"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549710005-9

Effect of boron on iodine-reducing activity of tissues and the reaction of boron with other mineral elements in metabolism. N. V. Kovaleva and M. Ya. Shkol'nik. *Doklady Akad. Nauk S.S.S.R.* 85, 425-8(1952).—Expts. with flax (B-requiring plant) and wheat (having lesser B requirement) plants showed that B leads to increased I-reducing activity of flax in cultures in which Ca, N, and K salts were added. At high levels of nitrates or lime, i.e. when B requirements rise, there is a reduced I-reducing power of the plant tissues. Catalase activity parallels the rise of I-reducing activity. Wheat on high nitrate and lime diet shows either very little decline (or none) in the I-reducing activity, indicating that the plant is able to regulate its reduction-oxidation systems satisfactorily even with disturbed mineral supply. In cultures with NH_4NO_3 introduction of B leads to a decline of I-reducing power. The pos. effect of B at high levels of lime supply indicates the interrelation of mineral elements (with pos. or neg. activities) in regulation of oxidation-reduction processes in plants.

G. M. Kosolapoff

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549710005-9"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549710005-9

SHKOL'NIK, M.Ya.; MAKAROVA, N.A.; STEKLOVA, M.M.; KOVALEVA, N.V.

Some data on the physiology of branched wheat in connection with mineral nourishment. Trudy Bot.inst. Ser.4 no.9:63-76 '53. (MLRA 6:6)

1. Botanicheskiy institut imeni V.L. Komarova akademii nauk SSSR.
(Wheat) (Plants--Metabolism)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549710005-9"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549710005-9

SHKOL'NIK, M.Ya.; NATANSON, N.Ye.

Viscosity of the protoplasm in various sorts (according to drought resistance) of wheat and barley and the effect of trace elements on it. Doklady Akad. Nauk S.S.S.R. 88, 1067-70 '53) (MLRA 6:2)
(CA 47 no.21:11359 '53)

1. Leningrad. Agr. Inst.

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549710005-9"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549710005-9

SHKOL'NIK, M. Ya.

USSR/Biology - Hybridization 1 Nov 53

"Modification of the Chemical Properties of Plants by Treating Their Seeds With Extracts From Other Plants," M. Ya. Shkol'nik, N. A. Makarova

DAN SSSR, Vol 93, No 1, pp 185-188

Treated seeds of ordinary wheat and of barley with extracts from bushy wheat and from peas and those of bushy wheat with extracts from ordinary wheat. Found that the carbohydrate and protein compn of the seeds was modified and became similar to that of the plants from which the extracts were made. Assume that the changed metabolism and compn may be

275T3

inherited by the plants grown from the treated seeds. Expts to establish whether this type of vegetative hybridization occurs have been planned. Presented by Acad V. N. Sukachev 28 Apr 53.

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549710005-9"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549710005-9

Shkol'nik, M. Ya.

USSR

Treating seed before planting with solutions of minor elements and foliar application of these. M. Yu. Shkol'nik and N. A. Makarova. *Zemledelie* 2, No. 11, 31-9(1954).—Barley and spring-wheat seed treated with H_3BO_3 produced higher yields than untreated seed. Winter wheat did not respond as well as spring wheat to this treatment. Applications of B seemed to increase the total and protein N in the grain. For 2 centners of seed 20 g. H_3BO_3 was used. For foliar applications, H_3BO_3 (0.15 g./l.) was compared with $MnSO_4$ (1 g./l.), $CuSO_4$ (0.15 g./l.), $ZnSO_4$ (0.25 g./l.), and KH_2PO_4 (3 g./l.). The solns. were used in the early stages of growth, in June, and later in July. In this treatment the B was inferior to Mn and Zn. Small applications of $CuSO_4$ to potatoes were effective in increasing yield. When potato seeds were treated, the starch content and that of ascorbic acid increased. The applications of minor elements is recommended for soils in zones of chernozem and podzolization.

I. S. Joffe

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549710005-9"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549710005-9

SHKOL'NIK, M.

(2)

12094* (Increasing Yield of Barley by Treating the Seeds in Boric Acid Solution Before Sowing.) Povyshenie urozhainosti iachmenia s pomosheh'iu predposevnoi obrabotki semian v rastvore bornoi kisloty. M. Shkol'nik and N. Makarova. *Dostizhenila Nauki i Peredovogo Opyta v Sel'skom Khozialstve*, 1954, no. 4, Apr., p. 76-77.

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549710005-9"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549710005-9

SHKOLNIK, M. Ya.

USSR/Biology - Plant physiology

Card 1/1 : Pub. 124 - 3/35

Authors : Shkolnik, M. Ya., Doctor of Biological Sciences

Title : Micro-elements in the feeding of plants

Periodical : Vest. AN SSSR 7, 22-29, July 1954

Abstract : Discussion is presented on the physiological role of various micro-elements - chemical elements such as B, Mn, Zn, Cu, Mo, Co, I, Ra, U, etc.- necessary for normal growth of plants.

Institution : ....

Submitted : ....

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549710005-9"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549710005-9

Shkol'nik, M. Ya.

The nature of some similarity of action of boron, iron, and hydrogen peroxide on material metabolism in plants. M. Ya. Shkol'nik and M. M. Steklova. *Doklady Akad. Nauk SSSR* 94, 157-60(1954).—A review (19 references) and expts. with flax plants grown in media contg. Fe, H_2O_2, and B in various amts., indicate that Fe, B, and H_2O_2 produce similar effects. Deficiencies in these substances shift the plant metabolism in the direction of oxidation reactions. The presence of B reduces the flax requirement for K, with an accompanying increase of yields of the seed. Seed pretreatment with H_2O_2 increases the seed yield of alfalfa by over 40%. G. M. Kosolapoff

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549710005-9"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549710005-9

SHKOL'NIK, M. Ya.

USSR/ Biology - Plant Physiology

Card : 1/1

Authors : Kovaleva, N. V., and Shkol'nik, M. Ya.

Title : Effect of Mg, K, Fe and Be on the growth and biochemical properties of flax and barley during Bo deficiency

Periodical : Dokl. AN SSSR, 96, Ed. 4, 837 - 840, June 1954

Abstract : Flax, in the absence of Bo, perishes in its very-early stage and, very often, immediately after the development of the cotyledon; whereas barley gives a well developed vegetative mass, but does not sprout. In the case of flax neither Fe nor K, used in large dosages, nor manganese dioxide were capable of compensating for the Bo deficiencies. Mg increased dosages of Fe and K and Be compensated for the Bo deficiency in the case of barley and resulted in satisfactory sprouting of the plant. Fourteen references. Tables, photos.

Institution : Acad. of Sc. USSR, The V. L. Komarov Botanical Institute

Presented by: Academician A. L. Kursanov, March 16, 1954

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549710005-9"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549710005-9

Shkol'nik, M. Ya.

Quantitative separation of organic acids in plants by the method of distribution (partition) chromatography on silica gel. M. Ya. Shkol'nik (A. N. Bakh Biochem. Inst., Acad. Sci. ~~U.S.S.R., Moscow~~). *Doklady Akad. Nauk S.S.S.R.* 98, 443-6(1954).—The sepn. is effected by driving the soln. by N pressure through the chromatographic column (diagram shown), provided by a separate reservoir at the top for introduction of solvents. The silica gel is introduced in suspension in $CHCl_3$, which is allowed to drain, is pressed out with N and the test sample is introduced. If Et_2O or $BuOH$-$CHCl_3$ is used as the mobile phase, the order of emergence of org. acids from the column is: AcOH, fumaric, pyruvic, glycolic, malic, $(CO_2H)_2$, malonic, citric, and tartaric. The typical emergence titration curves are shown. The best results were obtained with 10% $BuOH$-$CHCl_3$, followed by 35% $BuOH$-$CHCl_3$. Typical sepn. and detn. of acids present in blackberries and other plant material are shown. The material can be introduced in aq. soln. or in $BuOH$-$CHCl_3$.

G. M. Kosolapoff

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549710005-9"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549710005-9

SHKOL'NIK, M. YA.

USSR

Similar actions of some mineral elements on metabolism. M. Ya. Shkol'nik. *Izvest. Akad. Nauk S.S.S.R., Ser. Biol.* 1955, No. 1, 3-12; cf. *C.A.* 48, 7713b.—Expts. with flax and sunflower in which the effects of B, Mn, and Fe were exaind. showed that B can greatly reduce the neg. action of Fe deficiency on flax. MnO_2 can reduce the neg. effects of B deficiency, indicating that MnO_2 has an action similar to that of B on the carbohydrate metabolism. This similarity of B and MnO_2 extends to I-reduction by tissues and their content of ascorbic acid. $MnSO_4$ does not have this action and, in fact, it furthers the neg. action of B deficiency on the plant; with exclusion of B, the addn. of $FeCl_3$ or Fe citrate also acts in a depressant manner on the plants. G. M. Kosolapoff

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549710005-9"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549710005-9

SHKOL'NIK, M. Ya.

