

17(4,10)

AUTHORS: Alikhanyan, S. I., Klepikova, F. S., SOV/20-125-3-51/63  
Mindlin, S. Z., Garina, K. P., Zhdanova, N. I.

TITLE: Characteristics of the Induced Mutation Process in Actinomycetes - the Producers of Antibiotics (Osobennosti indutsirovannogo mutatsionnogo protsessa u aktinomitsetov - produtsentov antibiotikov)

PERIODICAL: Doklady Akademii nauk SSSR, 1959, Vol 125, Nr 3, pp 643-645 (USSR)

ABSTRACT: Not only different species but also closely related strains of the same microbe species may differ with respect to their sensitivity and the frequency of the induced mutation (Refs 2-5). As a result of their investigations of actinomycetes the authors were able to provide a comparative analysis of the variability with respect to the production of antibiotics in strains of the same and of different species. The producer of streptomycin, albomycin, oxytetracycline and vitamin B<sub>12</sub> was concerned. The strains of the albomycin producer were irradiated with X-rays with an intensity of 399 r/sec and a dose of

Card 1/4

Characteristics of the Induced Mutation Process in  
Actinomycetes - the Producers of Antibiotics

SOV/20-125-3-51/63

20 to 640 kr. A bacteriocidal lamp BUV-30 served for the ultra-violet irradiation (wave length 2537 Å). of the producer of oxytetracycline. The irradiation intensity amounted to 100 erg/mm<sup>2</sup>. sec at a distance of 15 cm. The spores of the producer of vitamin B<sub>12</sub> were treated with ethylenimine

(dilution 1:7000). Figure 1 shows data concerning the frequency of formation of the plus and minus variants of Act. subtropicus (albomycin producer). An already earlier described regularity (Ref 6) can be seen therefrom: to begin with the number of both plus and minus variants increases with an intensification of the dose. As soon as the curves have reached a certain level, a decrease occurs. In both cases (strains Nr 39 and 738) the highest amount of plus variants is achieved at lower doses than the maximum of the minus variants. Both strains vary considerably with respect to the ratio between plus and minus variants. It was proved that the type of variability differs between the highly active "cultivated" strains and those of the wild type (with low activity). Figure 2 shows the curves of variability with respect to the frequency of plus and minus variants in highly

Card 2/4

Characteristics of the Induced Mutation Process in  
Actinomycetes - the Producers of Antibiotics

SOV/20-125-3-51/63

active strains of the producers of streptomycin and oxytetracycline (*Act. globisporus streptomycini*, strain Nr 66 and *Act. rimosus*, strain Nr 293 respectively). The former was preserved alone by several times selecting it under the effect of X-rays and ultraviolet rays, the latter under ultraviolet irradiation. Figure 2 shows that the results are similar to those obtained for the active strain *Act. subtropicus* Nr 738, i.e. the frequency of the minus variants increases that of the plus variants considerably. In the case of the little active, not several times selected strain H-6 of *Act. olivaceus* (the producer of vitamin B<sub>12</sub>) the frequency of the plus variants was much higher than that of the minus variants under the effect of ethylenimine, just like with the little active strain Nr 39 of *Act. subtropicus* (Fig 3). Thus, it was proved that in strains of various species in many cases a similarity is possible with respect to the type of induced variability of the characteristic feature of the formation of an antibiotic, whereas strains of one and the same species may highly differ in this respect. This regularity appears also in the case when

Card 3/4

Characteristics of the Induced Mutation Process in      SOV/20-125-3-51/63  
Actinomycetes - the Producers of Antibiotics

different strains are subjected to the effect of completely different mutagenous factors (see above). Finally, the authors endeavor to explain these facts. There are 3 figures and 9 references, 3 of which are Soviet.

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

PRESENTED: November 19, 1958, by I. I. Shmal'gauzen, Academician

SUBMITTED: November 19, 1958

Card 4/4

17 (1)

AUTHORS:

Gol'dat, S. Yu., Alikhanyan, S. I.

SOV/20-125-5-49/61

TITLE:

The Effect of the Combined Application of Ultraviolet and X-Rays Upon the Mutagenic Process in *Streptomyces aureofaciens* LS-B16 (Vliyaniye kombinirovannogo deystviya ul'trafiol'tovykh i rentgenovskikh luchey na mutatsionnyy protsess u *Streptomyces aureofaciens* LS-B16)

PERIODICAL:

Doklady Akademii nauk SSSR, 1959, Vol 125, Nr 5, pp 1134-1136 (USSR)

ABSTRACT:

The mutagenic effectiveness of the rays mentioned in the title can be modified by several additional factors and conditions which influence the sensitivity of the cells to the radiant energy (Refs 1-5 et al). In this connection it was interesting to clarify the effectiveness of the interaction between these two kinds of rays and to determine whether irradiation with one of these factors influences the mutagenic effect of the other one. The fungus mentioned in the title, a biomyces producer which had been obtained by the authors due the combined application of the two aforementioned kinds of rays to the spores of the phylum LS-B536, was used for this purpose. Ultraviolet rays were produced by two bactericide

Card 1/4

The Effect of the Combined Application of  
Ultraviolet and X-Rays Upon the Mutagenic Process in *Streptomyces aureofaciens* LS-B16

lamps BUV-15. X-rays were produced by the tube of the X-ray apparatus RU-7 with short focal distance. The irradiation was carried out in two turns with equal dose: ultraviolet rays → X-rays, and vice versa. In either case the one kind of irradiation was followed immediately by the other after 1.2 and 3 hours. Meanwhile, the suspension was stored at 5°. The results are given in tables 1 and 2. Table 1 shows that the combined effect of the two kinds of radiation is in each turn considerably less intense than the expected cumulative effect. The sequence of irradiation influenced considerably the viability of the spores of the fungus mentioned in the title. The effect was much more intense in the case of combined ultraviolet-rays → X-rays without interval and with intervals of 1 or 2 hours than in the case of an inverse sequence of irradiation. Thus, ultraviolet rays reduced to a certain extent the lethal effect of the subsequent X-rays. In the case of an interval of 3 hours the viability of the fungus was rapidly reduced. The inverse sequence of irradiation yielded contrary results. In this case the longer interval between the individual irradiations reduced the lethal effect (Fig 1).

Card 2/4

The Effect of the Combined Application of  
Ultraviolet and X-Rays Upon the Mutagenic Process in *Streptomyces aureofaciens* LS-B16

SOV 40-101-1-15/61

Table 2 shows the aforesaid effect upon the mutagenic process. Mutations were considerably more frequent in the case of the irradiation X-rays → ultraviolet rays than in the case of an inverse sequence. The pretreatment with ultraviolet rays compensated to a certain extent the effectiveness of the subsequent irradiation with X-rays. The largest number of mutations (7.5 %) was obtained with an interval of 4 hours between the individual irradiations (Fig 2). In equal percentage of mutations was obtained by an inverse sequence and by an interval of 3 hours; it was, however, the lowest in this combination. The results obtained are to be regarded as provisional. There are 3 figures, 2 tables, and 6 references, 1 of which is Soviet.

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

Card 3/4

ALIKHANYAN, S.I.

Use of physical and chemical factors in the selection of micro-organisms. Trudy Inst. mikrobiol. no.10:46-58 '61. (MIRA 14:7)  
(INDUSTRIAL MICROBIOLOGY) (VARIATION (BIOLOGY))



KAMENEVA, S.V.; ALIKHANYAN, S.I.

