

EXCERPTA MEDICA Sec 5 Vol 12/12 Gen. Path. Dec 59

3800. EXPERIMENTAL STUDY OF THE AETIOLOGY OF HUMAN LEUKAEMIAS. II. THE EFFECT OF FORMALINIZATION, GLYCERINIZATION, HIGH TEMPERATURES AND RADIATION ENERGY ON THE ACTIVITY OF THE HUMAN 'LEUKAEMIC FACTOR' (Russian text) - Bergoltz V. M. - PROBL. GEMATOL. I PEREL. KHOVI 1959, 4/1 (26-28) TABLES 3

In a previous paper (ibid. 1957, 32, 11; see Exc. Med. Cancer 1958, abstr. no 19) the author reported on the isolation, from human leukaemic tissue, of an acellular 'factor' capable of producing leukaemia in a large number of mice. The present paper gives further data on this factor. Its activity was reduced by 14% by means of 0.4% formalin; 1% formalin sufficed to neutralize its activity in fresh extract. UV irradiation left the factor unaffected; radioactive cobalt (103,680 r.) slightly reduced the activity. The factor remained intact throughout 4 months in 50% neutral glycerine at 4°C. Temperatures of 70-100°C. had an unmistakable inhibitory effect, whereas fresh leukaemia extract produced leukaemia (myelosis and reticulosis) in about 34% of experimental mice; this rate was only 3% after

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heating. It may be presumed that leukaemia involves a virus-like disease. The
lack of complete inactivation might be attributable to protection afforded by lipids.
Brandt - Berlin (V. 16)

NEMKOVA, N.M.; BERGOL'TS, V.M.

Morphological analysis of systemic diseases in mice induced by acellular extracts from human leukemic tissues [with summary in English, p.62]. Probl.gemat. i perel.krovi 4 no.1:28-33 Ja-F '59. (MIRA 12:2)

1. Iz virusologicheskoy laboratorii Gosudarstvennogo onkologicheskogo instituta imeni P.A. Gertsena (dir. - prof. A.N. Novikov) i iz Tsentral'nogo ordena Lenina instituta gematologii i perelivaniya krovi (dir. - deystvitel'nyy chlen AMN SSSR prof. A.A. Bagdasarov). (LEUKEMIA,

pathol. of systemic dis. in mice induced by acellular human leukemic tissue (Rus))

BERGOL'TS, V.N.

Experimental study on the etiology of leukemia in man. Report No.3:
Significance of lipid and liponucleoprotein components in the act-
ivity of the human leukemia factor. Probl.gemat.i perel.krovi 4
no.9:23-27 S '59. (MIRA 13:1)

1. Iz virusologicheskoy laboratorii Gosudarstvennogo onkologicheskogo
instituta imeni P.A. Gertsena (dir. - prof. A.N. Novikov).
(LEUKEMIA exper.)
(LIPIDS chem.)
(NUCLEOPROTEINS chem.)

BERGOL'TS, V.M.

Experimental study on the etiology of acute leukemia in man. Probl.
gemat.i perel.krovi 4 no.11:16-21 N '59. (MIRA 13:3)

1. Iz Onkologicheskogo instituta imeni P.A. Gertsena (direktor -
Prof. A.N. Novikov) Ministerstva zdravookhraneniya RSFSR.
(LEUKEMIA etiology)

EXCERPTA MEDICA Sec 16 Vol 7/R Cancer August 59

3006. **Certain properties of the human 'leukaemic factor' cultured on chick embryonic membranes (Russian text)** BERGOLT S. V. M. Virol. Lab., P. A. Guertzen State Oncol. Inst., Moscow *Bull. Eksp. Biol. i Med.* 1959, 47/1 (71-74) Tables 2 Illus. 2

The author presents results of examination of the properties of the human 'leukaemic factor' cultured on the chorioallantoic membrane of developing chick embryos. It was established that 'leukaemic' allantoic fluid loses its leukaemogenic activity at high temperatures and after treatment with 1% formalin solution. Lyophilized preparations of 'leukaemic' allantoic fluid (which was kept in dried condition up to 2.5 months) caused myeloid leukaemias and haemocytoblasts in mice (especially when administered into the thymus gland). 'Leukaemic' allantoic fluid adsorbed on human erythrocytes possessed leukaemogenic activity. 'Leukaemic' allantoic fluid when examined microscopically was found to contain globular bodies 100-125 m μ . in size (such particles were rarely revealed in control preparations and were then few in number).

BERGOL'TS, V.M. (Moskva)

Most recent experimental data on the etiology of leukemia. Usp.
sovr.biol. 47 no.3:390-396 My-Je '59. (MIRA 12:10)
(LEUKEMIA, etiol. & pathogen.
review (Rus))

BERQOL'TS Vil'yam Moiseyevich; BRAUDE, A.I., red.; ZUYEVA, N.K.,
tekhn.red.

[Virological etiology of leukemias in man; experimental
investigation] O virusnoi etiologii leukozov cheloveka;
eksperimental'noe issledovanie. Moskva, Gos.izd-vo med.
lit-ry, 1960. 187 p. (MIRA 14:4)
(LEUKEMIA) (VIRUSES)

BERGOL'TS, V.M. (Moakva)

Polyoma virus. Vop. virus. 5 no. 2:131-133 Mr-5 '60. (MIRA 14:4)
(TUMORS) (VIRUSES)

BERGOL'TS, V.M.; POPKOVA, V.N.

Pseudoleukosis in mice caused by bacteria of the Salmonella group.
Lab. delo 7 no.5:33-35 My '61. (MIRA 14:5)

1. Gosudarstvennyy onkologicheskiy institut imeni P.A.Gertsena i
Gorodskaya ordena Lenina klinicheskaya bol'nitsa imeni S.P.Botkina,
Moskva.

(LEUKEMIA)

(SALMONELLA)

BERGOL'TS, V.M., doktor meditsinskikh nauk

"Pollution of the air with carcinogenic 3,4-benzopyrene" by L.M.
Shabad, P.P. Dikun. Reviewed by V.M. Bergol'ts. Sov. zdrav. 20 no.1:
82-84 '61. (MIRA 14:5)

(BENZOPYRENE)
(SHABAD, L.M.)

(AIR--POLLUTION)
(DIKUN, P.P.)

DEMENT'YEVA, V.V.; BERGOL'TS, V.M.

Possibility of increasing the biological activity of extracts from human leukemic tissues. Biul. eksp. biol. i med. 3[i.e.53] no.3: 76-78 Mr '62. (MIRA 15;4)

1. Iz laboratorii eksperimental'noy terapii opukholey (zav. - doktor meditsinskih nauk V.M.Bergol'ts) Gosudarstvennogo nauchno-issledovatel'skogo onkologicheskogo instituta imeni P.A.Gertseva (dir. - prof. A.N.Novikov), Moskva. Predstavlena akademikom V.N. Chernigovskim.

(LEUKEMIA)

(TISSUE EXTRACTS)

BERGOL'TS, V.M., doktor med.nauk

Does a virus cause leucosis in cattle? Priroda 51 no.4:102-104
Ap '62. (MIRA 15:4)

1. Gosudarstvennyy nauchno-issledovatel'skiy onkologicheskiy
institut im. P.A.Gertsena, Moskva.
(Leucosis) (Cattle—Diseases and pests) (Viruses)

DEMENT'YEVA, V.V.; BERGOL'TS, V.M.

