

РАПОТНОВА, И. Л.

"Heterotrophic processes in autotrophic organisms." (p. 135) by "abctnova, I. L.

SO: Advances in Modern Biology (Uspekhi Sovremennoi Biologii) Vol. XXII, No. 1, 1946.

RABOTNOVA, I. L.

FA 5T2

USSR/Medical Science  
Microbiology

Feb 1947

"Microorganisms as Reagents in Quantitative Assaying  
of Vitamins and Amino Acids," I. L. Rabotnova, 4 pp

"Uspek Sovremen Biolog" Vol XXIII, No 2

Tests made on vitamins B<sub>1</sub>, B<sub>2</sub>, B<sub>3</sub>, B<sub>4</sub>, B<sub>5</sub>, B<sub>6</sub>, B<sub>7</sub>,  
B<sub>8</sub>, B<sub>9</sub>, and amino-benzoic acid with various micro-  
organisms to determine whether the reaction involves  
the pH values. Includes tables.

712

RABOTNOVA, I. L.

PA 23T72

USSR/Medicine - Stains and Staining, Jul/Aug 1947  
Gram Staining  
Medicine - Stains and Staining, Methods

"Gram's and the Ribonucleic Acid Method of Staining  
Bacteria," I. L. Rabotnova, Moscow, 1 p

"Uspakhi Sovremennoy Biologii" Vol XXIV, No 1 (4)

In 1884 Gram discovered by accident a method of staining matter for microscopic study by means of gentian violet. The slide was then painted with Lugol's caustic solution. The article mentions Henry and Stacey and Bartholomew and Umbreit who did considerable work on the determination of Gram positive and Gram negative specimens by different methods of treatment.

23T72

RAE'INOVA, I., KONDRYAT'EVA, E., NETTE, I., and ARONES, S.  
Department of Microbiology, Moscow State University.

"Fixation of the Air Nitrogen by the Azobacter Under Different Conditions of  
Aeration," Mikrobiologia, Vol. 18, No. 6, Nov/Dec '49.

1ST AND 2ND ORDERS      3RD AND 4TH ORDERS

PROCESSES AND PROPERTIES INDEX

CA

Symbiotic bacteria on meadow foxtail. I. L. Katalnova and N. I. Ponomarenko. *Mikrobiologiya* 18, 54-61 (1980).—Root nodules on foxtail (*Alopecurus pratensis*) carry bacteria, e.g. *Bacillus alopecuri* (I), but not in visible colonies. The bacteria live in the rhizosphere and apparently do not participate in nodule formation. In pure cultures I (a spore-forming aerobic ammonifying organism) does not fix atm. N and can live in nitrite-free mediums. Aid to plant growth by I is by some mechanism other than supplying N. Julian F. Smith

112

COMMON (LITERATURE)

MATERIALS INDEX

ASB-51A METALLURGICAL LITERATURE CLASSIFICATION

ADVANCED

GROUPS

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100

CA

2

L. Papan: first to study fermentation of cellulose and of  
formic acid. I. L. Rabinova. *Microbiologiya* 10, 494-9  
(1949).—Historical. Julian P. Smith

CA

Influence of aeration intensity on autotrophic and heterotrophic nutrition of *Chlorella*. I. L. Rabotova and I. V. Konova (People's Univ., Moscow). *Mikrobiologiya* 19, 24-31(1959).—Cultures of *Chlorella vulgaris* (B) grow far better on mash than on prepd. sugar mediums. The optimum concn. is 1-2° Balling. Under anaerobic conditions at  $r_H$  13-18 l lives but does not proliferate; when aerated to  $r_H$  19-23, it proliferates. In nutrition I passes from heterotrophism at low  $r_H$  through a heterotrophic-autotrophic stage at medium  $r_H$  to a chiefly prototrophic (photosynthesis) stage at high  $r_H$ . J. F. S.

B.A.

AM-25

Priority of Russian microbiologist A. P. Lashov in discovery  
of capacity of *Salmonella typhimurium* to grow within *Giardia*.  
L. A. Babitskaya (*Microbiology*, 1989, 28, 276-278) — A polemical  
discussion. D. H. KATZ.



CA

Denitrication on asphalt and other hydrocarbon bases.  
 L. L. Rabinovaya, M. V. Plebikova, and L. V. Magnitskaya  
 (Lomonosov People's Univ., Moscow). *Microbiologia* 19,  
 102-9 (1959). — Cultures of denitrifiers such as *Achromo-*  
*bacter centropunctatum*, *A. agile*, and *Pseudomonas aeruginosa*  
 were tested in presence of kerosene, paraffins, hydrocarbons  
 xams, and asphalts. They all oxidized hydrocarbons without  
 alkalinizing the medium; denitrication accelerated the oxida-  
 tion. *Sulfomonas denitrificans* can utilize crude asphalt  
 contg. S compounds. . . . . Julian F. Smith

SHAPOSHNIKOV, V. N.; RABOTNOVA, I. L.; YARMOLA, G. A. and KUZNETSOVA, V. M.

"About the Development of Funguses on Natural Rubber Trees," Microbiology, Vol. 21, Issue 3, Publishing Co. of the AS USSR, Moscow, 1952.

RABOTNOVA, I. L.

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USSR/Biology - Microbiology, Rubber Mar/Apr 52

"Growth of Bacteria on Natural Rubber," V. K. Shaposhnikov, I. L. Rabotnova, G. A. Yarmola, V. M. Kuznetsova, N. N. Mozokhina-Porshnyakova, Biol Soil Sci Res Inst, Moscow State U imeni M. V. Lomonosov

"Mikrobiol" Vol XXI, No 2, pp 146-154

Found that rubber hydrocarbon may be consumed by the following microorganisms: *Bac. subtilis*, *Achr. agile*, *Mycococcus ruber*, *Mycobact. globiforme*, *Mycobact, lacticola*, *Act. albus*, and the yeast *Torula rosea*.

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210710

SHAPOSHNIKOV, V.M., RABOTNOVA, E.L., YARMOLA, G.A., KUZNETSOVA, V.I.

Molds - Botany

Development of molds on natural rubber. Mikrobiologiya 21 no. 3, 1952

9. Monthly List of Russian Accessions, Library of Congress, September ~~1951~~, Uncl.  
1952

CA

Microbiology 11-c

Some physiological characteristics of *Clostridium pasteurianum*. I. L. Rabatnova, V. K. Egurova, G. K. Orodina, and I. K. Eletskii (SUUR Univ., Moscow). *Microbiologiya* 21, 427-37(1932).--Under lab. conditions cultures of *Cl. pasteurianum* in symbiosis with *B. closteroides* lose both spore-forming and N-fixing powers of *Cl. pasteurianum*. But fresh symbiotic cultures fix N independently of the combined N content in the medium. In presence of yeast autolysate, N fixation reached 400 mg./l. Loss of N-fixing power is retarded by Mo salts (e.g.,  $(NH_4)_2MoO_4$  or  $Na_2MoO_4$ ); the optimum concn. is 10 mg./l. J. P. S.

1. RABOTNOVA, I. L.
2. USSR (600)
4. Plants - Metabolism
7. Basic aspects of "bio-energy" of plants. V. O. Tauson. Reviewed by I. L. Rabotnova. Mikro-biologiya 22, No. 1, 1953.

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

Rabotnova, I. L.

Substrate nitrification by growth of *Azotobacter beijerinckii*. I. L. Rabotnova and G. S. Rodionova (M. V. Lomonosov State Univ., Moscow). *Mikrobiologiya* 22, 415-22 (1953).—Growth of *A. beijerinckii* (cultured from rye roots) is rapid in well-aerated N-free liquid media, but poor in thin layers of immobile liquid. At the optimum pH (7.0), growth reaches 200-400 million cells/ml. in N-

supports the theory of transition mechanisms, ...  
producing NH<sub>3</sub>. Julian P. Smith



Enriching substrates in nitrogen compounds by growth of  
Azotobacter agilis and Azotobacter chroococcum. I. I.  
Glasoleva and R. M. Glasoleva (M. V. Lomonosov State  
Univ. Moscow, U.S.S.R.) Dokl. Akad. Nauk SSSR 233: 1011-1013 (1978)

**"APPROVED FOR RELEASE: Tuesday, August 01, 2000**

**CIA-RDP86-00513R001343**

**APPROVED FOR RELEASE: Tuesday, August 01, 2000**

**CIA-RDP86-00513R0013438**

BOY State Univ. Moscow, Minnesota  
(1953). Julian F. Smith

RABOTNOVA, I.L.

Data on the history of the development of technical microbiology  
in the U.S.S.R. Microbiology of wine making. Mikrobiologiya 23  
no.1:99-108 Ja-F '54. (MLRA 7:2)

1. Moskovskiy gosudarstvennyy universitet im. M.V.Lomonosova.  
Biologo-pochvennyy nauchno-issledovatel'skiy institut.  
(Microbiology) (Wine and wine making)

RABOTNOVA, I.L.