Studying the comparative mutability of some loci in Actinomyces  
olivaceous strains produced by genetic transfers. Radiobiologiya  
1 no.5:725-730 '61. (MIRA 14:11)

1. Institut energii imeni I.V.Kurchatova AN SSSR, Moskva.  
(ACTINOMYCES) (RADIATION—PHYSIOLOGICAL EFFECT)  
(VARIATION (BIOLOGY))

YEROKHINA, L.I.; ALIKHANYAN, S.I.

Use of visible light in studying the kinetics of mutagenesis.  
Radiobiologiya 1 no.5:792-795 '61. (MIRA 14:11)

1. Institut atomnoy energii imeni I.V.Kurchatova AN SSSR, Moskva.  
(ULTRAVIOLET LIGHT--PHYSIOLOGICAL EFFECT)  
(VARIATION (BIOLOGY))

ALIKHANYAN, S.I., prof.

Chemical mutagenesis. Zhur.VKHO 6 no.3:285-292 '61. (MIRA 14:6)  
(Variation (Biology)) (Biochemistry)

MINDLIN, S.Z.; KUBYSHKINA, T.A.; ALIKHANYAN, S.I.

Use of Act. rimosus mutants for the study of oxytetracycline biosynthesis. Antibiotiki 6 no.7:623-629 J1 '61. (MIRA 15:6)

1. Institut atomnoy energii AN SSSR imeni I.V. Kurchatova.  
(OXYTETRACYCLINE) (ACTINOMYCES)

ALIKHANYAN, S.I.; GARINA, K.P.; ZHDANOVA, N.I.; VLADIMIROV, A.V.

Selection of a strain of Act. antibioticus for the production of  
oleandomycin. Antibiotiki 6 no.10:867-871 0 '61. (MIRA 14:12)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut antibiotikov.  
(OLEANDOMYCIN) (ACTINOMYCES)

ALIKHANYAN, S.I.; MOROZOVA, Ye.S.; VESELOVA, S.I.

Comparative study of the variability in antibiotic synthesis of various strains of Act. streptomycini under the influence of ultraviolet rays and ethyleneimine. Antibiotiki 6 no.12:1055-1058 D '61. (MIRA 15:2)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut antibiotikov.  
(ACTINOMYCES) (ULTRAVIOLET RAYS--PHYSIOLOGICAL EFFECT)  
(ETHYLENIMINE)

ALIKHANYAN, S.I.; BORISOVA, L.N.

Recombination of *Actinomyces aureofaciens*. *Mikrobiologiya* 30  
no.2:214-220 Mr-Apr '61. (MIRA 14:6)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut antibiotikov,  
Moskva.

(STREPTOMYCES)

ALIKHANYAN, S.I.

Genetic research in Czechoslovakia. Biol. MOIP. Otd. biol. 66 no.4:  
140-143 J1-Ag '61. (MIRA 14:7)  
(CZECHOSLOVAKIA--GENETICS)



ALIKHANYAN, S.I.; MINDLIN, S.Z.; ZAYTSEVA, Z.M.; ORLOVA, N.V.

Production of inactive mutants of *Actinomyces rimosus* and formation of the antibiotic during their joint cultivation. Dokl. AN SSSR 136 no.2:468-471 '61. (MIRA 14:1)

1. Predstavleno akademikom M.M. Shemyakinym.  
(ACTINOMYCETES) (TERRAMYCIN)

ZAOTSEVA, Z.M.; MINDLIN, S.Z.; ALIKHANYAN, S.I.

Terramycin synthesis in joint cultures of inactive mutants of  
Actinomyces rimosus. Dokl. AN SSSR 136 no. 3:714-717 Ja '61.  
(MIRA 14:2)

1. Predstavleno akademikom V.N. Shaposhnikovym.  
(TERRAMYCIN) (ACTINEMYCES)

ENGEL'GARDT, V.A., akademik, glav. red.; KUZIN, A.M., zam. glav. red.;  
NUZHIDIN, N.I., red.; ALIKHANYAN, S.I., doktor biol. nauk, red.;  
SHAPIRO, N.I., kand. biol. nauk, red.; KOCHEREZHKIN, V.G.,  
kand. biol. nauk, red.; ARSEN'YEVA, M.A., red. izd-va;  
PRUSAKOVA, T.A., tekhn. red.

[Radiation genetics] Radiatsionnaya genetika; sbornik rabot. Moskva, Izd-vo Akad. nauk SSSR, 1962. 367 p. (MIRA 15:2)

1. Akademiya nauk SSSR. Otdeleniye biologicheskikh nauk. 2. Chlen-korrespondent AN SSSR (for Kuzin, Nuzhdin). 3. Institut biologicheskoy fiziki AN SSSR, Moskva (for Kuzin).

(GENETICS) (RADIATION—PHYSIOLOGICAL EFFECT)

S/747/62/000/000/022/025  
D243/D307

AUTHORS: Alikhanyan, S. I., Yerokhina, L. I. and Lyubinskaya, S. I.

TITLE: Peculiarities of the induced mutation process in micro-organisms

SOURCE: Radiatsionnaya genetika; sbornik rabot. Otd. biol. nauk AN SSSR. Moscow, Izd-vo AN SSSR, 1962, 319-332

TEXT: The authors wished to study the mechanism of mutation formation in actinomycetes, after irradiation with uv, and the effect of visible light on the reactivation of cells inactivated by ultraviolet. Aqueous spore suspensions of H-6 Act. olivaceous received doses of 250 - 5,000 erg/mm<sup>2</sup> sec from a *BYB-15* (BUV-15) bactericidal lamp giving resonance radiation with a wavelength of 2537 Å. Visible light was between 3300 - 3600 Å. The constant factor for inactivation was 0.2, for mutagenesis 0.5. Visible light removed the cell inactivation effect and mutagenic effects caused by both high and low doses of uv. The extent of reactivation differs from that of frequency reduction and the processes involved seem to be indepen-

Card 1/3

Peculiarities of the ...

S/747/62/000/000/022/025  
D243/D307

dent. To determine the dose of visible light required for maximum reactivation and removal of the mutagenic effect, spores of H-6 Act. olivaceous were immediately after radiation subjected to photoreactivation for 1/2, 1, 2, 4 and 6 hours. Mutation formation was studied in the biochemical mutant No. 74 Act. olivaceous over a 7-hr. period. It was found that up to 50% only of irradiated spores were reactivated by visible light, and that when spore survival was increased 15,000 times, only 75% of uv-inclined mutations were removed. Two hours were required for visible light to exert its maximum effect on both processes. Mutation formation is a prolonged process and may vary at each locus in relation to the degree and nature of the initial damage. Some (instantaneous) mutations are never restored: They probably result from very severe damage to a locus, occurring during irradiation. The problem of changing radiosensitivity after repeated doses of radiation was also considered by reporting experiments carried out while seeking new Actinomycete strains with improved antibiotic activity. The strains investigated were Act. subtropicus, rimosus and spheroides. The hypothesis that a negative correlation exists between the ability to manufacture anti-

Card 2/3

Peculiarities of the ...

S/747/62/000/000/022/025  
D243/D307

biotics and radioinsensitivity was not confirmed. The organisms did not become accustomed to the effect of radiation, either in respect of the inactivation or the genetic effect. The gradual rise in sensitivity is the result of an 'accumulation' of the lethal genetic effect in a series of irradiated cell generations. There are 7 figures and 5 tables.

