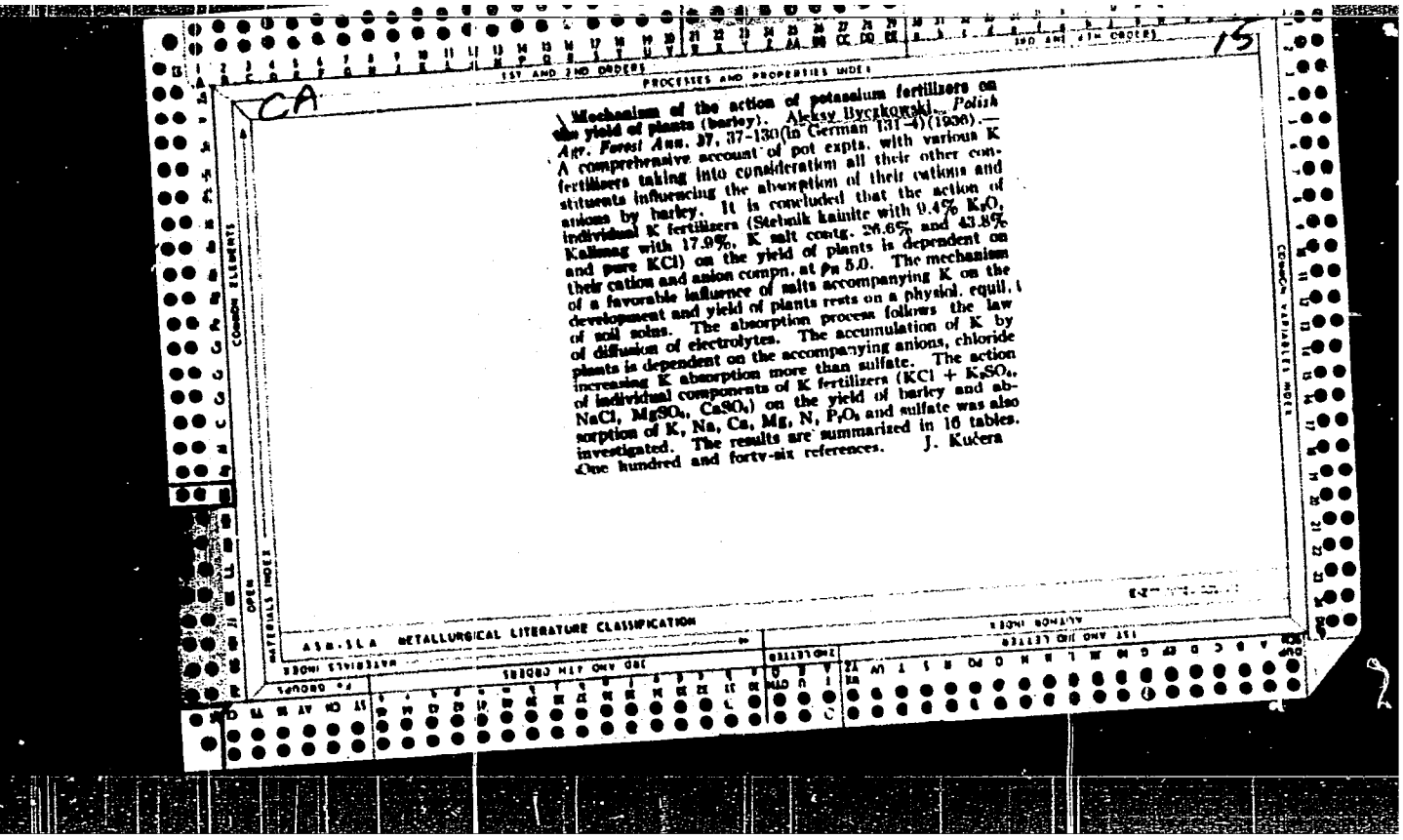


The influence of the form of potassium fertilization on the chemical composition of plants. F. Terlikowski, A. Bycakowski and S. Szczański. *Polish Agr. Forest Symp.* 31, 133-38(138-40 in English)(1934); cf. *C. A.* 28, 2103⁹.—In fertilization with kainite, the contents of K and Ca in all plants analyzed, as well as K and Ca assimilation, were lower, while the Na content and yield were higher than with the high-K fertilizer. Fertilization with kainite increases the Mg content of plants. Owing to the presence of Na, and possibly also of Mg, K of kainite can be consumed more economically in certain soil conditions than K of high-K salts. The use of high-K salt induces a higher assimilation of soil cations by plants, especially of Ca. The chloride and sulfate contents and assimilation are always higher in kainite fertilization. The influence of K fertilization on P assimilation was not established. The N content and assimilation were lower with kainite fertilization.

J. Kubera



Changes in the cation composition in the sorption complex of the soil in relation to the form of potassium fertilization. F. Terlikowski, A. Byczkowski and S. Sosnaski. *Polish Agr. Forest Ann.* 57, 9–19(in German 19–30)(1936).—Five soils under the influence of various fertilizers (Stebnik laminite contg. 9.5% K_2O, Stassfurt salts with 43.2% K_2O and pure KCl) showed differences in sorption capacity and in the adsorbed cations. In all soils the K fertilizers effected a decalcification of the sorption complex which was more pronounced with fertilizers with a higher content of impurities. The amt. of exchangeable K increased under the influence of K salts, and the amts. of Na and Mg in exchangeable form increased with increasing contents of these elements in the fertilizers applied. J. Kuśera



