MAKEDONOV, A.V.; RODNYY, N.I.

Composition of lower-permian sediment formations of the Pechora coal basin [with summary in English]. Geokhimiia AN SSSR no.6: 538-552 '57. (MIRA 11:2)

1. Trest Pechorauglegeologiya, g. Vorkuta.
(Geology, Stratigraphic)

RODNYKH, ALEKSANDR ALEKSIEVICH.

Istoriia vozdukhoplavaniia i letaniia v Rossii. [The history of aeronavigation and flying in Russia]. S.-Peterburg, Tipografiia t-va "Gramotnost'," 1911-12. 2 v. illus. (incl. ports., facsims.). DLC: TL526.R9R57

Kratkii ocherk po istorii russkago vozdukhoplavaniia. [Short survey of the history of Russian aeronavigation]. 2. izd. S.-Peterburg, Gramotnost, 1910? "Trudy A.A. Rodnykh": p. [14]-16. DLC: TL526.R9R58

SO: Soviet Transportation and Communications, A Bibliography, Library of Congress, Reference Department, Washington, 1952, Unclassified.

Rodnykh, Aleksandr Alekseyvich

RODNYKH, ALEKSANDR ALEKSEEVICH.

Ptitsekrylye mashiny; ornitoptery i ortoptery; ikh opisanie, istoriia i primenenie v zhizni. S 29 risunkami. Leningrad, Izd. "Krasnoi gazety," 1929. 46 p., illus. (Populiarnaia biblioteka zhurnala "Nauka i tekhnika," vyp. 86)

Title tr.: Mechanical birds; ornithopters and orthopters; their description, history and utilization.

TL717.R6

SO: Aeronautical Sciences and Aviation in the Soviet Union, Library of Congress, 1955.

RODOLEC, V. M.

"E.Benes, Enemy of our Nations." p. 391. (PRIRODA A SPOLOCNOST. Vol. (2), No. 7, 1953; Praha, Czech.)

So: Monthly List of East European Accessions, (EEAL), LC, Vol. 4, No. 4, April 1955, Uncl..

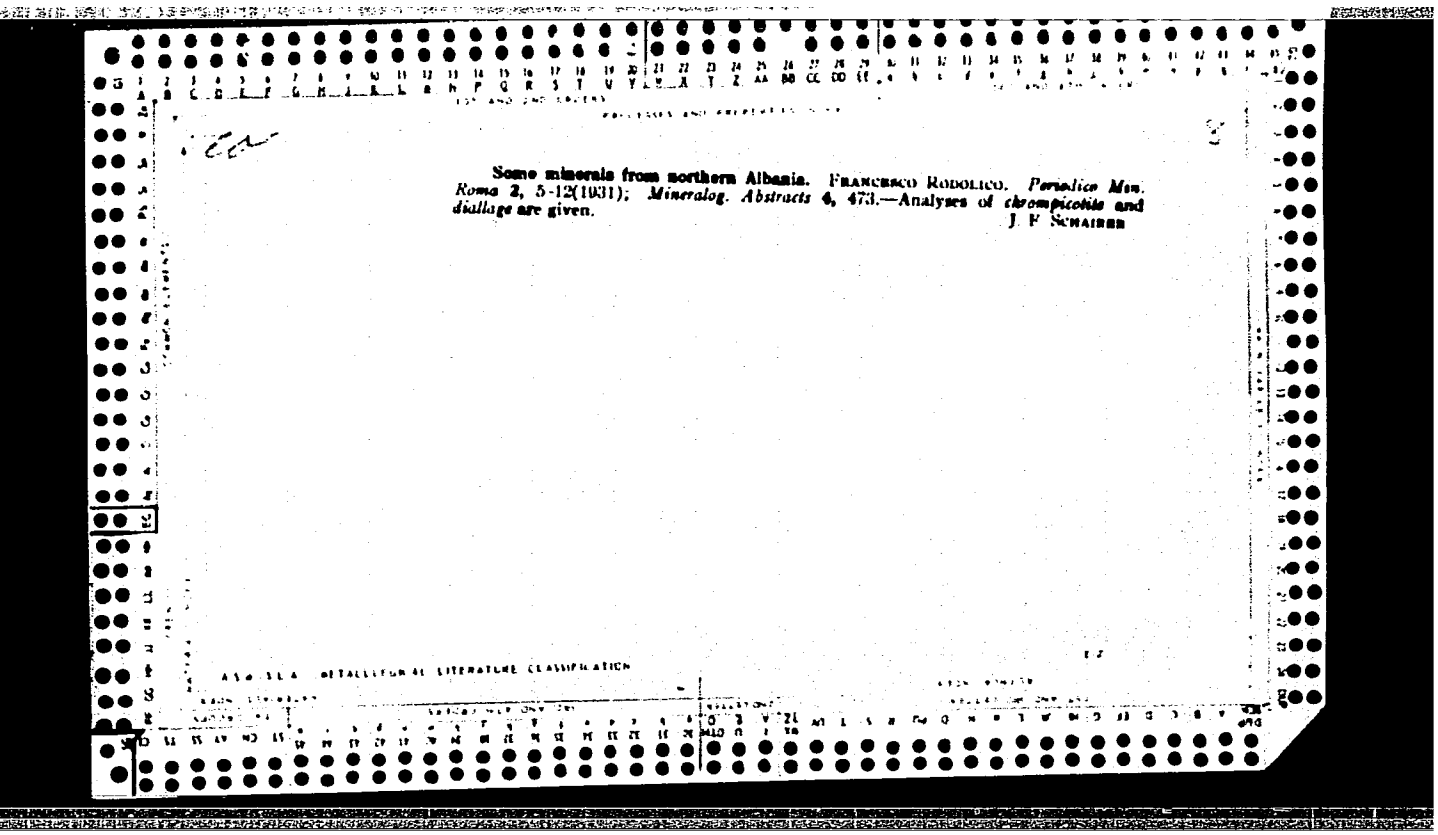
RODOLF, Kos, dr.

Recent recommendations for tracheostomy. Orv. hetil. 103 no.34:1585-1590 26 Ag '62.

(TRACHEA surg)

RODOLFI, Zvonimir, strojar

Lubrication of steam turbines. Pt.2. Pogon 4 no.7/8:102-108 Jl/Ag'63.



Some minerals from northern Albania. FRANCESCO RODOLICO. *Periodico Min. Roma* **2**, 5-12(1931); *Mineralog. Abstracts* **4**, 473.—Analyses of *chrompicotite* and *diallage* are given.
J. F. SCHAIRER

RODOMAKIN, A.F.

Distribution of soil erosion in Aktyubinsk Province. Trudy Inst. pochv. AN Kazakh. SSR 15:208-219 '63. (MIRA 16:12)

RODOMAKIN, A.F.

Classifying and mapping deflated soils. Pochvovedenie no.2:86-90 F '63. (MIRA 16:3)

1. Institut pochvovedeniya AN KazSSR.
(Pavlodar Province--Soils) (Pavlodar Province--Erosion)

DAVIDOVICH, V.G., otv.red.; KHOREV, B.S., otv.red.; RODOMAN, B.B., red.; KONOVALYUK, I.K., mladshiy red.; MAL'CHEVSKIY, G.N., red.kart; GLEYKH, D.A., tekhn.red.

[Satellite cities] Goroda - sputniki; sbornik statei. Moskva, Gos.izd-vo geogr.lit-ry, 1961. 193 p.

(MIRA 15:2)

(Cities and towns)

RODOMAN, B.B.

Logical and cartographic forms of regionalization and problems of their study. Izv. AN SSSR. Ser. geog. no.4:113-126 Jl-Ag '65.
(MIRA 18:8)

3(2) SOV/10-59-4-16/29

AUTHOR: Rodoman, B.B.

TITLE: On the Elementary, Synthetic, and Complex Maps

PERIODICAL: Izvestiya Akademii nauk SSSR, Seriya geograficheskaya, 1959, Nr 4, pp 119-125 (USSR)

ABSTRACT: The article discusses elementary (analytical), synthetic, and complex maps in a highly specialized cartographic language by giving elaborate descriptions of each group. It also cites the following authors of cartographical treatises: D.L. Armand, N.N. Baranskiy, A.M. Komkov, A.I. Preobrazhenskiy, B.B. Rodoman, K.A. Salishchev, A.V. Gedymin, and A.I. Spiridonov. In conclusion, the article points to the fact that the most difficult maps to draw are complex maps. As for synthetic maps, their authors must not necessarily be cartographers, but specialists in such fields as physical geography, economic geography, geomorphology, etc. In this case, technical difficulties give way to

Card 1/2

On the Elementary, Synthetic, and Complex Maps

those arising from methodology which rest on problems of division and classification into various districts. Maps made by the method of composition and synthesis transform them from a descriptive agent into that of generalization. Therefore, complex and synthetic maps are a special tool in certain stages of the purposeful geographical research. There are 11 Soviet references.

MARKHININ, Yevgeniy Konstantinovich; RODOMAN, B.B., red.;
KIR'YANOVA, Z.V., mlad. red.

[Plutonic chain] TSep' Plutona. Moskva, Mysl', 1965.
229 p. (MIRA 18:3)

DANILOV, Natal'ya Anatol'yevna; KEMMERIKH, Aleksandr Oskarovich; RODOMAN, B.B., red.; KIR'YANOVA, Z.V., mlad. red.

[Seasons of the year] Vremena goda. Moskva, Mysl', 1964. 172 p. (MIRA 18:1)

ARMAND, David L'vovich; RODOMAN, B.B., red.; KIR'YANOVA, Z.V., mlad. red.

[For us and our grandchildren] Nam i vnukam. Moskva, Mysl', 1964. 180 p. (MIRA 17:12)

SAUSHKIN, Yulian Glebovich; RODOMAN, B.B., red.

[Moscow; geographical characteristics] Moskva; geograficheskaia kharakteristika. Moskva, Mysl', 1964. 238 p.
(MIRA 17:9)

GALAKTIONOV, Ivan Innokent'yevich; RODOMAN, B.B., red.; VILENSKAYA, E.N., tekhn.red.

[Buryat-Mongolia; nature sketches] Buriatiia; ocherk prirody. Moskva, Gos.izd-vo geogr.lit-ry, 1959. 90 p. (MIRA 12:7)
(Buryat-Mongolia--Geography)

KOZLOV, Innokentiy Varfolomeyevich; RODOMAN, B.B., red.; KONOVALYUK, I.K., mladshiy red.; MAL'CHEVSKIY, G.N., red.kart; KOSHELEVA, S.M., tekhn.red.

