USSR/Cultivated Plants. Fruits. Berries. M

Abs Jour: Ref Zhur-Biol., No 5, 1958, 20508.

1 vine. An increase in berry weight and sugar content and a reduction in acidity were noted.

Card : 2/2

DOBROLYUBSKIY, O.K., kandidat khimicheskikh nauk.

Foliar nutrition with trace elements. Priroda 45 no.10:85-88 O '56. (MLRA 9:11)

1. Odesskiy sel'skokhozyaystvennyy institut.
(Fertilizers and manures)

Dobrolyubskiy, O.K.

Category: USSR/General Division. Congresses. Meetings. Conferences. A-4

Abs Jour: Referat Zh.-Biol., No 6, 25 March, 1957, 21355

Author : Dobrolyubskiy, O.K.
Inst : not given
Title : More Attention to Implantation of Trace Elements. The All-Union Conference on Trace Elements.

Orig Pub: Byul. Mosk. o va ispit. prirodi, otd. biol., 1956, 61, No. 2, 107-112

Abstract: No abstract.

Card : 1/1

DOBROLYUBSKIY, O. K.

Extraradicle nutrition of grape with cobalt trace element. O. K. Dobrolyubskii and A. V. Slavvo (Agr. Inst., Odessa). *Doklady Akad. Nauk S.S.S.R.* 106, 735-8(1956).—Spraying of grapevines with Co solns. at 0.0001–0.1 g. $CoSO_4$/plant gave progressively greater improvement in growth and berry yield. Sugar content was improved and its accumulation accelerated. The best results were obtained by addn. of $CoSO_4$ to Bordeaux soln. Co with Cu gave a synergistic effect.

G. M. Kosolapoff

USSR/Cultivated Plants - Fruits. Berries. M-6

Abs Jour : Ref Zhur - Biol., No 7, 1958, 29990

Author : Dobrolyubskiy, O.K.

Inst : Odessa Agricultural Institute.

Title : What Micronutrients Contribute to Fruit Crops.

Orig Pub : Sadovodstvo, vinogradarstvo i vinodeliye Moldavii, 1957, No 3, 14-16.

Abstract : This study of the influence of micronutrients on the development and productivity of cherries, apricots, peaches, plums, apples, black currants, strawberries both garden and wild was made at the Odessa Agricultural Institute in 1953-1956. The side-dressing with micronutrients increased the yield and its quality. A concentration of solutions of Zn, Mn, B, Cu, Co, Cr and Mo is recommended.

Card 1/1

USSR/Cultivated Plants - Fruits. Berries. M

Abs Jour : Ref Zhur Biol., No 12, 1958, 53833

Author : Dobrolyubskiy, O.K.
Inst : -
Title : Microelements in Viticulture and Wine Making

Orig Pub : Vinodeliye i vinogradarstvo SSSR, 1957, No 3, 19-22

Abstract : This article points out the significance of microelements in creating definite properties in different wines. Top dressing with microelements is recommended for the grape vines. The application of the microelements can be combined with the spraying with Bordeau solution.

Card 1/1

USSR/Cultivated Plants. Fruit Trees. Small Fruit Plants. M

Abs Jour: Ref Zhur-Biol., No 17, 1958, 77859.

Author : Dobrolyubskiy, O.K.; Slavvo, A.V.
Inst :
Title : After Effect of the Micronutrient of Chrome on Grapes.

Orig Pub: Sad i ogorod, 1957, No 5, 66.

Abstract: As a result of spraying of Aligote grapevines in the Odessa Agricultural Institute with a solution of chromium sulfate, the saccharinity was increased by 17.2-18.45%, acidity was decreased from 11.35 to 9.9 mg/eqv/l, ripening of the harvest was accelerated (glucoacidimeter indicator increased from 1.51 to 1.86) and the harvest increased by 10 c/ha. -- P. Kh. Kiskin.

Card : 1/1

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

ABS. JOUR. : RZhBiol., No. 6 1959, No. 24543

AUTHOR : Dobrolyubskiy, O.K.; Slavvo, A.V.
INST. : Academy of Sciences, USSR
TITLE : Change of Some Oxygen Reduction Processes In Grapes Under the Influence of Microelements

ORIG. PUB. : Dokl. AN, USSR, 1957, 117, No. 6, 1064-1067

ABSTRACT : Grape plants were sprayed with a weak solution of sulfates of microelements (Co, Cr and Zn). In all cases a speeding up of ripening of the berries and an increased yield was observed, as well as a rise in fructose content, increased activity of peroxidase and polyphenoloxidase in the leaves, and an increase of total oxidizability of leaf tissues (determined by the Krasinskiy method). The work was performed at the Odessa Agricultural Institute.--O.V. Bogdashevskaya.

CARD: 1/1

Dobrolyubskiy, [redacted] O.K.

USSR/Chemical Technology - Chemical Products and Their Application. Fertilizers. H-3

Abs Jour : Referat Zhur - Khimiya, No 1, 1958, 1905

Author : Dobrolyubskiy O.K.

Inst : Novocherkassk Polytechnic Institute

Title : Fritts -- A New Fertilizer

Orig Pub : Udobreniye i urozhay, 1957, No 7, 54-55

Abstract : Description of the results of field experiments, with maize, in the souther chernozem of the Odessa area, on investigation of the effects of fritts, produced at the Novocherkassk Polytechnic Institute, containing one of the minor-lements in the following amounts (in 5): ZnO 19, MnO_2 21, MoO_3 4.5, and also a mixture of the oxides of B, Mn, Cu, Zn, Fe and Mo.

Card 1/1

COUNTRY : USSR M-8
CATEGORY :

ABS. JOUR. : RZBiol., No. 19 1958, No. 87251

AUTHOR : Dobrolyubskiy, O. K.; Slavvo, A. V.
INST. : Odessa Agricultural Institute
TITLE : The Effect of Some Minor Elements on Grapes

ORIG. PUB. : Tr. Odessk. s.-kh. in-ta, 1957, 8, 49-63

ABSTRACT : On chernozem soils of southern Ukrainian SSR (Odesskaya Oblast') a study was made of the effect on yield and quality of grapes, of Zn and Co, on their application during autumn, in the spring before flowering, and as a spray (spraying of flower clusters before blooming). The sulfates of Zn and Co were used in different concentrations. The effect of both minor elements was favorable regardless of the manner in which they were applied. On autumn application to the soil the best results were obtained with a concentration of 3 g Zn per vine, and of 0.1 g Co per vine. On spring application to the soil the effect of the minor elements was less strongly manifested.

CARD: 1/2

M-3

Country : USSR
CATEGORY :

ABS. JOUR. : RZBiol., No. 19, 1958, No. 87251

AUTHOR :
INST. :
TITLE :

ORIG. PUB. :

ABSTRACT : Optimal dosage of Zn was also found to be 3 g, and that of Co -- 0.1 g per vine. Spray applications of minor elements had a good effect on the grapes, particularly at dosages of 0.005 g $ZnSO_4$ per vine (weight of grapes was increased by 56%, their volume -- by 63%, and sugar content -- by 10%), and of 0.00002 g $CoSO_4$ per vine. Two sprayings of the vines with $Co_2(SO_4)_3$, before blooming and 25-30 days after it, accelerated ripening, increased the sugar content of the grapes, accelerated fermentation of the must expressed from the experimental grapes, with dosages of 0.005 and 0.0005 g per vine.

V. V. Arkhangel'skaya.

CARD: 2/2

DOBROLYUBSKIY, O.K.

DOBROLYUBSKIY, O.K.

"Microcrystalloscopy" by I.M.Korenman. Reviewed by O.K.Dobroliubskii. Zhur.anal.khim. 12 no.2:276-277 Mr-Ap '57. (MLRA 10:7)
(Crystallochemistry)

DOBROLYUBSKIY, O.K.

"Foliar feeding of agricultural plants." Reviewed by O.K. Kobroliubskii. Bot.zhur. 42 no.3:480-484 Mr '57. (MLRA 10:5)

1.Odesskiy sel'skokhozyaystvennyy institut.
(Fertilizers and manures)

DOBROLYUBSKIY, O.K.

A useful book on photosynthesis ("Photosynthesis, the nutrition of plants through the use of light and carbon" by A.A.Nichiporovich. Reviewed by O.K.Dobroliubskii). Biul.MOIP. Otd.biol. 62 no.3: 96-99 My-Je '57. (MLRA 10:8)
(PHOTOSYNTHESIS) (NICHIPOROVICH, A.A.)

USSR/Cultivated Plants. Fruits. Berries. M

Abs Jour : Ref Zhur-Biol., No 15, 1958, 68376

Author : Dobrolyubskiy, O. K., Slavvo, A. V.
Inst : Odessa Agricultural Institute.AS USSR.
Title : Use of the Microelement, Nickel, for Grapevine Nutrition.

