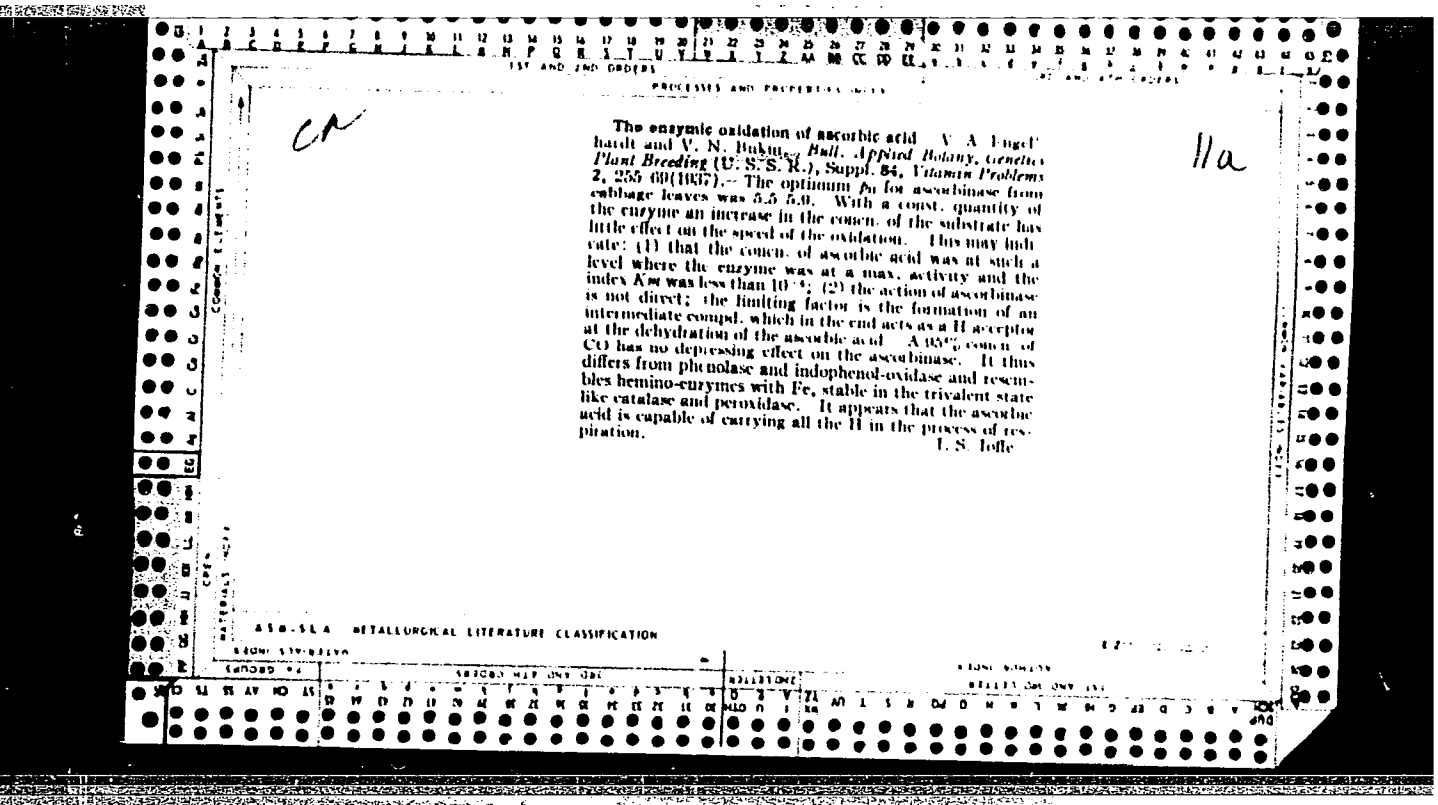
"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307410012-3



CA

11a

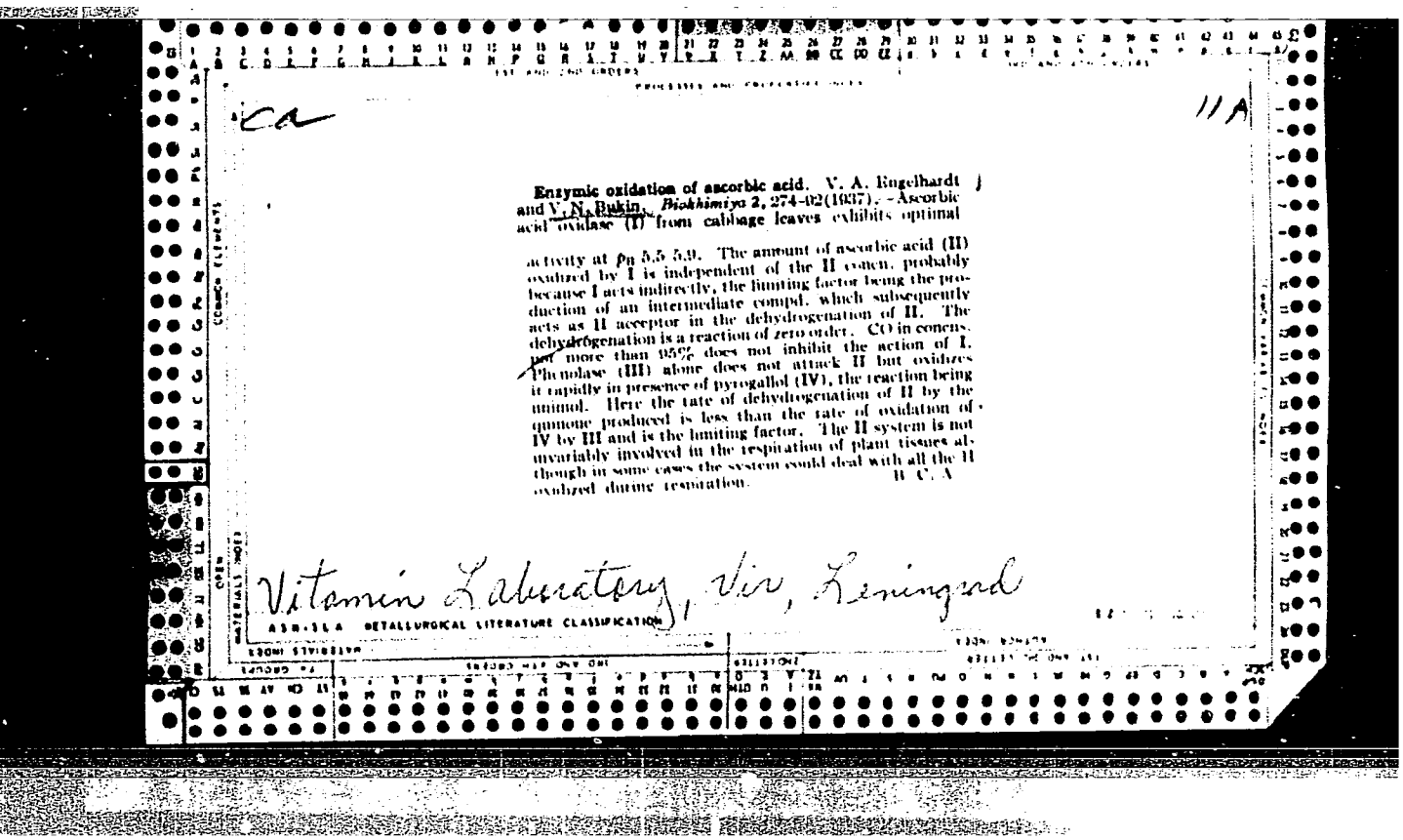
The enzymic oxidation of ascorbic acid V. A. Engel'hardt and V. N. Bukin, *Bull. Applied Botany, Genetics Plant Breeding* (U. S. S. R.), Suppl. 84, *Vitamin Problems* 2, 255-69(1937).—The optimum p_H for ascorbinase from cabbage leaves was 5.5-5.9. With a const. quantity of the enzyme an increase in the concn. of the substrate has little effect on the speed of the oxidation. This may indicate: (1) that the concn. of ascorbic acid was at such a level where the enzyme was at a max. activity and the index K_M was less than 10^{-4}; (2) the action of ascorbinase is not direct; the limiting factor is the formation of an intermediate compd. which in the end acts as a H acceptor at the dehydration of the ascorbic acid. A 95% concn. of CO has no depressing effect on the ascorbinase. It thus differs from phenolase and indophenol-oxidase and resembles hemino-enzymes with Fe, stable in the trivalent state like catalase and peroxidase. It appears that the ascorbic acid is capable of carrying all the H in the process of respiration.

I. S. Ioffe

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307410012-3"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307410012-3



Ca

IIA

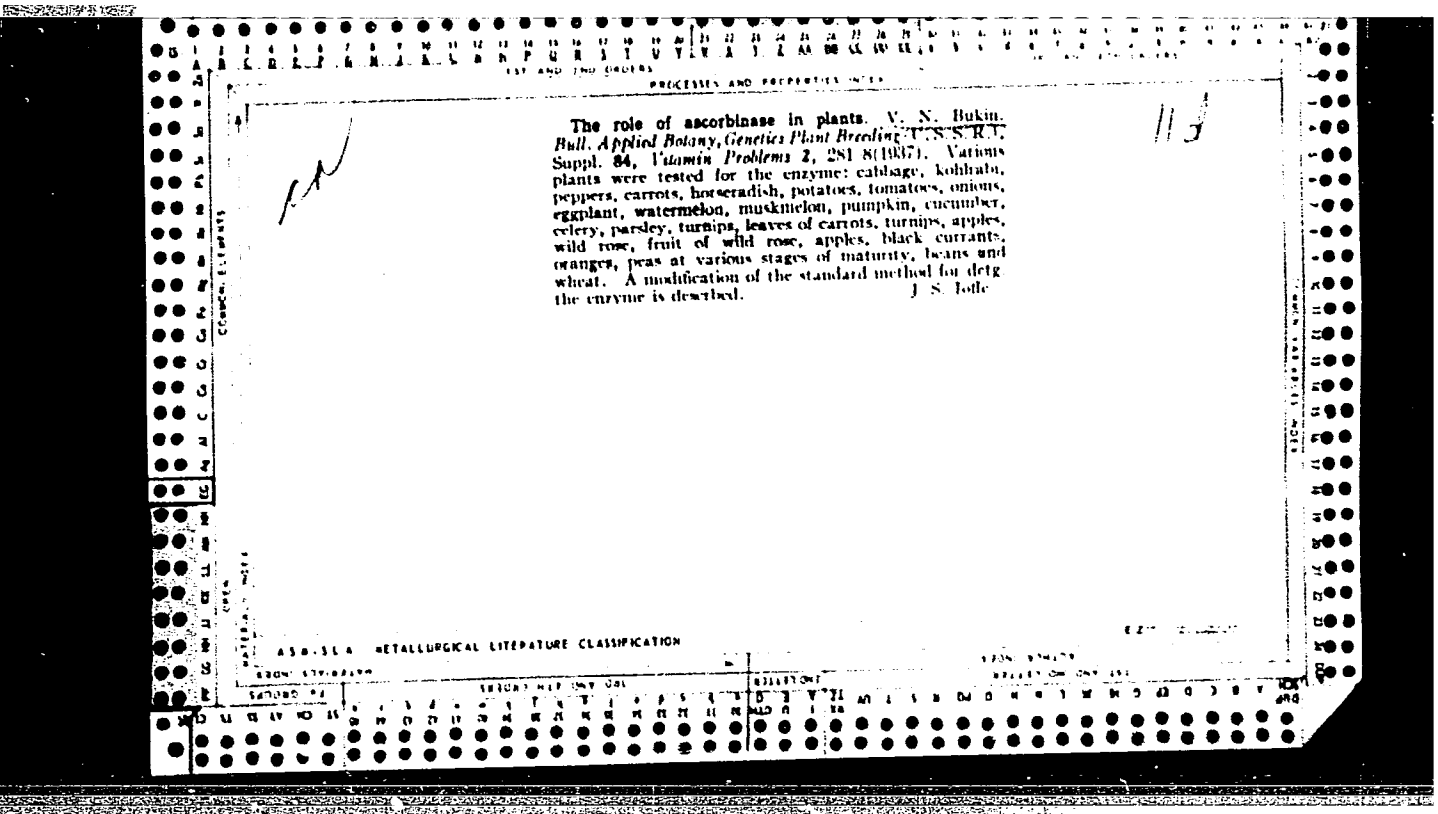
Enzymic oxidation of ascorbic acid. V. A. Engelhardt and V. N. Bukin. *Biokhimiya* 2, 274-92(1937).—Ascorbic acid oxidase (I) from cabbage leaves exhibits optimal activity at *p*H 5.5-5.9. The amount of ascorbic acid (II) oxidized by I is independent of the II concn. probably because I acts indirectly, the limiting factor being the production of an intermediate compd. which subsequently acts as H acceptor in the dehydrogenation of II. The dehydrogenation is a reaction of zero order. CO in concns. not more than 95% does not inhibit the action of I. Phenolase (III) alone does not attack II but oxidizes it rapidly in presence of pyrogallol (IV), the reaction being uninol. Here the rate of dehydrogenation of II by the quinone produced is less than the rate of oxidation of IV by III and is the limiting factor. The II system is not invariably involved in the respiration of plant tissues although in some cases the system could deal with all the II oxidized during respiration. H. C. A

Vitamin Laboratory, Vir, Leningrad

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307410012-3"

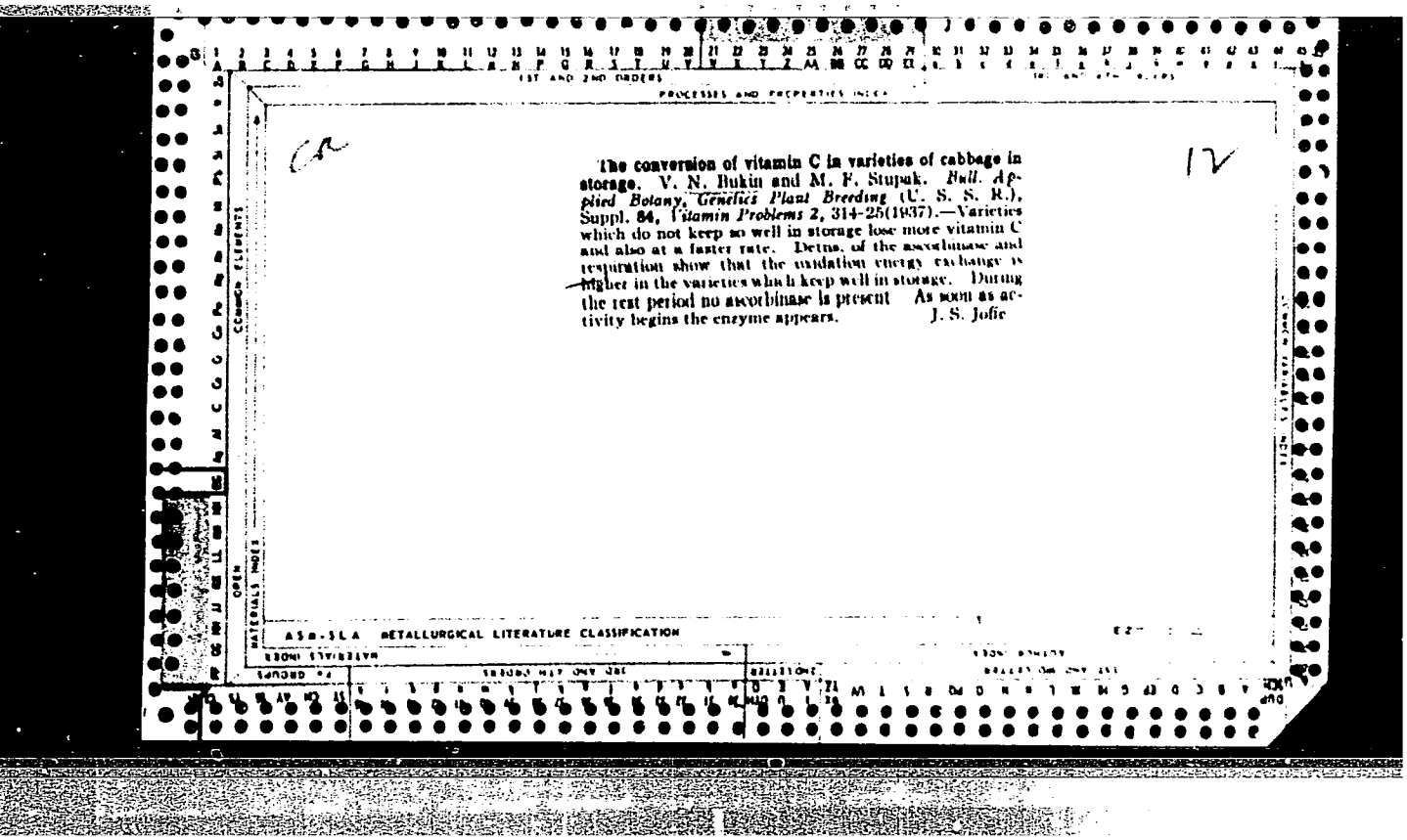
"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307410012-3