Materials on the history of technical microbiology in the U.S.S.R.  
Microbiology in the baking of bread. Mikrobiologiya 23 no.2:221-227  
Mr-Apr '54. (MLRA 7:4)

1. Moskovskiy gosudarstvennyy universitet im. M.V.Lomonosova.  
Biologo-pochvennyy nauchno-issledovatel'skiy institut.  
(Microbiology) (Bread)

RABOTNOVA, I. L.  
USSR/Biology

FD 302

Card 1/1

Author : Rabotnova, I. L.

Title : Data on the history of technological microbiology in the USSR. Microbiology in the alcohol industry

Periodical : Mikrobiologiya, 23, 349-360, May/June 1954

Abstract : This article is a historical review of the role of microbiology in the development of the alcohol industry in the USSR. Emphasis is laid on Russian, and especially Soviet, "firsts." The names of investigators, the locations of many of their laboratories, and brief summaries of their work are given. There is an extensive bibliography containing 75 Soviet entries.

Institution : Moscow State University imeni Lomonosov; Biologico-Soil Scientific Research Institute

Submitted : April 19, 1953

RABOTNOVA, I.L.

Data on history of industrial microbiology; microbiology in  
brewing industry. Mikrobiologiya 23 no.4:493-497 J1-Ag '54.  
(MLRA 7:9)

1. Moskovskiy gosudarstvennyy universitet im. M.V.Lomonosova  
Biologo-pochvennyy nauchno-issledovatel'skiy institut.  
(MICROBIOLOGY, history,  
Russia)

RABOTNOVA, I.L.

History of technical microbiology in U.S.S.R. III. Microbiology of  
wine making. I. L. Rabotnova (*Mitt. VersSta. Gärungsgew.*, 1955,  
9, 197-202; *ex J.S.F.A. Abstr.*, 1955, ii, 289).—A review with  
86 references. P. S. ARUP. *md* *1*



КАБОТОВА И. Л.

MD ✓ Requirements of anaerobic bacteria in the oxidation-reduction conditions of mediums. I. L. Rabotnova, E. O. Toropova, and M. Yu. Rabaeva (M. V. Lomonosov State Univ., Moscow), *Mikrobiologiya* 24, 525-31(1955).—The putrefactive anaerobes *Clostridium sporogenes* and *Bacillus putrificus* can develop in broth exposed to air if the tube is filled 5-6 cm. deep and the medium is thickened with 0.2% agar. The initial rH of 20-22 drops to 1-2, and in the stage of rapid decrease (first few hrs.) proliferation stops but the cells grow larger, mainly in length. If rH is held to 5 or higher for *C. sporogenes* or to 3 or higher for *B. putrificus*, proliferation does not begin again after the first-stage stoppage, showing that these are obligate anaerobes. Proliferation is not inhibited by such rH indicators as neutral red, Janus green, phenosafranine, indigo di- or tetrasulfonate, or methylene blue (titrations with  $\text{Na}_2\text{S}_2\text{O}_4$  or ascorbic acid). Reducing power is not limited to the medium, but is also exerted by the living cells. Spores can grow at rH 20.8 but are inhibited at rH 21.8; with *C. sporogenes* formation of giant cells occurs at rH 3-5. Julian F. Smith

(3)

Biol Soil Faculty

Работнова, И. Л.

MP / The lag stage and oxidation-reduction potential in cultures of anaerobes. I. L. Rabotnova and N. A. Pryanishnikova (Moscow State Univ.). *Mikrobiologiya* 24, 671-6 (1955).—In cultures of obligative anaerobes (*Clostridium sporogenes* and *C. acetobutylicum*) and facultative anaerobes (*Bacillus macerans*) a reducing agent will lower rH and accelerate proliferation, thus shortening the lag stage; as little as 0.01%  $\text{Na}_2\text{S}_2\text{O}_4$  can be effective. Ascorbic acid and glucose act similarly; or the lag phase can be buffered at rH  $\approx$  -16 (approx.) for long duration, with thionine. Conversely, oxidizing agents delay or prevent transition from the lag stage to active proliferation. Julian F. Smith

(2)

Name: RABOTNOVA, Irina Leonidovna

Dissertation: Significance of <sup>pH</sup> rH and oxidation-reduction conditions for the development and metabolism of micro-organisms

Degree: Doc Biol Sci

Affiliation: [not indicated]

Defense Date, Place: 14 May 56, Council of Moscow Order of Lenin and Order of Labor Red Banner State U imeni Lomonosov

Certification Date: 18 May 57

Source: BMVO 15/57

RABOTNOVA, I L

N/5  
614.18  
.R1

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Rol' fiziko-khimicheskikh usloviy (rN i gN2) v zhiznedeyatel'nosti mikroorganizmov [The effect of physical & chemical properties (rN and gN2) in the activities of micro-organisms] Moskva, Izd-vo Akademii Nauk SSSR, 1957.

274 p. diagrs., tables.

Athead of title: Akademiya Nauk SSSR. Institut Mikrobiologii.  
Bibliographies at the end of most chapters.

RABOTNOVA, I.L.

Ability of micro-organisms to change the conditions of the medium  
in accordance with their needs. Trudy Inst. mikrobiol. no.5:80-95  
'58 (MIRA 11:6)

1. Kafedra mikrobiologii biologo-pochvennogo fakul'teta Moskovskogo  
gosudarstvennogo universiteta imeni Lomonosova.

(MICRO-ORGANISMS,

adaptation of medium to requirements, review (Rus))

RABOTNOVA, I.L.

"Introduction to bacterial physiology" [in English] by C.E. Clifton.  
Reviewed by I.L. Rabotnova. Mikrobiologiya 27 no.6:753-754 N-D '58.

(MIRA 12:1)

(BACTERIA)

(CLIFTON, C.E.)

COUNTRY : USSR  
CATEGORY :  
ABS. JOUR. : RZhBiol., No.3 1959, No. 10040  
AUTHOR : Rabotnova, I. L.  
INST. : Institute of Microbiology of the Academy of Sciences USSR  
TITLE : Active Change of the Conditions of the Medium by  
Microorganisms in Accordance with Their Requirements  
ORIG. PUB. : Tr. In-ta mikrobiol. AN SSSR, 1958, No 5, 80-95  
ABSTRACT : A review constructed on the basis of an analysis of the  
data in the literature and the experimental material of  
the author. Active change of the surrounding medium  
by microorganisms is regarded through the example of  
a change in the pH and Eh of the medium by them.  
Bibliography. 60 titles. -- L. V. Kalakutskiy

Card: 1/1

RABOTNOVA, I.I.; ZAYTSEVA, G.N.; MINEYEVA, L.A.

Study of the lag phase in micro-organisms. Report No.3: Changes in the cells of Azotobacter grown on molecular and ammonia nitrogen. Mikrobiologiya 28 no.5:683-689 S-O '59. (MIRA 13:2)

1. Kafedra mikrobiologii i kafedra biokhimii rasteniy Moskovskogo gosudarstvennogo universiteta im M.V. Lomonosova.  
(AZOTOBACTER culture)

RABOTNOVA, I.L.; ZAYTSEVA, G.N.; MINEYEVA, L.A.

Study of the lag-phase in micro-organisms. Report No.2: Changes in cells of *Torula utilis* and *Pseudomonas fluorescens* during the lag phase. *Mikrobiologiya* 28 no.4:481-487 JI-Ag '59. (MIRA 12:12)

1. Biologo-pochvennyy fakul'tet Moskovskogo gosudarstvennogo universiteta im. M.V. Lomonosova.  
(CRYPTOCOCCUS)  
(PSEUDOMONAS)



RABOTNOVA, I.L.; MINEYEVA, L.A.

Study of the lag phase in micro-organisms. Report No.1: Influence of external conditions on the duration of the lag phase in *Torulopsis utilis* and *Pseudomonas fluorescens*. Mikrobiologiya 28 no.3:352-357 My-Je '59. (MIRA 13:3)

1. Biologo-pochvennyy fakul'tet Moskovskogo gosudarstvennogo universiteta im. M.V. Lomonosova.

(CRYPTOCOCCUS, culture

*Torulopsis utilis*, eff. of external cond. on length of lag phase (Rus))

(PSEUDOMONAS, culture

*fluorescens*, eff. of external cond. on length of lag phase (Rus))

RABOTNOVA, I.L.

Celebration in honor of Vladimir Nikolaevich Shaposhnikov. Mikro-  
biologiya 28 no.3:468-470 My-Je '59. (MIRA 13:3)

(BIOGRAPHIES

Shaposhnikov, Vladimir No. (Rus))

RABOTNOVA, I.L.; KUPLETSKAYA, M.B.; KUZNETSOVA, V.M.

Microbiological maceration of eucommia leaves. Report No.1: Optimum conditions for maceration by an active complex of micro-organisms. Mikrobiologiya 28 no.6:874-880 N-D '59. (MIRA 13:4)

1. Kafedra mikrobiologii Moskovskogo gosudarstvennogo universiteta i Nauchno-issledovatel'skiy institut resinovykh izdeliy shirokogo potrebleniya.