MD

Effect of nitrogen on duration of the light phase in Perilla. M. Ya Shkol'nik, N. A. Makarova, and F. F. Lelsie (V. L. Komarov Botan. Inst., Leningrad). *Fiziol. Rastenii* 2, 513-17(1955).—High doses of N fertilizer reduce the duration of the light phase in Perilla from various locations with 6-24 days requirement for passage from flowering to fruit-bearing stage. G. M. Kosolapoff

(2)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549710005-9"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549710005-9

SHKOL'NIK, M.Ya.

Effect of some minor elements on frost resistance of citrus crops. (MLRA 9:5)
Trudy Bot.inst.Ser.4 no 10·296-308 '55.
(Plants--Frost resistance) (Citrus fruits)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549710005-9"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549710005-9

SHKOL'NIK, M. YA.

Interaction of mineral elements in the exchange of matters. M. Ya. Shkol'nik. *Zhur. Obshchei Biol.* 16, 119-40(1955).—It is shown that there are important connections between the action of different mineral elements on the exchange of matters and also between the action of these elements and the action of other external factors such as temp., light, and pH of the feeding soln. These connections are significant not only in plants but also in the animal kingdom. Mostly a review with 67 references.

F. J. Hendel

MD

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549710005-9"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549710005-9

SHKOL'NIK, M. YA.

The biological role of boron in plants. M. Ya. Shkol'nik
Uspekhi Sovremennoi Biol. 40, 211-29(1955) —A review with
112 references. I. A. Stekol

(1)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549710005-9"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549710005-9

SHKOLNIK, M. Ya.

USSR/ Biology--Physiology

Card 1/1 Pub. 86--34/39

Authors : Shkno'nik, M. Ya. Dr. Biol. Sc.

Title : The biological role of microelements in the organisms of animals and human beings

Periodical : Priroda 44/1, 120--122, Jan 1955

Abstract : A review is made of the book, "The Biological Role of Microelements in the Organisms of Animals and Human Beings," by A. O. Voynar, published by the "Soviet Science" Publishing Office, in 1953, and containing 495 pages. The word microelements is used for those elements which enter into the organism in very minute proportions. The author mentions 52 such elements and discusses the role they play in vital processes, including diseases which result from their absence. Generally the book is rated good.

Institution : .....

Submitted : .....

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549710005-9"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549710005-9

SHKOL'NIK, M. YA.

USSR/Biology - Botany

Card 1/1 Pub. 86 - 14/37

Authors : Shkol'nik, M. Ya., Dr. Biol. Sc.

Title : Biological role of boron

Periodical : Priroda 44/4, 89 - 94, Apr 1955

Abstract : A study is made of the effect of boron on the growth of plants. The boron content of plants is found to vary with the kind of plant, dicotyledonous plants requiring much more than monocotyledonous ones. It is believed that the study of the action of boron may lead to a solution of the problem of the biochemistry of plants and perhaps to embryology. Illustrations.

Institution : .....

Submitted : .....

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549710005-9"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549710005-9

~~SHO~~ SHKOL'NIK, M. YA.

USSR/ Agriculture - Plant physiology

Card 1/1 Pub. 22 - 50/54

Authors : Shkol'nik, M. Ya., and Steklova, M. M.

Title : The importance of P, B and H_2O_2 on the vernalization stage of winter plants

Periodical : Dok. AN SSSR 100/3, 591-594, Jan 21, 1955

Abstract : Agricultural data are presented showing the importance of P, B and H_2O_2 on the vernalization of winter plants. Ten USSR references (1934-1954).

Institution : Academy of Sciences USSR, The V. L. Komarov Botanical Institute

Presented by: Academician A. L. Kursanov, November 30, 1954

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549710005-9"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549710005-9

SHKOLNIK, M. YA

1-3

USSR/Plant Physiology - Mineral Nutrition.

Abs Jour : Ref Zhur - Biol., No 5, 1958, 19978

Author : Shkolnik, M.Ia.
Inst : -
Title : The Present Status of the Problem on the Physiological Role of Microelements in Plants.

Orig Pub : V sb.: Mikroelementy v s.kh. i meditsine, Riga, AN LatvSSR, 1956, 23-40.

Abstract : No abstract.

Card 1/1

USSR / Plant Physiology. Mineral Nutrition

Abs Jour : Ref Zhur - Biol., No 8, 1958, No 34271

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549710005-9

Author : Shkol'nik, M. Ya.; Stoklova, [illegible]
Inst : Academy of Sciences Latvian SSR
Title : Effect of Certain Micro- and Trace elements on the Passing of the Phase of Vernalization in Winter Wheat.

Orig Pub : V sb.: Mikroelementy v s.kh. i meditsine, Riga, AN LatvSSR, 1956, 227-245.

Abstract : In the Botanical Institute of the Academy of Sciences of SSSR (Leningrad) - during a 2 year period of tests with soil cultivations the following studies have been made: the effect of incomplete (shortened by 8-10 days) vernalization of various winter cultivations in solutions KH_2PO_4, $MgSO_4$, H_3BO_3, $ZnSO_4$, Na_2MoO_4, H_2O_2 on the velocity of vernalization and passing through further phases of development. Moreover, and this for the benefit of the success of

Card 1/2

USSR / Plant Physiology. Mineral Nutrition

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549710005-9

SHKOL'NIK, M.Ya., doktor biologicheskikh nauk.

Biological role of trace elements and their effect on raising productivity. Est.v shkole no.1:15-22 Ja-F '56. (MLRA 9:5)

1. Botanicheskiy institut Akademii nauk SSSR.
(Trace elements)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549710005-9"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549710005-9

SHKOL'NIK, M.Ya.; MAKAROVA, N.A.; STEKLOVA, N.A.; YEVSTAF'YEVA, L.N.

On the causes of the specific role of boron in reproductive organ development, fertilization and fruit formation [with English summary in insert). Fiziol.rast. 3 no.3:191-198 My-Je '56.(MLRA 9:9)

1.Botanicheskiy institut imeni V.L.Komarova Akademii nauk SSSR, Leningrad.
(Plants, Effect of boron on)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549710005-9"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549710005-9

Shkol'nik, M.Ya.

2/

Effect of various methods of supply of trace elements on development of, the crop of, the fodder qualities of red clover, and on the content of trace elements in it. M. Ya. Shkol'nik and V. P. Bozhenko. *Izvest. Akad. Nauk S.S.S.R., Ser. Biol.* 1956, No. 4, 39-57.—Seed treatment with Zn gave the greatest growth of plant mass in comparison with B or Mo. In 2-year expts. the Zn treatment nearly doubled the yield of clover in both acidic and nearly neutral soils. Mo gives a better result in acidic soil than in neutral soil. Introduction of B or especially Mo by spraying of the plant, rather than through the roots, raises the content of these elements in the plant more than does the root feeding. PK fertilizers tend to raise the content of Mo and lower that of B in the plant. Zn tends to lower the content of B in the plant. In acidic soils spraying with Mo gives a better effect than root feeding. Seed pretreatment with Zn and spraying of the plant with Mo gave the best root growth in clover with increased development of nodules. Addn. of Mo to the soil gave the same growth improvement as PK fertilizer. Zn and B and especially Mo increased the content of vitamin C in the leaves and roots of clover; liming of soil also gave this effect. The carotene content was raised by Mo and Zn, less by B, along with liming and PK fertilization. Cu, Zn, Mo, P, and K raised the content of proteins and carbohydrates in the plant mass. PK was particularly effective in raising protein content. G. M. Kosolapoff

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549710005-9"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549710005-9

SHKOL'NIK, M.Ya.; MAKAROVA, N.A.: PEYVE, Ya.V., otvetstvennyy red.; VIKHREV, S.D., red.izd-va; ZENDEL', R.Ye., tekhn.red.