CA

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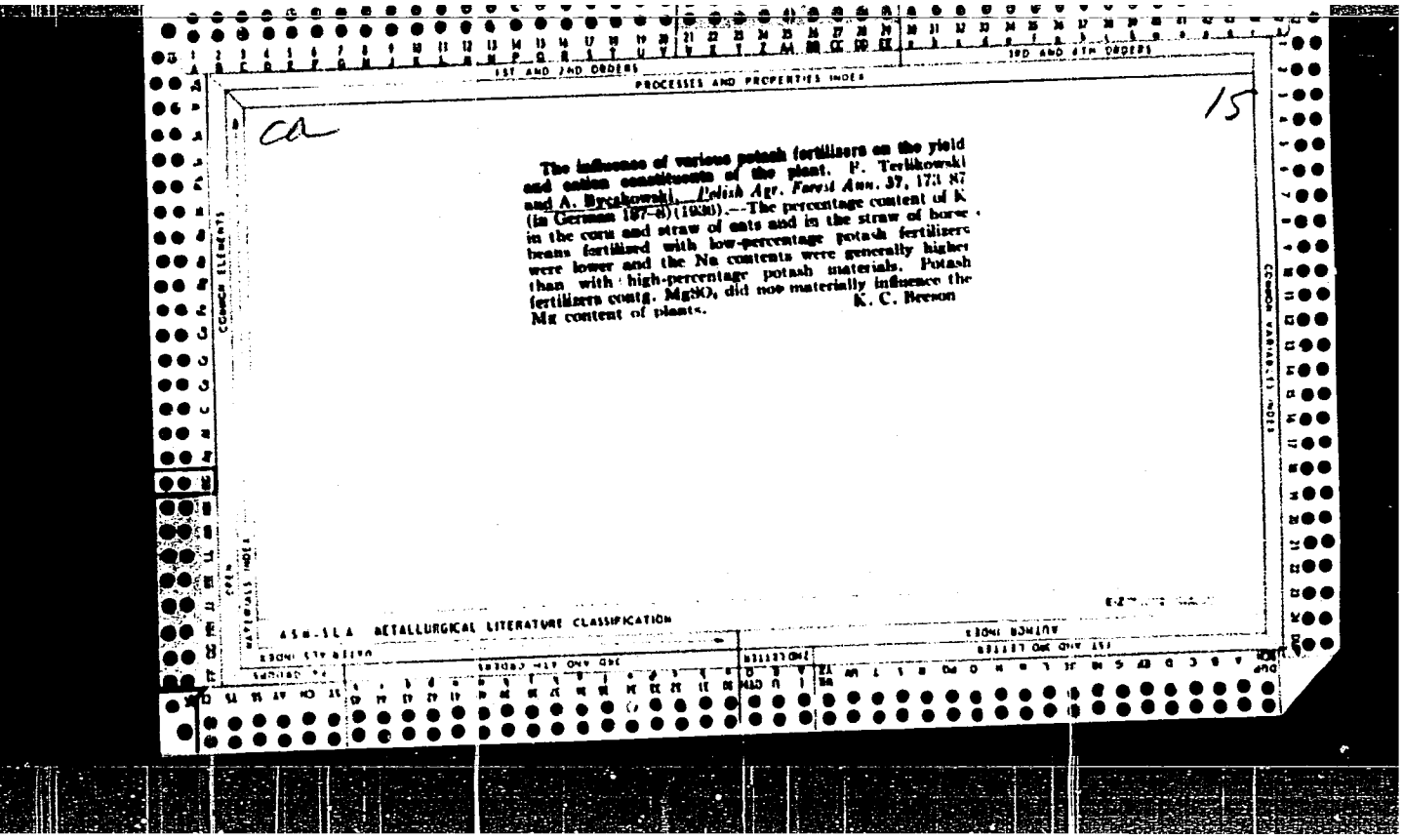
Mechanism of the action of potassium fertilizers on the yield of plants (barley). Aleksy Byczkowski. *Polish Agr. Forest Ann.* 37, 37-130(In German 131-4)(1936).—A comprehensive account of pot expts. with various K fertilizers taking into consideration all their other constituents influencing the absorption of their cations and anions by barley. It is concluded that the action of individual K fertilizers (Stebnik kainite with 9.4% K_2O, Kalimag with 17.9% K salt contg. 26.6% and 43.8% and pure KCl) on the yield of plants is dependent on their cation and anion compn. at *Ph* 5.0. The mechanism of a favorable influence of salts accompanying K on the development and yield of plants rests on a physiol. equil. of diffusion of electrolytes. The absorption process follows the law of soil solns. The accumulation of K by plants is dependent on the accompanying anions, chloride increasing K absorption more than sulfate. The action of individual components of K fertilizers (KCl + K_2SO_4, NaCl, $MgSO_4$, $CaSO_4$) on the yield of barley and absorption of K, Na, Ca, Mg, N, P_2O_5 and sulfate was also investigated. The results are summarized in 16 tables. One hundred and forty-six references. J. Kučera