(EUCOMMIA)

(FERMENTATION)

(GUTTA-PERCHA)

RABOTNOVA, I.L.

Accomodative metabolism in micro-organisms. Zhur. ob. biol. 21  
no.5:313-321 S-0 '60. (MIRA 13:9)

1. Chair of Microbiology, the State University, Moscow.  
(MICRO-ORGANISMS) (METABOLISM)

RABOTNOVA, I.I.; KUPLETSKAYA, M.B.; KUZNETSOVA, V.M.

Microbiological maceration of eucommia leaves. Report No.2: Causative agent of the "fermentation" of eucommia leaves. Mikrobiologiya 29 no.1:129-132 Ja-F '60. (MIRA 13:5)

1. Biologo-pochvennyy fakul'tet Moskovskogo gosudarstvennogo universiteta imeni M.V. Lomonosova.

(FUNGI)

(PLANTS microbiol.)

RABOTNOVA, I. L., PLAKUNOVA, V. G. (USSR).

The Reductions of Microorganisms.

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

RABOTNOVA, I.L.; BALITSKAYA, R.M.; BELOZERSKAYA, N.A.; DISLER, Ye.N.;  
ZLOCHEVSKAYA, I.V.

Intravital isolation reducing substances in cultures. Mikrobiologiya  
30 no.1:3-8 Ja-F '61. (MIRA 14:5)

1. Biologo-pochvennyy fakul'tet Moskovskogo gosudarstvennogo  
universiteta imeni M.V.Lomonosova.  
(MICRO-ORGANISMS) (OXIDATION, PHYSIOLOGICAL)

ALIAN, Akhmed; RABOTNOVA, I.L.; NIKOLAYEV, P.I.; IVANOV, V.A.

Submerged cultivation of acetic acid bacteria under different  
aeration conditions. Mikrobiologiya 52 no.4:703-710 JI-Ag '63.  
(MIRA 17:6)

1. Biologo-pochvennyy fakul'tet Moskovskogo gosudarstvennogo  
universiteta imeni M.V. Lomonosova.



RABOTNOVA, I.L.; PLAKUNOVA, V.G.; PALEYEVA, M.A.; SHENDEROVA, L.V.

Causes of a decrease in redox potential in cultures of micro-organisms. Mikrobiologiya 32 no.6:954-960 N-D '63

(MIRA 18:1)

1. Biologo-pochvennyy fakul'tet Moskovskogo gosudarstvennogo universiteta imeni M.V. Lomonosova.

GRECHUSHKINA, N.N.; RABOTNOVA, I.L.

Role of oxygen in the metabolism of *Lactobacterium pento aceticum*  
cultivated in brewing wort. Vest. Mosk. un. Ser. 6: Biol., pochv.  
19 no.4:44-47 J1-Ag '64. (MIRA 17:12)

1. Kafedra mikrobiologii Moskovskogo universiteta.

GRECHUSHKINA, N.N.; RABOTNOVA, I.L.

Secretion of reducing agents by sporeforming aerobic bacteria.

Vest. Mosk. un. Ser. 6: Biol., pochv. 19 no.5:28-35 S-O '64.

(MIRA 17:12)

1. Kafedra mikrobiologii Moskovskogo universiteta.

BEREZOVA, Ye.F.; NAKHIMOVSKAYA, M.I.; RYBALKINA, A.V.; RABOTNOVA, I.L.;  
MESSICHEVA, M.A.

David Moiseevich Novogradskii, 1898-1953; on the 10th  
anniversary of his death. Mikrobiologiya 33 no.2:379-381  
Mr-Ap '64. (MIRA 17:12)

ALIAN, Akhmed; RABOTNOVA, I.I.

Continuous submerged culture of *Acetobacter aceti* in a synthetic medium. *Mikrobiologiya* 33 no.4:705-712 J1-Ag '64.

(MIRA 18:3)

1. Biologo-pochvennyy fakul'tet Moskovskogo gosudarstvennogo universiteta imeni Lomonosova.

RABOTNOVA, I.L.

Reviews. Mikrobiologiya 33 no.6:1089-1090 N-D '64.

(MIRA 18:4)

L 36427-66 EWT(1)/EWT(m)/T DJ/WE/JK

ACC NR: AP6015207

(A)

SOURCE CODE: UR/0411/65/001/002/0167/0174

AUTHORS: Nette, I. T.; Grechushkina, N. N.; Rabotnova, I. L.

ORG: Biological Soil Science Faculty, Moscow State University (Biologo-pochvonnyy fakul'tet Moskovskogo gosudarstvennogo universiteta)

TITLE: The growth of certain mycobacteria<sup>6</sup> in petroleum and petroleum products

SOURCE: Prikladnaya biokhimiya i mikrobiologiya, v. 1, no. 2, 1965, 167-174

TOPIC TAGS: microbiology, petroleum residue, fuel microorganism

ABSTRACT: Research into the nature of cultures of microorganisms actively using petroleum products was initiated because fuels and lubricants can acquire desirable new properties due to the action of these microorganisms. Soils from petroliferous areas of the Ukraine and the Tatar and Moscow areas, vaseline and spindle oils, MC-20 and MP-16 p oils were used for isolating the microorganisms. A liquid medium of the following composition was used (%):  $\text{NH}_4\text{NO}_3$  -- 0.1;  $\text{KH}_2\text{PO}_4$  -- 0.02;  $\text{MgSO}_4$  -- 0.01;  $\text{NaCl}$  -- 0.01. Tap water pH after sterilization was 7.2--7.5, and oils introduced into the medium made up 1%. Isolation was performed under varying conditions of aeration--stationary and oscillating at 30C, and growth time was reduced from 7--14 days to 4--7 days under the more aerated conditions. The tabulated results show that 76 pure cultures actively utilizing hydrocarbons were isolated, the majority of them

Card 1/2

UDC: 613.663+576.852.2

L 36427-66

ACC NR: AP6015207

3

being mycobacteria with the dominant strains being close to *Mycobacterium micosum* and *Mycobacterium lacticolum*. Cultures were grown in about 5 ml of the following medium (%):  $\text{NH}_4\text{NO}_3$  -- 0.4;  $\text{MgSO}_4$  -- 0.08;  $\text{KH}_2\text{PO}_4$  -- 0.06;  $\text{Na}_2\text{HPO}_4$  -- 0.14; tap water pH -- 7.2--7.3, with the addition of 1--2 drops of sterile hydrocarbon mixture at 28--30C for 7--10 days. Results show that the cultures most active in the use of petroleum and petroleum products were *M. micosum*, *M. lacticolum*, and 3 strains of bacteria which grow well in all mixtures except in heavy, nonparaffin naphthene petroleum. Results of growing microorganisms in individual hydrocarbons show that all cultures used basically only paraffin. Mycobacteria were most active in utilizing individual hydrocarbons and hydrocarbon mixtures, with *M. micosum* and *M. lacticolum* being most active, particularly in the use of gases. The majority of strains grew in  $\text{C}_1$ - $\text{C}_4$ ,  $\text{C}_6$ - $\text{C}_{10}$ ,  $\text{C}_{12}$  and  $\text{C}_{16}$  alkanes, phenol, xylene, and toluyl, but not in cyclohexane, naphthalene, a-methylnaphthalene, and benzol. Ethylene and isooctane were used only by certain strains. Many strains of *M. lacticolum* growing in individual hydrocarbons and gases form red and orange pigments, indicating the possibility of the accumulation of carotinoids in hydrocarbons. The authors thank K. I. Bessmertnyy for supplying oils and fuels, and they also thank microbiology students K. A. Nikitina and S. M. Shust for participating in obtaining the cultures. Orig. art. has: 4 tables.

SUB CODE: 21, 06/

SUBM DATE: 30Nov64/

ORIG REF: 005/

OTH REF: 011

Card 2/2 DS



GRECHUSHKINA, N.N.; NIKITINA, K.A.; RABOTNOVA, I.L.