[Soviet subtropics] Sovetskie subtropiki. Moskva, Gos.izd-vo geogr.lit-ry, 1959. 125 p. (MIRA 12:7)
(Russia, Southern--Description and travel)

SOV/12-91-2-7/21

3(5)

AUTHOR: Rodoman, B.B.

TITLE: About the Concepts of "Mainland", "Continent" and "Part of the World"

PERIODICAL: Izvestiya Vsesoyuznogo geograficheskogo obshchestva, 1959, Nr 2, pp 159 - 160 (USSR)

ABSTRACT: The author describes the "Mainland" as a geological and geomorphical conception. It has an underwater surface as well as dry land, parts of which are islands. The mainlands are separated from one another by the oceanic cavities. There are 6 of them: Eurasia, Africa, North America, South America, Australia and Antarctica. The "Continent" is a solid, continuous mass of dry land. There are 4 of them: The Old World (Eurasia and Africa), America, Australia and Antarctica. None of the islands are included in any of the continents. "Parts of the World" is merely a historical conception. The concept com-

Card 1/2

About the Concepts of "Mainland", "Continent" and "Part of the World"

prises the whole of the dry land with the islands apportioned to them. There are 6 "Parts of the World": Europe, Asia, Africa, America, Australia and Antarctica. Possibly a 7th part, Oceania, which is an isolated group of islands in the Pacific can be added to them. The concept "Parts of the World" is used for administrative, educational and many other purposes, including the traditional system of presenting atlases, but there are, according to the author, many inconsistencies in this system. There are 2 Soviet references.

ZABELIN, Igor' Mikhaylovich; RODOMAN, B.B., red.; KONOVALYUK, I.K., mladshiy red.; KOSHELEVA, S.M., tekhn. red.

[Physical geography and the science of the future] Fizicheskaia geografiia i nauka budushchego. Moskva, Geografgiz, 1963. 111 p. (MIRA 16:11)
(Physical geography)

ZAKHAROVA,T.K.; TUGARINOV,Dmitriy Nikolayevich,; RODOMAN, B.B.,red.;
NOGINA, N.I., tekhn. red.

[Tajik S.S.R.] Tadzhikskaia SSR. Moskva, Gos.izd-vo geogr. lit-ry,
1958. 63 p. (MIRA 11:12)
(Tajikistan)

GVOZDETSKIY, Nikolay Andreyevich; DOBRONRAVOVA, K.O., redaktor; RODOMAN, B.B., redaktor; MAL'CHEVSKIY, G.N., redaktor kart; GLEYKH, D.A., tekhnicheskiy redaktor

[Forty years of exploration and discover] Sorok let issledovanii i otkrytii. Moskva, Gos. izd-vo geogr. lit-ry, 1957. 206 p. (MLRA 10:4)
(Russia--Discovery and exploration)

NARZIKULOV, I.K., redaktor; RYAZANTSEV, S.N., redaktor; RODOMAN, B.B., redaktor; NOGINA, N.I., tekhnicheskiy redaktor

[Tajik S.S.R.; economic geography] Tadzhikskaia SSR; ekonomiko-geograficheskaia kharakteristika. Pod red. I.K.Narzikulova i S.N.Riazantseva. Moskva, Gos. izd-vo geogr. lit-ry, 1956. 226 p. (MLRA 10:2)

1. Akademiya nauk Tadzhikskoy SSR, Stalinabad.
(Tajikistan--Economic geography)

NIKOL'SKIY, Igor' Vladimirovich; RODOMAN, B.B., red.; BELICHENKO, R.K., mladshiy red.; MAL'CHEVSKIY, G.N., red.kart; GLEYKH, D.A., tekhn.red.

[Geography of transportation in the U.S.S.R.] Geografiia transporta SSSR. Moskva, Gos.izd-vo geogr.lit-ry, 1960. 406 p. (MIRA 13:11)
(Transportation) (Russia--Economic geography)

RODOMAN, B.B.

Methods of division into individual regions and regional types and their representation on maps. Vop.geog. no.39:28-69 '56. (MLRA 9:11)

(Physical geography) (Cartography)

RODOMAN, N., gornyy inzhener

Mine workers should have engineering knowledge. Mast.ugl. 9 no.6:20-21 Je '60. (MIRA 13:7)

1. Nachal'nik uchastka shakhty im. Il'icha, Luganskoy oblasti.
(Lugansk Province--Coal miners)

RYABINSKIY, V.S., kand.med.nauk; RODOMAN, V.Ye.

Simple test for the determination of the degree of bacteriuria. Urol. i nefr. no.2:14-19 '65. (MIRA 19:1)

1. Urologicheskaya klinika (zav.- chlen-korrespondent AMN SSSR prof.A.Ya.Pytel') II Moskovskogo meditsinskogo instituta imeni N.I.Pirogova.

YUGOSLAVIA

PITELJ, Anton; RJABINSKIJ, Vladimir and RODONAN, Vladimir; Urology Clinic of the Second Moscow Medical Institute "Nikolaj I. Pirogov" [original affiliation not shown], Director Prof Anton PITELJ, Moscow, U.S.S.R.

"The Use of Triphenyltetrazoliumchloride Test in the Determination of Bacteriuria."

Belgrade, Srpski Arkhiv za Tselokupno Lekarstvo, Vol 93, No 4, Apr 1965; pp 345-351.

Abstract [English summary modified]: Use of the triphenyltetrazolium-chloride test for the detection of urinary tract infection in 407 tests on 197 patients, compared with urine culture results revealed that 9 hours' incubation prior to read-out then another supplemental read-out 6 hours later is more valid if the threshold of urinary tract infection is considered to be 100,000 microbes per ml. Data also on use of the test in 149 obstetric and gynecologic, and 89 strictly gynecologic patients. Chemical structure of reagent, 7 Soviet and 19 Western references; manuscript received 6 May 65 [Sic].

1/1

Rodomanchenko, O.

AUTHOR: Rodomanchenko, O.

107-9-31/53

TITLE: Manufacturing of Loop Vibrators for TV-Antennas (Izgotovleniye petlevykh vibratorov dlya televizionnykh antenn)

PERIODICAL: Radio, 1957, # 9, p 42 (USSR)

ABSTRACT: When manufacturing loop vibrators, the vibrator tube is filled up with sand and the bending place is heated by a spiritus flame. The author suggests another method using the coil from an electric stove, described in the article, which will eliminate the possibility of overheating the tube and allow to obtain its uniform and correct bending.

AVAILABLE: Library of Congress

Card 1/1

D'YAKOV, D.D., kandidat tekhnicheskikh nauk, redaktor [deceased]; ZADOROZHNYY, A.I., redaktor; RODOMANOV, P.S., redaktor; TIKHONOV, S.N., redaktor; KONOVALOVA, Ye.I., tekhnicheskiy redaktor

[Pulse radionavigation aids. Translated from the English] Impul'snye radionavigatsionnye ustroistva. Perevod s angliiskogo. Pod red. D.D. D'iakova. Moskva, Voen. izd-vo Ministerstva obor. SSSR, 1955. 487 p. (MIRA 10:1)

1. Massachusetts Institute of Technology. Radiation Laboratory. (Loran) (Radar)

RODONAYA, T.E.

Studying the biology of Paramphistomum skrjabini [in Georgian with summary in Russian]. Trudy Inst. zool. AN Gruz. SSR 17:3-18 '60.
(MIRA 13:11)

(Georgia--Trematoda) (Parasites--Cattle)

RODONAYA, T.E.

Helminths of wild mammals of the Lagodekhi State Preserve [in Georgian with summary in Russian]. Trudy Inst. zool. AN Azerb. SSR 14:147-187 '56.
(Lagodekhi State Preserve--Worms, Intestinal and parasitic)
(Parasites--Mammals) (MIRA 9:9)

RODONAYA, T.E.

Some data on the interrelationship of the miracidia of Paramphistomum skrjabini with the environment. Soob. AN Gruz.SSR 20 no.5:583-585 My '58. (MIRA 11:10)

(Trematoda) (Larvae--Worms)

KURASHVILI, B.; RODONAYA, T.

Activities of the Georgian Society of Helminthologists during 1963-1964. Med. parazit. i parazit. bol. 34 no.4:501 Jl-Ag '65. (MIRA 18:12)

RODONAYA, T.E.; KURASHVILI, B.Ye.

Distribution of species of the genus Diphyllobothrium in Georgia. Soob. AN Gruz. SSR 27 no.6:763-764 D '61.
(MIRA 15:2)

1. Institut zoologii AN Gruzinskoy SSR, Tbilisi. Predstavleno chlenom-korrespondentom AN Gruzinskoy SSR L.P.Kalandadze.
(Georgia—Tapeworms)

MOSELIANI, D.V. ; RODONAYA, T.E.

Material on the pathomorphological changes in the lungs during protostrongyliasis in hares. Soob.AN Gruz.SSR 23 no.6:719-729 D '59. (MIRA 13:6)

1. Institut zoologii AN GruzSSR, Tbilisi. Predstavleno chlenom-korrespondentom Akademii L.P.Kalandadze.
(Lungworms) (Hares--Disease and pests)

RODONAYA, T.E.; YENUKIDZE, G.P.

Some data on trichinosis in wild mammals in Georgia. Soob. AN Gruz. SSR 22 no.3:351-353 Mr '59. (MIRA 12:8)

1.AN GruzSSR, Institut zoologii, Tbilisi. Predstavleno akademikom N.N. Ketskhoveli.
(Georgia--Trichina and trichinosis) (Parasites--Mammals)

RODONAYA, T.E.

Data on the study of helminths of the silver fox in the Bakuriani State Fur Farm. Soob.AN Gruz.SSR 8 no.9/10:661-664 '47.(MIRA 9:7)

1.Akademiya nauk Gruzinskoy SSR, Zoologicheskiy institut, Tbilisi. Predstavleno deystvitel'nym chlenom Akademii F.A.Zaytsevym.
(Bakuriani--Worms, Intestinal and parasitic)(Parasites--Foxes)

KURASHVILI, B.Ye.; RODONAYA, T.E.

Study of the geographic distribution of fascioliasis and dicroceliasis in farm animals of Georgia. [in Georgian with summary in Russian]. Trudy Zool.inst.AN Gruz.SSR 13:223-241 '54. (MLRA 8:8)
(Georgia--Parasites) (Parasites--Domestic animals)

MOSELIANI D.V.; RODONAYA, T.E.

Study of muellerlosis in domestic and wild animals of Georgia.
Soob.AN Gruz.SSR 28 no.1:79-80 Ja '62. (MIRA 15:4)

1. Akademiya nauk Gruzinskoy SSR, Institut zoologii. Predstavlenc chlenom-korrespondentom Akademii L.P.Kalandadze.
(Georgia--Nematoda) (Parasites--Sheep) (Parasites--Goats)

RODONAYA, T.E.