[Microelements in agriculture] Mikroelementy v sel'skom khoziaistve. Moskva, Izd-vo Akad.nauk SSSR, 1957. 290 p. (MIRA 11:2)

1. Chlen-korrespondent AN SSSR (for Peyve)
(Trace elements)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549710005-9"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549710005-9

COUNTRY : USSR
CATEGORY : Plant Physiology. Mineral Nutrition. I

ABS. JOUR. : RZhBiol., No. 6 1959, No. 24537

AUTHOR : Makarova, N.A.; Shkol'nik, M.Ya.
INST. : Academy of Sciences, USSR
TITLE : Influence of Boron on Heat Resistance and Water-Holding Capacity of Leaves

ORIG. PUB. : V. sb.: Pamyati akad. N.A. Maksimova, 1957, 81-86

ABSTRACT : Field experiments were conducted with buckwheat (Fagopyrum esculentum) and sunflower (Helianthus annuus) in the Kamennaya steppe in Voronezhskaya oblast' and vegetation experiments with barley (Hordeum) in the Botanical Institute of the Academy of Sciences in Leningrad. Pre-planting soaking of seeds in a solution of boric acid and foliar top dressing with B increased the viscosity of protoplasm in buckwheat and sunflower. Top dressing sunflower with Cu caused a

CARD: 1/4

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549710005-9

COUNTRY :
CATEGORY : I

ABS. JOUR. : RZhBiol., No. 6 1959, No. 24537

AUTHOR :
INST. :
TITLE :

ORIG. PUB. :

ABSTRACT : greater increase of viscosity of protoplasm in the upper leaves and less viscosity increase in the lower leaves as compared to foliar dressing with B. Treatmentin a boric acid solution and foliar dressing with B raised the heat resistance of buckwheat but did not affect the heat resistance of sunflower. Soaking of seeds in boric acid increased the water-holding capacity of buckwheat leaf tissues. Pre-planting treatment of seeds by the Henkel method and in a boric acid solution decidedly affected the water-holding capacity of

CARD: 2/4

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549710005-9

COUNTRY :
CATEGORY :

I

ABS. JOUR. : RZhBiol., No. 6 1959, No. 24537

AUTHOR :
INST. :
TITLE :

ORIG. PUB. :

ABSTRACT : drought were obtained with a four-hour soaking in a boric acid solution.--T. F. Koretskaya.

CARD: 4/4

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549710005-9"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549710005-9

COUNTRY :
CATEGORY : I

ABS. JOUR. : RZhBiol., No. 6 1959, No. 24536

AUTHOR :
INST. :
TITLE :

ORIG. PUB. :

ABSTRACT : B was observed only in buckwheat, and it was higher in the case of extra-root feeding with B than with treatment of the seeds with H_3BO_3. The water-holding capacity of buckwheat leaves and of the varieties of barley (Hordeum) differentiated by drought resistance was increased under the influence of pre-planting treatment of their seeds with a solution of H_3BO_3; their pollination with magnesium borate before sowing boosted the intensity of transpiration in morning hours and considerably

CARD: 2/5

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549710005-9

COUNTRY :
CATEGORY : I

ABS. JOUR. : RZhBiol., No. 6 1959, No. 24536

AUTHOR :
INST. :
TITLE :

ORIG. PUB. :

ABSTRACT : reduced it in the hotter daytime hours. The same thing was observed in an experiment with Medicago sativa in treating its seeds before sowing with H_3BO_3 and $H_3BO_3 + Na_2MoO_4$. The total number of carbohydrates and also of saccharose and monose in the above-ground mass of summer wheat Lutescens 62 was increased as a result of pre-planting treatment of seeds with a solution of H_3BO_3 and $ZnSO_4$. Treatment of seeds of Gordeiform 10 with solutions of H_3BO_3 and $MnSO_4$ caused an increase of monose in

CARD: 3/5

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549710005-9

SHKOL'NIK, M.YA.

26-10-36/44

AUTHOR: Shkol'nik, M.Ya., Doctor of Biological Sciences, Leningrad

TITLE: A Popular Book on Trace Elements (Populyarnaya kniga o mikroelementakh)

PERIODICAL: Priroda, 1957, No 10, pp 119-120 (USSR)

ABSTRACT: The author reviews the book: "Mikroelementy v sel'skom khozyaystve" - Trace Elements in Agriculture" by O.K. Dobrolyubskiy (Sel'khozgiz, 1956, 64 pp.). He says that the book was written in order to give practical advice to agricultural employees on the various ways trace elements can be used. Many examples are given showing that the writer is fully versed with the latest facts on these elements. In spite of a few defects, the book is a valuable source for the dissemination of such knowledge.

AVAILABLE: Library of Congress

Card 1/1

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549710005-9"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549710005-9

SHKOL'NIK, M.Ya.; MAKAROVA, N.A.

Significance of trace elements for dry farming on Chernozem soils and their effect on the physiological processes determining the drought and heat resistance of plants. Trudy Bot. Inst. Ser. 4 no.12:23-73 '58. (MIRA 11:7)

(Plants, Effect of minerals on) (Chernozem soils) (Dry farming)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549710005-9"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549710005-9

SHKOL'NIK, M.Ya.; MAKAROVA, N.A.; STEKLOVA, M.M.; GRESHISHCHEVA, V.N.

Physiological characteristics of initial and transmuted forms of corn and clover under different conditions of water supply and the effect of phosphorus, boron, and copper under these conditions. Trudy Bot. inst. Ser. 4 no.12:95-119 '58. (MIRA 11:7)
(Botany--Variation) (Soil moisture) (Plants, Effect of minerals on)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549710005-9"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549710005-9

SHKOL'NIK, M.Ya.

Effect of trace elements on photosynthesis, carbohydrate content and assimilate translocation of plants as studied against a background of nitrate and ammonia nutrition. Trudy Bot. inst. Ser. 4 no.12: 154-168 '58. (MIRA 11:7)
(Plants, Effect of minerals on) (Plants, Effect of nitrogen on)
(Plants--Metabolism)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549710005-9"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549710005-9

SHKOL'NIK, M.Ya.; CHIRKOVA, T.V.

Effect of boron, zinc, and molybdenum on growth, development, carbohydrate metabolism, photosynthesis and the trend of oxidation-reduction processes in the ontogenesis of corn. Trudy Bot. inst. Ser. 4 no.12:169-192 '58. (MIRA 11:7)
(Corn (Maize)) (Plants, Effect of minerals on)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549710005-9"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549710005-9

SHKOL'NIK, M.Ya.; STEKLOVA, M.M.

Effect of molybdenum, copper, manganese and ascorbic acid on the development of the yarovization stage in winter crops. Trudy Bot. inst. Ser. 4 no.12:242-256 '58. (MIRA 11:7)
(Vernalization) (Plants, Effect of metals on)
(Plants, Effect of ascorbic acid on)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549710005-9"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549710005-9

SHKOL'NIK, M.Ya., doktor biol.nauk

Role of trace elements in plant culture. Biol. v shkole no.5:65-72 S-O '58. (MIRA 11:11)

1. Botanicheskiy institut imeni V.L. Komareva AN SSSR.
(Trace elements) (Fertilizers and manures)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549710005-9"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549710005-9

SHKOL'NIK, M.Ya.; ABDURASHITOV, S.A.

Effect of trace elements on the synthesis and translocation of carbohydrates [with summary in English]. Fiziol.rast. 5 no.5:393-399 S-O '58. (MIRA 11:11)

1. Botanicheskiy institut imeni V.L. Komarova AN SSSR, Leningrad.
(Plants, Effect of minerals on) (Plants, Motion of fluids in)
(Carbohydrate metabolism)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549710005-9"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549710005-9

f. Absorption and translocation of mineral elements supplied to the leaves of plants. E I Ratner and G N Beriozov, USSR Academy of Sciences, Moscow

g. Proteolytic processes under the conditions of an adverse water balance. E N Sisakyan, A N Bakh Institute of Biochemistry, Academy of Sciences USSR, Moscow

h. The role of oxidative enzymes in the ripening and storage of fruits. E A Ershid, A N Bakh Institute of Biochemistry, Academy of Sciences, USSR, Moscow

i. Dependence of mineral composition of plants on the environmental conditions. M I Zaitzeki, Academy of Sciences USSR, Moscow

j. Introduction of topic at seminar on growth substances and their antags. A P Bolshakova and I N Konovalov, V L Komarov Botanical Institute Academy of Sciences, USSR, Leningrad

k. Nucleic acids and plant morphogenesis. V G Komarov, Bashkirian Branch of Academy of Sciences USSR, Ufa, USSR

l. The state of deoxyribonucleic acid in the nucleus and age changes in the plant cell. V G Komarov, S E Sokolov, V N Kiselova, A P Kolesnikova and I P Gudzenko, Bashkirian Branch of Academy of Sciences, USSR, Moscow, USSR

m. Biochemical properties of plant cell [illegible] A A Popilova, A N Bakh Institute of Biochemistry, Academy of Sciences, USSR, Moscow

n. Interrelationships between respiration and photosynthesis. G V Zalenskiy, V L Komarov Botanical Institute, Academy of Sciences USSR, Leningrad

