

X-ray investigation ...

S/192/02/005/002/005/004
0267/0301

ASSOCIATION: Institut Obshchey i Neorganicheskoy Khimii im. N.S.
Kurnakova AN SSSR (Institute of General and Inorganic
Chemistry im. N.S. Kurnakov, AS USSR)

SUBMITTED: October 25, 1961

Card 2/2

S/070/63/008/001/016/024
E132/2460

AUTHORS: Gol'der, G.A., Chetkina, L.A.

TITLE: X-ray diffraction measurements on certain substituted anthraquinone

PERIODICAL: Kristallografiya, v. 9, no. 1, 1965, 104-105

TEXT: The following results were obtained:

1-fluoroanthraquinone. $P2_1/c$ (a, b, c) = 24.35, 3.88, 16.47 Å.
 $C_{14}H_7O_2F$ $\beta = 96^\circ$, $Z = 4$.

1-chloroanthraquinone. $P2_1$ (a, b, c) = 7.90, 3.99, 17.09 Å.
 $C_{14}H_7O_2Cl$ $\beta = 96^\circ$, $Z = 2$

1-bromoanthraquinone. $P2_1$ (a, b, c) = 7.86, 4.03, 17.06 Å.
 $C_{14}H_7O_2Br$ $\beta = 95^\circ$, $Z = 2$

1-iodoanthraquinone. $P2_1$ (a, b, c) = 7.90, 4.24, 17.04 Å.
 $C_{14}H_7O_2I$ $\beta = 92^\circ$, $Z = 2$.

The above crystals appear to be isomorphous, except for the
Card 1/2

X-ray diffraction ...

S/O70/63/008/001/016/024
E132/E460

F derivative.

2,6-dimethyl ester of anthraquinone carboxylic acid

 $C_{14}H_{16}O_2(COCH_3)_2$ Cc or C2/c (a, b, c) = 24.34, 6.21, 19.44 Å
β = 94°, Z = 8ASSOCIATION: Fiziko-khimicheskiy institut im. I.Ya.Karpova
(Physico-chemical Institute imeni I.Ya.Karpov)

SUBMITTED: July 18, 1962

Card 2/2

WYNNON, T.V.; RICHMOND, F.,

Structure of ...
242-250 163.

GOL'DER, G.A.; CHETKINA, L.A.

X-ray diffraction measurements of certain substituted anthra-
quinones. Kristallografiya 8 no.12 104-106 Ju-F*63 (MIRA 1967)

1. Fiziko-khimicheskiy institut imeni I. Ya. Karpova.

S/070/63/008/002/002/017
E021/E120

AUTHORS: Chetkina L.A., Gol'der G.A., and Zhdanov G.S.

TITLE: Crystal structure of 1,5-dibromanthraquinone

PERIODICAL: Kristallografiya, v.8, no.2, 1963, 194-200

TEXT: Single crystals of 1,5-dibromanthraquinone
[(C₇H₃O)₂Br₂] in the form of long dark-yellow needles were

obtained by slow evaporation from a solution in pyridine and also by sublimation in a normal atmosphere. The parameters of the monoclinic unit cell were found by X-ray measurements to be: a = 11.24 ± 0.02, b = 13.43 ± 0.03, c = 3.93 ± 0.01 Å, β = 91°23' ± 12', v = 598 Å³. The density was calculated from the data to be 2.03 g/cm³ which is close to the value obtained from pycnometric measurements (2.02). The number of molecules in the unit cell is two, and the space group is

C_{2h}⁵ - P2₁/a. The deviation of the bromine and oxygen atoms on different sides of the plane of the anthraquinone ring was found to be 0.158 and -0.130 Å respectively. The bond lengths of

Card 1/2

Crystal structure of ...

S/070/63/008/002/002/017
E021/E120

C - Br and C - O were 2.00 and 1.34 Å respectively.
There are 5 figures and 3 tables.

ASSOCIATION: Fiziko-khimicheskiy institut im. L.Ya. Karpova
(Physicochemical Institute imeni L.Ya. Karpov)

SUBMITTED: June 27, 1962

Card 2/2

CHEYKINA, I.A.; GOL'DER, G.A.

Crystalline structure of 1,5-dihydroanthraquinone. Kristallografiya
8 no.4:582-586 JI-Aq: '63. (MIRA 16:9)

1. Fiziko-khimiicheskiy Institut imeni L.Ya. Karpova.
(Anthranquinone)

APPROVED FOR RELEASE: Thursday, September 26, 2002
APPROVED FOR RELEASE: Thursday, September 26, 2002

CIA-RDP86-00513R000515620016-5
CIA-RDP86-00513R000515620016-5"

CHETKINA, L.A.; GOL'DER, G.A.

Elementary cells and space groups of substituted α,α' -
difluorostilbenes. Zhur. strukt. khim. 5 no. 5:798-800
S-0 164 (MIRA 10:1)

L. Fiziko-khimicheskiy institut imeni L. Ya. Karpya.

CHETKINA, L.A.; GOL'DER, G.A.; ZHDANOV, G.S.

Crystalline structure of 1.5-dibromanthraquinone. Kristallografiia 8 no.2:194-200 Mr-Ap '63. (MIRA 17:8)

1. Fiziko-khimicheskiy institut imeni Karpova.

VAYNSHFOR, V.V.; KARTININ, B.M.; GOLDBER, G.A.

Structure of soaps modified by additives of lead and aluminum
stearates. Koll. zhur. 26 no.3:290-295 My-Je '64 (MIRA 17:9)

1. Moskovskiy institut neftekimicheskoy i gazovoy promyshlennosti
imeni Gubkina.

L 21068-65 EPF(c)/EPF(n)-2/EPR/ENG(j)/EWA(h)/EWP(j)/EWT(m)/T/PA(1) Pc-4/
Pr-4/Ps-4/Pu-4/Peb RPL/AFWL/ASD(m)-3/AS(mp)-2/ESD(g#) 31/RM/M/1
ACCESSION NR: AP4044881 S/0020/64/157/006/1399/1402

AUTHOR: Bruk, M. A.; Abkin, A. D.; Khomikovskiy, P. M.; Gol'der, G. A.;

Chu-Hsiang-ling

TITLE: Certain questions about the radiation polymerization and copolymerization
of tetrafluoroethylene in the solid state 14

SOURCE: AN SSSR. Doklady*, v. 157, no. 6, 1964, 1399-1402

TOPIC TAGS: radiation polymerization, solid state radiation polymerization,
polymerization mechanism, tetrafluoroethylene, tetrafluoroethylene trifluoro-
chloroethylene copolymer, luminescence, radical mechanism, ionic mechanism