The role of ascorbinase in plants. V. N. Bukin. *Bull. Applied Botany, Genetics Plant Breeding* (U.S.S.R.), Suppl. 84, *Vitamin Problems* 2, 281–8(1937). Various plants were tested for the enzyme: cabbage, kohlrabi, peppers, carrots, horseradish, potatoes, tomatoes, onions, eggplant, watermelon, muskmelon, pumpkin, cucumber, celery, parsley, turnips, leaves of carrots, turnips, apples, wild rose, fruit of wild rose, apples, black currants, oranges, peas at various stages of maturity, beans and wheat. A modification of the standard method for detg the enzyme is described. J. S. Jolle

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307410012-3"

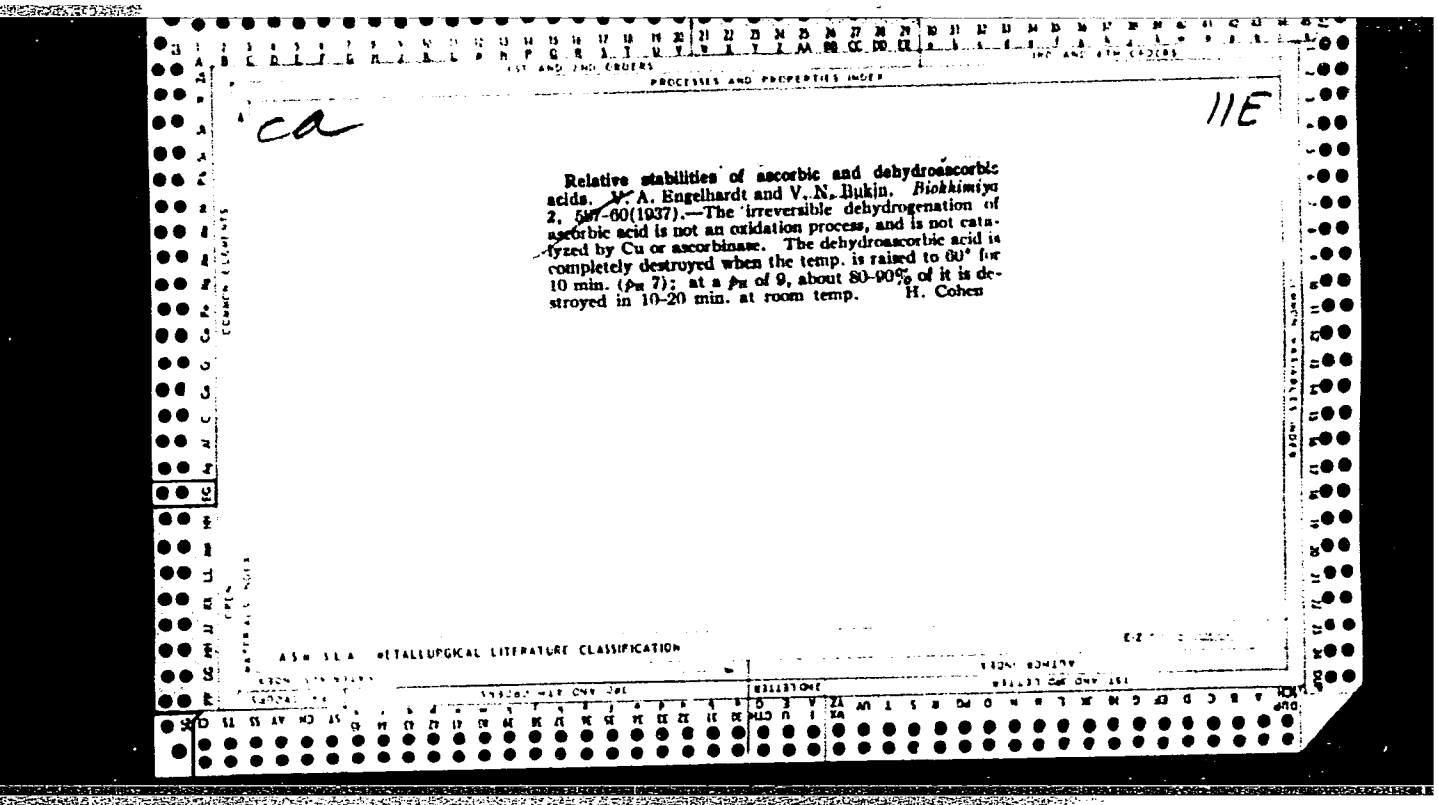
"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307410012-3



The conversion of vitamin C in varieties of cabbage in storage. V. N. Bukin and M. F. Stupak. *Bull. Applied Botany, Genetics Plant Breeding* (U. S. S. R.), Suppl. 84, *Vitamin Problems* 2, 314-25(1937).—Varieties which do not keep so well in storage lose more vitamin C and also at a faster rate. Detns. of the ascorbinase and respiration show that the oxidation energy exchange is higher in the varieties which keep well in storage. During the rest period no ascorbinase is present As soon as activity begins the enzyme appears. J. S. Jofic

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307410012-3"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307410012-3



PROCESSES AND PROPERTIES INDEX

ca

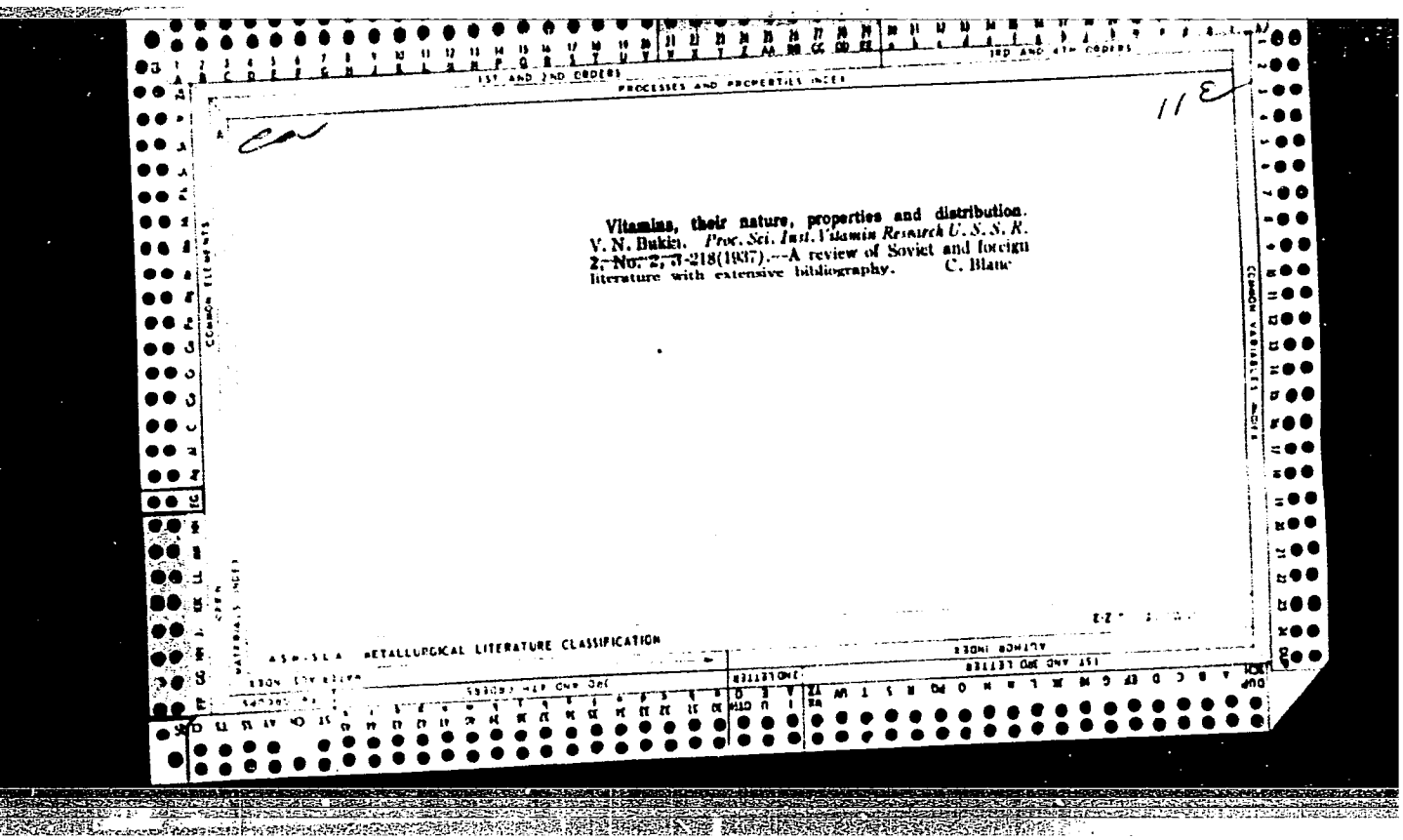
11E

Relative stabilities of ascorbic and dehydroascorbic acids. V. A. Engelhardt and V. N. Bukin. *Biokhimiya* 2, 587-60(1937).—The irreversible dehydrogenation of ascorbic acid is not an oxidation process, and is not catalyzed by Cu or ascorbinase. The dehydroascorbic acid is completely destroyed when the temp. is raised to 60° for 10 min. (p_H 7); at a p_H of 9, about 80-90% of it is destroyed in 10-20 min. at room temp. H. Cohen

ASM METALLURGICAL LITERATURE CLASSIFICATION

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307410012-3"

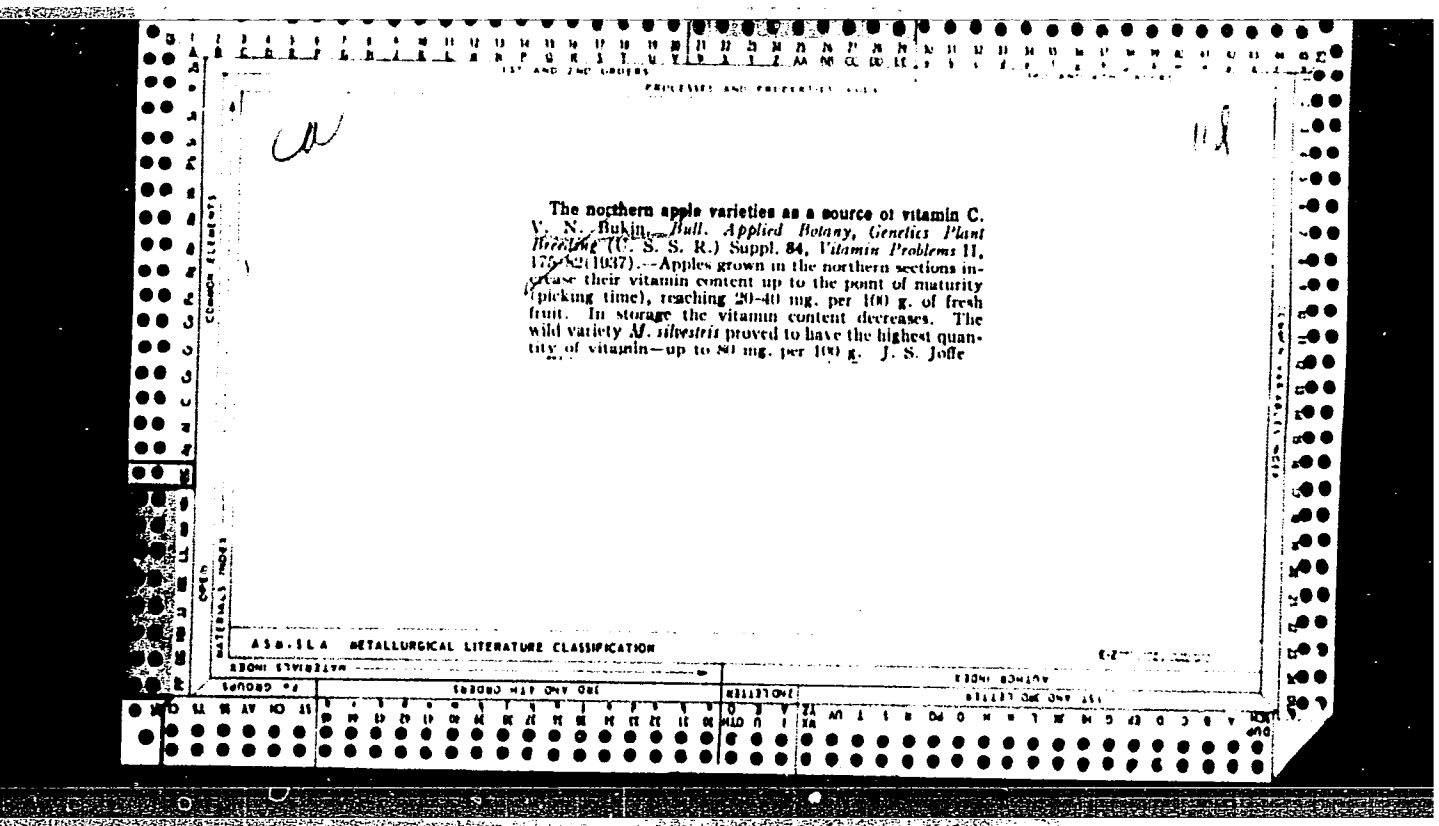
"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307410012-3



Vitamins, their nature, properties and distribution. V. N. Bukin. *Proc. Sci. Inst. Vitamin Research U. S. S. R.* 2, No. 2, 3-218(1937).—A review of Soviet and foreign literature with extensive bibliography. C. Blanc

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307410012-3"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307410012-3

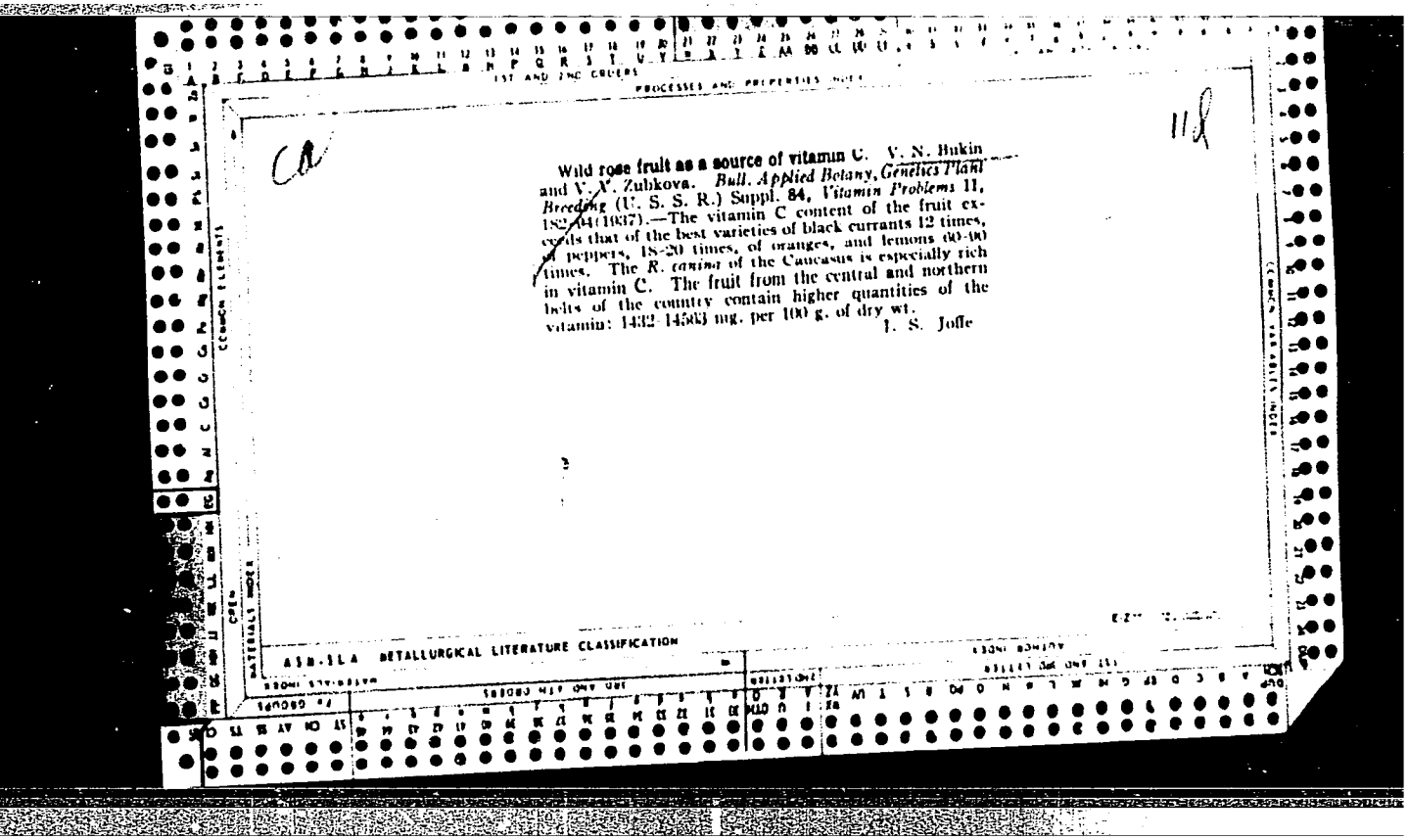


The northern apple varieties as a source of vitamin C. V. N. Bukin. *Bull. Applied Botany, Genetics Plant Breeding* (U. S. S. R.) Suppl. 84, *Vitamin Problems* II, 175–82 (1937).—Apples grown in the northern sections increase their vitamin content up to the point of maturity (picking time), reaching 20–40 mg. per 100 g. of fresh fruit. In storage the vitamin content decreases. The wild variety *M. silvestris* proved to have the highest quantity of vitamin—up to 80 mg. per 100 g. J. S. Joffe

