

Investigating the effect ...

S/509/62/000/009/010/014
D207/D308

mended. Surface-active agents do not always determine the effectiveness of a lubricant, but their presence reduces adhesion between titanium and the rolls. Deterioration of mechanical properties of titanium, due to possible hydrogenation, was not observed. The standard methods of applying the lubricant in the case of steel were also suitable for titanium. The best lubricants gave a 30 - 40% increase of the deformation per single pass compared with dry rolling, and the number of passes could be reduced by half compared with rolling using 59C (59S) paste. There are 5 figures and 3 tables. X

Card 2/2

ACCESSION NR: AT4014064

S/3072/43/000/000/0097/0101

AUTHOR: Chamín, I. A.; Belosevich, V. K.; Chamín, Yu. A.; Shakhov, V. L.; Pavlov, I. M.; Pedos, I. F.

TITLE: Extract from an article on lubrication in cold sheet rolling

SOURCE: Fiz.-khim. zakonomernosti deystviya smazok pri obrabotke metallov davleniyem. Moscow, Izd-vo AN SSSR, 1963, beginning with "V SSSR na neskol'ky'kh..." on page 97 through page 101

TOPIC TAGS: cold rolling lubricant, cold rolling, lubricant, palm oil substitute, mineral oil, animal fat, vegetable fat, castor oil

ABSTRACT: In several Soviet plants investigations have been made on replacement of palm oil as lubricant in sheet rolling by domestic substitutes on the basis of vegetable and animal fats, and by lubricants on the basis of synthetic fatty acids. In one plant, the standard mineral emulsion B has been used on the rolling mill 220/600 x 650 for cold sheet rolling. On the basis of the investigations, the mineral emulsion has been replaced by more efficient technological lubricants. Palm oil, castor oil, and beef tallow were investigated. In another case, palm oil, artificial solid fat (Salomas, obtained as the result of action of chemical compounds from oils), and castor oil have been tried and compared as lubricants on the continuous

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rolling mill 244/600 x 650. Positive results have been obtained, resulting in a production rise of 30-40%. Similar experiments have been conducted on the four-high reversible rolling mill 180/600 x 650 for stainless steel 1 Kh 18N9T (Ya/II) cold strip rolling. In this case, water based mineral oil emulsion, B-106 stearin, B-99 table fat, and beef tallow have been used as technological lubricants. The conclusion has been made that, by applying effective lubricants, the manufacturing cycle of thin stainless strips will be considerably reduced by reducing the number of heat treatment and pickling operations. However, because of scarcity of fats of organic origin, further development has been directed toward finding synthetic compounds structurally similar to animal fats. During trial runs of a five-unit rolling mill 1200, lubricants on the base of vegetable fats have been tried out and compared with palm oil. 9000 tons of sheet, 98% of acceptable quality, have been rolled on castor oil at a specific oil consumption of 2.8 kg/ton. More than 6000 tons have been rolled on artificial solid fat. During these tests, castor oil has been the most effective lubricant, requiring the least power. Processes of annealing, descaling, pickling, and tinning have not created difficulties during manufacture of strips, and the quality of sheet has not been impaired by the lubricant. With regard to the search for new synthetic technological lubricants in cold rolling, a substantial disadvantage exists: the lack of emulsions which are inexpensive and more efficient

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than such of mineral oils. From the given review it has been concluded that addition of fats to mineral emulsions has only a slight if any improving effect on the lubricating properties; and that emulsions on the basis of fats or their equivalent substitutes are either expensive or are unstable and insufficiently effective. Orig. art. has: 4 tables.

ASSOCIATION: none

SUBMITTED: 00

DATE ACQ: 19Dec64

ENCL: 00

SUB CODE: MM, IE

NO REF SOV: 007

OTHER: 008

Card 3/3

ACCESSION NR: AT4014065

S/3072/63/000/000/0102/0109

AUTHOR: Belosevich, V. K.; Chamin, Yu. A.; Shakhov, V. L.; Soltan, S. G.; Sazanov, M. A.; Chamin, I. A.