PROCESSES AND PROPERTIES INDEX

CA

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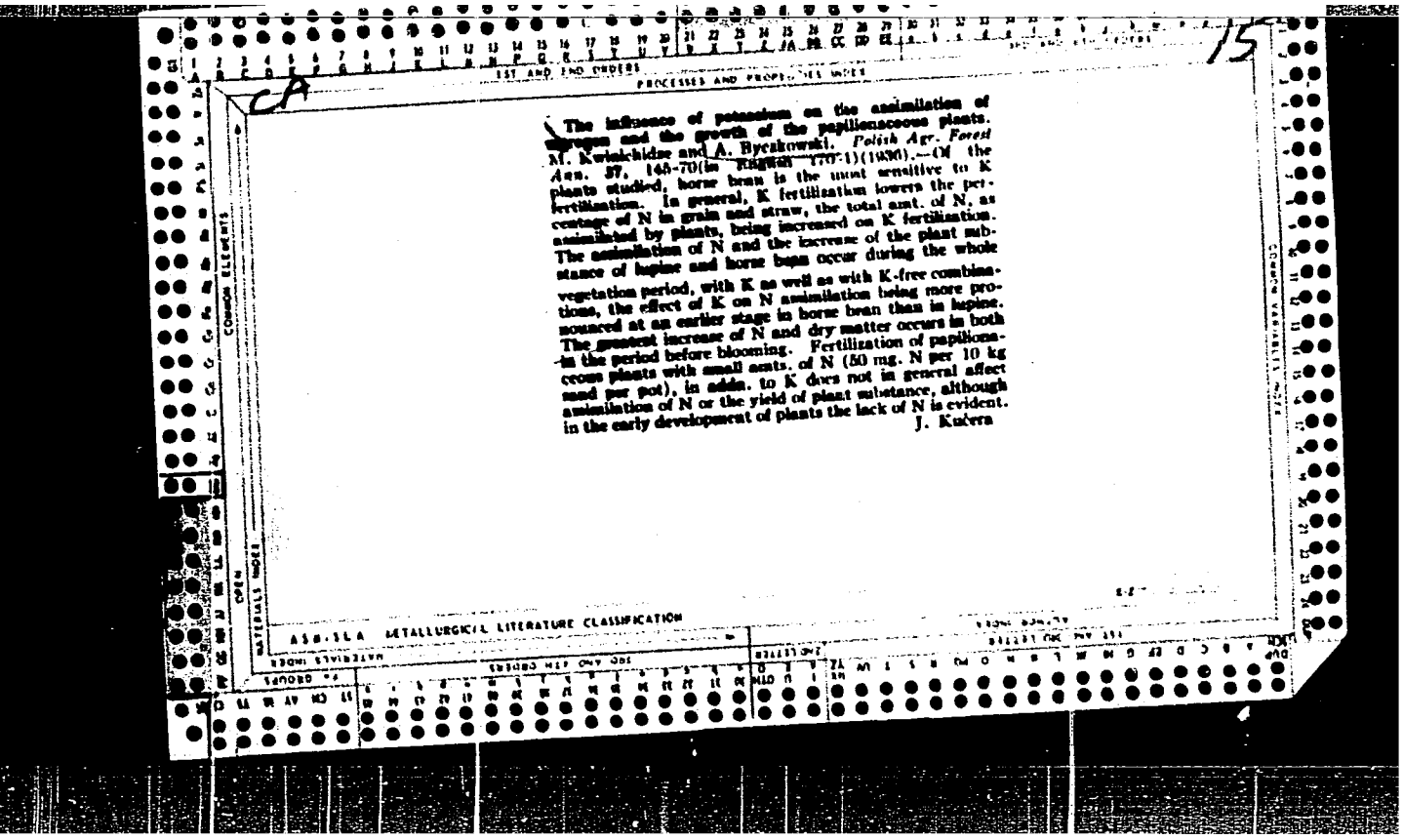
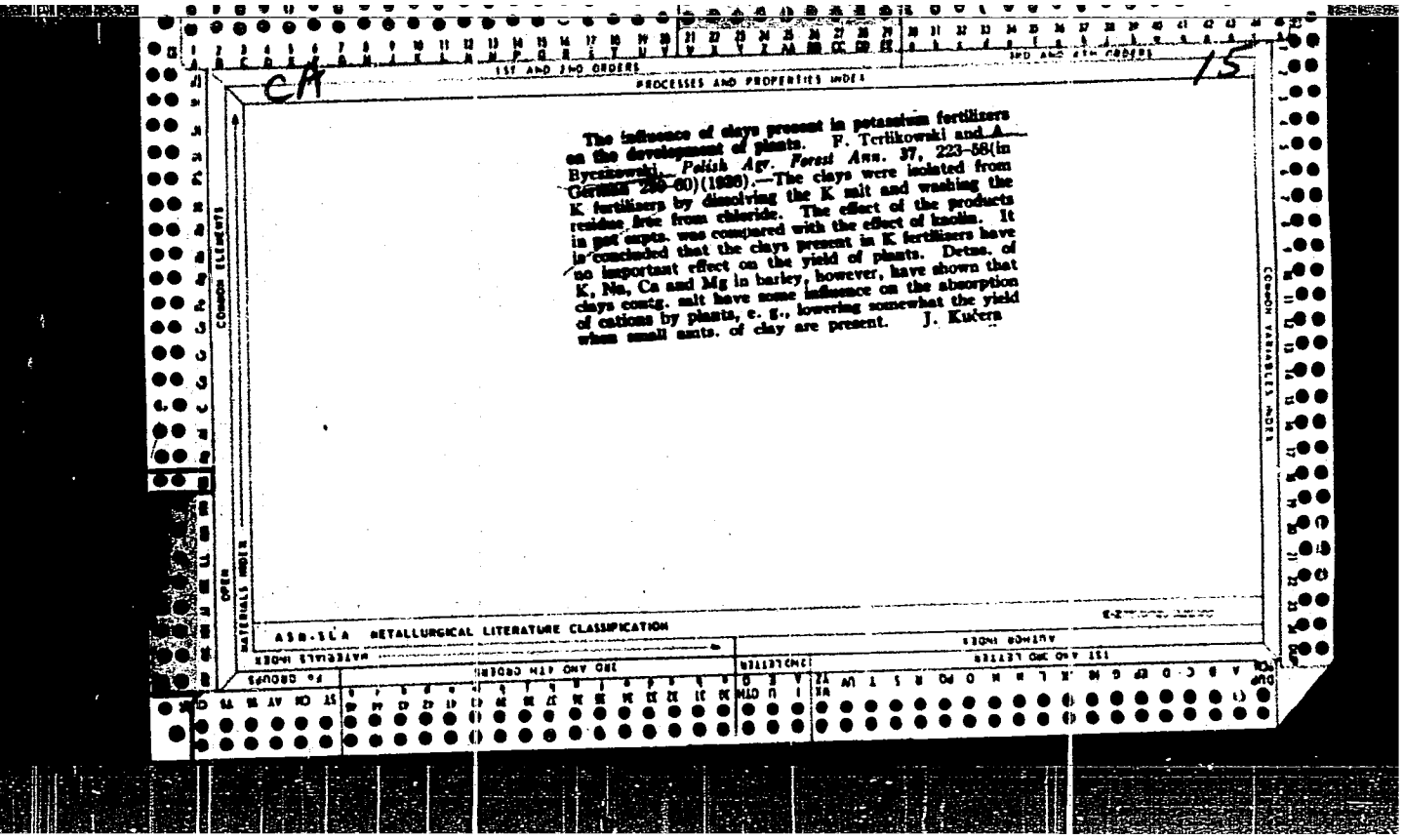
The influence of various potash fertilizers on the yield and cation constituents of the plant. F. Terlikowski and A. Brzakowski. *Polish Agr. Forest Ann.* 37, 173-87 (in German 187-8)(1958).—The percentage content of K in the corn and straw of oats and in the straw of horse beans fertilized with low-percentage potash fertilizers were lower and the Na contents were generally higher than with high-percentage potash materials. Potash fertilizers contg. MgSO, did not materially influence the Mg content of plants. K. C. Berger

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION



The influence of potassium on the assimilation of nitrogen and the growth of the papilionaceous plants. M. Kwiatkiska and A. Byczkowski. *Polish Agr. Forest Ann.* 37, 145-70(in English 177-1)(1930).—Of the plants studied, horse bean is the most sensitive to K fertilization. In general, K fertilization lowers the percentage of N in grain and straw, the total amt. of N, as assimilated by plants, being increased on K fertilization. The assimilation of N and the increase of the plant substance of lupine and horse bean occur during the whole vegetation period, with K as well as with K-free combinations, the effect of K on N assimilation being more pronounced at an earlier stage in horse bean than in lupine. The greatest increase of N and dry matter occurs in both in the period before blooming. Fertilization of papilionaceous plants with small amts. of N (50 mg. N per 10 kg sand per pot), in addn. to K does not in general affect assimilation of N or the yield of plant substance, although in the early development of plants the lack of N is evident.