A50.51.4 METALLURGICAL LITERATURE CLASSIFICATION

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307410012-3"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307410012-3

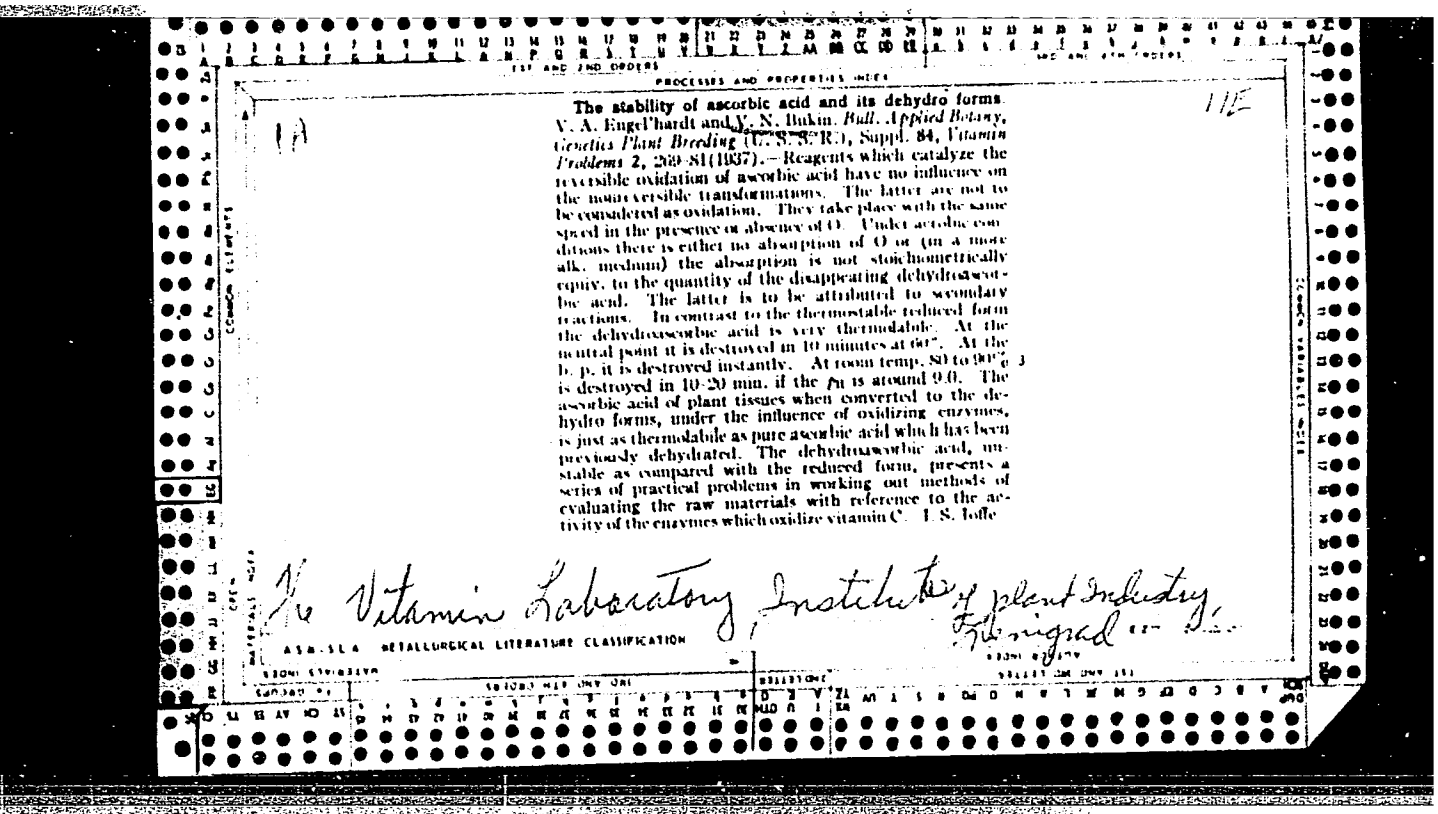


Wild rose fruit as a source of vitamin C. V. N. Bukin and V. V. Zubkova. *Bull. Applied Botany, Genetics Plant Breeding* (U. S. S. R.) Suppl. 84, *Vitamin Problems* II, 182-94(1937).—The vitamin C content of the fruit exceeds that of the best varieties of black currants 12 times, of peppers, 18–20 times, of oranges, and lemons 60–80 times. The *R. canina* of the Caucasus is especially rich in vitamin C. The fruit from the central and northern belts of the country contain higher quantities of the vitamin: 1432–14503 mg. per 100 g. of dry wt.

I. S. Joffe

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307410012-3"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307410012-3



PROCESSES AND PROPERTIES INDEX

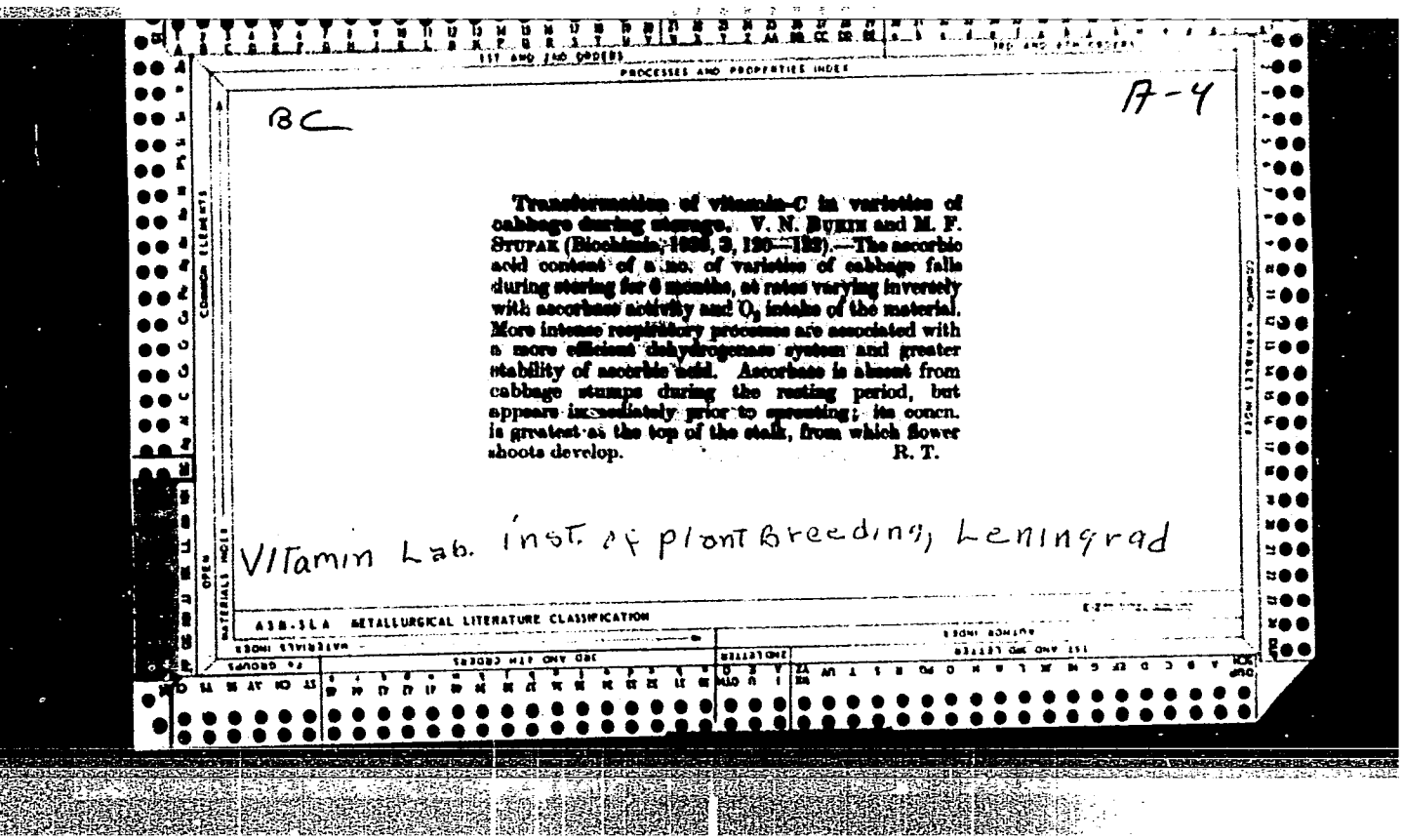
The stability of ascorbic acid and its dehydro forms. V. A. Engel'hardt and V. N. Ilukin. *Bull. Applied Botany, Genetics Plant Breeding* (U.S.S.R.), Suppl. 84, *Vitamin Problems* 2, 269-81 (1937).—Reagents which catalyze the reversible oxidation of ascorbic acid have no influence on the monoreversible transformations. The latter are not to be considered as oxidation. They take place with the same speed in the presence or absence of O. Under aerobic conditions there is either no absorption of O or (in a more alk. medium) the absorption is not stoichiometrically equiv. to the quantity of the disappearing dehydroascorbic acid. The latter is to be attributed to secondary reactions. In contrast to the thermostable reduced form the dehydroascorbic acid is very thermolabile. At the neutral point it is destroyed in 10 minutes at 60°. At the b. p. it is destroyed instantly. At room temp. 80 to 90% is destroyed in 10-20 min. if the p_H is around 9.0. The ascorbic acid of plant tissues when converted to the dehydro forms, under the influence of oxidizing enzymes, is just as thermolabile as pure ascorbic acid which has been previously dehydrated. The dehydroascorbic acid, unstable as compared with the reduced form, presents a series of practical problems in working out methods of evaluating the raw materials with reference to the activity of the enzymes which oxidize vitamin C. I. S. Ioffe

To Vitamin Laboratory, Institute of Plant Industry, Leningrad -- D...

A.S.M.-S.L.A. METALLURGICAL LITERATURE CLASSIFICATION

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307410012-3"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307410012-3



PROCESSES AND PROPERTIES INDEX

BC

A-4

Transformation of vitamin-C in varieties of cabbage during storage. V. N. Bukin and M. F. Stupak (Biokhimia, 1938, 3, 120—129).—The ascorbic acid content of a no. of varieties of cabbage falls during storing for 6 months, at rates varying inversely with ascorbase activity and O_2 intake of the material. More intense respiratory processes are associated with a more efficient dehydrogenase system and greater stability of ascorbic acid. Ascorbase is absent from cabbage stumps during the resting period, but appears immediately prior to sprouting; its concn. is greatest at the top of the stalk, from which flower shoots develop. R. T.

Vitamin Lab. Inst. of Plant Breeding, Leningrad

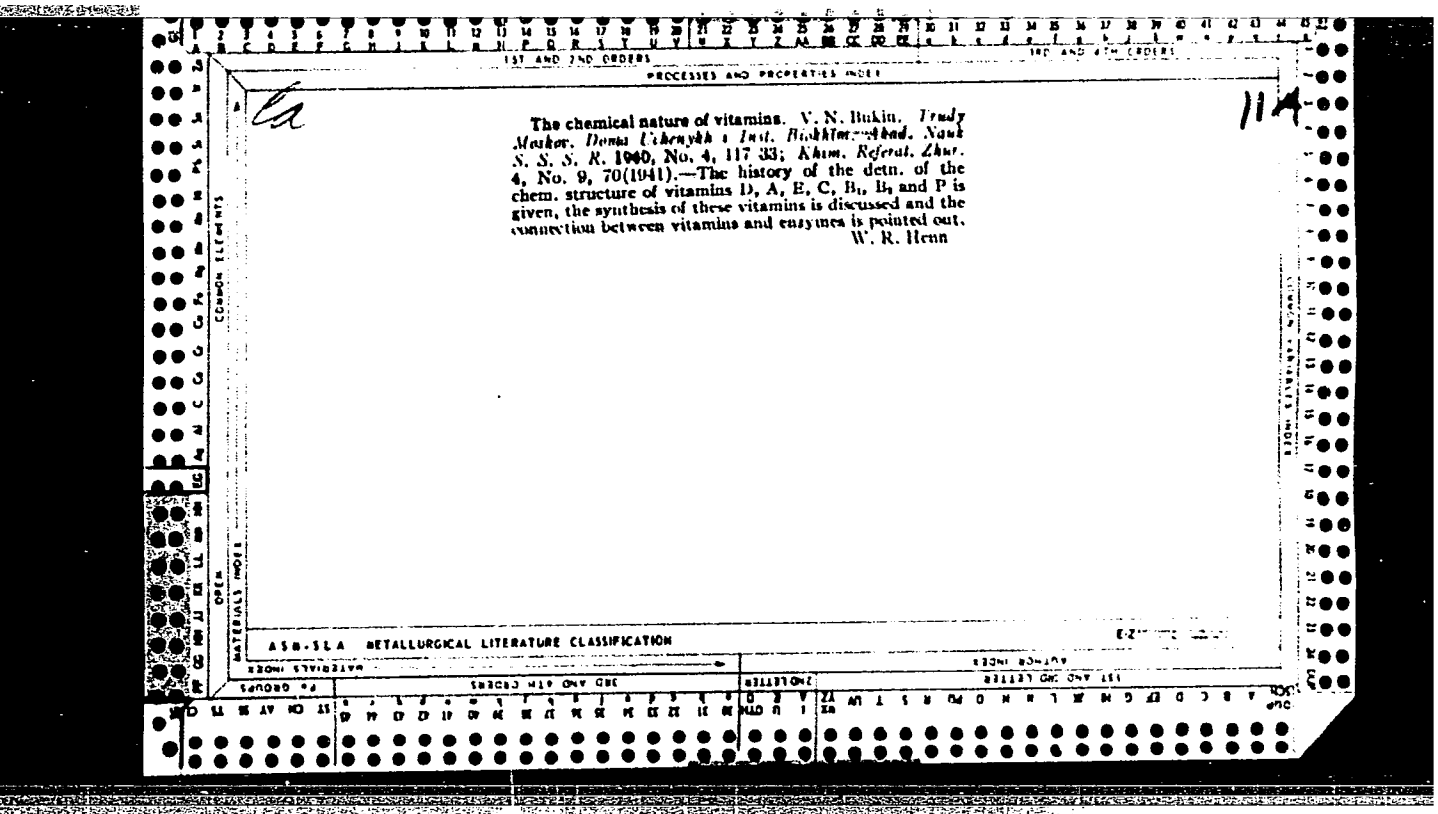
A38-SLA METALLURGICAL LITERATURE CLASSIFICATION

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307410012-3"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307410012-3

1ST AND 2ND ORDERS

3RD AND 4TH ORDERS



PROCESSES AND PROPERTIES INDEX

Ca

114

The chemical nature of vitamins. V. N. Bukin. *Trudy Moskov. Doma Uchenykh i Inst. Biokhim. Akad. Nauk S. S. S. R.* **1940**, No. 4, 117-33; *Khim. Referat. Zhur.* 4, No. 9, 70(1941).—The history of the detn. of the chem. structure of vitamins D, A, E, C, B_1, B_2 and P is given, the synthesis of these vitamins is discussed and the connection between vitamins and enzymes is pointed out.