ABSTRACT: The solid state radiation polymerization of tetrafluoroethylene (TFE)
and its radiation copolymerization with trifluorochloroethylene (TFCE) was inves-
tigated in order to determine the mechanism of the polymerization reaction. The
temperature-polymerization rate curve showed a maximum at -131C, near the
monomer melting temperature, and an additional maximum at -160 to -165C,
where destruction of radicals, stabilized at lower temperatures, starts. X-rays

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L 21068-65

ACCESSION NR: AP4044881

2

showed no structural change in the -196 to -155 C range, hence the effect at -165 was attributed to the release in the molecular motion in the TFE crystal lattice. By examination of temperature relationships it was also established that the intensity of luminescence was not determined by the destruction of radicals. TFE and TFCE were copolymerized in the gas and liquid phases and in the solid state. In the gas and liquid phase gamma-radiation copolymerizations the product composition was proportional to that of the initial mixtures, i. e., the copolymerization constants were equal to 1. Solid state radiation polymerization was conducted with mixtures containing up to about 80% TFCE which are single phase solid solutions stable to -170C and higher. The copolymers produced at -145 and at -170C using up to 50% TFCE were all greatly enriched in TFE; the copolymerization constants: r_1 (TFE) = 25; r_2 (TFCE) = 0.04. Pure solid (crystalline or amorphous), or liquid (-120C)TFCE could not be polymerized. Addition of a small amount, 1% , of TFCE to TFE sharply reduced the yield of the polymer. It was concluded the radical mechanism of the gas and liquid phase polymerizations did not obtain for the solid state radiation polymerization; the mechanism of the latter was apparently ionic. "The thermoluminescence curve was obtained by V. A. Tochin in the Institute of Chemical Physics AN SSSR." Orig. art. has: card 2/3

L 21068-65

ACCESSION NR: AP4044881

4 figures and 1 table.

ASSOCIATION: None

SUBMITTED: 02Mar64

ENCL: 00

SUB CODE: GC

NO REF SOV: 008

OTHER: 001

TO: DIRECTOR, CIA

FROM: SAC, [redacted] (100-100000) (P)

SUBJECT: [redacted] (100-100000) (P)

100-100000

1. The first part of the document is a list of names and titles of individuals who were involved in the project.

2. The second part of the document is a list of dates and times when the individuals were present at the project.

3. The third part of the document is a list of locations where the individuals were present.

GOL'DERMAN, G.D.

Using natural and coke gas in blast furnace production. Metallurg
10 no.6:13-14. Je '65. (MIFA 18:6)

SECRET

at the end of the line of best fit - waiting, 10/11/68
(10/11/68)

SHKOLYAR, L.F.; MAMONTOV, N.V.; GOL'DEVICH, A.A.; MAYKOVA, Z.V.; KOSTROMINA, N.V.; KUTYAVINA, V.M.; ROMALIS, P.I.; KAPLINSKAYA, L.G., red.; DROZHZHINA, L.P., tekhn. red.

[Transactions of the Soviet Antarctic Expedition] Trudy Sovetskoi antarkticheskoi ekspeditsii, 1955. Leningrad, Izd-vo "Morskoi transport." Vol.23. [Second Continental Expedition, 1956-1958; observational data] Vtoraya kontinental'naya ekspeditsiya, 1956-1958 gg.; materialy nabludenii. Pod red. L.V.Dolganova. 1961. 277 p.
(MIRA 14:11)

1. Sovetskaya antarkticheskaya ekspeditsiya, 1955. 2. Glavnaya geofizicheskaya observatoriya im. A.I.Voyeykova (for all except Kaplinskaya, Drozhzhina).

(Antarctic regions--Solar radiation)

1. GOL'DBERG, I.G.
 2. USSR (600)
 4. Technology
 7. Pressure stabilizers. Leningrad, Gosenergoizdat, 1950
9. Monthly List of Russian Accessions, Library of Congress, March, 1950. Unclassified.

GERENROT, Yu.Ye.; GOL'DFAIN, A.I.

High-frequency hardening of rings used in supporting and turning devices. Stro.i dor.mashinostr. 3 no.12:26-27 D '58.

(HIRA 11:12)

(Induction heating) (Metals--Hardening)

Gol'dfand, R. A. and Medel', L. M. and Ioffe, R. A. - "Changes in the chemical composition of the spinal fluid of tuberculosis meningitis patients undergoing streptomycin treatment", Trudy Akad. med. nauk SSSR, Vol. II, 1949, p. 133-42.

SO: U-4329, 19 August 53, (Letopis 'Zhurnal 'nykh Statey, No. 21, 1949).

PHILIPPA, G. J.

Chairman, Justice, Control & Security Administration. (-1-1-1-)

Chair of Education. (1-1-1-)

"Contribution of Education's Function."

Chair, Education, Control & Security Administration.

GOL'DFARB, D. M.; PEISAKHIS, L. A.

Mechanism of action of bacterial toxins in the organism of sensitive and resistant animals; role of environmental temperature on reproduction of botulism in frogs. Uchen. zapiski vtor. moskov. med. Inst. Stalina 1:217-222 1951.

(CLML 21:3)

1. Assistant for Gol'dfarb. 2. Department of Microbiology (Head -- Prof. V. D. Timakov, Corresponding Member AMS USSR).

GOL'DFARB, D.M.; ZUYEV, V.A.; TIMAKOV, V.D., professor, *saveduyushchiy*.

Effect of amytal-induced sleep on the efficacy of serum therapy of experimental tetanus intoxication in white mice. Authors' abstract. *Zhur.mikrobiol. epid.i immun. no.8:65-66 Ag '53.* (MIRA 6:11)

1. Kafedra mikrobiologii II Moskovskogo meditsinskogo instituta im. I.V.Stalina
(Sleep) (Tetanus) (Serum therapy)

GOLDFARB, D. M.

"Future studies of Bacteriophage as a Means of Detecting Microorganisms"
[paper read at a session of the institute's Scientific Council held in
1955] Proceedings of Inst. Epidem and Microbiol im. Gamaleya 1954-56.

Laboratory of Microbiology, Timakov. V. D., professor. Active Member.
Academy of Medical Sciences USSR, head. Inst. Epidem and Microbiol im.
Gamaleya AMS USSR

SO: Sum 1186. 11 Jan 57.

GOLDFARB, D. M., KUMITZOW, V. H., GUTCHERSON, J. S.

"The Detection of Dysentery and Typhoid Fever Bacteria in Various Materials With the Aid of the FN 96 Titre Accumulation Reaction" Proceedings of Inst. Epidem and Microbiol im. Gamaleya 1974-56

Interinstitute Scientific Conference on Problems of Dysentery (The following are identifications of personnel associated with the Institute of Epidemiology and Microbiology (now H. F. Gamaleya) who attended the conference held in Moscow, 2-4 April 1967) Inst. Epidem and Microbiol im. Gamaleya ANT USSR

SO: Sum 1187. 21 Jan 67.