o. Oxidases other than cytochrome oxidase in plants. [illegible] A N Bakh Institute of Biochemistry, Academy of Sciences, USSR, Moscow

p. On vernalization problems. V I Bezemov, Institute of Plant Industry, Leningrad, USSR

q. Promoting effect of micronutrients on the resistance of plants to unfavorable conditions. M Y Shkolnik, Academy of Sciences, USSR, Leningrad

r. L'application des changements morphologiques et chimiques des organes reproducteurs embryonnaires pour le diagnose du besoin des plantes en engrais. V V Tourlin, l'Academie des Sciences de l'URSS, Moscow

s. Peculiarities of the changes of physiological processes in plants correlated with frost hardiness. I N Konovalov, E I Lozova, E N Kitaeva, A I Sukhanikova, and N V Shilova, V L Komarov Bot Inst, Academy of Sciences, USSR, Leningrad

t. Photoperiodism in trees. D S Mechkov, Laboratory of Light Physiology, Leningrad, USSR

u. The vegetation of natural grasslands of the USSR, P V Lavrin, Leningrad

v. The cytology of fertilization in flowering plants. E Cherniavova-Novashina, Botanical Institute, Academy of Sciences, USSR, Leningrad

w. The correlation between the concepts "forest ecosystem" and "forest biogeocenosis" and their importance for the classification of forests. V N Sukachev, Forest Institute, Academy of Sciences USSR, Moscow

Report submitted but not presented at the Intl. Botanical Congress Montreal, Canada, July 6 Aug 1959.

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549710005-9

PEYVE, Ya.V., glav. red.; ALIYEV, G.A., akademik, red.; ABUTALYBOV, M.G., prof., red.; BERZIN, YA.M. [Berzins,J.], akademik, red.; VINOGRADOV, A.P., akademik, red.; VLASYUK, P.A., akademik, red.; VOYNAR, A.O., prof., red.; DROBKOV, A.A., prof., red.; KATALYMOV, M.V., prof., red.; KOVAL'SKIY, V.V., red.; KOVDA, V.A., red.; KEDROV-ZIKHMAN,O.K., akademik, red.; LEONOV, V.A., akademik, red.; PETERBURGSKIY, A.V., prof., red.; SINYAGIN, I.I., red.; CHERNOV, V.A., prof., red.; CHANISHVILI, Sh.F., red.; SHKOL'NIK, M.Ya., prof., red.; SHCHERBAKOV, A.P., kand. sel'khoz. nauk, red.; VENGRANOVICH, A., red.; DYMARSKAYA, O., red.; KLYAVINYA,A [Klavina, A.], tekhn. red.

[Use of trace elements in agriculture and medicine; transactions] Primenenie mikroelementov v sel'skom khoziaistve i meditsine; trudy. Riga, Izd-vo Akad.nauk Latviiskoi SSR, 1959. 706 p. (MIRA 14:12)

1. Vsesoyuznoye soveshchaniye po mikroelementam. 3d, Baku, 1958. 2. Chlen-korrespondent Akademii nauk SSSR (for Peyve, Kovda). 3. AN Azerbaydzhanskoy SSR (for Aliyev). 4. AN Latviyskoy SSR (for Berzin). 5. Vsesoyuznaya akademiya sel'skokhozyaystvennykh nauk im. V.I.Lenina (for Vlasyuk, Kedrov-Zikhman). 6. AN Belorusskoy SSR (for Leonov). 7. Chlen-korrespondent Vsesoyuznoy akademii sel'skokhozyaystvennykh nauk im. V.I.Lenina (for Sinyagin, Koval'skiy). 8. Chlen-korrespondent AN Gruzinskoy SSR (for Chanishvili).

(Trace elements) (Biochemistry) (Agriculture)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549710005-9"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549710005-9

SHKOL'NIK, M.Ya.; STEKLOVA, M.M.; SOLOV'YEVA, Ye.A.

Causes of difference in the degree of boron requirements under different ecological conditions. Izv.AN SSSR.Ser.biol. no.5:663-673 S-O '59. (MIRA 13:2)

1. Botanical Institute, Academy of Sciences of the U.S.S.R., Leningrad.
(Plants, Effect of boron on)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549710005-9"

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SHKOL'NIK, M.Ya.; AZIMOV, R.A.

Foliar feeding with trace elements as a means of increasing the yield and improving the quality of strawberries. Fiziol.rast. 6 no.1:107-111 Ja-F '59. (MIRA 12:2)

1. V.L. Komarov Botanical Institute, U.S.S.R. Academy of Sciences, Leningrad.

(Strawberries--Fertilizers and manures)
(Trace elements)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549710005-9"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549710005-9

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Effect of trace elements on seed germination and on cold resistance of corn shoots. Zemledelie 7 no.12:69-70 F '59. (MIRA 12:3)

(Corn (Maize)) (Plants--Frost resistance)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549710005-9"

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SHKOL'NIK, M. Ya.; BOZHENKO, V.P.

Boron requirements of cereals, the particular role of this element in fruit formation and its significance in nitrogen metabolism. Trudy Bot. inst. Ser.4 no.14:284-303 '60. (MIRA 14:3)
(Plants, Effect of boron on) (Grain)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549710005-9"

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SHKOL'NIK, M.Ya.

Role of trace elements in plant physiology. Izv. AN SSSR. Ser. biol. no.5:686 S-O '60. (MIRA 13:9)

1. Botanical Institute, Academy of Sciences of the U.S.S.R., Leningrad.
(TRACE ELEMENTS) (PLANT PHYSIOLOGY)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549710005-9"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549710005-9

SHKOL'NIK, M.Ya.

Functional diseases and variability of plants resulting from the excess or deficiency of macro- and microelements in different biogeochemical provinces. Trudy Biogeokhim. lab. no.11:33-42 '60. (MIRA 14:5)

1. Botanicheskiy institut imeni V.L.Komarova AN SSSR.
(SOILS--COMPOSITION) (PLANT DISEASES)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549710005-9"

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SHKOL'NIK, M.Ya.; MAYEVSKAYA, A.N.

Morphological variability of plants due to boron deficiency.
Bot.zhur. 45 no.6:805-811 Je '60. (MIRA 13:7)

1. Laboratoriya mikroelementov Botanicheskogo instituta im. V.L.Komarova Akademii nauk SSSR, Leningrad.
(Plants, Effect of boron on)
(Abnormalities(Plants))

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549710005-9"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549710005-9

SHKOLNIK, M. Ya., MAYEVSKAYA A.N., SOLOVYEVA YE. A. (USSR)

"Significance of Boron in Nucleic Acid Metabolism"

Report presented at the 5th Int'l Biochemistry Congress, Moscow, 10-16 Aug. 1961

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549710005-9"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549710005-9

SHKOL'NIK, M.Ya.; MAYEVSKAYA, A.N.

Morphological changes in the sunflower due to boron deficiency. Nauch. dokl. vys. shkoly; biol. nauki no. 1:143-148 '61. (MIRA 14:2)

1. Rekomendovana laboratoriyey mikroelementov Botanicheskogo instituta AN SSSR im. V.L. Komarova.
(PLANTS, EFFECT OF BORON ON) (ABNORMALITIES (PLANTS))

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549710005-9"

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SHKOL'NIK, M.Ya., red.; KONOVALOV, I.N., red.

"Physiology of irrigated wheat" by N.S.Petinov. Reviewed by M.Ia.Shkol'nik, I.N.Konovalov. Izv. AN SSSR. Ser. biol. no.4: 653-656 Jl-Ag '61. (MIRA 14:9)
(WHEAT) (PETINOV, N.S.)

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SHKOL'NIK, M. A.

"Microelements and ferments" by M. V. Reive. Reviewed by M.IA. Shkol'nik. Fiziol. rast. 8 no.4:516-517 '61. (MIRA 14:11)

(Trace elements)
(Enzymes)

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SHKOL'NIK, M.Ya.; ABDURASHITOV, S.A.

Effect of trace elements on the development and oxidation-reduction processes in corn during ontogenesis. Fiziol. rast. 8 no.4:425-433 '61. (MIRA 14:11)

1. Komarov Botanical Institut, U.S.S.R. Academy of Sciences, Leningrad.

(Corn(Maize))
(Trace elements--Physiological effect)
(Plants--Respiration)

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549710005-9

SHKOL'NIK, M.Ya.; SOLOV'YEVA, Ye.A.

Physiological role of boron. Report No. 1: Elimination of boron deficiency by nucleic acid. Bot. zhur. 46 no. 2:161-173 F '61. (MIRA 14:2)

1. Botanicheskiy institut im. V.L. Komarova Akademii nauk SSSR, Leningrad.
(Plants, Effect of boron on)
(Plants, Effect of nucleic acids on)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549710005-9"

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MAKAROVA, N.A.; STEKLOVA, M.M.; SHKOL'NIK, M.Ya.

