

PROCESSES AND PROPERTIES INDEX

11d

Material requirements in the nutrient and energy relations of bacterial metabolism. V. N. Shaposhnikov and V. A. Semenova. *Mikrobiologiya* 18, 106-17(1949).— Fermentation of lactic acid (I) by *Betabact. breve* (II) is sluggish in peptone-Ca lactate medium, but addn. of 4 vol.-% of a 1% soln. of methylene blue increased cell growth 150%. AcOH:EtOH ratio 120%, and consumption of I 100% (Semenova, Dissertation, Univ. Moscow, 1947). In a phosphate-buffered peptone medium with 1% glucose, Ca lactate acts as a buffer. Fermentation continues longer with I and sugar than with sugar alone, but if pH rises above 6 the balance shifts from forming I to fermenting it. Early in the fermentation pyruvic acid and AcOH are formed much more copiously than I. Heterofermentative formation of I, e.g. by II, has a rapid initial stage (especially in neutral mediums) in which the oxidation reduction reactions of cell-building metabolism supply the entire H demand. Then participation of H in forming fermentation products increases greatly, and utilization of H is slower. Julian F. Smith

A.S.M.S.A. METALLURGICAL LITERATURE CLASSIFICATION

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
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SHAPOSHNIKOV, V. N.

USSR/Biology - Microbiology, Rubber Mar/Apr 52

"Growth of Bacteria on Natural Rubber," V. N. 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, Mycoccus ruber, Mycobact. globiforme, Mycobact, lacticola, Act. albus, and the yeast Torula rosea.

210710

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

Molds (Botany)

Development of molds on natural rubber.
Mikrobiologiya 21 No. 3 (1952)

Monthly List of Russian Accessions, Library of Congress, September 1952. UNCLASSIFIED.

SHAPOSHNIKOV, V.N.

Carbon dioxide in the metabolism of heterotrophic bacteria. Mikro-
biologiya 21, 735-47 '52. (MLRA 5:12)
CA 47 no.14:7036 '53)

1. Lomonosov State Univ., Moscow.

1. SHAPOSHNIKOV, V. N.
2. USSR (600)
4. Microorganisms
7. Invisible workmen. Znan. sila, No. 3, 1953.

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

SHAPOSHNIKOV, V.N.

On the book by S.⁴¹. Vinogradskiy, "Microbiology of the soil"

Microbiologia. Vol. 22. No. 3, P. 358, 1953.

SHAPOSHNIKOV, V.N., akademik.

Trend of research in the field of applied microbiology.
no.11:65-71 N '53.

Vest. AN SSSR 23
(MIRA 6:12)
(Microbiology)

SHAPOSHNIKOV, V.N., akademik, redaktor; KONDRAT'YEVA, E.N. [translator];
MEKHTIYEVA, V.L. [translator]; SIDOROV, B.N., redaktor; ENDEN, M.G.,
redaktor; SHAPOVALOV, V.I., tekhnicheskii redaktor

[Bacterial physiology. Translated from the English] Fiziologiya
bakterii. Perevod s angliiskogo E.N.Kondrat'evoi i V.L.Mekhtievoi.
Pod red. i s predisl. V.N.Shaposhnikova. Moskva, Izd-vo inostranoi
lit-ry, 1954. 547 p. (MIRA 7:11)
(BACTERIA)

SHAPOSHNIKOV, V.N.

NY

U.S.S.R.

Physiological nature of some bacterial fermentations in connection with evolution of functions. V. N. Shaposhnikov. *Izvest. Akad. Nauk S.S.S.R., Ser. Biol.* 1955, No. 3, 16-24. — A review, without literature references, in which it is pointed out that all types of fermentation that have been studied have 3 phases, the 2nd of which generally produces the industrially important substances.
G. M. Kosolapoff

SHAPOSHINOV, V.N., akademik, professor

Invisible helpers. Nauka i zhizn' 22 no.5:14-16 My '55
(MIRA 8:6)

1. Moskovskiy gosudarstvennyy universitet imeni M.V. Lomonosova.
(Microorganisms)

SHAPOSHNIKOV, V. N.

✓ Facts and their interpretation: V. O. Kalinenko, "Does
chemosynthesis occur in iron bacteria and in nitrifiers?"
V. N. Shaposhnikov. *Mikrobiologiya* 25, 497-507 (1950).
Polenic review; 23 references. Julian F. Smith

SHAPOSHNIKOV, V.N.; akademik; BEKHTEBEVA, M.N.; KOSHELEVA, N.A.; KHRZHANOV-
SKAYA, V.E.

Formation of proteolytic enzymes in bottom-cultures of Actinomycetes.
Dokl.AN SSSR 111 no.4:890-893 D '56. (MLRA 10:2)

1. Institut mikrobiologii Akademii nauk SSSR.
(ACTINOMYCES)

SHILOVNIKOV, V. N.

"Über Einige Wahrscheinliche Wege der Evolution Des Stoffweccels bei den Microorganismen," a paper presented at the Internptional Symposium on the Origin of Life, Moscow, 19-24 Aug 1957.

RABOTNOVA, I.L.; SHAPOSHNIKOV, V.M., akademik, otvetstvennyy redaktor;
VORONKEVICH, I.V., redaktor izdatel'stva; ZELENKOVA, Ye.V.,
tekhnicheskiy redaktor

[Role of physical and chemical factors (pH and rH₂) in the vital
activity of micro-organisms] Rol' fiziko-khimicheskikh uslovii
(pH i rH₂) v zhiznedeiatel'nosti mikroorganizmov. Moskva, Izd-vo
akad.nauk SSSR, 1957. 274 p. (MLRA 10:10)

(Micro-organisms)

(Hydrogen-ion concentration)

(Oxidation--Reduction reaction)

SHAPOSHNIKOV, Y.N.

Bacterial photosynthesis in relation to the evolution of metabolism.
Izv. AN SSSR. Ser. biol. no.6:674-688 N-D '57. (MIRA 10:12)

1. Moskovskiy gosudarstvennyy universitet im. M.V.Lomonosova.
(PHOTOSYNTHESIS) (BACTERIA)

SHAPOSHNIKOV, V.N., KONDRAT'YEVA, Ye.N., FEDOROV, V.D.

Studies on green sulfur bacteria of the genus Chlorobium.
[with summary in English]. Mikrobiologiya 27 no.5:529-535
S-0 '58 (MIRA 11:12)

1. Moskovskiy gosudarstvennyy universitet imeni M.V. Lomonosova.
(CHLOROBIVM, culture
thiosulfatophikum, isolation & properties (Rus))

SOV/20-121-2-46/53

AUTHORS: ~~Shagoshnikov, V. N.,~~ Member, Academy of Sciences, USSR,
Zajtseva, E. M., Orlova, E. V.