GOLDFARB, D. M. and TIMKOV, V. I.

"The Diagnosis of Dysentery, Bacteriophage, and the Problem of Detecting Bacteria" Proceedings of Inst. Epidem and Microbiol in. Gomsleyn 1954-56

Inter-Union Scientific Conference on the Problem of Dysentery (The Role of the Identification of Bacteria in the Etiology of the Disease and Their Biology) Inst. Gomsleyn attended the conference held in M. S. U. v. M. April 1956] Inst. Epidem and Microbiol. in. Gomsleyn M. USSR

SI: GOM 114, 12 JAN 57.

APPROVED FOR RELEASE: Thursday, September 26, 2002
GOLDFARB, D. M., and TIMAKOV, V. D.

"The Experimental Basis of a New Principle for Discovering Pathogenic Microorganisms with the Help of a Phage." Proceedings of Inst. Epidem and Microbiol im. Gamaleya 1954-56.

Laboratory of Microbiology, Timakov, V. D., professor, Active Member, Academy of Medical Sciences USSR, head, Inst. Epidem and Microbiol im. Gamaleya AMS USSR

SO: Sum 1166, 11 Jan 57.

GOL'DFARB, D. M. and TIMAKOV, V. D.

"The Experimental Basis for a New Method of Detecting Dysentery and Typhoid Bacteria With the Aid of Phage," by V. D. Timakov and D. M. Gol'dfarb, Institute of Epidemiology and Microbiology imeni Gamaleya, Academy of Medical Sciences USSR, Zhurnal Mikrobiologii Epidemiologii i Immunologii, No 10, Oct 59.
pp 3-9 ✓

This article describes the results of a method of diagnosing dysentery by observing the effect of inoculating suspect bacteria on a dysentery phage culture rather than the reverse, i.e., the action of dysentery phage on a bacterial culture isolated from a person suspected of having dysentery. This new method is based on the observation of increases in the phage titer which are characteristic of various phases of the interaction of phage and homologous bacteria. The method of calculating the increase is described. The results of testing homologous, dysentery-dysentery phage, and heterogenous, typhoid-dysentery phage combinations are presented in a chart. Two tables illustrate the possibilities of the method.

GOL'DFARB D. M.

Country : USSR
Category: Virology. Bacterial Viruses (Phages)

Abstr Jour: Ref Zhur-Biol., No 23, 1958, 103474

Author : Timakov, V. D.; Gol'dfarb, D. M.

Inst : -

Title : Experimental Basing of a New Method of Detecting
Dysentery and Typhoid Bacteria by Means of Phage

Orig Pub: Sb. Bakteriologiya. Tbilisi, Gruzmedgiz, 1957,
61-69.

Abstract: The experimental basing of a method of detecting
bacteria by means of the phage titer increase reac-
tion (PTIR) is presented. It is shown through exam-
ples of detecting bacteria, Flexner dysentery and
typhoid, under experimental conditions that the PTIR
is many times more sensitive than the bacteriologic

Card : 1/2

Country : USSR
Category: Virology. Bacterial Viruses (Phages)

E

Abstr Jour: Ref Zhur-Biol., No 23, 1958, 103477

Author : Gol'dfarb, D. M., Ostrovskaya L. S.
Inst : -
Title : Phage Titer Increase Reaction as a Method of
Detecting Typhoid Bacilli in Water.

Orig Pub: Sb. Bakteriologiya. Tbilisi. Gruz. SSSR, 1957,
37-39.

Abstract: Using the phage titer increase reaction it is possible to detect typhoid bacillus in water in a quantity of four to five cells per cubic centimeter in 11 hours; in a quantity of 0.02-0.03 cells per cubic centimeter, in 20 hours. In these experiments the method proved to be 10,000 times more sensitive than the bacteriologic. -- Ya. I. Reutenshteyn.

Card : 1/1

USSR / Microbiology. Sanitary Microbiology. F

Abs Jour : Ref. Zhur - Biol., No. 21, 1953, No. 95092

tion and on the infecting dose of the bacteria.
-- M. D. Krylova.

Inst. Epidemiology + Microbiology
AMN 528

Card 2/2

USSR / Sanitary Microbiology. Sanitary Microbiology F-3
of Water.

USSR / Sanitary Microbiology. Sanitary Microbiology F-3
of Water.

Abs Jour: Ref Zhur-Biol., 1958, No 17, 76717.

Abstract: from one of the numerous cultures of the bacteria of the intestinal group. In tests with artificially-contaminated raw tap water, the reaction was positive up to 14 days after contamination with a typhoid culture with an original concentration of 100-1000 bacteria per 1 ml; in well water, up to 4-7th day. In raw tap water, preliminarily contaminated with coliform bacterium, the reaction of the growth of the titer of the phage was observed only 3 days after its contamination with S. typhi. The sensitivity of the reaction, according to the tests of the authors, is significantly higher than in such common bacteriological investigations; it depends on the character of the strain and on the presence of alien microflora in

Card 2/3

TIMAKOV, Vladimir Dmitriyevich, GOLDBERG David Moiseyevich, MEN'COVA, P. S.
red.; BEL'CHIKOVA, Yu. S., tekhn. red.

[Fundamentals of experimental medical bacteriology]. Osnovy
eksperimental'noi meditsinskoi bakteriologii, obshchaya chast'.
Moskva, Gosizdat-76 med. lit-ry, 1958. 347 p. (MISA 11:8)
(Bacteriology, Medical)

USSR / Virology. Bacterial Viruses (Phages)

E-1

Abs Jour : Ref Zhur - Biol., No 20, No 90543

Authors : Gol'dfarb, D. M.; Kuznetsova, V. M.; Ostrovskaya, Z. S.

Inst : Not given

Title : The Role of Quantitative Relations Between Bacteriophage and Bacteria in the Phage Titer Increase Reaction.

Orig Pub : Zh. mikrobiol., epidemiol. i immun-biol., 1958, No. 1, 110-114.

Abstract : Various concentrations of the cells of Flexner's No. 170 dysentery culture and typhoid bacteria Ty 2 were mixed with different cultures of corresponding specific phages. It turned out that multiplication of the dysentery phage took place when the infection did not numerically exceed 4.0 particles per cell.

In low bacterial concentrations the interaction of the phage and the cell did not depend upon the multiplicity, since in these cases the probability of phage-cell encounters was diminished.

Card 1/2

APPROVED FOR RELEASE Thursday, September 20, 2001 CIA-RDP80-00513R000513020010-3

USSR / Virology. Bacterial Viruses. (Phages). 1

Abs Jour: Ref Zhur-Biol., No 3, 1959, 19250.