Orig Pub : Dokl. AN SSSR, 1957, 112, No 2, 347-349

Abstract : The results of field experiments which were performed at the vineyards of the Odessa Agricultural Institute's study farms and in which $NiSO_4$ was applied in a dosage of 0.05 grams in 0.5 liters of water per bush (the soil is southern chernozem [Black soil], pH of 7.2-7.3), indicate that the weight of the grapes increased by 23 percent whereas the quality of them was

Card : 1/2

USSR/Cultivated Plants. Fruits. Berries. M

Abs Jour : Ref Zhur-Biol., No 15, 1958, 68376

unchanged. In other experiments with $NiSO_4$, the grape yield increased from 35.0 to 43.3 centners/centaro. In this experiment, the effect of $NiSO_4$ was meant to accelerate the ripening of higher quality grapes. The results achieved by using various concentration of $NiSO_4$ did not show great differences. -- A. M. Shchepetil'nikova

Card : 2/2

DOBROLYUBSKIY, O.K.

AUTHORS: Dobrolyubskiy, O. K., and Slavvo, A. V., 20-6-40/47

TITLE: Modifications of Some Redox Processes in Vitis vinifera Under the Influence of Trace Elements. (Izmeneniya nekotorykh okislitel'no-vosstanovitel'nykh protsessov v vinograde pod vozdeystviyem microelementov)

PERIODICAL: Doklady AN SSSR, 1957, Vol. 117, Nr 6, pp. 1064-1067 (USSR)

ABSTRACT: The great influence exerted by trace elements upon the processes of development of all organisms may be explained by the chemical peculiarities of the respective compounds. In the periodic law most of the trace elements belong to the group of d-elements, i.e. of such in which the quantum number of the last electron capable of annexation is d. When the chemical elements with numbers from 24 to 29 are examined (Cr, Mn, Fe, Co, Ni, and Cu) it is seen that they may all lose their electrons not only from the last energetic level but also from the incomplete last but one level. These chemical elements in a different manner show positive valence, especially in complex and inner-complex compounds. They thus become metal components of various complicated organic substances, especially enzymes. In biochemical processes trace elements are above all co-enzymes. Their part is by no means restricted to the sole acceleration of spontaneously occurring chemical

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reactions. The presence of a single trace element in the absence of others is often capable of obstructing this or that process. Therefore a kind of certain, well coordinated ensembles of quantity- and trace-elements with an adequate mutual energetic action must participate in the reactions. Trace elements may not only play the part of catalysts, but also of promotors and inhibitors of various reactions in organisms. The trace elements are above all capable of influencing the total oxidizability of the tissues. Corresponding redox processes are accompanied by modifications of the enzymatic activity of the grapes. Among various enzymes the oxidases which activate the molecular O_2 are of greatest importance. An increase in the activity of oxidases leads to the accumulation of sugars, increases the glucose-acidometrical index and thus accelerates the ripening of the grapes. In the authors' tests $ZnSO_4$ (5.10^{-3} g salt per vine) and $CoSO_4$ as well as $Cr_2(SO_4)_3$ (both salts 5.10^{-5} g per vine) were added to the Bordeaux mixture. Figure 1 shows the oxidizability of the tissue of the vine-leaves under the influence of Co^{2+} and Cr^{3+}. It was higher than in the control in which the vines were only treated with Cu^{2+}. About the same rules were determined for the grapes. Figure 2 shows the

increase in the activity of the peroxidase in the vine-leaves. In the leaves (and grapes) of the vines treated with Zn^{2+}, Co^{2+} and Cr^{3+} it was higher than in the control. From figure 3 may be seen an analogous effect of these trace elements upon the activity of the polyphenol-oxidase. The sugar content was also increased by the trace elements (table 1). From the above-mentioned fact follows an acceleration of the ripening of grapes. The crop yield was thereby increased. Fertilizing with trace elements influences the grapes in a similar manner. There are 3 figures, 1 table, and 11 references, 8 of which are Slavic.

ASSOCIATION: Odessa Agricultural Institute (Odesskiy sel'skokhozyaystvennyy institut)

PRESENTED: June 28, 1957, by A.L. Kursanov, Academician

SUBMITTED: February 4, 1957

AVAILABLE: Library of Congress

Card 3/3

AUTHOR: Dobrolyubskiy, O.K., Docent, Candidate of Chemical Sciences 153-58-1-28/29

TITLE: A Book on Chemical Equations (Kniga o khimicheskikh uravneniyakh)

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Khimiya i khimicheskaya tekhnologiya, 1958, Nr 1, pp. 185-188 (USSR)

ABSTRACT: In the following book criticism the author comments upon the book "Chemical Equations" (Khimicheskiye uravneniya) by A.A.Kudryavtsev , which was recently published in the USSR. Particular attention was paid by the author of this book to processes of oxidation and reduction. In spite of the fact that criticism was, on the whole, favorable, the following faults are mentioned: Classification of chemical reactions, oxidation-reduction, and exchange reactions is of too general a nature and does not supply a sufficient amount of detailed information. Further, the lack of uniformity of expressioning equations is criticized. In conclusion, the fact is, however, stressed that the book will be a great aid to young chemists. The large number of misprints is, however, criticized, and the critic ends his critical review by mentioning a number of inappropriate expressions and formula-

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A Book on Chemical Equations

153-58-1-28/29

tions used. There are 3 references, 3 of which are Soviet.

Card 2/2

DOBROLYUBSKIY, O.K.; SLAVVO, A.V.

Use of potassium -naphtoxyacetate and 2,4-dichlorophenoxy- -butyric acid in viticulture. Fiziol. rast. 5 no.2:190-193 Mr-Ap '58. (MIRA 11:4)

1.Odesskiy sel'skokhozyaystvennyy institut, Odessa.
(Viticulture) (Growth promoting substances)

DOBROLYUBSKIY, O. K.

Valuable book on microelements("Microelements in agriculture" by M. IA. Shkol'nik and N.A. Makarova. Reviewed by O.K. Dobroliubskii. Zemledelie 6 no.11:85-87 N '58. (MIRA 11:11)
(Trace elements)
(Shkol'nik, M. IA.)
(Makarova, N.A.)

DOBROLYUBSKIY O.K.

25-58-3-40/41

AUTHOR: Dobrolyubskiy, O.K., Candidate of Chemical Sciences (Odessa)

TITLE: Frits (Fritty)

PERIODICAL: Nauka i Zhizn', 1958, Nr 3, p 79 (USSR)

ABSTRACT: The author describes the use of frit, which was developed and first applied in the USA, as a fertilizer.

AVAILABLE: Library of Congress

Card 1/1 1. Fertilizer-Synthetic

26-58-2-23/48

AUTHOR: Dobrolyubskiy, O.K., Candidate of Chemical Sciences

TITLE: Pre-Sowing Treatment of Seeds with Trace Elements (Predposevnaya obrabotka semyan mikroelementami)

PERIODICAL: Priroda, 1958, Nr 2, pp 95-97 (USSR)

ABSTRACT: The author deals with the treatment of seeds with minute traces of elements - compounds of zinc, manganese, copper, boron, cobalt, nickel, chromium, etc. - in solution before sowing. He mentions the experiments carried out in this field by M.Ya. Shol'nik, N.A. Makarova, Ye.S. Klimova, A.Ya. Kokin, Ye.I. Tarasov and M.N. Muzalev of the Petrozavodsk State University and by the Odessa Agricultural Institute in various regions of the Ukraine. The elements affect changes in the seed's embryo which, by the division of the cells, is passed on to the whole plant and can affect all stages of its development and functioning. Ya.E. Ekster and K. Nurmagambetov, Yu.N. Shcherbakov and F.Ye. Malenev have also been active in this field. The climatic, seasonal and soil conditions encountered when the treated seeds are planted are very important and have a radical effect on the success of the treatment. The Kinel'skaya gosudarstvennaya

Pre-Sowing Treatment of Seeds with Trace Elements 26-58-2-23/48

selektsionnaya stantsiya (Kinel' State Selection Station), Kuybyshev oblast', has carried out successful experiments on developing the resistance of plants to frost by treating corn seeds with an aluminum solution and subjecting the sprouts with 4-5 leaves to a 5° C frost for 24 hours. Yu.Ye. Novitskaya has stated that trace elements can change the intensity of the transpiration of the leaves, intensify photosynthesis, influence the carbohydrate metabolism, the ascorbic acid content, catalysis in the tissues.
There are 2 photos.