TITLE: Investigation of the properties of various complex esters as technological lubricants for the cold rolling of carbon and special steels

SOURCE: Fiz.-khim. zakonmernosti deystviya smazok pri obrabotke metallov davleniyem. Moscow, Izd-vo AN SSSR, 1963, 102-109

TOPIC TAGS: lubricant, cold rolling, steel, complex ester, petrolatum, carbon steel, steel rolling

ABSTRACT: The effect of the structure of some synthetic esters upon their effectiveness as lubricants for the cold rolling of 08KP, 33A 1Kh18N9T, and VG98 steel has been investigated. The effectiveness of the lubricant was evaluated on the basis of measurements during several rolling operations with constant adjustment of the rollers. Thus, the distance of the top roller was reduced after each operation to provide constant pressure. There was found to be a direct linear relationship between band thickness and the pressure of the metal on the roller. The

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effectiveness of various tested esters and natural oils is shown in Figure 1 of the Enclosure. Similar curves were obtained for various hydrocarbon lubricants and mixtures of technical petrolatum with the triethyleneglycol esters of the C17-C21 acids. It is concluded that the effectiveness of an ester increases proportionally with the length of the molecule. The type of alcohol and length of its molecule do not affect the lubrication properties of the ester, but do affect the melting point. Branches, chains and cyclic groups decrease the lubrication effectiveness of the esters. The presence of oleic acid in the lubricant increases the antiscratching property of the lubricant. The most effective esters proved to be those from the dibasic alcohols and the synthetic C17-C21 fatty acids containing antiscratching admixtures. The butyl ester of stearic acid was better than palm oil, while the technological properties of the simple hydrocarbons were worse than those of palm oil. The friction coefficient of any lubricant may be increased by dilution with a less effective one. "The work was carried out under the direction of I. M. Pavlov, corr. member of the AN SSSR." Orig. art. has: 6 figures and 2 tables.

Card

2/4

ACCESSION NR: AT4014065

ASSOCIATION: None

SUBMITTED: 00

DATE ACQ: 19Dec63

ENCL: 01

SUB CODE: MM

NO REF SOV: 007

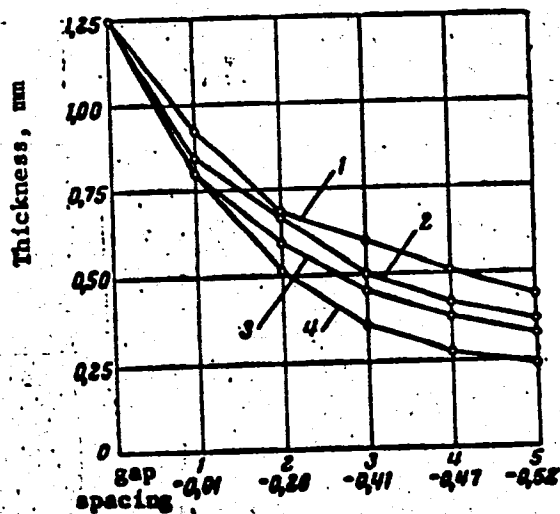
OTHER: 001

Card 7/4

ACCESSION NR: AT4014065

ENCLOSURE: 01

Effectiveness of various complex esters and natural fats (steel 08KP):



Card 4/4

CHAMKIN, N.V.

Changes in the electrocardiogram in pulmonary emphysema and their relation to disorders of the external respiratory function. M. zh. trudy Riaz.med.inst. 18 no.2:105-111 '64.

Changes in the ballistocardiogram in pulmonary emphysema.
Ibid.:112-119 (MIRA 19:1)

1. Kafedra gospiatal'noy terapii (zav. -- prof. N.A.Troitskiy)
Ryazanskogo meditsinskogo instituta.

CHAMO, S.

Using the dynamic and kinematic properties of refracted waves in geological interpretation of seismic prospecting data for Turkmenia. Razved. i prom. geofiz. no. 37:9-21 '60. (MIRA 14:3)
(Turkmenistan--Seismic prospecting)

CHAMO, S.

Study of the deep-seated structure of the earth's crust by the method
of reflected waves. Razved. i prom. geofiz. no.46:130-138 '62.

(MIRA 16:3)

(Seismic prospecting)

(Earth—Surface)

CHAMO, S.; BASENTSYAN, Sh.

Methodology and results of seismic studies conducted by the correlation refracted wave method with shot point profiling in western Turkmenia. Prikl. geofiz. no.36:66-85 '63.

(MIRA 16:9)

(Turkmenistan--Seismic prospecting)

VOL'VOVSKIY, B.S.; VOL'VOVSKIY, I.S.; ISHUTIN, V.V.; SEMENOVICH, V.V.;
TAL'-VIRSKIY, B.S.; CHAMO, S.S.