Interrelationship between Trichinella spiralis (Owen, 1835) and Alveococcus multilocularis (Leuckart, 1863) Abuladze, 1960. Soob. AN Gruz. SSR 40 no.2:437-440 N '65.
(MIRA 19:1)

1. Institut zoologii AN GruzSSR. Submitted June 22, 1965.

RODONAYA, T.E.

Materials on the study of helminths in wild ruminants in Georgia. Soob. AN Gruz. SSR 28 no.6:709-716 Je '62. (MIRA 15:7)

1. AN Gruzinskoy SSR, Institut zoologii, Tbilisi. Predstavleno chlenom-korrespondentom AN Gruzinskoy SSR L.P.Kalandadze.
(Georgia--Parasites--Ruminantia)
(Worms, Intestinal and parasitic)

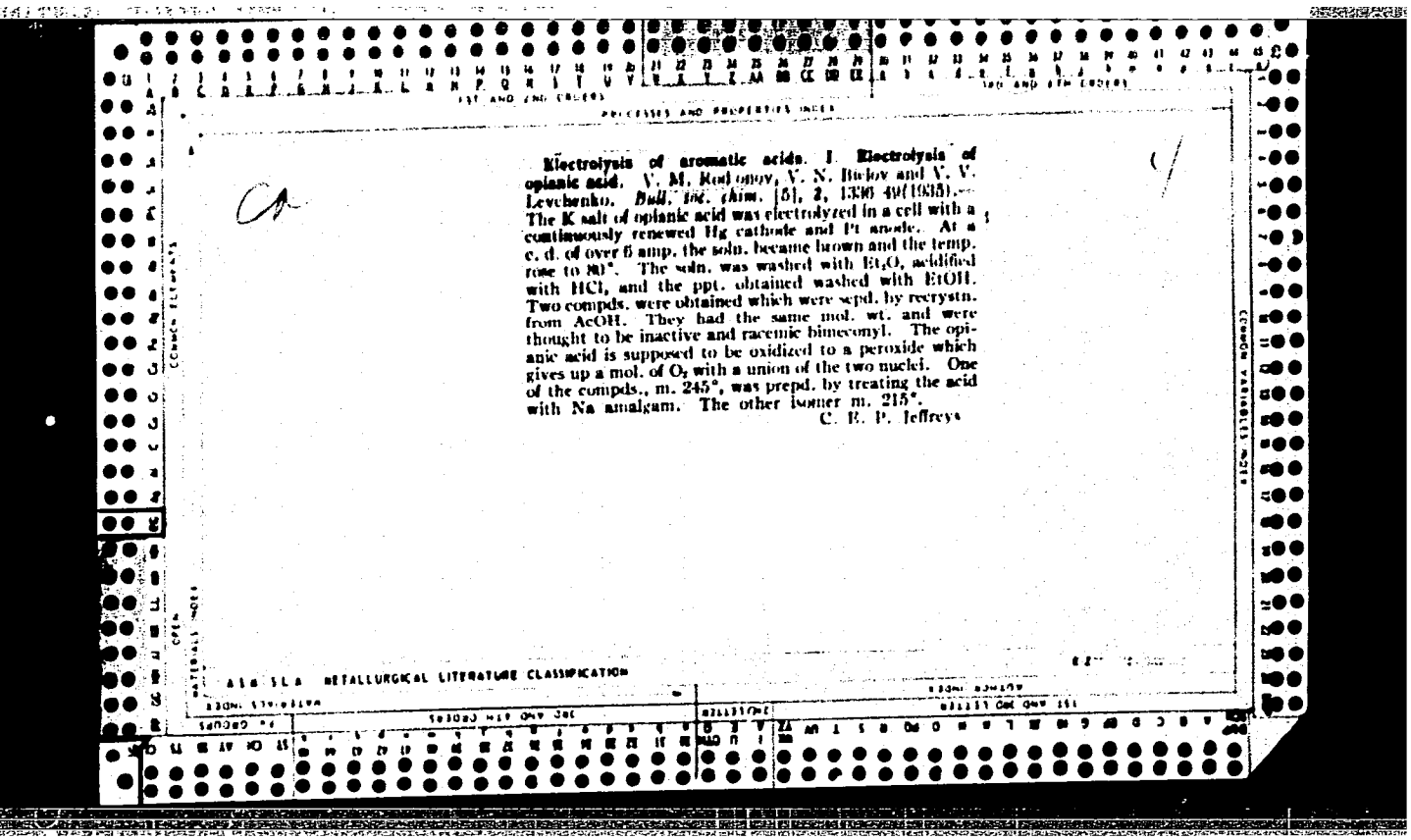
RODONAYA, T.E.

KURASHVILI, B.Ye.; RODONAYA, T.E.; KOIAVA, L.I.

Study of helminthofauna parasitic on fishes of certain bodies of water of the interior of Georgia [in Georgian with summary in Russian] Trudy Zool.inst. AN Gruz. SSR 10:93-120 '51. (MLRA 7:7)
(Parasites--Fishes) (Georgia--Worms, Intestinal and parasitic) (Worms, Intestinal and parasitic--Georgia)

RODONAYA, T.E.

Contributions to the study of the helminthofauna of predatory mammals of Georgia [in Georgian with summary in Russian]. Trudy Zool.inst. AN Grus.SSR 10:121-144 '51. (MLRA 7:7)
(Georgia--Worms, Intestinal and parasitic)(Worms, Intestinal and parasitic--Georgia) (Parasites--Carnivora)



Electrolysis of aromatic acids. I. Electrolysis of opianic acid. V. M. Rodionov, V. N. Bielov and V. V. Levchenko. *Bull. inst. chim.* [5], 2, 1330-49(1935).—The K salt of opianic acid was electrolyzed in a cell with a continuously renewed Hg cathode and Pt anode. At a c. d. of over 5 amp. the soln. became brown and the temp. rose to 80°. The soln. was washed with Et_2O, acidified with HCl, and the ppt. obtained washed with EtOH. Two compds. were obtained which were sepd. by recrystn. from AcOH. They had the same mol. wt. and were thought to be inactive and racemic bimecomyl. The opianic acid is supposed to be oxidized to a peroxide which gives up a mol. of O_2 with a union of the two nuclei. One of the compds., m. 245°, was prepd. by treating the acid with Na amalgam. The other isomer m. 215°.

C. R. P. Jeffreys

RODONYI, J. Pal

A Hungarian invention to insure the eveness of the depth of plowing.
Elet tud 16 no.49:1563 3 D '61.

RODONYI, Karoly

The 1964 railroad plan on the agenda of the central committee of trade unions. Magy vasut 8 no.3:2-3 3 F'64.

1. Miniszterhelyettes; MAV vezerigazgato.

VISI, Ferenc; RODONYI, Karoly

The establishment of the joint freight car service has been advantageous to all the Council of Mutual Economic Assistance countries. Magy vasut 8 no.2: 1 16 Ja'64.

1. MAV vezerigazgato (for Rodonyi).

RODONYI, Karoly

It is necessary to improve coordination in freight transportation. Kozleked kozl 20 no.28:463 12 Jl '64.

1. Deputy Minister and Vice-President, Central Council of Transportation, Budapest.

SZABO, Antal; RODONYI, Karoly

An appeal! Magy vasut 8 no.5:1 2 Mr '64.

1. Vasutasok Szakszervezete fotitkara (for Szabo).
2. Miniszterhelyettes; Magyar Allamvasutak vezerigazgatoja (for Rodonyi).

RODONYI, Karoly

There is a possibility for fulfilling the 1963 plans.
Magy vasut 7 no.13:2 2 Jl '63.

1. MAV vezerigazgatohelyettes.

RODONYI, Karoly

Readjustment of monthly pays for railroad workers. Magy vasut 8 no.2:2 16 Ja '64.

Service system of railroad employees. 3

1. Miniszterhelyettes; MAV vezerigazgato.

CSANADI, Gyorgy, dr.; RODONYI, Karoly

Conference on wage system at the General Directorate of the Hungarian State Railways. Vasut 13 no.11:1-2 N'63.

1. Kozlekedes - es postaugyi miniszter elso helyettese; MAV vezerigazgato (for Csanadi). 2. MAV vezerigazgatohelyettes (for Rodonyi).

BULGARIA/Microbiology - Microorganisms Pathogenic to Humans and Animals F-3

Abs Jour: Ref Zhur - Biol, No 18, 1958, 81566

Author : Rodopska, S., Tsankova, P., Gylybova, V.

Inst : Bulgarian Scient.-Res. Institute of Epidemiol. and Microbiol.

Title : Experimental Study of Immunizing Properties of Minimal Doses of BCG Vaccine.

Orig Pub: Tr. Respubl. n.-i. in-t epidemiol. i mikrobiol., 1956, 3, 115-124

Abstract: No abstract.

Card 1/1 41

RODOPSKA, S.G., d-r; MANOLOV, D.; TENCHEV, G.; STOYANOV, D. [Stoianov, D.]

Reimmunization by massive does of BCG. Trudy epidemiol mikrobiol 8:49-53 '61 [publ. '62].