ASSOCIATION: Odesskiy sel'skokhozyaystvennyy institut (Odessa Agricultural Institute)

Card 2/2 1. Agriculture--USSR 2. Seeds--Mineral--Impregnation--Theory

AUTHORS: Dobrolyubskiy, O. K., Slavvo, A. V. 20-118-5-55/59

TITLE: The Effect Produced by the Cadmium Trace Element Upon Vitis Vinifera
(Vozdeystviye mikroelementa kadmiya na vinograd)

PERIODICAL: Doklady Akademii Nauk SSSR, 1958, Vol. 118, Nr 5, pp. 1040 - 1042 (USSR).

ABSTRACT: Among the chemical elements of the sub group Zn, Cd and Hg only Zn is utilized as trace element for the nutrition of organisms. Cd compounds are hardly used at all in plant growing (reference 4), although numerous data are available on its role as trace element in human beings and the animals (reference 5, 6). A comparison of the atomic structure of the 3 mentioned elements is given. With the increasing ordinal number the virulence increases and the percentage content of these elements in the organism drops: Zn - 10^{-3}%, Cd - 10^{-4}% and the most poisonous Hg - 10^{-6}%. Cadmium always accompanies zinc as mineral. However, its content in the soil is by hundreds of times smaller than that of zinc. Cd is contained in black soils in quantities of $2{,}0.10^{-6}$ to $1{,}3.10^{-5}$%. In this case the rela-

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tion Zn: Cd is on the average looo. Due to the relation Zn : Cd~2o : 1 in the plants (reference 7) the authors assume that the plants do not need cadmium less than zinc, the compounds of which are often absorbed in great quantities from the soil. The authors have examined the influence of Cd^{2+} on Vitis vinifera using the hitherto employed methods (reference 8). The soil was southern black soil, weakly alkaline (pH 7,2 - 7,3) in which the quantity of the assimilable Cd^{2+} - forms is very little. The grape was sprayed with $CdSO_4$ solution twice: a) at the beginning of full flowering (june 23) and b) when the grapes were of the size of a pea (July 1d). Each plant received 5.10^{-3} g and 5.10^{-5} g $CdSO_4$. Control grapes were sprayed with the same quantity of water (0,2 l). The results given on table 1 show that the weight of the grapes increases considerably under the influence of Cd^{2+} (from 11 to 17%) in particular at a quantity of 5.10^{-3} g per grape. This concentration agrees with the optimum quantity of $ZnSO_4$ in the feeding of the grape outside of the roots (references 8,9). The crop of the grapes in both cases increased from 35 hundredweights/ha to 38,8 hundredweights/ha. Moreover, sugar content increased and acidity

of the grapes was reduced; thus, reapening was accelerated. The possible participation of the Cd^{2+}-compounds in extremely important oxidative-reductive processes in organisms and in the fermentative activity has been proved already (references lo, ll). The Cd^{2+}-compounds accelerate, although more weakly than the Zn^{2+}-compounds the oxidation process of the sulfohydryl groups to sulfite groups and activate the decolorization of methylene blue by means of several plant dehydrations. According to the character of anions, salt concentration and several other factors the Cd^{2+}-compounds may have catalase-($CdSO_4$) or peroxidase activity. It can be seen from table 2 that Cd^{2+} reduces oxidizability of the leaf tissue. From the same table it can also be seen that the action of the trace element leads to an increase of the content of ascorbic acid in Vitis vinifera: by three times in the leaves and by 1,8 times in the grapes. The study of the Cd influence on the accumulation of several sugars should be intensified. Table 2 shows that the fructose content increases most. The relation: fructose: glucose increased under the influence of Cd^{2+} from 0,92 to 0,96 and),98 which proves the acceleration of the reapening of the grapes.

The Effect Produced by the Cadmium Trace Element Upon Vitis Vinifera

20-118-5-55/59

There are 2 tables, and 11 references, 10 of which are Soviet.

ASSOCIATION: Odesskiy sel'skokhozyaystvennyy institut (Agricultural Institute, Odessa)

PRESENTED: October 9, 1957, by A. L. Kursanov, Academician.

SUBMITTED: June 5, 1957.

Card 4/4

AUTHORS: Dobrolyubskiy, O. K., Slavvo, A. V.

TITLE: The Influence of the Zinc Trace Element on the Fermentative Activity of the Grape (Vliyaniye mikroelementa tsinka na fermentativnuyu deyatel'nost' vinograda)

SOV/20-121-2-47/53

PERIODICAL: Doklady Akademii nauk SSSR, 1958, Vol. 121, Nr 2, pp. 370-373 (USSR)

ABSTRACT: The use of zinc as trace element represents a very effective acceleration of the ripening of grapes, of the crop, the increase of the sugar- and the decrease of the acid content (Ref 1). Earlier the authors found that this is done best by some way outside the roots by adding zinc to the Bordeaux mixture. Such a treatment for four years has increased the crop of some sorts of grapes by 18 to 57 %. One of the causes of the effect mentioned is the participation of zinc in various redox processes in the organism (Refs 3, 4). In the case of zinc deficiency the system of dehydrases is suppressed; when the redox tissue activity is changed the irreversibly oxidized tanning matters in the humor do not occur (Ref 5) etc. . The use of zinc increases the capability of assimilation of the plant for various nutrients, it also increases

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the fermentative activity. This finally determines the course of the most important processes of the organism. The analyses of the leaves of the Riesling sort from the Odessa area (Table 1) demonstrate the influence of the trace element. It was used twice in a quantity of 0,005 g $ZnSO_4$ per grape in combination with the Bordeaux mixture: a) during efflorescence, b) when the grapes were about the size of peas. From table 1 may clearly be seen that the oxidizability and the iodine reducing capability of the tissue increase by this treatment. The changes mentioned above are directly connected with the fermentative activity of the organism (Ref 6). In the grape exposed to the effect of very large amounts of copper in the Bordeaux mixture the activity of the ascorbic oxidase and polyphenol oxidase can be considerably modified as these two ferments contain copper (Ref 8). For the reason of comparison leaves were investigated which had been sprayed with Bordeaux mixture only and with zinc + $CuSO_4$. From table 1 a may be seen that the activity of the ascorbic oxidase in spite of the fluctuations decreases towards the end of the vegeta-

tion. Zinc, however, maintained this activity at a high level. The effect of the polyphenol oxidase was about similar (Fig 1 b). There are 2 figures, 2 tables, and 9 references, 7 of which are Soviet.

ASSOCIATION: Odesskiy sel'skokhozyaystvennyy institut (Odessa Agricultural Institute)

PRESENTED: April 1, 1958, by A. L. Kursanov, Member, Academy of Sciences, USSR

SUBMITTED: March 7, 1958

DOBROLYUBSKIY, O.K.

Third All-Union Conference on Trace Elements. Nauch.dokl.vys. shkoly; biol.nauki no.2:217-219 '59. (MIRA 12:6)
(Trace elements--Congresses)

DOBROLYUBSKIY, O.K.

Changes in certain biochemical processes of grapes due to fertilization with the trace element cadmium. Nauch. dokl. vys. shkoly; biol. nauki no.4:151-155 '59. (MIRA 12:12)

1.Rekomendovana kafedroy neorganicheskoy i analiticheskoy khimii Odesskogo sel'skokhozyaystvennogo instituta.
(Grapes--Fertilizers and manures) (Plants, Effect of cadmium on)

DOBROLYUBSKIY, O.K.

Valuable book on trace elements ("Trace elements in agriculture" by M.IA. Shkol'nik, N.A. Makarova. Reviewed by O.K. Dobroliubskii). Nauch. dokl. vys. shkoly; biol. nauki no.4:205-207 '59.
(MIRA 12:12)
(Trace elements) (Fertilizers and manures)

DOBROLYUBSKIY, O.K.

Effect of some little-studied trace elements on plants.
Fiziol. rast. 6 no.5:550-559 S-O '59. (MIRA 13:2)

1.Odessa Agricultural Institute.
(Plants--Nutrition) (Trace elements)

30(1) SOV/25-59-9-10/49

AUTHOR: Dobrolyubskiy, O.K., Candidate of Chemical Sciences

TITLE: Miraculous Milligrams

PERIODICAL: Nauka i zhizn', 1959, Nr 9, pp 30-32 (USSR)

ABSTRACT: The author writes about the effect of chemical substances on the growth and development of animal and vegetable organisms. It has been proven that a slight change in the chemical composition of nutritious substances (by several milligrams) can give appreciable results. Of the 102 elements of the periodical table, for the processes of active life, some are necessary in relatively large quantities (macroelements), and the others in very small doses. These are the microelements copper, zinc, manganese, cobalt, iodine, arsenic, etc. Up to now, the necessity for dozens of microelements in plant and animal life has been proven. The chemical treatment of seeds before sowing is one of the most important methods for increasing the yield of crops. In experiments carried out by M.Ya. Shkol'nik

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and N.A. Makarova in the Lodeynopol'skiy rayon, Leningradskaya Oblast', the treatment of seeds with a boric acid solution before sowing increased the yield of summer wheat by 2 to 6 centners per hectare. According to data of the Belorusskiy institut zemledeliya (Belorussian Institute of Agriculture), in experiments carried out by V.P. Deyeva in the kolkhoz imeni Zhdanov, Novogrudskiy rayon, Grodnenskaya Oblast', the treatment of seeds of sugar beets with a solution containing a boric compound increased the yield by 15%, with a manganese compound by 12%, and with a molybdenum compound by 22%. At the same time the sugar content of the roots increased by 0.7 to 0.8%. I.P. Pavlov, K.A. Timiryazev and I.V. Michurin stated that organisms have the highest sensitivity to external effects during the early stages of growth. The author describes the treatment of seeds with microorganisms and stresses the role of microelements in increasing the sprouts' resistance to frost. There are 3 photographs and 1 drawing.