TITLE: A Synthetic Medium for the Biosynthesis of Oxytetracycline
(Terramycine) in the Culture of *Act. rimosus* LS-T-118
(Sinteticheskaya sreda dlya biosinteza oksitetratsiklina
(terramitsina) kul'turoy *Act. rimosus* LS-T-118)

PERIODICAL: Doklady Akademii nauk SSSR, 1958, Vol. 121, Nr 2, pp. 366-369
(USSR)

ABSTRACT: A precisely determined composition of the medium is very important in the investigation of many problems of the physiology of micro-organisms. The medium is to secure the formation of antibiotics in great quantities when they are investigated. Such a medium is not known for *Actinomyces rimosus* as most of the descriptions published do not meet such demands. Therefore the authors carried out the present investigation. The sowing material of the race mentioned in the title was grown on a synthetic medium of maize-extract ashes, and then on the medium described lateron. The tables 1 - 3 show the average results of three experiments. According to several variables with sev-

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SOV/20-111-2-40/55

A Synthetic Medium for the Biosynthesis of Oxytetracycline (Terramycin) in the Culture of *Act. rimosus* LS-T-113

eral substances the following composition was selected:
starch 3%, glucose 0,2%, $(\text{NH}_4)_2\text{SO}_4$ 0,1%, NH_3 0,1%, succinic acid 0,46%, K_2HPO_4 0,03%, $\text{MgSO}_4 \cdot 7\text{H}_2\text{O}$ 0,01%, $\text{FeSO}_4 \cdot 7\text{H}_2\text{O}$ 0,001%, MnCl_2 0,0008%. Distilled water was used. The pH is brought down to 7,3 - 7,4 prior the sterilization, and after it it is kept at about 6,7 - 6,9. The sterilization is carried out at 0,8 atmospheres of excess pressure for 30 minutes. The data characterizing the growth of terramycin producers are given in table 4. From it may be seen that the pH is maintained within a range (6,0 - 7,0) favorable for the development of the producers. Carbohydrates and nitrogen are utilized relatively quickly and they are almost completely used up toward the end of the fermentation. The quick growth of the producers corresponds to this phenomenon. The weight of the mycelium reaches its maximum after 70 - 80 hours and amounts to 750 - 850 mg-%. The absence of any spore formation is characteristic for this medium. An average of 1 500 - 1 900 $\mu\text{g}/\text{ml}$ oxytetracycline is formed on the medium recommended. After 24 hours of

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A Synthetic Medium for the Biosynthesis of Oxytetracycline (Terramycin) in
the Culture of *Act. rimosus* LS-T-118

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fermentation its accumulation in considerable quantities sets in,
and its concentration is highest after 100 - 120 hours. The
medium supplies stable reproducible results and therefore may
be used for physiological investigations of the biosynthesis
of oxytetracycline. There are 4 tables and 8 references, 5 of
which are Soviet.

ASSOCIATION: Vsesoyuznyy nauchno-issledovatel'skiy institut antibiotikov
(All-Union Scientific Research Institute for Antibiotics)

SUBMITTED: April 9, 1958

Card 3/3

SHAPOSHNIKOV, V.N.

[Physiology and biochemistry of micro-organisms] Fiziologiya i
biokhimiia mikroorganizmov. Moskva, Akad. nauk, In-t mikrobi-
logii, 1959. 287 p. (MIRA 14:8)

(MICRO-ORGANISMS)



SHAPOSHNIKOV, V.N.

Physiology of metabolism in micro-organisms is the basis for their effective use in industrial processes. Trudy Inst. mikrobiol. no. 6:5-12 '59. (MIRA 13:10)

1. Moskovskiy gosudarstvennyy universitet.
(BACTERIA) (FERMENTATION)

17(4,12)

AUTHORS: Shaposhnikov, V. M., Academician, Bekhtereva, SOV/20-124-1-57/69
M. N., Kosheleva, M. A., Khrzhanovskaya, V. E.

TITLE: The Possibility of Controlling the Process of Antibiotic Formation in Actinomyces Violaceus (Vozmozhnost' regulirovaniya protsessa obrazovaniya antibiotika u Actinomyces violaceus)

PERIODICAL: Doklady Akademii nauk SSSR, 1959, Vol 124, Nr 1, pp 198 - 201 (USSR)

ABSTRACT: Two stages of the process of fermentation were detected (Refs 1,2). The products of fermentation are mostly formed at different periods in the course of development of the culture. They are very rapidly formed during the second stage when the culture stops growing. It is not possible to completely identify the 2 stages in the formation of antibiotics with the regularities of bacterial processes. Antibiotics differ greatly from bacterial processes and their structure is very complicated. Their characteristic features are given. It was observed that an intensive formation of antibiotics often coincides with the moment of exhaustion of one or the other element in the culture medium. In this connection intermediary

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The Possibility of Controlling the Process of Antibiotic SOV/20-124-1-57/69
Formation in Actinomyces Violaceus

products can be formed as well as products of autolytic decomposition. The mentioned products serve as a source for the formation of single molecule particles of antibiotics. From this aspect the method of exchanging culture media during fermentation gains particular importance for the problem mentioned in the title. So far the authors have found that the development of the Act. violaceus Nr 719 really represents a 2-phase process. (Figs 1:2). The most intensive formation of the antibiotic takes place during a rapid decrease of growth of the culture. Morphological changes of the culture of the Act. violaceus can be observed which are doubtlessly a result of the change of its physiological state with increasing age. As the calculation of the productivity of the culture on the basis of an uninterruptedly changing medium does not result in a correct comparative estimation of the biochemical activity of the mycelium, special experiments were carried out. The normally bred mycelium was put into small flasks for a time of 6-8 hours. The amount of mycelium did not exceed 0.5 g/100 ml. The initial pH-value 7 was maintained (Fig 3). In the course of this experiment it was

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The Possibility of Controlling the Process of Antibiotic SOV/2o-124-1-57/69
Formation in Actinomyces Violaceus

proved that a young mycelium (42 hours old) is not yet able to form an antibiotic. Only later, e.g. after 72 hours the rate of production of antibiotic was of 4500 relative units per 1 g mycelium hour. The substitution for the hitherto used medium Nr 1 by other sorts of media accelerated fermentation and development of the culture. This is why the most productive age varied somewhat. In order to find out whether a young mycelium is ready for the formation of the antibiotic a young and an older mycelium were put into media with different pH-values during fermentation. It was thus proved that the pH-values from 6 to 8 do not cause a young mycelium to produce an antibiotic. In the old mycelium the production remained unchanged between 5.8 and 8.8. The elimination of nitrogen from the culture medium led, however, to an increased production of the antibiotic, even in the case of a young mycelium. The increase was up to 117 relative units. This process was accompanied by clear changes in the structure of the cytoplasm. There are 5 figures, 1 table and 3 Soviet references.

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The Possibility of Controlling the Process of Antibiotic SOV/20-124-1-57/69
Formation in Actinomyces Violaceus

ASSOCIATION: Institut mikrobiologii Akademii nauk SSSR (Institute of
Microbiology, Academy of Sciences, USSR)

SUBMITTED: September 13, 1958

Card 4/4

17(2,12)

AUTHORS:

Shaposhnikov, V. N., Academician,
Kazanskaya, T. B.

SOV/20-127-5-51/58

TITLE:

Interrelations Between the Chemical Composition of Soy-bean Meal Fractions and Streptomycin Formation in Actinomyces streptomycini

PERIODICAL:

Doklady Akademii nauk SSSR, 1959, Vol 127, Nr 5, pp 1117-1120 (USSR)

ABSTRACT:

Soy-bean oil and palmitic acid as well as the basic amino acids and leucine stimulate the streptomycin formation by Act. streptomycini LS-1 (Ref 1). The above data were, however, insufficient for the establishment of a synthetic culture medium for this strain. Therefore the authors investigated various amino acid fractions of the hydrolysates of soy-bean meal in order to prove the connection between the chemical composition of these fractions and the streptomycin formation. The following mixture (in %) served as culture medium: glucose 2, $(\text{NH}_4)_2\text{SO}_4$ 0.3, NaCl 0.25, KH_2PO_4 0.05, CaCO_3 0.3, and distilled water. 2% soy-bean meal or another organic substance containing 112 g total nitrogen per 100 ml