J. Kulvra



CA

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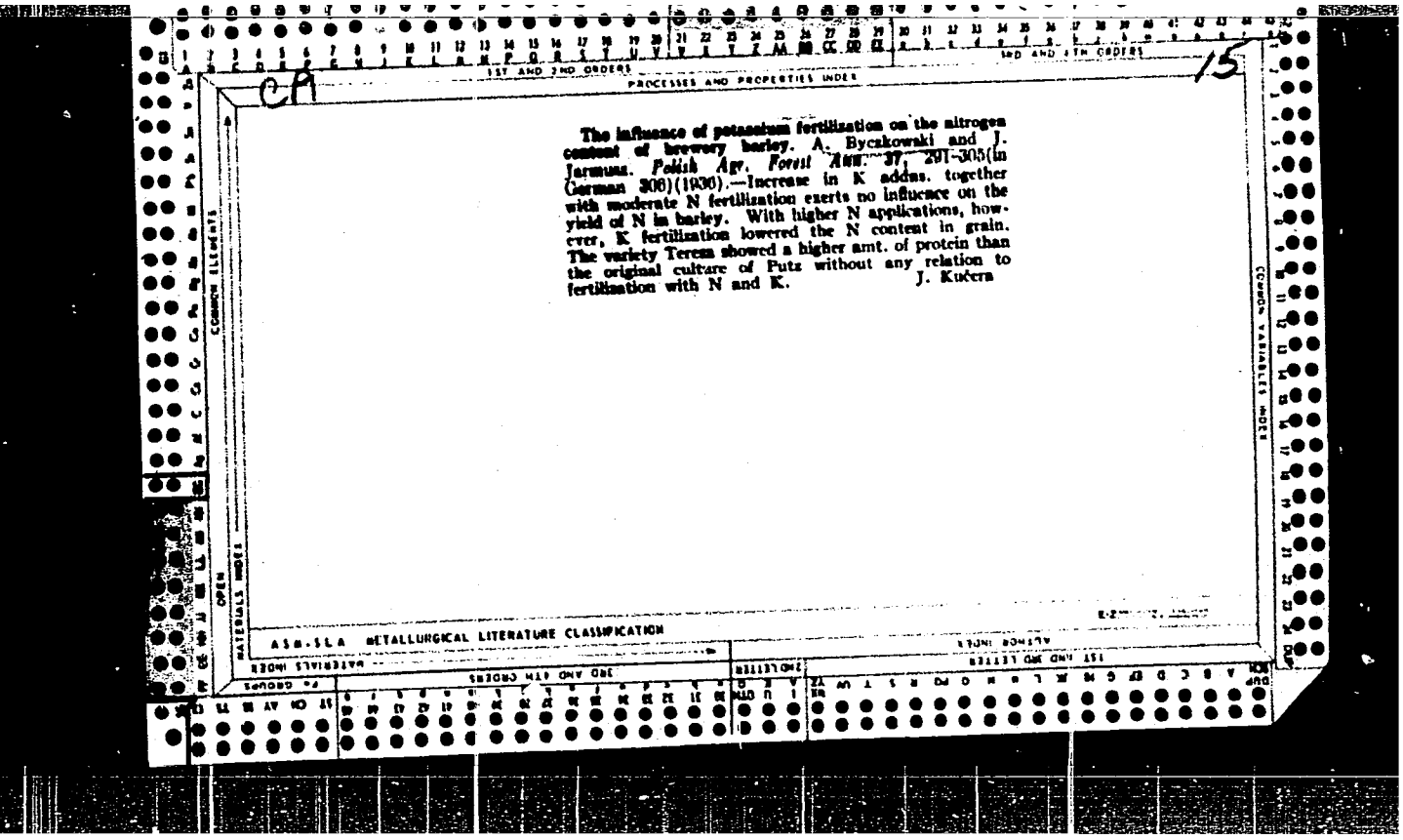
PROCESSES AND PROPERTIES INDEX

The influence of clays present in potassium fertilizers on the development of plants. F. Tertikowski and A. Byczkowski. *Polish Agr. Forest Ann.* 37, 223–58(in German 259–60)(1930).—The clays were isolated from K fertilizers by dissolving the K salt and washing the residue free from chloride. The effect of the products in pot expts. was compared with the effect of kaolin. It is concluded that the clays present in K fertilizers have no important effect on the yield of plants. Detns. of K, Na, Ca and Mg in barley, however, have shown that clays contg. salt have some influence on the absorption of cations by plants, e. g., lowering somewhat the yield when small amts. of clay are present. J. Kuéra