W. R. Henn

COMMON ELEMENTS

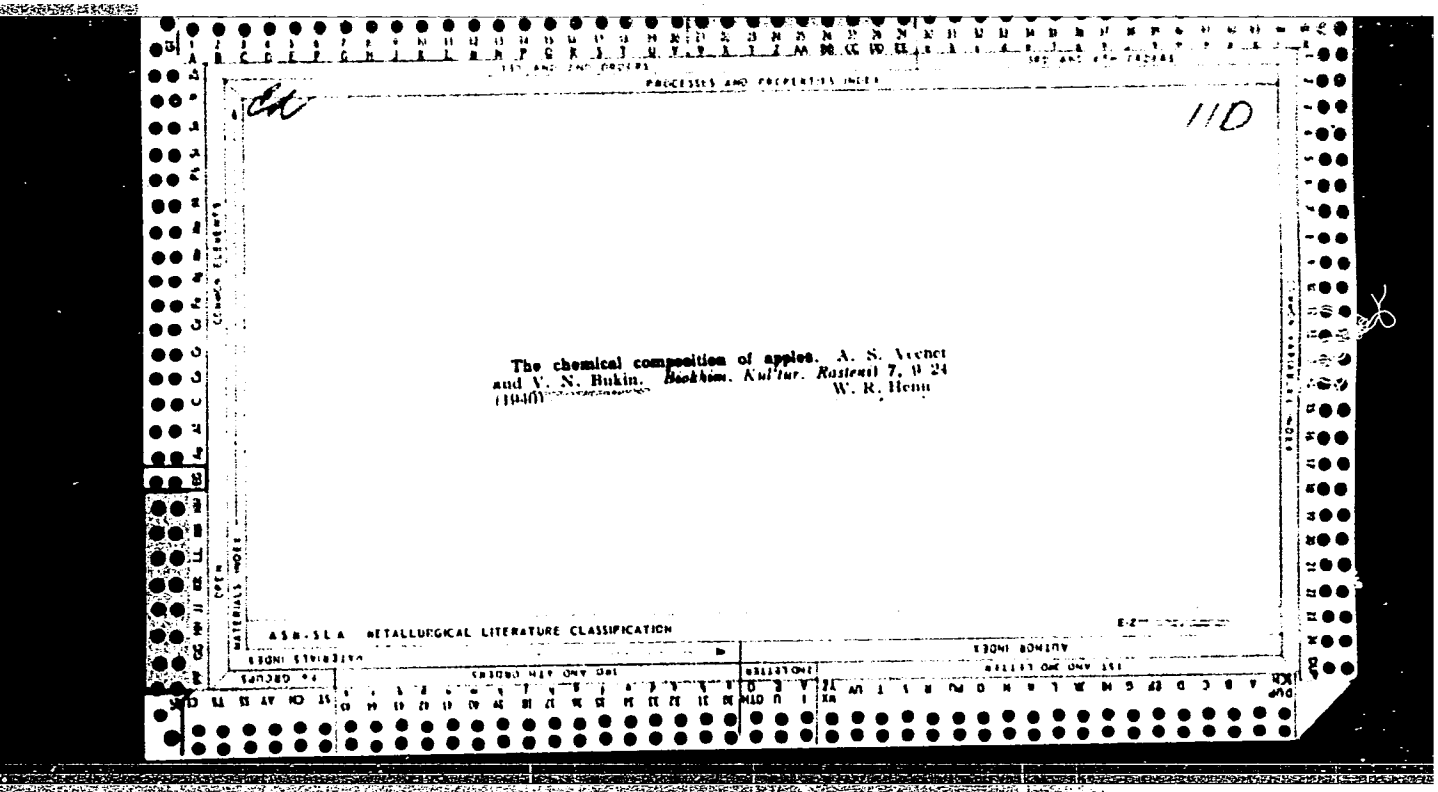
OPEN

MATERIALS INDEX

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

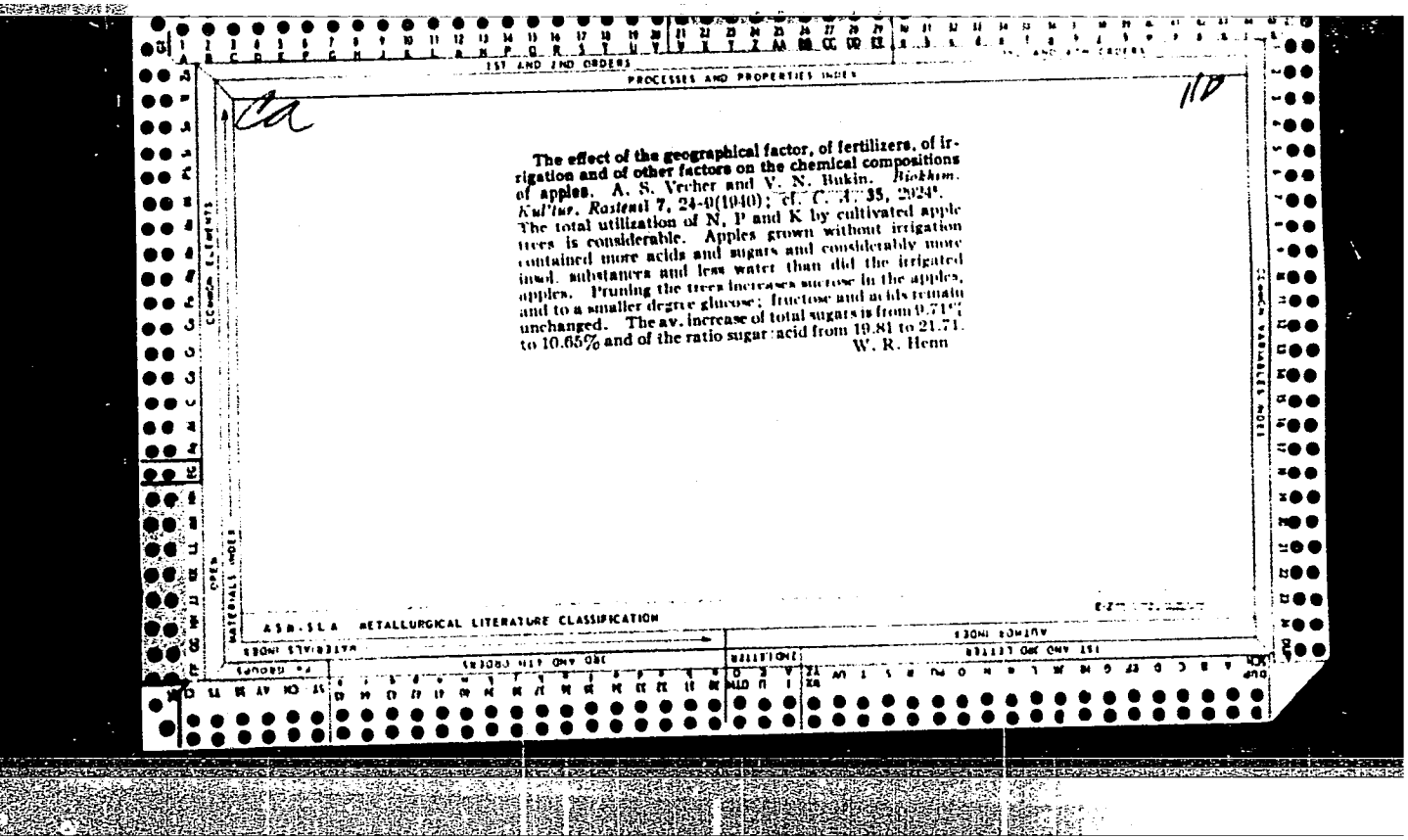
APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307410012-3"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307410012-3



APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307410012-3"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307410012-3



1ST AND 2ND ORDERS

PROCESSES AND PROPERTIES INDEX

Ca

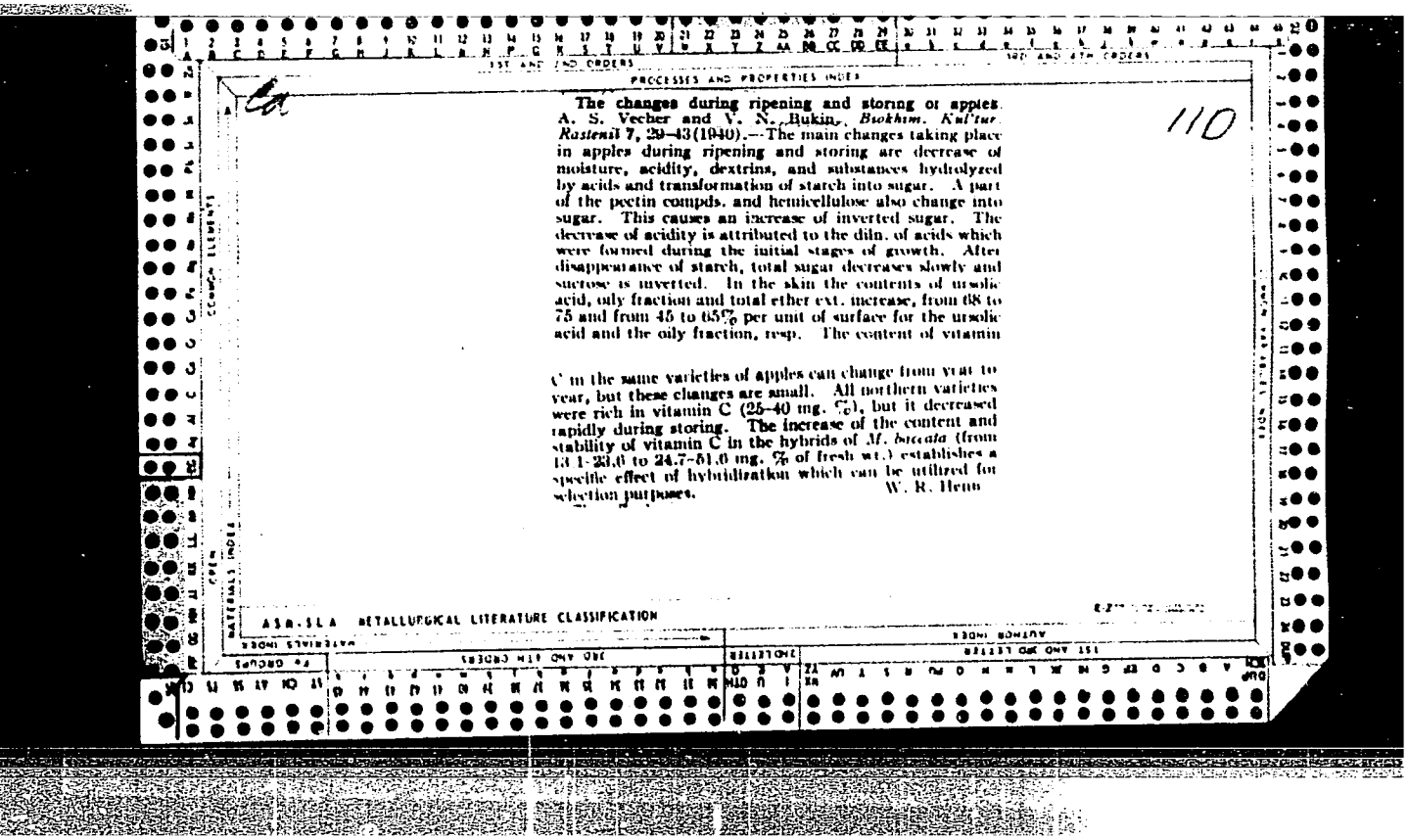
110

The effect of the geographical factor, of fertilizers, of irrigation and of other factors on the chemical compositions of apples. A. S. Vecher and V. N. Bukin. *Biokhim. Kul'tur. Rastenii* 7, 24-9(1940); cf. *C. A.* 35, 2024⁸. The total utilization of N, P and K by cultivated apple trees is considerable. Apples grown without irrigation contained more acids and sugars and considerably more insol. substances and less water than did the irrigated apples. Pruning the trees increases sucrose in the apples, and to a smaller degree glucose; fructose and acids remain unchanged. The av. increase of total sugars is from 9.71% to 10.65% and of the ratio sugar:acid from 19.81 to 21.71.
W. R. Henn

A S M - S L A METALLURGICAL LITERATURE CLASSIFICATION

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307410012-3"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307410012-3



PROCESSES AND PROPERTIES INDEX

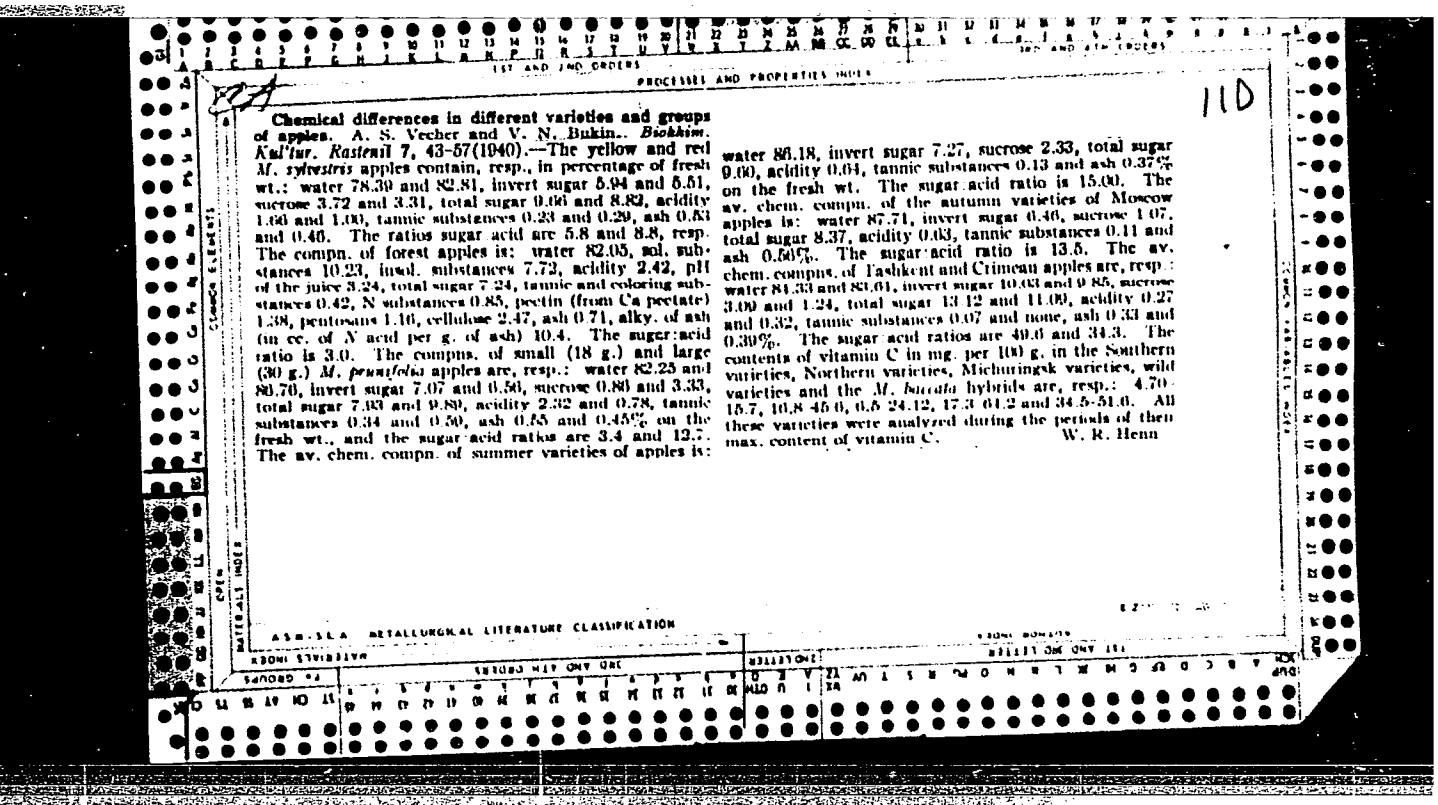
110

The changes during ripening and storing of apples. A. S. Vecher and V. N. Bukin. *Biokhim. Kul'tur. Rastenii* 7, 29–43(1940).—The main changes taking place in apples during ripening and storing are decrease of moisture, acidity, dextrins, and substances hydrolyzed by acids and transformation of starch into sugar. A part of the pectin compds. and hemicellulose also change into sugar. This causes an increase of inverted sugar. The decrease of acidity is attributed to the diln. of acids which were formed during the initial stages of growth. After disappearance of starch, total sugar decreases slowly and sucrose is inverted. In the skin the contents of ursolic acid, oily fraction and total ether ext. increase, from 68 to 75 and from 45 to 65% per unit of surface for the ursolic acid and the oily fraction, resp. The content of vitamin C in the same varieties of apples can change from year to year, but these changes are small. All northern varieties were rich in vitamin C (25–40 mg. %), but it decreased rapidly during storing. The increase of the content and stability of vitamin C in the hybrids of *M. baccata* (from 13.1–23.0 to 24.7–51.0 mg. % of fresh wt.) establishes a specific effect of hybridization which can be utilized for selection purposes. W. R. Henn

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307410012-3"

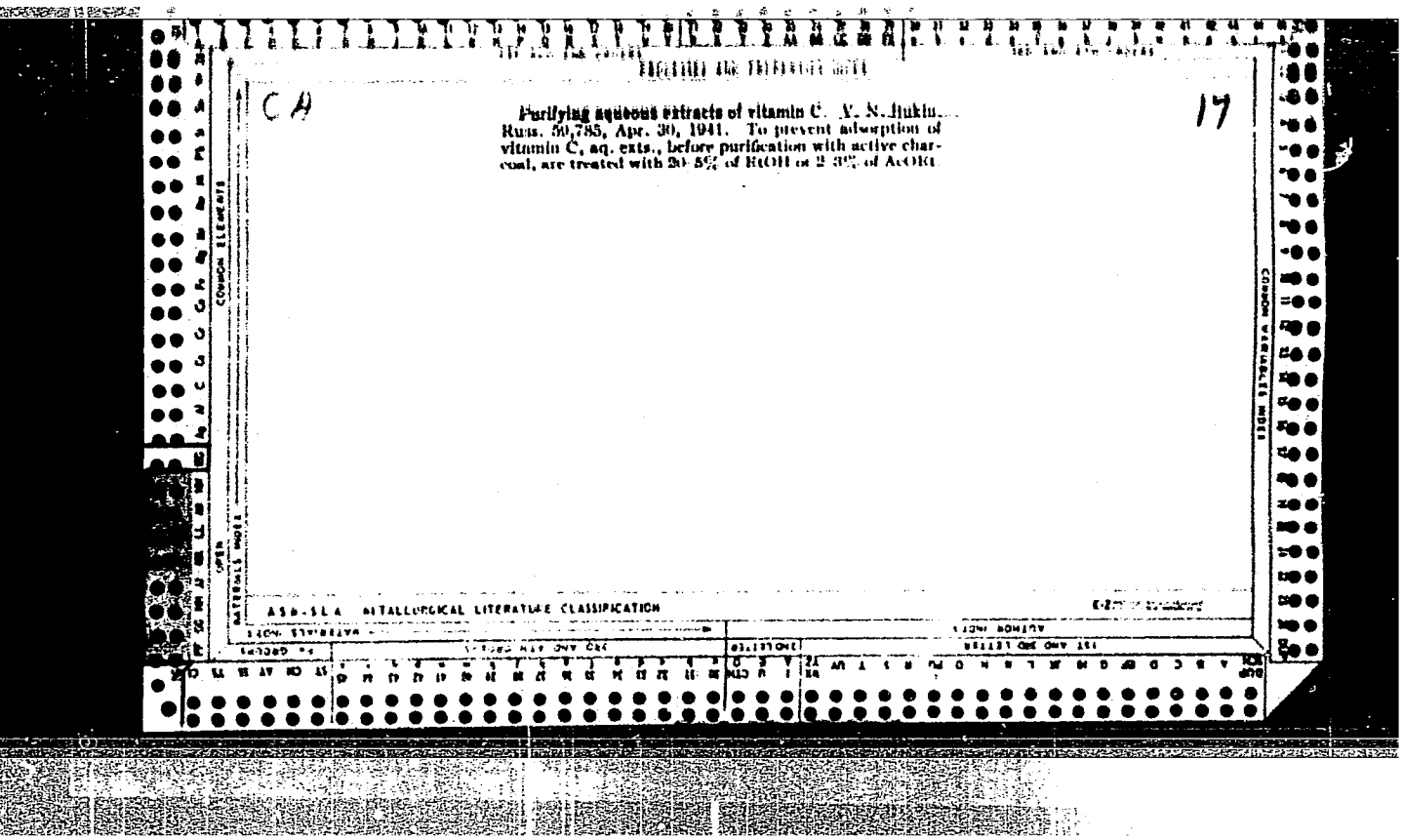
"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307410012-3