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Interrelations Between the Chemical Composition of Soy-bean Meal Fractions and Streptomycin Formation in *Actinomyces streptomycini* SOV/20-127-5-51/58

culture medium (like in soy-bean meal) were added. In the latter case also an addition of inosite, $MgSO_4$, and of trace elements was used. 2 ml of a 72 - 96 hours old culture of the LS-1 strain from the Vsesoyuznyy nauchno-issledovatel'skiy Institut antibiotikov (All-Union Scientific Research Institute of Antibiotics) were sown on the culture medium. Hydrolysates from degreased soy-bean meal were produced by H_2SO_4 and HCl (A. N. Belozerskiy and N. I. Proskuryakov, Ref 2) as well as by NaOH. After the removal of humins and NH_3 the hydrolysates were separated into 2 fractions: (a) into basic amino acids, (b) into monoamino acids. Streptomycin was determined by *Bac. mycoides* as experimental object. Nitrogen was determined in either fraction (Table 1). These data show that the hydrochloric acid hydrolysates contain more amino acid nitrogen than those obtained by H_2SO_4 and NaOH. The ratio between the basic amino acids and the monoamino acids was highest in the fractions obtained by alkaline hydrolysis. The results of the

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Interrelations Between the Chemical Composition of
Soy-bean Meal Fractions and Streptomycin Formation
in *Actinomyces streptomycini*

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analyses agreed with the data of K. G. Ioffe and Ye. A. Yermakova. Table 2 shows that the monoamino acids are more favorable for the growth of Actinomycetes, whereas the basic amino acids stimulate the streptomycin formation. Since the detection of a possibly simple culture medium was the object of these experiments the above experiments were not continued. The following culture medium is recommended for the preliminary physiological investigation of the IS-1 strain: (in %)
proline 0.92, glucose 2, $(\text{NH}_4)_2\text{SO}_4$ 0.3, NaCl 0.25, KH_2PO_4 0.1, inositol 0.025, MgSO_4 0.1, MnSO_4 , ZnSO_4 , and FeSO_4 0.0001 each. The biomass amounts on the culture medium to 800 mg-%; 1300-1400 $\mu\text{g/ml}$ streptomycin are produced. Another paper will deal with the problem of the proline effect and other compounds of the pyrrole group. The following conclusions are drawn from the results: (1) The hydrolysate fractions of soy meal containing basic amino acids consist of arginine, histidine, lysine, and proline. (2) These fractions are more

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Interrelations Between the Chemical Composition of
Soy-bean Meal Fractions and Streptomycin Formation
in *Actinomyces streptomycini*

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favorable for the streptomycin production by the strain LS-1
than the monoamino acid fractions. There are 2 tables and
7 references, 6 of which are Soviet.

ASSOCIATION: Institut mikrobiologii Akademii nauk SSSR (Institute of Micro-
biology of the Academy of Sciences, USSR)

SUBMITTED: June 6, 1959

Card 4/4

17(2)

SOV/20-128-4-57/65

AUTHORS: Shaposhnikov, V. N., Academician, Kazanskaya, T. B.,
Poltava, I. G.

TITLE: The Effects of Compounds of the Pyrrole Group on the Develop-
ment of Actinomyces streptomycini

PERIODICAL: Doklady Akademii nauk SSSR, 1959, Vol 128, Nr 4, pp 840-842
(USSR)

ABSTRACT: The fungus mentioned in the title grows well on a medium
containing one single nitrogen source, namely the amino acid
proline (of the pyrrole group (I)); physiologically active
substances containing one pyrrole ring ((II)-(VIII)) are
mentioned. The problem still to be solved is, whether Act.
streptomycini makes use of the pyrrole ring or whether a
pyrrole ring which is connected with a certain atom group,
is required for the development of this fungus. For this
purpose experiments with some of the mentioned compounds
had to be made. Earlier experiments with oxyproline showed
that this substance alone, in contrast to proline, favors the
growth of Actinomyces. A list of publications (Refs 2-6)
is given which shows that there are hardly any data on the
subject concerned. Therefore the effect mentioned in the title

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The Effects of Compounds of the Pyrrole Group on the Development of Actinomyces streptomycini

is ment to be explained for the first time by the authors. Strain LS-1 from the Kiyevskaya selektsionnaya stantsiya (Kiyev Selection Station) growing on a mineral glucose containing medium, is used for this purpose. 2% of soya bean flour or amino acid or of any pyrrole compound were added which corresponded to a nitrogen content of 112 mg per 100 ml. For the method see reference 1. The effects of succinamide (VIII), succinimide (VII), pyrrolidine (II) and others, on the vital activity of strain LS-1 were examined. Proline (III) and oxyproline (IV) were also used for comparison. Table 1 shows the results. On the basis of these results, the authors arrived at the following conclusions: 1) synthetic media, containing proline, histidine with lysine and also one of the pyrrole group: (III), (VII), or (VIII), favor the growth of the fungus and the formation of streptomycin. The yields of the latter amounted to 74-84% of those with soya bean flour. 2) (IV), the only nitrogen source, favors the growth but stimulates the development of the antibiotic only weakly (Table 1). Added to media with basic amino acids (IV) also favors growth, but reduces the streptomycin yield (Table 2).

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The Effects of Compounds of the Pyrrole Group on the Development of Acti-
myces streptomycini

SOV/20-128-4-57/65

There are 2 tables and 6 references, 1 of which is Soviet.

ASSOCIATION: Institut mikrobiologii Akademii nauk SSSR
(Institute of Microbiology of the Academy of Sciences, USSR)

SUBMITTED: July 2, 1959

Card 3/3

SHAPOSHNIKOV, Vladimir Nikolayevich, akademik; RABOTNOVA, I.L., red.
izd-va; NOVICHKOVA, N.D., tekhn.red.

[Physiology of metabolism in micro-organisms with reference
to functional evolution] Fiziologiya obmena veshchestv
mikroorganizmov v svyazi s evoliutsiei funktsii. Moskva,
Izd-vo Akad.nauk SSSR, 1960. 161 p. (MIRA 13:7)
(BACTERIA) (METABOLISM)

SHAPOSHNIKOV, V.N.; FEDOROV, V.D.

Study of phosphorus metabolism in the green photosynthesizing sulfur bacteria and its relation to carbon dioxide fixation. *Biokhimiia* 25 no. 3:487-495 My-Je '60. (MIRA 14:4)

1. Biological Faculty, State University, Moscow.
(BACTERIA, SULFUR) (PHOSPHORUS METABOLISM) (PHOTOSYNTHESIS)

SHAPOSHNIKOV, V.N.; OSNITSKAYA, L.K.; CHUDINA, V.I.

Use of acetic acid as a sole source of carbon by the photosynthesizing bacteria *Chromatium vinosum*. *Mikrobiologiya* 29 no.1:14-20 Ja-F '60. (MIRA 13:5)

1. Institut mikrobiologii AN SSSR.
(CHROMATIUM metab.)
(ACETATES metab.)
(PHOTOSYNTHESIS)

SHAPOSHNIKOV, V.N.; OSNITSKAYA, L.K.; CHUDINA, V.I.

Participation of propionic acid in the constructive metabolism of
Chromatium vinosum. Mikrobiologiya 29 no.2:164-169 ^{Mr-Apr '60.}
(MIRA 14:7)

1. Institut mikrobiologii AN SSSR.
(CHROMATIUM VINOSUM)

(BACTERIOLOGY--CULTURES AND CULTURE MEDIA) (PROPIONIC ACID)

SHAPOSHNIKOV, V.N.; OSNITSKAYA, L.K.; CHUDINA, V.I.