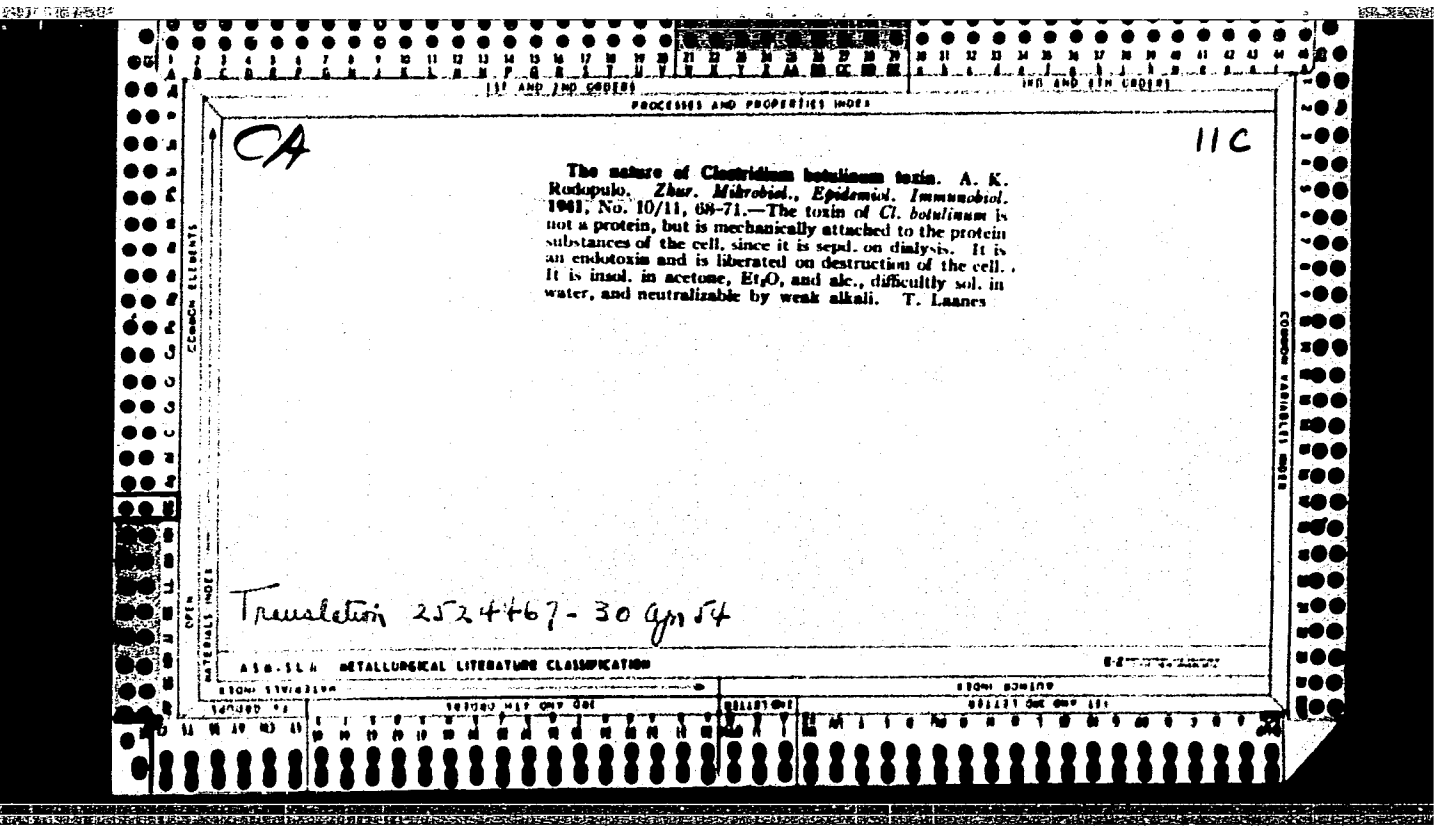
1. Chlen Redaktsionnoy kollegii, "Trudy Nauchno-issledovatel'skogo instituta epidemiologii i mikrobiologii" (for Rodopska).

RODOPSKI, G.

Prof. Lazarov, Bulgarian airplane constructor. Nauka i tekh mladezh no.3:23-24 Mr '57.

SEMASHKO, Nikolay Aleksandrovich; ASHURKOV, Ye.D., redaktor; BARSUKOV, M.I., redaktor; VINOGRADOV, N.A., redaktor; GORFIN, D.V., redaktor; PETROV, B.D., redaktor; RODOV, Ya.O., redaktor; SLONIMSKAYA, N.A., redaktor; GABERLAND, M.I., tekhnicheskiy redaktor

[Selected works] Izbrannye proizvedeniia. Red. kollegiia: E.D. Ashurkov i dr. Moskva, Gos. izd-vo med. lit-ry, 1954. 337 p. (MLRA 7:10)
(Public health)

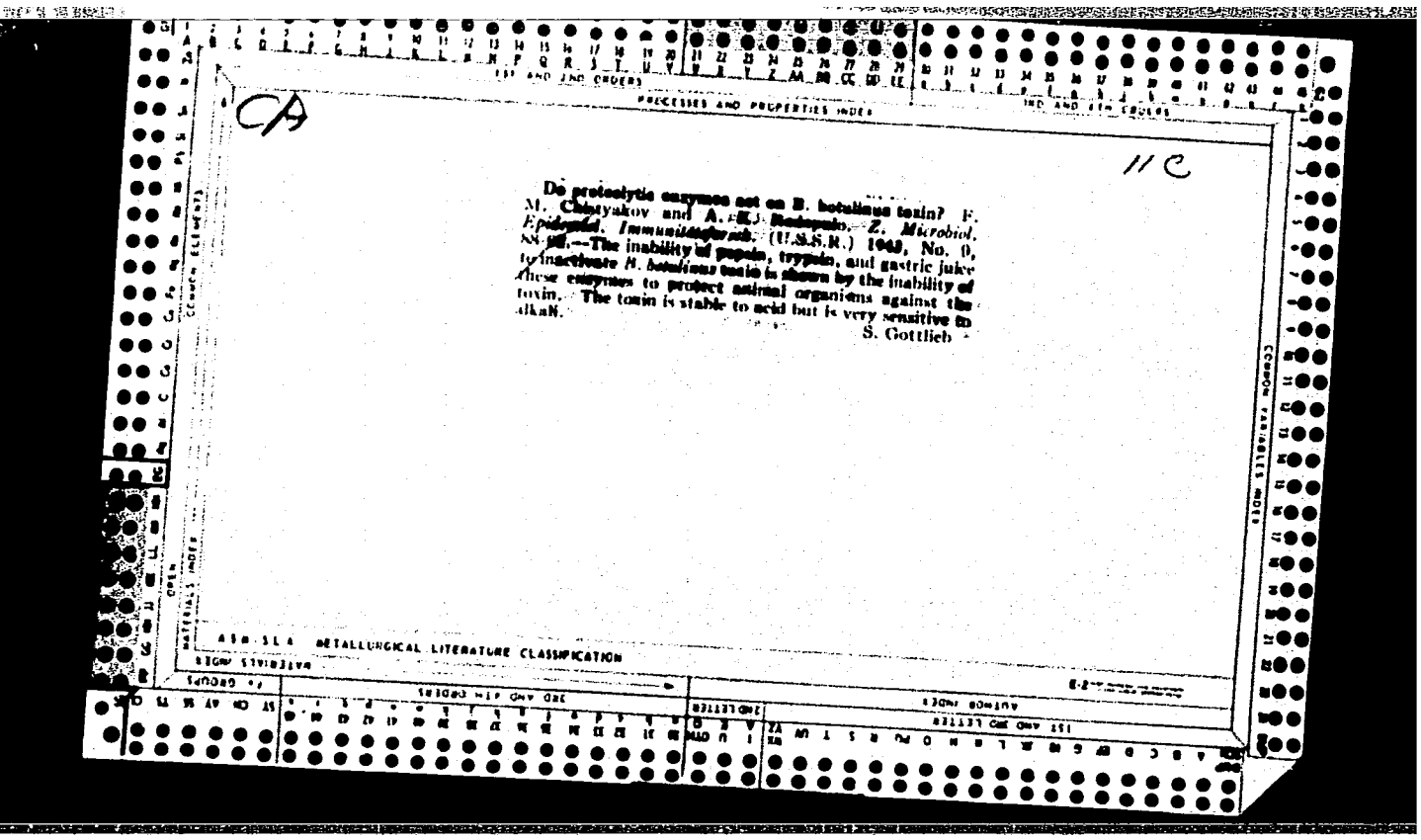


CA

11C

The nature of Clostridium botulinum toxin. A. K. Rodopulo. *Zhur. Mikrobiol., Epidemiol. Immunobiol.* 1961, No. 10/11, 68–71.—The toxin of *Cl. botulinum* is not a protein, but is mechanically attached to the protein substances of the cell, since it is sepd. on dialysis. It is an endotoxin and is liberated on destruction of the cell. It is insol. in acetone, Et_2O, and alc., difficultly sol. in water, and neutralizable by weak alkali. T. Laanes

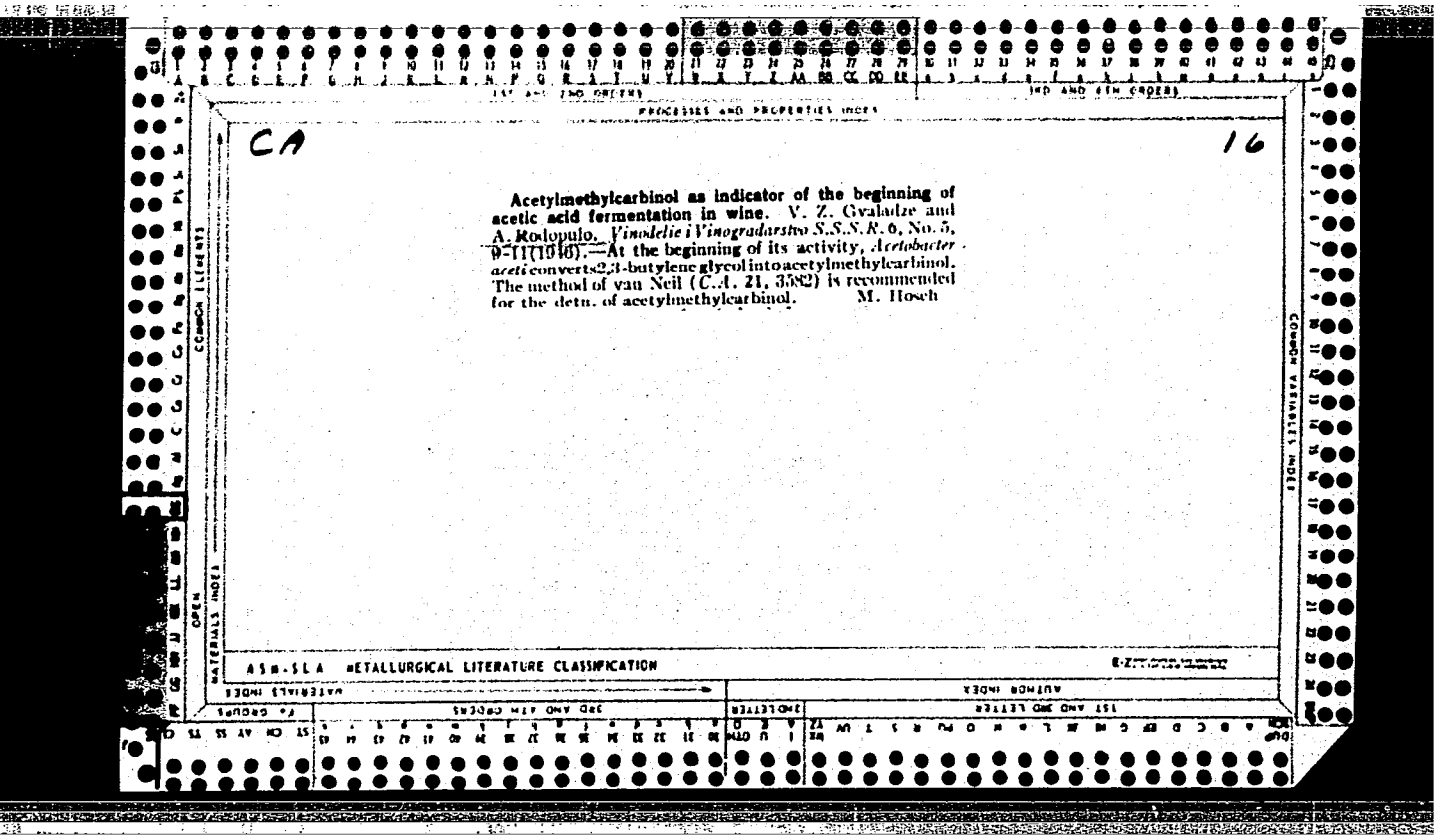
Translation 252467-30 Jan 64



RODOPULO, A.K.