Study of the physiology of *Mycobacterium lacticolum* strain  
35 as related to the use of hydrocarbons. Prikl. biokhim. i  
mikrobiol. 1 no. 6:627-634 N-D '65. (MIRA 18:12)

1. Moskovskiy gosudarstvennyy universitet imeni Lomonosova,  
biologo-pochvennyy fakul'tet. Submitted Dec. 29, 1964.

L 27402-66 EWT(1)/T JK

ACC NR: AP6017700

SOURCE CODE: UR/0220/65/034/002/0200/0203

AUTHOR: Grechushkina, N. N.; Nikitina, K. A.; Rabotnova, I. L. 29

ORG: Biology-Soil Faculty, Moscow State University im. M. V. Lomonosov (Biologo-pochvennyy fakul'tet Moskovskogo gosudarstvennogo universiteta) B

TITLE: Factors underlying the decrease of the redox potential in cultures of sporeg-  
nous aerobic bacteria

SOURCE: AN SSSR. Mikrobiologiya, v. 34, no. 2, 1965, 200-203

TOPIC TAGS: bacteria, bacteriology, plant metabolism

ABSTRACT: In experiments on the culturing of Bacillus mesentericus, Bac. brevis, Bac. cereus, and Bac. simplex, it was established that the decrease in the  $rH_2$  of the medium during culturing was associated with an increase in the content of reducing substances formed by the bacteria. However, aeration of the cultures also had an effect: the  $rH_2$  decreased to a greater extent during culturing in test tubes than during cultivation in flasks. The effect of aeration could be seen most clearly in connection with the culturing of Bac. Mesentericus on a dulcete medium, i.e., under conditions in which reducing substances are not formed. The  $rH_2$  was lower when Bac. mesentericus was cultured in test tubes, because the aeration was less effective. For bacteria of the group investigated, aeration probably had a greater effect on the  $rH_2$  than the formation of reducing substances. Orig. art. has: 4 figures. [JPRS]

SUB CODE: 06 / SUEM DATE: 30Mar64 / ORIG REF: 004

Card 1/1 10

UDC: 576.851.51.098

ACC NR: AP6033912

SOURCE CODE: UR/0220/66/035/005/0805/0811

AUTHOR: Avakyan, Z. A.; Rabotnova, I. L.

ORG: Soil Biology Department, Moscow State University im. M. V. Lomonosov (Biologo-pochvennyy fakul'tet Moskovskogo gosudarstvennogo universiteta)

TITLE: Determining concentrations of copper toxic for microorganisms

SOURCE: Mikrobiologiya, v. 35, no. 5, 1966, 805-811

TOPIC TAGS: toxicity, bactericide, copper compound, ~~T. utilis~~ pH,  
MICROORGANISM

ABSTRACT: This study concerned determination of the concentration of copper in various nutrient media, and of the concentration required to kill *T. utilis*. It was found that in nutrient media (I, II, V, VI) with mannitol, sucrose, and glycerol at pH 6.0—7.0, copper is precipitated as a salt and cannot be detected in the solution. However, in the same media at pH 5.0, copper is present in solution.

Card 1/2

UDC: 576.8.095.18:506.56

ACC NR: AP6033912

Polarography showed that in media with asparagine and citrates at pH 7.0, copper is found in the solution in the form of an asparagine or citrate complex. Growth of *T. utilis* was found to be completely inhibited on a glycerol-containing medium (VI) with a copper concentration of 40 mg/l. Finally, the resistance of *T. utilis* to copper was not increased after 50 transfers on medium VI containing copper.

[WA-50; CBE No. 14]  
[EL]

SUB CODE: 06/ SUBM DATE: 15Mar66/ ORIG REF: 001/ OTH REF: 005

BARKOV, V.Ye.; BYKHOVSKIY, Ya.L.; GRZHIBOVSKIY, V.V.; PAVLYCHEV, L.Ye.;  
RABOTNOVA, K.A.; SOKOLOV, V.B.; SOLOV'YEV, P.N.; KHERSONSKIY,  
D.S.; ZVENIGORODSKIY, I.S., red.; SAVAL'YEV, V.I., red.; BORUNOV,  
N.I., tekhn.red.

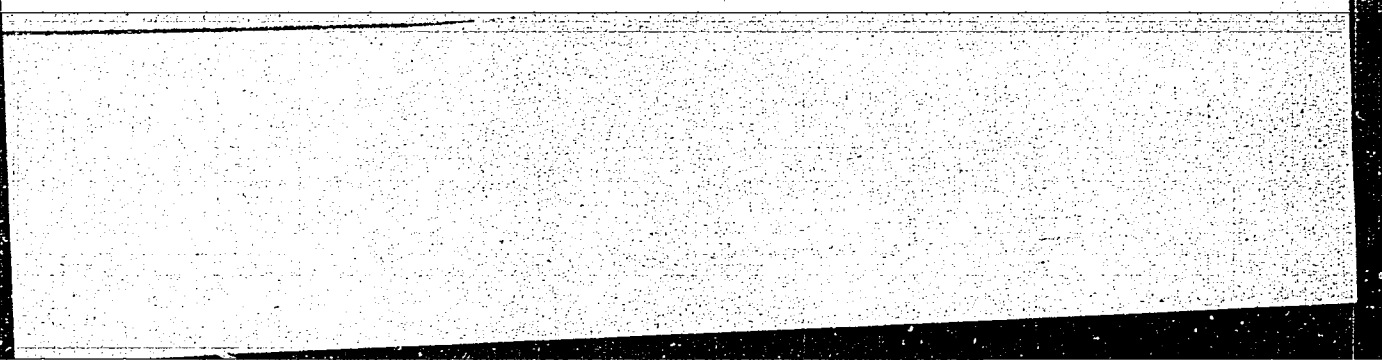
[Safety rules in the construction and use of communication structures  
and equipment] Pravila tekhniki bezopasnosti pri ekspluatatsii i  
stroitel'stve sooruzhenii i ustroistv svyazi. Moskva, Gos.energ.  
izd-vo, 1959. 103 p. (MIRA 13:4)

1. Russia (1923- U.S.S.R.) Ministerstvo stroitel'stva elektro-  
stantsiy. Tekhnicheskoye upravleniye. 2. Tekhnpraveniye Mi-  
nisterstva elektrostantsiy (MES) (for Barkov). 3. Vsesoyuznyy  
nauchno-issledovatel'skiy institut energetiki (VNIIE) (for Bykhovskiy,  
Pavlychev, Sokolov). 4. Gosudarstvennyy trest po organizatsii i ratsio-  
nalizatsii elektrostantsiy (ORGRES) (for Grzhibovskiy). 5. Leningrad-  
skoye rayonnoye upravleniye energokhozyaystva (Lenenergo) (for Rabot-  
nova). 6. Moskovskoye rayonnoye upravleniye energokhozyaystva (for  
Solov'yev, Khersonskiy).

(Electric engineering--Safety measures)  
(First aid in illness and injury)

**"APPROVED FOR RELEASE: Tuesday, August 01, 2000**

**CIA-RDP86-00513R001343**



**APPROVED FOR RELEASE: Tuesday, August 01, 2000**

**CIA-RDP86-00513R0013438**

*RABOTNOVA, T. N.*

**RABOTNOVA, T. N.** kand. tekhn. nauk; SIZOVA, L.A., inzh.

New types of industrial phototubes. Svetotekhnika 4 no.1:3-11 Ja  
'58. (MIRA 11:1)

1. Moskovskiy elektrolampovyy zavod.  
(Photoelectric cells)

RABOTNOVA, T.N., kand.tekhn.nauk; KONONCHUK, L.V., inzh.

Data on parameters and technical characteristics of phototubes with multislotted cathodes. Svetotekhnika 5 no.9:1-7  
S '59. (MIRA 13:2)

1. Moskovskiy elektrolampovyy zavod.  
(Photoelectric cells)



RABOTSKIY, G.Ya., kapitan med.sluzhby

Eliminating a focus of infectious nephrosonephritis. Voen.-med.  
shur. no.12:41-42 D'55 (MIRA 12:1)  
(HEMORRHAGIC FEVER)

17(14)

SOV/177-58-11-43/50

AUTHOR: Rabotskiy, G.Ya., Captain of Medical Corps

TITLE: The Application of Novikov's Antiseptic Liquid in Tank Units

PERIODICAL: Voenno-meditsinskiy zhurnal, 1958, Nr 11, p 88 (USSR)

ABSTRACT: The author writes that for 2 years Novikov's anti-septic liquid has been used in tank units for treating fresh wounds in order to prevent purulent processes. About 5 minutes after the liquid has been applied to the injured part of the skin and the adjacent surface, a dense elastic film develops which protects the wound from external influences. The application of Novikov's antiseptic liquid reduced the sick rate due to purulent processes by half within the 1954/56 period.

Card 1/1

RABOTTA' BYE E

21909

Prostoyev (pyeryedobaya). Sakhar. Prom-St' 1949, No. 8, C-1-3

SO. LETOPIS' NO. 34

L-14255-63 EWT(1)/FBD/FCC(w)/BDS/EEC-2/EEC-2/ES(v) AFFTC/APGC/ASD/  
 ESD-3 Pa-4/Pi-4/Pj-4/Pk-4/Pl-4/Pm-4 PR-2/WR

ACCESSION NR: AP3004417

S/0020/63/151/004/0811/0814 109  
98

AUTHOR: Kotel'nikov, V. A.; Dubrovin, V. M.; Dubinskiy, B. A.; Kislik, M. D.;  
Kuznetsov, B. I.; Petrov, G. M.; Rabotyagov, A. P.; Rzhiga, O. N.; Shakhovskoy,  
A. M.