Chemical differences in different varieties and groups of apples. A. S. Vecher and V. N. Bukin.. *Biokhim. Kul'tur. Rastenii* 7, 43-57(1940).—The yellow and red *M. sylvestris* apples contain, resp., in percentage of fresh wt.: water 78.39 and 82.81, invert sugar 5.94 and 5.51, sucrose 3.72 and 3.31, total sugar 9.66 and 8.82, acidity 1.60 and 1.00, tannic substances 0.23 and 0.29, ash 0.53 and 0.46. The ratios sugar acid are 5.8 and 8.8, resp. The compn. of forest apples is: water 82.05, sol. substances 10.23, insol. substances 7.72, acidity 2.42, pH of the juice 3.24, total sugar 7.24, tannic and coloring substances 0.42, N substances 0.85, pectin (from Ca pectate) 1.38, pentosans 1.16, cellulose 2.47, ash 0.71, alky. of ash (in cc. of *N* acid per g. of ash) 10.4. The sugar:acid ratio is 3.0. The compns. of small (18 g.) and large (30 g.) *M. pruniformis* apples are, resp.: water 82.25 and 80.70, invert sugar 7.07 and 0.50, sucrose 0.80 and 3.33, total sugar 7.93 and 9.89, acidity 2.32 and 0.78, tannic substances 0.34 and 0.50, ash 0.55 and 0.45% on the fresh wt., and the sugar:acid ratios are 3.4 and 12.7. The av. chem. compn. of summer varieties of apples is: water 86.18, invert sugar 7.27, sucrose 2.33, total sugar 9.60, acidity 0.64, tannic substances 0.13 and ash 0.37% on the fresh wt. The sugar:acid ratio is 15.00. The av. chem. compn. of the autumn varieties of Moscow apples is: water 87.71, invert sugar 0.46, sucrose 1.07, total sugar 8.37, acidity 0.03, tannic substances 0.11 and ash 0.50%. The sugar:acid ratio is 13.5. The av. chem. compns. of Tashkent and Crimean apples are, resp.: water 84.33 and 83.61, invert sugar 10.03 and 9.85, sucrose 3.00 and 1.24, total sugar 13.12 and 11.09, acidity 0.27 and 0.32, tannic substances 0.07 and none, ash 0.33 and 0.39%. The sugar:acid ratios are 49.6 and 34.3. The contents of vitamin C in mg. per 100 g. in the Southern varieties, Northern varieties, Michuringsk varieties, wild varieties and the *M. baccata* hybrids are, resp.: 4.70-15.7, 10.8-45.0, 6.5-24.12, 17.3-61.2 and 34.5-51.0. All these varieties were analyzed during the periods of their max. content of vitamin C. W. R. Henn

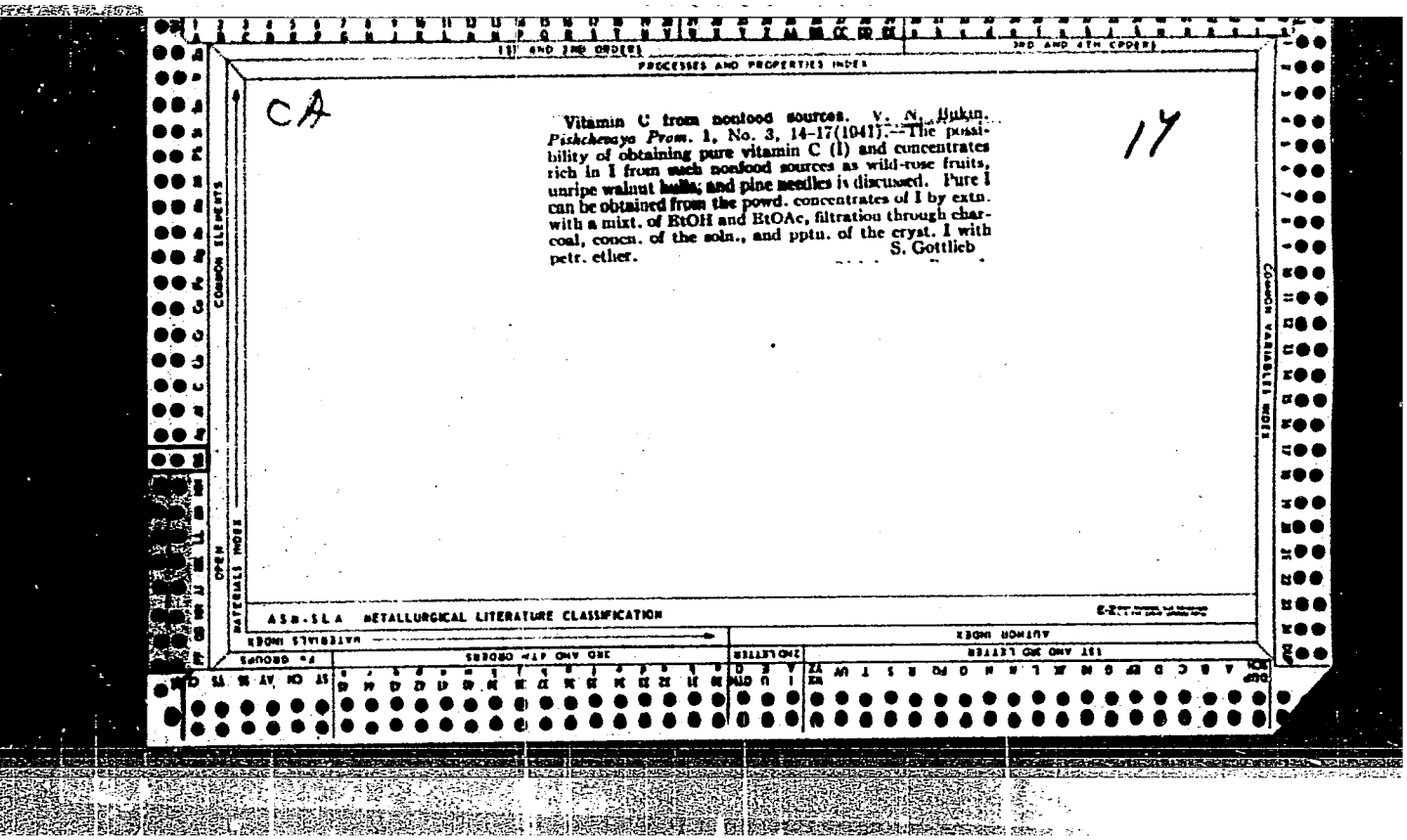
APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307410012-3"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307410012-3



APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307410012-3"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307410012-3



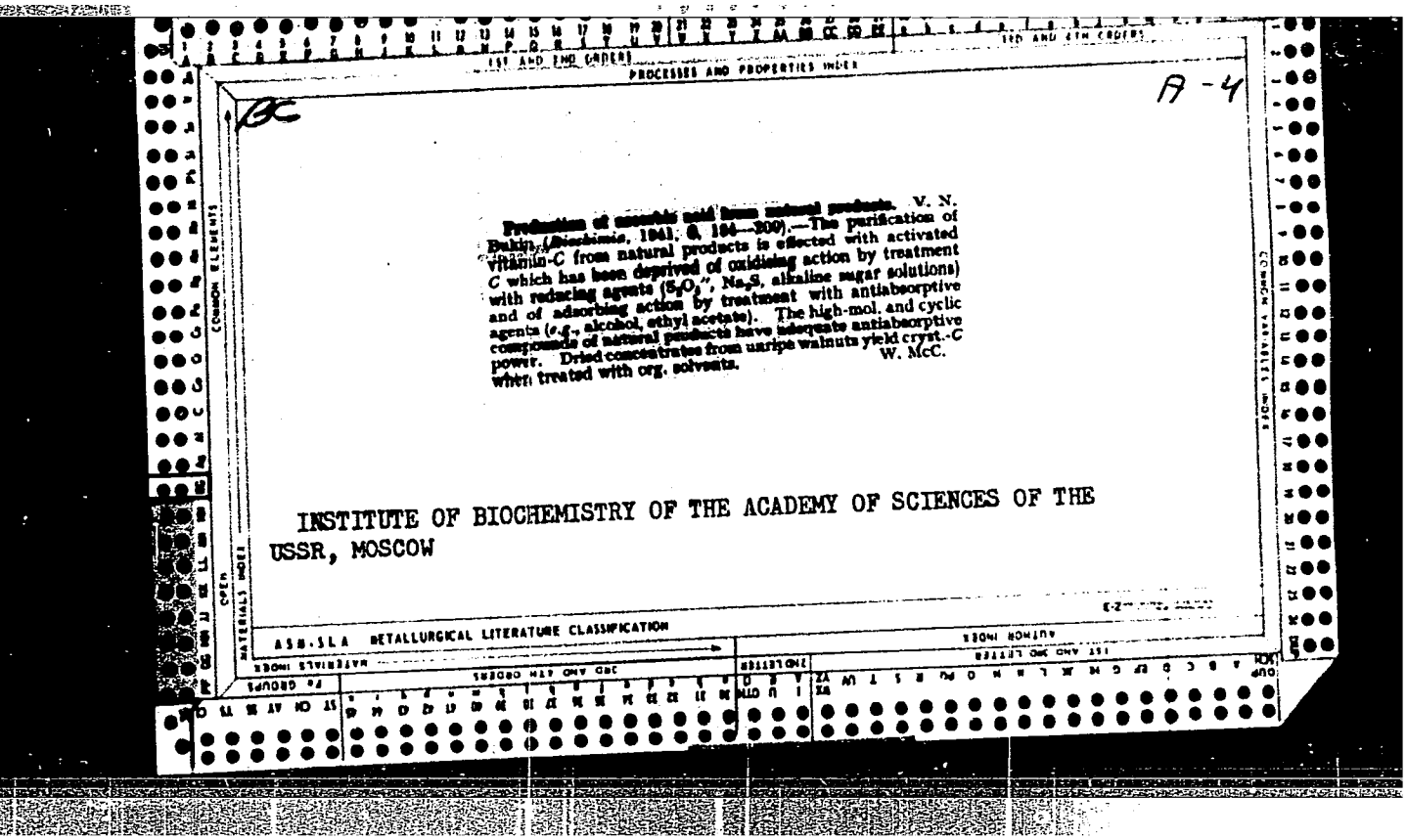
CA

17

Vitamin C from nonfood sources. V. N. Ilukin. *Pishchevaya Prom.* 1, No. 3, 14–17(1941).—The possibility of obtaining pure vitamin C (I) and concentrates rich in I from such nonfood sources as wild-rose fruits, unripe walnut hulls, and pine needles is discussed. Pure I can be obtained from the powd. concentrates of I by extn. with a mixt. of EtOH and EtOAc, filtration through charcoal, concn. of the soln., and pptn. of the cryst. I with petr. ether.
S. Gottlieb

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307410012-3"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307410012-3



PROCESSES AND PROPERTIES INDEX

A-4

Production of ascorbic acid from natural products. V. N. Bukin. (*Biokhimiia*, 1941, **6**, 194—200).—The purification of vitamin-C from natural products is effected with activated *C* which has been deprived of oxidising action by treatment with reducing agents (S_2O_3'', Na_2S, alkaline sugar solutions) and of adsorbing action by treatment with antiabsorptive agents (*e.g.*, alcohol, ethyl acetate). The high-mol. and cyclic compounds of natural products have adequate antiabsorptive power. Dried concentrates from unripe walnuts yield cryst.-*C* when treated with org. solvents. W. McC.

INSTITUTE OF BIOCHEMISTRY OF THE ACADEMY OF SCIENCES OF THE USSR, MOSCOW

A58.SLA METALLURGICAL LITERATURE CLASSIFICATION

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307410012-3"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307410012-3

KORSHUNOV, B.G.; DROBOT, D.V.; PETROV, K.I.; BUKHTIYAROV, V.V.; RUBTSOV, M.V.

System $SmCl_3$ - NaCl - KCl. Zhur. neorg. khim. 10 no.7: 1675-1680 Jl '65. (MIRA 18:8)

1. Moskovskiy institut tonkoy khimicheskoy tekhnologii imeni M.V. Lomonosova.

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307410012-3"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307410012-3

KORSHUNOV, B.G.; DROBOT, D.V.; BUKHTIYAROV, V.V.; SHEVTSOVA, Z.N.

Interaction of samarium (III)chloride with the chlorides of sodium, potassium, rubidium, and cesium. Zhur. neorg. khim. 9 no.6:1427-1430 Je '63 (MIRA 17:8)

1. Moskovskiy institut tonkoy khimicheskoy tekhnologii imeni Lomonosova.

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307410012-3"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307410012-3

BORISOV, V. Ye.

Dissertation: "Use of the Chromatographic Method in the Analysis of Copper-Iron Ceramic Alloys and Bronze." Cand Chem Sci, Inst of Geochemistry and Analytical Chemistry imeni V. I. Vernadskiy, Acad Sci USSR, 24 May 54. Vechernyaya Moskva, Moscow, 13 May 54.

SO: SUM 284, 26 Nov 1954

Published in J. Anal. Chem. (USSR), 7, 417-24, 1952.

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307410012-3"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307410012-3

BUKHTIYAROV, V.E.

USSR/Chemistry - Analytical

Card 1/1 : Pub. 145 - 3/14

Authors : Ryabchikov, D. I., and Bukhtyarov, V. E.

Title : Determination of beryllium in bronze through the application of a cationite

Periodical : Zhur. anal. khim. 9/4, 196-198, Jul-Aug 1954

Abstract : A method of determining Be in bronzes through the application of SBS type cationites is described. The new method is similar to the one used in determining Be in artificial mixtures in the presence of Al and Fe. Results obtained in determining Be in bronzes are tabulated. Three USSR references (1936-1952). Tables.

Institution : .....

Submitted : May 5, 1954

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307410012-3"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307410012-3

BUKHTIYAROV, V. Ye.

941. Determination of calcium in nickel-base alloys. Y. E. Bukhtiarov. *Zavod. Lab.*, 1955, 21 (9), 1042.—The nickel alloy (0·5 g) is attacked with 25 ml of aqua regia, the excess of HNO_3 is boiled off, 20 ml of 20 per cent. HCl solution are added, the cooled solution is mixed with 30 ml of water, and then filtered into a 500-ml calibrated flask, the residue being washed 3 or 4 times with water. Aq. NH_3 is added until a ppt. appears, which is then dissolved with a few drops of 20 per cent. HCl solution; the liquid is treated with 25 ml of 10 per cent. ammonium benzoate solution and heated to boiling point. In the presence of large amounts of Cr, boiling is continued for 10 min. Sodium diethyldithiocarbamate solution (10 per cent.) (50 ml) is added to the cold solution, the vol. is made up to the mark and the solution is filtered. The filtrate (100 ml) is mixed with 30 ml of a buffer solution (20 g of NH_4Cl and 100 ml of 20 per cent. aq. NH_3 in 1 litre), 5 ml of sodium diethyldithiocarbamate solution, 10 ml of aq. NH_3 (concn. not stated), 5 drops of 0·02 *M* $K_2Cr_2O_7$ and 7 or 8 drops of Eriochrome black T solution (prepared by dissolving 0·5 g in 10 ml of buffer solution and diluting with ethanol to 100 ml). The Ca is determined by titrating with 0·01 *N* EDTA (disodium salt) solution to a green colour. Two further drops of the indicator solution are added before the end of the titration. A blank is carried out at the same time. The method has been tested over the range 0·03 to 0·5 per cent.

G. S. SMITH

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307410012-3"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307410012-3

RYABCHIKOV, D.I.; BUKHTIAROV, V.Ye.

Separation of titanium from tungsten by ion exchange chromatography. Zhur.anal.khim. 15 no.2:242 Mr-Ap '60. (MIRA 13:7)

1. Institut geokhimii i analiticheskoy khimii im. V.I.Vernadskogo AN SSSR, Moskva.
(Titanium--Analysis) (Tungsten--Analysis)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307410012-3"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307410012-3

RYABCHIKOV, D.I.; BUKHTIAROV, V.Ye.