DOBROLYUBSKIY, O.K.

Effect of fertilizers containing the trace element chromium on biochemical processes in grapes. Biokhimiia 24 no.4:625-630 Jl-Ag '59. (MIRA 12:11)

1. Odesskiy sel'skokhozyaystvennyy institut.
(GRAPES--FERTILIZERS AND MANURES)
(PLANTS, EFFECT OF CHROMIUM ON)

DOBROLYUBSKIY, O.K., kand. khim. nauk

Wonder-working milligrams. Nauka i zhizn' 26 no.9:30-32 S '59.
(MIRA 13:1)
(Field crops--Fertilizers and manures)

AUTHOR: Dobrolyubskiy, O.K.

TITLE: All-Union Conference on Microelements (Vsesoyuznoye soveshchaniye po mikroelementam)

SOV/80-32-2-56/56

PERIODICAL: Zhurnal prikladnoy khimii, 1959, Vol XXXII, Nr 2, pp 469-472 (USSR)

ABSTRACT: The Third All-Union Conference on microelements took place in Baku in April 1958. It was convened by the USSR Academy of Sciences and the Academy of Sciences of the Azerbaydzhan SSR. It was attended by more than 70 scientific research institutions. The President of the Latvian Academy of Sciences and Associate Member of the USSR Academy of Sciences Ya.V. Peyve presented a paper on the connection between soil conditions and the action of microelements on plants. The content of microelements in the soil in forms accessible for plants is investigated by P.A. Vlasyuk, Sh.F. Chanishvili, V.V. Akimtsev, G.A. Aliyev, A.N. Gyul'[illegible], D.P.[illegible], N.P.Sverdin, A.I. Makarova, R.S. Osokina, A.A. Alekseyev, M.S. Dzhurko, Ya.V. Peyve, N.N. Ivanova, M.V. Katalymov, S.I. Ryabova, V.A. Chernov. Ya.V. Peyve demonstrated methods for the quantitative analysis of microelements in the soil. The efficiency of the microelements of manganese, boron, copper, molybdenum,

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cobalt, zinc, nickel, aluminum, vanadium, and chromium in different agricultural crops is investigated by P.A. Vlasyuk, G.A. Aliyev, O.K. Kedrov-Zikhman, M.Ya. Shkol'nik, M.G. Abutalybov, D.M. Guseynov, A.V. Peterburgskiy, Ye.I. Ratner, S.S. Abayeva, V.V. Yakovleva, A.P. Shcherbakov, O.K. Dobrolyubskiy. M.V. Katalymov presented a paper on the technological and agrochemical investigation of boron fertilizer carried out in the Institute of Fertilizers and Insectofungicides. The use of fritts was dealt with in the papers presented by Ya.V. Peyve, R.S. Rin'ke, P.A. Vlasyuk, M.S. Darmenko, A.P. Shcherbakov, T.I. Kurakhtanova, N.I. Baglykov. M.Ya. Shkol'nik from the Botanical Institute of the USSR Academy of Sciences imeni V.L. Komarov presented a paper on the physiological-biochemical investigation of microlements. S.M. Manskaya and T.V. Drozdova from the Institute of Geochemistry and Analytical Chemistry imeni V.I. Vernadskiy made a communication on the role of natural organic compounds in concentrating microelements. L.K. Ostrovskaya showed that the need of plants for copper fertilizers increases with the rise of the level of nitrogen compounds. P.A. Vlasyuk and Z.M. Klimovitskaya demonstrated that a deficiency of boron compounds is connected with the destruction of the oxidation-

reduction processes. The importance of chelate compounds is investigated by M.Ya. Shkol'nik and Ya.V. Peyve. Ya.V. Peyve, N.N. Ivanova, and Yu.N. Dobritskaya communicated methods for the determination of molybdenum in soils and plants, M.V. Katalymov and S.I. Ryabova for the determination of mobile boron, A.N. Gyul' akhmedov for the fast determination of manganese, copper and cobalt in carbonate soils. L.Ya. Levanidov recommended to classify the microelements with variable valence as a separate group. A.P. Shcherbakov demonstrated the phenomena of physiological antagonism, synergism and additivity. O.K. Dobrolyubskiy connected the role of chromium, nickel, cobalt, cadmium and mercury with their position in the periodic system. According to the paper presented by V.V. Koval'skiy there are special areas on the surface of the earth where the plants react in a characteristic way on an excess or a deficiency of microelements. The study of these biogeochemical provinces has been developed by V.I. Vernadskiy and A.P. Vinogradov. The influence of microelements on domestic animals was demonstrated by Ya.M. Berzin', N.I. Zaderiy, F.A. Petrov. The biochemical processes in the animal organism caused by microelements were studied by F.Ya. Berenshteyn, A.D. Gololobov, and Ya.A. Babin. The influence

of microelements on the human organism was shown by A.O.Voynar. The role of microelements in medicine during various diseases was dealt with by V.A.Leonov, V.M.Shostkov, Ye.N.Ivanova, Ye.V.Sabadash, M.G.Mirzakarimov, A.I.Venchikov, R.G.Kayran, and others.

USCOMM-DC-60,880

DOBROLYUBSKIY, O.K.

"Foliar feeding of plants"; a collection of translations from foreign periodical literature. Reviewed by O.K. Dobroliubskii. Biul.MOIP. Otd.biol. 64 no.5:168-171 S-O '59.

(MIRA 13:6)

(PLANTS--ASSIMILATION) (FERTILIZERS AND MANURES)

DOBROLYUBSKIY, O.K.; FEDORENKO, I.V.

Effect of the trace element zonc on its concentration in grapes.
Nauch.dokl.vys.shkoly; biol.nauki no.2:158-161 '60. (MIRA 13:4)

1. Rekomendovana kafedroy neorganicheskoy i analiticheskoy khimii Odesskogo sel'skokhozyaystvennogo instituta.
(GRAPES--FERTILIZERS AND MANURES)
(PLANTS, EFFECT OF ZINC ON)

DOBROLYUBSKIY, O.K.; ZHIVITSKAYA, L.I.

Cobalt content of grapes as related to the utilization conditions of the trace element. Nauch.dokl.vys.shkoly: biol.nauki no.4:186-189 '60. (MIRA 13:11)

1. Rekomendovana kafedroy neorganicheskoy i analiticheskoy khimii Odesskogo sel'skokhozyaystvennogo instituta.
(GRAPES--FERTILIZERS AND MANURES)
(PLANTS, EFFECT OF COBALT ON)

DOBROLYUBSKIY, O.K.; RYZHA, V.K.

Effect of the trace element manganese on some biochemical processes in grapes. Biokhim. vin. no.6:171-195 '60. (MIRA 13:10)

1. Odesskiy sel'skokhozyaystvennyy institut.
(Grapes--Fertilizers and manures)
(Plants, Effect of manganese on)

DOBROLYUBSKIY, O.K.

Methods of preparation and properties of alkali metal cyanocobaltates. Izv. vys. ucheb. zav; khim. i khim. tekh. 3 no. 5:798-804 '60. (MIRA 13:12)

1. Odesskiy sel'skokhozyaystvennyy institut. Kafedra neorganicheskoy i analiticheskoy khimii.
(Cyanocobaltates)

DOBROLYUBSKIY, O.K.; SLAVVO, A.V.

Effect of trace elements on the accumulation of sugars in berries of the grapevine. Biokhim. vin. no.6:196-222 '60. (MIRA 13:10)

1. Odesskiy sel'skokhozyaystvennyy institut.
(Grapes--Fertilizers and manures) (Trace elements) (Sugars)

DOBROLYUBSKIY, O.K.

Role of the trace element zinc in biochemical processes taking place in grapes, Biokhim.pl.i ovoshch. no.6:228-251 '61. (MIRA 14:6)

1. Odesskiy sel'skokhozyaystvennyy institut.
(Grapes) (Plants, Effect of zinc on)

DOBROLYUBSKIY, O.K.; SLAVVO, A.V. [deceased]

Effect of the trace element nickel on some physiological and biochemical properties of grapes. Fiziol.rast. 8 no.3:355-358 '61. (MIRA 14:5)

1. Odesskiy sel'skokhozyaystvennyy institut.
(Plants, Effect of nickel on) (Grapes--Fertilizers and manures)

DOBROLYUBSKIY, O.K.; RYZHA, V.K.