TITLE: Radar observations of the planet Mars in the Soviet Union

SOURCE: AN SSSR. Doklady\*, v. 151, no. 4, 1963, 811-814

TOPIC TAGS: Mars radar observations, Mars reflected-signal spectrum, Mars  
 Doppler-frequency shift, Mars rotation time, Mars reflection coefficient

ABSTRACT: Radar observations of Mars' northern hemisphere from 14°30' to 14°  
 latitude and from 310 to 360° and from 0 to 140° longitude were carried out in  
 the Soviet Union on 6-10 February 1963 at a frequency of approximately 700 Mc.  
 The polarization of radiated waves was circular, with antenna polarization  
 changing to linear during reception. The energy of the signal incident on the  
 visible surface of Mars was 1.2 w. Both transmission and reception lasted  
 approximately 11 minutes. The signal had the shape of alternate rectangular  
 transmissions and intervals of a duration of 4.096 sec each, at two frequencies

Card 1/42

L 14255-63

ACCESSION NR: AP3004417

10

differing by 62.5 cps. The signals were recorded on a magnetic tape together with a 2000-cps oscillation, which served as a scale. Receiver sensitivity was calibrated before and after operation on the basis of Cassiopeia-A discrete-source radiation. The correction for frequency shift due to the Doppler effect was regulated by an electronic digital frequency meter. In all, 99 observations were made, and the signal reflected from Mars was reliably detected on the nights of February 7-8 (28 observations) and February 8-9 (20 observations). The results of spectral analysis of these 48 observations, carried out with 4-cps filters and a storage time of 8.5 hr, are shown in Fig. 1 of the Enclosure. In the reflected signal spectrum, there is a narrowband component whose energy exceeded by 4 times the RMS measurement error caused by noise. The average reflection coefficient, determined as the ratio of the reflected-signal energy to received-signal energy under the assumption that Mars was an even, ideally conductive sphere, was found to be 7%. "The authors thank L. V. Apraksin, V. O. Voytov, M. M. Dedlovskiy, G. A. Zhurkina, A. M. Lukin, M. M. Sinodkin, B. A. Stepanov, A. V. Frantsesson, D. M. Tavetkov, and I. A. Sharabarin for their assistance." Orig. art. has: 3 figures, 1 table, and 1 formula.

Association: Inst. of Radio and Engineering and Electronics

Card 2/42

RABOV, STEFAN

Rabov, Stefan Uchebnik po telefona tehnika za VII klas na mekhano-elektrotekhnicheskite gimnazii. Sofiya, Narodna prosveta, 1951. 215 p. (Principles of telephone constructions and usage; a textbook for mechanicotechnical high schools)

SO: Monthly List of East European Accessions, L C, Vol. 3 No. 1 Jan. '54 Uncl.

RABOV, STEFAN

"Uchebnik po avtomatichna telefonija (avtomatichni telefonni tsentrali) za V kurs na otdel slabi tokove pri tehnikumite po elektrotehnika. Sofiya (Narodna prosveta) 1952. 155 p. (Automatic telephony; automatic telephone exchanges; a textbook for the fifth year of electrotechnical schools. Illus.)

SC: Monthly List of East European Accessions, L.C. Vol. 2 No. 7, July 1953, Uncl.

RABOV, S.

"Device for measuring the time for starting the electromagnetic relay."

p.13 (Tekhnika, Vol. 7, no. 2, 1958, Sofia, Bulgaria)

Monthly Index of East European Accessions (EEAI) LC, Vol. 7, No. 8, August 1958



RABOV St.; EMANUILOV, Emanuel; PEICHEV, Veselin

Electric parameters of some compensation and bridge speech systems of the TsB telephone apparatus. Godishnik mash elekt 12 no. 2:107-120 '62 [publ. '63].

RABOV, Stefan, inzh.

Construction of universal teletypes. Tekhnika Bulg 12 no.5:  
4-7 '63.

RABOV, V.K., mladshiy nauchnyy sotrudnik.

Morphological changes in the hip joint following an experimental surgical deepening of the acetabulum. Ortop. travm. i protez. 24 no.2:27-33'F'63. (MIRA 16:10)

1. Iz otdeleniya ortopedii vzroslykh (zav. - dotsent A.Ya. Demidov) i patologoanatomicheskoy laboratorii (zav. - kand. med. nauk L.S.Monogenova) Saratovskogo instituta travmatologii i ortopedii (dir. - dotsent Ya.N.Rodin). Adres avtora: Saratov, ul. Chernyshevskogo d. 148, Institut travmatologii i ortopedii.

\*

KRONROD, A. S., RABOVA, Z. S., and SUKHATSHEVA, N. M.

"Two Problems of Non-Diffusional Calculations for Absorbing Blocks."

paper to be presented at 2nd UN Intl. Conf. on the peaceful uses of Atomic Energy, x Geneva, 1 - 13 Sep 58.

RABOVIK, JA. J.

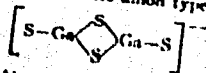
"On the Chemistry of Gallium I. On the Acid Properties of Gallium Hydroxide."  
Ivanov-Emin, B. N. and Rabovik, Ja. J. (p. 781)

SO: Journal of General Chemistry (Zhurnal Obshchei Khimii) 1944, Volume 14, no. 7-8.