✓

Card 3/3

42698

27.12.80

2120

S/747/62/000/000/023/025  
D243/D307

AUTHORS: Alikhanyan, S. I. and Kameneva, S. V.

TITLE: The genetic effect of radiation in microorganisms with various reorganizations of nuclear structures

SOURCE: Radiatsionnaya genetika; sbornik rabot. Otd. biol. nauk AN SSSR. Moscow, Izd-vo AN SSSR, 1962, 333-345

TEXT: The influence of the genotype of an irradiated organism on the effects of radiation was investigated by considering the influence of the genetic effect of irradiation with changing number of nuclear structures in the cell and the effect of gene position in moulds of the *Penicillium* type, whose so-called parasexual cycle enables stable, diploid strains to be obtained. These moulds are considered to have certain advantages over the plants and microorganisms hitherto used in such studies. Two diploid groups of mutant strains of *P. chrysogenum* were used: diploid family 58/66 consisted of two initial haploids *H1* and *HA-3* (NG and NA-3), diploid 48/66 and a diploid recombinant *P-2* (R-2); diploid family 16/66 consisted

Card 1/3

The genetic effect ...

S/747/62/000/000/023/025  
D243/D307

of two initial haploid strains (11<sup>a</sup> and NA-3), diploid 16/66 and a haploid recombinant R-1. The number of morphological changes, e.g. colony size, and the total number of mutant and recombined forms in each strain were compared after irradiation with doses of uv (from 250 - 8,000 erg/mm<sup>2</sup>) and of x rays (5,000 to 160,000 r). Antibiotic activity was determined in diploid 16/66 after doses of 2,000 and 4,000 erg/mm<sup>2</sup>. The number of morphological changes was much greater in diploids than in haploids after both uv and x ray irradiation. The mutability curves for uv irradiation were similar in both forms, with a peak at 4,000 erg/mm<sup>2</sup>, whilst for x ray irradiation the diploid curve peak lay at 40,000 r, and the haploid at 80,000 r. Study of antibiotic activity showed a greater number of plus-variants in diploids at low doses. These differences in response are considered to be due to the diploid's greater capacity for crossovers. The influence of the genome on the response of an individual gene to radiation was studied in two double auxotrophic mutants obtained from biochemical mutants of *Actinomyces olivaceus* by the authors' transduction method (Dokl. AN SSSR, 1960, 5, no. 132). uv was used in doses of 250, 500, 750 and 1000 erg/mm<sup>2</sup>,

Card 2/3



The genetic effect ...

S/747/62/000/000/023/025  
D243/D307

and x rays in  $5 \times 10^3$ ,  $10^4$ ,  $1.5 \times 10^4$  and  $2 \times 10^4$  r doses. The effect of genome on the reverse mutation at two loci was studied. At one locus, no mutations were found after uv irradiation in strain 80; in the genotypically very similar strain 5, which differs in one newly introduced gene only, a mutation rate of several tenths per  $10^8$  surviving spores was measured; in strain 19, which differed substantially from strain 80, the mutation rate reached 8 per  $10^8$  surviving spores at 1000 erg/mm<sup>2</sup>. After irradiation with x rays at the same locus, in strain 80 no mutations were observed, in strain 5 37 per  $10^9$  surviving spores at 20,000 r, while in strain 19 the frequency declined again. Investigation of the second locus revealed a similar picture. It is concluded that the effect of genotype on post-irradiation mutation behavior at a locus and the specificity of behavior at that locus are clearly shown. There are 8 figures and 2 tables. ✓

Card 3/3

LUR'YE, L.M.; ALIKHANYAN, S.I.

Formation of penicillin through uninterrupted feeding of carbohydrates into fermentation media. Antibiotiki 7 no.1:11-16 Ja '62.

(MIRA 15:2)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut antibiotikov.  
(PENICILLIN) (CARBOHYDRATES)

ALIKHANYAN, S.I.; CHERNOSVIT'OVA, V.I.; LYUBINSKAYA, S.I.

Some characteristics of the selection of highly active strains  
of penicillin-producing organisms. Antibiotiki 7 no.6:491-495  
Je '62. (MIRA 15:5)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut antibiotikov.  
(PENICILLIUM)

ALIKHANYAN, S.I.; MINDLIN, S.Z.; SUKHODOLETS, V.V.; KRYLOV, V.N.

Some current problems in the genetics of micro-organisms.  
Antibiotiki 7 no.9:841-852 S '62. (MIRA 15:12)

1. Institut atomnoy energii imeni Kurchatova AN SSSR.  
(GENETICS) (MICROBIOLOGY)

HUNGARY

ALLIKOVA, M. M., FLOREN, M. Z., SZUCHOWICZ, V. V., KRISOV, V.N.;  
Soviet Academy of Medicine, Atomic Energy Institute Named After Kur-  
chatov [Russian version not given].

"Some Recent Problems of Microbial Genetics."

Budapest, Biological Journal, Vol 10, No 2, 65, 1966.

Abstract: The article is a translation from the Russian of a lecture  
presented at a congress on microbial genetics held in Moscow in January  
1962. It represents a brief review of recent advances in the genetics  
of microorganisms, dealing mostly with work of Western European and  
United States scientists. Of 49 references, almost all are Western.

1/3

ALIKHANYAN, S.I.; TETERYATNIK, A.F.

Obtaining streptomycin-producing variants under the influence of actinophages of "zero" mutants of the IS-1 strain of Act. streptomycini. Mikrobiologiya 31 no.1:54-60 Ja-F '62. (MIRA 15:3)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut antibiotikov.  
(ACTINOMYCES) (BACTERIOPHAGE) (STREPTOMYCIN)

MINDLIN, S.Z.; ALIKHANYAN, S.I.; MURAV'YEVA, L.I.

Studying the mechanism of recombination in *Actinomyces rimosus*.  
Mikrobiologiya 31 no.3:443-448 My-Je '62. (MIRA 15:12)

1. Institut atomnoy energii imeni I.V.Kurchatova AN SSSR.  
(ACTINOMYCES) (BOTANY--VARIATION)

ALIKHANYAN, S.I.

Induced mutagenesis in the selection of micro-organisms. Izv.AN  
SSSR.Ser.biol. 27 no.4:544-575 J1-Ag '62. (MIRA 15:9)

1. Kurchatov Institute of Atomic Energy, Moscow.  
(ANTIBIOTICS) (VARIATION (BIOLOGY))



ZAYTSEVA, Z.M.; ALIKHANYAN, S.I.

Production and properties of new teracyclines. Antibiotiki 8  
no.6:551-556 Je'63 (MIRA 17:3)

MKRTUMYAN, N. M., and ALIKHANYAN, S. I.,

"Induced Mutations in Extracellular Actinophages."

report submitted for the 11th Intl. Congress of Genetics, The Hague, Netherlands,  
2-10 Sep 63

ALIKHANYAN, S. I., and OGANES'YAN, M.,

"New Derivatives of  $\beta$ -chloro- ethyl- amine as Active Mutagenic Factors."

report submitted for the 11th Intl. Congress of Genetics, The Hague, Netherlands,  
2-10 Sep 63.

KLEPIKOVA, S.S.; ALIKHANYAN, S.I.