Consumption of acetic and propionic acids by *Chromatium vinosum*
in case of their simultaneous presence in the culture medium.
Mikrobiologiya 29 no.3:320-322 My-Je '60. (MIRA 13:7)

1. Institut mikrobiologii AN SSSR.
(CHROMATIUM) (ACETIC ACID)
(PROPIONIC ACID)

SHAFOSHNIKOV, V. N. (USSR), VINOGRADOV, A. P. (USSR), and KAPLAN, N. O. (USA)

Report presented at the 5th International Biochemistry Congress,
Moscow, 10-16 Aug 1961

SHAPOSHNIKOV, V.N.; OSNITSKAYA, L.K.; CHUDINA, V.I.

Development of the purple sulfur bacterium, *Chromatium vinosum*, in various light intensities. *Mikrobiologiya* 30 no.5:825-832 S-0 '61.
(MIRA 14:12)

1. Institut mikrobiologii AN SSSR.
(BACTERIA, SULFUR) (LIGHT--PHYSIOLOGICAL EFFECT)
(CHROMATIUM VINGSUM)

SHAPOSHNIKOV, V.N., akademik; YEGOROV, N.S.; BABANOVA, I.P.

Role of pyruvic acid in the biosynthesis of chlortetracycline by cultures of *Actinomyces aureofaciens*. Dokl. AN SSSR. 144 no.6: 1387-1389 Je '62. (MIRA 15:6)

1. Moskovskiy gosudarstvennyy universitet im. M.V.Lomonosova.
(Pyruvic acid) (Aureomycin)

SHAPOSHNIKOV, V.N.; KAZANSKAYA, T.B.; ORLOVA, I.G.

Effect of dicarboxylic acids and some other compounds on the
biosynthesis of streptomycin. ~~Inv. AN SSSR~~. Ser. biol. no. 6:813-
824 N-D '62. (MIRA 16:1)

1. Institut mikrobiologii AN SSSR.
(STREPTOMICIN)

KONDIAT'YEVA, Yelena Nikolayevna; SHAPOSHNIKOV, V.N., akademik, otv.
red.; RUBAN, Ye.L., red. izd-va; ZUDINA, V.I., tekhn. red.

[Photosynthetic bacteria] Fotosinteziruiushchie bakterii. Mo-
skva, Izd-vo Akad. nauk SSSR, 1963. 314 p. (MIRA 16:6)
(BACTERIA, AUTOTROPHIC) (PHOTOSYNTHESIS)

SHAPOSINIKOV, V.N.; FIMOGENOVA, T.V.

Biosynthesis of vitamin B₁₂ and free porphyrins by the *Nocardia erythropilis* culture. *Mikrobiologiya* 32 no.3:391-397 My-Je '63
(MIRA 17:3)

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

SHAPOSHNIKOV, V.N.; FEOFILOVA, Ye.P.

Study of the pigments of *Actinomyces longispororuber*. Mikro-
biologiya 32 no.5:745-747 S-0163 (MIRA 17:2)

1. Institut mikrobiologii AN SSSR

SHAPOSHNIKOV, V.M.; BEKHTEREVA, M.N.; KHRZANOVSKAYA, V.E.

Keto acid formation in submerged cultures of *Actinomyces violaceus* 719. Mikrobiologiya 32 no.6:946-953 N-D '63
(MIRA 18:1)

1. Institut mikrobiologii AN SSSR.

SHAPOSHNIKOV, V.N., akademik; PLAKUNOVA, V.G.

Ways of the utilization of glycerin by *Actinomyces aureofaciens*
IS-B-16. Dokl. AN SSSR 148 no.1:210-213 Ja '63. (MIRA 16:2)

1. Moskovskiy gosudarstvennyy universitet im. M.V. Lomonosova.
(GLYCEROL) (ACTINOMYCES)

SHAPOSHNIKOV, V.N., akademik; PLAKUNOV, V.K.

Comparative physiology of two strains of *Staphylococcus aureus*
209-P, one of which is resistant and the other sensitive to
tetracycline antibiotics. Dokl. AN SSSR 148 no.2:448-451 Ja '63.
(MIRA 16:2)

(STAPHYLOCOCCUS) (TETRACYCLINE)

SHAPOSHNIKOV, V.N., akademik; YEGOROV, N.S.; KORSHUNOV, V.V.

Physiology of the amino acid metabolism in *Bacillus brevis* var.
G.-B. Dokl. AN SSSR 148 no.5:1196-1198 F '63. (MIRA 16:3)

1. Moskovskiy gosudarstvennyy universitet im. M.V.Lomonosova.
(AMINO ACID METABOLISM) (BACTERIA, AEROBIC)

SHAPOSHNIKOV, V.N., akademik; BALITSKAYA, R.M.; KONDRAT'YEVA, Ye.N.

Effect of some reducing agents on the development of green sulfur bacteria and the synthesis of bacterioviridin by them at various light intensities. Dokl. AN SSSR 151 no.3:708-711 J1 '63.
(MIRA 16:9)

1. Moskovskiy gosudarstvennyy universitet im. M.V.Lomonosova.
(Bacteria, Sulfur) (Photosynthesis) (Bacterioviridin)

SHAPOSHNIKOV, V.N.;KONOVA, I.V.; BORISOVA, A.I.

Vitamin B₁₂ synthesis by Actinomyces olivaceus in a synthetic medium in the presence of 5,6-dimethyl benzimidazole. Mikrobiologiya 32 no.4:598-602 JI-Ag '63. (MIRA 17:6)

1. Institut mikrobiologii AN SSSR.

SHAPOSHNIKOV, V.N., akademik; BEKHTEREVA, M.N.; YAKUBOV, G.Z.;
KHOKHLOVA, Yu.M.

Effect of cultivation conditions on the correlation of
components of an antibiotic produced by *Actinomyces violaceus*,
strain no. 719. Dokl. AN SSSR 153 no.5:1195-1198 D '63.
(MIRA 17:1)

1. Institut mikrobiologii AN SSSR.

SHAPAROV, V.N.; VOROB'YEV, L.I.

Development of propionibacterium and the synthesis of vitamin B₁₂
on synthetic and natural media. Mikrobiologiya 32 no.2:204-208¹²
Mr-Apr '63. (MIRA 17:9)

L. Institut mikrobiologii AN SSSR.

SHAPOSHNIKOV, V. N.; SILAYEV, A. B.; NEFELOVA, M. V.; ORLOVA, T. I.; KUZNETSOVA, V. S.;
MIRONOVA, I. B.; ZUBOVA, O. V.

"Directed biosynthesis of aurantin and investigation of biological and chemical
properties of new aurantin fractions."

report submitted for Antibiotics Cong, Prague, 15-19 Jun 64.

Lab of Antibiotics, Faculty of Soil Biology, Moscow State Univ.

SHAPOSHNIKOV, V.N.; KOZLOVA, Ye.I.; AZOVA, L.G.

Destruction of wool by micro-organisms. Vest. Mosk un.
Ser. 6: Biol., pochv. 19 no. 2: 58-63 Mr.-Ap '64. (MIRA 17:9)

1. Kafedra mikrobiologii Moskovskogo universiteta.

SHAPOSHNIKOV, V.N.; PLAKUNOVA, V.G.

Stimulation of chlortetracycline biosynthesis by aromatic
amino acid antagonists. Izv. AN SSSR Ser. biol. 29 no.1:
132-136 Ja-F'64 (MIRA 17:3)

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

SHAFOSHNIKOV, V.N.; PROFILOVA, Ya.I.

Pigments of *Aspergillus longisporus* ruber. Mikrobiologiya
33 no.1813-15 1977 Jan. (MIRA 17:9)

1. Institut mikrobiologii AN SSSR.

ACCESSION NR: AP4031822

S/0220/64/033/002/0221/0223

AUTHOR: Shaposhnikov, V. N.; Pimenova, M. N.; Maksimova, I. V.;
Zhdannikova, Ye. N.; Ramenskaya, A. A.