Abstract: influence on the results of lysis and liberation of the phage. If the phages are selected for industrial purposes it is necessary to find out the optimal conditions for their preparation. -- Ya I. Mautenshteyn.

Card 3/3

GOL'DFARB, D.M.

Phage absorption on the bacterial cell. Zhur, mikrobiol. epid. i
immun. 29 no. 5: 64-69 My 1983 (MIRA 11:6)

1. Iz Instituta epidemiologii i mikrobiologii imeni Gamalei.
(BACTERIOPHAGE,
adsorption on bact. cell (Rus))

GOL'DFARB, D.M.; YERESHOV, F.I.

A modified phage titer growth reaction in the investigation of objects containing free phage. Zhur. mikrobiol. epid. immun. 29 no.12:30-34 D '58.
(MIRA 12:1)

1. Is Instituta epidemiologii i mikrobiologii imeni Gamalei AMN SSSR i kafedry mikrobiologii II Moskovskogo meditsinskogo instituta imeni Pirogova.

(BACTERIOPHAGE,

phage titer growth reaction in detection of free phage with anti-phage prep. dimezol 14 (rus))

GOL'FARB, D. M., TIMAKOV, V. D.

"Bacteriophage and the problem of indication of bacteria."

report submitted at the 13th All-Union Congress of Hygienists, Epidemiologists
and Infectionists, 1959.

GOL'DFARB, D.M.; BROKER, T.H.

Antiphage properties of certain antibiotics, antiseptics, amino acids
and antitumor drugs. Vop. virus. 4 no.1:103-108 Ja-F '59. (MIRA 12:4)

1. Laboratoriya izmen chivosti mikrobov i otdel epidemiologii Instituta
epidemiologii i mikrobiologii imeni N.F. Gamalei AMN SSSR, Moskva.
(BACTERIOPHAGE, effect of drugs on,
repeat title (Rus))

TIMAKOV, V.D.; GOLDFARB, D.M.

Bacteriophage titer growth reaction as a method of diagnosis of infectious diseases and studies of pathogenic bacteria. *Sov. J. Microbiol. Immun. 8* no.6:361-368 N '59.

1. *Ustav epidemiologie a mikrobiologie N. F. Gamaleji v Moskve.*
(BACTERIOPHAGE)
(COMMUNICABLE DISEASES diag.)

GOL'DFARB, D.M.

Basic aspects of current knowledge of the bacteriophage. Test. AME
SSSR 14 no.3:29-37 '59. (MIRA 12:3)
(BACTERIOPHAGE,
review (Rus))

TIMAKOV, V.D., prof.; GOL'DFARB, D.M., doktor med.nauk; FADKIN, B.Ye., kand.
med.nauk

Some aspects of the utilization of the bacteriophage for
radiobiological research. Vest.AMN SSSR 14 no.8:61-67
'59. (MIRA 12:11)

1. Institut epidemiologii i mikrobiologii imeni Gamalei.
2. Deystvitel'nyy chlen AMN SSSR (for Timakov).
(BACTERIOPHAGE)
(RADIOLOGY)

OSTROVSKAYA, N.N.; GOLDFARB, D.K.

Use of "phage titer increase" in detecting Brucella in the environment. Zhur.mikrobiol.soid. i immun. 30 no.5:145
Mg 159. (MIRA 12:9)

1. Iz Instituta epidemiologii i mikrobiologii imeni Gamalei
ANU SSSR.

(BRUCELLA)

GOL'DFARB, D.M.

Studying a single phage multiplication cycle without using antiphage serum. Zhur.mikrobiol.epid.i immun. 30 no.10:90-93 O '59.

(MIRA 13:2)

1. Iz Instituta epidemiologii i mikrobiologii imeni Gamalei AMN SSSR.
(BACTERIOPHAGE)

17 (2)

AUTHORS: Bass, I. A., Broker, T. N., Gol'dfarb, D. M., SOV/20-129-6-61/69
Gorlenko, Zh. M., Il'yashenko, B. N.,
Nankina, V. P., Khesin, R. B.

TITLE: Infectious Properties of Injured Phages

PERIODICAL: Doklady Akademii nauk SSSR, 1959, Vol 129, Nr 6, pp 1421 - 1423
(USSR)

ABSTRACT: D. Fraser and co-workers (Ref 12) concluded from their investigations that the infectious activity of the destroyed preparations of phage T2 is related to the desoxyribonucleic acid (DNA) which was liberated from the protein covers of the phage particles by the effect of urea. The results obtained by the authors, however, were rather divergent. Therefore, they thoroughly investigated the preparations formed from bacteriophages by treatment with urea. The following dysentery phages were used: T1r, EM (isolated from the soil by T. N. Broker), and N-2 (obtained by F. I. Yershov, 2-y Moskovskiy gosudarstvennyy meditsinskiy institut, Second Moscow State Medical Institute). The effect of the phages was tested on protoplasts (bacteria without cell walls). The authors obtained them from cells of the following bacterial strains by means of lysozyme according to R. Repaske

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Infectious Properties of Injured Phages

SCV/20-129-6-61/69

(Ref 13): E. coli B (sensitive to phage T4r and DM); E. coli 600 (resistant to all three phages mentioned); and Sh. dys. Newcastle (obtained by F. I. Yershov, sensitive to N-2). Suspensions of phages, concentrated to 10^{12} particles in 1 ml, were treated with an 8 M urea solution. Thereafter, the action of phages on intact cells was completely eliminated. They showed an activity of 0.0001 to 0.001% on protoplasts. This effect concerns bacteria strains sensitive to phages as well as those resistant to phages. Thus, this remaining activity cannot be due to the preservation of a few phage particles. Further experiments showed that the above residual infectivity is not related to the free DNA which has left the virus particles. Thus, it could be assumed that only the part of the DNA is active which is protected against the used desoxyribonuclease by other components of the phage (probably by proteins). In order to check this assumption, the proteins were separated from the preparations by phenol or chloroform. The preparations were completely inactivated in spite of the proved extensive separation of the proteins from the DNA. This proved again that, after

Infectious Properties of Injured Phages

SCX/20 121-6 01/69

treatment with urea, infectious activity is not due to free DNA. On the other hand, it has been known that the protein component isolated from the phage cannot cause phage reproduction in the bacteria. The only assumption is that one complex of the DNA with the protein has infectious activity. It was serologically proved that the proteins of the active complexes mentioned are similar to the antigens of normal phage particles. The transition of 80-90% of activity into the precipitate could be achieved by centrifugation of virus preparations treated with urea as well as by suspensions of intact phages. The electron microscope showed that the above complex has corpuscular structure and that it is of about the same size as the intact phage. Figures 1 and 2 show that, apparently, urea destroys only the distal parts of the processes. Thus, the phage particles become incapable of depositing on normal bacteria. The inner part of the process axis which consists of protein is uncovered by the urea effect. Further experiments with trypsin, which destroyed the uncovered part, brought about complete suppression of activity. Thus, the protein in the axis of the phage particle is necessary for the occurrence of the infectious activity of the preparations mentioned. There are 1 figure and 13 references.