Chemistry of gallium. II. Hydroxygallates of alkali and alkaline earth metals. B. N. Ivanov-Emin and Ya. I. Rabovik (M. V. Lomonosov Inst. Fine Chem. Technol., Moscow); *J. Gen. Chem. (U.S.S.R.)* 17, 1001-9 (1947) (in Russian); *cf. C.A.* 39, 6155. —Addn. of excess freshly pptd.  $\text{Ga}(\text{OH})_3$  to 10 ml. satd.  $\text{LiOH}$ , boiling, filtration from undissolved  $\text{Ga}(\text{OH})_3$  and evapn. to 1.5-2 ml. gave crystals which, after washing with alc. and short drying, analyzed  $\text{Li}_2\text{O} \cdot \text{Ga}_2\text{O}_3 \cdot 12\text{H}_2\text{O}$  or  $[\text{Li}(\text{H}_2\text{O})_4][\text{Ga}(\text{OH})_4]$ , hexagonal plates of d. 2.17-2.18,  $n_D$  1.473. The compd. loses  $\text{H}_2\text{O}$  even at room temp.; over  $\text{H}_2\text{SO}_4$ , it loses  $4\text{H}_2\text{O}$ ; at  $110^\circ$ , 3 hrs., it loses  $6\text{H}_2\text{O}$  more; these dehydrations evidently result in  $[\text{Li}(\text{H}_2\text{O})_3][\text{Ga}(\text{OH})_4]$  and  $\text{Li}_2\text{O} \cdot \text{Ga}_2\text{O}_3 \cdot 2\text{H}_2\text{O}$ , resp. Further heating results in the final, irreversible dehydration to  $\text{Li}[\text{GaO}_2]$ ; fusing with  $\text{Li}_2\text{SO}_4$  at  $1000-1100^\circ$  for 20 hrs. gives rounded crystals, hardly sol. in  $\text{H}_2\text{O}$ . (2) Soln. of  $\text{Ga}(\text{OH})_3$  in excess  $\text{NaOH}$  gives a product with  $\text{Na}:\text{Ga} = 1:1$ . With a deficit of  $\text{NaOH}$ , evapn. gives a sirupy mass which can only be made to solidify over  $\text{P}_2\text{O}_5$  or by boiling with abs. alc. for 3 hrs.; the latter operation gives a product of the compn.  $\text{Na}[\text{Ga}(\text{OH})_4]$  but not in well-formed crystals. Calcination of finely ground  $\text{Ga}_2\text{O}_3$  with  $\text{Na}_2\text{CO}_3$  in a Pt crucible at  $850-1000^\circ$ , 15-30 min., gives  $\text{Na}[\text{GaO}_2]$ ; excess carbonate remains unchanged. The Na metagallates dissolve in  $\text{H}_2\text{O}$  easily without significant hydrolysis; they are easily hydrated to  $\text{Na}[\text{Ga}(\text{OH})_4]$ , which is reversibly dehydrated at  $140^\circ$ , 40 min.; thermography showed that this dehydration takes place at  $117-20^\circ$ ; there also appears an as yet unexplained endothermic effect at  $170^\circ$ . (3)  $\text{K}[\text{Ga}(\text{OH})_4]$  was prepd. by dissolving 1.5 g.  $\text{Ga}(\text{OH})_3$  in 10 ml. 50%  $\text{KOH}$  and long evapn. over  $\text{H}_2\text{SO}_4$ ; monoclinic or triclinic crystals, d. 2.36,  $n_D$  1.500,  $n_D$  1.485. Heating to  $300^\circ$  results in  $\text{K}[\text{GaO}_2] \cdot 1.5\text{H}_2\text{O}$ , heating to  $400^\circ$  in  $\text{K}[\text{GaO}_2] \cdot \text{H}_2\text{O}$ . The last  $\text{H}_2\text{O}$  is hard to eliminate at higher temp. (4) Pure  $3\text{CaO} \cdot \text{Ga}_2\text{O}_3 \cdot 12\text{H}_2\text{O}$  or  $\text{Ca}_3[\text{Ga}(\text{OH})_4]_2 \cdot 6\text{H}_2\text{O}$  was obtained by adding a soln. of  $\text{Na}[\text{Ga}(\text{OH})_4]$  to a boiling satd. soln. of  $\text{Ca}(\text{OH})_2$ ; hexagonal plates, d. 2.38,  $n_D$  1.561,  $n_D$  1.546. Addn. of a soln. of  $\text{Na}[\text{Ga}(\text{OH})_4]$  to a cold satd. soln. of  $\text{Ca}(\text{OH})_2$  gives fine cryst. spherulites of d. 2.35, mean  $n$  1.565, analyzing  $4\text{CaO} \cdot \text{Ga}_2\text{O}_3 \cdot 13.5\text{H}_2\text{O}$ . No pptn. occurs on adding  $\text{Na}[\text{Ga}(\text{OH})_4]$  to 20%  $\text{CaCl}_2$ ; however, addn. of  $\text{NH}_4\text{OH}$  does ppt.  $4\text{CaO} \cdot \text{Ga}_2\text{O}_3 \cdot 21\text{H}_2\text{O}$  (analogous to the Al compd.), fine spherulitic crystals. Reaction between  $\text{CaCl}_2$  and warm  $\text{K}[\text{Ga}(\text{OH})_4]$  gives impure cubic crystals strongly contaminated with  $\text{Ca}(\text{OH})_2$  and resembling  $\text{Ca}_3[\text{Al}(\text{OH})_4]_2$ . (5) No pptn. occurs between dil.  $\text{K}[\text{Ga}(\text{OH})_4]$  and dil.  $\text{SrCl}_2$  but addn. of the latter to hot concd.  $\text{Sr}(\text{OH})_2$  ppts.  $\text{Sr}_2[\text{Ga}(\text{OH})_4]_2$ , rhombic dodecahedra, d. 1.54,  $n$  1.025. III. Thiogallates of alkali metals. *Ibid.* 1247-52. —(1)  $\text{Li}_2\text{CO}_3$  (or  $\text{Na}_2\text{CO}_3$ ) in equimol. mixt. with  $\text{Ga}_2\text{O}_3$ , heated in a stream of dry  $\text{H}_2\text{S}$ , 2-3 l./hr., 2 hrs. at  $800^\circ$ , then 4 hrs. at  $900^\circ$ , and cooled under  $\text{H}_2\text{S}$ , gave light-brown masses with distinct cryst. structure;  $\text{Li}[\text{GaS}_4]$ , brown-red, m.  $1020^\circ \pm 5^\circ$ , apparently rhombic plates and prisms, highly birefringent,  $n > 1.78$ , d. 2.38, does not react with boiling  $\text{H}_2\text{O}$ ;  $\text{Na}[\text{GaS}_4]$ , dark yellow, m.  $952^\circ \pm 2^\circ$ , tetragonal prisms, highly birefringent,  $n > 1.78$ , d. 2.36, partly sol. in  $\text{H}_2\text{O}$ , going over into  $\text{Na}[\text{GaS}_4] \cdot 2\text{H}_2\text{O}$  on moistening and drying over  $\text{CaCl}_2$ . (2)  $\text{Ga}_2\text{O}_3$  was heated with 8 parts  $\text{K}_2\text{CO}_3$  ( $\text{Rb}_2\text{CO}_3$ ,  $\text{Cs}_2\text{CO}_3$ ) and 8 parts S under  $\text{CO}_2$ , 15 min. at  $450^\circ$ , then 2-3 min. at  $1100^\circ$ , leached with  $\text{H}_2\text{O}$ , and the insol. thiogallates were washed with  $\text{H}_2\text{O}$  and alc. and dried over  $\text{CaCl}_2$ ;  $\text{K}[\text{GaS}_4]$ , tetragonal, m.  $965^\circ \pm 2^\circ$ , yellow, medium birefringence,  $n > 1.74$ , does not react with  $\text{H}_2\text{O}$ ;  $\text{Rb}[\text{GaS}_4]$ , yellow-brown, tetragonal, m.  $960^\circ \pm 2^\circ$ , highly birefringent,  $n > 1.78$ , d. 3.42;  $\text{Cs}[\text{GaS}_4]$ , rhombic, light yellow to bright red pleochroic, m.  $960^\circ \pm 5^\circ$ , highly birefringent,  $n > 1.78$ , d. 3.56, does not react with  $\text{H}_2\text{O}$ . Li and Na thiogallates cannot be prepd. by this method, only by (1). (3) All thiogallates are stable in

[Ga(OH)<sub>4</sub>] to a boiling satd. soln. of Ca(OH)<sub>2</sub>; hexagonal plates, d. 2.38, n<sub>D</sub> 1.561, n<sub>D</sub> 1.546. Addn. of a soln. of Na[Ga(OH)<sub>4</sub>] to a cold satd. soln. of Ca(OH)<sub>2</sub> gives fine cryst. spherulites of d. 2.35, mean n 1.565, analyzing 4CaO.Ga<sub>2</sub>O<sub>3</sub>.13.5H<sub>2</sub>O. No pptn. occurs on adding Na[Ga(OH)<sub>4</sub>] to 20% CaCl<sub>2</sub>; however, addn. of NH<sub>4</sub>OH does ppt. 4CaO.Ga<sub>2</sub>O<sub>3</sub>.21H<sub>2</sub>O (analogous to the Al compd.), fine spherulitic crystals. Reaction between CaCl<sub>2</sub> and warm K[Ga(OH)<sub>4</sub>] gives impure cubic crystals strongly contaminated with Ca(OH)<sub>2</sub> and resembling Ca<sub>3</sub>[Al(OH)<sub>4</sub>]<sub>2</sub>. (5) No pptn. occurs between dil. K[Ga(OH)<sub>4</sub>] and dil. SrCl<sub>2</sub> but addn. of the latter to hot concd. Sr(OH)<sub>2</sub> ppts. Sr<sub>2</sub>[Ga(OH)<sub>4</sub>]<sub>2</sub>, rhombic dodecahedra, d. 1.54, n 1.025. III. Thiogallates of alkali metals. *Ibid.* 1247-52. —(1) Li<sub>2</sub>CO<sub>3</sub> (or Na<sub>2</sub>CO<sub>3</sub>) in equimol. mixt. with Ga<sub>2</sub>O<sub>3</sub>, heated in a stream of dry H<sub>2</sub>S, 2-3 l./hr., 2 hrs. at 800°, then 4 hrs. at 900°, and cooled under H<sub>2</sub>S, gave light-brown masses with distinct cryst. structure; Li-[GaS<sub>4</sub>], brown-red, m. 1020° ± 5°, apparently rhombic plates and prisms, highly birefringent, n > 1.78, d. 2.38, does not react with boiling H<sub>2</sub>O; Na<sub>2</sub>[GaS<sub>4</sub>], dark yellow, m. 952° ± 2°, tetragonal prisms, highly birefringent, n > 1.78, d. 2.36, partly sol. in H<sub>2</sub>O, going over into Na-[GaS<sub>4</sub>].2H<sub>2</sub>O on moistening and drying over CaCl<sub>2</sub>. (2) Ga<sub>2</sub>O<sub>3</sub> was heated with 8 parts S under CO<sub>2</sub>, 15 min. at 450°, then 2-3 min. at 1100°, leached with H<sub>2</sub>O, and the insol. thiogallates were washed with H<sub>2</sub>O and alc. and dried over CaCl<sub>2</sub>; K<sub>2</sub>[Ga<sub>2</sub>S<sub>4</sub>], tetragonal, m. 965° ± 2°, yellow, medium birefringence, n > 1.74, does not react with H<sub>2</sub>O; Rb<sub>2</sub>[Ga<sub>2</sub>S<sub>4</sub>], yellow-brown, tetragonal, m. 960° ± 2°, highly birefringent, n > 1.78, d. 3.42; Cs<sub>2</sub>[Ga<sub>2</sub>S<sub>4</sub>], rhombic, light yellow to bright red pleochroic, m. 960° ± 5°, highly birefringent, n > 1.78, d. 3.56, does not react with H<sub>2</sub>O. Li and Na thiogallates cannot be prepd. by this method, only by (1). (3) All thiogallates are stable in

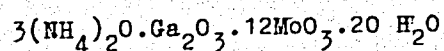
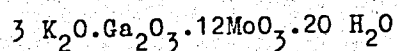
air; they are decompd. by strong acids with evolution of H<sub>2</sub>S. (4) By the thiogallate anion type,



Ga differs from Al and shows an analogy with In and Tl, evidently owing to the 18-electron shell of the ion, in contrast to the 8 outer electrons of Al<sup>+++</sup>.