Use of ion-exchange chromatography for the determination of zirconium and hafnium when present together in alloys based on molybdenum. Zhur. anal. khim. 19 no.11:1411-1412 '64.
(MIRA 18:2)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307410012-3"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307410012-3

LAZAREV, P. S. FEDOROV, A. I. (Professors), BUKHTILOV, F. N., PAVLOV, P. I. (Docents, Troitsk Veterinary Institute), Zaslonov, M. S. (Director of the Troitsk Intersovkhoz Veterinary Bacteriological Laboratory) and PLEKHANOV, B. P. (Head Veterinary Doctor of the Bredinsk District, Chelyabinsk Oblast')

"Certain characteristics of the course taken by rabies in cattle"

Veterinariya, vol. 39, no. 9, September 62, p. 20

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307410012-3"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307410012-3

LAZAREV, P.S., prof.; FEDOROV, A.I., prof.; BUKHTILOV, F.N., prepodavatel'; KAMYNIN, I.N., prepodavatel'; KONDAKOV, N.F., aspirant; AMELIN, I.P.; ZAYNIKAYEV, M.Sh., veterinarnyy vrach

Malignant course of foot-and-mouth disease. Veterinariia 41 no.5: 39-42 My '64. (MIRA 18:3)

1. Troitskiy veterinarnyy institut (for Lazarev, Fedorov, Bukhtilov, Kamynin, Kondakov). 2. Nachal'nik Chelyabinskogo oblastnogo veterinarnogo otdela (for Amelin).

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307410012-3"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307410012-3

BUKHTIN, V.S., inzh.; BOGOMOLOV, M.S., inzh.; MONONTOV, A.A., inzh.; BORISOV, I.F., inzh.

Determining the level of mechanization, automation, and labor consumption for individual ore mining processes. Izv. vys. ucheb. zav.; gor. zhur. 7 no.10:44-50 '64. (MIRA 17:11)

1. Vostochnyy nauchno-issledovatel'skiy gornorudnyy institut.

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307410012-3"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307410012-3

BUKHTIN, V.S., inzh.; BOGOMOLOV, M.S., inzh.; MAMONTOV, A.A., inzh.

Ways of improving repair operations at Gornaya Shoriya mines. Gor. zhur. no.11:48-50 N '64. (MIRA 18:2)

1. VostNIGRI, Novokuznetsk.

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307410012-3"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307410012-3

KOLESNIKOV, S.A.; BUKHTIYAROV, A.G.

Results of the experimental testing of the Research Institute for Experimental Surgical Apparatus and Instruments and Melrose apparatus for artificial blood circulation. Trudy NIIRKHSI no.5: 125-131 '61. (MIRA 15:8)

1. Iz Instituta grudnoy khirurgii AMN SSSR.
(PERFUSION PUMP (HEART)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307410012-3"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307410012-3

BUKHTIYAROV, A.G.; RUSSKIKH, V.V.; SHCHELKANOVTSEVA, N.I.

Changes in the higher nervous activity, in certain other functions, and in the brain structure of animals under the influence of potassium and calcium salts. Uch.zap.Mosk.nauch.-issl.inst. san i gig. no.3:53-59'60. (MIRA 16:7)
(CONDITIONED RESPONSE) (POTASSIUM SALTS—PHYSIOLOGICAL EFFECT)
(CALCIUM SALTS—PHYSIOLOGICAL EFFECT) (BRAIN)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307410012-3"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307410012-3

BUKHTIYAROV, A.G.

Reaction of the organism to chronic small threshold quantities of poison and methods for studying these reactions. Uch.zap. Mosk.nauch.-issl.inst.san.i gig. no.3:3-16'60. (MIRA 16:7)
(POISONS—PHYSIOLOGICAL EFFECT)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307410012-3"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307410012-3

BUKHTIYAROV, A.I., aspirant; KINDYAKOV, V.I., kand. vet. [illegible], vremennyy rukovoditel' raboty

Experimental foot-and-mouth disease in roe deer. [illegible]
42 no.9:41-43 S '65. (MIRA 18:11)

1. Kazakhskiy nauchno-issledovatel'skiy veterinarnyy institut.

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307410012-3"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307410012-3

L 24687-66 EWT(1)/T JK

ACC NR: AP6015817 (A, N) SOURCE CODE: UR/0346/65/000/009/0041/0043

30
13

AUTHOR: Bukhtyarov, A. I. (Aspirant); Kindyakov, V. I. (Scientific instructor; Candidate of veterinary sciences)

ORG: Kazakh Scientific Research Veterinary Institute (Kazakhskiy nauchno-issledovatel'skiy veterinarnyy institut)

TITLE: Experimental foot-and-mouth disease in roe deer

SOURCE: Veterinariya, no. 9, 1965, 41-43

TOPIC TAGS: foot and mouth disease, commercial animal, epidemiology, virus disease, virus

ABSTRACT: In view of the increasing number of reports on the role of wild animals in the rise and spread of foot-and-mouth disease among the livestock, the authors investigated the course and spread of this disease in six roe deer 1.5 years old each, kept in special metal cages and infected with the aphthous virus of this disease. Natural infection was accomplished by placing healthy animals in the cages with the artificially infected animals. Findings: following the first 24 hours, the animals displayed a depressed state, low mobility, low appetite, higher body temperature, increase in respiratory and pulse rates, with subsequent, increasing salivation and formation of aphthae on the mucous membrane of the upper and lower lips and in the nostrils; this state deteriorated until, beginning with the 4th day of infection, the animals started to die. Those animals that survived regained their appetite on the

Card 1/2 UDC: 619:616.988.43:599.735.3

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307410012-3"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307410012-3

L 24687-66

ACC NR: AP6015817

8th day and recovered toward the 11th day. With the object of determining the possibility of the natural infection of livestock by wild animals, castrated bulls were placed in the cages with the artificially infected deer. The bulls caught the infection toward the 5th-7th day. The course of the disease was typical, with the bulls recovering after two weeks. The authors conclude that roe deer are susceptible to both artificial and natural infection with types A and O virus of foot-and-mouth disease. On artificial intravaginal infection, aphthae appear on the mucous membrane of the lips rather than, as normally, in livestock, at the site of introduction of virus. The course of the disease was of below-normal severity, and its clinical picture and pathologoanatomic changes in the deer point to a toxicoseptic character of the disease. It appears that, owing to their ecological features, wild animals are much more rarely in contact with the foot-and-mouth virus than domestic animals, and this accounts for the violence of their reaction to administration of the virus. Orig. art. has: 1 figure. [JPRS]

SUB CODE: 06, 02 / SUBM DATE: none

Card 2/2 FW

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307410012-3"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307410012-3

BUKHTIYAROV, Aleksey Mikhaylovich; ZIKEVSKAYA, Lidiya Mikhaylovna; FROLOV, Gennadiy Dmitriyevich; KRENITSKIY, N.A., red.; GORYACHAYA, M.M., red.

[Collection of problems in programming with answers and solutions] Sbornik zadach po programmirovaniiu s otvetami i resheniiami. Moskva, Nauka, 1965. 410 p.
(MIRA 18:11)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307410012-3"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307410012-3

ZATSEPIN, K.S.; BUKHTIYAROV, N.T.

Pipelines of glass-reinforced plastic for transporting gas, petroleum, and petroleum products. Stroi.truboprov. 9 no.2: 9-12 F '64. (MIRA 17:3)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut po stroitel'stvu magistral'nykh truboprovodov.

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307410012-3"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307410012-3

GIL'MAN, T.P.; ZATSEPIN, [illegible]

Device for studying [illegible] of glass fillers with binders. Plast. [illegible] (MIRA 18:9)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307410012-3"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307410012-3

BUKHTIYAROV, Viktor Pavlovich, kand. tekhn.nauk; ZARODZINSKIY, Z.K., red.; GOSPODARSKAYA, T.N., red. izdpva; VDOVINA, V.M., tekhn. red.

[Automation of the processing of dimension stock by planing] Avtomatizatsiia obrabotki bruskovykh zagotovok stroganiem. Moskva, Goslesbumizdat, 1963. 95 p. (MIRA 16:7)

(Automation) (Planing machines)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307410012-3"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307410012-3

BUKHTIAROV, V.I., kand. tekhn. nauk

Modern equipment for polishing panel parts of furniture. Der. prom. 14 no.5:14-15 My '65. (MIRA 18:6)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307410012-3"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307410012-3

MATVEYEV, K.I.; OSIPOV, A.M.; ODYAKOV, V.F.; SUZDAL'NITSKAYA, Yu.V.; BUKHTOYAROV, I.A.; YEMEL'YANOVA, O.A.

Catalytic oxidation of ethylene in the presence of aqueous solutions of palladium salts. Kin.i kat. 3 no.5:661-673 S-O '62. (MIRA 16:1)

1. Institut kataliza Sibirskogo otdeleniya AN SSSR.
(Ethylene) (Oxidation) (Palladium salts)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307410012-3"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307410012-3

BUKHTOYAROV, M.

BUKHTOYAROV, M.

Packing rear borders of dump trucks. Avt.transp. 35 no.2:16 F '57.
(MIRA 10:12)

(Dump trucks)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307410012-3"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307410012-3

ROMENSKIY, L.P., kand.tekhn.nauk; SPIRIDONOV, V.I., inzh.; MARIN, A.A., inzh.
BUKHTOYAROV, N.G., inzh.

Using flexible cables in mines. Bezop.truda v prom. 5:4-5
Jl '61. (MIRA 14:6)

1. Voroshilovskiy gornometallurgicheskiy institut.
(Electric cables)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307410012-3"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307410012-3

EXCERPTA MEDICA Sec 16 Vol 7/12 Cancer Dec 59

5023. **Tumour development in rats after intraperitoneal injection of nitric acid plutonium (Russian text)** BUKHTOYAROVA Z. M. and LEMBERG V. K. Med. Acad. of Sci., Moscow *Vopr. Onkol.* 1959, 5/8 (140-148) Graphs 2 Tables 3 Illus. 4

Osteogenic sarcomas and various soft tissue tumours were provoked in rats after a single intraperitoneal injection of nitric acid plutonium in the amounts of 6.3×10^{-2} μc./g., 4.0×10^{-2}, 1.89×10^{-2}, 0.63×10^{-2}, and 0.315×10^{-2} μc./g. of body weight. The first two doses resulted in leucopenia and caused early death. Most tumours and most varied tumours were induced with the dose of 1.89×10^{-2} μc./g. The osteogenic sarcomas were characterized by their polymorphism and multicentric origin; in the controls no osteogenic sarcomas were seen. Soft tissue tumours were also found in control animals, but in the experimental animals they were less differentiated and of more varied type. (XVI, 5, 14)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307410012-3"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307410012-3

2824

S/581/61/000/000/015/020
D299/D304

27.1220

AUTHORS: Lemberg, V.K., Bukhtoyarova, Z.M. and Nifatov, A.P.

TITLE: The distribution of plutonium in the liver according to the results of histoautoradiography

SOURCE: Lebedinskiy, A.V. and Moskalev, Yu.I., eds. Biologicheskoye deystviye radiatsii i voprosy raspredeleniya radioaktivnykh izotopov; sbornik rabot. Moscow, Gosatomizdat, 1961, 136-144

TEXT: Due to the absence of suitable published data on the subject, the authors set out to study the course of the micro-distribution of plutonium-239 in the liver and bones by the histoautoradiographic method, i.e., by studying histological slides fixed on a photographic emulsion. The tests were run on white rats, plutonium-239 being introduced intraabdominally as $Pu(NO_3)_4$ in a single dose of 7 μc/kg at pH = 2. After 6 and 12 hours, and 1, 3, 7, 14, 28, 41, 56, 88 and 225 days the rats were decapitated and slides of the

Card 1/3

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307410012-3"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307410012-3

The distribution of plutonium...

bone and liver tissues prepared. A detailed analysis of the photos showing the tracks of plutonium alpha-particles at various stages after the introduction of plutonium-239 is given and the results of the experiments are compared with various findings in the specialized literature on this subject. The histoautocardiograms showed a definite redistribution of plutonium in the structural elements of the bones and liver. Within 6-12 hours after its introduction diffuse distribution of plutonium in all structural parts of the liver is noted. Subsequently, from 1-225 days, the plutonium content in the hepatic cells decreases and begins to accumulate in the Kupffer's cells and the macrophages of the perivascular connective tissue. Six to 12 hours after its introduction the bones contain only a small amount of diffusely distributed plutonium (bone marrow, compact substance and diploë). By the end of the 3rd day a marked increase was noted in the plutonium content of the bone marrow. At subsequent stages the plutonium content in the bone marrow gradually diminished, but increased in the endosteum and periosteum. Some plutonium, however, was retained in the compact bone throughout the

Card 2/3

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307410012-3"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307410012-3

whole period of the investigation. There are 6 figures and 17 references: 6 Soviet-bloc and 11 non-Soviet-bloc. The 4 most recent references to English-language publications read as follows: J.S. Arnold cited by L.F. Lamerton "Proceedings of the Second United Nations International Conference of the Peaceful Uses of Atomic Energy", vol. 22, p. 119. Geneva, 1958; M.P. Finkel, Proceedings of the Society for Experimental Biology and Medicine, 83, 3, 494 (1953); M. Heller, Ch. 5 - "Bones" in the book by W. Bloom. Histopathology of Irradiation from External and Internal Sources, 70-161. N.Y. - Tor. - Lnd., 1948; R.J. Schubert, M. Finkel, M. White a. G. Hirsch, J. Biolog. Chem., 182, 2, 635 (1950).

Card 3/3

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307410012-3"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307410012-3

28246
S/581/61/000/000/017/020
D299/D304

27.1220

AUTHOR: Bukhtoyarova, Z.M.

TITLE: The course of bone tissue lesions in rabbits contaminated with plutonium-239

SOURCE: Lebedinskiy, A.V. and Moskalev, Yu.I., eds. Biologicheskoye deystviye radiatsii i voprosy raspredeleniya radioaktivnykh izotopov; sbornik rabot. Moscow, Gosatomizdat, 1961, 155-163

TEXT: Most experimental research on the osteocarcinogenic effects of plutonium-239 has been carried out on rats, animals which grow for the greater part of their life span. The present work set out to study the effects of incorporated plutonium on the bone tissue of rabbits, the normal growth of whose skeleton ceases by the end of the animal's first year of life. Plutonium was injected into 6-8-month-old rabbits intravenously as $Pu(NO_3)_4$ in single doses of 21, 14, 7 and 2 μc/kg. Some rabbits were killed off after 15 days.

Card 1/4

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307410012-3"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307410012-3

The course of bone tissue lesions...

1, 3, 6, 7 and 12 months. The rest were spared to determine their life duration and the rate of osteosarcomogensis at later stages. Doses of 21, 14 and 7 μc/kg greatly reduced the animals' life span and induced marked lesions of the peripheral blood and a pronounced drop in body weight. A drop in the leukocyte count was noted after 5-15 days and was not restored to normal in the rest of the animals' life span. The dose of 2 μc/kg caused no substantial lesions of the peripheral blood but somewhat reduced the animals' life span. In animals killed 15-30 days after a dose of 7 μc/kg thickened atypical beams were noted in the epiphysometaphysical area of the hipbone; the distribution of these deep into the diaphysis was much greater than in the control animals. By the 3rd month the number of mitoses in the lamellar cells and the osteoblast count both showed a marked drop, whereas the osteoclast count had risen sharply. Varying degrees of aplasia of the bone marrow and replacement of bone marrow cells by fibrous tissue was noted in all animals killed from the 15th day onwards. Despite the predominance of resorption processes (osteolysis), bone neoplasms (often atypical)

Card 2/4

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307410012-3"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307410012-3

The course of bone tissue lesions...

were noted in some rabbits. About 50% of the rabbits which received 2 μc/kg developed bone tumors; these animals mostly died at the age of 1 year. The tumors were identified as osteogenic sarcomata, mainly of the osteoplastic type. The destruction of the bone tissue in rabbits which received 7, 14 and 21 μc/kg far exceeded normal bone changes due to age. These lesions corresponded to the patho-anatomical picture of typical acute and subacute radiation sickness from isotopes of the osteotropic group. Comparison of the reactions of rabbits and rats at 7 and 2 μc/kg showed that the former are more sensitive to the action of plutonium. Both doses reduced the rabbits' life more than that of the rats. The 2 μc/kg dose induced osteosarcomata in 50% of the rabbits, while a dose of 1.89 μc/kg induced tumors in only 30% of the rats. There are 4 figures, 2 tables and 21 references: 10 Soviet-bloc and 11 non-Soviet-bloc. The 4 most recent references to English-language publications read as follows: W.G. Cahan, H.Q. Woodward cited by L.F. Lamerton. Proc. of the Second United Nations International Conference of the Peaceful Uses of Atomic Energy, Geneva, 1-13 Sept., 1958, vol. 22, Biol-

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307410012-3"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307410012-3

The course of bone tissue lesions...

ogical Effects of Radiation, p. 119; M.P. Finkel, Proc. Soc. Experim. Biol. Med., 83, 3, 494 (1953); M. Heller, Ch. 5 - "Bones", in the book by W. Bloom, Histopathology of Irradiation from External and Internal Sources, N.Y., 1948; S. Koletsky and G.E. Gustafson, Cancer Research, 15, 2, 100 (1955).

Card 4/4

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307410012-3"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307410012-3

44063

27.1220

S/742/62/000/000/005/021
I015/I215

AUTHORS: Lemberg, V.K., Bukhtoyarova, Z.M.