TITLE: Seasonal periodicity in the growth of green algae under
laboratory conditions

SOURCE: Mikrobiologiya, v. 33, no. 2, 1964, 221-223

TOPIC TAGS: algae cultivation, Chlorella vulgaris, Chlorella
ellipsoidea, Scenedesmus obliquus, Scenedesmus quadricauda,
Ankistrodesmus falcatus

ABSTRACT: A two-year study was made of the growth of algae under
laboratory conditions, that is, constant composition of medium, tem-
perature, and illumination. The investigations were conducted
with pure cultures of Chlorella vulgaris (strain 87), Chlorella
ellipsoidea, Scenedesmus obliquus, Scenedesmus quadricauda, and
Ankistrodesmus falcatus. The nutrient medium for Chlorella con-
sisted of KNO_3 , 1.82 g/l; K_2HPO_4 , 0.42 g/l; $\text{MgSO}_4 \cdot 7\text{H}_2\text{O}$, 0.96 g/l;

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ACCESSION NR: AP4031822

FeSO₄, 0.005 g/l; CaCl₂, 0.011; EDTA, 0.1 g/l, and Arnon microelement solutions, A₄ (1 ml) and B₇ (1 ml). Scenedesmus and Ankistrodesmus algae were grown in a nutrient medium consisting of Ca(NO₃)₂·4H₂O, 2.0 g/l; K₂HPO₄, 0.36 mg/l; MgSO₄·7H₂O, 0.2 g/l; FeSO₄, 0.005 g/l; EDTA, 0.1 g/l, and Arnon microelement solutions, A₄ (1 ml) and B₇ (1 ml). The initial pH of the medium ranged from 5.3 to 5.6. Air containing 2% CO₂ was bubbled through the suspension continuously (that is, 24 hours per day). TBS-30 lamps with a light intensity of 2000 lux at 27—28C were used for illumination. The experiments which were conducted through 1961 and 1962 produced quite similar data. No seasonal periodicity was observed in the development of algae grown under laboratory conditions. The number of cells was determined monthly in the 7- and 10-day yields with a difference not exceeding 20—30%. Orig. art. has: 5 figures.

ASSOCIATION: none

SUBMITTED: 31Jan63

DATE ACQ: 07May64

ENCL: 00

SUB CODE: LS

NO REF SOV: 010

OTHER: 001

Card 2/2

SHAPOSHNIKOV, V.N.; AZOVA, L.G.; KOZLOVA, Ye.I.

Wool fiber spoiling micro-organisms. Mikrobiologiya 33 no.4:
727-736 J1-Ag '64. (MIRA 18:3)

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

SHAPOSHNIKOV, V.N.; FLAKNOVA, V.G.

Stimulation of chlortetracycline biosynthesis by N-methylanthranilic acid. Mikrobiologiya 33 no.5:753-757 S-O '64.

(MIRA 18:3)

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

SHAIKHINOV, V.N.; FEFILOVA, Ye.P.

Study of the nature of main fractions of *Actinomyces longispororuber* pigments. *Mikrobiologiya* 33 no.6:944-950 N-D '64.

(MIRA 18:4)

1. Institut mikrobiologii AN SSSR.

SHAPOSHNIKOV, V. N., akademik; KRASIL'NIKOVA, Ye. N.

Effect of glyceric and pyruvic acid on the fermentation produced by *Lactobacterium delbrueckii*. Dokl. AN SSSR 156 no. 1: 183-186 My '4. (MIRA 17:5)

1. Moskovskiy gosudarstvennyy universitet im. M. V. Lomonosova.

SHAPOSHNIKOV, V.N., akademik; FINOGENOVA, T.V.

Effect of iron concentration on the flavin synthesis in *Nocardia erythropolis*. Dokl. AN SSSR 156 no. 3:692-694 '64. (MIRA 17:5)

SHAPOSHNIKOV, V.N., akademik; IGRIYA, Zh.K.

Effect of the conditions of cultivation on the nature of the
utilization of formic acid by *Bacterium formicum*. Dokl. AN
SSSR 156 no. 5:1201-1203 Je '64. (MIRA 17:6)

1. Moskovskiy gosudarstvennyy universitet im. M.V.Lomonosova.

SHAPOSHNIKOV, V.N., akademik; KOSHELEVA, N.A.; KOLESNIKOVA, I.G.;
RAYKOVA, L.A.

Effect of the sources of carbon on the biosynthesis of α -keto-
glutaric acid in cultures of *Pseudomonas fluorescens*. Dokl.
AN SSSR 157 no.1:180-182 JI '64 (MIRA 17:8)

SHAPOSHNIKOV, V.N., akademik; BEZBORODOV, A.M.; DOMRACHEVA, L.A.;
KUPTSOVA, N.I.

Formation and distribution of amino acids in an *Actinomyces*
levoris 2789 culture according to developmental phases. Dokl.
AN SSSR 157 no.3:681-683 J1 '64. (MIRA 17:7)

1. Institut mikrobiologii AN SSSR i Leningradskiy khimiko-
farmatsevticheskiy institut.

BELOUSENIKOV, V.N., akademik

Half-fermentative lactic acid fermentation in the presence of
complementary hydrogen acceptors. Dokl. AN SSSR 157 no.4:
648-651 Ag 1964 (MIRA 17:8)

L. Mosk. gos. univ. imeni M. V. Lomonosova.

SHAPOSHNIKOV, V.N., akademik; FLAKUNOV, V.K.

Interrelationship between the biosynthesis of protein, ribonucleic acid and some coenzymes under the influence of tetracyclines on Staphylococcus aureus 209 P. Dokl. AN SSSR 158 no.4:987-989 0 '64. (MIRA 17:11)

1. Moskovskiy gosudarstvennyy universitet im. M.V. Lomonosova.

SHAPOSHNIKOV, V.N., akademik; KAZANSKAYA, T.B.; ORLOVA, I.G.

Characteristics of *Aerobacter cloacae* No.28 as related to the
accumulation of valine in the medium. Dokl. AN SSSR 159 no.6:
1408-1410 D '64 (MIRA 18:1)

1. Institut mikrobiologii AN SSSR.

ANAN'YEV, V.N.; ROZINA, E.M.

Utilization of hydrogen sulfide and organic compounds by green sulfur bacteria *Chlorocystidium ethylosum* at different initial intensities. Mikrobiologiya 33 no.3:385-390 My-Je '61.

(MIRA 12:11)

1. Biologiya-prirody: fakul'tet Moskovskogo gosudarstvennogo universiteta imeni M.V.Lomonosova. Uchenye Zapiski, March 27, 1963.

САНДЖИДИН, М.Н., МВИА, 24 15.

Some characteristics of the physiology of *Bacterium formicum*.
Nauch. zap. vys. shkoly; biol. nauki no.1:171-172 '65.

(MIRA 18:2)

1. Rekomendovana kafedroy mikrobiologii Moskovskogo gosudarstvennogo universiteta.

SHAPOSHNIKOV, V.N.; NEPELOVA, M.V.; ORLOVA, T.I.; SILAYEV, A.B.

Effect of levomycetin on the development and antibiotic-formation
activity in organisms producing aurantin. Antibiotiki 10 no.1:13-18
Ja '65. (MIRA 18:4)

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

L 3906-66

ACCESSION NR: AP5023547

UR/0220/65/034/004/0602/0610
576.8.095

11
B

AUTHOR: Shaposhnikov, V. N.; Orlova, I. G.