Card 3/4

Infectious Properties of Injured Phages

SOV/20-129-6-61/69

ASSOCIATION: Institut biofiziki Akademii nauk SSSR (Institute of Biophysics of the Academy of Sciences, USSR). Institut epidemiologii i mikrobiologii im. N. F. Gamaleya Akademii meditsinskikh nauk SSSR (Institute of Epidemiology and Microbiology imeni N. F. Gamaley of the Academy of Medical Sciences, USSR)

PRESENTED: June 10, 1959, by I. L. Knunyants, Academician

SUBMITTED: May 29, 1959

Card 4/4

FRADKIN, G.Ye.; GOL'DFARB, D.M.; IL'YASHENKO, B.N.; AVDENEVA, A.V.;
VINETSKIY, Yu.P.

Mechanism of radiation injury of the bacteriophage under the
indirect action of ionizing radiation. Med. rad. 5 no.12:36-42
'60. (MIRA 14:3)

(BACTERIOPHAGE)

(ESCHERICHIA COLI)

102,6)

SOV/16-60-3-3/37

AUORS Gol'dfarb, D.M., Kuznetsova, V.N., Ostrovskaya, E.S.

TITLE Instructions on the Use of the Phage Titer Rise Reactor for Detecting
Shigella Dysenteriae and Salmonella Typhosa

PERIODICAL Zhurnal mikrobiologii, epidemiologii i immunologii, 1960, Nr 3,
pp 36 - 40 (USSR)

ABSTRACT. This is a detailed description of the use of the phage titer rise reaction for the diagnosis and detection of Shig. dysenteriae and Salm. typhosa in stools, blood, urine, water, washings from objects of the external environment, food, etc.
There is 1 table.

ASSOCIATION Institut epidemiologii i mikrobiologii imeni Gamalei AMN SSSR
(Institute of Epidemiology and Microbiology imeni Gamaleya of the AMN, USSR)

SUBMITTED: April 27, 1959

Card 1/1

Doc ID: A6616,001

AUTHORS Gold, Mark, I. M. & L. S. (1967)

TITLE The Role of Anticollinase in Phage Resistance of Enterobacteriaceae

PERIODICAL Journal of General Microbiology, 1967, No. 4, pp. 62-67

TEXT: The authors made a study of phage resistance in *Enterobacteriaceae* as a factor in the formation of phage-resistant strains. Enterobacteriaceae, most of the work being conducted with *Shigella flexneri*, was found to possess phage-resistant phage. Enterobacteriaceae developed phage resistance under the action of antibiotics - streptomycin, tetracycline and chloramphenicol. This phage resistance is a combination of two processes - induction and selection - caused by phages of the strain in the presence of antibiotics. When phage resistance was induced by the action of dysentery or typhoid phage, the resulting phage-resistant strains exhibited increased resistance to antibiotics. Phage resistance and resistance to antibiotics are transmissible characteristics and are genetically linked to the bacterial cell's genetic apparatus, since it is possible to differentiate phage-resistant strains.

Card 1/1

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phase-resistant variants of the virus were obtained by the action of the virus on the cells caused by the induction of the action of the virus. The factors of these variants under the action of the virus were determined by the action of the virus on the cells under the action of the virus.

ASSOCIATION: Institute of Biological Chemistry, Moscow, U.S.S.R.
Institute of Biological Chemistry, Moscow, U.S.S.R.
The AMN, USSR

SUBMITTED: May 21, 1989

BASS, I.A.; BROKER, T.N.; GOL'DFARB, D.M.; GORLENKO, Zh.M.; IL'YASHENKO,
B.N.; NANKINA, V.P.; KHESIN, P.B.

Significance of proteins for the infectivity of bacteriophages treated
with urea. Biokhimiia 25 no.2:360-367 Mr-Apr '60. (MIRA 14:5)

1, Institut biofiziki Akademii nauk SSSR i Institut epidemiologii
i mikrobiologii im. N.F.Gamaleya Akademii meditsinskikh nauk SSSR,
Moskva.

(BACTERIOPHAGE)

(UREA)

(PROTEINS)

GOL'DFARB, D.M.; OSTROVSKAYA, Z.S.

Obtaining a specific indicator typhoid phage by the method of intensive passage. Zhur.mikrobiol.epid.i immun. 31 no.1:30-34
Ja '60. (MIRA 13:5)

1. Iz Instituta epidemiologii i mikrobiologii imeni Gamalei AN
SSSR.

(BACTERIOPHAGE)
(SALMONELLA TYPHOSA)

TIMAKOV, V.D.; GOL'DFARB, D.M.

Reaction of phage titer increase as a method for the diagnosis of
infectious diseases and for the indication of pathogenic bacteria.
Zhur.mikrobiol. i immun. 31 no.1:5-10 Ja '60. (MIRA 13:5)
(COMMUNICABLE DISEASES diagnosis)
(BACTERIOPHAGE)

GOL'DRAB, D.M.; KUZNETSOVA, V.N.; OSTROVSKAYA, Z.S.

Methodical instructions for the use of the titer phage rise
for detecting dysentery and typhoid bacteria. Zhur. mikrobiol.
epid. i immun. 31 no.3:36-40 Mr '60. (MIRA 14:6)

1. Iz Instituta epidemiologii i mikrobiologii imeni Gamalei AMN
SSSR.

(SHIGELLA PARADYSENTERIAE)

(SALMONELLA)

GOL'DFARB, D.M.; KUZNETSOVA, V.N.

Role of antibiotics in the formation of phage-resistant variants of bacteria of the enteric group. Zhur. mikrobiol. epid i immun. 31 no.6:62-66 Je '60. (MIRA 13:8)

1. Iz instituta epidemiologii i mikrobiologii im. Gamalei ANM SSSR.
(SHIGELLA PARADYSENTERIAE) (ESCOLERICHIA COLI)
(BACTERIOPHAGE) (ANTIBIOTICS)

APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R000515620016-5
GOL'DFARB, David Moiseyevich. Prinimali uchastiye: YERSHOV, F.I.,
kand. med. nauk; KRYLOVA, M.D., kand. med. nauk; TIMAKOV,
V.D., prof., red.; PARNES, Ya.A., red.; ZAKHAROVA, A.I.,
tekhn. red.