Effect of trace elements on the oxidation-reduction processes as related to the different forms of nitrogen nutrition. Trudy Bot. inst. Ser. 4 no.15:158-192 '62. (MIRA 15:7)
(Plants, Effect of trace elements on)
(Oxidation-reduction reaction)
(Plants, Effect of nitrogen on)

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PARIBOK, T.A.; SHKOL'NIK, M.Ya.

Effect of soil temperature on the amount of different forms of boron in kidney bean plants. Trudy Bot. inst. Ser. 4 no.15: 193-203 '62. (MIRA 15:7)
(Plants, Effect of boron on)
(Plants, Effect of soil temperature on)

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SHKOL'NIK, M.Ya.; PARIBOK, T.A.

Effect of glassy frit trace element fertilizers on the yield and trace element content of plants. Trudy Bot. inst. Ser. 4 no.15:204-213 '62. (MIRA 15:7)
(Plants, Effect of trace elements on) (Frits)

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SHKOL'NIK, M.Ya.; MAYEVSKAYA, A.N.

Significance of boron in nuclein metabolism. Fiziol. rast. 9 no.3:270-278 '62. (MIRA 15:11)

1. V.L.Komarov Botanical Institute, U.S.S.R. Academy of Sciences, Leningrad.

(Plants, Effect of boron on)
(Nucleic acid metabolism)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549710005-9"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549710005-9

SHKOL'NIK, M.Ya.; SOLOV'YEVA-TROITSKAYA, Ye.A.

Physiological significance of boron. Report No.2: Temperature factor in eliminating boron deficiency by the nucleic acid. Bot. zhur. 47 no.5:626-635 My '62. (MIRA 16:5)

1. Botanicheskiy institut imeni V.L.Komarova AN SSSR, Leningrad.
(Plants, Effect of boron on)
(Nucleic acid metabolism)
(Plants, Effect of temperature on)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549710005-9"

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SHKOL'NIK, M.Ya.; SOLOV'YEVA-TROITSKAYA, Ye.A.

Physiological role of boron. Report No.3. Specific role of boron in the formation of reproductive organs and fruiting. Bot. zhur. 47 no.10:1414-1425 O '62. (MIRA 15:12)

1. Botanicheskiy institut imeni V.L. Komarova AN SSSR, Leningrad.

(Plants, Effect of boron on)
(Plants—Reproduction)

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549710005-9

SHKOL'NIK, M.Ya.; DAVYDOVA, V.N.

Partial elimination of zinc deficiency in plants by vitamins B_1 and B_{12}. Dokl. AN SSSR 142 no.1:230-232 Ja '62. (MIRA 14:12)

1. Botanicheskiy institut im. V.L. Komarova AN SSSR. Predstavleno akademikom A.L. Kursanovym.
(Plants, Effect of zinc on)
(Plants, Effect of vitamins on)

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SHKOL'NIK, M.Ya.; KOSITSYN, A.V.

Effect of boron on the rate of P^{32} inclusion in the nucleic acids of the sunflower. Dokl.AN SSSR 144 no.3:662-664 My '62. (MIRA 15:5)

1. Botanicheskiy institut im. V.L.Komarova AN SSSR. Predstavleno akademikom A.L.Kursanovym.
(Boron) (Nucleic acids) (Sunflowers)

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SHKOL'NIK, M.Ya.; MAYEVSKAYA, A.N.

Mechanism of the effect exerted by boron on the biosynthesis of nucleic acids; effect of boron on energy metabolism. Dokl.AN SSSR 145 no.1:222-224 Jl '62. (MIRA 15:7)

1. Botanicheskiy institut imeni V.L.Komarova AN SSSR. Predstavleno akademikom A.L.Kursanovym.
(Nucleic acid metabolism) (Plants, Effect of boron on)

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549710005-9

SHKOL'NIK, Mark Yakovlevich; MATVEYENKO, T.A., red.izd-va; KASHINA, P.S., tekhn. red.

[Importance of trace elements in the plant life and agriculture of the Soviet Union; presented at the twenty-third annual Timiriazev lecture, June 3, 1962] Znachenie mikroelementov v zhizni rastenii i zemledelii Sovetskogo Soiuza; dolozheno na dvadtsat' tret'em ezhegodnom timiriazevskom chtenii 3 iiunia 1962 goda. Moskva, Izd-vo AN SSSR, 1963. 85 p. (Timiriazevskie chteniia, no.23) (MIRA 17:3)

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KOSITSYN, A.V.; SHKOL'NIK, M.Ya.

"Plant nutrition and metabolism" by Konrad Mengel. Reviewed by A.V.Kositsyn, M.IA.Shkol'nik. Bot.zhur. 48 no.2:289-291 F '63. (MIRA 16:4)

1. Botanicheskiy institut imeni V.L.Komarova AN SSSR, Leningrad.
(Plants—Nutrition) (Plants—Metabolism)
(Mengel, Konrad)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549710005-9"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549710005-9

BOZHENKO, V.P.; SHKOL'NIK, M.Ya.; MOMOT, T.S.

Effect of microelements on the ATP content of plants under conditions of water deficiency and the action of high temperatures. Dokl. AN SSSR 153 no.6:1447-1449 D '63. (MIRA 17:1)

1. Botanicheskiy institut im. V.L. Komarova AN SSSR. Predstavleno akademikom A.L. Kursanovym.

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549710005-9"

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SHKOL'NIK, M.Ya.; SAAKOV, V.S.

Effect of trace elements on the rate of photosynthesis and the translocation of assimilates. Fiziol. rast. 11 no.5: 783-792 S-O '64. (MIRA 17:10)

1. Komarov Botanical Institute, U.S.S.R. Academy of Sciences, Leningrad.

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549710005-9

SHKOL'NIK, M.Ya.; MAYEVSKAYA, A.N.; BOZHENKO, V.P.; ALEKSEYEVA, Kh.A.

Morphological variability of plants caused by boron deficiency. Bot. zhur. 49 no.11:1584-1591 N '64. (MIRA 18:1)

1. Botanicheskiy institut imeni V.L.Komarova AN SSSR, Leningrad.

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549710005-9"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549710005-9

SHKOL'NIK, M.Ya.; DAVYDOVA, V.N.

Effect of zinc and vitamins B_1 and B_6 on the incorption of C^{14}-tyrosine into proteins. Dokl. AN SSSR 161 no.6:1465-1466 Ap '65. (MIRA 18:5)

1. Botanicheskiy institut im. V.L.Komarova AN SSSR. Submitted August 26, 1964.

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549710005-9

SHKOLNIK, M.Ya.; TMOITSKAYA, Ye.A.; MAYEVSKAYA, A.N.

Reproducing with the aid of 8-azaguanine morphological changes in sunflowers characteristic of boron deficiency. Fiziol. rast. 12 no.5:876-887 S-O '65. (MIRA 19:1)

1. Botanicheskiy institut imeni Komarova AN SSSR, Leningrad.

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L 52097-65 EPF(c)/EPR/EWP(j)/EWT(m)/T/EWP(v) Pc-4/Pr-4/Ps-4 WW/RM

ACCESSION NR: AP5015266 UR/0286/65/000/009/0048/0048

27

B

AUTHORS: Dombrovskiy, A. V.; Shkol'nik, Ya. Sh.; Shkol'nik, R. S.

TITLE: Cementing composition based on aqueous solution of polyacrylamide. Class 22, No. 170601

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 9, 1965, 48

TOPIC TAGS: cement, plywood, polyacrylamide, hydrochloric acid, ammonium compound

ABSTRACT: This Author Certificate presents a cementing composition based on an aqueous solution of polyacrylamide and used in producing plywood sheets. To increase the strength of cemented plywood joints, a mixture of urotropine and a mineral acid (for instance, hydrochloric acid) or a solution of free aldehyde and an acid salt (ammonium chloride) is added to the aqueous solution of polyacrylamide.

ASSOCIATION: none

SUBMITTED: 14Oct63 ENCL: 00 SUB CODE: GC,MT

NO REF SOV: 000 OTHER: 000

Card 1/1 mB

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549710005-9"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549710005-9

ACC NR: AP7001429 (A, N) SOURCE CODE: UR/0413/66/000/021/0148/0148

INVENTOR: Shkol'nik, R. S.; Shkol'nik, Ya. Sh.