Oxidizing enzymes of must and wine. A. K. Rodopulo. *Vinodelie i Vinogradarstvo S.S.S.R.* 8, No. ~~11, 6-9(1948)~~; cf. *C.A.* 48, 12368a.—Catalase (I), oxidase (II), peroxidase (III), and dehydrogenase (IV) are present in grape must. The activity of IV is increased by addn. of succinic acid (H-donor) to the must or wine. During the alc. fermentation the activities of I, II, and III are greatly decreased, while the activity of IV is slightly increased, probably due to the formation of H-donating substances. In fresh wine the catalase activity is absent. Owing to only slight activities of II and III the oxidative processes in wine are very slow.

E. Wierbicki



CA 16

Acetylmethylcarbinol as indicator of the beginning of acetic acid fermentation in wine. V. Z. Gvaladze and A. Kolopulo. *Vinodelie i Vinogradarstvo S.S.S.R.* 6, No. 5, 9–11(1946).—At the beginning of its activity, *Acetobacter aceti* converts 2,3-butylene glycol into acetylmethylcarbinol. The method of van Neil (*C.A.* 21, 3582) is recommended for the detn. of acetylmethylcarbinol. M. Hosch

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

RODOPULO, A. K.

Oxidizing enzymes of champagne varieties of grapes and musts. A. K. Rodopulo (All-Union Sci. Research Inst. Vinicult. and Viticult., "Magarach," Yalta, Crimea.) *Biokhim. Vinodeliya, Akad. Nauk S.S.S.R., Shornik* 3, 43-62(1950).—The activity of polyphenol oxidase (I), ascorbic acid oxidase, and catalase (but not of cytochrome oxidase) was demonstrated in grapes and wines; the main oxidizing system was I. I consists of a sol. and insol. part, the insol. part being more active. During the fermentation the activity of the enzymes was decreased and after 6 days it vanished completely. A small part of I is adsorbed by the yeasts. I is not present in wine. The oxidizing processes in wine seem to occur through quinones (10 mg. quinones/l. was found in a fresh wine); a participation of quinones in the oxidizing processes in wine is discussed. E. W.

Rodopulo, A.K.

Clarification of wine by askangel. A. K. Rodopulo, F. P. Kiladze, and V. P. Gvelesiani (Transcaucasian Branch, Inst. "Magarach"). *Vinodelie i Vinogradarstvo S.S.S.R.* 10, No. 4, 34-6(1950).—Small pieces of true bentonite, askangel (I) (particles sized from 0.01 to 0.0001 m.), were kept in water (in the ratio of 1:5) for several days. The swollen mass was dild. with a wine to a bentonite concn. of 5%; at this concn. the nonsol. particles were pptd. and removed. The alky. of 7 (100 g. of dry I required 28 ml. of 0.1*N* H_2SO_4) was neutralized by the wine. Before use the suspension was boiled under reflux condenser for 30 min. For the prepn. of champagne wines 0.4–0.5, and for other wines 0.5–0.8 to 1 g. of dry I/l., was used. After 7 days the treated wines were transparent; the products were freed from the ppt. after 15 days. A champagne wine (grape variety Cicka) showed the following chem. characteristics before and after the I treatment: pH 3.2, 3.2, titratable acidity 7.0, 7.0, volatile acids 0.97, 0.97 g./l., alc. 10.6, 10.6 vol. %, enotannin 133, 112, iron 8.5, 7.1, and proteinaceous materials 64, 35 mg./l., resp. The wines treated with I were superior in their organoleptic qualities to the wines clarified either by fish glue or $K_4Fe(CN)_6$ (which decreases the titratable acidity of the products).

E. Wierbicki

Rodopulo A.K

The role of tannins in the oxidation of must and wine. A. K. Rodopulo (Transcaucasian Branch, Inst. "Magarach"). *Vinogradarstvo S.S.S.R.* 10, No. 9, 20–1(1950).—Total tannins (I), enotannin (II), and polyphenols (III) were detd. in grape must after 0, 3, 6, and 12 hrs., resp., after its sepn. from the pulp. In this time I decreased from 5.7 to 3.5, II from 3.8 to 3.0, and III from 1.8 to 0.4 ml. of 0.1*N* $KMnO_4$ soln./50 ml. must, resp., and the amt. of total quinones increased from 0 to 10.4 mg./l.; however, the quinone increase did not correspond to the decrease of polyphenols actually found. In order to understand better the changes of tannin substances which took place during the delay of the fermentation the nature of tannins in fresh grape peels was studied. The peels were pasteurized, dried at 50–60°, and powdered. The powder was extd. with $CHCl_3$, followed by C_6H_6, to remove chlorophyll, lipides, and resins. The residue was freed from the extn. solvents and newly extd. with AcOEt for 48 hrs. The ext. was then freed from AcOEt and the residue formed was recrystd. from dild. EtOH. The product, colorless crystals, m. 214°, contg. C 61.5, H 4.8, and O 33.6%, mol. wt. 296, was slightly sol. in water, giving in aq. soln. the characteristic reactions with $FeCl_3$ (green color) and with ferritartrate (violet color) for the presence of 2 carboxylic groups in *o*-position, and a pos. test for phloroglucinol. It was concluded that the product was a polyphenolcatechol (epicatechol) (IV) having the empirical formula of $C_{15}H_{14}O_6$. By extg. the coloring substances of the peels with amyl alc. and re-extg. the amyl alc. ext. with 1% NH_4OH (but not with 1% HCl soln.) an aglycon fraction (V) was also isolated. By use of the Warburg app. the consumption of O by 1% solns. of IV and V (3-ml. samples and phosphate buffer pH 5.5 were used) was then investigated. IV was slightly oxidized without the presence of polyphenol oxidase in the soln.; in the presence of the enzyme the O consumption was very great. V was oxidized in the presence of the enzyme to a much smaller extent than IV, and without the enzyme it was not oxidized at all. Thus, to obtain good-quality products the oxidation of IV by polyphenol oxidase must be prevented (by addn. of SO_2). E. Wierbicki

Rodopulo, A. K.

Improving the technology of champagne wine. A. K. Rodopulo (Transcaucasian Branch, Inst. "Magarach"). *Vinodelie i Vinogradarstvo S.S.S.R.* 10, No. 11, 33-6(1950). —The role of O in the industrial prepn. of champagne wine and controlling of the access of O to the wine during the processing are described. The study was conducted on 40,000 l. of must used as exptl. material and the same amt. used as control. To the exptl. material SO_2 was added, 100-105 mg./l. before the alc. fermentation, and supplemented to 200 mg./l. after the fermentation was over. After 45 days the products were taken off the yeasts, clarified, and transferred to 8000-9000-l. vessels for further processing. In each case the operation was performed with and without access of O (air); this gives 4 different treatments of the wine. The best-quality wine was obtained from the must treated with SO_2 and processed without access of O. The wine had the following properties: pH 3.2, oxidation-reduction potential (E_H) 302.7 mv., rH 20.0, oxygen 4.6 ml./l., alc. 10.2 vol. %, volatile acids 0.90 g./l., titratable acidity 7.9 g./l., sugar 0.20%, and glycerol 7.3 g./l. The corresponding control contained more alc. (11.3%) and less glycerol (6.0 g./l.). The products obtained by processing with an access of O showed higher E_H (420.8 mv.), rH (21.0), and amt. of O dissolved in the wines (7.8 ml./l. (control), and 7.2 ml./l. (processed with SO_2)). During the alc. fermentation the amt. of O in the 4 variants decreased continuously. It was concluded that in order to get good champagne wines the oxidative processes in the musts must be controlled by the addn. of SO_2 and an exclusion of O

B. Wierbicki

CA

Oxidation of tartaric acid in wine in the presence of salts of heavy metals. Activation of oxygen by iron. A. K. Kondopulu (Magarach Inst., Thilissi). *Izvest. Akad. Nauk S.S.S.R., Ser. Biol.* 1951, No. 3, 115–28.—Manometric investigation of tartaric acid oxidation in the presence of Fe^{++} and Fe^{+++} salts showed that while ferric Fe does not oxidize tartaric acid it does oxidize dihydroxymaleic acid by the way of conversion to ferrous Fe; this has a catalytic effect on the oxidation of the acid, which is accelerated by salts of heavy metals in general. Ferrous Fe activates O which is then capable of oxidizing tartaric acid, but an increase of Fe concn. does not proportionally increase the oxidation rate. Dihydroxymaleic acid accelerates oxidation of tartaric acid in the presence of $FeSO_4$ by the above mechanism. The catalyzates contain glyoxalic acid, isolable as the 2,4-dinitrophenylhydrazone, m. 190°. Grape wine contains dihydroxymaleic, diketosuccinic, glyoxalic, and oxalic acids and glyoxal; all are genetically related. Catalytic action of metal salts in this oxidation system is best at pH below 5. Quinones retard the oxidation of tartaric acid.

G. M. Kosolapoff

RODOPULO, A.K.

The photoelectrometric method for the determination of iron in wine. A. K. Rodopulo. *Vinodelie i Vinogradarstvo S.S.S.R.* 11, No. 6, 13-14(1951).—By using the Russian-made photoelectrometric colorimeter, "Cvetomer TsZ-A," Fe was detd. as Prussian blue in the range of 0.025–1 mg. Fe/50 ml. of the soln. When applied to wine no ashing of the sample was necessary. To a 50-ml. sample add 0.5 ml. 5% $K_4Fe(CN)_6$ and det. the absorbence (Fe^{++} is detd.); then add 5 ml. concd. HCl and 4–5 drops concd. HNO_3 to the sample and det. again the color d. (total Fe is detd.). The difference between the 2nd and 1st reading gives the amt. of color owing to the Fe^{++} present in the sample. The actual amt. of Fe is then detd. by reading the corresponding Fe^{++} concn. (mg./50 ml.) on a standard curve prepd. under the same conditions. B. Wierbicki—

RODOPULO, A. K.