Comparative studies on the effect of various mutagenic factors  
on Actinomyces subtropicalis cultures. Antibiotiki 8 no.9:777-782  
S '63. (MIRA 17:11)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut antibiotikov.

YEROKHINA, L. I.; ALIKHANYAN, S. I.

"The production of mutants of actinomyces rimosus, synthetizing substances different from oxytetracycline."

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

Inst Atomic Energy im I. V. Kurchatov, Moscow.

ALIKHANYAN, S. I.

"Genetic control of metabolic processes."

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

YEROKHINA, L.I.; IL'INA, T.S.; KAMENEVA, S.V.; KRYLOV, V.N.;  
LOMOVSKAYA, N.D.; MINDLIN, S.Z.; NIKIFOROV, V.N.; SOKOLOVA,  
Ye.V.; SUKHODOLITS, I.V.; ZAKHAROV, I.A.; INGE-VECHTOMOV,  
S.G.; KVITKO, K.V.; KRIVISSKIY, A.S.; KARASEVICH, Yu.N.;  
ENGEL'GARDT, V.A., akademik, glav. red.; ALIKHANYAN, S.I.,  
prof., red.; IL'INA, T.S., red.

[Genetics and variation of micro-organisms] Genetika i se-  
lektsiya mikro-organizmov. Moskva, Nauka, 1964. 304 p.  
(MIRA 17:9)

1. Institut atomnoy energii imeni I.V.Kurchatova (for  
Yerokhina, Il'ina, Kameneva, Krylov, Lomovskaya, Mindlin,  
Nikiforov, Sokolova, Sukhodolets). 2. Kafedra genetiki Le-  
ningradskogo gosudarstvennogo universiteta (for Zakharov,  
Inge-Vechtomov, Kvitko). 3. Institut radiatsionnoy i fiziko-  
khimicheskoy biologii (for Krivisskiy). 4. Institut mikro-  
biologii AN SSSR (for Karasevich).

ACCESSION NR: AP4027986

S/0205/64/004/002/0313/0321

AUTHOR: Zhdanov, V. G.; Alukhanyan, S. I.

TITLE: Use of fast neutrons in selecting an Actinomyces erythreus erythromycin producer

SOURCE: Radiobiologiya, v. 4, no. 2, 1964, 313-321

TOPIC TAGS: Act. erythreus, erythromycin producer, fast neutron selection, induced Act. erythreus variant, fast neutron dose (10 to 60 kr), ultraviolet irradiation, diethylsulfate treatment, variant antibiotic activity, fast neutron dose RBE

ABSTRACT: The present study was conducted to test the effectiveness of using fast neutrons to induce Act. erythreus variants with high antibiotic activity and to compare these variants with those induced by ultraviolet irradiation, diethylsulfate (DES) treatment, and DES treatment combined with ultraviolet irradiation. Suspensions of Act. erythreus spores in plexiglass tumblers were placed into special lead containers and irradiated with fast neutron doses (10 to 60 kr) for a maximum of 6 min at 33 to 34°C. After irradiation the suspensions were sown on an agar corn medium and antibiotic activity of colonies

Card 1/2



ACCESSION NR: AP4027986

was determined 10 days later. On the basis of fast neutron dose RBE, the effects of various fast neutron doses (10 krad and 40 krad) were compared with those of corresponding ultraviolet radiation doses (1000 erg/mm<sup>2</sup> and 4000 erg/mm<sup>2</sup>). Other experiments investigated the effects of diethylsulfate treatment (1:100 solution) of Act. erythreus spores for 30 min and 60 min periods and also the effects of this treatment in combination with ultraviolet radiation (1500 erg/mm<sup>2</sup> dose) and fast neutron doses (10, 20, and 30 krad doses). Experimental data show that the largest number of variants with high antibiotic activity was induced by fast neutrons. An Act. erythreus strain (IAE-lefu) with 60 to 70% higher antibiotic activity than in initial strain LS-E2577 was produced by use of fast neutron selection. Orig. art. has: 6 figures and 5 tables.

ASSOCIATION: Institut atomnoy energii im. I. V. Kurchatova, Moscow (Atomic Energy Institute)

SUBMITTED: 16Jul63

ENCL: 00

SUB CODE: LS

NR REF SOV: 003

OTHER: 004

Card 2/2

OGANESYAN, M.G.; ALIKHANYAN, S.I.

Variability in vitamin production by *Actinomyces olivaceus* induced by new mutagens of the 2-chloralkyl series. Antibiotiki 9 no.1:22-24 Ja '64. (MIRA 18:3)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut antibiotikov, Moskva.

ALIKHANYAN, S.I.; OGANEV, M.G.

Relation of the mutagenic effect of 2-chloroalkylamines to the structure of their functional groups and radicals. Vest. AMN SSSR 19 no.1:72-84 '64. (MIRA 17:7)

1. Vsesoyuznyy Nauchno-issledovatel'skiy institut antibiotikov Ministerstva zdavookhraneniya SSSR.

ACCESSION NR: AP4022477

S/0220/64/033/001/0073/0078

AUTHOR: Mkrtumyan, N. M.; Alikhanyan, S. I.

TITLE: Biological effect of ultraviolet radiation on actinophages

SOURCE: Mikrobiologiya, v. 33, no. 1, 1964, 73-78

TOPIC TAGS: ultraviolet radiation, ultraviolet radiation biological effect, actinophage, actinophage mutagenesis, Act. Streptomyces Kras. B-6 culture, actinophage negative colony, actinophage radiosensitivity, irradiated host cell

ABSTRACT: Lack of literature data on induced mutagenesis in actinophages prompted the present study of actinophage type I which is active against Act. Streptomyces Kras. B-6 cultures. The effects of ultraviolet radiation on actinophages were studied after two experiments were staged to determine: 1) actinophage type I growth, and 2) morphology of negative colonies formed by extracellular actinophages and infected sprouts in B-6 cultures. Actinophage type I was found to sprout in Act. Streptomyces B-6 population approximately 75 min after infection and to continue growing for 45 min. When actinophages and 12 hr sprouts of actinomycete treated with embichine

Card 1/3

ACCESSION NR: AP4022477

were sown, large homogeneous negative colonies formed in all the B-6 cultures, but such colonies were found in only 44% of the control group cultures. In a series of experiments with ultraviolet radiation the following were determined: sensitivity of free and intracellular actinophages to ultraviolet radiation, inhibiting effect on reproduction, and effect of irradiated host cells on actinophage sensitivity to ultraviolet radiation. The intracellular actinophage was found to be 40 times more resistant to ultraviolet radiation than the free actinophage and 10 times more resistant than the noninfected sprout. An ultraviolet irradiated actinophage starts to sprout 30 min later than in the control group. Survivability of nonirradiated actinophages does not change when sown on irradiated host cells. However, irradiated actinophages sown on irradiated host cells produce 4.7 times fewer negative colonies than when sown on nonirradiated host cells. Consequently, irradiated actinophages should be sown on nonirradiated host cells to increase their survivability. The authors hypothesize that the genetic material of the actinophage and the host cell are homologous and that damaged actinophage genetic material is possibly replaced by the host cell. Orig. art. has: 6 tables and 3 figures.