TITLE: Histoautoradiographic data on the distribution of plutonium in the bones of rats and rabbits

SOURCE: Plutoniy-239; raspredeleniye, biologicheskoye deystviye, uskoreniye vyvedeniya. Ed. by A.V. Lebedinskiy and Yu.I. Moskalev. Moscow, Medgiz, 1962, 32-40

TEXT: The microlocalization of Pu^{239} in the bones has been insufficiently studied. Experiments were carried out on 44 albino rats weighing 160-200 g and 35 rabbits weighing 2.5-3.5 kg. A single dose of plutonium-239 nitrate (7 μCu/kg of the radioisotope) was administered i.p. to the rats and i.v. to the rabbits. The rats were

Card 1/3

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307410012-3"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307410012-3

S/742/62/000/000/005/021
I015/I215

Histoautoradiographic data...

decapitated 6 and 12 hours, 1,3,7,14 days and 1,1½,2,3, and 7½ months after the injection; the rabbits were sacrificed by air embolism 1, 3,7,14 days and 1,3,4,5 and 6 months after the injection. The bones were decalcified and sectioned for historadioautographs. The decalcification was carried out with Ebner's fluid, which causes only a minimal loss of Pu. Histoautoradiography was performed according to Evans and Ye.V. Erleksova. The exposure time was 4 and 8 weeks. The sections were stained with Weigert's hematoxylin. It was found that plutonium nitrate was retained in the bones mainly in the endosteum, periosteum and bone marrow and to a lesser extent in other bone trabecules. The distribution of plutonium in bone tissue differed according to the animals species: the maximal Pu content in the bone marrow of rabbits was noticed 7 days - 4½ months after injection; in rats

Card 2/3

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307410012-3"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307410012-3

S/742/62/000/000/005/021
I015/I215

Histoautoradiographic data...

the maximum was reached on the 3rd day, after which a gradual decrease was observed. In the rabbits, unlike the rats, a marked concentration of Pu in the RES cells of the bone marrow was observed. The affinity of Pu to the endosteum and periosteum, however, was equally marked in both the rats and rabbits, but it reached a constant level on the 3rd-7th day in the rats, whereas its concentration increased steadily till the 6th month in the rabbits. There are 7 figures.

Card 3/3

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307410012-3"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307410012-3

44077

S/742/62/000/000/019/021
I015/I215

27 1220

AUTHOR: Bukhtoyarova, Z.M.

TITLE: The effect of Pu^{239} poisoning on bone tissue in rabbits

SOURCE: Plutoniy-239; raspredeleniye, biologicheskoye deystviye, uskoreniye vyvedeniya. Ed.by A.V. Lebedinskiy and Yu.I. Moskalev. Moscow, Medgiz, 1962, 142-150

TEXT: Most of the studies on the effect of Pu injuries on bones were carried out on rats-animals the growth of which is continuous throughout the entire period of life. Experiments were carried out on 154 rabbits weighing 2.5 - 3.5 kg and aged 6-8 months. A single dose of 21,14,7 and 2 μCu/kg b.w. of Pu nitrate (pH = 2.0) was administered i.v. Fifty eight animals were sacrificed 0.5-12 months after

Card 1/2

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307410012-3"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307410012-3

S/742/62/000/000/019/021
I015/I215

The effect of Pu^{239} poisoning.I.

the injection and the others were kept for the determination of the survival rate. The proximal epiphyses of the femur, tibia and humerus and the distal epiphyses of the femur and ribs (3rd-6th), and the vertebrae (X-XII) sternum and occiput were examined. The material was fixed in 10% formalin and decalcified with Ebner's fluid. The sections, after celloidin-paraffin embedding were stained with Ehrlich's hematoxylin-eosin. In acute and subacute radiation injuries (21,14 and 7 μCu/kg) the main changes in bones are those of destruction and aplasia of bone marrow. Chronic injury (2 μCu/kg) caused but slight destructive changes and the main picture was of bone neoplasms. Precancerous changes were detectable already on the 3rd month. Doses of 7 and 2 μCu/kg were bone-tumor-producing, whereby the smaller dose was the more potent (51.1% of the animals developed bone tumors after this dose). There are 7 figures and 3 tables.

Card 2/2

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307410012-3"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307410012-3

KHMEL', L.; BUKHVAL'D, L.

Occupational dermatomycoses in agriculture. Vest. derm. i ven. no.2:8-14 '62. (MIRA 15:2)

1. Iz dermatologicheskoy kafedry (zav. - prof. L. Khmel') meditsinskogo fakul'teta imeni Komenskogo v Bratislave (Chekhoslovatskaya Sotsialisticheskaya Respublika).

(DERMATOMYCOSIS) (AGRICULTURE--HYGIENIC ASPECTS)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307410012-3"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307410012-3

15

BUKHVALOV, A.M.

PHASE I BOOK EXPLOITATION SOV/6352

Akademiya nauk SSSR. Vychislitel'nyy tsentr

Nomograficheskiy sbornik (Collected Papers on Nomography, no. 1.) Moscow, 1962. 248 p. 1800 copies printed.

Resp. Ed.: G. S. Khovanskiy, Candidate of Technical Sciences; I. A. Orlova; Tech. Ed.: A. I. Korkina.

PURPOSE: This collection of papers is intended for those engaged in research on and design of nomographs.

COVERAGE: This collection contains 27 papers concerning various aspects of the theory, construction, and use of nomograms for the solution of algebraic, functional, transcendental, and differential equations. No personalities are mentioned. There are 122 references: 102 Soviet (1 of which is a translation from the English), 8 German, 5 French, 2 English, 2 Spanish, 2 Rumanian, and 1 Czech.

Card 1/10

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307410012-3"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307410012-3

Collected Papers on Nomography SOV/6352

XX. Bakhvalov, S. V., Moscow. Constructing Nomograms for Solutions of Differential Equations 180

XXI. Kuz'min, Ye. N. Projective Equivalence of the Nomograms Obtained by Kellogg's Method for an Equation of the Third Nomographic Order. 188

XXII. Kuz'min, Ye. N. Solution of the Problem of Anamorphosis for an Equation of the Third Nomographic Order 192

XXIII. Bukhvalov, A. M. Representations by Nomograms of Equations of Aligned Point of Zero Genus 205

XXIV. Bukhvalov, A. M. Representation of the Empirical Relationships Between Three Variables, Given in Tabular Form by Nomograms of Aligned Points of Zero Genus 212

Card 8/10

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307410012-3"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307410012-3

BUKHVALOV, A.M. (Minsk)

Nomographic representation of equations permitting of being represented by nomograms constructed from aligned points of zero genus. Nom. sbor. no.1:205-211 '62. (MIRA 16:5)
(Nomography (Mathematics))

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307410012-3"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307410012-3

BUKHVALOV, A.M. (Minsk)

Nomographic representation of empirical relationships between three variables derived from tables and permitting of being represented by nomograms constructed from points of zero genus. Nom. sbor. no.1: 212-215 '62. (MIRA 16:5)

(Nomography (Mathematics))

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307410012-3"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307410012-3

BUKHVALOV, A.M.

Nomographic representation of equations of the first genus with three variables. Dokl. AN SSSR 148 no.5:1005-1008 F '63.
(MIRA 16:3)

1. Belorusskiy politekhnicheskiy institut. Predstavleno akademikom A.A.Dorodnitsynym.

(Differential equations) (Nomography (Mathematics))

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307410012-3"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307410012-3

BUKHVALOV, A.M. (Minsk)

Numerical method of determining the elements of nomographic representation of the form $M_1 + M_2 = M_3$ for a given equation. Nom. sbor. no.2:153-164 '64.

Numerical method for determining the elements of the nomographic representation of the form $M_1 + M_2 = M_3$ for functions given in tables. Ibid.:165-171 (MIRA 18:3)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307410012-3"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307410012-3

BUKHVALOV, A.M. (Minsk)

One by one separation of variables in equations with several variables. Nom. sbor. no.3:144-149 '65.

(MIRA 18:10)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307410012-3"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307410012-3

L 3216-66 EWT(d) IJP(c)

ACCESSION NR: AP5009209 S/0020/65/161/001/0016/0018

AUTHOR: Bukhvalov, A. M. 44,55

TITLE: Elementary method of separating variables in equations with many variables 16,44,55

SOURCE: AN SSSR. Doklady, v. 161, no. 1, 1965, 16-18

TOPIC TAGS: variable, variable separation, nomographic computation

ABSTRACT: By separating the variables in the equation

$$F(u_1,\ldots,u_n) = 0,\ n \geqslant 4 \qquad (1)$$

we represent this equation in the equivalent form

$$F_1 = F_2 \qquad (2)$$

where $F_1 = F_1(u_\alpha,\ldots,u_\sigma)$, $F_2 = F_2(u_\varepsilon,\ldots,u_\lambda)$, and $\alpha,\ldots,\sigma,\varepsilon,\ldots,\lambda$ are any values of the subscripts $1,\ldots,n$. In other words, we reduce the equation to the system of equations

$$F_1 - s = 0,\ F_2 - s = 0 \qquad (3)$$

where s is a new auxilliary variable. In practice the first step is to seek a solution with respect to any two variables u_α and u_β, that is, to seek the corresponding functions Θ_α and Θ_β, where Θ is

Card 1/2

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307410012-3"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307410012-3

L 3216-66

ACCESSION NR: AP5009209

defined by the equation

$$u_i = \theta_i(u_1,\ldots,u_{i-1}, u_{i+1},\ldots,u_n). \qquad (4)$$

The next step is the choice of allowable substitutions $u_\beta = u_{\beta_0}, \ldots, u_\delta = u_{\delta_0}$, $u_p = \theta_p(u_1,\ldots,u_{p-1},u_{p+1},\ldots,u_n)$, $p \neq \beta, \ldots, \delta$ in the expression for θ_α. As a result, we get F_1, depending only on u_α, $u_\beta, \ldots, u_\delta$. Separation of variables by this method is simplest in nomographically rational equations, that is, in the form of equation (1), the left side of which is a nomographic polynomial containing only one function of each variable. Orig. art. has: 12 formulas.

ASSOCIATION: None.

SUBMITTED: 050ct64 ENCL: 00 SUB CODE: MA

NR REF SOV: 004 OTHER: 003

GPC

Card 2/2

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307410012-3"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307410012-3

BUKHVALOV, A.M.

Elementary method for the disjunction of variables in equations with many variables. Dokl. AN SSSR 161 no.1:16-18 Mr '65.
(MIRA 18:3)

1. Submitted October 6, 1964.

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307410012-3"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307410012-3

BUKHVALOV, B.M.

Improving the quality of projects. Mashinostroitel' no.6:34 Je '65.
(MIRA 18:7)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307410012-3"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307410012-3

BUKHVALOV, B.N., dotsent, kandidat tekhnicheskikh nauk.

Power calculations of roller straightening machine drives. Sbor. st.Ural.politekh.inst. no.48:57-63 '53. (MLRA 9:3)
(Rolls (Iron mills))

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307410012-3"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307410012-3

BUKHVALOV, B.N., dotsent, kandidat tekhnicheskikh nauk.

Designing drives for wire reelers on wire-rod mills. Trudy Ural. politekh.inst. no.45:152-155 '53. (MLRA 9:11)
(Rolling mills) (Wire)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307410012-3"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307410012-3

SOV/137-57-11-21287

Translation from: Referativnyy zhurnal, Metallurgiya, 1957, Nr 11, p 95 (USSR)

AUTHOR: Bukhvalov, B.N.

TITLE: Rational Methods of Hot Rolling Large Angles and Beams (Ratsional'nyye sposoby goryachey prokatki ugolkovykh profiley i balok bol'shogo razmera)

PERIODICAL: V sb.: Ratsionalizatsiya profiley prokata. Moscow, Profizdat, 1956, pp 185-186

ABSTRACT: Complex systems of grooving are normally employed in the rolling (R) of angle shapes. However, angles may also be produced by the R of ordinary strip with subsequent bending to angles without reduction. This is done by idler rolls mounted on the finishing stand. However, this system does not produce the sharp exterior angle required by the USSR Government Standard (GOST) now in force. Under the new Government Standard, angles will be supplied with rounded outer angles, and this will simplify grooving and the process of angle R. Large beams are R by special 6-stand mills with a total motor capacity of ~20,000 hp. When the assortment of beams is large, the frequent roll changes have a damaging effect upon

Card 1/2

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307410012-3"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307410012-3

Rational Methods of Hot Rolling Large Angles and Beams

the output rate of the mill. The larger beams, with a wide range of flange widths, may be produced by bending the edges of general-purpose plate without reduction and the use of 2 welded longitudinal seams, symmetrically positioned. Conversion from one beam size to another may be performed by shifting the working-stand housings laterally. When shapes are bent "from rolling heat" there need be no fear of crack formation.

P.G.

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307410012-3"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307410012-3

BUKHVALOV, B.N., dotsent, kand.tekh.nauk

Diagonal rolling of sheets. Trudy Ural.politekh.inst. no.78:38-57 '60.
(MIRA 14:5)

(Rolling (Metalwork))

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307410012-3"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307410012-3

BUKHVALOV, I.B.; KIRPICHNIKOVA, Ye.S.; RYABOV, V.F.; SHCHERBAKOVA, E.G.

Different blood types in birds; based on materials collected in the steppe districts of the Virgin Territory. Vest. Mosk. un. Ser. 6; Biol., pochv. 19 no.3:51-55 My-Je '64. (MIRA 17:12)

1. Kafedra tsitologii i gistologii Moskovskogo universiteta.

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307410012-3"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307410012-3

L 6351-65 EWT(m)/EWA(d)/T/EWP(t)/EWP(z)/EWP(b)/EWA(c) MJW/JD

ACCESSION NR: AP5015868 UR/0136/65/000/006/0077/0078
669-419.4 : 621.7[illegible]

AUTHOR: Bukhvalov, O. B.; Zasukha, P. F.

TITLE: Strain hardening of ASM and ATsK alloys and steel at different temperatures

SOURCE: Tsvetnyye metally, no. 6, 1965, 77-78

TOPIC TAGS: aluminum alloy, Armco iron, steel, bimetal, strain hardening

ABSTRACT: For the accurate determination of the dimensions of stock going into the production of bimetal bushings, the deformation resistance of antifriction alloys ASM (3.5-4.5% Sb, 0.3-0.7% Mg), ATsK (2-3% Zn, 2-3% Si), Armco iron and [illegible] was investigated as a function of the degree of deformation and temperature. The data from these investigations are plotted in two sets of hardening curves, one for the aluminum alloys, the other for the steels. These curves are also intended for determining rolling forces. Cylindrical samples were subjected to upsetting on a 60-ton friction press with a block rate of 200 mm/sec corresponding to the strain rate in the rolling of bimetal under mill conditions. Samples were heated in a special tube furnace. It is shown that the aluminum alloys are hardened by cold deformation,

Card 1/2

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307410012-3"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307410012-3

L 63541-65

ACCESSION NR: AP5015868 O

but as temperatures rise their strain hardening falls, more so in ASM than in ATsK, which contains silicon. It is also found that the deformation resistance of the steels increases somewhat in the 200-250°C temperature interval which is in agreement with other studies. The deformation resistance of 08kp steel is slightly greater as it contains twice as much carbon as Armco iron. Orig. art. has [illegible]

ASSOCIATION: none

SUBMITTED: 00 ENCL: 00 SUB CODE: MM

NO REF SOV: 005 OTHER: 000

Card 2/2

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307410012-3"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307410012-3

ACC NR: AP6033617 SOURCE CODE: UR/0136/66/000/010/0068/0070

AUTHOR: Zasukha, P. F.; Bukhvalov, O. B.; Yershov, A. A.; Nikiforov, V. K.

ORG: none

TITLE: Rolling of ASM alloy-clad steel with an aluminum insert

SOURCE: Tsvetnyye metally, no. 10, 1966, 68-70

TOPIC TAGS: aluminum alloy, cladding, ~~aluminum alloy clad~~ steel, clad metal rolling/ASM alloy

ABSTRACT: The effect of antimony content in the ASM alloy (3.5—6.5% Sb, 0.3—0.7% Mg, 0.3—0.7% Fe, 0.3—0.5% Si, Al-balance) on bond strength between the alloy cladding and a low-carbon steel base has been investigated. Low-carbon steel plate was clad with pure aluminum or alloys containing up to 8% antimony. It was found that the bond strength between pure aluminun and steel reached 6.4 kg/mm^2; it was reduced to 6.0 kg/mm^2 in the case of alloy containing 2% antimony, and 3.0 kg/mm^2 in alloy with 8% antimony. The steel-ASM alloy interface contained numerous brittle crystals of AlSb compound, which caused a separation of cladding. To eliminate the effect of antimony and other alloying elements on bond strength, the cladding was done with an aluminum inter-

Card 1/2 UDC: 669-419.4:621.771

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307410012-3"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307410012-3

ACC NR: AP6033617

layer. In practice, the machined ASM alloy ingots are pack-rolled with A6 aluminum sheets 3 mm thick at 500—540C in eight passes with reduction from 136 to 8 mm, then cold rolled to the required thickness. The cold-rolled sheets are then used as cladding material for steel. Orig. art. has: 2 figures.