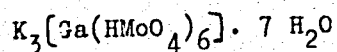
N. Thon

·AUTHORS: Ivanov-Emin, B. N., Rabovik, Ya. I. SOV/78-3-10-35/35  
?  
TITLE: Hexamolybdenum Gallates of Alkali Metals ( Geksamolibdato-  
gallaty shchelochnykh metallov)  
PERIODICAL: Zhurnal neorganicheskoy khimii 1958, Vol 3, Nr. 10,  
pp 2429-2432 (USSR)  
ABSTRACT: The production of potassium and ammoniumhexamolybdenum  
gallate was carried out in the weakly acid medium when solutions  
formed by potassium molybdate ( ammonium molybdate) and  
gallium sulfate were heated. The compounds have the following  
composition:



It follows from the analyses of the molecular conductivity  
that alkalihexamolybdenum gallates consist of four ions. The  
following coordination structure was suggested for potassium  
and ammoniumhexamolybdenum gallates:

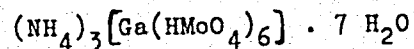
Card 1/2





Hexamolybdenum Gallates of Alkali Metals

SOV/78-3-10-35/35



When dried, hexamolybdenum gallates of potassium and ammonium lose seven mol water at 110-120° C. The water of constitution is removed not before a temperature of 250° C has been reached. These investigations show that hexamolybdenum gallates of potassium and ammonium are analogous to the corresponding aluminum compounds. There are 1 figure, 3 tables, and 9 references, 3 of which are Soviet.

SUBMITTED: January 20, 1958

card 2/2

USCOMM-DC-60758

5(2)

SOV/78-4-10-9/40

AUTHORS:

Ivanov-Emin, B. N., Rabovik, Ya. I.

TITLE:

Complex Compounds of Halides of Gallium and Indium With Pyridine

PERIODICAL:

Zhurnal neorganicheskoy khimii, 1959, Vol 4, Nr 10, pp 2228-2236 (USSR)

ABSTRACT:

In the introduction the authors mention the complex compounds of the halides of Ga, In and Th with ammonia, ethylene diamine and urea hitherto known. The ethylene diamine and ammonia-ethylene diamine compounds were described by A. P. Kochetkova and V. G. Tronev (Ref 2) who have also synthesized compound  $\text{InCl}_3 \cdot 4\text{NH}_3$  (Ref 4). Preliminary experiments showed that the formation of pyridine complex compounds of gallium from aqueous solutions is not possible. The synthesis was therefore carried out in alcoholic or ethereal solution. The following compounds were obtained for the first time:  $\text{GaCl}_3 \cdot \text{C}_5\text{H}_5\text{N}$ ,  $\text{GaCl}_3 \cdot 2\text{C}_5\text{H}_5\text{N}$ ,  $\text{GaBr}_3 \cdot 3\text{C}_5\text{H}_5\text{N}$ ,  $\text{GaI}_3 \cdot 3\text{C}_5\text{H}_5\text{N}$ ,  $\text{InBr}_3 \cdot 3\text{C}_5\text{H}_5\text{N}$  and the  $\alpha$ -picoline complex compounds  $\text{InHal}_3 \cdot 3\text{C}_5\text{H}_4\text{CH}_3\text{N}$ . The analyses of the preparations, the variation of pH on dilution and titration

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SOV/78-4-10-9/40

Complex Compounds of Halides of Gallium and Indium With Pyridine

with KOH, the melting points and the molecular electrical conductivities are given and the crystals shown in a picture. The absence of the tripyridine compounds of  $\text{GaCl}_3$  and  $\text{InJ}_3$  and the low stability of the  $\text{GaCl}_3$ -dipyridine complex is explained by the trans-effect according to I. I. Chernyayev, on suggestion of B. V. Nekrasov. The indium complexes are completely hydrolyzed by water, whereas the gallium complexes form acido complexes without noticeable hydrolysis. The aqueous solutions are of acid reaction, their electrical conductivity ranks in the decreasing order of  $\text{Cl} \rightarrow \text{Br} \rightarrow \text{J}$ . By determination of the molecular weight of the gallium-halogen complexes they were proved to be monomer when dissolved in benzene. There are 3 figures, 8 tables, and 9 references, 3 of which are Soviet.

SUBMITTED: July 2, 1958

Card 2/2

IVANOV-EMIN, B.N.; NISEL'SON, L.A.; RABCVIK, Ya, I.; LARIONOVA, L.Ye.

Complex compounds of gallium halides with o-phenanthroline. Zhur.  
neorg.khim. 6 no.5:1142-1146 My '61. (MIRA 14:4)

(Gallium compounds) (Phenanthroline)

BAECVIK, Ya.I.; ORESHKINA, O.M.; GORBACHEVA, Ye.G.; KUZNETSOVA,  
L.A., red.

[Laboratory manual of qualitative analysis for correspondence-  
course students of the faculties of agronomy and zootechny]  
Rukovodstvo k prakticheskim zaniatiyam po kachestvennomu ana-  
lizu dlia studentov-zaochnikov agronomicheskogo i zootekhniche-  
skogo fakul'tetov. Moskva, 1963. 170 p. (MIRA 17:8)

USSR / Human and Animal Morphology - Digestive Tract S

Abs Jour : Ref: Zhur. - Biol., No. 22, 1958, No. 101432

Author : Rotenberg, Ya. A.; Rabovskaya, A. Ye.

Inst : -

Title : Surgical Anatomy in Injuries of the Organs of  
the Peritoneal Cavity.

Orig Pub : In the collection: Neotlozhnaya khirurgiya or-  
ganov bryushnoy polosti. Kiev, Gosmedizdat,  
UkrainianSSR, 1955, 225-232.

Abstract : No abstract.

Card 1/1

RABOVSKAYA, A. Ye. Cand Med Sci -- (diss) "Consequences of gunshot trauma of the stomach in connection with medical and labor expertise." Khar'kov, 1957. 13 pp 22 cm. (Min of Health UkSSR. Khar'kov State Med Inst), 100 copies (KL, 13-57, 101)

507/81-59-8-28434

Translation from: Referativnyy zhurnal, Khimiya, 1959, Nr 8, p 407 (USSR)

AUTHORS: Rabovskaya, N.S., Kucherovskaya, V.N.

TITLE: An Investigation of the Process of Esterification of Ethylene Glycol by Acetic Acid in the Presence of Cationites as Catalysts

PERIODICAL: Tr. po khimii i khim. tekhnol., 1958, Nr 1, pp 190 - 191


ABSTRACT: The kinetics of the esterification process of ethylene glycol (I) by acetic acid (II) in the presence of KU-2 cation-exchange resin has been studied. It has been established that the quantity of cationite starting with 0.5% of the weight of the reaction mass practically does not affect the process, and a 9-fold application of one and the same sample of KU-2 resin does not decrease the activity of the catalyst (the activity which is spent nearly completely after the 11th cycle is restored after 6 days). In the absence of the catalyst the monoester of I (chiefly) is formed, in the presence of KU-2 (or  $H_2SO_4$ ) the diester. The reaction rate in the presence of  $H_2SO_4$  is somewhat higher than in the presence of KU-2, but in

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SOV/81-59-8-2843a

An Investigation of the Process of Esterification of Ethylene Glycol by Acetic Acid  
in the Presence of Cationites as Catalysts

the case of conducting the reaction with the distillation of the reaction water (in  
the form of an azeotropic mixture with  $C_6H_6$ ) these rates practically coincide, ex-  
ceeding by 3 - 4 times the reaction rate in the absence of a catalyst. 

O.Ch.

Card 2/2

RABOVSKAYA, U.S.; KUCHEROVSKAYA, V.N.

Production of ethylene glycol diacetate in the presence of cation-exchanging resins. Zhur.prikl.khim. 31 no.11:1757-1759 N '58.  
(MIRA 12:2)

(Ethanediol)

(Base-Exchanging compounds)

5.3200  
5.1190

66859

SOV/76-33-11-14/47

5(4)

AUTHOR:

Rabóvskaya, N. S.

TITLE:

Use of Ion-exchange Resins as Catalysts in the Organic Synthesis

PERIODICAL:

Zhurnal fizicheskoy khimii, 1959, Vol 33, Nr 11, pp 2467-2470 (USSR)

ABSTRACT:

The author checked the applicability of ion exchangers as catalysts in the esterification of ethylene glycol with acetic acid (Ref 9). At first, three cation exchangers, KU-1 and KU-2 (sulfo cation exchangers) and SG-1<sup>1</sup> (carboxyl cation exchanger) were investigated. As the catalytic activity decreased in the order KU-2 > KU-1 > SG-1 (Fig 1), the further experiments were carried out with KU-2. In the presence of KU-2 and sulfuric acid ethylene glycol diacetate forms, while without catalyst the reaction only proceeds up to the monoester (Table, Fig 2). The esterification could be accelerated 3-4-times only with KU-2 and thus proceeded as rapidly as in the presence of sulfuric acid alone (as a catalyst). KU-2 loses its catalytic activity already after 11 working periods but regains it after a 6-day storage. Reed and Wenzel (Ref 10), Hamilton and Metzner

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66859

SOV/76-33-11-14/47

Use of Ion-exchange Resins as Catalysts in the Organic Synthesis

(Ref 11) carried out a gaseous-state hydration of ethylene oxide with cation exchangers as catalysts. In the present case the reaction took place under less rigorous conditions, and it was found that, already at 0°, ethylene oxide in the presence of ion exchangers is capable of adding water and low alcohols, in which case only the cation exchangers KU-1 and KU-2 (Figs 3,4) proved effective, while the anion exchangers EDE-10 and AV-16 were ineffective. A special advantage of the catalysts investigated in the two above reactions was their selectivity, i.e. they accelerate the main reaction considerably more than the side reactions, while sulfuric acid equally accelerates both the main and the side reactions. Finally the author expresses his gratitude to G. A. Razuvayev for helpful advice. There are 5 figures, 1 table, and 11 references, 1 of which is Soviet.