Effect of manganese trace element fertilizers on biochemical processes in grapes. Fiziol. rast. 9 no.1:53-59 '62. (MIRA 15:3)

1. Odessa Agricultural Institute.
(Grapes--Fertilizers and manures)
(Manganese--Physiological effect)

DOBROLYUBSKIY, O.K.

Participation of scandium in oxidation-reduction processes in plants. Dokl. AN SSSR 144 no.5:1174-1177 Je '62. (MIRA 15:6)

1. Odesskiy sel'skokhozyaystvennyy institut. Predstavleno akademikom A.L.Kursanovym.
(BOTANY--PHYSIOLOGY) (OXIDATION-REDUCTION REACTION) (SCANDIUM)

DOBROLYUBSKIY, Oleg Konstantinovich, kand. khim. nauk; ANTONYUK, L., red.; MIKHAYLOVSKAYA, N., tekhn. red.

[Wonderful milligrams]Chudesnye milligrammy. Moskva, Izd-vo "Molodaia gvardiia," 1962. 142 p. (MIRA 16:3)
(Trace elements)

DOBROLYUBSKIY, O.K.

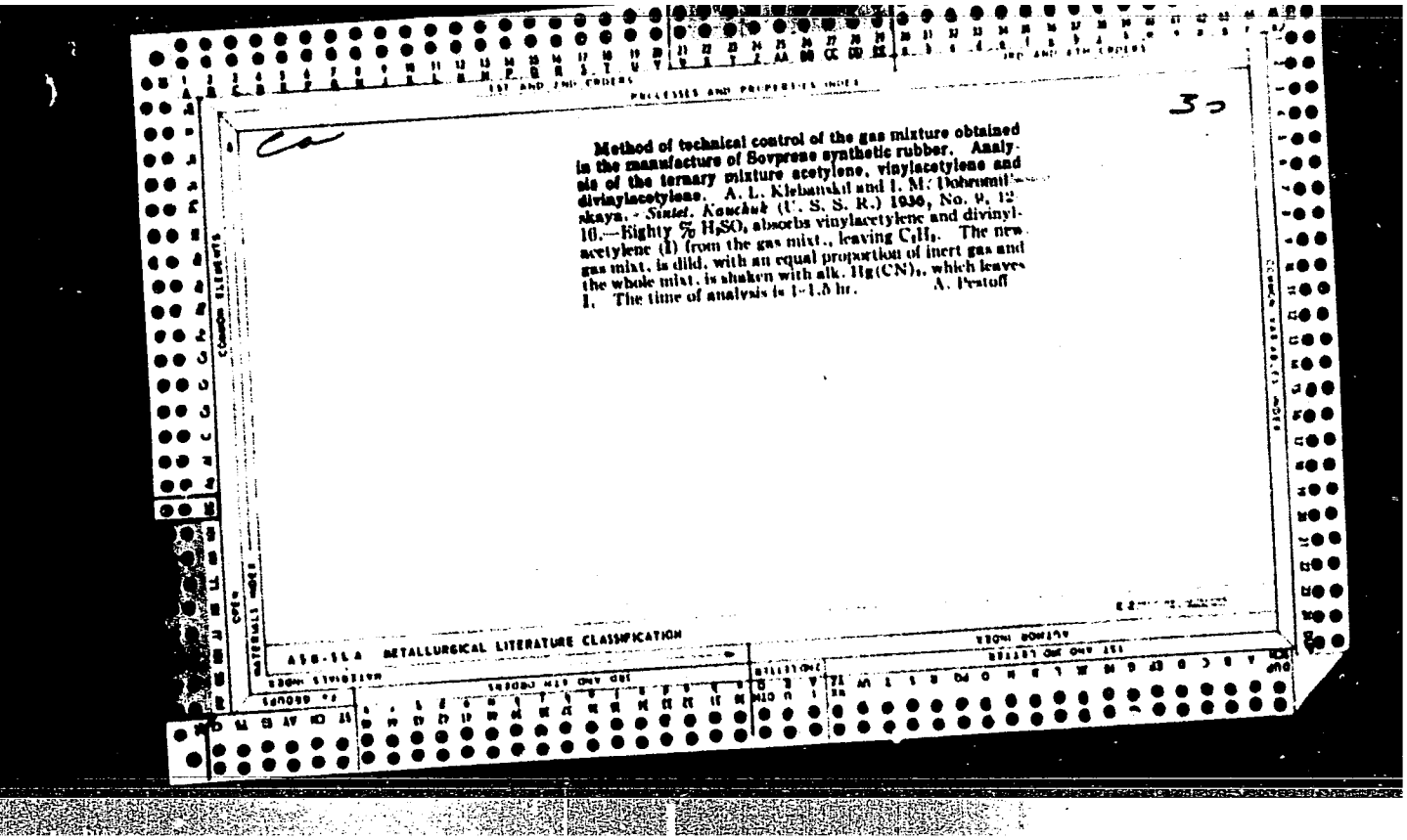
Effect of the trace element vanadium on grapes. Fiziol. rast. 10 no.3:319-324 My-Je '63. (MIRA 16:6)

1. Odessa Agricultural Institute.
(Plants, Effect of vanadium on) (Grapes)

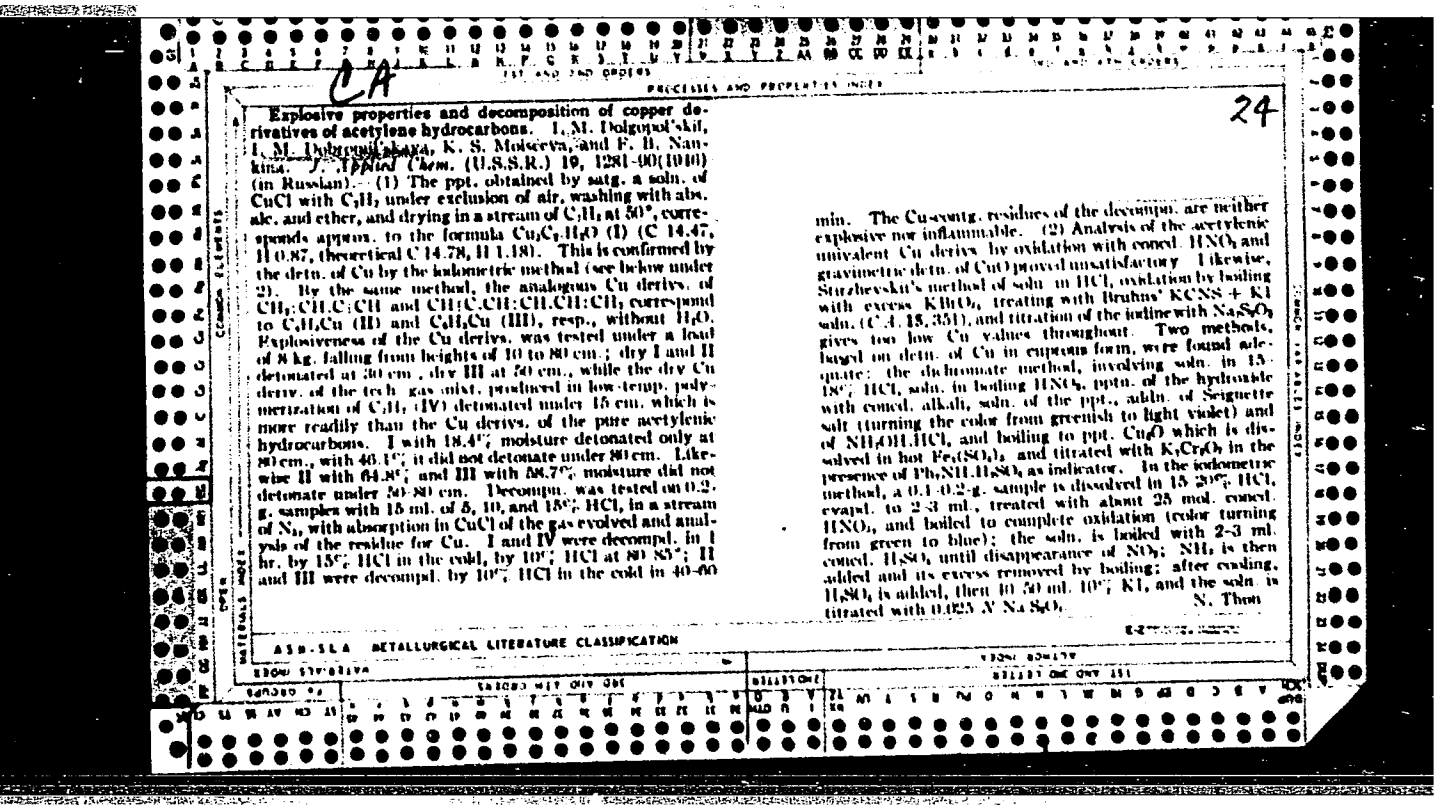
DOBROLYUBSKIY, O.K.