Blind passages in animals of different types of an agent found
in human leucotic tissue. Dokl.AN SSSR 145 no.2:472-473 J1 '62.
(MIRA 15:7)

1. Gosudarstvennyy nauchno-issledovatel'skiy onkologicheskiy
institut imeni P.A.Gertsena. Predstavleno akademikom A.N.
Bakulevym.

(LEUKEMIA)

(VIRUSES)

BERGOL'TS, V.M.

"Role of viruses in the development of tumors" by A.D.Timofeevskii.
Reviewed by V.M.Bergol'ts. Vop.virus. 7 no.6:747-748 N-D '62.

(MIRA 16:4)

(VIRUSES) (TUMORS)
(TIMOFEEVSKII, A.D.)

BERGOL'TS, V.M., doktor med.nauk

Outstanding event in science; Eighth International Congress on
Cancer in Moscow. Priroda 51 no.7:120 J1 '62. (MIRA 15:9)
(Oncology--Congresses)

CHECHIK, B.E.; BERGOL'TS, V.M.

Isolation from mouse tissues of a heterogenous antigen reacting with sera against human leukemic spleens. Probl. gemat. i perel. krovi no.10:11-18 '62. (MIRA 17:12)

1. Iz laboratorii eksperimental'noy terapii opukholey (zav. - doktor med. nauk V.M. Bergol'ts) Gosudarstvennogo onkologicheskogo instituta imeni P.A. Gertsena (direktor - prof. A.N. Novikov).

BERGOL'TS, V.M.

Viral etiology of leukemia in humans; a review. Probl. gemat.
i perel krovi 8 no.1.: 24-34 Ja '63. (MIRA 16:5)
(LEUKEMIA) (VIRUSES)

BERGOLT'S, V.M.; CHECHIK, B.E.

Human and animal corpuscular antigens detected with sera
against human leukemic tissues. Neoplasma 10 no.5:449-459
'63.

1. Gosudarstvennyy nauchno-issledovatel'skiy onkologicheskii
institut im. P.A.Gertsena, Moskva, SSSR.

BERGOL'TS, V.M., doktor med.nauk (Moskva)

Contribution to the development of scientific virology; the 70th
anniversary of Professor L.A.Zil'ber. Priroda 53 no.6:114 '64.
(MIRA 17:6)

BERGOLTS, V. M.

"Epidemiology of leukemias."

report submitted to 10th Cong, Intl Society of Hematology, Stockholm, Sweden,
30 Aug-4 Sep 64.

State Oncological Inst, Moscow.

I 0018_4E

Microbes. Leukoses of mice. In: Leukoses of animals. In:

presence of antileukosis antibodies within 6 months after beginning to work
on leukemia (similar data could not be obtained in the author's laboratory).
Work by Schwartz, and in the USSR by the author.

lymphatic leukemia; it can be temporarily alleviated by therapy that is
effective against leukemia. Orig. anti. has a life span

YU. M. P. ...
MIN'KOVA, N.G.; MIN'YANIN, I.M., akademik

Cystaphos (monosodium salt of β -aminoethylaminoacetic acid)
as a means for increasing the effectiveness of the chemotherapy
of tumors. Dokl. AN SSSR no. 2476-479 1965. 1965.

1. Institut gigiyeny i prof. i. I. P. ...
i Institut elementoorganicheskikh soedineniy AN SSSR.

FEDOROV, N.A., prof.; ALEKSEYEV, G.A., prof.; BERGOL'TS, V.M., doktor med.nauk;
SKACHILOVA, N.N.

Current aspects of experimental and clinical hematology; based
on data of the 10th International Congress on Hematology. Probl.
gemat. i perel. krovi no.3:49-55 '65.

(MIRA 18:10)

1. Deystvitel'nyy ohlen AMN SSSR (for Fedorov).

BERGOL'TS, V.M.; DEMENT'YEVA, V.V.

Use of the surviving spleen tissue culture for the detection of leucosogenic agent in human leukemic tissue. Biul. eksp. biol. i med. 60 no. 10:92-95 O '65 (MIRA 19:1)

1. Laboratoriya eksperimental'noy terapii opukholey (zav. - doktor med. nauk V.M. Bergol'ts) Gosudarstvennogo onkologicheskogo instituta imeni P.A. Gertsena (direktor - prof. A.N. Novikov), Moskva. Submitted November 5, 1964.

BERGOL'TSEV, A., kapitan meditsinskoy sluzhby

Prevention of catarrhal diseases. Tyl i snab. Sov. Voor. S11
21 no.12:61-64 D '61. (MIRA 15:1)
(MILITARY MEDICINE)

BERGOL'TSEV, I.

TsM - 3 decelerimeter. Muk.-elev.prem. 21 no.11:30 N '55.
(MLRA 9:4)

1.Dnepropetrovskoye zavodupravleniye No.1.
(Flour--Analysis)

BERGOL'TSEV, L.

The reporter's camera. Sov. foto 18 no.9:47-49 8 '58.
(Photography, Journalistic) (MIRA 11:10)
(Camera)

BERGOLITSEV, T. A.

BERGOL'TSEV, T.A., inzh.

Remote control of street lighting with the TUO-AKKh-1 system
and experience using it. Energetik 5 no.10:25-28 0 '57.(MIRA 10:12)
(Street lighting)

27.3500

2220, 4112

30509
S/194/61/000/008/062/092
D201/D304

AUTHORS: Bergol'tseva, L.A. and Gal'chuk, N.A.

TITLE: The effect of ultrasound on the Cl. perfringens toxin

PERIODICAL: Referativnyy zhurnal. Avtomatika i radioelektronika, no. 8, 1961, 13, abstract 8 E93 (Sb. nauchn. rabot Khar'kovsk. med. in-ta i N.-i. in-ta vaktsin i syvorotok (former Tr. Khar'kovsk. med. in-ta), 1960, no. 53, 197-202)

TEXT: Natural and dissolved concentrated toxins in quantities of 20-40 ml, were subjected to ultrasound for 30-120 min. at a frequency of 1 mc/s and intensity 5-8 W/mm [Abstracter's note: Evidently a misprint]. The toxins after being subjected to ultrasound were analyzed by the method of the lecithinase activity and biological break-through on white mica. The examination of several series of the toxin has shown the following: The degree of inactivation of

X

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The effect of ultrasound...

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the natural toxin by ultrasound depends on the toxin concentration and duration of ultrasound; the dry toxin becomes inactivated quicker in media non-containing nitrogenous substances; in a physiological solution its inactivation occurs much quicker than in a 1% peptone and Martin's broth; under the effect of ultrasound the toxin becomes inactive, fully losing its antigenic properties. 3 tables. X

[Abstracter's note: Complete translation]

Card 2/2

BERGOL'TSEVA, L. A.

Bergol'tseva, L. A.; Denisova, N. Ya.; and Segal' M. S. - "The action of morphanile and sulfidine on stimulants of gas gangrene in experiment." Collection I. Trudy Ukr. in-ta epidemiologii i mikrobiologii im Mechnikova, Vol. XIV, Issue 1, 1948, p. 149-54

SO: U-3950, 16 June 53, (Letopis, 'Zhurnal 'nykh Statey, No. 5, 1949).

USSR / Microbiology. Anaerobic Bacilli.

F-6

Abs Jour: Ref Zhur-Biol., No 13, 1958, 72214.

Author : Cherkas, G. P., Khodorova, Z. N., Borgol'tseva,
L. A.

Inst : Kharkov Scientific-Research Institute of Vaccines
and Sera.

Title : Comparative Evaluation of the Effectiveness of
Different Antigens and Methods of Immunization
Used for the Obtaining of Antiperfringens Sera
in an Experiment.