USSR/Medicine - Microbiology Jan/Feb 51

"The Metabolism of Bacillus Botulinus," A. K. Rodopulo, All-Union Sci Res Inst of the Refrigerating Ind imeni A. I. Mikoyan, Moscow

"Mikrobiologiya" Vol XX, No 1, pp 26-32

188T74

Studied fermentation of Bac. botulinus cultures in meat-peptone bouillon plus 2% glucose. Detd volatile acids, P_H and Eh of medium, aldehydes, acetone, ethanol, butanol, and carried out biol tests for the presence of toxin. Bac. botulinus weak evolution of CO_2 and considerable accumulation of NH_3 due to deamination of amino acids.

188T74

USSR/Medicine - Microbiology (Contd) Jan/Feb 51

Addn of glucose strengthens fermentation activity; There is increased evolution of gas, accumulation of volatile acids, and lowering of the P_H.

188T74

RODOPULO, A. K.

"The Metabolism of Bacillus Botulinus," Mikrobiol., 22, No.1, 1951

All-Union Sci. Res. Inst. Refrigerating Ind. im. Mikoyan

Translation - NIH — in/M

1. RODOPULO, A.K.

2. USSR (600)

4. Wine and Wine making - Analysis

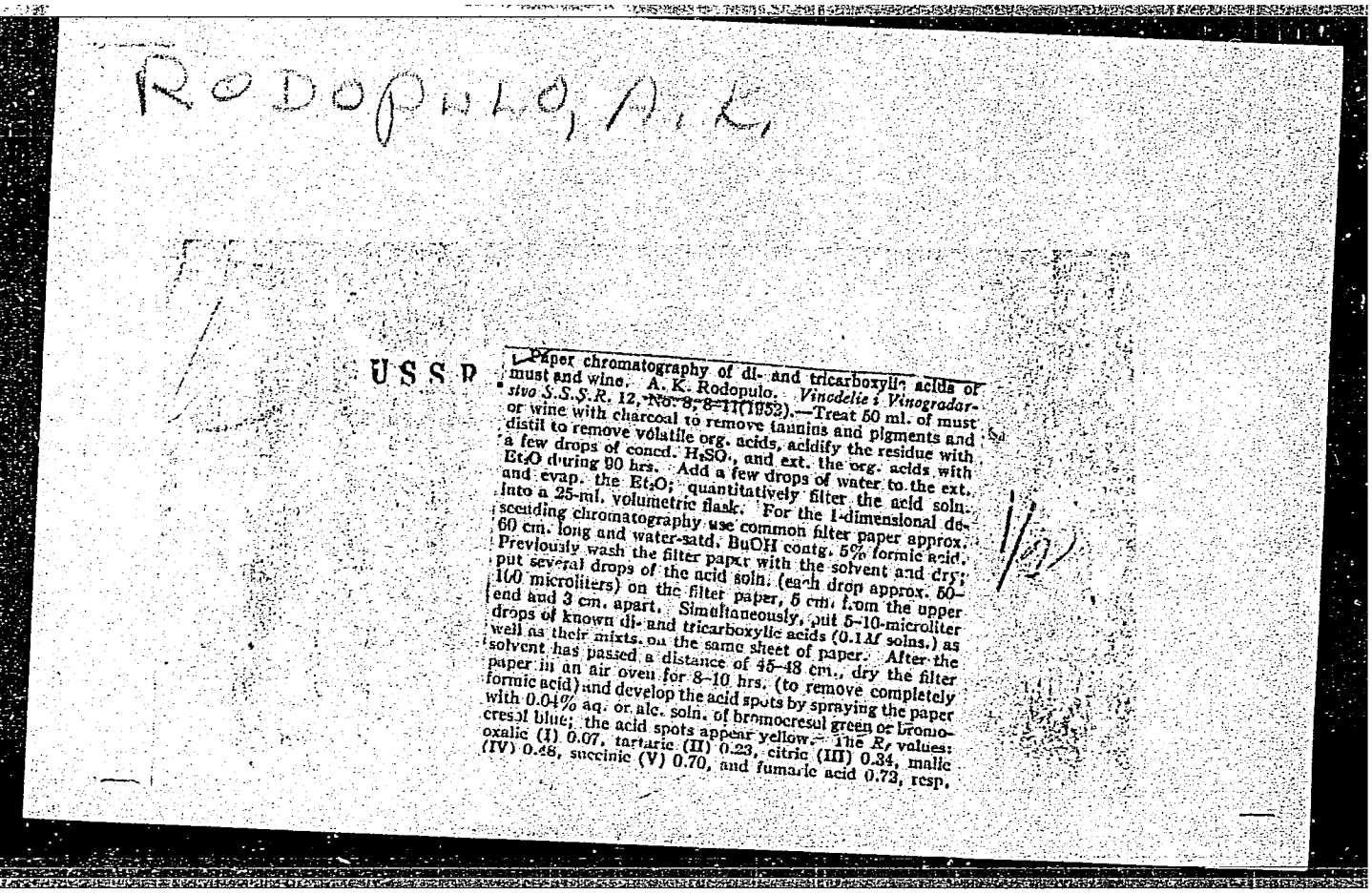
7. Reaction of acetamide formation in wine. Vin. SSSR 12 No. 1952.

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

KODOPULO, N.K.

USSR

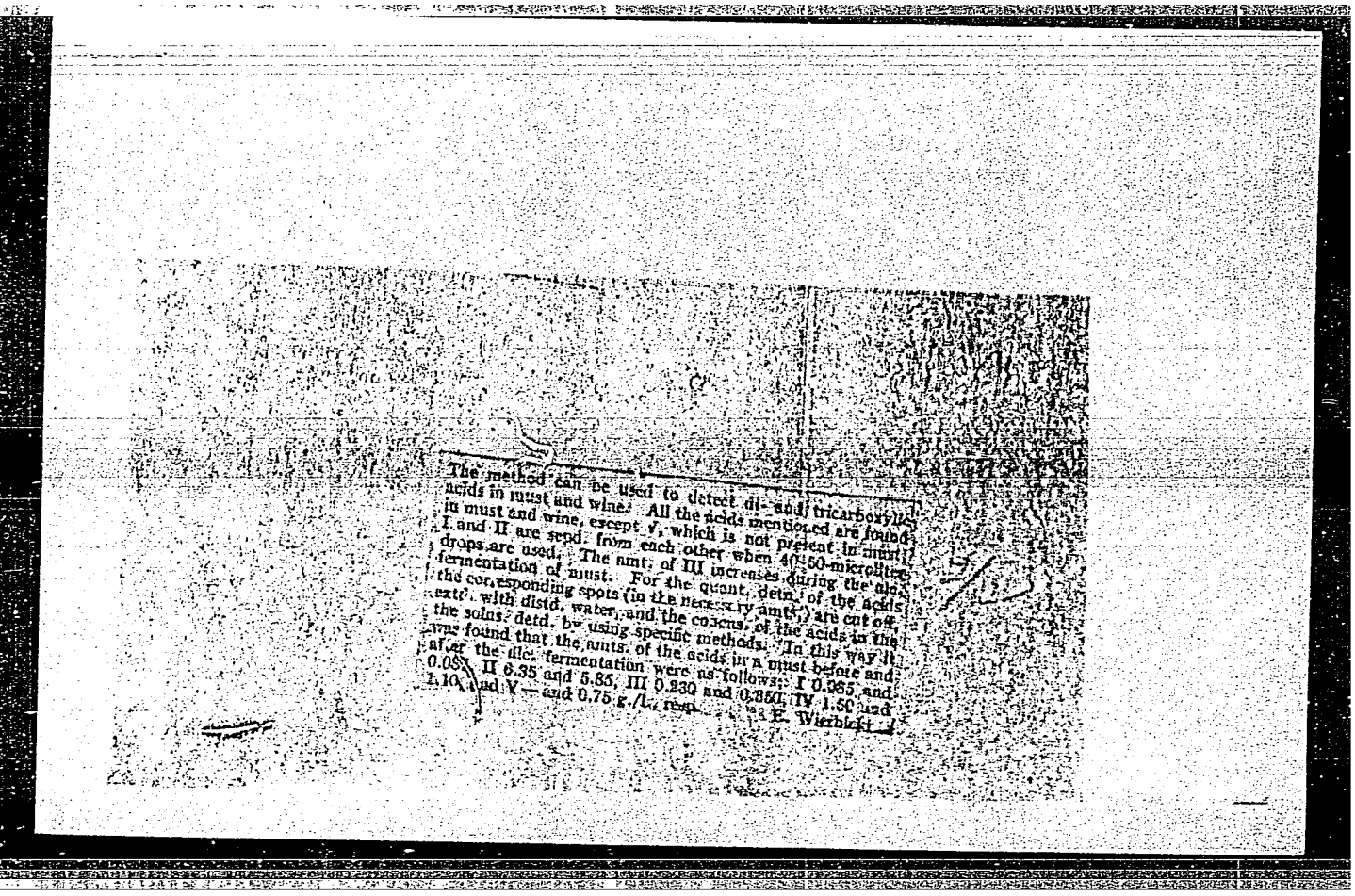
Oxidation-reduction processes taking part in the production of wine. A. K. Kodopulo. *Vinodelie i Vinogradarstvo S.S.S.R.* 12, No. 1, 21-4(1952); cf. *C.A.* 48, 14102i.—In the oxidation-reduction processes are involved the enzymes, polyphenol oxidase, ascorbic acid oxidase, cytochrome oxidase, peroxidase, catalase, and alc. dehydrogenase, and such systems as polyphenol ⇄ quinones, ascorbic acid ⇄ dehydroascorbic acid, EtOH ⇄ AcH, reduced cytochrome c ⇄ oxidized cytochrome c, coenzyme I ⇄ dihydrocoenzyme I, and glutathione (RSH) ⇄ RSSR. The biochem. conditions are discussed under which these oxidation-reduction systems are present in must and wine. Bivalent iron (Fe^{++}) also possesses biocatalytic properties. A canary-yellow complex salt (I) of Fe^{++} with tartaric acid, nearly insol. in water but sol. in dil. alk. solns., has been isolated; 1 mol. of H_2O is strongly held on the I mol.: it cannot be removed even by treating I with H_2SO_4. During aging of wine I is pptd. in the containers. I shows a strong catalytic effect on the oxidation of tartaric acid (II) to dihydroxymaleic acid (III), which in turn, in the presence of atm. O is readily oxidized to dioxosuccinic acid (IV). Under aerobic conditions IV is further oxidized (with decarboxylation) to $HO_2CC(:O)CHO \rightarrow C(:O)(CO_2H)_2 \rightarrow HO_2CCHO \rightarrow (CO_2H)_2$. This process is not desirable since the final products of this oxidation reaction affect the quality of wine. Under anaerobic conditions IV oxidizes II to III; this causes an accumulation of III in the wine. Ascorbic acid, if present, very rapidly oxidizes II to IV. To get a good-quality product the access of O to wine during the processing has to be regulated to keep the O concn. below 1 ml./l. wine. B. Wierbicki



RODOPULO, A. K.