Card 2/3

ACCESSION NR: AP4022477

ASSOCIATION: Institut atomnoy energii im. I. V. Kurchatova (Atomic Energy Institute)

SUBMITTED: 21Apr63

DATE ACQ: 09Apr64

ENCL: 00

SUB CODE: LS

NR REF SOV: 004

OTHER: 008

Card

3/3

MRRTUMYAN, N.M.; ALIKHANYAN, S.I.

Biological effect of ultraviolet rays on actinophage.  
Mikrobiologiya 33 no.1:73-78 Ja-F '64. (MIRA 17:9)

1. Institut atomnoy energii imeni Kurchatova.

ALIMKANYAN, S. I.

Advances and prospects in the genetics of microorganisms. Genetika  
no.1:67-77 '65. (MIRA 18:10)

1. Institut atomnoy energii im. I.V.Kurchatova AN SSSR, Moskva.



SUKHODOLIN, V.V.; IL'INA, T.S.; ALIKHANYAN, S.I.

Genetic mapping of thymine-dependent mutants of Escherichia  
coli K-12. Genetika no.1:78-88 '65. (MIRA 18:10)

1. Institut atomnoy energii im. I.V.Kurchatova AN SSSR, Moskva.

KAMENEVA, S.V.; KALYAYEVA, E.S.; ALIKHANYAN, S.I.

Study of the genetic basis of different quantitative thymine  
requirement by Escherichia coli K-12 thymine mutants. Genetika  
no.1:100-105 '65. (MIRA 18:10)

1. Institut atomnoy energii im. I.V.Kurchatova AN SSSR, Moskva.

ALIKHANYAN, S.T.; MKRTUMYAN, N.M.

Production of spectrum induced mutations in actinophages  
without preliminary intracellular replication in the phage  
resistant strain. Mikrobiologiya 34 no.1:101-109 Ja-F '65.  
(MIRA 18:7)

1. Institut atomnoy energii imeni I.V. Kurchatova.

ALTEK, N. N.; LITVINOV, V. V.

Genetic recombinations in bacteria. Usp. mikrobiol. 1:101-132  
164. (MIRA 18:9)

1. 39746-65 EWT(1)/EWA(1)/EWA(b)-2 RO  
ACCESSION NR: AP5003899

S/0216/65/000/001/0138/0141

AUTHOR: Zhdanova, N. I.; Alifhanyan, S. I.

TITLE: Effect of stabilizing selection in breeding an oleandomycin producer

SOURCE: AN SSSR. Izvestiya. Seriya biologicheskaya, no. 1, 1965, 1:8-141

TOPIC TAGS: Act. antibiotics, oleandomycin producer, mutation, phenotype, genetic effect, culture media

Card 1/2

1. 39746-65  
ACCESSION NR: AP5003899

of productivity variability for these four strains showed that a sharp shift (gross mutation) in the genotype produces extremely high variability and the selection of small quantitative deviations (minute mutations) leads to stabilization of the characteristic in the population at a certain threshold. With a high degree of homogeneity in a population, a new variability shift can be produced under the action of mutagenic factors. Orig. art. has: 2 tables and 1 figure.

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

SUBMITTED: 02Apr64

INCL: 00

SUB CODE: LS

NR REF NOV: 005

OTHER: 000

Card

2/2

L 56545-65

ACCESSION NR: AP5010359

UR/0205/65/005/002/0304/0308

AUTHOR: Zhdanova, N. I.; Zharova, N. I.; Alikhanyan, S. I.

TITLE: A comparison of fast neutrons, X-rays, and ultraviolet rays with chemical mutagens in Act. antibioticus selection

SOURCE: Radiobiologiya, v. 5, no. 2, 1965, 304-308

TOPIC TAGS: Act. antibioticus 32, antibiotic producer selection, mutagen, fast neutron dose, X-ray irradiation, ultraviolet ray irradiation, ethylenimine, diethylsulfate, radiation induced mutation

ABSTRACT: Act. antibioticus 32 spores suspended in water with a titer of  $1.10^{10}$  spores/ml were treated with the following 5 mutagens to evaluate their relative effectiveness in selection of antibiotic producers: ethylenimine (0.1%), diethylsulfate (0.2%), fast neutrons, X-rays, and UV rays. Chemical mutagen treatment was conducted at 28°. Two BUV-15 bactericidal lamps (104 ergs/sec) were used as a UV source, a close focusing tube of a RUM-7 unit (60 kv, 20 ma, 537 r/min) was used as an X-ray source, and a 100 kv reactor (16 rads/sec, gamma-background 2.3 rads/sec) was used for fast neutron irradiation. The effect of each mutagen on spore survival and antibiotic production variability was

Card 1/2

L 56545-65

ACCESSION NR: AP5010359

investigated through a 4-5 stage selection process. The frequency of high activity variants (plus-variants) and low activity variants (minus-variants) was determined. A comparison of the mutagenic factors on the basis of highest plus-variant frequencies shows that fast neutrons are first, X-rays are second and ethylenimine is third. In comparing the effectiveness of these three mutagenic factors and natural selection at the end of the 4 stage selection process, ionizing irradiation still maintained its superiority over ethylenimine and the variant produced by natural selection practically did not differ from the control. Thus, ionizing irradiation in the form of fast neutrons and X-rays proved to be more effective than a chemical mutagen in the form of ethylenimine at all stages of antibiotic producer selection. Orig. art. has: 2 figures and 2 tables.

ASSOCIATION: Vsesoyuznyy nauchno-issledovatel'skiy institut antibiotikov, Moskva  
(All Union Scientific-Research Institute of Antibiotics, Moscow)

SUBMITTED: 06Apr64

ENCL: 00

SUB CODE: LS

NR REF SOV: 007

OTHER: 002

mg  
Card 2/2



L 1619-66

ACCESSION NR: AP5017764

UR/0216/65/000/004/0542/0549  
575.24

AUTHOR: Alikhanyan, S. I.; Grinberg, K. N.; Krylov, V. N.;  
Maysuryan, A. N.; Oganessian, M. G. 20  
B

TITLE: Temperature-sensitive (ts) mutants of bacteriophage T4B

SOURCE: AN SSSR. Izvestiya. Seriya biologicheskaya, no. 4, 1965,  
542-549

TOPIC TAGS: bacterial genetics, biochemistry, temperature  
characteristic

ABSTRACT: A new method of inducing temperature-sensitive bacteriophage T4B mutants with disturbed synthesis of various enzymes, particularly those required for DNA synthesis, is described. *E. coli* B strains were infected with bacteriophage T4B and cultivated in a broth using 2,6-diaminopurine, hydroxylamine, ultraviolet light, and 5-bromouracil as mutagenic agents. Mutants were selected from a total of 298 colonies by methods of absolute selection, minute-phenotype, and antiphage serum. In contrast to phage T4B, the mutants behave differently at 27 and 42 C. Hydroxylamine with

Card 1/2

L 1619-66

ACCESSION NR: AP5017764

antiphage serum yielded a high percentage (15-20%) of ts-mutants. Preliminary classification of the ts-mutants by a complementation test divided them into 50 groups. Some groups had 4-7 mutants, others 2, and the majority one. A physiological study of the ts-mutants showed that their thermal sensitivity is related to the thermolability of the intracellular developmental stages. Differences were found in mutant inactivation kinetics when applying the one step growth cycle according to Adams at 42 C. On the basis of these differences the mutants may be divided into 4 phenotypes. The fact that these mutants were preliminarily distributed over 50 groups indicates that many genes are affected by mutations. The tests confirmed the assumption that conditionally lethal mutations may be induced from the bacteriophage T4B. Orig. art. has: 6 tables and 2 figures.