Orig Pub: Tr. Khar'kovsk. n.-i. in-ta vaktzin i syvorotok,
1957, 24, 173-180.

Abstract: No abstract.

Card 1/1

82

USSR / Microbiology. Microorganisms Pathogenic to Humans and
Animals.

F-5

Abs Jour : Ref Zhur - Biol., No 20, 1958, No. 90960

Author : Bergolitsaya, L. A.

Inst : Kharkov Scientific Research Institute for Vaccines and
Sera

Title : Comparative Study of Adsorption Antigen of Perfringens
on Aluminum Hypophosphate and Aluminum Hydroxide

Orig Pub : Tr. Kharkovsk. n.-i. in-ta vaktsein i syvorotok, 1957,
24, 193-201

Abstract : No abstract given

Card 1/1

BERGOL'TSEVA, L. A. Cand Biol Sci -- ■ "Aluminum-hydroxide and aluminum-phosphate-sorbed anatoxins perfringens and their immunizing effectiveness in experiment."
Khar'kov, 1959. 14 pp (Min of Agr UkSSR. Khar'kov Vet Inst), 200 copies
(KL, 52-59, 118)

MIKULINSKAYA, R.M.; FYADINA, D.D.; DROMASHKO, A.I.; SHULICHENKO, A.I.;
ROMASHKO, Yu. V.; ZLATOPOL'SKAYA, R.D.; BERGOL'TSEVA, L.A.; VEREZUB,
L.G.; CHAYKINA, T.H.; YEMEL'YANOVA, O.I.; GINZBURG, L.Ya.; GOLODYUK,
L.F.; RUMYANTSEVA, I.V.; VYCHEGZHANIN, A.G.; GOL'DENBERG, R.A.

Data on the study of the epidemiological effectiveness of vaccination
against influenza in Kharkov in October 1957. Vop.virus. 4 no.4:407-
411 JI-Ag '59. (MIRA 12:12)

1. Khar'kovskiy institut vaktsin i syvorotok imeni I.I. Mechnikova.
(INFLUENZA, prevention & control)

L 05136-67 EWT(1) RO/JK

207-50

ACC NR: AP6031137

SOURCE CODE: UR/0438/66/028/004/0080/0083

14B

AUTHOR: Nechayevs'ka, M. R. -- Nechayevskaya, M. R.; Kalynychenko, M. F. -- Kalinichenko, N. F.; Bergol'tseva, L. A. -- Berhol'tseva, L. A.; Biryukova, S. V.; Berezhkivs'ka, L. Ya. -- Berezhkovskaya, L. Ya.

ORG: Khar'kov Institute of Vaccines and Serums im. Mechnikov (Kharkivs'kyy institut vaktsih i sirovatoK)

TITLE: Fillers for casein nutrient media used in the study of toxin formation by gas

SOURCE: Mikrobiologichnyy zhurnal, v. 28, no. 4, 1966, 80-83

TOPIC TAGS: toxin, anatoxin, gas gangrene, experimental nutrient media, toxin formation/porolon

ABSTRACT: New standard fillers--porolon, fibrin, and sawdust, proved themselves good substitutes for the ground meat and millet usually used in the culture and production of gas gangrene toxins. The toxins and toxoids of Cl. oedematiens, Cl. perfringens and Cl. septicum showed a high degree of activity in casein hydrolysate nutrient media containing porolon, fibrin, or sawdust fillers. The

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L 05136-67

ACC NR: AP6031137

toxoids obtained were harmless to laboratory animals. Orig. art. has: 2 tables.
[W. A. 5a] [GC]

SUB CODE: 06/ SUBM DATE: 05Nov65/

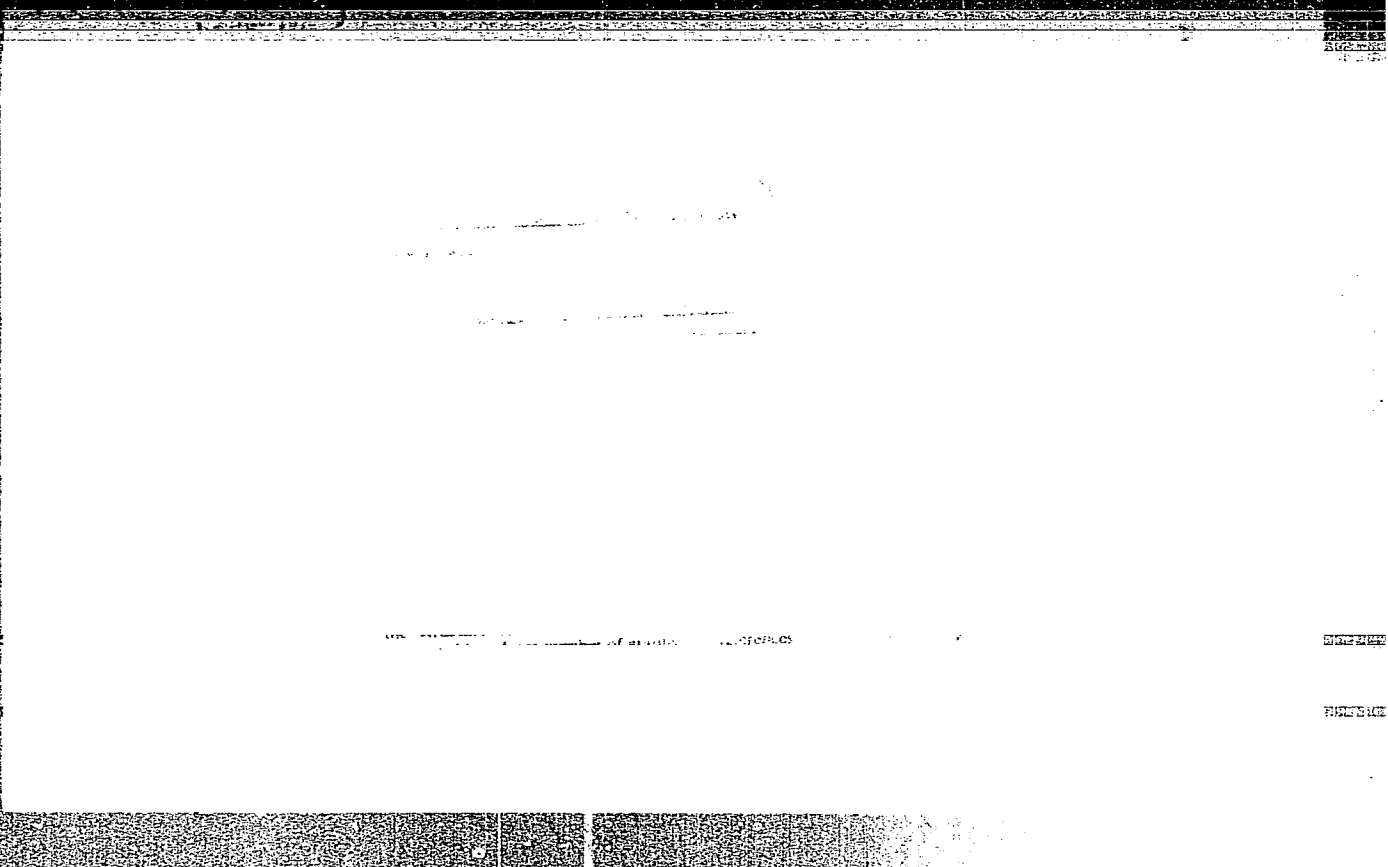
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Card 2/2

BERGSHTEYN, Solomon Grigor'yevich; SHEKHTMAN, I.V., red.