SUB CODE: 11, 13/ SUBM DATE: none/ ORIG REF: 004

Card 2/2

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307410012-3"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307410012-3

BUKHVALOV, V. (g.Gor'kyi)

SN-200 voltage stabilizer for television power supply. Radio no.4:52 Ap '61. (MIRA 14:7)
(Television) (Electric power supply to apparatus)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307410012-3"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307410012-3

BUKHVALOVA, K. I.

GORSHKOV, A.A., professor, redaktor; BUKHVALOVA, K.I., redaktor; SHCHEPTEV, V.M., tekhnicheskiy redaktor.

[Founding industry] Liteinoe proizvodstvo. Sverdlovsk, Gos. nauchno-tekhn. izd-vo mashinostroit. lit-ry [Sverdlovskoe otd-nie] 1947. 52 p. (MLRA 7:8)

1. Vsesoyuznoye nauchno-tekhnicheskoye obshchestvo mashinostroiteley. Ural'skoye otdeleniye. 2. Sverdlovskoye otdeleniye Mashgiza.
(Founding)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307410012-3"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307410012-3

ALOV. A.A.; TOKAREVA, V.A., redaktor; BUKHVALOVA, K.I., redaktor.

[Electrodes for arc welding and weld deposition] Elektrody dlia dugovoi svarki i naplavki. Sverdlovsk, Gos. nauchno-tekhn. izd-vo mashinostroit. lit-ry [Sverdlovskoe otd-nie] 1947. 86 p. (MLRA 7:7)
(Welding)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307410012-3"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307410012-3

YEREMIN, A.N., kandidat tekhnicheskikh nauk; GORELOV, V.M., inzhener, retsenzent; BUKHVALOVA, K.I., inzhener, redaktor; DUGINA, N.A., tekhnicheskiy redaktor

[Physical characteristics of steel under cutting] Fizicheskaia sushchnost' iavlenii pri rezanii stalei. Moskva, Gos. nauchno-tekhn. izd-vo mashinostroit. lit-ry, 1951. 225 p. [Microfilm]
(Metal cutting) (Steel) (MLRA 9:9)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307410012-3"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307410012-3

YASHCHERITSYN, P.I.; LOSKUTOV, V.V., kandidat tekhnicheskikh nauk, retsenzent; BUKHVALOVA, K.I., inzhener, redaktor; DUGINA, N.A., tekhnicheskiy redaktor

[High-speed grinding] Skorostnoe shlifovanie. Moskva, Gos. nauchno-tekhn. izd-vo mashinostroit. lit-ry, 1953. 110 p. [Microfilm] (MLRA 7:10)

(Grinding and polishing)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307410012-3"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307410012-3

MIROSHNICHENKO, Boris Yakovlevich; BUKHVALOVA, K.I., inzh., red.vypuska; KUZNETSOV, N.S., inzh., red.; GAVRILOV, P.G., kand.tekhn.nauk, red.; SOMOVA, T.M., inzh., red.; MARCHENKOV, I.A., tekhn.red.

[Layout precision in the manufacture of machinery] Tochnost' mashinostroitel'noi razmetki. Sverdlovsk, Gos.nauchno-tekhn.izd-vo mashinostroit.lit-ry, 1960. 86 p. (Biblioteka razmetchika, no.4). (MIRA 14:1)

(Laying out--Machine-shop practice)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307410012-3"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307410012-3

BOYARSKIY, Lazar' Todrisovich; KORSHIKOV, Nikolay Petrovich; VERBOVSKIY, I.I., inzh., retsenzent; SHKURO, V.M., inzh., retsenzent, red.; BUKHVALOVA, K.I., inzh., red.; DUGINA, N.A., tekhn.red.

[Technology of the manufacture of forging and pressing machinery] Tekhnologiia kuznechno-pressovogo mashinostroeniia. Moskva, Gos.nauchno-tekhn.izd-vo mashinostroit.lit-ry, 1960. 432 p. (MIRA 14:4)

(Forging machinery)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307410012-3"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307410012-3

BUKHVINER, V.Ye.

Design of a discrete synchronization system. Elektrosviaz' 16 no.6: 3-9 Je '62. (MIRA 15:6)
(Radio) (Information theory)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307410012-3"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307410012-3

S/106/62/000/006/001/003
A055/A101

9,2580

AUTHOR: Bukhviner, V.Ye.

TITLE: Calculation of a discrete synchronization system

PERIODICAL: Elektrosvyaz', no. 6, 1962, 3 - 9

TEXT: A discrete synchronization system (for two independent oscillators) is described, where the averaging device contains a reversible counter. The author considers the system with indirect control of the phase of oscillations, shown in Figure 1, where the received discrete signals, after passing through the forming device (1), reach the phase discriminator (2), into which are also fed the periodic pulses from the controlled scaler (5), a highly stable h-f sinusoidal voltage being supplied to this scaler by the quartz oscillator (4); through the controlling device (6), the error signal from the phase discriminator changes the operating conditions of the controlled scaler; the system is completed by the averaging device (3) which determines essentially the parameters of the system. The averaging device suggested by the author (see Fig. 2) contains a binary counter with a controlled direction of counting ("sum" or "dif-

Card 1/3

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307410012-3"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307410012-3

Calculation of a discrete synchronization system

ference"). To the phase discriminator (1) are applied the narrow pulses (corresponding to the fronts of the received signals) and the rectangular voltage (with a frequency equal to twice the keying frequency) from the controlled scaler output stage, this voltage being applied to the two inputs (in opposition) of the phase discriminator: the "positive" and the "negative" input. The amplitude-summed signals (whose time-diagrams are reproduced in the article) put into operation the device controlling the counting direction (2), and this device determines the reversal of the counter (3) for "sum" or "difference" operation. The author deduces a set of formulae giving the parameters of the synchronization system described by him, and reproduces finally a numerical example of the calculation of these parameters. The Soviet personalities mentioned in the article are: P.A. Kotov, N.I. Chistyakov, V.M. Sidorov, V.S. Mel'nikov and F.V. Mayorov. There are 3 figures.

SUBMITTED: March 10, 1961

Card 2/2

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307410012-3"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307410012-3

9,6000
6.7100

4642
S/106/63/000/001/001/007
A055/A126

AUTHOR: Bukhviner, V.Ye.

TITLE: Experimental investigation of the interference immunity of synchronization systems

PERIODICAL: Elektrosvyaz', no. 1, 1963, 3 - 12

TEXT: An experimental method for comparing the interference immunity of discrete synchronization systems with different averaging devices is described. The circuit used for this experimental investigation is shown in Fig. 1. This circuit permits to vary all the parameters of the synchronization system linked by the inequality:

$$K_f < \frac{1}{nN} \frac{K_\mu}{K_\delta} ; \qquad (1)$$

where n is the "scaling" coefficient of the controlled scaler; N is the capacity of the discrete storage device (number of pulses); K_f is the coefficient of the permissible relative instability of the keying frequencies of the synchronized devices; K_μ is a coefficient taking into account the random character of keying

Card 1/3

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307410012-3"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307410012-3

(variable density of keying) (K_{μ} varies between 0 and 1); K_{δ} is a coefficient taking into account the random character of the variation of the direction of the time-distortions of the input signal fronts (K_{δ} varies between 1 and 2). The synchronized reference system consists of the regenerating device 3 to which are simultaneously applied the signals from the generator 1, distorted in the time-distortion simulator 2, and the regenerating pulses cophasely formed in the same generator. The distorted signals are also applied to the second regenerator 4, but the regenerating pulses, in this case, come from the output of the investigated synchronization system 10. Devices 5 and 6 are error-counters, and 9 is a scaler. 7 and 8 are devices recording the maximum values of time-distortion. System 10 (with discrete phase tuning and discrete averaging) contains the master-oscillator 11, the controlled scaler 12, the phase discriminator 13 and the averaging device 14. N and n were varied in this system. Three variants of the averaging device are described. Calculated and experimental data on the permissible frequency range of discrete synchronization systems are compared. The maximum permissible value of N is determined. The necessity of the automatic blocking of averaging devices is shown; this automatic blocking permits to widen considerably the frequency range of the synchronization systems. The advantage of

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307410012-3"

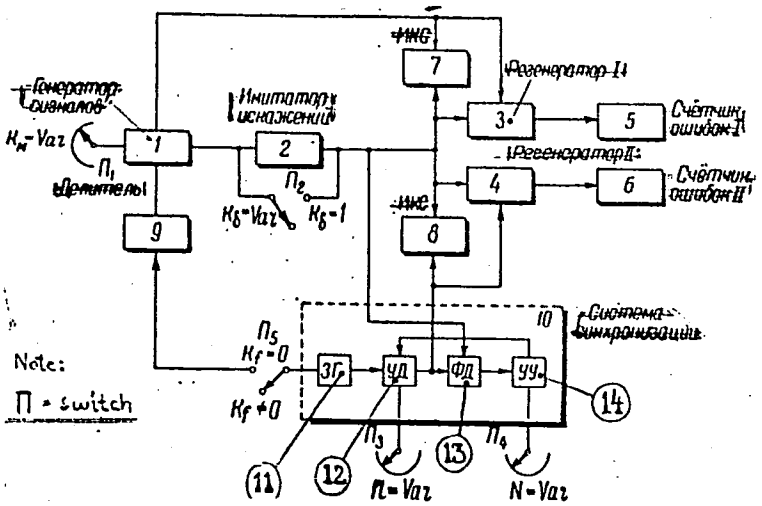
"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307410012-3

Experimental investigation of the interference ....

using systems with automatic phase tuning in radio channels is stressed. There are 5 figures and 2 tables.

SUBMITTED: May 15, 1962

Figure 1



Card 3/3

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307410012-3"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307410012-3

BUKHVINER, V.Ye.

Synchronization system with a constant frequency trim. Elektrosviaz' 18 no.1:9-16 Ja '64. (MIRA 17:4)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307410012-3"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307410012-3

ACCESSION NR: AP4037400 S/0106/64/000/005/0053/0063

AUTHOR: Bukhviner, V. Ye.

TITLE: Statistical-characteristic analyzer for radiotelegraph channels

SOURCE: Elektrosvyaz', no. 5, 1964, 53-63

TOPIC TAGS: radio, radiotelegraphy, telegraphy, radiotelegraph channel, channel characteristic analyzer

ABSTRACT: Some ways of developing a telegraph analyzer of channel reliability are discussed; a laboratory-model portable transistorized analyzer is described. The device analyzes a radiotelegraph channel by the probability of errors, their distribution, error symmetry and correlation; it is essentially a transmitting-receiving set of synchronous measuring equipment; its block diagram is shown in Enclosure 1. The analyzer, intended for research on and aligning radiotelegraph channels, consists of three channels (one principal and two auxiliary) and has a

Card 1/3

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307410012-3"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307410012-3

ACCESSION NR: AP4037400

discrete synchronization system with an indirect automatic phase control of its quartz oscillator. A master oscillator ensures signaling speeds of 1,200, 600, 300, 100, and 50 bauds. An a-c power supply at 50 va is required. Orig. art. has: 11 figures and 9 formulas.

ASSOCIATION: none

SUBMITTED: 29Mar63 DATE ACQ: 09Jun64 ENCL: 01

SUB CODE: EC NO REF SOV: 006 OTHER: 000

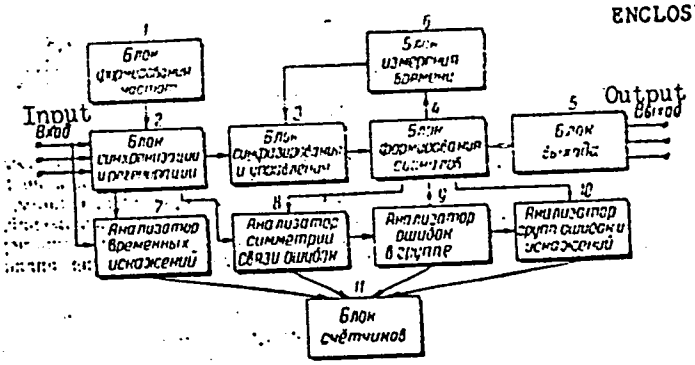
Card 2/3

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307410012-3"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307410012-3

ENCLOSURE: 1

ACCESSION NR: AP4037400



Statistical-characteristic analyzer for radiotelegraph channels

1 - frequency forming unit; 2 - sync and regenaration unit;
3 - phasing and control unit; 4 - signal shaper; 5 - output unit;
6 - time measuring unit; 7 - time distortion analyzer;
8 - error symmetry and correlation analyzer; 9 - intragroup-error analyzer; 10 - error-group and distortion analyzer;
11 - counter unit.

Card 3/3

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307410012-3"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307410012-3

L 25914-66 EWT(d)/FSS-2

ACC NR: AP6016668 SOURCE CODE: UR/0106/65/000/007/0010/0016

AUTHOR: Bukhviner, V. Ye.

35
B

ORG: none

TITLE: Automatic control of the quality of radiotelegraph communications

SOURCE: Elektrosvyaz', no. 7, 1965, 10-16

TOPIC TAGS: automatic control, radio telegraphy

ABSTRACT: It is shown that the quality of radiocommunications can be automatically controlled with the aid of the amplitude of time distortions so that not more than 10 of each 100,000 received code combinations may be erroneously recorded, thus adhering to the recommendations of the CCIR concerning radio lines. The probability density of the distribution of time distortions in trunk radio channels can be approximated with a sufficient accuracy by a power law whose parameters are determined by the quality of the communications. The measurements of time distortions for the purpose of automatic control of the quality of communications should be performed with respect to the position of regenerating pulses, which is determined by the synchronization system of the concerned communication channel. The efficiency of the communication channel, defined as the ratio of time of operation with a

Card 1/2 UDC: 621.396.235.4.004

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307410012-3"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307410012-3

L 25914-66
ACC NR: AP6016668 D

high quality to the total time of operation, may be regarded as the operational parameter of communication quality. In this connection, the author formulates the requirements that must be met by a communication channel before it can be considered efficient. Continuous registration of the channel's efficiency can be accomplished with the aid of a simple circuit in which the recorder input receives pulses from a metering device. These pulses proceed to a distortion counter and thence to a storage device regulated by a timer. Orig. art. has: 4 figures, 5 formulas, and 2 tables. [JPRS]

SUB CODE: 17, 09 / SUBM DATE: 29Aug64 / ORIG REF: 007

Card 2/2 BLG

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307410012-3"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307410012-3

L 8786-66 EWT(d)/FSS-2

ACC NR: AP5028138 SOURCE CODE: UR/0106/65/000/011/0017/0023

AUTHOR: Bukhviner, V. Ye.

ORG: none

TITLE: Error-correcting coding in a simplex radio channel using a chain code

SOURCE: Elektrosvyaz', no. 11, 1965, 17-23

TOPIC TAGS: radio communication, radio telegraphy

ABSTRACT: The principal shortcoming of recurrent and group codes is seen in their inability to restore information on the basis of check symbols only; when the working channel fails, the information arrived via the check channel is useless. A continuous, "chain" coding system is suggested in which working-channel relative-coded symbols are transmitted as check symbols. A theoretical analysis of the new coding system brings about these conclusions: (1) Noise rejection of

Card 1/2

UDC: 621:396.14:621.398.623

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307410012-3"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307410012-3

L 8786-66
ACC NR: AP5028138

the chain code is comparable to that of 10-digit group codes with R = 2 and approaches that of a tripled system (R = 3), where R is redundancy; (2) The chain code permits restoring information from check signals which helps in reserving the channels; (3) The chain code is expedient for simplex channels with an error probability P = 0.01—0.0001; with P > 0.01, the chain coding does not yield higher fidelity; with P < 0.0001, the chain coding may prove too expensive; (4) High detecting ability of the chain code and simplicity of the equipment required permit using it on automatic-RQ duplex lines; (5) The chain coding may prove useful in secondary-multiplexing systems working with parallel channels and frequency-time diversity. Orig. art. has: 4 figures, 14 formulas, and 2 tables.

SUB CODE: 17 / SUBM DATE: 12Feb65 / ORIG REF: 005 / OTH REF: 004

jw
Card 2/2

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307410012-3"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307410012-3

L 40909-66 EWT(d)/EWT(l)/EEC(k)-2/EWP(v)/EWP(k)/EWP(h)/EWP(l) BC

ACC NR: AP6009937 SOURCE CODE: UR/0118/65/000/011/0025/0026

AUTHOR: Bukhtiarov, V. A. (Engineer); Zhuk, I. N. (Engineer); Kulakov, N. N. (Engineer); Lozovoy, Ye. K. (Engineer); Malich, V. V. (Engineer); Napreychikov, F. I. (Engineer) 57 B

ORG: none

TITLE: Inductive relay for signaling, control, and telemetry

SOURCE: Mekhanizatsiya i avtomatizatsiya proizvodstva, no. 11, 1965, 25-26

TOPIC TAGS: electric relay, circuit design, telemetry equipment, automatic control equipment

ABSTRACT: The authors introduce a universal and stable inductive sensor which has a high degree of reliability and sensitivity. The inductive relay (sensor) proposed is intended for signaling, control, and telemetry. The device is based on a transistorized oscillator with tuned circuits in the base circuitry and on an emitter capable of operating in a "quasi-trigger" and intermittent oscillating mode. The all-purpose relay may be used in automatic control, monitoring and alarm systems, telemetry systems, and at unattended beacons. The output may be an electromagnetic relay or a contactless relay device of any type. The oscillator is distinguished by a high degree of frequency stability in all modes and uses a series-produced

Card 1/2 UDC: 621.3.083:669.001.6

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307410012-3"