ASSOCIATION: Institut atomnoy energii im. I. V. Kurchatova  
(Institute of Atomic Energy)

SUBMITTED: 08Jun64

ENCL: 00

SUB CODE: 18

NR REF SOV: 002

OTHER: 006

Card 2/2 JD

FEDOROVA, I.V.; ALIKHANYAN, S.I.

Characteristics of the variability of *Actinomyces aureofaciens* strains in respect to the production of antibiotics under the effect of mutant actinophages. Antibiotiki 10 no.7:579-585 J1 '65. (MIRA 18:9)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut antibiotikov i Institut atomnoy energii imeni I.V. Kurchatova, Moskva.

MOROLOVA, Ye.S., ALIKHANYAN, S.I.

Natural and induced variability of the strain 15-1 with respect  
to production of antibiotic on various media. Antibiotiki 10  
no.3:709-713 Ag '65. (MIRA 18:9)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut antibiotikov,  
Moskva.

LOMOVSKAYA, N.D.; ALIKHANYAN, S.I.

Characteristics of the effect of 2 actinophages on cultures of  
Actinomyces spheroides. Antibiotiki 10 no.9:793-800 S '65.  
(MIRA 18:9)

1. Institut atomnoy energii imeni I.V.Kurchatova, Moskva.

ALJEHANYAN, C.T.

Johann Gregor Mendel, 1822-1884. Mikrobiologia 34 no.4:733-739  
Jl-ag '65.

(MIRA 18:10)

ALIKHANYAN, S.I.; IL'INA, T.S.; KALYAYEVA, E.S.; KAMENEVA, S.V.; SUKHODOLETS, V.V.

Characteristics of Escherichia coli K 12 mutants with impaired  
thymidyllic acid synthesizing system. Mikrobiologiya 34 no.4:666-  
675 Jl-Ag '65. (MIRA 18:10)

1. Institut atomnoy energii imeni I.V.Kurchatova.

ALIKHANYAN, S.I.; FEDOROVA, I.V.

Sarcosine induced mutations in actinophages lysing the strains  
of *Actinomyces aureofaciens*. Mikrobiologiya 34 no.3:450-455 My-Je  
'65. (MIRA 18:11)

1. Institut atomnoy energii imeni I.V.Kurchatova i Vsesoyuznyy  
nauchno-issledovatel'skiy institut antibiotikov.



SUKHODOLETS, V.V.; ALIKHANYAN, S.I.

Thymidine-sensitive gene in Escherichia coli K-12; phenotypical  
expression and chromosomal localization. Genetika no.2:47-53  
Ag '65. (MIRA 18:10)

1. I.V. Kurchatov's Institute of Atomic Energy, Moscow.

RUBIKAS, I.; ALIKHANYAN, S.I.

Cross-transformation of mutant T-4 phages. Dokl. AN SSSR 163  
no.6:1487-1490 Ag '65. (MIRA 18:8)

1. Submitted November 3, 1964.

ALIKHANYAN, S.I.

Some problems of the mechanism of mutagenesis. Izv. AN SSSR.  
Ser. biol. no.6:825-835 N-D '65. (MIRA 18:11)

1. Instiut atomnoy energii im. I.V. Kurchatova.

IL'INA, T.S.; ALIKHANIAN, S.I.

Burst of phage of Pl kc from Escherichia coli K-12 mutants with disturbed system of thymidylic acid synthesis. Genetika. no.3:105-110 S '65. (MIRA 18:12)

1. Institut atomnoy energii imeni I.V.Kurchatova, Moskva.  
Submitted May 6, 1965.

RUBIKAS, I.; ALIKHANYAN, S.I.

Transformation of phage T4rII by using uninjured phage. Genetika  
no.5:11-13 N '65. (MIRA 19:1)

1. Institut atomnoy energii imeni I.V. Kurchatova, Moskva, 1  
Institut botaniki AN Litovskoy SSR, Vil'nyus. Submitted August 23,  
1965.

RUBIKAS, I.; KRYLOV, V.N.; ALIKHANYAN, S.I.

Transformation of phage T4rII 250. Genetika no.5:14-18 N '65.  
(MIRA 19:1)

1. Institut atomnoy energii imeni I.V. Kurchatova, Moskva i  
Institut botaniki AN Litovskoy SSR, Vil'nyus. Submitted August  
23, 1965.

ALIKHASHKIN, A.; GORCHEV, I.; MAYOROV, Ye.

Highly efficient calculating machines in the service of  
economists. Fin.SSSR 37 no.2:58-61 F '63. (MIRA 16:2)  
(Punched card systems—Budget)

ALIKHASHKIN, Aleksandr Il'ich; GORCHEV, Ivan Ivanovich; MAYOROV,  
Yevgeniy Semenovich; MEDVEDEVA, R., red.

[Mechanization of planning and accounting work in financial  
organs] Mekhanizatsiia planovo-uchetnykh rabot v finansov-  
nykh organakh. Moskva, Izd-vo "Finansy," 1964. 92 p.  
(MIRA 17:8)



SOV/124-58-10-11321

Translation from: Referativnyy zhurnal, Mekhanika, 1958, Nr 10, p 89 (USSR)

AUTHOR: Alikhashkin, Ya.I.

TITLE: A Method of Computing the Yield of a Pressure Inflow to a Well Which Does not Completely Penetrate an Aquifer (Odn sposob rascheta debita dlya napornogo pritoka k nesovershennoy skvazhine)

PERIODICAL: Vychislit. matematika, Nr 1, 1957, pp 131-135

ABSTRACT: The Abel-Euler method is employed to improve the convergence of series encountered in the expressions for the constants of seepage resistance and mean potential values along a section of the well within an aquifer. Tables and graphs are given which permit calculation of the yield of a well (which does not completely penetrate the aquifer) with an accuracy sufficient for all practical purposes. Bibliography. 5 references.

V.A. Karpychev

Card 1/1

ALIKHASHKIN, Ya.I.

Solving the problem of an imperfect well by the method of straight  
lines. Vych. mat. no.1:136-152 '57. (MIRA 10:11)  
(Fluid mechanics) (Differential equations) (Determinants)

ALIKHASHKIN, Ya. I., YUSHKIN, A. R.

Using electronic calculating machines for hydraulic calculations  
of water-supply systems. Gor. khoz. Mosk. 34 no.11:17-18 N '60.

(MIRA 13:11)

1. Uchenyy sekretar' Vychislitel'nogo tsentra Akademii nauk SSSR  
(for Alikhashkin). 2. Glavnyy inzhener proyekta instituta "Mosinsh-  
proyekt" (for Yushkin).

(Electronic calculating machines)

-(Water-supply engineering)

CHISTOVA, E.A.; ALIKHASHKIN, Ya.I., kand. viz.-mat.nauk, otv. red.;  
ORLOVA, I.A., red.; KORKINA, A.I., tekhn. red.

[Standard programs for the "Strela-3" computer] Standartnye  
programmy dlia mashiny "Strela-3." Moskva. No.3. [Calculation  
of Bessel's functions] Vychislenie funktsii Besselia. 1961. 39 p.  
(MIRA 15:1)

1. Akademiya nauk SSSR. Vychislitel'nyy tsentr.  
(Bessel's functions)

SRAGOVICH, A.I.; CHAYKOVSKAYA, E.N.; ALIKHASHKIN, Ya.I., kand. fiz.-mat.  
nauk; ORLOVA, I.A., red.; KORKINA, A.I., tekhn. red.