Regional geophysical studies in central Asia and their further trends.
Sov.geol. 6 no.12:112-117 D '63. (MIRA 16:12)

1. Nauchno-issledovatel'skaya sredneaziatskaya geofizicheskaya
ekspeditsiya kontory "Spetsgeofizika" i Uzbekskiy geofizicheskiy
trest.

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50

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

CHAMODANOV, V. S. PROCESSES AND PROPERTIES INDEX

CA 18

The possibility of treating South-Ural bauxites by the Bayer process. V. S. Chamodanov and N. N. Varlamova. *Tsvetnye Met.*, 10, No. 6, 61-57(1940). -- Samples from various points of the 4 main bauxite deposits in the South Ural were studied for the purpose of determining whether these bauxites can be treated in the existing facilities at the Ural alumina plant. The samples contained 53.0-62.1% of Al_2O_3 . With standard methods, the extn. of Al_2O_3 was 70.0-95.2%. Generally, the southern bauxites are very similar to North Ural bauxites now treated at the plant, and can be readily handled without major changes in the routine of the plant. The Akhil bauxite deposit is an exception, since it requires a higher leaching temp. (215°) or a greater quantity of $CaCl_2$, but this bauxite can be treated at the plant.

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50

COMMON ELEMENTS MATERIALS INDEX

ASB-114 METALLURGICAL LITERATURE CLASSIFICATION

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

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50

CHAMOKOVA, Ye. F., Grigor'yeva, M. K.

"Effect of dysentery on the course of tuberculosis in children."
Vop. pediat. i okhr. mat. i det. 20, no. 2, 1952.

MLRA, Lib. of Congress, August 1952, Uncl.

CHAMOKOVA, Ye.F.

**Thymol test in dysentery in children. Vopr. pediat. 20 no. 5:33-36
Sept-Oct 1952. (CML 23:3)**

**1. Of the Department of Pediatrics of Dsaudshikan State Medical In-
stitute (Acting Head of Department -- Ye. F. Chamokova).**

CHAMOKOVA, YE. F.

Disturbance of the proteogenic function of the liver in children's dysentery. E. F. Chamokova. *Voprosy Pediat. Okhrony Materinstva i Detsko* 21, No. 4, 5-8(1953).—In dysentery there is a definite disturbance of the protein-forming function of the liver, the disturbance being greater with more severe cases. Adaptability of children in such cases is high since many survived although their blood protein dropped to 3%. Among the clinical tests, the thymol test for eucolloidal properties of the plasma proteins appears to be the best index of the disturbance.

G. M. Kosolapoff

CHAMOKOVA, Ye.F.

Indications for plasma transfusion in dysentery. *Pediatria* no.2:
39-42 Mr-Apr '55. (MLRA 8:8)

1. Glavnyy pediater Ministerstva zdravookhraneniya Severo-Osetinskoy
ASSR.

(BLOOD TRANSFUSION, in various diseases,
dysentery, bacillary, indic. in child.)
(DYSENTERY, BACILLARY, in infant and child,
blood transfusion in, indic.)

CHAMOKOVA (E) F.
EXCERPTA MEDICA Sec 7 Vol 13/1 Pediatrics Jan 59

174. SUBFEBRILE CONDITIONS IN CHILDREN (Russian text) - Chamokova
E. F. - VOPR. OKHR. MATER. I DETS. 1957, 1 (11-16)

By a thorough examination of sick children with a subfebrile temperature it is often possible to detect occult foci of infection. Of 76 children, 2 months to 15 yr. of age, only in two was the presence of infection not established; in 43 children the cause of the subfebrile state was a cholecystitis of various aetiology (epidemic hepatitis, typhus, lambliasis); in the rest of the children the subfebrile condition was caused by residual manifestations of various infections. - (S)

1. Glavnyy pediater Ministerstva zdavookhraneniya Severo-Osetinskoy ASSR.

~~CHAMOKOVA, Ye.F.~~; MEDVEDKOVA, A.I.; GRIGOR'YEVA, M.K.

Functional state of certain internal organs in tuberculous
meningitis. *Pediatrics* 37 no.4:75 Ap '59. (MIRA 12:6)
(MENINGES--TUBERCULOSIS) (VISCERA)

CHAMOKOVA, Ye.F.