[Pulse-type regulation of the angular velocity of electric motors] Impul'snoe upravlenie skorost'iu vrashchenia elektrodvigatelei. Moskva, Izd-vo "Energia," 1964. 80 p. (Biblioteka po avtomatike, no.101) (MIRA 17:6)

VASHCHEV, N.V.; MODIN, N.A.; BERGSON, N.V.

Compressed wood for the manufacture of lasts for shoes. Der.
prom. 14 no.6:15 Je '65. (MIRA 18:7)



CZECHOSLOVAKIA/Crystals.

B-5

Abs Jour : Referat Zhur - Khimiya, No 6, 1957, 18351

regions stable up to 60°, the other one, existing at all studied temperatures and frequencies, was determined by the basic elements of the crystal lattice. According to the values of the resistivity, the polycrystalline yellow I with a small content of red I is between semiconductors and insulators.

Card 2/2

- 111 -

BERGSTEIN, ARNOST

CZECHOSLOVAKIA/Physical Chemistry - Thermodynamics. B-8
Thermochemistry. Equilibrium. Physicochemical Analysis.
Phase Transitions.

Abs Jour : Referat Zhur - Khimiya, No 2, 1957, 3736

Author : Bergstein Arnost
Title : Investigation of Reactions Occuring on Calcining of
Equimolecular Mixture of BaCO₃ and TiO₂ (Anatase), by
Determination of Dielectric Characteristics.

Orig Pub : Chem. listy, 1955, 49, No 8, 1117-1132; Sb. chekhosl.
khim. rabot, 1955, 20, No 5, 1041-1058.

Abstract : Study of the reaction of formation of BaTiC₃ from BaCO₃
and TiO₂ (anatase). The investigation was carried out
by determination of dielectric constant, its temperature
dependence, and of the dependence of polarization on vol-
tage. The procedure of thermal dielectric analysis that
was used can be utilized up to a temperature of 700°, is
more sensitive than the roentgenographic in the

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- 85 -

B. BERGSTEIN, A. MASL

Formation of solid solutions of lead titanate in barium titanate

followed by measurement of dielectric constants

Abstract

From the temp. dependence of the dielec. const. the homogeneity of reaction products is inferred; from the dependence of the polarization on the intensity of the external elec. field the presence of solid solns. of both components was ascertained. B. Bergstein

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Some scientific projects at
the University of California
at Los Angeles have been
funded by the CIA. The
CIA has also funded the
work of several other
scientists at the University
of California at Los Angeles.
The CIA has also funded
the work of several other
scientists at the University
of California at Los Angeles.
The CIA has also funded
the work of several other
scientists at the University
of California at Los Angeles.

1. The reaction products of burning nitrogen-rich
 fuels, such as hydrazine and other nitrogenous
 fuels, are known to contain nitrogenous
 compounds. It is known that the
 nitrogenous compounds, such as nitrogen
 dioxide, which are formed in the
 combustion of these fuels, are
 highly toxic and can cause
 severe damage to the human
 respiratory system.

"APPROVED FOR RELEASE: 06/08/2000

CIA-RDP86-00513R000204920004-0

APPROVED FOR RELEASE: 06/08/2000

CIA-RDP86-00513R000204920004-0"

1957/65/1/1/1, AKIV281

✓The course of some powder reactions in the preparation of lead titanate. Arnold Reigstein (Čs. akad. věd. Prágo. Chem. Listy 50, 1957, 1045-1048). PbTiO₃ is formed from equimol. mixts. of PbO and anatase, and at 570°C. from PbO and white PbO. At 400-500°C. anatase prevails over the formation of PbTiO₃. At 500°C. anatase and PbO₂ convert to PbTiO₃ and TiO₂. The formation of PbTiO₃ starts after complete decomposition of PbCO₃ above 600°C. The cryst. change of the red PbO at 570°C. speeds up the formation of PbTiO₃ from all the mixts. tested. A mixt. of red and yellow PbO (formed by the decomposition of PbCO₃) is less reactive than the red PbO. The rate of formation of PbTiO₃ is the same as that obtained by one firing of the powder mixt. and the reaction toward reduction is not observed. The reaction rate increases with increasing difference between the firing temp. and the temp. of firing.

BERGSTEIN, A.

A Perfected device for polishing balls made of hard materials.

P. 125 (Jemna Mechanika a Optike. Vol. 2, no. 4, Aug. 1957, Praha, Czechoslovakia)

Monthly Index of East European Accessions (EFAI) LC. Vol. 7, no. 2,
February 1958

CZECHOSLOVAKIA/Magnetism - Ferrites and Ferrimagnetism.

Abs Jour : Ref Zhur - Fizika, No 6, 1959, 13239

Author : Baoz, J., Bergstein, A., Krupicka, S., Vintera, J.,
Zaveta, K.

Inst : Institute of Technical Physics, Czechoslovak Academy of
Sciences, Prague, Czechoslovakia

Title : Influence of the Method of Preparation on Certain Magne-
tic Properties of Manganese-Zinc Ferrite.

Orig Pub : Chekhosl. fiz. zh., 1957, 7, No 1, 66-79.

Abstract : The authors have investigated the influence of temperature
and the annealing temperature on the magnetic properties
of manganese-zinc ferrites with an excess of manganese.
It was possible to correlate the magnetic properties with
the structure and chemical composition of the specimens.

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BERNSTEIN, A.

Thermographic indications of reactions of manganese ferrite by means of
exoelectronic emission. p. 408

408. (Ceskoslovenska Moroflogie. Vol. 7, no. 4, 1957 Praha, Czechoslovakia)

Monthly Index of East European Accessions (EEAI) LC. Vol. 7, no. 2,
February 1958

CZECHOSLOVAKIA/Magnetism - Ferrites and Ferrimagnetism.

F

Abs Jour : Ref Zhur Fizika, No 11, 1959, 25140

Author : Bergstein, Arnost; Behun, Antonin

Inst : -

Title : Thermographic Determination of the Reaction of Manganese Ferrite with the Aid of Exoelectronic Emission.

Orig Pub : Chekhosl. fiz. zh., 1957, 7, No 4, 489-494

Abstract : The authors have measured the temperature dependence of exoelectronic emission of sintered specimens with chemical composition $Fe_2O_3 \cdot 0.915 \cdot MnO_1.33 \cdot 0.043SiO_2$, consist, in accordance with the x-ray pattern, of a mixture of manganese ferrites ($MnFe_2O_4$), Fe_2O_3 , and Mn_2O_3 . The curves obtained were compared with curve of stretching and of the thermal emfs. Agreement was obtained between the temperature of the maximum of exoelectronic emission and the temperatures at the kink or at the maximum and minimum of the curves that represent the remaining properties.

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CZECHOSLOVAKIA/Magnetism. - Ferrites and Ferrimagnetism.

F

Abs Jour : Ref Zhur Fizika, No 11, 1959, 25140

From a comparison with the curves of electric conductivity of the initial materials, annealed at the same temperature as the investigated specimens, it follows that the kinks and the extreme near 400 and 600° C must probably be attributed essentially to the presence of manganese oxides, with which, as was observed, oxidation-reduction processes takes place, connected with the crystallographic changes. Practice has shown that the method of exoelectronic emission curves together with other methods, like the thermographic method, can serve for a qualitative study of certain reactions in the solid phase.

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BERGSTEIN, A.

CZECHOSLOVAKIA/Physical Chemistry - Kinetics, Combustion,
Explosions, Topochemistry, Catalysis.

B-9

Abs Jour : Ref Zhur - Khimiya, No 7, 1958, 20695

Author : A. Bergstein, J. Vintera.