USSR

Paper chromatography of di- and tricarboxylic acids of must and wine. A. K. Rodopulo. *Vinodelie i Vinogradarstvo S.S.S.R.* 12, No. 8, 8–11(1952).—Treat 50 ml. of must or wine with charcoal to remove tannins and pigments and distil to remove volatile org. acids, acidify the residue with a few drops of concd. H_2SO_4, and ext. the org. acids with Et_2O during 90 hrs. Add a few drops of water to the ext. and evap. the Et_2O; quantitatively filter the acid soln. into a 25-ml. volumetric flask. For the 1-dimensional descending chromatography use common filter paper approx. 60 cm. long and water-satd. BuOH contg. 5% formic acid. Previously wash the filter paper with the solvent and dry; put several drops of the acid soln. (each drop approx. 50–100 microliters) on the filter paper, 5 cm. from the upper end and 3 cm. apart. Simultaneously, put 5–10-microliter drops of known di- and tricarboxylic acids (0.1*M* solns.) as well as their mixts. on the same sheet of paper. After the solvent has passed a distance of 45–48 cm., dry the filter paper in an air oven for 8–10 hrs. (to remove completely formic acid) and develop the acid spots by spraying the paper with 0.04% aq. or alc. soln. of bromocresol green or bromocresol blue; the acid spots appear yellow. The R_f values: oxalic (I) 0.07, tartaric (II) 0.23, citric (III) 0.34, malic (IV) 0.48, succinic (V) 0.70, and fumaric acid 0.73, resp.



The method can be used to detect di- and tricarboxylic acids in must and wine. All the acids mentioned are found in must and wine, except V, which is not present in must. I and II are sepd. from each other when 40-50-microliter drops are used. The amt. of III increases during the alc. fermentation of must. For the quant. detn. of the acids, the corresponding spots (in the necessary amts.) are cut off, extd. with distd. water, and the contents of the acids in the solns. detd. by using specific methods. In this way it was found that the amts. of the acids in a must before and after the alc. fermentation were as follows: I 0.265 and 0.08; II 6.35 and 5.85; III 0.230 and 0.350; IV 1.50 and 1.10; and V — and 0.75 g./L., resp.

E. Wierbicki

1. RODOPULO, A. K.

2. USSR (600)

4. Champagne (wine)

7. Regulation of oxidation-reduction process in champagne production. Vin. SSSR 12, no. 10, 1952

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

Rodopulo, A. K.

USSR.

Role of ferrous salts of organic acids in the ripening and aging of wine. A. K. Rodopulo. *Vinodelie i Vinogradarstvo S.S.S.R.* 13, No. 1, 9–12(1953).—Oxidation of tannins, coloring substances, and org. acids in wine depends on the ability of these wine constituents to form complex salts with Fe^{++}. The addn. of ferrous salts of tartaric, fumaric, citric, oxalic, glycolic, and dihydroxymaleic acids to fresh wine increased the organoleptic qualities of the wine (tasted after 5 months storage). The most effective catalysts were the salts of oxalic and tartaric acids (20 mg./l.). The catalysts were not sol. in wine and could be removed easily from the aged products. During the processing tartaric acid was first oxidized (the presence of O was required) to dioxymaleic acid, which is responsible for the improvement of the wine flavor. The further oxidation is an anaerobic dehydrogenation; the presence of a large quantity of O at this stage is not desirable.

E. Wierbicki

CH

USSR.

Determination of peroxides in must and wine. A. K. Rodopulo. *Vinodelie i Vinogradarstvo S.S.S.R.* 13, No. 6, 6–7(1953).—During storage of must or wine under aerobic conditions H_2O_2 and quinones are formed. To det. quinones, add 10 ml. 0.1*M* KI soln. followed by 10 ml. 0.1*M* HCl to 50 ml. of the exptl. material and let the mixt. stand for 20 min. in a dark place. Then add 1 ml. 0.5% starch soln. and titrate the liberated I, with 0.01*N* $Na_2S_2O_3$ soln., 1 ml. of 0.1*N* $Na_2S_2O_3$ soln. being equal to 0.53 mg. of quinones. To detect H_2O_2, add 0.5 g. $CaCO_3$ and several drops of the exptl. material to 3 ml. of a mixt. contg. 0.1*M* $CuSO_4$ 21, 0.1*M* $K_3Fe(CN_6)$ 10, 15% AcONa 6, and water 20 ml. In the presence of H_2O_2 the soln. turns yellow. The sensitivity of the method is 5–10 microgamma H_2O_2, being particularly sensitive when the reagent and $CaCO_3$ are put on a filter paper before the addn. of the sample. Quinones do not give this reaction. R. W.

RODOPULO, A. K.

(2)

Chemical Abst.
Vol. 48 No. 8
Apr. 25, 1954
The Fermentation Industries

Partition and determination of organic acids in grape wine and grape must by chromatographic methods. A. K. Rodopulo (Transcaucasian Branch Inst. "Magarach," Tiflis). *Biokhimiya* 18, 544-7(1953).—Fifty ml. of wine or must was treated with activated charcoal to remove tannic and coloring substances. Volatile oils were removed by steam distn. Samples were acidified and extd. with ether for 90 hrs. Ten ml. H_2O was added, the ether driven off, filtered, the flask rinsed to make the final vol. 25 ml. In the must were found tartaric, acetic, citric, and oxalic acids. In the wine lactic and succinic acids were found in addn. During fermentation of the grape must a marked diminution in acetic and an increase in citric acids occur. Acetic acid is extensively oxidized by the yeast into oxalic acid, which undergoes decarboxylation, condensation with another mol. of its own type forming citric acid. Acetic acid is oxidized by yeast cells as well as by bacteria. B. S. Levine

Rodopulo, A.K.

Carboxylation of pyruvic acid by yeasts. A. K. Rodopulo (All-Union Sci. Research Inst. Viniculture and Wine, "Magarach," Transcaucasian Sta., Tiflis). *Mikrobiologiya* 22, 530–4(1953).—Cultures of *Saccharomyces ellipsoideus* and *S. cerevisiae* form citric acid (0.48 mg./ml.) in a medium contg. 0.08*M* Na pyruvate at pH 6.2; in presence of 0.08*M* Na pyruvate and 0.05*M* $NaOOCCH_2COCOONa$ at pH 5 the yield is 1.35 mg./ml., but with 0.05*M* $NaOOCCH_2COCOONa$ alone no citric acid is formed. Evidently the β-carboxylase in the yeast carboxylates pyruvic acid to oxalacetic acid, which then forms citric acid by oxidative condensation and decarboxylation. Julian F. Smith

RODOPULO, A.K.

Dehydrogenases of the grape. A. K. Rodopulo. *Doklady Akad. Nauk S.S.S.R.* 95, 815-18(1954).—It was shown that the grape contains bound succinicdehydrogenase which transfers H to O activated by oxidative enzymes. The latter contain polyphenoloxidase or the products of its action, but cytochrome oxidase does not appear. Oxidation of succinic acid in grape in the presence of cytochrome c is inhibited by malonic acid. G. M. Kosolapoff

All-Union Sci.-Res. Inst. Viniculture and Wine, "Magarach"

Rodopulo, A.K

Paths of transformations of organic acids in wine yeast. A. K. Rodopulo. (Transcaucasian Branch Inst. "Magarach, Tiflis). *Izvest. Akad. Nauk S.S.S.R., Ser. Biol.* 1956, No. 2, 108–19.—Wine yeast oxidizes pyruvic acid and AcOH along 2 paths: (1) pyruvic acid is carboxylated to oxaloacetic acid, the latter condenses with pyruvic acid at the instant of oxidative decarboxylation, yielding citric acid; and (2) dehydrogenation of AcOH and condensation to $(CH_2CO_2H)_2$; the latter through the stage of fumaric acid and malic acid yields oxaloacetic acid, which condenses with AcOH yielding citric acid. The processes were traced by paper chromatography. Malic and pyruvic acid increase the respiration rate of wine yeast, while citric acid does not. Na malonate partly inhibits the oxidation of succinate by yeast. Synthesis of citric acid from pyruvic acid was demonstrated *in vivo*. G. M. Kosolapoff

RODOPULO, A.K.; SARISHVILI, N.G.

Biochemical processes in treating wine-making materials before champagnization by biologically continuous method. Prikl. biokhim. i mikrobiol. 1 no. 6:669-674 N-D '65. (MIRA 18:12)

1. Institut biokhimii imeni Bakha AN SSSR i TSentral'naya nauchno-issledovatel'skaya laboratoriya vinodeliya i severnogo vinogradarstva.

RODOPULO, A.K.; YEGOROV, I.A.; YASHINA, V.Ye.

Bouquet substances of sherry. Prikl. biokhim. i mikrobiol. 1 no.1:95-101 Ja-F '65. (MIRA 18:5)

1. Institut biokhimii imeni Bakha AN SSSR.

[illegible]

Study of the chemical composition of cognac alcohols by the gas-liquid chromatography method. Izv. AN SSSR. Ser. biol. no.4:613-622 Jl-Ag '64. (MIRA 17:10)

1. Institut biokhimii im. A.N.Bakha AN SSSR.

RODOPULO, A.K.; YEGOROV, I.A.; SARISHVILI, N.G.

Production of higher alcohols by wine yeasts. Mikrobiologiia 32 no.6:1066-1072 N-D '63 (MIRA 18:1)

1. Institut biokhimii imeni A.N. Rakha AN SSSR.

SISAKYAN, N.M.; RODOPULO, A.K.; YEGOROV, I.A.; SARISHVILLI, N.G.