TITLE: Effect of organic acids on the growth of *Pseudomonas liquefaciens* and the synthesis of free intracellular amino acids

SOURCE: Mikrobiologiya, v. 34, no. 4, 1965, 602-610

TOPIC TAGS: microbiology, amino acid, bacteria, biochemistry, carbon, organic acid

ABSTRACT: The purpose of the work was to study the growth of *Pseudomonas liquefaciens* on media containing organic acids as the sole source of carbon and energy and to elucidate the effect of these acids on the synthesis of free intracellular amino acids in the course of cultural growth. This microorganism was found to be capable of utilizing organic acids as the sole source of carbon and energy; media containing combinations of lactic-and-malic or succinic-and-pyruvic acids were the most favorable for the growth of these bacteria. The growth of *Ps. liquefaciens* on organic acids is accompanied by a release of other organic acids, e. g., α -keto-

Card 1/2

L 3906-66

ACCESSION NR: AP5023547

glutaric and fumaric acids. The authors also studied the dynamics of α -amino nitrogen in *Ps. liquefaciens* on media with various combinations of organic acids. Maximum accumulation of free intracellular amino acids coincided with maximum accumulation of the biomass. The addition of lactic and malic acids to the medium increased the α -amino acid content of the cells 1.5-2-fold. The amount of amino acids varied with the carbon source used. Orig. art. has: 6 figures, 1 table.

ASSOCIATION: Institut mikrobiologii AN SSSR (Institute of Microbiology, AN SSSR)

SUBMITTED: 02Feb65

ENCL: 00

SUB CODE: LS, OC, GC

NO REF SOV: 012

OTHER: 026


Card 2/2

CHAPANCHIKOV, V.N., akademik; FLAKUNOVA, V.G.

Interrelationships among the ways of metabolism in the biosynthesis
of tetracycline antibiotics. Dokl. AN SSSR 160 no.3:710-712 Ja '65.
(MIRA 18:3)

1. Moskovskiy gosudarstvennyy universitet.

L 39479-65 EWG(j)/EWG(r)/EWT(l)/EWA(j)/FS(v)-3/EWG(v)/EWG(a)-2/EWA(b)-2/
ACCESSION NR: AP5007666 S/0020/65/160/006/1424/1426

EWG(c) Pe-5 DD/JK
AUTHOR: Telitchenko, M. M.; Gusev, M. V.; Shaposhnikov, V. N.

TITLE: Toxicity of blue-green algae ✓ 3635

SOURCE: AN SSSR. Doklady, v. 160, no. 6, 1965, 1424-1426 B

TOPIC TAGS: algae, Anabaena variabilis, Nodularia, Phormidium uncinatum, culture method, toxic effect, Daphnia magna

ABSTRACT: The present study was carried out to determine whether nonpoisonous forms of blue-green algae have the capacity to eliminate the toxic effect of poisonous forms. Four series of experiments were conducted on Daphnia magna in different blue-green algae cultures: 1) control, 2) Anabaena variabilis (poisonous), 3) Anabaena variabilis (poisonous) and Nodularia (nonpoisonous), and 4) Anabaena variabilis (poisonous), Nodularia (nonpoisonous), and Phormidium uncinatum (nonpoisonous). The algae were cultivated for 20 days under the following conditions: 20-24° temperature, pH 7.9-8.0, and illumination of 2500 lx. At the time of experimentation the algae cultures contained up to 70% live Daphnia magna cells. Survivability curves for Daphnia magna were plotted for the 20 day period. Results
Card 1/2

L 39479-65
ACCESSION NR: AP5007666

clearly show that the nonpoisonous blue-green algae (Nodularia and Phormidium uncinatum) inhibit the toxic effect produced by the poisonous form (Anabaena variabilis). Survivability (LD50) of Daphnia magna is 5.2 days in an Anabaena culture, 7 days in an Anabaena and Nodularia culture, 18 days in a mixed culture of Anabaena and Nodularia and Phormidium, and is higher than 20 days in the control. Additional experiments showed that Anabaena filtrate is also toxic and reduces Daphnia magna survivability. Toxicoses are produced in those cases when the water supply blooms with poisonous forms of blue-green algae; at this time the algae may be regarded as a monoculture in a logarithmic phase of growth with live cells predominating and titers increasing. Orig. art. has: 2 figures.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet im. M. V. Lomonosova (Moscow State University)

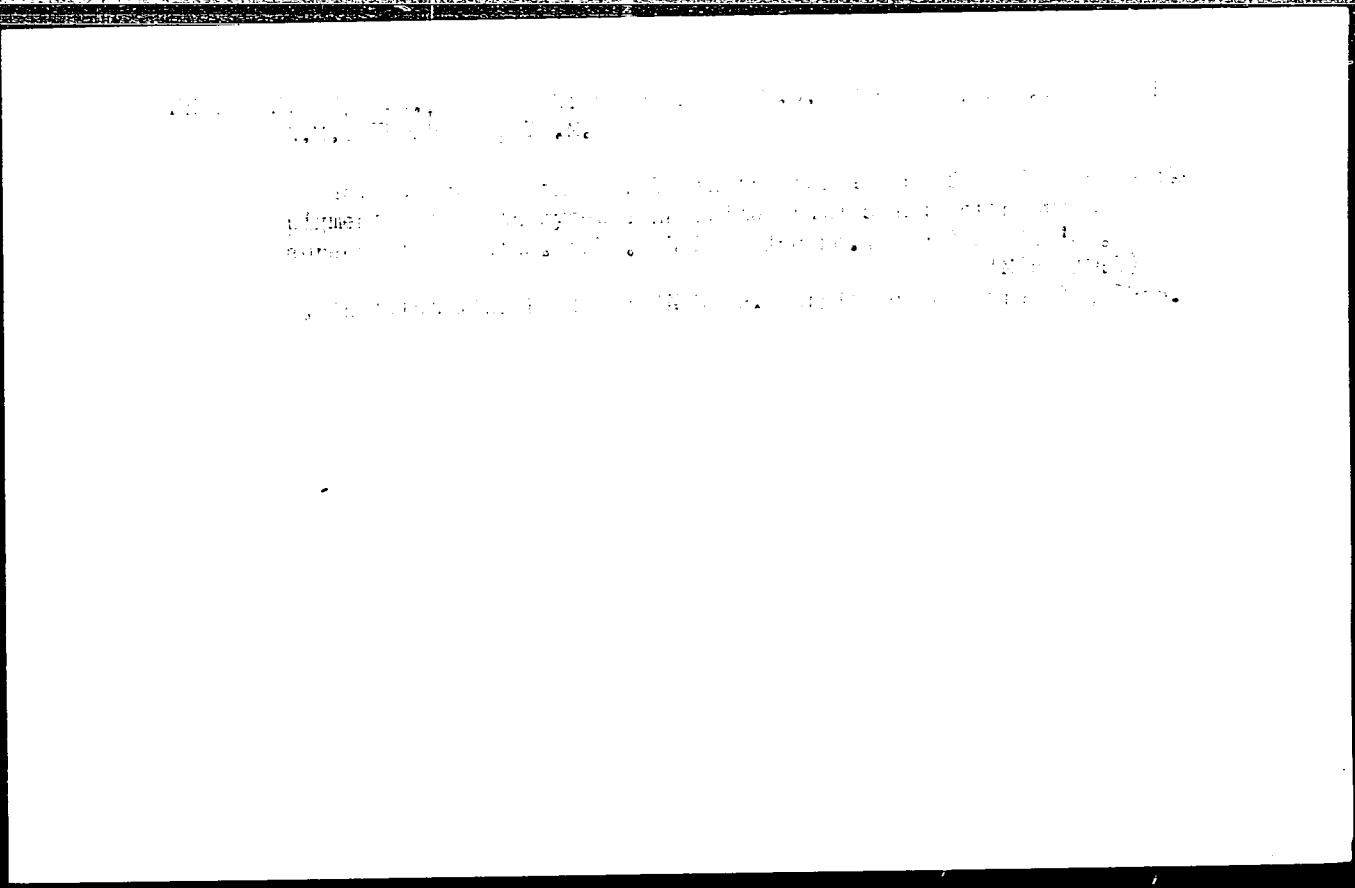
SUBMITTED: 21 May 64 ENCL: 00 SUB CODE: LS
NR REF SOV: 005 OTHER: 002

Card 2/2 ps

SHAFOSHNIKOV, V.N., akademik; LCRIYA, Zh.K.