Inst : -

Title : Thermal Decomposition of Bivalent Manganese Carbonate.

Orig Pub : Sb. chekhosl. khim. rabot, 1957, 22, No 3, 884-895

Abstract : See RzhKhim, 1957, 44309.

Card 1/1

CZECHOSLOVAKIA / Physical Chemistry. Crystals.

Abs Jour: Ref Zhur-Khimiya, No 10, 1959, 34011

Author : Rozsival M., Bergstein A.

Inst : Not given

Title : Thermal Decomposition of the Divalent Manganese
Carbonate. II. Investigation with Electron Micro-
scope

Orig Pub: Chem. listy, 1958, 52, No 6, 1011-1014

Abstract: With the aid of electron microscope, changes of shape and dimensions of the $MnCO_3(I)$ products of decomposition were studied. Samples of I in the form of tablets, 1 and 10 mm in thickness, pressed under 250 kg/cm^2 pressure, were heated in air for 3 hours at temperatures ranging from 200° to 1300° . The investigated samples contained 0.001%

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4

CZ/8-52(82)-10-3/29

AUTHORS: Bergstein, A; Rozsival, M. and Mikulaš, M.

TITLE: On the Preparation of Manganese Ferrites (K přípravě manganatých ferritů)

PERIODICAL: Chemické Listy, 1958, Vol.52(82), Nr 10, pp 1856 - 1965 (Czechoslovakia)

ABSTRACT: The chemical and phase composition, the oxygen content, the shape of the crystals and occurrence of ferrimagnetism, as well as the Curie temperature of two mixtures of $MnCO_3$ and $FeO(OH)$ containing various quantities of manganese, depending on the temperature of combustion on air, were investigated. Tests included x-ray and chemical analysis, electron-microscopy and the measurement of the initial susceptibility. The composition, humidity, and data obtained by the spectral analysis of the investigated substances are given. The molar ratio of the powdery substances equalled $Fe:Mn = 2:0.94$ and $Fe:Mn = 2:1.537$. It was found that the curve showing the dependence of the oxygen content on the temperature has a similar shape as for $MnCO_3$ itself when heating up to $1,100^\circ C$ (Figures 1a and 1b). The maximum is shifted from 700 to 800 respectively $900^\circ C$ in the stability region of stoichiometric Mn_2O_3 in mixtures with Fe_2O_3 with

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On the Preparation of Manganese Ferrites CZ/8-52(82)-10-3/39

decreasing manganese content. The ratio of MnO where exceeded in the range between 400°C and 1.46 is no- this maximum, and the hausmanite structure phase (α -Mn₂O₃) does not appear anywhere but only the ilmenitic β -Mn₂O₃ (Table 2). Fe₂O₃ is dissolved in Mn₂O₃ at and above 700°C (Fig.2, Table 2). On exceeding this maximum, solid solutions of Fe₂O₃ in Mn₃O₄ are formed. Oxidation takes place between 1,000 and 1,100°C. Solutions of Fe₂O₃ in Mn₃O₄ are ferri-magnetic and have a cubical structure. Mixtures with a lower manganese content can show slightly tetragonal deformation up to 1,100°C. A solution with a Curie point at 260°C (Fig.4), formed in a richer mixture at 900°C, is considered to be a solution in α -Mn₃O₄. Oxidation takes place on increasing the temperature and the Curie point is raised to above 300°C. No interference can be seen in the roentgenograms above 900°C. Mixtures containing 1.537 Mn are homogeneous above 1000°C and have an accurate Curie point; their Curie constant and Curie temperature change proportionally with the oxygen content above 900°C (Figs.5 and 6, Curve 1). The proportion of the dissolved Fe₂O₃ increases rapidly with increasing combustion temperature, and is

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On the Preparation of Manganese Ferrites CZ/8-52(82-10-3/39

only completely soluble at 1350°C under defined experimental conditions. The rate constant and Curie temperature depend on the oxygen content as well as on the concentration of Fe_2O_3 (Figs.5 and 6, Curve 2). The authors suggest a basic mechanism for the formation of manganese spinels on air. There are 6 Figures, 2 Tables and 14 References: 4 English, 4 Russian, 1 Swedish, 1 Italian, 1 German and 3 Czech.

ASSOCIATION: Ústav technické fyziky. Československá akademie věd, Praha (Institute for Physics, Czechoslovak Academy of Sciences, Prague)

SUBMITTED: 5th October, 1957

Card 3/3

COUNTRY : CZECHOSLOVAKIA H
CATEGORY : Chemical Technology. Chemical Products and
Their Uses. Part 2. Ceramics. Glass. Binding*
ANS. JOUR. : RZKhim., No. 1 1960, No. 1860
AUTHOR : Borgstein, A.
INST. : -
TITLE : Comparative Differential and Thermal Analysis
ORIG. PUB. : Silikaty, 1959, 3, No 2, 161-162
ABSTRACT : The method of comparative differential and
thermal analysis (DTA), differing by the fact
that the negative (-) junction of the thermo-
couple is located not in inert material but in
a substance comparable with the investigated
one, is set forth. The positive junction (+)
is placed in the substance investigated. Both
*Materials. Concrete. General Problems

CARD: 1/3

H-25

COUNTRY :		H
CATEGORY :		
ABS. JOUR. :	RZKhim., No. 1	1960, No. 1860
AUTHOR :		
INST. :		
TITLE :		
ORIG. PUB. :		
ABSTRACT cont'd :	substances should preferably be* of the same density. By this method, the DTA enables to record the difference in the thermal behavior of two analogous samples, and determination is made as to the rapidity or slowness of exo- and endothermic reactions in each of them. The furnace temperature curve is described as in normal DTA. The method is very expedient for evaluation of the reacting ability in the	
	*compressed into samples	
CARD:	2/3	

COUNTRY : H
CATEGORY :
ABS. JOUR. : RZKhim., No. 1 1960, No. 1860
AUTHOR :
INST. :
TITLE :
ORIG. PUB. :
ABSTRACT : caking of various ceramic masses, for instance
cont'd : in the production of ferrites. Several examples
of curves of the comparative DTA for two varieties of ZnO and ferrite masses with different content of Fe₂O₃ are cited.-- S. Glebov

CARD:

3/3

H-26

BERGSTEIN, A.

"Investigation of slow processes by differential thermal analysis." p. 254.

SILIKATY. (CESKOSLOVENSKA VEDECKA TECHNICKA SPOLECNOST PRO PRUMYSL SILIKATU PRI
CESKOSLOVENSKE AKADEMII VED.) Praha, Czechoslovakia, Vol. 3, no. 3, 1959.

Monthly List of East European Accessions (EEAI), IC, Vol. 8, No. 9, September 1959.
Uncl.

COUNTRY : Czechoslovakia
CATEGORY : B-9
ABS. JOUR. : RZKhim., No. 23 1959, No. 81409
AUTHOR : Rozsival, M.; Bergstein, A.
INST. : Not given.
TITLE : Thermal Decomposition of $MnCO_3$.
II. Electron Microscope Studies.
ORIG. PUB. : Collect. Czechosl. Chem. Commun., 1959
24, #4, 1195-1199
ABSTRACT : See RZKhim, 1959, #10, 34011.