[Bacteriophagy] Bakteriofagiia. Pod red.i s predisl. V.D.
Timakova. Moskva, Medgiz, 1961. 297 p. (MIRA 15:2)

1. Deystvitel'nyy chlen Akademii meditsinskikh nauk SSSR
(for Timakov).

(BACTERIOFAGE)

TIMAKOV, V.D.; GOL'DFARB, D.M.

Variability of the phage controlling the bacterial host. Vop. virus.
7 no. 1:95-102 Ja-F '61. (MIRA 14:4)

1. Institut epidemiologii i mikrobiologii imeni N.F. Gamalei
AMN SSSR, Moskva.
(BACTERIOPHAGE) (SHIGELLA)

GOL'DFARB, D.M.

Transduction and conversion. Zhur.mikrobiol.epid.i immun. 32 no.3:
9-16 Mr '61. (MIRA 14:6)

1. Iz Instituta epidemiologii i mikrobiologii imeni Gamalei
AMN SSSR.

(BACTERIA)

FRANK, H. G., and G. H. B. (1971)

"Aspects of Tumor Promotion by Chemicals and the Role of Bacteria in Experimental Carcinogenesis"

paper presented at the Conference on Carcinogenesis: Molecular Aspects at the Molecular Level (IARC), Paris, France, 1971.

TIMAKOV, Vladimir Dmitriyevich; GOL'DFARB, David Moiseyevich; FAINES, Ya.A., red.; MATVEYEVA, M.M., tekhn. red.

[Phage titer growth reaction] Reaktsiia narastaniia titra faga
(rNF). Moskva, Medgiz, 1962. 69 p. (MIRA 15:6)
(BACTERIOPHAGE)

GOL'DFAIRB, D.M., prof.

From 0 to 40 billion. Ziorov'e 8 no.2:29 F '62. (MIRA 15:4)
(BACTERIOPHAGE)

TIMAKOV, V.D.; GOL'DFARB, D.M.; SKAVRONSKAYA, A.G.

Resistance of micro-organisms as a genetic problem. Vest.AMNI SSSR
17 no.4:7C-76 '62. (MIRA 15:8)
(MICROBIOLOGY) (NUCLEIC ACIDS) (GENETICS)

60007

SECRET

GOL'DFARB, D.M. (Moskva)

Some problems in contemporary genetics based on data from
microbiological studies. Pat. fiziol. i eksp. terap. 1 no. 32
4-14. Mg-1963 (MIRA 1964)

MEMORANDUM FOR THE DIRECTOR, CIA

1. The following information was obtained from a review of the personnel files of the Central Intelligence Agency, Office of the Director of Central Intelligence, and the Central Intelligence Agency, Office of the Chief of Staff, dated 10/10/54.

2. The following information was obtained from a review of the personnel files of the Central Intelligence Agency, Office of the Chief of Staff, dated 10/10/54.

GOLDFARB, D.M., prof.

Molecules which contaminate. Zdorov'e 9 no.2:10-11 F '63.

(MIRA 16:3)

(VIRUSES)

TEMAROV, V.D.; GOL'DFARB, D.I.

Genetics of the viruses. Vest. ANU SSSR 10 no.5:49-54'63.
(MIRA 10:8)

(VIRUS RESEARCH) (GENETICS)

TIMAKOV, V.D.; GOLDFARB, D.M.; FOMINOV, Y.I.; ZAVYONSKAYA, A.G.;
ZUYEV, V.A.

Antiphage and antibacterial activity of the antitumor
preparations dichloroethylamine and its derivatives. Vop.
virus no. 4:650-662 N-D '66. (MIRA 17:6)

1. Institut epidemiologii i mikrobiologii imeni N.F. Gamalei
AMN SSSR, Moskva.

GOLDFARB, D.M., ET AL.

Infectious disease susceptibility in culture media. Pop. virus
no. 62001-627. (MIA 17:6)

In: *Infectious disease epidemiology and control*, V.F. Gumbel,
Ed. USSR, Moscow.

SECRET

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SECRET

TIMAKOV, V.D.; GOL'DFARB, D.M.

On induced viral mutagenesis. Arch. roum. path. microbiol. 22
no.4:895-902 S-D'63

1. Institut epidemiologii i mikrobiologii imeni N.F.Gamalei
AMN SSSR.

BRISMANOVICH, S.N.; AVDEYINA, A.V.; SEMENOV, S.M.

release of the enzymes of the glucose transformation system
from the spheroplasts of *Escherichia coli* I obtained under the
influence of the "ghosts" of the even series of I phase.
Biokhimiya 28 no.4:760-718 31-Aug '63. (MIRA 19:3)

I. Institut epidemiologii i mikrobiologii imeni Gamalei AN
SSSR, Moskva.

GOL'DFARB, D.M.

Deoxyribonucleic acids in bacteriophages. Zhur. mikrobiol.,
epid. i immun. 40 no.12:11-20:63. (MIRA 16:10)

1. Iz Instituta epidemiologii i mikrobiologii imeni Gamalei
AMN SSSR.

x

GOL'DFARB, D.M.

Desoxyribonucleic acid of bacteriophages. Report No. 86-0000001.
properties. Zhur. mikrobiol., epid. i immun. 40 no. 1986:12-13, 1986.
(NIRA 8641.)

L 42066-65

ACCESSION NR: AP5010903

UR/0286/15/000/007/0093/0053

AUTHORS: Gol'dfarb, D. M.; Borisova, L. N.

12
B

TITLE: A method for protecting antibiotics producing actinomycetes from the action of actinophagi. Class 30, No. 169752

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 7, 1965, 93

TOPIC TAGS: biochemistry, antibiotic, actinomycetes, actinophages

ABSTRACT: This Author Certificate presents a method for protecting antibiotics-producing actinomycetes from the action of actinophagi by inactivating the latter. To preserve actinomycetes completely and thus to increase the yield of antibiotics, dimezine-14 in a concentration of 100-300 γ /ml is added to the medium containing actinomycetes.

ASSOCIATION: none

SUBMITTED: 15Oct62

ENCL: 00

SUB CORR: 18

NO REF SOV: 000

OTHER: 000

Card 1/1 *am*

VINEYERIN, Yu.I., kandyd. biol. nauk; Shtrom, I.S., kandyd. biol. nauk, prof., mem.; Shtrom, I.S., red.

[Microcosmos of life] Mikro'nyy zmierni. Moskva, izdatel'stvo "Znanie," 1971. 136 p. (Mirovyye universitet kul'tury: Estestvenno-nauchnyi fakul'tet, nos. 1,2,3)

(Data 1971)

GAUSEP, N.M.; GUSEV, V.I.; KISHINEVICH, V.V.