Effect of the microelement tungsten on plant organisms. Nauch. dokl. vys. shkoly; biol. nauki no.1:142-145 '64. (MIRA 17:4)

1. Rekomendovana kafedroy neorganicheskoy i analiticheskoy khimii Odesskogo sel'skokhozyaystvennogo instituta.



Method of technical control of the gas mixture obtained in the manufacture of Bovprene synthetic rubber. Analysis of the ternary mixture acetylene, vinylacetylene and divinylacetylene. A. L. Klebanskiĭ and I. M. Dobromil'skaya. *Sintet. Kauchuk* (U. S. S. R.) 1936, No. 9, 12-16.—Eighty % H_2SO_4 absorbs vinylacetylene and divinylacetylene (I) from the gas mixt., leaving C_2H_2. The new gas mixt. is dild. with an equal proportion of inert gas and the whole mixt. is shaken with alk. $Hg(CN)_2$, which leaves I. The time of analysis is 1–1.5 hr. A. Pentoff



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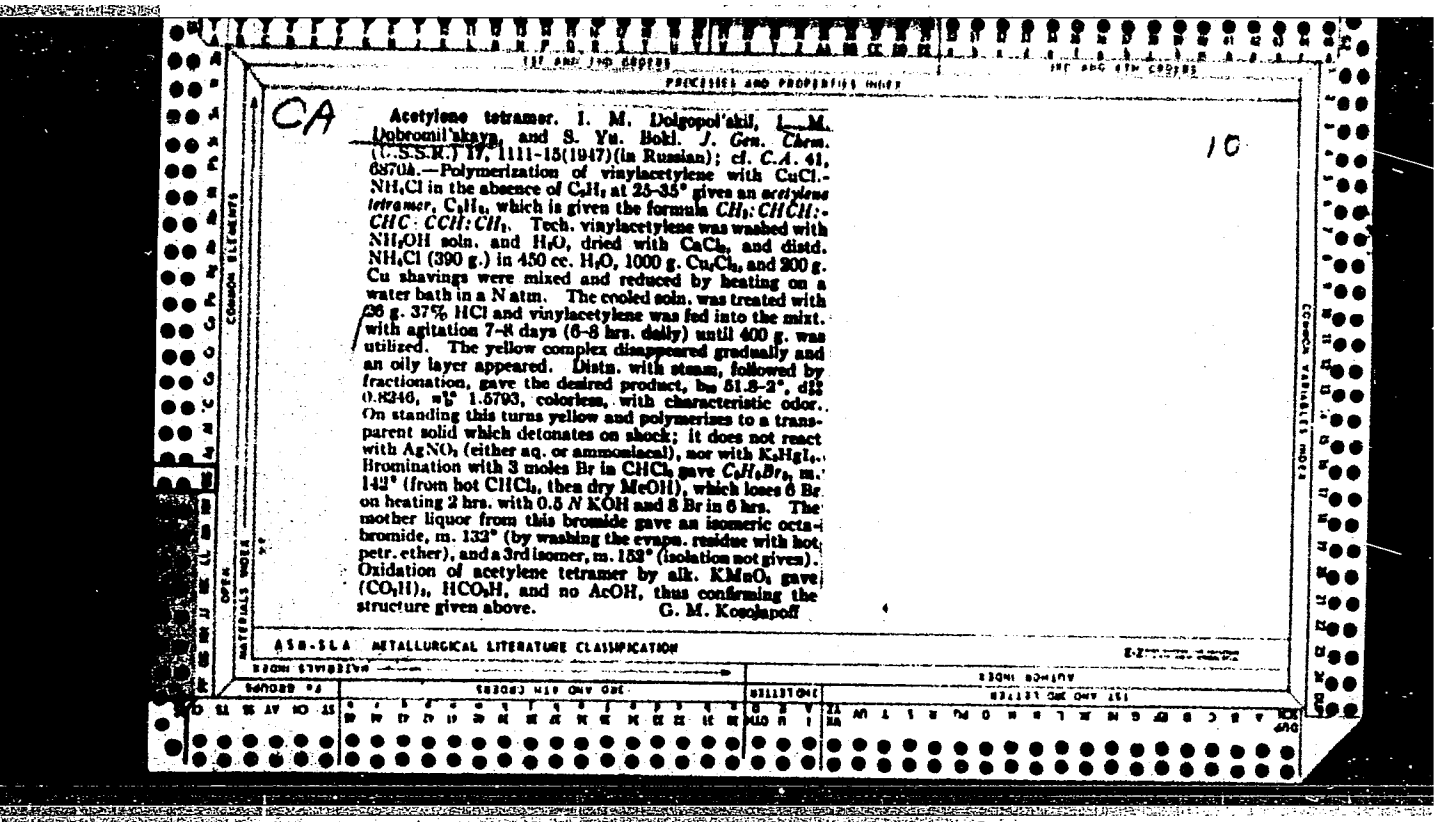
Explosive properties and decomposition of copper derivatives of acetylene hydrocarbons. I. M. Dolgopol'skii, I. M. Dubrovinskaya, K. S. Moiseeva, and F. B. Nankina. *J. Applied Chem.* (U.S.S.R.) 19, 1281-90(1946) (in Russian).—(1) The ppt. obtained by satg. a soln. of CuCl with C_2H_2 under exclusion of air, washing with abs. alc. and ether, and drying in a stream of C_2H_2 at 50°, corresponds approx. to the formula $Cu_2C_2.1H_2O$ (I) (C 14.47, H 0.87, theoretical C 14.78, H 1.18). This is confirmed by the detn. of Cu by the iodometric method (see below under 2). By the same method, the analogous Cu derivs. of $CH_2:CH.C:CH$ and $CH:C.CH:CH.CH:CH_2$ correspond to C_4H_3Cu (II) and C_6H_5Cu (III), resp., without H_2O. Explosiveness of the Cu derivs. was tested under a load of 8 kg. falling from heights of 10 to 80 cm.; dry I and II detonated at 50 cm., dry III at 50 cm., while the dry Cu deriv. of the tech. gas mixt. produced in low-temp. polymerization of C_2H_2 (IV) detonated under 15 cm. which is more readily than the Cu derivs. of the pure acetylenic hydrocarbons. I with 18.4% moisture detonated only at 80 cm., with 40.1% it did not detonate under 80 cm. Likewise II with 64.8%; and III with 58.7% moisture did not detonate under 50-80 cm. Decompn. was tested on 0.2-g. samples with 15 ml. of 5, 10, and 15% HCl, in a stream of N_2, with absorption in CuCl of the gas evolved and analysis of the residue for Cu. I and IV were decompd. in 1 hr. by 15% HCl in the cold, by 10% HCl at 80-85°; II and III were decompd. by 10% HCl in the cold in 40-60 min. The Cu-contg. residues of the decompn. are neither explosive nor inflammable. (2) Analysis of the acetylenic univalent Cu derivs. by oxidation with concd. HNO_3 and gravimetric detn. of CuO proved unsatisfactory. Likewise, Strzhevskii's method of soln. in HCl, oxidation by boiling with excess $KBrO_3$, treating with Bruhns' KCNS + KI soln. (*C.A.* **15**, 351), and titration of the iodine with $Na_2S_2O_3$ gives too low Cu values throughout. Two methods, based on detn. of Cu in cuprous form, were found adequate: the dichromate method, involving soln. in 15-18% HCl, soln. in boiling HNO_3, pptn. of the hydrosols with concd. alkali, soln. of the ppt., addn. of Seignette salt (turning the color from greenish to light violet) and of $NH_4OH.HCl$, and boiling to ppt. Cu_2O which is dissolved in hot $Fe_2(SO_4)_3$ and titrated with $K_2Cr_2O_7$ in the presence of $Ph_2NH.H_2SO_4$ as indicator. In the iodometric method, a 0.1-0.2-g. sample is dissolved in 15-20% HCl, evapd. to 2-3 ml., treated with about 25 ml. concd. HNO_3, and boiled to complete oxidation (color turning from green to blue); the soln. is boiled with 2-3 ml. concd. H_2SO_4 until disappearance of NO_2; NH_4 is then added and its excess removed by boiling; after cooling, H_2SO_4 is added, then 10-50 ml. 10% KI, and the soln. is titrated with 0.025 *N* $Na_2S_2O_3$. S. Thon