CARD: 1/1

BERGSTEN, A

¹
 / Manganese ferrites. II. Ignition at reduced pressure.
 A. Bergstein (Csl. akad. věd, Prague). *Collection Czechoslov. Chem. Commun.* 24, 3382-80 (1959); cf. *C.A.* 53, 5937h.—Under a pressure of 0.1 mm. the loss of O during thermal dissociation of mixtures of $MnCO_3$ and $FeO(OH)$ occurs at lower temperatures than with $FeO(OH)$ alone, and Mn stays, contrary to the ignition of $MnCO_3$ alone, more as bivalent. Preheating in air shifts the beginning of the thermal dissociation to higher temperatures, which is caused, in addition to the change of the grain size and activity, by the phase changes during the preheating. During the ignition of the nonpreheated mixtures at 0.1 mm., manganese ferrites and solid solutions of MnO and FeO_{1-x} are formed starting with 700°. With increasing temperature and decrease of total O content the portion of the monoxides increases at the expense of the spinel. Simultaneously the Mn^{2+} ions in ferrosplates are replaced successively by Fe^{2+} ions while the composition of the cubic iron oxide phase approaches the cation ratio of Mn:Fe, that of the starting material (0.94:2 and 1.537:2). Both phases are homogeneous and in equilibrium after 3.5 hours of ignition, and their composition depends on that of the starting material. The lattice constant of the spinel phase changes discontinuously

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 after a certain Fe^{2+} ion content has been reached which may be due to a change of the normal to the inverse spinel lattice. After preheating in the presence of air at normal pressure, the starting material for the formation of ferrosplines is not the solid solution of a hematite structure but the solution of Fe_2O_3 in a deficient $\beta-Mn_2O_3$. In this case at all temperatures of ignition a ferrospline is formed whose lattice constant and chemical composition is close to that of manganese ferrite, $MnFe_2O_4$. During the ignition at 1000, 1200, and 1300° the equilibrium conditions at molar ratios of Mn:Fe 31.97:68.03 and 43.5:56.5 are given for the existence of homogeneous solid solutions of MnO and FeO_{1-x} , having a cubic structure of the NaCl type. Except for two cases in which after ignition at 1000° practically homogeneous stoichiometric manganese ferrite was formed, the curves of the O loss are similar to those for $MnCO_3$ and Mn ferrite and show in the proximity of 1100° a maximum or an inflection. The same course was observed on an x-ray diagram where the portion of the spinel phase increases or is formed after having disappeared after heating at 1000°. This phenomenon was not observed during the decomposition of $FeO(OH)$ alone.
 M. Hudlický

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24,2200

Z/012/60/000/01/008/015

E073/E135

AUTHORS: Bergstein, A., Rozsival, M., and Mikuláš, N.

TITLE: Preparation of Manganese-Magnesium Ferrites¹ and the Influence of the Initial Ferrous Oxide Used

PERIODICAL: Silikáty, 1960, No 1, pp 60-66 (+ 4 plates)

ABSTRACT: Three types of Fe_2O_3 (designated as Č II, Č VII and Z) were used for manufacturing a Mn-Mg ferrite mass with a rectangular hysteresis for microwave applications. The shape and size of the particles were compared by using an electron microscope (see Fig 2a-2f, plate), the reactivity of the ferrous oxides was determined by means of DTA (graph, Fig 3), and finally the shrinkage curves (Fig 4) were also compared. The cooling curve of the DTA shows a maximum at about 670 °C for the βFe_2O_3 to αFe_2O_3 transformation which can be applied for identifying ferrous oxide which did not react during the heat treatment (Fig 5d). The inclination angle of the DTA curves of the ferrite materials (Fig 5a, b and c) shows the influence of the quality of the applied Fe_2O_3 both on the intensity and the character of the ferrite formation and sintering. It was established by means of an electron microscope (Fig 6, Table 2) that the

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Preparation of Manganese-Magnesium Ferrites and the Influence of the Initial Ferrous Oxide Used

ferrite crystals in the mass "Z" are largest after heating at 1180 °C, and those of the mass "C II" are smallest. For the mass from the oxide "Z", the crystal growth is fastest at a temperature below 1050 °C, whilst for a mass from the oxide "C VII" it is fastest in the temperature range 1050-1180 °C. A part of the ferrite crystals from the raw material "Z" retains the rod shape of the original FeO(OH); after sintering at 1180 °C the mass obtained from "C II" was found to contain Fe₂O₃ which did not react. Microphotos 7 and 9 (plates) show the difference in the crystal size and porosity of ferrite specimens sintered at 1480 °C. The "rectangularity" factor and the insulation ratio in the case of microwave ferrite increase with increasing size of the crystal and with decreasing porosity. The difference in the SiO₂ content of the "Z" and of "C II" and "C VII" (see Tables 1 and 3) is less significant from the point of view of the properties of the ferrite specimens than

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E073/E135

Preparation of Manganese-Magnesium Ferrites and the Influence of
the Initial Ferrous Oxide Used

the difference in the reactivity between the less
reactive, coarse grained and therefore unsuitable
"Č II" on the one hand, and the "Č VII" and "Ž"
materials on the other hand.

There are 9 figures, 3 tables and 6 references, of
which 1 is English and 5 are Czech.

ASSOCIATION: Ustav technické fyziky ČSAV, Praha
(Institute of Technical Physics, ČSAV Prague)

SUBMITTED: June 10, 1959

Card 3/3

X

BERGSTEIN, Arnost

Principles of the technology of ceramic dielectrics and ferromagnetic materials. Pokroky fys pev latek 5:2-56 '60. (EEAI 9:7)

1. Ustav technicke fysiky Ceskoslovenski akademie ved, Praha
(Ceramics) (Dielectrics)
(Magnetic materials)

1
3
1-1111 (MAY)
No. 7.
y
11
21

✓ Manganese-magnesium ferrites. I. Differential thermal analysis of the formation of the manganese-magnesium ferrites up to 1050°. A. Bergstein (Ústav technické fyziky ČSAV, Prague). *Collection Czechoslov. Chem. Commun.* 25, 1715-9 (1960).—The effect of the compn. of the original mixt. on the mechanism of formation of Mn Mg ferrosplines was studied by means of the differential thermograms of 5 mixts. of Fe_2O_3 , $MnCO_3$, and basic $MgCO_3$. The mixts. ignited at various temps. were analyzed by x-rays. The presence of Mg ions lowers the initial temp. of ferrite formation. The intensity of spinel formation has its optimum at the ratio Mg: Mn = 2.8. B. Břetka

S/081/62/000/009/004/075
B177/B138

AUTHOR: Bergstein, A.

TITLE: Manganese-magnesium ferrites. II. Dependence of the lattice parameter and lattice dislocations on the composition

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 9, 1962, 31, abstract 9B188 (Collect. Czechosl. Chem. Commun. v. 25, no. 9, 1960, 2274-2282)

TEXT: The effect of varying the ratio of Mn and Mg ions on the O₂ content and on the lattice parameter of a series of manganese-magnesium ferrites with a deficiency of Fe ions is investigated. For paper I, see RZhKhim., 1961, 16B368. [Abstracter's note: Complete translation.] ✓

Card 1/1

BERGSTEIN, A.

Crystal structure and mean valency of manganese ions of some compounds
in the system CuO_xFeO_y . Coll Cz Chem 26 no.3:740-746 Mr '61.
(EEAI 10:9)

1. Institute of Technical Physics, Czechoslovak Academy of Science,
Prague.

(Copper oxides) (Iron oxides) (Manganese oxides)

BERGSTEIN, A.; BOHUN, A.

Manganese magnesium ferrites. III. Emission of exoelectrons. Coll. Cz
Chem 26 no. 3:747-752, Mar '61. (KEAI 10:9)

1. Institute of Technical Physics, Czechoslovak Academy of Science,
Prague.

(Electrons) (Magnesium manganese ferrites)

S/058/62/000/004/122/160
A061/A101

AUTHORS: Bergstein, A., Gerber, R.