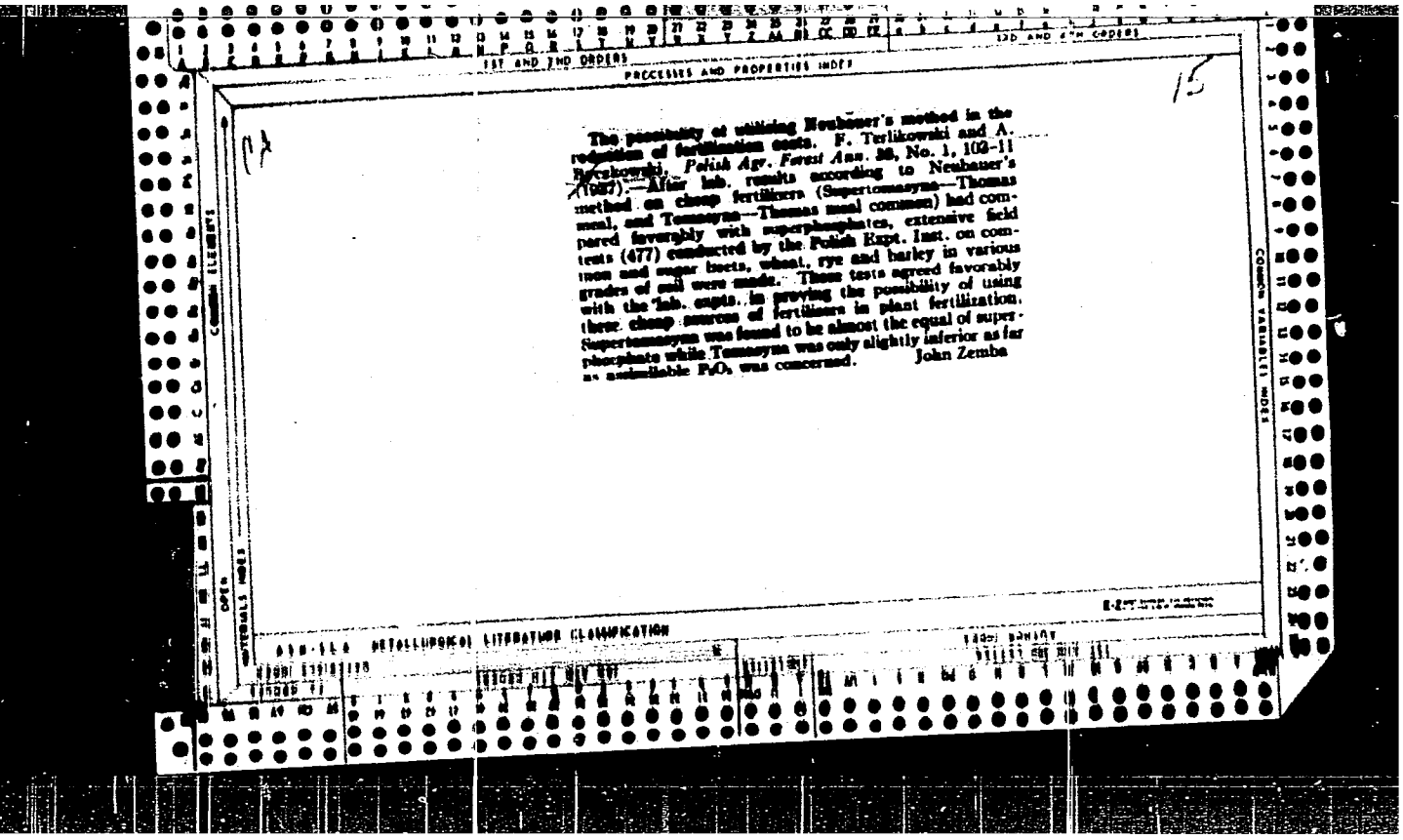
ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION



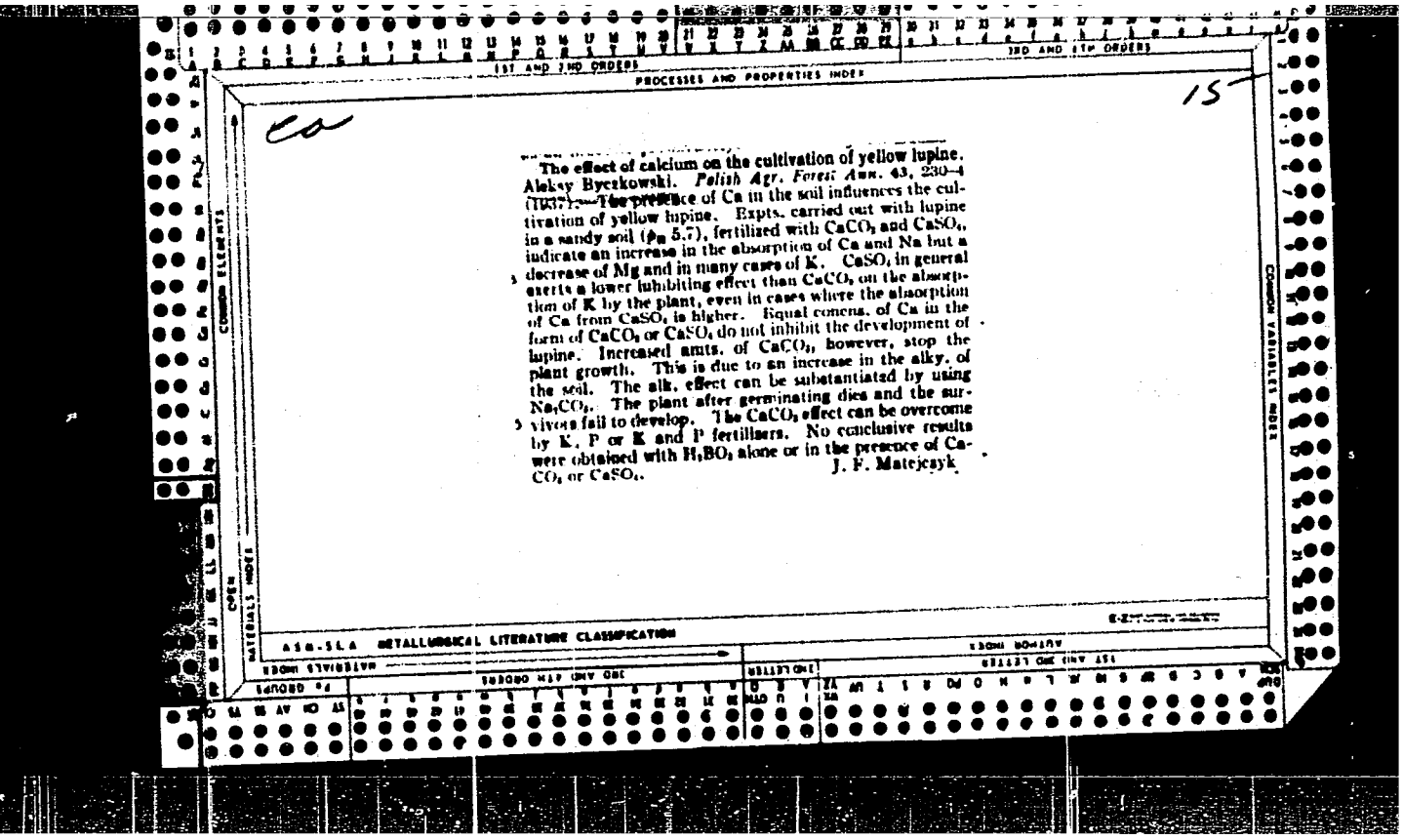
PROCESSES AND PROPERTIES INDEX

The influence of potassium fertilization on the nitrogen content of brewery barley. A. Bycakowski and J. Jarmuss. *Polish Agr. Forest Ann.* 37, 291-305(in German 306)(1930).—Increase in K addns. together with moderate N fertilization exerts no influence on the yield of N in barley. With higher N applications, however, K fertilization lowered the N content in grain. The variety Terem showed a higher amt. of protein than the original culture of Putz without any relation to fertilization with N and K. J. Kučera

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION



The possibility of utilizing Neubauer's method in the reduction of fertilization costs. F. Terlikowski and A. Terlikowski. *Polish Agr. Forest Ann.* 38, No. 1, 103–11 (1937).—After lab. results according to Neubauer's method on cheap fertilizers (Supertomasyna—Thomas meal, and Tomasyna—Thomas meal common) had compared favorably with superphosphates, extensive field tests (477) conducted by the Polish Expt. Inst. on common and sugar beets, wheat, rye and barley in various grades of soil were made. These tests agreed favorably with the lab. expts. in proving the possibility of using these cheap sources of fertilizers in plant fertilization. Supertomasyna was found to be almost the equal of superphosphate while Tomasyna was only slightly inferior as far as available P_2O_5 was concerned. John Zemba



PROCESSES AND PROPERTIES INDEX

Ca

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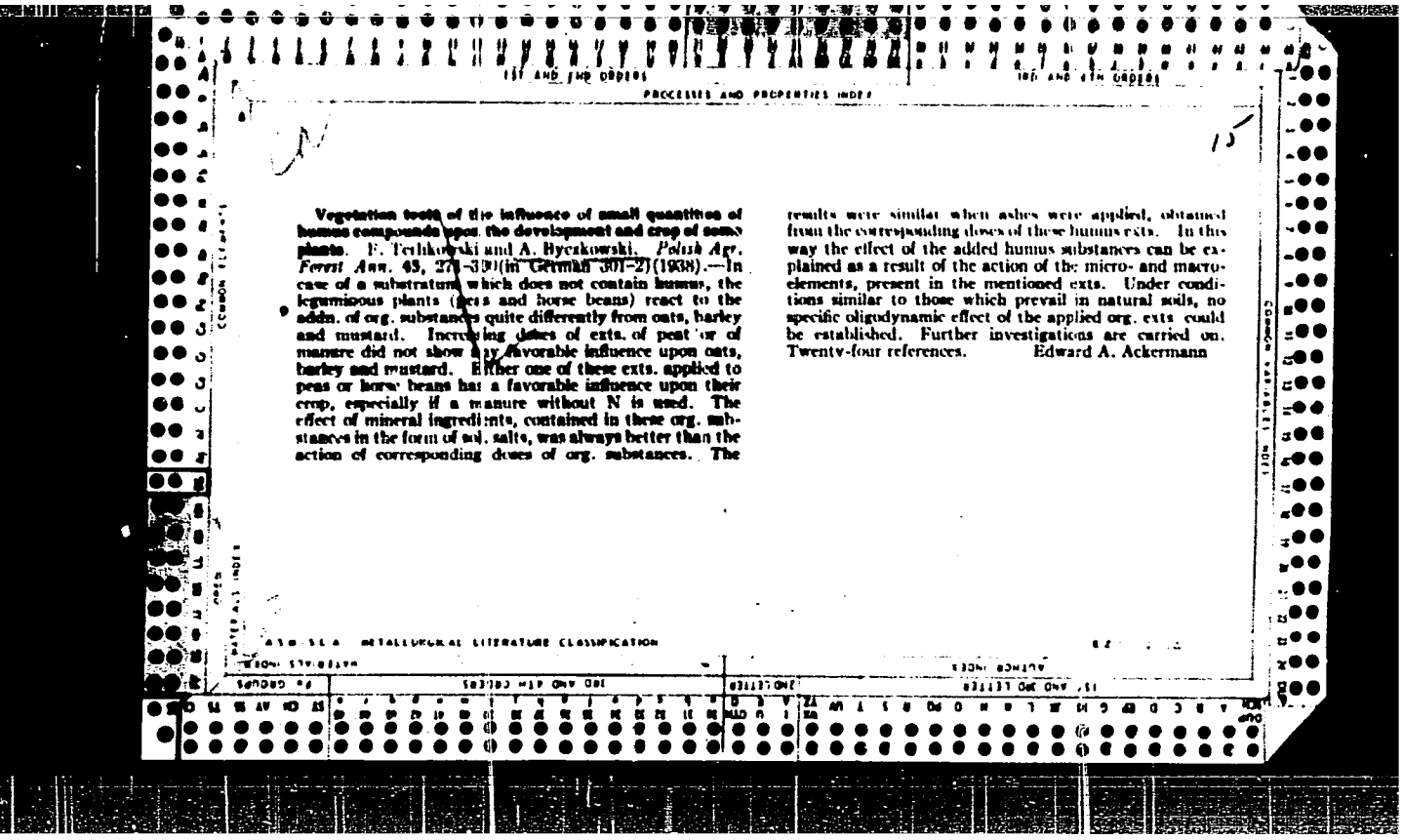
The effect of calcium on the cultivation of yellow lupine. Aleksy Byczkowski. *Polish Agr. Forest. Ann.* 43, 230–4 (1937).—The presence of Ca in the soil influences the cultivation of yellow lupine. Expts. carried out with lupine in a sandy soil (pH 5.7), fertilized with $CaCO_3$ and $CaSO_4$, indicate an increase in the absorption of Ca and Na but a decrease of Mg and in many cases of K. $CaSO_4$ in general exerts a lower inhibiting effect than $CaCO_3$ on the absorption of K by the plant, even in cases where the absorption of Ca from $CaSO_4$ is higher. Equal concns. of Ca in the form of $CaCO_3$ or $CaSO_4$ do not inhibit the development of lupine. Increased amts. of $CaCO_3$, however, stop the plant growth. This is due to an increase in the alky. of the soil. The alk. effect can be substantiated by using Na_2CO_3. The plant after germinating dies and the survivors fail to develop. The $CaCO_3$ effect can be overcome by K, P or K and P fertilizers. No conclusive results were obtained with H_3BO_3 alone or in the presence of $CaCO_3$ or $CaSO_4$.