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



CA

10

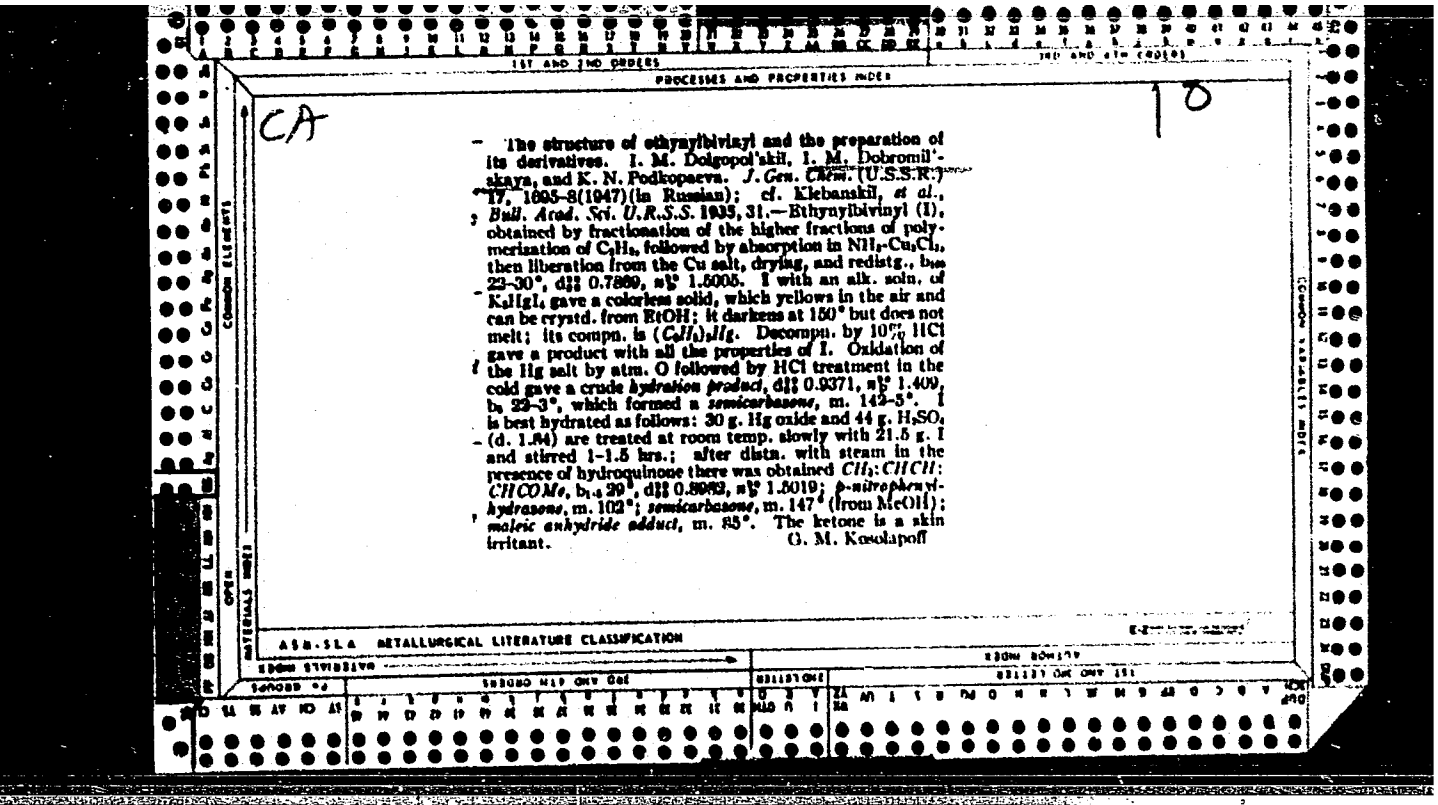
Acetylene tetramer. I. M. Dolgopol'skii, L. M. Dubroomil'skaya, and S. Yu. Bokl. *J. Gen. Chem.* (U.S.S.R.) 17, 1111-15(1947)(in Russian); cf. *C.A.* 41, 6870h.—Polymerization of vinylacetylene with CuCl.-NH_4Cl in the absence of C_2H_2 at 25–35° gives an *acetylene tetramer*, C_8H_8, which is given the formula $CH_2:CHCH:CHC:CCH:CH_2$. Tech. vinylacetylene was washed with NH_4OH soln. and H_2O, dried with $CaCl_2$, and distd. NH_4Cl (390 g.) in 450 cc. H_2O, 1000 g. Cu_2Cl_2, and 200 g. Cu shavings were mixed and reduced by heating on a water bath in a N atm. The cooled soln. was treated with 36 g. 37% HCl and vinylacetylene was fed into the mixt. with agitation 7–8 days (6–8 hrs. daily) until 400 g. was utilized. The yellow complex disappeared gradually and an oily layer appeared. Distn. with steam, followed by fractionation, gave the desired product, bp 51.8–2°, d_4^{18} 0.8246, n_D^{18} 1.5793, colorless, with characteristic odor. On standing this turns yellow and polymerizes to a transparent solid which detonates on shock; it does not react with $AgNO_3$ (either aq. or ammoniacal), nor with K_2HgI_4. Bromination with 3 moles Br in $CHCl_3$ gave $C_8H_8Br_6$, m. 142° (from hot $CHCl_3$, then dry MeOH), which loses 6 Br on heating 2 hrs. with 0.5 *N* KOH and 8 Br in 6 hrs. The mother liquor from this bromide gave an isomeric octabromide, m. 132° (by washing the evapn. residue with hot petr. ether), and a 3rd isomer, m. 153° (isolation not given). Oxidation of acetylene tetramer by alk. $KMnO_4$ gave $(CO_2H)_2$, HCO_2H, and no AcOH, thus confirming the structure given above.

G. M. Kosolapoff

DOBROMILSKAYA, I. M.

Dolgopolsky, J. M., Dobromilskaya, I. M., and Bokl, S. U. - "Investigation of the Acetylene Tetramer". (p. 1115)

SO: Journal of General Chemistry, (Zhurnal Obshchei Khimii), 1947, Vol. 17, No. 6



1ST AND 2ND ORDERS

PROCESSES AND PROPERTIES INDEX

CA

10

– The structure of ethynylbivinyl and the preparation of its derivatives. I. M. Dolgopol'skii, I. M. Dobromil'skaya, and K. N. Podkopaeva. *J. Gen. Chem.* (U.S.S.R.) 17, 1695–8(1947)(in Russian); cf. Klebanskii, *et al.*, *Bull. Acad. Sci. U.R.S.S.* 1935, 31.—Ethynylbivinyl (I), obtained by fractionation of the higher fractions of polymerization of C_4H_6, followed by absorption in NH_4-Cu_2Cl_2, then liberation from the Cu salt, drying, and redistg., b_{60} 23–30°, d_4^{20} 0.7869, n_D^{20} 1.5005. I with an alk. soln. of K_2HgI_4 gave a colorless solid, which yellows in the air and can be crystd. from EtOH; it darkens at 150° but does not melt; its compn. is $(C_6H_5)_2Hg$. Decompn. by 10% HCl gave a product with all the properties of I. Oxidation of the Hg salt by atm. O followed by HCl treatment in the cold gave a crude *hydration product*, d_4^{20} 0.9371, n_D^{20} 1.409, b_5 22–3°, which formed a *semicarbazone*, m. 142–5°. I is best hydrated as follows: 30 g. Hg oxide and 44 g. H_2SO_4 (d. 1.84) are treated at room temp. slowly with 21.5 g. I and stirred 1–1.5 hrs.; after distn. with steam in the presence of hydroquinone there was obtained CH_2:$CHCH$:$CHCOMe$, $b_{1.4}$ 29°, d_4^{20} 0.8082, n_D^{20} 1.5019; *p-nitrophenylhydrazone*, m. 102°; *semicarbazone*, m. 147° (from MeOH); *maleic anhydride adduct*, m. 85°. The ketone is a skin irritant.

G. M. Kosolapoff

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

The Synthesis of Ethyl- and 2-Propylbutadiene-1,3 SOV/79-28-7-14/64

According to Kaufmann (Kaufman) by titration with bromine the authors determined that these compounds exhibit an unsaturated character. To prove that the alkyl butadienes have a diene structure they were condensed with maleic acid anhydride in benzene solution. The melting points of the products obtained from it are also shown in the table. There are 1 table and 9 references, 3 of which are Soviet.

SUBMITTED: June 13, 1957

1. Butadienes--Synthesis 2. Condensation reactions

Card 2/2

DOLGOPOL'SKIY, I.M.; DOBROMIL'SKAYA, I.M.; BYSOV, B.A.

Synthesis of fluoroprene over a solid catalyst. Zhur. prikl. khim. 31 no.10:1534-1541 O '58. (MIRA 12:1)

1.Vsesoyuznyy nauchno-issledovatel'skiy institut sinteticheskogo kauchuka imeni S.V. Lebedeva.