Products of the transformation of amino acids by yeasts and their effect on the quality of champagne. Biokhim. vin. no.7:131-147 '63. (MIRA 16:4)

1. Institut biokhimii imeno A.N.Bakha AN SSSR i TsNILViSV Ministerstva sel'skogo khozyaystva SSSR.
(Champagne (Wine)) (Amino acids)

YEGOROV, I.A.; RODOPULO, A.K.; PISARNITSKIY, A.F.

Determining higher alcohols in cognac by gas-liquid chromatography. Dokl. AN SSSR 151 no.3 729-731 Jl '63. (MIRA 16:9)

1. Institut biokhimii im. A.N.Bakha AN SSSR. Predstavleno akademikom N.M.Sisakyanom.
(Gas chromatography) (Brandy--Analysis)

YEGOROV, I.A.; RODOPULO, A.K.

Quantitative determination of the higher alcohols in brandy by the paper chromatography method. Biokhim. vin. no.7:218-223 '63. (MIRA 16:4)
(Brandy) (Paper chromatography)

YEGOROV, I.A.; RODOPULO, A.K.

Separation of 3,5-dinitrobenzoates of brandy alcohols by the method of paper partition chromatography. Dokl. AN SSSR 146 no.1:210-212 S '62. (MIRA 15:9)

1. Institut biokhimii im. A.N. Bakha AN SSSR. Predstavleno akademikom N.M. Sisakyanom.
(Benzoic acid) (Paper chromatography) (Brandy)

RODOPULO, Aleksandr Konstantinovich; AGABAL'YANTS, G.G., doktor sel'khoz. nauk, retsenzent; VECHER, A.S., doktor biol. nauk, spets. red.; PRITYKINA, L.A., red.; SATAROVA, A.M., tekhn. red.

[Biochemical processes in wine making]O biokhimicheskikh protsessakh v vinodelii. Moskva, Pishchepromizdat, 1962. 178 p. (MIRA 16:2)

(Wine and wine making--Analysis)

RODOPULO, Aleksandr Konstantinovich (All-Union Sci Res Inst of ~~Wine Making~~ Viniculture and Viticulture "Magarach") for Doc~~tor~~ of Biological Sci~~ence~~ on the basis of dissertation defended 7 Jan 60 in Council of ~~the~~ Inst~~itute~~ of Bio-Chemistry im. Bakh, Acad Sci USSR, entitled: "~~Acidulous and Regenerative~~ Oxidation-Reduction Processes in Grapes, Juice, and Wine." (BMVISSO USSR, 2-61, 25)

RODOPULO, A. K. Doc Biol Sci -- (diss) "Oxidation-reduction processes in grapes, must, and wine." Mos, 1959. 47 pp (Acad Sci USSR. Inst of Biochemistry im A. N. Bakh. All-Union Sci Res Inst of Viniculture and Viticulture "Magarach"), 200 copies List of author's works, pp 45-47 (31 titles) (KL, 48-59, 114)

RODOPULO, A.K.

Carboxylation of pyruvic acid with babeled carbon C^{14} and formation of citric acid. Mikrobiologiia 28 no.2:197-203 Mr-Ap '59. (MIRA 12:5)

1. Moskovskiy filial Institut "Magarach."
(SACCHAROMYCES, metab.
radiocarbon labeled pyruvic acid, carboxylation & citric acid synthesis (Rus))
(PYRUVATES, metab.
Saccharomyces, carboxylation & citric acid synthesis (Rus))
(CITRATES, metab.
Saccharomyces, form. in carboxylation of pyruvic acid (Rus))

Rodopulo, A.K.

USSR/Microbiology - General Microbiology. F-1

Abs Jour : Ref Zhur - Biologiya, No 7, 1957, 26223

Author : Rodopulo, A.K.
Inst : Academy of Sciences USSR
Title : Pathways of Conversion of Organic Acids in Tartaric Yeasts.

Orig Pub : Izv. AN SSSR, Ser. biol. 1956, No 2, 108-119

Abst : On the basis of experiments in the acidification of dormant yeast cells of Saccharomyces ellipsoideus (Kakhuri 4, Steinberg 1892) and S. cerevisiae (race 12) by means of various organic acids, the author comes to the conclusion that the acidification of pyruvic and acetic acids may take place, apparently, in two ways. Pyruvic acid may be carboxylated into oxalacetic acid, which is then condensed with the pyruvic acid molecule into citric acid at the moment of acidifying decarboxylation. The other alternative consists in the dehydration of acetic acid

Card 1/2

RODOPULO, A.K.

Dioxymaleic acid oxidase in grapes. Biokhim. vin. no.5:199-212 '57.
(MLRA 10:6)

1. Zakavkazskiy filial Vsesoyuznogo nauchno-issledovatel'skogo instituta vinodeliya i vinogradarstva "Magarach".

(Grapes) (Oxidases) (Maleic acid)

RODOPULO, A. K.

Oxidation-reduction processes in the grape brew (wort) and in the wine. A. K. Rodopulo. *Trudy Vsesoyus. Nauch. Issledovatel. Inst. Vinodeliya i Vinogradarstva "Magarach"* 4, 3-60(1953); *Referat. Zhur. Khim. Biol. Khim.* 1955, No. 8593.—Grapes contain polyphenol oxidase, peroxidase, ascorbic acid oxidase, and catalase, all of which are carried over into the expressed pulp in lesser amts. Polyphenol oxidase constitutes the basic oxidative factor of the entire system of oxidation. However, new oxidative enzymes emerge in the wort, such as cytochrome oxidase and alcohol dehydrogenase, in the process of the yeast activity and proliferation. No oxidative enzymes were found in the wine. Polyphenols and tannins of the grapes likewise find their way into the pulp. Polyphenol oxidase changes the tannin substances of the brewing pulp into quinones. These dehydrogenate ascorbic acid, and thereby dihydroxydicarboxylic dioxydicarbonic acids are reduced to polyphenols. After the first process of wine aeration and owing to the action of salts of heavy metals the polyphenols are again converted into quinones. Oxidative processes are also activated in the grape wort and in the wine by the action of salts of heavy metals on organic acids. In the wine are also found the following reversibly interconvertible substances; tartaric, dihydroxymaleic, diketosuccinic, glyoxalic, and oxalic acids, and glyoxal. Oxidation of the wine acids occurs as a result of the action of complex Fe salts of tartaric and oxalic acids. The addn. of these to wine hastens the process of its aging. If the aerated wine is stored under anaerobic conditions the process of tartaric acid oxidation is arrested at the diketosuccinic acid stage. The latter by dehydrogenation of new portions of the tartaric acid is converted into dihydroxymaleic acid which improves the taste of the wine.

B. S. Levine

Rodopulo, N. K.

Comparative investigation of bentonites as clarifying agents for wine. A. K. Rodopulo, V. P. Gvelesiani, and F. P. Kiladze. *Vinodelie i Vinogradarstvo* 11, No. 4, 13–16(1951); *Chem. Zentr.* 1951, II, 2204; cf. *C.A.* 48, 14100*f*.—Expts. are reported on the clarification of Cicka champagnes, white European (Chinuri), red Kakhetian, and ordinary (Zolikauri) wines with bentonites (I), subbentonites (II), askangel (III) and askan glue, Aksamarov white (IV) and green, and various green glues. The best swelling was obtained with III and IV. The suspensions were prepd. by dilu. with 10 parts water (5 parts in the case of the subbentonites). From 40 to 200 g. I and 200–800 g. II were used per hectoliter, with the suspension first being shaken 15 min. with an equal vol. of wine and then for 20 min. with the total vol. being treated, after which it was allowed to settle. The champagnes were clarified in 8–10 days; 16–18 days were required for clarification with fish glue. The addn. of 2 g. I and 0.05 g. fish glue per l. clarified the wine within 1 hr. III was most effective in clarifying the red wine. I reduced titratable acid by 0.06–0.28%, increased Ca content by 10–14 mg./l. and the ash and ext. contents by 0.02–0.03 g./l., and sharply reduced the high Fe contents (from 27 to 2–7 mg./l. for ordinary wines). III was especially effective in this respect. The I reduced protein N by 6–18 mg./l. At high values for titratable acid (7.5–9.0%), clarification with I gave better results. III clarified champagnes in 18 days (35 days for fish glue); I, therefore, was found to be a very satisfactory clarifying agent and was more effective than fish glue and gelatin.

M. G. Moore

(2)

Rodopulo, A. K.

Determination of di- and tricarboxylic acids in grapes, ciders, and wines. A. K. Rodopulo. *Vinodelie i Vinogradarstvo S.S.S.R.* 14, No. 4, 5-9(1954).—Add 1 ml. to 50 g. of grapes ground in a mortar with quartz sand, filter, and wash. Treat the filtrate with activated C to remove tannin and colored substances, filter, wash, neutralize with NH_4, and acidify with AcOH to a yellowish color (indicator bromocresol purple). Add 1 g. H_3BO_3 and 10% $CaCl_2$ or $Ca(AcO)_2$. After standing 72 hrs. filter, wash, and det. oxalic acid. Treat 100 ml. of wine or cider (100 g. grapes) with activated C, filter, wash, evap. to 25 ml., and acidify with 2 drops of concd. H_2SO_4; ext. with ether in the extractor 18–20 hrs. (the tartaric acid exts. with difficulty). Distil off the ether in the presence of 10 ml. H_2O, filter, and wash. Transfer the filtrate to a 100-ml. volumetric flask and dil. to the mark. To 1 ml. of the soln. add 2 ml. 50% H_2SO_4, 0.5 ml. 20% HPO_3, 1 ml. 10% KBr, and 3 ml. 5% $KMnO_4$. Shake the mixt. and let stand 10 min. at 18°. Decomp. the excess $KMnO_4$ with 2% H_2O_2. Ext. the pentabromacetone formed with petr. ether. To the ether soln. add 3 ml. 4% Na_2S, and det. the citric acid colorimetrically by the yellow color of the liquid. Det. malic acid by the modified method of Pucher, et al. (*C.A.* 28, 4101[9]; 35, 3553[3]). Remove the citric acid from 5 ml. of must and add 10 ml. 0.1% 2,4-dinitrophenylhydrazine in 2*N* HCl to the aq. soln. After standing 12 hrs., filter, ppt., wash, dissolve in 50 ml. of 5% KOH in aq. alc. soln., and colorimetrically det. the blue color. Det. succinic acid by the P. and V. method.

M. C.

RODOPULO, A.K.

Oxidation-reduction transformations of organic acids in grapes during the process of ripening. Biokhim. vin. no.6:132-170 '60.
(MIRA 13:10)

1. Moskovskiy filial Vsesoyuznogo nauchno-issledovatel'skogo instituta vinodeliya i vinogradarstva "Magarach".
(Grapes) (Fruit--Ripening) (Acids, Organic)