Large reproduction in concentration of Escherichia coli produced
with the help of lytic enzyme of the phage T2. *Microbiologia* 34
no. 4: 648-652. 1963. (MIRA 18:10)

1. *Microbiologia* 34: 648-652. 1963. (MIRA 18:10)
2. *Microbiologia* 34: 648-652. 1963. (MIRA 18:10)

GOL'DFARB, D.M.; RYTCHEV, V.; KUZNETSOVA, V.N.; NESTEROVA, G.F.

Induction of λ -mutations of the phage T2 by nitrous acid and hydroxylamine. Genetika no.2:3-12 Ag '65. (MIRA 18:10)

1. Institut epidemiologii i mikrobiologii imeni N.F. Gamalei, AMN SSSR, Moskva.

1. The first section of the document discusses the current situation in the region and the need for a comprehensive approach to address the challenges facing the population.

2. It is noted that the existing policies and programs are inadequate to meet the needs of the people, particularly in the areas of economic development and social services.

3. The following is a summary of the main findings of the study:

The study reveals that the majority of the population is engaged in subsistence agriculture, which is highly vulnerable to fluctuations in weather and market prices. There is a significant lack of access to modern farming techniques and inputs, leading to low yields and income. Additionally, there is a widespread lack of basic education and healthcare services, which further hampers the population's ability to improve their living standards. The government should prioritize the development of rural infrastructure and provide technical assistance to farmers to increase their productivity and income.

4. It is concluded that a coordinated effort involving the government, the private sector, and the community is essential to address the identified issues and achieve sustainable development for the region.

GOL'DFARB, E. M.

USSR/Physics - Heat Conduction

Oct 52

"Application of the Method of Sources to the Solution
of the Equation of Heat Conduction," E. M. Gol'dfarb

"Zhur Tekh Fiz" Vol 22, No 10, pp 1606-1617

The essence of the method of sources is that any
process of heat propagation in a body can be repre-
sented as sum of processes of temp equalization from
set of elementary quantities of heat (sources) distri-
buted in space and time. The problem is to find the
correct distribution of these sources. Cites N. N.
Rykalin (Thermal Principles of Welding, Moscow/
Leningrad, 1947).

236T91

USSR/Metals - Heat regenerator theory

FD-302

Card 1/1 Pub. 153-20/28

Author : Gol'dfarb, E. M.

Title : Accumulation of heat under periodically repeated heating and cooling

Periodical : Zhur. tekhn. fiz. 24, 891-906, May 1954

Abstract : Discusses the mathematical theory of heat exchange in regenerators, which has still been insufficiently studied in spite of their widespread use in industry. Solves by operational methods. Thanks Prof. I. D. Semikin, who posed this subject. Reference: I. D. Semikin, "Principles of regenerator theory." Metallurgicheskiye Tsechi [Metallurgical Furnaces], edited by M. A. Glinkov, 1951.

Institution :

Submitted : September 8, 1953

GOLDFARB, E. M.

APPROVED FOR RELEASE: Thursday, September 26, 2002
USSR/Plavich heat exchange

CIA-RDP86-00513R0003
CIA-RDP86-00513R000515620016-5

FD-1008

Card 1/1 : Pub. 153 - 7/24

Author : Gol'dfarb, E. M.

Title : Heating of bodies of diverse shape by gases in direct-flow or counter-flow

Periodical : Zhur. tekhn. fiz., 24, 1012-1019, Jun 1954

Abstract : Describes analytically the heating up of bodies of various simple shapes (plate, cylinder, and sphere) in direct-flow or counter-flow, as in furnaces. Notes that, in metallurgy mostly square and round billets are heated in rolling mill furnaces and mostly batch charges in shaft furnaces. Three references (A. V. Lykov, G. P. Ivantsov, and B. I. Kitayev).

Institution : -

Submitted : June 5, 1953

124-57-2-1975

Translation from: Referativny Zhurnal, Mekhanika, 1957, Nr 2, p 71 (USSR)

AUTHOR Semak, I. D. Gollfarb, E. M.

TITLE To the Theory of the Free Jet of a Kerosene-solubility stream

PERIODICAL Nauch. tr. Dnepropetrovsk. metallurg. in-ta, 1954, Nr 3, pp 3-15

ABSTRACT Differential equations are obtained, which determine the propagation of a plane and an axisymmetric laminar jet in an infinite medium having the same physical properties. Formulas for the velocity distribution over a cross section and along the axis of the jet are given. It is shown that the dimensionless velocity profiles become similar, starting from a certain fully defined time criterion. The calculations conducted on the basis of the relationships obtained are confirmed satisfactorily by the experimental data of I. D. Semak (Nauch. tr. Dnepropetrovsk. metallurg. in-ta, 1948, Nr 14). However, it is necessary to note that the formulas proposed by the authors coincide with the first approximation of the solution obtained for similar problems by P. S. Z. (Mekhanika, SB. Peterb., 1952, in period. izd., 1950, Nr 1, Quarterly Appl. Math., 1952, Vol. 10, Nr 2). Bibliography: 6 references. M. M. Bemiova

Card 1/1

Handwritten: R. 18

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Handwritten: 7/21

Dynamics of the Solidification of Castings. *by* F. M. Coldfare and E. M. Quilley. *Science Progress*, 1930, (23: 10-22). [in English]. In this theoretical discussion of casting solidification a non-chemical treatment of heat flow is adopted. In this a given layer starts to thin part of the flow process only after a time interval which increases with the distance of the layer from the surface. The discussion includes the dynamics of the growth of the crust with a constant temperature of the casting surface; the influence of the mould material on the temperature gradient in the crust and of a gap or facing layer on crust formation; and the calculation of mould thickness, worked examples being given.

17 1987 1 1119

Translation from: *Russkoye inzhinirskoye Metallurgiya*, 1957, No. 8-10 (USSR)

AUTHOR: Goldschub, E. M.

TITLE: The Employment of Engineering Methods in the Problem of Thermal Conductivity (Primeneniye inzhinirnykh metodov v reshenii teplotoprovodnosti)

PERIODICAL: *Tekhnicheskaya Chernaya Metallurgiya*, 1957, No. 7, pp 406-423, 437-451

ABSTRACT: A study of various problems of non-stationary thermal conductivity based on a concept that assumes the gradual inclusion of a body into the heating process, and is called the engineering model of thermal conductivity. The process of heating is divided into periods. The initial period (IP) is characterized by the variable thickness of the layer being heated (HL). In the regular period (RP) the entire body participates in the heating and the thickness of the HL is constant. The solution for the regular period may be obtained by assuming the rate of heating (RH) to be the same at various points of the HL. At the same time the RH may be influenced by the manner in which the heat is applied.