Treating lipid nephrosis. *Pediatrics* 37 no.9:88 S '59. (MIRA 13:2)

1. Iz kliniki detskikh bolezney Severo-Osetinskogo meditsinskogo instituta.

(KIDNEYS--DISEASES)

CHAMOKOVA, Ye.F.

Classification of inflammatory diseases of the biliary tract in children.
Sov. med. 27 no.11:14-18 N '64. (MIRA 18:7)

1. Kafedra detskikh bolezney (ispolnyayushchiy obyazannosti zaveduyushchego - dotsent Ye.F. Chamokova) Severo-Osetinskogo meditsinskogo instituta, Ordzhonikidze.

GAVRILENKO, L., kandidat tekhnicheskikh nauk; KATKHE, O., inzhener.
SHESTOPALOV, V., inzhener; CHAMORTSEV, I., inzhener.

Ways of decreasing the consumption of lubricating oils in 8DR
43/61 engines. Mor.flot. 16 no.1:26 Ja '56. (MLRA 9:5)

1. Odesskiy institut inzhenerov morskogo flota (for Katkhe);
2. Chernomorskoye parokhodstvo (for Shestopalov, Chamortsev).
(Lubrication and lubricants) (Diesel engines)

С.Н.А. 406. 4.14
MATVEYEV, A.I., kandidat tekhnicheskikh nauk, redaktor; CHAMOV, A.N.,
inzhener, redaktor; GOL'D, B.V., kandidat tekhnicheskikh nauk,
retsensent; DYBOV, O.V., kandidat tekhnicheskikh nauk, retsen-
sent; MINKIN, M.L., kandidat tekhnicheskikh nauk, retsensent;
OSTROVTSSEV, A.N., kandidat tekhnicheskikh nauk, retsensent;
TIKHONOV, A.Ye., tekhnicheskiy redaktor.

[Studies in construction of automobiles; collection of scientific
research problems of the Molotov Automobile Factory and the
Zhdanov Polytechnical Institute at Gorkiy] Issledovaniia v oblasti
konstruirovaniia avtomobilia; sbornik nauchno-issledovatel'skikh
rabot avtomobil'nogo zavoda imeni Molotova i Gor'kovskogo
politeknicheskogo instituta imeni Zhdanova. Moskva, Gos. nauchno-
tekh. isd-vo mashinostroit. i sudostroit. lit-ry, 1953. 249 p.
[Microfilm] (MLRA 9:2)
(Automobiles -- Design and construction)

LIPGART, A.A.; MOZOKHIN, N.G.; YUSEMANOV, H.A.; VASSERMAN, G.M.; ~~CHAMOV~~
A.N. inzhener, redaktor; SOKOLOVA, T.F., tekhnicheskiy redaktor;
TIKHONOV, A.Ya., tekhnicheskiy redaktor

[ZIM automobile; description of its design and maintenance]
Avtomobil' ZIM; opisanie konstruktzii i ukhod. Moskva, Gos.
nauchno-tekhn. izd-vo mashinostroit. lit-ry, 1954. 327 p.
(Automobiles) (MLRA 8:3)

ZINILEV, Georgiy Vladimirovich, prof.; PEVZNER, Ya.M., prof., retsenzent;
CHAMOV, A.N., red.; MAKHIMSON, V.A., red.isd-va; UVAROVA, A.F.,
tekhn.red.; CHERNOVA, Z.I., tekhn.red.

[Theory of the automobile] Teoriia avtomobilia. Moskva, Gos.
nauchno-tekhn.isd-vo mashinostroit.lit-ry, 1959. 312 p.
(MIRA 12:5)

(Automobile engineering)

KOSHKIN, V.K., doktor tekhn. nauk, prof.; MAYZEL', L.M., kand. tekhn. nauk; CHERNOMORDIK, B.M., kand. tekhn. nauk; KREPS, L.I., kand. tekhn. nauk, retsentsent; CHAMOV, A.N., inzh., red.; SMIRNOVA, G.V., tekhn. red.

[Free-piston gas producers for gas-turbine units] Svobodnoporshnevyye generatory gaza dlia gazoturbinnnykh ustanovok. Moskva, Mashgis, 1963. 289 p. (MIRA 16:10)
(Gas turbines) (Gas producers)

FAL'KEVICH, B.S., doktor tekhn. nauk, prof.; CHAMOV, A.N., inzh.,
red.; UVAROVA, A.F., tekhn. red.