ORG: none

TITLE: Liquid medium for ultrasonic flaw detection

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 21, 1966, 148

TOPIC TAGS: ultrasonic flaw defect~~ion~~OR, ~~ultrasonic~~ quality control~~, water containing contact liquid, contact liquid composition, rough machined surface inspection~~

ABSTRACT: This Author Certificate introduces a liquid medium for ultrasonic detection. To assure effective quality control, especially in inspection of rough surfaces, the liquid contains 0.8—2.0% polyacrylamide, 0.4—1.0% sodium nitrate and 97—98.8% water. [WW]

SUB CODE: 11,13/ SUBM DATE: 22Nov65/ ATD PRESS: 5110

Card 1/1 UDC: 620.179.16

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549710005-9"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549710005-9

CA

Methods of determining the carbon dioxide of soil air

N. I. Gorbunov, R. Ya. Shkol'nik and T. M. Morozova. *Pedology* (U. S. S. R.) 1941, No. 2, 43-62(in German, 62).

A critical review of methods. A simplified one is suggested. Diagrams and description of the method are given in detail.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549710005-9"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549710005-9

Chemical nature of some unstable substances of green plant leaf. A. M. Kuzin and R. Ya. Shkol'nik (A. N. Bakh Biochem. Inst., Acad. Sci., U.S.S.R.). *Doklady Akad. Nauk S.S.S.R.* **65**, 527-30(1949). Treatment of beet leaf matter with NH_2OH and treatment of the aq. soln., after removal of AmOH-sol. matter, with $Cu(OAc)_2$ gave the Cu salts of substances appearing to be *hydroxamic acids* derived from pentose; typical analysis was $C_5H_8O_3NBa_2$. The hydroxamic acids arise from very reactive peroxides, which are readily attacked when the leaf structure is ruptured and the peroxides thus liberated attack the initially formed oxime of the pentose, yielding the hydroxamates. G. M. Kosolapoff

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549710005-9

11 D

C. A.

Significance of unstable peroxides of green leaf in photosynthesis. A. M. Kuzin and R. Ya. Shkol'nik (A. N. Bakh Biochem. Inst., Acad. Sci. U.S.S.R.). *Doklady Akad. Nauk S.S.S.R.* 65, 719-22(1949).—Trituration of leaves or other parts of plants (wheat, sunflower) showed that the hydroxamic acid test with NH_3OH, which can be deduced from possible reaction of an unstable peroxide and NH_2OH, appears only in green leaves and is neg. in stems, roots, or seeds. Heating *Elodea* growths to 50° completely destroyed these peroxides; other plants (*Tradescantia*, pond weed) showed somewhat higher, but still limited stability. Repression of photosynthesis by phenylurethan also led to disappearance of the peroxides; Et_2O has similar effect, and HCN has a like, but slower acting effect. Etiolated leaves show a less than normal amt. of the peroxides.

G. M. Kosolapoff

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549710005-9"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549710005-9

CA

11 D

Participation of alduronic acids in photosynthesis. A. M. Kuzin and R. Ya. Shkol'nik. *Doklady Akad. Nauk S.S.S.R.* **73**, 355-8(1950).—Extn. of leaves of various plants with hot H_2O and extn. of the latter with isoAmOH, followed by pptn. of the concd. aq. layer by means of EtOH yielded, in all cases, ppts. giving pos. tests for uronic acids, neg. tests for pyruvic acid or glyoxalic acid. These alduronic acids are invariably present when the leaves are stored in darkness, but vanish totally or partially upon irradiation in the absence of CO_2 in the atm. (CO_2-free air or H atm.). Wheat sprouts grown in total darkness failed to show uronic acids in the above technique, although sprouts grown with exposure to light readily gave pos. tests. The results are similar with isolated chloroplasts. It is suggested that part of the photosynthesis reaction chain involves formation of peroxides of carbohydrates having the structure $RC(O_2)OH$, with CO_2 adding between the C atom and the O; this forms substances capable of uronic acid tests and capable of being reduced to ketoaldehydes. G. M. Kosolapoff

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549710005-9"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549710005-9

SHKOL'NIK, R. Ya

"Intermediate Products of Photosynthesis." Sub 22 Nov 51, Inst of Biochemistry imeni A. N. Bakh.

Dissertations presented for science and engineering degrees in Moscow during 1951.

S): Sum. No. 480, 9 May 55

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549710005-9"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549710005-9

CA

11 D

The action of phenylurethan on photosynthesis. A. M. Kuzin and R. Ya. Shkol'nik. *Doklady Akad. Nauk S.S.S.R.* 78, 949-51(1951).—Immersion of cuttings of *Potamogeton perfoliatus* in 0.05 and 0.1% phenylurethan decreases respiration rate in immersions up to 2 hrs.; a 12-hr. immersion drops respiration to 30% of normal. Photosynthesis is affected much more and 2 hrs. in 0.05% soln. stops it completely. Substances pptd. by $BaCl_2$ from 80% EtOH ext. drop sharply after such immersions. The EtOH exts. some coloring matter from the plants. This material shows reducing properties and is increased by hydrolysis with 0.5 *N* HCl; uronic acid test is weakly pos. and methylpentose test is pos. with indications of the presence of rhamnose. G. M. Kosolapoff

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549710005-9"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549710005-9

SHKOL'NIK, R. Ya.

Determination of nonvolatile organic acids in plant extracts by the method of paper chromatography. R. Ya. Shkol'nik. *Doklady Akad. Nauk S.S.S.R.* 90, 847-9 (1953).—Preliminary tests on sepns. of nonvolatile carboxylic acids were made on paper by using the following solvent systems: EtOH–NH_4OH–H_2O (90:5:5), PhOH–HCO_2H–H_2O (30:0.4:10), $CHCl_3$–EtOH–HCO_2H (2:1:2), and BuOH satd. with HCO_2H and H_2O (18:2:9 ratio, with aq. phase being sepd.). Good sepns. were obtained with PhOH and BuOH systems but in PhOH the R_f values for oxalic and tartaric acids were too close (0.16 and 0.17) and removal of PhOH was tedious. Hence the last solvent system (listed above) was most satisfactory. With exposure time of 48 hrs. satisfactory chromatograms of nonvolatile acids were thus obtained for oxalic, tartaric, citric, malic, glycolic, succinic, and fumaric acids from a variety of plant exts.; the detection was made by spraying with bromophenol blue indicator, and the R_f values were resp: 0.09, 0.21, 0.31, 0.46, 0.56, 0.68, 0.72. The acids were extd. from the plant material with purified Et_2O. Tests were made with exts. from *Morus* sp., *Aloe arborescens*, *Sempervivum globiferum*, and *S. sobolifer*um.

G. M. Kosolapoff

B

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549710005-9"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549710005-9

Shkol'nik, R. Ya

USSR/ Biology - Biochemistry

Card 1/1 Pub. 22 - 31/48

Authors : Shkol'nik, R. Ya.

Title : Quantitative distribution of organic acids in plants by the method of distributive chromatography over silica gel

Periodical : Dok. AN SSSR 98/3, 443-446, Sep 21, 1954

Abstract : Scientific data, regarding the quantitative distribution of organic acids in plants by means of the distributive chromatography method with silica gel, are presented. Five references: 2-USA; 1-English and 2-USSR (1934-1953). Table; graphs; drawing.

Institution : Academy of Sciences USSR, The A. N. Bakh Institute of Biochemistry

Presented by: Academician A. I. Oparin, June 2, 1954

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549710005-9"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549710005-9

SHKOL'NIK R. YA.

Separation of organic acids from plant material by method of partition chromatography on paper and columns of silica gel. R. Ya. Shkol'nik. *Trudy Komissii Anal. Khim., Akad. Nauk S.S.S.R., Inst. Geokhim. i Anal. Khim.* 6, 502–8(1955); cf. *C.A.* 50, 2725*i*; Isherwood, *C.A.* 41, 2505*f*.—Paper chromatograms were prepd. from the org. acids extd. from the leaves of mulberry (*Morus*), aloe (*Aloe arborescens*), and house leeks (*Sempervivum globiferum* and *S. soboliferum*). The org. acids extd. from the fruit of bilberry (*Vaccinium myrtillus*) and red bilberry (*V. vitis idaea*) and from leaves of *S. soboliferum* were sepd. on silica gel and detd. The results were compared with those obtained by other methods. Dry sample (0.5 g.) was suspended in 1 ml. 4*N* H_2SO_4. Asbestos (1 g.) was added and the mixt. extd. 18 hrs. with Et_2O. Then, the acids were extd. from the Et_2O by H_2O. The paper chromatogram method of S. (*loc. cit.*) was used. The solvent was *n*-BuOH satd. with HCO_2H and H_2O, the developer 0.04% bromophenol blue in alc. The R_f values for acids in this solvent were: oxalic 0.09, tartaric 0.21, citric 0.31, malic 0.46, glycolic 0.56, succinic 0.68, and fumaric 0.72. Paper chromatograms of the 4 plants and of 0.1*M* solns. of pure acids are shown. Silica gel, prepd. by method of I. (*loc. cit.*) was suspended in H_2O. Only the silica gel which settled out in 10 min. was used. Silica gel (3 g.) was mixed with 1–1.5 ml. H_2O, then with 30 ml. $CHCl_3$, and transferred to the column, 1.1 × 45 cm. After 20–30 min. the $CHCl_3$ was drained. The silica gel column was condensed under N at a pressure of 5–8 cm. Hg. A layer of solvent was always above the silica gel. Filtrates were collected in an automatic siphon arrangement. Samples (4.5 ml.) were titrated with 0.02*N* alc. NaOH with 0.04% alc. soln. of