Card 1-3

147 148 149 150 151

The Employment of Engr. Methods in the Theory of Thermal Conductivity

the surface of the body. The IP may be regarded as the sum
of the regular conditions differing from each other on the
thickness of the HL. The solution of the stated problem is the
determination of the temperature distribution in the HL of a deter-
minate thickness and the determination of the dependence of the
thickness of the HL on time. In the process of heating of plates,
cylinders or spheres by means of a constant positive heat flux q ,
the RH is equal to qF/Pc , where F is the surface of the body
being heated, P is the weight of the portion of the body involved
in heating, and c is the specific heat of the material.
The ratio P/F is equal to $S\gamma/K$, where γ is the specific weight.
The growth of skin on a metal solidifying in contact with surface
temperature is analogous to the process of heating of the HL
in a normal heating process. The effect of the latent heat of solidi-
fication is compensated for in the specific heat capacity of the
solidified skin. In computing the process of heating of a body
by means of radiation, it is assumed that the property heating
highly is possible for the different time required by the surface
and the intermediate zone and the center, viz. to reach the
same temperature. This difference is taken into account in the

Card 2-3

137 1957-11-21 39

The Employm't of Engr. Methods in the Theory of Thermal Conductivity

inertia correction for the length of the heating time obtained from the radiation formula for thin bodies. The formulas proposed have been verified by numerical integration. The Author also presents computation formulas for a flat wall composed of n layers and subjected to the following conditions of heating: 1) a constant heat flow q_1 acts through an internal surface until the desired temperature has been reached at the surface; 2) the surface is exposed to a constant temperature until a stationary condition has been reached.

E. G.

3. Thermodynamics-Theory

SEMIKIN, I.D., professor; ROZENGART, Yu.I., kandidat tekhnicheskikh nauk, dotsent;
GOL'DFARB, E.M., kandidat tekhnicheskikh nauk.

Heating massive bodies by radiation. Stal' 16 no. 3:252-256 Mr '56.
(MIRA 9:7)

1. Dnepropetrovskiy metallurgicheskiy institut.
(Heat--Radiation and absorption) (Electrometallurgy)

Голдферт, Е. М.

86-12-22/26

AUTHOR: Gol'ferst, E.M., Candidate of Technical Sciences

TITLE: An Engineering Method for Calculating the Heating-up of Furnaces with a Multi-layer Lining (Ingeniernyi metod rascheta razogreva s mnoyosloynnoy oblozhenki pechey)

PERIODICAL: Stal', 1977, No. 11, pp. 1131 - 1133 (USSR).

ABSTRACT: A method of calculating heating up of single and multi-layer walls of furnaces, based on approximate solution of the problem for a body made from any finite number of layers with various thermo-physical properties is given. The method can be used for calculating heating-up conditions for various furnaces. There are 2 figures and 2 Slavic references.

ASSOCIATION: Dnepropetrovsk Metallurgical Institute (Dnepropetrovskiy metallurgicheskiy institut)

AVAILABLE: Library of Congress

card 1/1

GOL'DFARB, Emil' Mikhailovich; KRAVTSOV, Aleksandr Feodos'yevich; RADCHENKO,
Irina Ivanovna; ROZENGART, Yuriy Iosifovich; SEMLEKHIN, Iosif
Danilovich; TAYTS, Noy Yur'yevich, prof., doktor tekhn. nauk, red.;
CHUMACHENKO, T., vedushchiy red.; BESFYATOV, R., tekhn. red.

[Calculations for heating furnaces] Raschety nagrevatel'nykh pechei.
Pod red. N.IU. Taitsa. Kiev, Gos. izd-vo tekhn. lit-ry USSR, 1958.
421 p. (MIRA 11:8)

(Furnaces, Heating)

AUTHOR: W. H. P. H. M. 307/147-16-4-22, 10

TITLE: Complex Equations for the Thermal Conductivity in Low- ρ ,
High- μ and High- σ Media. (Continuation of paper
published in the Journal of Applied Physics, Vol. 41, No. 1, 1970)

PERIODICAL: Journal of Applied Physics, Vol. 41, No. 1, 1970, p. 100-102

ABSTRACT: A new method for the calculation of the thermal conductivity in cylindrical and spherical bodies was suggested. In the calculation it is necessary to take into account the distribution of the temperature on the surface of the bodies of any shape, as well as at different heating conditions on the surface of the bodies. Four cases were considered. The temperature on the surface is uniformly applied to it, and this temperature is maintained. The following equation holds:

$$\text{div}(\mathbf{v}) = 0; \quad \frac{\partial \mathbf{v}}{\partial \mathbf{r}} = 0. \quad (1)$$

Card 1, 5

If the heat source in the center of the bodies is constant

One-dimensional Steady State Thermal Conduction, in
 L. V. King, Cylindrical and Spherical Solids

SDV, 1-1-1-2-1-82, 17

1. The general equation

$$\lambda \frac{d^2 T}{dx^2} + \frac{d}{dx} \left(\frac{q}{x} \right) = 0 \quad (1)$$

is satisfied by the form

$$T(x, S) = \frac{q}{\lambda x} + C_1 \ln x + C_2 \quad (2)$$

The boundary conditions are:

$$T(x, S) = T_0 \quad \text{at} \quad x = R \quad (3)$$

$$\frac{dT}{dx} = -h \left(\frac{T - T_\infty}{x} \right) \quad \text{at} \quad x = R \quad (4)$$

(The temperature of the surrounding medium is constant and
 equal to T_∞ . Between the surface of the cylinder and the
 surrounding medium, heat exchange is according to Newton's law and so

Eq. (4)

Complex Equation for the Theoretical Conductivity in
 Lamellar Cellulose and Specialized Media

0 7/13-10-3-01/10

$$-\frac{W}{b} \frac{\partial t_b(x)}{\partial x} + t_b(x) - z(R, z) = 0. \quad (44)$$

In an alternative form the following equation holds:

$$-\frac{1}{z} T'(R, z) + T_b(z) - T(R, z) = 0; T'(1, z) = 0. \quad (45)$$

When considering the equations formed it may be seen that for calculating the heat conductivity it is useful to employ the following functions instead of the Bessel function:

$$H_{\nu}(u) = \frac{e^{-u} u^{\nu}}{u^{\nu}} \sum_{k=0}^{\infty} \frac{u^{2k}}{2^k k! \Gamma(\nu + k + 1)} = \frac{u^2}{2(2\nu - 2)} + \frac{u^4}{8, 4(2\nu + 2)(2\nu + 4)} + \dots (46)$$

The following was found for different values of ν :

$$H_{\frac{1}{2}}(u) = \cos u; H_{\frac{3}{2}}(u) = \frac{\sin u}{u};$$