J. F. Matejcnyk

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION



PROCESSES AND PROPERTIES INDEX

Vegetation tests of the influence of small quantities of humus compounds upon the development and crop of some plants. F. Tchikowski and A. Byczakowski. *Polish Agr. Forest Ann.* 45, 27–39 (in German 301–2) (1938).—In case of a substratum which does not contain humus, the leguminous plants (peas and horse beans) react to the addn. of org. substances quite differently from oats, barley and mustard. Increasing doses of exts. of peat or of manure did not show any favorable influence upon oats, barley and mustard. Either one of these exts. applied to peas or horse beans had a favorable influence upon their crop, especially if a manure without N is used. The effect of mineral ingredients, contained in these org. substances in the form of sol. salts, was always better than the action of corresponding doses of org. substances. The results were similar when ashes were applied, obtained from the corresponding doses of these humus exts. In this way the effect of the added humus substances can be explained as a result of the action of the micro- and macroelements, present in the mentioned exts. Under conditions similar to those which prevail in natural soils, no specific oligodynamic effect of the applied org. exts could be established. Further investigations are carried on. Twenty-four references. Edward A. Ackermann

BYCZKOWSKI, A

Fertilizing effect of ammonia solutions compared with sodium nitrate, ammonium nitrate, and ammonium sulfate. A. Byczkowski and M. Batalin. *Roczniki Nauk Rolniczych* 69, No. 1: 65–77(1954).—The fertilizing effect of a 20% NH_3 soln. applied as a dressing to oats and barley was but slightly lower than the effect of $NaNO_3$ (I) and equal to the effect of NH_4NO_3 (II). In soil conditions, the N of NH_3 was absorbed more slowly and in smaller quantities by oats and barley than in the case with I and II. The more rapid absorption of nitrate N gave as a consequence more energetic production of vegetative org. matter which resulted in higher yields. The most energetic absorption of N was noted in the case of young plants during tillering. The results of expts. over a 3-year period proved that applying a 20% NH_3 soln. at later stages of plant development could not be recommended. In potatoes, NH_3 gave the highest yields when applied before planting the seed potatoes; application of the 20% soln. during vegetation before the first or second ridging gave less satisfactory crops. E. G. J.

BYCZKOWSKI, A

POL

Absorption of nitrogen from ammonia and its fertilizing effect in relation to the method of application. A. Byczkowski and M. Ostromęcka. *Roczniki Nauk Rolniczych*, Ser. A 69, No. 1, 79–92(1954).—One application of the total dose of NH_3 during the initial period of development of oats, summer rape, and flax gave in effect the same absorption of N by the plants as in the case of $NaNO_3$. Application of NH_3 as a top dressing in several small doses decreased the absorption of N by the plants as well as its fertilizing effect on yields. On the basis of the results, it was recommended that NH_3 be applied before seeding.