TITLE: Structure of nonstoichiometric copper-manganese ferrite

PERIODICAL: Referativnyy zhurnal, Fizika, no. 4, 1962, 47, abstract 4E410
("Chekhosl. fiz. zh.", 1961, v. B11, no. 8, 613 - 616, English)

TEXT: The values, μ_{experim} , of molecular saturation magnetization of $\text{Cu}_{0.875}\text{Mn}_{0.302}\text{Fe}_{1.823}\text{O}_{4+\gamma}$ ferrites, annealed at different temperatures, were measured at the temperature of liquid N using the ballistic method. Tetragonal ferrites were obtained at $T = 700$ to 800°C , and cubic ferrites at $T = 900$ to $1,000^\circ\text{C}$. In tetragonal ferrites, $\mu_{\text{experim}} = 1.01$ to $1.14 \mu_{\text{B}}$, when $4+\gamma = 4.0045$ to 4.0125 , and $\mu_{\text{experim}} = 1.30 \mu_{\text{B}}$, when $4-\gamma = 3.9965$ to 3.9995 . In cubic ferrites, $\mu_{\text{experim}} = 1.49$ to $1.59 \mu_{\text{B}}$, when $4-\gamma = 3.9965$ to 3.9835 . From the values obtained for μ_{experim} and the factor of oxygen content, $4+\gamma$, the hypothetic cation distribution over the interstices A and B of the spinel lattice was determined. The mechanism of this distribution is explained by the equilibrium reaction of the cations $\text{Mn}^{3+} + \text{Cu}^{+} \rightleftharpoons \text{Mn}^{2+} + \text{Cu}^{2+}$ in the interstices B, taking place within

Card 1/2

Structure of nonstoichiometric...

S/058/62/000/004/122/160
A061/A101

limits set by electric neutrality and by the quantity γ .

N. Smol'kov

[Abstracter's note: Complete translation]

Card 2/2

Z/012/62/000/001/001/007
E073/E135

AUTHOR: Bergstein, A.

TITLE: Importance of differential thermal analysis for the study of tetragonally deformed spinels

PERIODICAL: Silikáty ⁶no.1, 1962, 53-57

TEXT: The crystallographic transformation of the tetragonally deformed spinel lattice to cubic spinel lattice in hausmanite, cupric ferrite and in a solid solution of 0.9 molar parts of cupric ferrite and 0.1 part of hausmanite was studied by means of differential thermal analysis. Hausmanite, prepared by decomposing $MnCO_3$, $\beta-Mn_2O_4$ became reversibly transformed to $\gamma-Mn_2O_4$ at 1150-1180 °C in an inert or slightly oxidizing atmosphere and at 1060 °C in a reducing atmosphere. There are two peaks on the cooling curves between 1000 and 900 °C, the second of which is due to a reoxidation process and the first was probably due to a reverse transformation of the crystal lattice. For cupric ferrite and its solid solution with hausmanite the DTA curves show one or two endothermal

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Importance of differential thermal... Z/012/62/000/001/001/007
E073/E135

minimum deflections above 900 °C or they show a minimum between 360 and 480 °C, depending on the previous heat treatment; in the latter case the minima were degenerated above 900 °C. The oxidation atmosphere brought about a shift in the minimum towards higher temperatures between 360 and 480 °C. These effects are attributed to the influence of the atmosphere, the preliminary heat treatment and the impurities on the structure of the spinel lattice and on the oxidation-reduction phenomena which take place during the differential thermal analysis. Detailed results and explanation of the shifts in the transformation points and the differences in the mechanism of the transformation phenomena during cooling will be the subject of a further paper.

There are 3 figures and 14 references: 6 Soviet-bloc and 8 non-Soviet-bloc. The four most recent English language references read as follows:

Ref.1: I.O. Dunitz, L.E. Orgel.
J. Phys. Chem. Solids, v.3, 20 (1957a)

Card 2/3

Importance of differential thermal... Z/012/62/000/001/001/007
E073/E135

Ref.3: A.I. Finch, A.P.B. Sinha, K.P. Sinha.
Proc. Royal Soc. London 242, 281 (1957)

Ref.6: A. Bergstein, L. Červinka,
J. Phys. Chem. Solids, v.18, 264 (1961)

Ref.8: H. Ohniski, T. Teranishi.
J. Phys. Soc. Jap., 16, 35 (1961)

ASSOCIATION: Ústav technické fyziky ČSAV
(Institute of Technical Physics, Czechoslovak AS)

SUBMITTED: May 10, 1961

Card 3/3

BERGSTEIN, A.; BURDA, E.; CERVINKA, L.

High-temperature X-ray chamber. Silikaty 7 no.1:61-63 '63.

1. Ustav technicky, Ceskoslovenska akademie ved, Praha.

BERGSTEIN, Arnost, RNDr., Sc.C.

Crystalchemistry and technology of ferrites. Sklar a keramik
12 no.4:150-152 Ap '62.

1. Ustav technicke fyziky, Ceskoslovenska akademie ved, Praha.

CZECHOSLOVAKIA

BERGSTEIN, A.

Institute of Physics of Solids of the Czechoslovak Academy
of Sciences, Prague

Prague, Collection of Czechoslovak Chemical Communications,
No 9, 1963, pp 2381-2385

"Manganese Magnesium Ferrites. IV. Oxygen Nonstoichiometry of
Spinels $Mn_x Fe_{3-x} O_{4+\gamma}$."

BERGSTEIN, A.

The lattice constant of $Mn_xFe_{3-0.4x}$ spinels. Chekhosl fiz
zhurnal 13 no.8:613-616 '63.

1. Ustav fyziky pevných látek, Československá akademie věd,
Praha.

BERGSTEIN, A.

Manganese magnesium ferrites. Pt.4, Coll. Cs Chem 28 no.9:
2381-2386 S '63.

1. Institute of Physics of Solids, Czechoslovak Academy
of Sciences, Prague.

BREJCHA, Miloslav; BERGSTEINOVÁ, Vlasta; BENES, Josef

Effect of certain antibiotics on post-irradiation syndromes in mice and rats. Cesk. onkol. 3 no.4:324-332 1956.

1. Staatliches Fakultätskrankenhaus, Praha.

(RADIATIONS, effects,

in mice & rats, eff. of antibiotics on reactivity (Ger))

(ANTIBIOTICS, effects,

on radiation eff. in mice & rats (Ger))

BERGSTEINOVA, VLASTA

BENES, Josef; BREJCHA, Miloslav; BERGSTEINOVA, Vlasta

Effect of some antibiotics on the radiation syndrome in mice and rats. Neoplasma, Bratisl. 4 no.3:224-226 1957.

1. Staatliches Fakultatskrankenhaus, Praha 12, Onkologische Abteilung.
(ROENTGEN RAYS, inj. eff.
eff. of antibiotics on radiation synd. in mice & rats)
(ANTIBIOTICS, eff.
on radiation synd. in mice & rats)

Bergsteinova, Vlasta

BENES, Josef; ~~BERGSTEINOVA, Vlasta~~; BREJCHA, Miloslav

Changes of the general amount of free amino acids and proteins in blood serum in the postirradiation syndrome in rats. Neoplasma, Bratisl. 4 no.4:351-356 1957.