ASSOCIATION: Tsentral'naya laboratoriya zavoda "Zavodstroy", g. Dzerzhinsk (Central Laboratory of the Plant "Zavodstroy", Town of Dzerzhinsk)

Card 2/2

KOGAN, L.M.; RABOVSKAYA, N.S.; VOL'FKOVICH, S.I., akademik

Radiolysis of tetrachloroethylene and hexachlorobutadiene.  
Dokl. AN SSSR 157 no.1:127-130 JI '64 (MIRA 17:8)

1. Moskovskiy gosudarstvennyy universitet im. M.V. Lomonosova  
i Vsesoyuznyy nauchno-issledovatel'skiy institut khimicheskikh  
sredstv zashchity rasteniy.

RABOVSKAYA, N.S.; KOGAN, L.M.; NIKOLAYEVA, A .A.

Radiolysis of some unsaturated carbon chlorides. Vest. Mosk.  
un. Ser. 2:Khim. 20 no.4:42-43 J1-Ag '65. (MIRA 18:10)

1. Kafedra khimicheskoy tekhnologii Moskovskogo gosudarstvennogo  
universiteta.

RAZUVAYEV, G.A.; SANGALOV, Yu.A.; MENSKER, K.S.; KOGAN, L.M.; RABOVSKAYA, N.S.

Initiation of vinyl chloride polymerization by reactions between  
lower unsaturated chlorocarbons and triethylaluminum. Dokl. AN SSSR  
160 no.1:143-144 Ja '65. (MIRA 18:2)

1. Moskovskiy gosudarstvennyy universitet. 2. Chlen-korrespondent  
AN SSSR (for Razuvayev).

KOGAN, I.M.; ROZHKOVA, N.G.; RABOVSKAYA, N.S.

Extensive chlorination of piperylene. Zhur.prikl.khim. 38 no.6:1315-  
1320 Je '65. (MIRA 18:10)

I. Vsesoyuznyy nauchno-issledovatel'skiy institut khimicheskikh  
sredstv zashchity rasteniy.



ACC: MR: AP5028281 (A)

SOURCE CODE: UR/0020/65/165/002/0337/0340

AUTHOR: Rabovskaya, N. S.; Kogan, L. M.

ORG: Moscow State University im. M. V. Lomonosov (Moskovskiy gosudarstvennyy universitet); All-Union Scientific Research Institute on Plant Protection by Chemistry (Vsesoyuznyy nauchno-issledovatel'skiy institut khimicheskikh sredstv zashchity rasteniy)

TITLE: Radiolysis of hexachlorocyclopentadiene

SOURCE: AN SSSR. Doklady, v. 165, no.2, 1965, 337-340

TOFIG TAGS: x ray irradiation, ethylene, butadiene

ABSTRACT: Radiolysis of hexachlorocyclopentadiene proceeded analogously to that of tetrachloroethylene or hexachlorobutadiene. Twenty ml. of hexachlorocyclopentadiene was placed in a Mo-glass ampule and the ampule was sealed without the removal of air. The radiolysis of hexachlorocyclopentadiene was performed at 20C, using  $0.66 \times 10^{22}$  -  $15.7 \times 10^{22}$  ev/ml. doses at the  $1.95 \times 10^{16}$  -  $3.82 \times 10^{16}$  ev/ml. sec. rate. With an increase of irradiation dose, the conversion proceeded fast at first and then became slower. After distilling the residue of hexachloropentadiene, the reaction products were separated by rectification in a vacuum with a subsequent freezing-out of crystals which formed in different fractions while standing for 10-15 days. The

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UDC: 547.514.72

ACC NR: AP5028281

products of radiolysis were: 20-30% yield of octachlorocyclopentene, m. 41.3-41.50; ~50% yield of a viscous red oil of  $C_{10}Cl_{10}$  composition, mol. weight 483, b. 180 - 830,  $n_D^{20}$  1.6049,  $d_4^{20}$  1.8085; 1 - 2% yield of yellowish crystals, having a mol. weight of 458 (cryoscopic determination) or 485 (isothermal distillation) and an absorption maximum at 273 and 320  $m\mu$  with the absorbance equal to 5000 and 32000, respectively; and traces of a crystalline compound of the composition of  $C_{15}Cl_{12}$ , m. 340 - 20, having an absorption maximum at 268 and 278  $m\mu$ . Molecular  $Cl_2$  did not form. Autocondensation of the hexachlorocyclopentadiene was not observed. The paper was presented by Academician S. I. Vol'kovich, 6 Apr. 65. Orig. art. has: 3 figs. and 3 formulas.

SUB CODE: 20/ SUBM DATE: 18Mar65/ ORIG REF: 003/ OTH REF: 005

Card 2/2

OGORODNIKOV, S.K.; KOROL', N.G.; RABOVSKAYA, R.V.

Liquid - vapor and liquid - liquid equilibrium in the binary systems formed by some perfluoroorganic compounds and C<sub>5</sub> and C<sub>6</sub> hydrocarbons. Zhur. prikl. khim. 37 no.8:1786-1790 Ag '64.  
(MIRA 17:11)

OROGORNIKOV, S.K.; RABOVSKAYA, R.V.; KOROL', N.G.; PRESMAN, B.I.

Azeotropy in binary systems formed by perfluorotriethylamine  
and C5 and C6 hydrocarbons. Zhur.prikl.khim. 37 no.7:1597-  
1601 J1 '64. (MIRA 18:4)

GUTMAN, Isif Moiseyevich; PICHAK, Fedor Ivanovich; RABOVSKIY, A.V., inzh.,  
retsensent; SOBOLEV, L.A., inzh., retsensent; BUSHUYEV, N.M.,  
kand.tekhn.nauk, red.; DUGINA, M.A., tekhn.red.

[Tractors and motor vehicles; manual for workers of collective  
farms] Traktory i avtomobili; spravochnik kolkhoznogo rabotnika.  
Moskva, Gos.nauchno-tekhn.izd-vo mashinostroit.lit-ry, 1960.  
163 p. (MIRA 13:9)

(Motor vehicles)

SOV/51-6-3-22/28

AUTHORS: Finkel'shteyn, A.I., Malachevskaya, F.L., Fisher, A.M.  
and Rabovskiy, B.G.

TITLE: A Simple Method of Preparation of Potassium Bromide Plates  
for Infrared Spectroscopy of Solids (Prostoy sposob  
prigotovleniya plastinok iz bromistogo kaliya dlya  
infrakrasnoy spektroskopii tverdykh tel)

PERIODICAL: Optika i Spektroskopiya, 1959, Vol 6, Nr 3, pp 415-417,  
(USSR)

ABSTRACT: The paper describes preparation of rectangular KBr or NaCl plates containing the substance to be investigated by infrared spectroscopy. The plates are prepared from dried (12-18 hours at 200°C) powders. A small amount (0.1-3%) of the investigated substance, also in powder form, was added to KBr or NaCl and ground in a porcelain mortar. The amount of the substance studied which is used depends on the spectral region to be investigated and the sensitivity and accuracy required. The plate is prepared using simple apparatus (figure). It consists of two Card 1/2 stainless-steel plungers (1 and 2) and a stainless-steel

SOV/51-6-3-22/28

A Simple Method of Preparation of Potassium Bromide Plates for Infrared Spectroscopy of Solids

ring (3). A plastic form (4) is placed on the lower plunger and filled with powder, which is then lightly compressed by means of a plastic piece 5. The form 4 and piece 5 are removed and the resultant thin rectangular plate is further compressed using the ring 3 and the upper plunger 2. It is necessary to apply 10-15 tons for several seconds or 5-7 tons for up to 30 minutes. The area of the plates produced is about  $1 \text{ cm}^2$  (20 x 5 mm). There is 1 figure and 3 references, of which 1 is German and 2 English.

SUBMITTED: June 24, 1958

Card 2/2

RABOVSKIY, B.G.

Temperature dependence of the rates of the reactions taking  
place during the chlorination of kaolin. Zhur.prikl.khim.  
33 no.3:540-546 Mr '60. (MIRA 13:6)  
(Kaolin) (Chlorination)



RABOVSKIY, B.G.; KOGAN, V.M.; FURMAN, A.A. (Moscow)

Possibility of applying a differential thermal method for studying  
the kinetics of chemical reactions. Zhur. fiz. khim. 38 no.12:2895-  
2898 D '64. (MIRA 18:2)