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SHROL'NIK, R. YA.

thymol blue as indicator. The order in which pure acids left the column was studied. The 1st solvent was n-BuOH-$CHCl_3$(35:36 $CHCl_3$(10:90 by vol.) and the second n-BuOH-$CHCl_3$(35:36 by vol.). The plant ext. was prepd. as before and 0.5 ml. placed on the column. If acids with close R_f were not sepd., a new 0.5 ml. portion of ext. was evapd. to dryness on the H_2O bath and 5 ml. n-BuOH-$CHCl_3$(35:36 by vol.) added. After standing 24 hrs. these 5 ml. were placed on a freshly prepd. column and sepd. as before. E. M.

J 2/2

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549710005-9

SHKOL'NIK, R.Ya.

Organic acid content of tomato leaves during the development of the plant. [with English summary in insert]. Fiziol.rast. 3 no.3:252-258 My-Je '56. (MIRA 9:9)

1.Institut biokhimii imeni A.N.Bakha Akademii nauk SSSR, Moskva.
(Tomatoes) (Leaves) (Citric acid) (Malic acid)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549710005-9"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549710005-9

DOMAN, N.G.; SHKOL'NIK, R.Ya.

Conversion of radiocarbon-labled sedoheptulose in kidney bean, tobacco and Sedum spectabile leaves. Biokhimiia 24 no.2:187-191 Mr-Ap '59 (MIRA 12:7)

1. Institute of Biochemistry, Academy of Sciences of the U.S.S.R., Moscow.
(MONOSACCHARIDES, metab.
sedoheptulose conversion in bean, tobacco & Sedum spectabile leaves, radiocarbon studies (Rus))

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549710005-9"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549710005-9

SHKOL'NIK, R.Ya.; DOMAN, N.G.

Transformations of C^{14}-labeled glyceric acid in string bean leaves. Biokhimiia 24 no.5:899-903 S-O '59. (MIRA 13:2)

1. Institut biokhimii im. A.N. Bakha Akademii nauk SSSR, Moskva.
(GLYCERIC ACID) (PLANTS--METABOLISM)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549710005-9"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549710005-9

SHKOL'NIK, R.Ya.; DOMAN, N.G.

Paper chromatographic fractionization of metabolites. Biokhimiia 25 no.2:276-281 Mr-Ap '60. (MIRA 14:5)

1. Institut biokhimii im. A.N.Bakha Akademii nauk SSSR, Moskva.
(PAPER CHROMATOGRAPHY) (METABOLISM)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549710005-9"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549710005-9

SMOLNIK, R. YA., TERENTYEVA, Z. A., DOMAN, N. G., (USSR)

"Mode of Assimilation of Carbon during Photosynthesis."

Report presented at the 5th Int'l. Biochemistry Congress, Moscow, 10-16 Aug 1961.

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549710005-9"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549710005-9

SHKOL'NIK, R.Ya.; DOMAN, N.G.; KOSTYLEV, V.N.

Chromatographic partition of metabolism products into fractions. Biokhimiia 26 no.4:621-625 Jl-Ag '61. (MIRA 15:6)

1. Institute of Biochemistry, Academy of Sciences of the USSR, Moscow.

(CHROMATOGRAPHIC ANALYSIS)
(METABOLISM)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549710005-9"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549710005-9

SHKOL'NIK, R.Ya.; DOMAN, N.G.

Transformations of phosphoglyceric acid-C^{14} in the leaves of kidney beans and sugar beets. Fiziol. rast. 10 no.3:295-299 My-Je '63. (MIRA 16:6)

1. A.N.Bakh Institute of Biochemistry, U.S.S.R. Academy of Sciences, Moscow.
(Glyceric acid) (Photosynthesis)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549710005-9"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549710005-9

[illegible]KOL'NIK, R.Ya., DOMAN N.G., [illegible], I.G.

Additional data on chromatographic separation of metabolic products in fractions. Biokhimiia 30 no.2:265-267 Mr-Ap '65. (MIRA 18:7)

1. Institut biokhimii imeni Bakha AN SSSR, Moskva.

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549710005-9

L 7056-66 EWT(1)/FS(v)-3 DD

ACC NR: AP5028095 SOURCE CODE: UR/0326/65/012/006/1005/1011

AUTHOR: Shkol'nik, R. Ya.; Doman, H. G.; Spektorov, K. S.; Lin'kova, Ye. A.

ORG: Institute of Biochemistry im. A. N. Bakh, Academy of Sciences, SSSR; Institute of Plant Physiology im. K. A. Timiryazev, Academy of Sciences, SSSR, Moscow (Institut biokhimii Akademii nauk SSSR i Institut fiziologii rasteniy Akademii nauk SSSR)

TITLE: Insoluble products of photosynthesis of a synchronous Chlorella pyrenoidosa culture at different stages of its development

SOURCE: Fiziologiya rasteniy, v. 12, no. 6, 1965, 1005-1011

TOPIC TAGS: photosynthesis, chlorella, synchronous culture, chromatography

ABSTRACT: As part of the continuing effort to determine the intermediate products of photosynthesis, an attempt was made to identify those radioactive products of photosynthesis which cannot be extracted from a synchronous culture of Chlorella pyrenoidosa with acidified alcohol (25C). A chart of the solvents used in chromatography and the steps taken is given in the original article. It was found that the composition of the residue depends both on the duration of exposure to light and on the stage of development of the culture. Analysis showed this residue to consist of: 1) phosphorylated sugars and phosphoglyceric acid (both of which are partially extracted by acidified alcohol at room temperature); 2) substances of the polysaccharide type; 3) substances of a protein character; and 4) certain unknown substances, which remain

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549710005-9

L 7056-66

ACC NR: AP5028095

at the starting point during chromatography even when several solvents are used. Polysaccharide-type substances appeared in the insoluble residue after only 2 sec of photosynthesis. After 5 min of photosynthesis in $C^{14}O_2$, the composition of the insoluble residue of a synchronous Chlorella culture in the fourth stage of development differed sharply from the composition of such a residue in the first and third stages of development. Sugars present in the residue as a result of the hydrolysis of polysaccharides also differed in composition depending on the developmental stage. Note: the four developmental stages of a synchronous culture of Chlorella pyrenoidosa selected were: 1) autospores (20 min of illumination); 2) 3 hr, 20 min of illumination; 3) 7 hr, 20 min of illumination; and 4) end of divison inside the mother cells and beginning of egress of autospores (9 hr, 20 min of illumination). Orig. art. has: 4 figures and 1 table. [JS]

SUB CODE: LS/ SUBM DATE: 15Oct64/ ORIG REF: 004/ OTH REF: 005/ ATD PRESS: 4143

Card 2/2

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549710005-9"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549710005-9

L 43932-65 EWG(j)/EWG(r)/EWT(1)/FS(v)-3/EWG(v)/EWG(a)-2/EWG(c) Pb-4/Pe-5 DD

ACCESSION NR: AP5011543 UR/0020/65/161/005/1231/1234

40

AUTHOR: Shkol'nik, R. Ya.; Doman, N. G.; Spektorov, K. S.; Lin'kova, Ye. A. 39 B

TITLE: Intermediate products of photosynthesis of a synchronous Chlorella culture at different stages of development 2

SOURCE: AN SSSR. Doklady, v. 161, no. 5, 1965, 1231-1234

TOPIC TAGS: photosynthesis, Chlorella, algae, phosphoglyceric acid, chromatography

ABSTRACT: Experiments were conducted to determine the inclusion of C^{14} in the primary products of photosynthesis of a synchronous Chlorella culture at different stages of its development. Chlorella pyrenoidosa was kept at 39C with a light-dark cycle of 8:16 hr. Four stages of development of the culture were selected, from the beginning of the light period to the formation of new autospores in the early part of the dark period. After filtration of a 5-ml suspension of each stage, the chlorella-coated filter was placed in a chamber at room temperature with 15% $C^{14}O_2$ in the air and exposed to light for periods of 2 and 10 sec, and 1 and 5 min. Intermediate products were fixed and extracted with alcohol. The activity of radioactive substances, both soluble and insoluble in alcohol, was determined. A large percentage of radioactivity (25—41%) was observed in the insoluble residue