Use of some organic acids and acid combinations by Bacterium formicum under aerobic conditions, Dokl. AN SSSR 162 no.2:445-446
1965. (MIRA 18:5)

L. Moskovskiy gosudarstvennyy universitet im. M.V.Lomonosova.



ACC NR: AT7002131

(A)

SOURCE CODE: UR/0000/66/000/000/0667/0684

AUTHOR: Kostin, I. Kh.; Smirnov, Yu. G.; Strel'chuk, N. A.; Khesin, G. L.; Shaposhnikov, V. N.

ORG: none

TITLE: An investigation, using the dynamic photoelasticity method, of pressure waves due to an explosion (a concentrated impulse in single phase and polyphase regions)

SOURCE: Vsesoyuznaya konferentsiya po polarizatsionno-opticheskomu metodu issledovaniya napryazheniy. 5th, Leningrad, 1964. Polarizatsionno-opticheskiy metod issledovaniya napryazheniy (Polarizing-optical method of investigating stresses); trudy konferentsii. Leningrad. Izd-vo Leningr. univ., 1966, 667-684

TOPIC TAGS: explosive, shock wave, pressure effect, elastic deformation, elastic stress, elastic wave, light polarization, explosive ~~Research~~

ABSTRACT: The results of an experimental investigation of pressure waves due to concentrated explosions in homogeneous and nonhomogeneous media are reported. Two main problems were investigated: the nature and propagation of pressure waves in homogeneous semi-infinite regions (explosion of small amounts of lead nitride in or on an epoxy plate of 250 x 300 x 4 mm), and in nonhomogeneous regions (explosion of small fixed amounts of lead nitride in an epoxy plate 360 x 260 x 4 mm, with the plate per-

Card 1/2

ACC NR: AT7002131

forated by apertures of various shapes). The experiments were recorded using polarized light with a photographic camera. 1. Pressure waves due to an explosion in an infinite plate: The pressure waves in this experiment consisted of a compression phase and a subsequent extension phase. The higher harmonics appearing after the extension wave are for practical purposes negligible. The ratio of compression phase to extension phase amplitudes depends on the size of the explosive charge and the distance from the epicenter of the explosion. It was found that the wavelength increases initially with increasing charge to a certain value. An additional increase in charge does not contribute to a further increase in wavelength. 2. Distribution of pressure waves near a free surface: In this experiment the propagation and the characteristics of the pressure wave due to an explosion some distance from the surface within a plate were recorded. 3. The mechanisms of dislocations within the medium and on the free surface. 4. The reflection and refraction of pressure waves in laminated media: These phenomena were observed in two- and three-layer media for varying depths of charge location. The propagation of pressure wave through a plate containing round, elliptical, and other apertures was investigated in three series of experiments. Orig. art. has: 10 figures.

SUB CODE: 15,19,20/

SUBM DATE: 14Jun66/

ORIG REF: 007/

OTH REF: 001

Card 2/2

SHAPOSHNIKOV, V.N.; ORLOVA, I.G.

Effect of organic acids on the growth of *Pseudomonas liquefaciens*
and the synthesis of free intracellular amino acids. *Mikrobiologiya*
34 no.4:602-610 J1-Ag '65. (MIRA 18:10)

1. Institut mikrobiologii AN SSSR.

BELEVTSOV, G.A.; KRASAVTSEV, N.I.; MISCHENKO, N.M.; SOLDATKIN, A.I.;
SHARKEVICH, L.D.; Primali uchastiye: FROLOV, S.Ya.;
SHESTOPALOV, I.I.; PECHNIKOVA, Z.A.; STOLBUNSKIY, L.Z.;
USOV, V.T.; GLOTOV, P.L.; VOLKOVA, A.Ya.; ALDOKHINA, V.P.;
VOLOSHIN, Yu.T.; SHUMAKOV, I.S.; ZAPOROZHETS, N.P.;
SHAPGSHNIKOV, V.P.; GONCHAROVA, M.Ya.

Investigation of blast furnace smelting using natural gas.
Stal' 22 no.6:483-486 Je '62. (MIRA 16:7)

(Blast furnaces--Equipment and supplies)

Abstract

Study of biochemistry and pathophysiology of the allergic component
in the pathogenesis of schizophrenia and infectious psychoses. Zhur,
Svetlana Polkhovna. Moscow: 1971. 171 p. 12a.

(MIRA 18:6)

1. Institute of Psychiatry (Soviet Academy of Sciences) - prof. I.A. Polishchuk)
Meningeal Institute of Psychiatry (Soviet Academy of Sciences).

PANASEYKIN, Yu.V., inzh.; SHAPOSHNIKOV, V.V., inzh.; GERASTMOV, V.A.,
elektronaladchik

Improvement in the construction of the RZMO system. TSement 31
no.5:17 S-0 '65. (MIRA 18:10)

1. Chimkentskiy tsementnyy zavod.

SHILOV, M.N.; SKIBO, N.S.; ROGOZHINA, N.V.; SHAPOSHNIKOV, Ya.P.;
STEPANYUK, A.I.; APTEKAREV, M.A.; NEVZOROV, P.L.; TABAKO, P.I.;
ALEKSEYEVSKIY, V.L.; ARTEMOV, N.N.; GRABOVSKIY, V.V.; MNOGOLET,
V.Ya.

[Cultivation practices for increasing crop yields in Groznyy Province] "Agrotekhnicheskie meropriyatia po povysheniiu urozhainosti dlia Groznenskoj oblasti." Groznyi, Groznenskoe obl.izd-vo. Pt.1. [Cultivation of field crops] Polevodatvo. 1945. 178 p. (MIRA 13:8)

1. Groznyy. Oblastnoy zemel'nyy otdel. 2. Glavnyy agronom Groznenskogo Oblastnogo zemel'nogo otdela (for Shilov). 3. Groznenskiy Oblastnoy zemel'nyy otdel (for Skibo, Rogozhina, Shaposhnikov, Stepanyuk, Aptekarev). 4. Direktor Opytnoy stantsii Groznenskoy oblasti (for Grabovskiy). 5. Inspektor Inspektury po sortoispytaniyu zernovykh i maslichnykh kul'tur i trav Ministerstva sel'skogo khozyaystva SSSR (for Mnogolet).

(Groznyy Province--Field crops)

SLUTSKIY, S.; SHAPOSHNIKOV, Ye.

Selecting a work organization diagram for river craft crews with
the aid of electronic calculating machines. Biul. nauch. inform.
trud i zar. plata 5 no.4:13-19 '62. (MIRA 16:1)
(Inland water transportation)
(Electronic calculating machines)

SLUTSKIY, S., kand.ekonom.nauk; SHAPOSHNIKOV, Ye., kand.tekhn.nauk;
MEL'NIKOV, A., inzh.

Length of the working day for the navigating personnel in summer
and during periods between navigations. Rech. transp. 22 no.11:
20-21 N '63. (MIRA 16:12)

SHAPOSHNIKOV, Ye.A.