[Theory of motor vehicles] Teoriia avtomobilia. Izd.2.,
perer. i dop. Moskva, Mashgiz, 1963. 239 p.
(MIRA 17:1)

CHAMOV, F.I.

Experimental conveyor plant for painting and drying all metallic
passenger cars. Lakokras.mat. i ikh prim. no.2:52-55 '61.

(MIRA 14:4)

(Painting, Industrial)

(Railroads--Passenger-cars)

KRESTAN, N.N.; CHAMOV, F.I.; SHCHETININ, V.N.; LEVINSKIY, Yu.V., red.;
ZAZUL'SKAYA, V.F., tekhn. red.

[Album of apparatus and equipment for industrial painting shops]
Al'bum oborudovaniia i apparatury okrasochnykh tsekhov. Moskva,
Goskhimizdat, 1962. 323 p. (MIRA 16:3)

1. Russia (1923- U.S.S.R.) Gosudarstvennyy komitet po khimii.
(Painting, Industrial—Equipment and supplies)

CHAMOV, NIKOLA

Bulgaria/Chemical Technology - Chemical Products and Their Application. Fermentation Industry, I-27

Abst Journal: Referat Zhur - Khimiya, No 19, 1956, 63579

Author: Chamov, Nikola

Institution: None

Title: Bulgarian Vermouth

Original

Periodical: B"lgarski vermut. Lozarstvo i vinarstvo, 1954, 3, No 2, 119-122; Bulgarian

Abstract: Four recipes are given for preparation of vermouth, based on decoctions of various herbs. Thermal treatment of vermouth at low and elevated temperature has given no beneficial results. Good results were obtained on addition of fruit extracts (pear, apple, cherry).

Card 1/1

CHAMOV, NIKOLE

Bulgaria/Chemical Technology - Chemical Products and Their Application. Fermentation Industry, I-27

Abst Journal: Referat Zhur - Khimiya, No 19, 1956, 63573

Author: Lichev, V. I., Chamov, Nikole

Institution: None

Title: A Bulgarian Vinicultural Problem

Original

Periodical: V"rkhu oshche yedin problem ot nasheto vinoproizvodstvo. Lozarstvo i vinarstvo, 1955, 4, No 3, 147-151; Bulgarian

Abstract: Considered are problems of organization of scientific researches.

Card 1/1

CHAMOV, P.; BURGUDZHIEV, B.

Two cases of hemorrhage into the abdominal cavity in cyst of the corpus luteum. Khirurgia, Sofia 9 no.10:941-942 1956.

1. (Iz Katedrara po akusherstvo i ginekologija pri visshia meditsinski institut i I gradski rodilen dom Tina Kirkova).

(CORPUS LUTEUM, cysts,

causing hemorrh. into abdom. cavity (Bul))

CHAMOV, Peter

Rotation of the umbilical cord in preventive external version
in breech presentation. Akush. ginek (Sofia) 1 no.2:22-26 '62.

1. Katedra po akusherstvo i ginekologija pri VMI [Vishh medi-
tsinski institut] - Sofia Zav. katedrata prof. Ilia
Shturkalev.

(LABOR PRESENTATION) (UMBILICAL CORD)

CHAMOV, P.; STANEV, S1; SHTURKALEV, 11.

Observations on the progestational activity of primulat N.
Akush. ginek. (Sofia) 3 no.4:65-69 '64

CHAMOV, P.; STAMENOV, SI.

~~CHAMOV, P.; STAMENOV, SI.~~
On hormonal hemostasis in functional uterine hemorrhage in
women. Akush. ginek. (Sofia) 3 no.4:70-75 '64.

CHAMOV, P.; STANEV, Sl.

Clinical significance of twisted umbilical cord. Akush. ginek.
(Sofia) 3 no.6:31-37 '64.

CHAMOV P.; STANEV, Sl.

On some cyclic intermenstrual bleedings. Nauch. tr. vissh. med.
inst. Sofia 43 no.3:31-35 '64.

1. Chair of Obstetrics and Gynecology. (Director: prof.
I. Shturkalev), Higher Medical Institute, Sofia.

CHAMOV, P.; STANEV, Sl.; VLADOV, Em.

Cases of utero-abdominal fistula following classical cesarean section. Akush. ginek. (Sofia) 4 no.3:231-234 '65.