(Fluoroprene)

DOLGOPOL'SKIY, I.I.; DOBROMIL'SKAYA, I.M.; BYZOV, B.A.

Hydrofluorination of vinylacetylene with a suspended catalyst.
Zhur.prikl.khim. 31 no.11:1716-1722 N '58. (MIRA 12:2)
(Hydrofluoric acid) (Butenyne) (Fluoroprene)

SOV/80-59-1-31/44

AUTHORS: Dolgopol'skiy, I.M., Dobromil'skaya, I.M. and Byzov, B.A.

TITLE: Chemical Transformations of Mercury Salts and Their Role in the Hydrofluorination Reaction of Vinylacetylene (Khimicheskiye prevrashcheniya soley rtuti i ikh rol' v reaktsii gidroftorirovaniya vinilatsetilena) Third Communication (Soobshcheniye III)

PERIODICAL: Zhurnal prikladnoy khimii, 1959, 32, Nr 1, pp 194-201 (USSR)

ABSTRACT: The authors investigated the composition of the catalytic mixture; the character of its changes in the hydrofluorination process of vinylacetylene; the mechanism of this reaction, and the formation of resins taking place during this process. The effect of various factors and conditions of experiments on the run of this process was also investigated and the results are presented in the tabular and graphical forms. The main results are as follows: 1. the change in the content of mercury and its salts at the continuous operation of the catalyzer is shown; 2. the possibility of a considerable lengthening of continuous operation with the maintenance of the constant activity of the catalytic mixture is demonstrated, which is attained by means of the periodic renewal of the catalyzer composition; 3. the possible mechanism of the hydrofluorination reaction and of the several side reactions occurring during

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SOV/80-59-1-31/44

Chemical Transformations of Mercury Salts and Their Role in the Hydrofluorination Reaction of Vinylacetylene

the synthesis of fluoprene out of vinylacetylene is considered. There are 3 graphs, 6 tables and 4 references, 3 of which are Soviet and 1 American.

ASSOCIATION: October 4, 1957

Card 2/2

DOBROMIL'SKIY, V.

Cities must be well supplied with potatoes and vegetables. Sov. torg. no.5:15-18 My '59. (MIRA 12:7)
(Produce trade)

DOBROMIL'SKIY, Vladimir Yefimovich; KIRAKOZOVA, N.Sh., red.; EL'KINA, E.M., tekhn. red.

[Price calculations for potatoes, vegetables, and fruit] Raschety za kartofel', ovoshchi i plody. Moskva, Gos.izd-vo torg.lit-ry, 1961. 133 p. (MIRA 14:12)

(Agricultural prices)

P.T.A. DOBROMIESKI, W. Mech. & Elec. Engineering

629.123.2

699

Dobromierski W. Geometrical Similarity in Ship Design.

„Podobieństwo geometryczne w pierwszym przybliżeniu projektowania okrętów". Technika Morza i Wybrzeża. No. 8—9, 1950, pp. 224—231, 3 figs.

An attempt to extend the range of applicability of geometrical similarity to the problems arising in the determination of the main dimensions and displacement of merchant ships at a given speed and dead weight. By expressing each of the weight groups of the ship as a variable function λ (of the length scale of the parent ship, and the ship designed), it is possible to arrive at an „equation of weights", which, when solved, gives the scale for converting all dimensions of the parent ship to the corresponding dimensions of the ship designed. A notable feature of this method is the speed with which it is possible to arrive at the first approximation applying to the ship which is being designed, that is: main dimensions, geometrical and hydrostatic features of its shape, displacement, and individual weight groups, as well as hydrodynamic features, these latter within a degree of accuracy equal to that of tests carried out with the model

P.T.A. DOBROMIRSKI, W

Mech. + Elec. Engineering

629.12.073

638

Dobromirski W., Wiśniewski J. Computation of Righting-Arm Curves for the Transverse Stability of Ships by Using Longitudinal Hull Sections.

„Obliczenie krzywej ramion momentu stateczności poprzecznej statków przy zastosowaniu wzdłużnicowych przekrojów kadłuba". Technika Morza i Wybrzeża. No. 11. 1950. pp 316—324. 10 figs. 4 tabs.

This article, while substantiating the theoretical methods drawn up by the Chair of Ship Designing of the Gdańsk Polytechnic on the basis of principles quoted by Euler (1903), is at the same time an attempt at systematization of the definitions and terms used in calculations of geometrical characteristics of ships' hulls. The parts dealing with the properties of the integral curves of longitudinal sections are intended to determine the anticipated course of these curves in a manner making it possible to obtain a degree of accuracy sufficient for computation purposes of diagrams of the curves, with a minimum number of tedious planimeter, or integrator measurings.

DOBROMIRSKI, W

PTA

4

1433 629.12.011.073

Dobromirski W., Wiśniewski J. Computation of Righting Arm Curves of the Transverse Moment of Stability of Ships by Means of Longitudinal Hull Sections. Part 2.

„Obliczenie krzywej ramion momentu stateczności poprzecznej statków przy zastosowaniu wzdłużnicowych przekrojów kadłuba" Technika Morza i Wybrzeża. No. 1, 1951, pp. 19—34, 9 figs.

Description of functions necessary for the purpose of computing righting arm curves of the transverse moment of stability of ships by means of the method outlined. The computations are taken to a point at which the results arrived at will make possible, when applying the hypotheses given in sections 1 and 2 of Part 1 of this publication, a graphic transposition of the delineation of functions

$\xi(V,\varphi)$ and $\eta(V,\varphi)$ — being coordinates of the centre of buoyancy in an axial system. The planimeter as an instrument for carrying out the requisite approximate integrations. The use of integrators. Comparison of the method proposed with methods hitherto in use, together with a discussion on the usefulness of application of this new method.

DOBROMIRSKI, Walerian, mgr inz.; ZYLICZ, Andrzej, mgr inz.

Development of inland navigation craft. Bud okretowe Warszawa 9 no.4:129-134 '64.

1. Office for Design and Studies of River Craft, Wroclaw.

DOBROMYL'SKIY, Prof. F.I.

USSR/Medicine - Citral Nov/Dec 48
Medicine - Tuberculosis

"Theoretical Basis for the Use of Citral in Clinics for Laryngeal and Pulmonary Tuberculosis," Prof F. I. Dobromyl'skiy, Vitamin Lab, Cen Ophthalmol Inst imeni Gel'mgol'ts, 3 pp

"Vest Oto-rino-laringol" No 6

It is clear from clinical observations that disturbance of histamine metabolism and dysfunction of the vegetative system are very marked in laryngeal and pulmonary tuberculosis. This is the reason citral is used as an antihistaminic, anti-

60/49778

USSR/Medicine - Citral (Contd) Nov/Dec 48

and analgesic agent. It is, however, supplementary, not an independent method of treatment.

60/49778

DOBROMYL'SKIY, F. I.

"Errors and Defects in USSR Otorhinolaryngological Literature," Vest. Oto-rino-laringol., No. 4, 1948.

DOBROMYL'SKIY, F. I.;PROF PA 46/49T79

USSR/Medicine - Tuberculosis, Therapy Mar 49
Medicine - Tuberculosis, Pulmonary

"Utilization of Citral in Cases of Tuberculosis of the Upper Respiratory Tract and the Oral Cavity," Prof F. I. Dobromyl'skiy, L. R. Shapiro, Moscow, 3/4 p

"Sov Med" No 3

Describes analgesic effect of citral. It also has antiphlogistic properties. Describes its successful use in a case of pulmonary tuberculosis.

46/49T79

DOBROMYL'SKIY, F. I.

"Review of A. N. Voznesenskiy's 'Tuberculosis of Upper Respiratory Tracts, Trachea, Bronchial Tubes, Mouth and Oesophagus," Sov. Med. No. 2, 1949

DOBROMYL'SKIY, F. I.

Ear - Diseases

Transactions of the Second Congress of Ukrainian Otolaryngologists. Reviewed by F. I. Dobromyl'skiy. Vest.oto-rin. 14 no. 1, 1952.

9. Monthly List of Russian Accessions, Library of Congress, April 1953, Uncl.

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NOSE, Accessory sinuses of - Diseases

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Abstract : In 74 of 96 school children examined of emmetrops and in 226 of 291 of ametrops the presence was established of binocular vision. A correlation between the condition of binocular functions and the type of refraction was not noted; clear strabismus analogous to the divergences can be met both with emmetropia and with any form of ametropia. The type of strabismus certainly corresponds to the type of ametropia. The correlation between the degree of ametropia and the number of the angle of the strabismus also

Card 1/2

* Iz kafedry glaznykh bolezney Kishinevskogo meditsinskogo instituta