Use of I.U.A. Krotov's apparatus for the bacteriological analysis
of the air in urban transport. Lab.delo 6 no.2:53-54 Mr-Ap '60
(MIRA 13:6)

1. Kafedra gigiyeny (zav. - prof. F.S. Okolov) Kubanskogo medi-
tsinskogo instituta.

(AIR--BACTERIOLOGY)

SHAPOSHNIKOV, Ye. A., aspirant

Causes of seasonal fluctuations in the incidence of angina. Gig.
i san. 26 no.11:18-23 N '61. (MIRA 14:11)

1. Iz kafedry gigiyeny Kubanskogo meditsinskogo instituta.
(THROAT—DISEASES)
(WEATHER—MENTAL AND PHYSIOLOGICAL EFFECT)

LEZAREVICH, L.P., dotsent; SHARGSHNIKOV, Ye.A.; KOVALENKO, V.D.;
IOSIFIDI, I.A.

Outpatient service for workers of the Krasnodar Worsted and Cloth
Combins frequently suffering from angina. Nauch. trudy Kub. gos.
med. inst. 19:19-28 '62. (MIRA 1":8)

1. Iz kafedry bolezney ukha, nosa i gorla (zaveduyushchiy -
prof. V.K. Suprunov) i kafedry obshchey gigizeny (zaveduyushchiy -
zasl. deyatel' nauki Kirgizskoy SSR prof. F.S. Okolev) Kubanskogo
gosudarstvennogo meditsinskogo instituta.

SHAPOSHNIKOV, Ye.A.

Evaluation of the role of climate in the analysis of the incidence of angina in workmen and employees. Nauch. trudy Kub. gos. med. inst. 19:29-39 '62. (MIRA 17:8)

1. Iz kafedry obshchey gigiyeny (zaveduyushchiy - zasluzhennyy deyatel' nauki Kirgizskoy SSR prof. F.S. Okolov) Kubanskogo gosudarstvennogo meditsinskogo instituta.

SHAPOSHNIKOV, Ye.A.

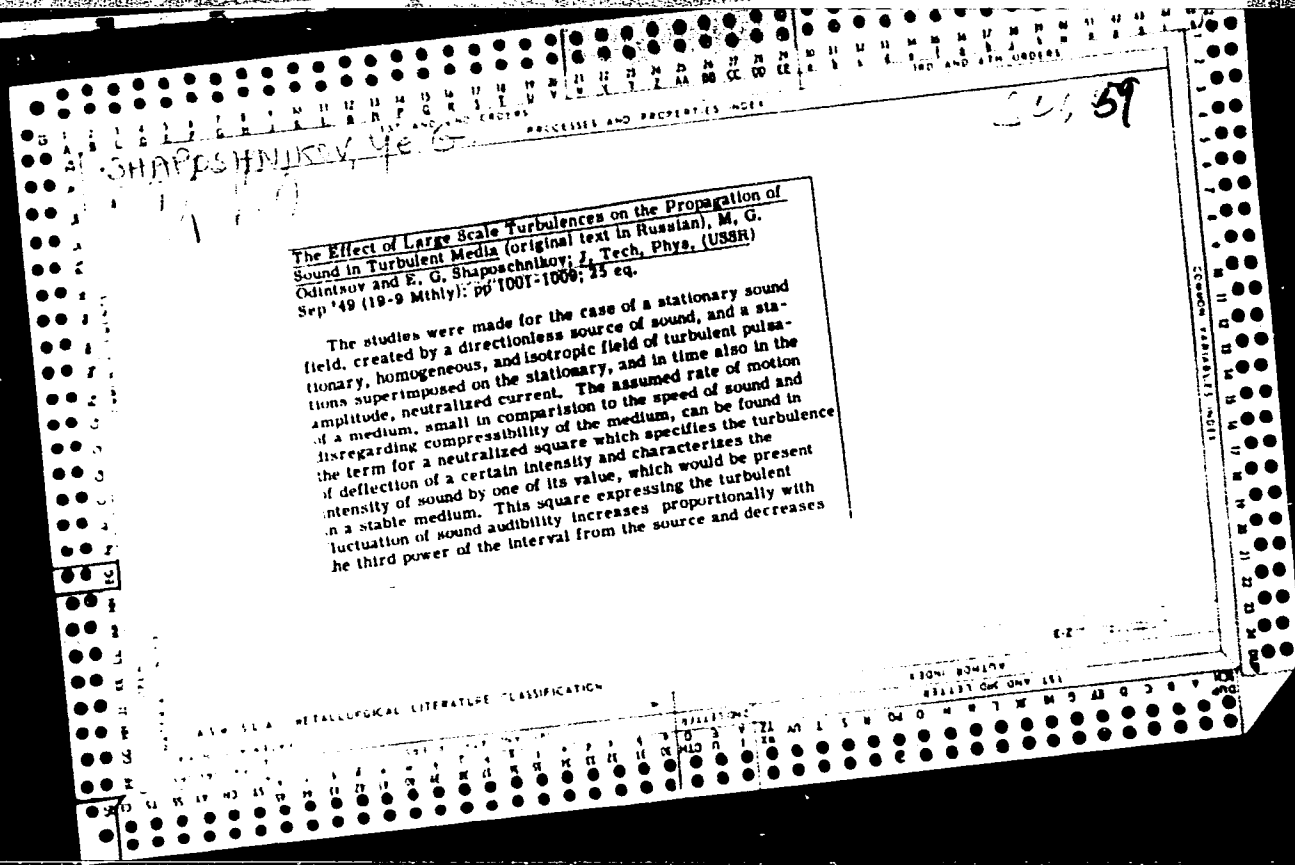
Comparative study of the incidence of angina, influenza, and catarrhs of the upper respiratory tracts taking into consideration the fluctuations of meteorological factors. Zhur.ush. nos.i gor.bcl.22.no.6:3-7 N-D'62. (MIRA 16:7)

1. Iz kafedry gigiyeny (zav.-zasluzhennyi deyatel' nauki, prof. F.S.Okolov) Kubanskogo meditsinskogo instituta.
(KRASNODAR—RESPIRATORY ORGANS—DISEASES)
(WEATHER—MENTAL AND PHYSIOLOGICAL EFFECTS)

AKIMOV, A.A., dotsent; SHAPOSHNIKOV, Ye.A.; KOLMAKOV, V.I.,

Incidence of angina and outpatient service for chronic
tonsillitis at some Krasnodar industrial enterprises. Nauch.
trudy Kub. gos. med. inst. 19:5-18 '62. (MIRA 17:8)

1. Iz kafedry bolezney ukha, gorla i nosa (zaveduyushchiy - prof.
V.K. Suprunov) i kafedry obshchey gigiyeny (zaveduyushchiy -
zasluzhennyy deyatel' nauki Kirgizskoy SSR prof. F.S. Okolov)
Kubanskogo gosudarstvennogo meditsinskogo instituta.



with the increasing wavelength of the sound. The factors affecting the propagation of sound in gases and fluids are (1) the viscosity and heat conductivity of the medium, which cause mainly the attenuation of sound; (2) the intramolecular processes of the type referred to by Kneizer, which also lead to the absorption of sound energy and dispersion of the speed of sound; and (3) heterogeneities of equilibrium characteristics of the medium as well as the movement of the medium caused by the dispersion of sound and deformation of the sound waves. It is stated that the effect of viscosity, thermal conductivity and Kneizer effects are usually very small in real cases of sound propagation (e.g., in the atmosphere or sea water) so that the basic factors remain to be the heterogeneity and the motion of the medium.

15-2-198

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SHAFOSHNIKOV, YE. I

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