1. Staatliches Fakultatskrankenhaus Praha 12, Onkologische Abteilung.
(ROENTGEN RAYS, eff.
on amino acids & proteins in blood of rats)
(BLOOD PROTEINS, eff. of radiation on
x-rays, in rats)
(AMINO ACIDS, in blood
eff. of x-irradiation in rats)

TOPOL, O.; BERGSTEINOVÁ, V.; LISKA, M.

Relation of sex chromatin to hormonal therapy of breast tumors.
Cesk.rentg. 15 no.1:17-24 F '61.

1. Onkologické oddělení FN KU, Praha 10. Patologickoanatomický
ústav FN KU, Praha 10.

(BREAST NEOPLASMS ther)

(HORMONES ther)

(CHROMOSOMES)

TOPOL, O.; BERGSTEINOVA, V.; CHODOUNSKY, Z.

Five-year treatment results in breast cancer. Cesk. rentgen.
18 no.1:1-10 Ja'64.

1. Onkologicke oddeleni fakultni nemocnice v Praze 10.

*

BERGUN, K. I.

"Determination of Cloud Altitude from Aircraft"
Tr. Tsentr. Aerol. Observ., No 12, 1953, pp 49-53

A formula is determined for cloud altitude, utilizing the airspeed of an aircraft. The relationship involves the azimuths and vertical angles to a point in the cloud at two instants in time and assumes that the altitude of the cloud does not vary during the measurement. Possible errors are analyzed. (Rzhfiz, No 2, 1953)

SO: Sum. 492, 12 May 55

ACC NR: AR6035072 SOURCE CODE: UR/0169/66/000/008/B007/B008

AUTHOR: Bergun, K. I.; Orlova, R. T.

TITLE: Improving air survey observations with an A-22-11 radiosonde

SOURCE: Ref. zh. Geofizika, Abs. 8B69

REF SOURCE: Sb. rabot Alma-Atinsk. gidrometeorol. observ., vyp. 1, 1965, 46-54

TOPIC TAGS: aerial survey, temperature measurement, temperature inversion, isobar/A-22-11 radiosonde

ABSTRACT: A temperature and humidity gage designed on the basis of a calibration certificate without regard to variations is proposed. The gage makes it possible to insure gage production far in advance, and verification of design accuracy. Temperature and humidity variations are introduced after exposure "to the open air before release." The gage is assembled with allowance for the temperature and possible inversion depending on the season and the time of day. Examples of gage design and methods of manufacturing are given. Certain

Card 1/2

UDC: 551.501.724:551.501.771

ACC NR: AR6035072

simplifications are suggested for the introduction of radiation corrections and for corrections on elevations from an isobaric surface level of 200 mb, when the introduction of radiation corrections becomes complex. A method is proposed to verify the accuracy of determination of elevations of isobaric surfaces of 1000 and 900 mb, based on measurements of pressure changes near the Earth and the mean temperature of the Earth layer—the isobaric surface of 1000 mb (900 mb).

L. Gayvoronskaya. [Translation of abstract]

[GC]

SUB CODE: 08, 04/

Card 2/2

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36901
S/048/62/026/004/006/014
B104/B102

AUTHORS: Bergunas, F. I., and Yenikeyeva, K. Sh.

TITLE: Photodielectric effect in electroluminescent zinc-sulfide phosphors

PERIODICAL: Akademiya nauk SSSR. Izvestiya. Seriya fizicheskaya, v. 26, no. 4, 1962, 475 - 479

TEXT: The nature of the sources of primary electrons producing luminescence in an electric field was clarified by an investigation of the photodielectric effect. ZnS-Cu specimens with blue emission bands were tested for this purpose. Disk-shaped specimens 40 mm in diameter and 0.2 mm thick were prepared with a Teflon filler. The dielectric properties at frequencies of $(20-4.5) \cdot 10^6$ cps were investigated between 110 - 370°K. The specimens were in a vacuum, and were excited with the 365-m μ Hg triplet. The results indicate that in the case of zinc-sulfide phosphors, the grains of the electroluminophor and photoluminophor have the same properties. The photodielectric effect is due to the photoconductivity in the granular specimen. Electroluminophor and photoluminophors differ in that

Card 1/2

Photodielectric effect in...

S/048/62/026/004/006/014
B104/B102

a second phase exists at the periphery of each grain of the former. This phase is a Cu_2S - CuS mixture, and exhibits metallic conduction in the temperature range in question. The light which excites the photoconductivity of the luminophor has virtually no influence upon the conduction of the second phase. As there is no free charge exchange between the luminophor grains and the second phase in weak fields, electroluminophors possess two different sources of dielectric losses which, when excited, produce two frequency maxima of $\tan \delta$ and create two regions of dispersion of C . Dark conductivity of the grain is attributed to the second phase. There are 2 figures. f.

Card 2/2

BERGUNKER, G.

Without consideration for the customers' demand. Mest.prom.
1 khud.promys. 2 no.12:14 D '61. (MIRA 14:12)

1. Upravlyayushchiy obkkoopstroytorgom, g. Simferopol'.
(Supply and demand)

BERGYANSKIY, M.G.; BRODSKIY, I.I.; VOYNOV, V.P.; GNILENKO, B.A.; GRINVAL'D,
V.A.; KRYUKOV, G.Ya.

Mechanization and automatization of the mandrel extracting operation
in continuous pipe rolling mills. Metallurg 5 no.11:30-33 N '60.
(MIRA 13:10)

1. Truboprokatnyy zavod im. V.I.Lenina.
(Pipe mills--Equipment and supplies)
(Automatic control)

BERI, Ye.B.

One third less than the average cost. Put'i put.khoz. no.7:
11-12 J1 '59. (MIRA 12:10)

1. Nachal'nik Mochishchenskogo shohabanochnogo zavoda, stan-
tsiya Yel'tsovka, Tomskoy dorogi.
(El'tsovka--Stone, Crushed)

VASHKOV, V.I.; SHNAYDER, Ye.V.; BRIKMAN, L.I.; ZAKOLODKINA, V.I.; CHUBKOVA, A.I.; ALIMBARASHVILI, TS.N.; BABAYANTS, G.A.; BERIANIDZE, I.Sh.; ZAKHAROV, P.V.; ISAAKYAN, A.G.; LEVIYEV, P.Ya.; MARTINSON, M.E.; MRACHKOVSKIY, S.K.; NAYDICH, N.L.; NESTERVODSKAYA, Ye.M.; RAZMANOVA, Ye.M.; SAVINA, K.V.; SERGEYEVA, A.Ye.; SOKOLOVA, M.Ye.; FOMICHEVA, V.S.; CHERNYSHOVA, V.A.; SHUMILOVA, T.V.

Sensitivity to DDT of houseflies in various climatic zones of the USSR. Zhur.mikrobiol., epid.i immun. 33 no.8:20-24 Ag '62.
(MIRA 15:10)

1. Iz TSentral'nogo nauchno-issledovatel'skogo dezinfektsionnogo instituta.

(FLIES--EXTERMINATION) (DDT)

VASHKOV, V.I.; SHAYDER, Ye.V.; ZAKOLODKINA, V.I.; BRIKMAN, L.I.; CHUEKOVA, A.I.
ALIMBARASHVILI, TS.N.; BABAYANTS, G.A.; BERIANIDZE, I. Sh.;
ZAKHAROV, P.V.; ISAAKYAN, A.G.; LEVIYEV, P. Ya.; MARTINSON, M.E.;
MRACHKOVSKIY, S.K.; NAYDICH, N.L.; NESTERVODSKAYA, Ye.M.;
RAZMANOVA, Ye.M.; SAVINA, K.V.; SERGEYEVA, A.V.; SOKOLOVA, M.Ye.;
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