[Standard programs for the "Strela-3" computer] Standartnye programmy  
dlia mashiny "Strela-3". Moskva. No.1. 1961. 47 p. No.2. 1961.  
36 p. (MIRA 14:10)

1. Akademiya nauk SSSR. Vychislitel'nyy tsentr.  
(Programming (Electronic computers))

ALIKHASHK N, Ya.I. (Moskva)

Numerical integration of the equation of an automatically simulated movement of the boundary surface of two liquids in a porous medium. Izv.AN SSSR.Otd.tekh.nauk.Mekh.i mashinostr. no.5:159-162 S-0 '61. (MIRA 14:9)

(Hydrodynamics)

ALIKHASHKIN, Ya.I. (Moskva); FAVORSKIY, A.P. (Moskva); CHUSHKIN, P.I. (Moskva)

Calculation of the flow in a flat Laval nozzle. Zhur. vych. mat i mat.  
fiz. 3 no.6:1130-1134 N-D '63. (MIRA 17:1)

ТАТАРОВ, З.И.; АЛИКШАСКИН, Я.И., канд. физ.-матем. наук, отв. ред.;  
Орлова, И.А., отв. сек.

APPROVED FOR RELEASE: 03/20/2001

CIA-RDP86-00513R000101110010-6"

[Standard programs for the "Strela-3" computer.] Standartnye  
programmy dlia mashiny "Strela-3." Moskva, VTs, AN SSSR, 1962.  
8 p. (Akademiia nauk SSSR. Vychislitel'nyi tsentr. Standartnye  
i tipovye programmy dlia mashiny "Strela-3," no.4) (MIRA 18:1)

ALIKHASHKIN, Ya.I., kand.fiz.-matem.nauk; KANTOR, B.Ya.; MARCHENKO, G.A.;  
ORLOVA, I.A., red.; KORKINA, A.I., tekhn.red.

[Standard programs for the "Strela-3" computer] Standartnye  
programmy dlia mashiny "Strela-3." Moskva, 1963. 15 p. (Akademiia  
nauk SSSR. Vychislitel'nyi tsentr. Standartnye i tipovye programmy  
dlia mashiny "Strela-3," no.5). (MIRA 16:10)



ALIKHASHKIN, Ya.I., kand. fiz.-matem. nauk; KHOMENKO, Yu.V., inzh.

Determining the form of the knife of the picker cylinder of  
a silage harvesting combine. Trakt. i sel'khoz mash. no.5:  
23-26 My '65. (MIRA 18:6)

1. Vychislitel'nyy tsentr AN SSSR i Vsesoyuznyy nauchno-  
issledovatel'skiy institut sel'skokhozyaystvennogo mashinostroyeniya.

ALIKHANYANTS, R. A

USSR/Chemistry - Specific Heat

Card 1/1

Authors : Kostryukov, V. N., Alikhanyants, R. A., Samoylov, B. N., and Strelkov, P. G.

Title : Thermodynamic Studies at Low Temperatures. IV. Methods for Measuring the Specific Heat of Condensed Gases.

Periodical : Zhur. Fiz. Khim. Vol. 28, Ed. 4, 650-655, Apr 1954

Abstract : A general description is given of a calorimetric apparatus, used for measuring the specific heat of condensed gases at low temperatures, and the determination of the volume of gas by means of weighing it under condensed condition. Four references; tables; graphs, drawings.

Institution : S. I. Vavilov's Institute of Physical Problems of the AS of the USSR.

Submitted : June 8, 1953

МЕЛНІШКИН, А.  
P. 2.

25(3)

PHASE I BOOK EXPLOITATION

SOV/1672

USSR. Upravleniye po organizatsii i mekhanizatsii ucheta

- Mekhanizatsiya ucheta i vychislitel'nykh rabot na promyshlennom predpriyatii; sbornik statey (Mechanization of Accounting and Computing Operations in an Industrial Establishment; Collection of Articles) Moscow, Gosstatizdat, 1957. 125 p. 5,100 copies printed.

Additional Sponsoring Agency: USSR. TSentral'noye statisticheskoye upravleniye.

Ed.: V.A. Ustiyants; Tech. Ed.: A.A. Kapralova.

PURPOSE: This book is intended for technical personnel servicing computers, tabulators, punch card machines, etc., and for those using this equipment.

COVERAGE: This collection of articles reviews various aspects of mechanical invoicing, use of key-operated calculators in account-

Card 1/4

Mechanization of Accounting (Cont.)

SOV/1672

ing, functions of interplant clearing houses, accounting of state taxes using business machines and computers, and operation of punch card machines. Technical features of computing and calculating are discussed and some measures to improve reliability are outlined. No personalities are mentioned. There are 8 Soviet references.

TABLE OF CONTENTS:

Galiyev, A. Use of the FMR-III Invoicing Machine for Simultaneous Printing of Three Billing Documents	3
Gavrilov, G. Mechanization of Finished Product Accounting Using Key-operated Calculators (Based on the Experience of the Shadrinskiy Avtoagregatnyy Zavod-Shadrinsk Automatic Calculator Plant)	13
Veprinskiy, S. Mechanizing Operations of an Accounts Clearing House (BVR) of a Construction Trust	20
Berezin, M., and A. Alikhashkin. Methods of Getting the Accounting Leaf and Insert Into the Face Account. Accounting of State Taxes Card 2/4	

Mechanization of Accounting (Cont.)

SOV/1672

(Experience of the Computing and Business Machine Service Center of  
the "Yuzhuralnikel'" Combine) 27

Lazarev, V., and A. Safonov. For Further Improvement of the Mechanization of State Tax Accounting 32

Potekhin, S. Methods of Perforation Control 40

Isakov, V. On Perforation Control Methods 53

Rapoport, Le. Effectiveness of Mechanized Engineering and Technical Calculations 56

Rappoport, M. Technique of Calculating Finite Differences on Computing Machines 80

Khusainov, B. Compilation of Calibrating Tables on Tabulating Machines (Experience of the Computing and Business Machine Service

Card 3/4

Mechanization of Accounting (Cont.)

SOV/1672

Center of the Novo-Ufimskiy neftepererobatyvayushchiy zavod-- New  
Petroleum Refinery at Ufa)

109

Tikhomirov, Yu., and N. Kotov. Automatic Stopping of the Tabu-  
lator and Switching on of a Light Signal With the Appearance of a  
"Short" in the Tabulator and the Totaling Perforator

120

Fokin, N. Modernization of the Totaling Perforator for the T-  
4MI Tabulator

123

AVAILABLE: Library of Congress (HF5679.R8)

Card 4/4

JG/bg  
8-5-59

GUSENKOV, V.; ALIKHASHKIN, A.

Practice of mechanizing the processing of reports on carrying  
out the state budget. Fin. SSSR. 22 no. 2:83-85 F '61.  
(MIRA 14:2)

1. Glavnyy bukhgalter Moskovskoy pechatnoy fabрики Gosznaka  
(for Gusenkov). 2. Nachal'nik tsekha mekhanizirovannogo ucheta  
Moskovskoy pechatnoy fabрики Gosznaka (for Alikhashkin).  
(Moscow--Printing industry--Accounting)  
(Machine accounting)

ALIKHASHMIN, YA. N.