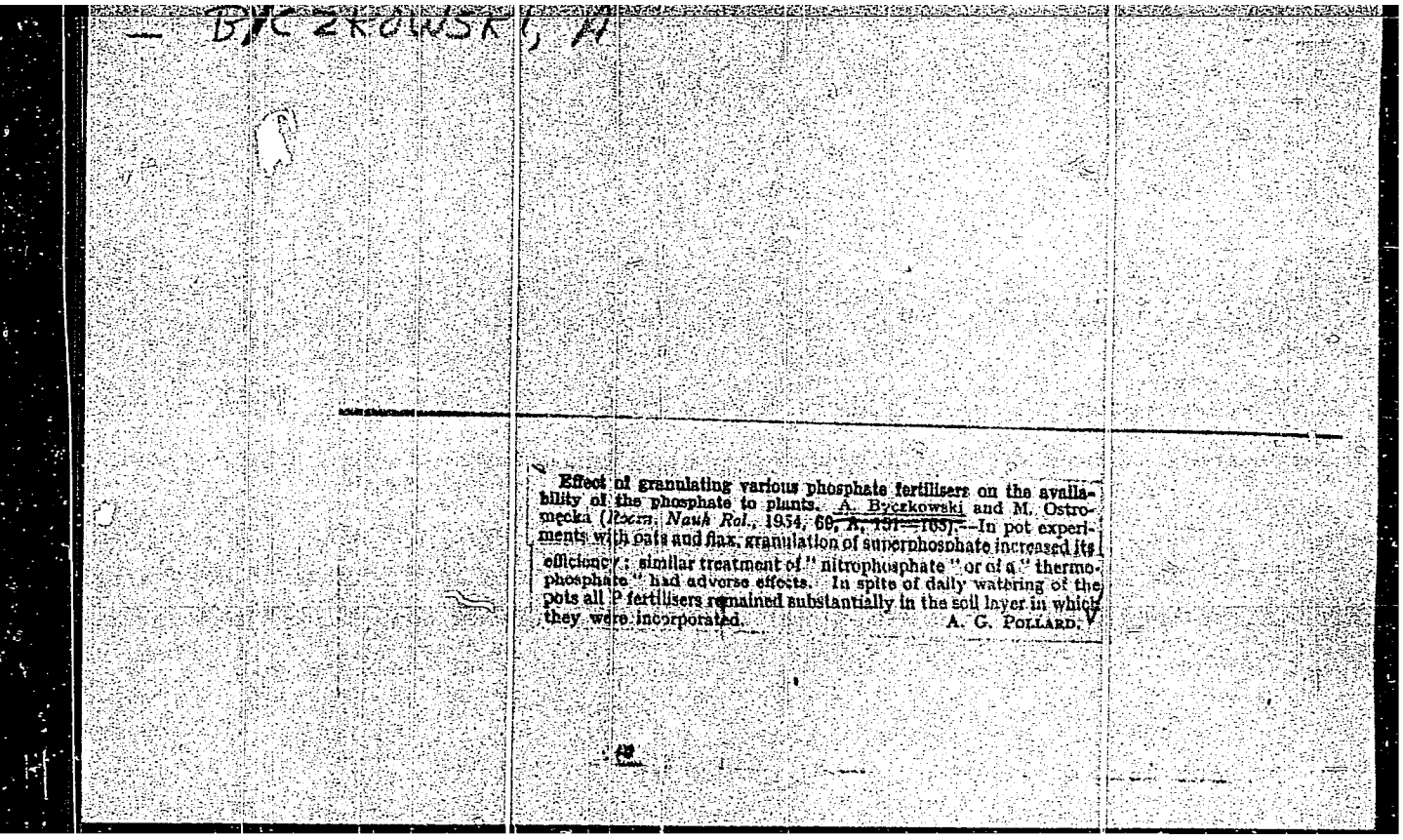
Ernest G. Jaworski

Byczkowski, A.

POL

V. The fertilizing effect of nitrate ammonium ammoniate as compared with other nitrogenous fertilizers. A. Byczkowski and M. Seidler. *Roczniki Nauk Rolniczych, Ser. A*, 69, No. 1, 93–100 (1954).—The fertilizing effect of the ammoniate, a liquid with a sp. wt. of 1.115 contg. 16.3% ammonium nitrate N and 13.8% ammonia N in a water soln., on the final yields of oats and barley was in general similar to the effect of $NaNO_3$, NH_4NO_3, and NH_3. The final yields of barley indicated a somewhat better effect of nitrates as compared with the ammoniate. The opposite was true during the stage of tillering. Oats showed a somewhat higher yield on the ammoniate than on other nitrogenous fertilizers. Barley absorbed N from $NaNO_3$ and NH_3 more intensively than N from NH_4NO_3 and the ammoniate. Oats absorbed N almost equally well from all of the fertilizers studied. Absorption was somewhat greater only in the case of NH_3.

Ernest G. Jaworski



— BYCZKOWSKI, A

Effect of granulating various phosphate fertilisers on the availability of the phosphate to plants. A. Byczkowski and M. Ostromecka (*Roczn. Nauk Rol.*, 1954, 69, A, 191–195).—In pot experiments with oats and flax, granulation of superphosphate increased its efficiency; similar treatment of "nitrophosphate" or of a "thermophosphate" had adverse effects. In spite of daily watering of the pots all P fertilisers remained substantially in the soil layer in which they were incorporated.

A. G. POLLARD.

BYCZKOWSKI, A

J-3

POLAND/Soil Science - Mineral Fertilizers.

Abs Jour : Ref Zhur - Biologiya, No 2, 1958, 5770

Author : Byczkowski, A., Birecka, H., Boratynski, K.
Inst :
Title : Knotty Problems of the Fertilization of Light Soils.

Orig Pub : Zesz. probl. nauki polsk., 1956, No 6, 175-200. Dyskus, 303-363, (Polish)

Abstract : In Skernevitsi when 20 T./hectare of manure were applied to light podzolic soil over a period of 25 years the humus content increased by 0.39%, i.e., 57% of the humus brought in with the manure during that period. In Germany (Nederling), when 40 T./hectare were applied yearly to light argillaceous soil, the humus content increased by 0.52% over the course of 18 years, i.e., 79% of the humus brought in with the manure. It is considered that 30% of the carbon in the manure is in the form of humus, and that 1/2 of this quantity can be preserved for an extended

Card 1/2

BOGUSZEWSKI, W.; BORATYNSKI, K.; BYCZKOWSKI, A.

Materials for the evaluation of the effectiveness of mineral fertilization of the main cereals cultivated in Poland on the basis of field experiments. Postepy nauk roln 9 no.1:3-25 Ja-F '62.

CA BYCZKOWSKI, S.

Vitamin A in codfish oils of Polish origin. Stanisław Byczkowski (Acad. Med., Gdańsk, Poland). *Farm. Polska* 7, 203–7(1951).—Domestic codfish oils and imported products contained a similar amt. of vitamin A. Exposure to air and light, as well as addn. of hydroquinone as antioxidant, had a similar effect upon the stability of both domestic and imported oils. Edward A. Ackermann

BYCZKOWSKI, S.

Natural ultrafiltration of human blood during a change in posture. Polski tygod. lek. 7 no. 29-30:923-925 28 July 1952. (CLML 23:5)

1. Of the Institute of Physiological Chemistry (Head--Prof. Wlodzimierz Mozolowski, M.D.) of Gdansk Medical Academy.

BYCZKOWSKI, S.

"Research Concerning the Use of Whale Oil for Medical Purposes." p.302
(PRZEMYSL ROLNY I SPOZYWCZY Vol. 7, no. 8, August 1953 Warszawa, Poland)

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

POLAND

BYCZKOWSKI, Stanislaw, Prof. Dr., Director of the Chair of Toxicological and Legal Chemistry (Katedra Chemii Toksykologicznej is Sadowej), Medical Academy (Akademia Medyczna) in Gdansk

"Science, Drugs, and Medicine."

Warsaw, Farmacja Polska, Vol 19, No 6, 25 Mar 63, pp 103-106.

Abstract: In speech opening academic year, author delves on the contributions of scientific research to conversion of medicine from an empirical to exact science. He particularly mentions contribution of chemical studies of metabolism, vitamins, enzymes, and the whole field of drugs and the connection between molecular configuration and biological action. It is, however, man who decides whether this knowledge is used for the benefit or destruction of mankind, citing Hiroshima, Hitler, and "soap and lamp" work done in the very buildings of this academy. Hence, the development of character and ideals are as important to medical students as medical knowledge itself. No references.

1/1

BYCZKOWSKI, Stanislaw, dr dr med.; KOPCZYNSKI, Witold; MINCER, Tadeusz; SENCZUK, Witold; ZEGARSKI, Witold.

Degree of risk of being poisoned by lead for painter maintenance men employed in the ship industry. Bud okretowe Warszawa 9 no.5:155-156 My '64

1. School of Medicine, Gdansk, and Voivodeship Station for Sanitation and Epidemiology, Gdansk.