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549710005-9

L 43932-65

ACCESSION NR: AP5011543

of different stages after 2-sec exposure. This finding does not agree with literature data on the solubility of early photosynthesis products. The failure of phosphoglyceric acid to pass into the alcohol solution may be explained by the presence of early phosphorus-containing products of photosynthesis in combined form, which are insoluble in acidified alcohol. As the culture develops, the rate of photosynthesis, i.e., the rate of C^{14} absorption per volumetric unit of the suspension, increases steadily except in the third stage (7 hr, 20 min of illumination). Of all durations of exposure to light, fixation of $C^{14}O_2$ is greatest in the fourth stage (9 hr, 20 min after the beginning of illumination). Chromatographic analysis of alcohol-soluble intermediate products of photosynthesis after 2-sec exposure showed one extremely radioactive compound. In the autospore stage, it appears in the zone of phosphoenolpyruvic acid, and in all other stages, in the zone of α-analine. Determination of the radioactivity of substances of the alcohol fraction, some of which are soluble and some insoluble in water, showed that 60—80% of the radioactivity for all exposures and at all stages of development is located in the water-soluble substances. Orig. art. has: 2 figures and 1 table. [JS]

ASSOCIATION: Institut biokhimii im. A. N. Bakha Akademii nauk SSSR (Institute of Biochemistry, Academy of Sciences SSSR)

Card 2/3

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549710005-9

L 43932-65

ACCESSION NR: AP5011543

SUBMITTED: 19Jun64 ENCL: 00 SUB CODE: LS

NO REF SOV: 005 OTHER: 005 ATD PRESS: 3248

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Card 3/3

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549710005-9"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549710005-9

L 9449-66

ACC NR: AP6001922 SOURCE CODE: UR/0107/65/000/003/0032/0033

AUTHOR: Ziger, A. (Engineer); Shkol'nik S. (Engineer)

ORG: none

23
B

TITLE: Stereophonic set "Belarus'-62-stereo"

SOURCE: Radio, no. 3, 1965, 32-33

TOPIC TAGS: circuit design, electronic equipment, electronics

ABSTRACT: The stereophonic set "Belarus'-62-stereo", designed by the Minsk Radio Factory is a combination of a fifteen-tube AM-FM superhetodyne and a stereophonic 4-speed record player. It has a long-wave band, a broadcasting band, and three short-wave bands (3.9-7.7, 9.4-9.8, and 11.6-12.1 Mc) in addition to the ultrahigh-frequency 65.8-73 Mc band. The intermediate AM frequency is 465 kc, FM - 6.5 Mc. The AM band width is continuously varying from 4-4.5 kc to 9-11 kc. With external antenna the sensitivity is 10-30 μV for long and medium waves, 20-50 μV for short waves, and 2-5 μV for UHF. An image rejection is 40-60 db. FM slopes of the resonant characteristics are 0.35-0.45 db/kc at a 120-180 kc band width. AM suppression is 26-30 db. Nominal power of each audio amplifier is 4 W, its pickup sensitivity not less than 150 mV, hum and noise not worse than 50-60 db. The audio amplifier reproduces the AM audio frequency band with 60-6000

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2

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549710005-9

L 9449-66

ACC NR: AP6001922

c/sec, FM - 60-16,000 c/sec. Nonlinear AM distortions for 50% modulation are not greater than 3%, FM - 4%. The article describes in details the construction and operation of each circuit element, and supplies the complete circuit diagram. Orig. art. has: 7 figures and 2 tables. [JPRS]

SUB CODE: 09 / SUBM DATE: none

Card 2/2 pw

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549710005-9"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549710005-9

[illegible], V. [illegible]

Mechanism of isomerization of monosulfonic acids of naphthalene. Part 2: Selecting the conditions for determining the composition of reaction products. Zhur. org. khim. 1 no.8:1448-1452 [illegible]

Mechanism of isomerization of monosulfonic acids of naphthalene. Part 3: Isomerization of 1 naphthalene-1-sulfonic acid with C^{14} in concentrated sulfuric acid. Ibid.:1452-1457

(MIRA 18:11)

1. Novosibirskiy institut organicheskoy khimii Sibirskogo otdeleniya AN SSSR.

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549710005-9"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549710005-9

GORDINSKIY, B.Yu.; SHEMANSKIY, V.M.; GAYEVSKIY, A.F.; SHKOL'NIK, S.I.

Reclaiming of polyester urethanes. Plast. massy. no.9:65-66 '65. (MIRA 18:9)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549710005-9"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549710005-9

L 15338-66 EWT(m)/EWP(j) RM

ACC NR: AP6000980 (A) SOURCE CODE: UR/0286/65/000/022/0058/0059

AUTHORS: Shimanskiy, V. M.; Gayevskiy, A. F.; Shkol'nik, S. I.; Gordinskiy, B. Yu.

ORG: none

TITLE: A method for obtaining polyethylene glycoladipinate. Class 39, No. 176403

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 22, 1965, 58-59

TOPIC TAGS: polymer, polymerization, polycondensation, ethylene glycol, adipic acid, polyester

ABSTRACT: This Author Certificate presents a method for obtaining polyethylene glycoladipinate by polycondensation of adipic acid with ethylene glycol. To increase the rate of reaction, a cyclic diester of adipic acid and diethylene glycol is added to the initial reaction mixture.

SUB CODE: 11/07 SUBM DATE: 14May62

Card 1/1 UDC: 678.674:547.461.6:66.062.722.8

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549710005-9"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549710005-9

ACC NR: AP6034195 SOURCE CODE: UR/0369/66/002/005/0538/0542

AUTHOR: Shkol'nik, S. I.; Shimanskiy, V. M.

ORG: Ukrainian Scientific Research Institute of the Printing Industry, L'vov (UkpNII poligraficheskiy promyshlennosti)

TITLE: Mechanical properties of polyester urethane elastomer

SOURCE: Fiziko-khimicheskaya mekhanika materialov, v. 2, no. 5, 1966, 538-542

TOPIC TAGS: elastomer, elastic modulus, tensile strength, mechanical property, synthetic polymer, polyurethane, urethane, polyester urethane

ABSTRACT: The results of investigations of the mechanical properties of polyester urethane (PEU) elastomers are presented. A total of 26 formulations with polyethylene glycol adipinate (PE) was synthesized. The latter was modified with various diisocyanates in the presence of ethanolamines. Investigations showed a marked decrease in elastomer strength with an increase in the excess of diisocyanate from 0.3 to 0.5 mol. A further increase in the diisocyanate content has very little influence on the mechanical characteristics of the PEU. The

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549710005-9

GILILOVA, B.G.; SHKOL'NIK, S.S.

Early diagnosis of tuberculous meningitis in adults and its therapy with streptomycin. Klin. med., Moskva 31 no.4:32-35 Apr 1953. (CIML 24:4)

1. Of Leningrad Scientific-Research Tuberuclosis Institute.

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GILILOVA, B.G.; SHKOL'NIK, S.S.

Early diagnosis of tuberculous meningitis in adults and its therapy with streptomycin. Klin.med. 34 no.4:32-35 Ap '53. (MLRA 6:7)

1. Leningradskiy nauchno-issledovatel'skiy tuberkuleznyy institut.
(Meninges--Tuberculosis) (Streptomycin)

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SHKOL'NIK, S.S. (Leningrad)

Application of extrapleural pneumothorax following tuberculous meningitis. Klin. med. 32 no.7:74 Jl '54. (MLRA 7:8)

1. Iz Leningradskogo nauchno-issledovatel'skogo tuberkuleznogo instituta imeni prof. A.Ya.Shternberga (dir.-kandidat meditsinskikh nauk A.D.Semenov)

(TUBERCULOSIS, MENINGEAL, complications,
*tuberc., pulm. tuberc., surg., artif. pneumothorax)
(PNEUMOTHORAX, ARTEFICIAL
*extrapleural, following from meningeal tuberc.)

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SHKOL'NIK, V., inzh.; LIVSHITS, G., inzh.

Using large-panel partitions in building apartment houses. Biul.stroi.tekh. 12 no.9:1-4 S '55. (MIRA 12:1)

1. Stroitel'noye upravleniye No.1 tresta No.3 Ministerstva gorodskogo i sel'skogo stroitel'stva BSSR.
(Concrete slabs)

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