ALIKHASHMIN, YA. N. - "Methods of Approximate Solution of One Spatial Problem in the Theory of Filtration (Problem of Imperfect Well). "Acad Sci USSR, Inst of Precision Mechanics and Computation Engineering, Moscow, 1955 (Dissertations for the Degree of Candidate of Physicomathematical Sciences

SO: Knizhnaya Letopis' No. 26 June 1955, Moscow



ALIKHAYAN, S.I.; LOMOVSKAYA, N.D.

Genetic recombination in actinophages. Izv. AN SSSR. Ser.  
biol. no.5:721-726 S-O '64. (MIRA 17:9)

1. Institut atomnoy energii im. I.V. Kurchatova AN SSSR, Moskva.

SEN'KO, M.F.; SLAVIKOVSKIY, N.A.; ALIKHODZHAN, B.A.; FILIN, L.G., inzh

Lengthening the life of rails. Put' i put.khoz. no.12:24 D  
'59. (MIRA 13:4)

1. Glavnyy inzhener sluzhby puti Moskovskoy dorogi (for Sen'ko).
  2. Zamestitel' nachal'nika distantsii puti Moskovskoy dorogi (for Slavikovskiy).
  3. Starshiy inzhener sluzhby puti Moskovskoy dorogi (for Alikhodzan).
- (Railroads--Rails)

ALIKHODZHAYEVA, M.A.; GUDKOV, I.V.; SHEKLEIN, A.V.

Selective coating of receivers of radiant solar energy. (Helio-  
tekhnika no.6:19-24 '65. (MIRA 19:1)

1. Gosudarstvennyy nauchno-issledovatel'skiy energeticheskiy  
institut imeni Krzhizhanovskogo.

L 36349-66

ACC NR: AP6017581

SWT(m)/EWP(j)/T

IJP(c) RM/WW

SOURCE CODE: UR/0377/65/000/006/0019/0024

AUTHOR: Alikhodzhayeva, M. A.; Gudkov, L. V.; Sheklein, A. V.

ORG: State Scientific Research Power Engineering Institute im. G. M. Krzhizhenskiy  
(Gosudarstvennyy n.-i. energeticheskiy institut)

TITLE: Concerning selective coating of receivers for radiant energy from the sun

SOURCE: Geliotekhnika, no. 5, 1965, 19-24

TOPIC TAGS: *dy. chemical enamel,* solar furnace, solar power plant, paint, solar radiation absorption/  
Khs 77 enamel, DM nitro dye *chemical.*

ABSTRACT: The purpose of the investigation was to find a more universal paint for solar radiation receivers, such as would absorb the incident radiation in the spectral range which produces low effective heating and would have a minimum emission in the region of the intrinsic thermal radiation of the receiver. Tests made on various Soviet enamels found that the most satisfactory results were obtained with the natural-drying enamel "Khs-77" which is a solution of the copolymer of vinyl chloride and vinylidene chloride mixed with volatile organic solvents, pigment, and filler. The coefficient of absorption and the degree of blackness of this enamel are compared with the nitro dye "DM" and the advantages of the former are demonstrated. A procedure for coating the solar radiation receiver with this enamel and calculating the heat loss in a water boiler treated with this enamel are presented. Plots of the heat loss of such a boiler with variation of temperature are presented. Orig. art. has: 3 figures, 3 formulas, and 2 tables.

SUB CODE: 03/13/

SUBM DATE: 27Sep65/

ORIG REF: 004

Cord 1/1

DOBRICH, Adal'bert [Dobrič, Adalbert]; ALIKHODZHICH, Asim [translator];  
PISAREV, I.Yu., prof., red.; KABACHNIK, Ya.I., red.; LATYSHEV,  
A.I., red.; VINOGRADOVA, V.A., tekhn.red.

[Industrial statistics] Promyshlennaya statistika. Pod red.  
I.IU.Pisareva. Moskva, Gos.stat.izd-vo, 1959. 291 p.  
(Industrial statistics) (MIRA 13:3)

OLEYNIK, I.P., kand. ekon. nauk, nauchn. sotr.; VOINOV, A.M., nauchn. sotr.; SEMENOV, I.I., nauchn. sotr.; PLAKSIN, S.V., nauchn. sotr.; KACHALOV, I.P., nauchn. sotr.; SEMENOVA, L.S., nauchn. sotr.; STORozHEV, I.V., nauchn. sotr.; GERTSOVICH, G.B., nauchn. sotr.; SERGEYEV, V.P., nauchn. sotr.; ALIKHODZHICH, A., nauchn. sotr.; LISOV, V.Ye., red.; NIKOLAYEV, D.N., red.; PONOMAREVA, A.A., tekhn. red.

[International socialist division of labor] Sotsialisticheskoe mezhdunarodnoe razdelenie truda. Pod red. I.P.Oleinika. Moskva, Izd-vo ekon. lit-ry, 1961. 350 p. (MIRA 14:11)

1. Akademiya nauk SSSR. Institut ekonomiki mirovoy sotsialisticheskoy sistemy. 2. Institut ekonomiki mirovoy sotsialisticheskoy sistemy AN SSSR (for all except Lisov, Nikolayev, Ponomareva). (Communist countries—Division of labor)

ALIKHODZHIN, B.A.

Rail tester with a spotter operating under the rail head. Put'i  
put.khov. 4 no.7:22 J1 '60. (MIRA 13:7)

1. Starshiy inzhener sluzhby puti, Moskva.  
(Railroads--Rails--Testing)

KOCHKAREV, P.Ya.; ALIKHODZHIN, B.A.

We don't miss a single defect. Put' i put.khoz. 6 no.11:25-28  
'62. (MIRA 16:1.)

1. Nachal'nik vagona-defektoskopa Moskovskoy dorogi (for  
Kochkarev).

(Railroads--Rails--Defects)



ALIKHOV, N.N., inzh.

Standardization of pipeline fittings. Sudostroenie 27  
no.6:53-54 Je '61. (MIRA 14:6)  
(Marine pipe fitting)

ALIKHOVA, T.N.

History of the development of the Russian Platform in the Ordovician period. Trudy Geol. muz. AN SSSR no.14:27-28 '63. (MBA 17:11)

ALIKHOVA, T.N.

[Brachiopoda of the middle and upper portion of the Lower  
Silurian in Leningrad Province and their stratigraphic  
significance] Brakhiopody srednei i verkhnei chasti nizhnego  
silura Leningradskoi oblasti i ikh stratigraficheskoe znachenie.  
Moskva, Gos.izd-vo geol.lit-ry, 1951. 80 p. (MIRA 12:12)  
(Leningrad Province--Brachiopoda, Fossil)

ALIKHOVA, T.N.; NIKIFOROVA, O.I., redaktor; VOLKOVA, A.M., redaktor;  
POPOV, N.D., tekhnicheskii redaktor

[Leading brachiopod fauna of Ordovician deposits in the northwestern  
part of the Russian Platform] Rukovodiashchaya fauna brachiopod  
ordovikskikh otlozhenii severo-zapadnoi chasti Russkoi platformy.  
Moskva, Gos. izd-vo geol. lit-ry, 1953. 160 [3] p. (MLRA 7:9)  
(Brachiopoda, Fossil)