1. Vissh meditsinski institut, Sofia, Akushero-ginekologichna klinika (rukov.: prof. Il. Shturkalev).

CHAMOV, P.; DIMITROV, D.

Essential thrombopenia, meno-metrorrhagia and sterility.
Akush. ginek. (Sofia) 4 no.3:210-217 '65.

1. Vissh meditsinski institut, Sofia, Katedra po akusherstvo
i ginekologija (rukov.: prof. Il. Shturkalev).

CHAMOV, T.; MARKOV, M.

Early ambulation in puerperium as a method of prevention of thrombophlebitis and embolism. *Khirurgia, Sofia* 6 no.8:496-499 1953. (CML 25:5)

1. Obstetric-Gynecological Division (Head -- T. Chamov), Stara Zagora District Hospital (Head Physician -- P. Fachidshiyev).

CHAMOV, V.I.

Cutter-loader fleet will be replenished. Ugol' Ukr. 5 no.2:24-25
F '61. (MIRA 14:3)

1. Glavnyy konstruktor Gorlovskogo zavoda im. Kirova.
(Gorlovka—Coal mining machinery)

CHAMOV, Yu. S.

"The Effectiveness of Predecessors of Hemp on Various Backgrounds of Fertilizers in the Conditions of the Poles'ye (Forest District) of the Ukranian SSR";
dissertation for the degree of Candidate of Agricultural Sciences
(awarded by the Timiryazev Agricultural Academy, 1962)

(Izvestiya Timiryazevskoy Sel'skokhozyaystvennoy Akademii, Moscow, No. 2,
1963, pp 232-236)

CHAMOYA #1

ND ✓ Eritrin. L. M. Yakobson, A. S. Konikova, A. I. Channova, and N. N. Dobbert. *Trudy Vsesoyuz. Nauch. Issledovatel. Inst. Antibiotikov* 1953, No. 1, 152-7.—Eritrin, an antibiotic extd. from liver and spleen of white rats, is an amorphous, dark-red powder, sol. in weak alkalis, acetone, and insol. in water and acids. It remains biologically active when heated at 70° for 10 min. in neutral or weak alk. or acid solus. In weakly alk. media, eritriu is inactivated in 48-60 hrs. It can be pptd. out by $(NH_4)_2SO_4$ and acids, especially by trichloroacetic acid. Eritrin destroys almost completely the activity of D-amino acid oxidase; it also decreases the activity of glutamic acid dehydrogenase by about 50%. The decrease of activity of the above substances probably is due to the presence of hemia. V. Milinajlov

CHAMOVA, K. G.

USSR/Medicine - Plastids
Medicine - Biochemistry

Jul 49

"Dehydrogenases of Plastids," N. M. Siskayan, K. G. Chamova, Inst
of Biochem imeni A. N. Bakh, Acad Sci USSR, 4 pp

"Dok Ak Nauk SSSR" VOL LXVII, No 2

Comparative study of dehydrogenasic activity in chloroplast, chromoplasts
and leucoplasts showed it was greatest in cholroplasts and smallest
in leucoplasts. Activity in chromoplasts was not observable by
methods used. Submitted by Acad A. I. Oparin 21 May 49.

PA 54/49T85

CHAMOVA, K.G.

1. Iz laboratorii immunokhimii (sav. - prof. V.S.Gostev) Instituta eksperimental'noy biologii (dir. - prof. I.N.Mayskiy) AMN SSSR, Moskva. Predstavlena deystvitel'nym chlenom AMN SSSR N.N.Zhukovym-Verezhnikovym.

Abs Jour : Ref Zhur - Biol., No 13, 1958, No 60943

Author : Chamova K.G.,
Inst : ~~GIVEN AT~~ top of page.
Title : The Serological Activity of a High Polymetric Desoxyribonucleic Acid

Orig Pub : Byul. eksperim. biol. i med. 1957, 44, No 10, 91-94

Abstract : A highly purified preparation DNK [DNA] was obtained from the thymus of a calf and the liver of a cow. DNK showed a negative reaction to tests for proteins. In the immunization of rabbits, with DNK, (intravenously 6 times, and a total dose of 8-110 milligrams) and anti-serum was obtained with a positive reaction to RSK [RSA], with still more protein removed and treated with trypsin compounds of DNK. Evidently, the serological activity is rather a property of DNK, than of possible protein admixures. Treatment with desoxyribonuclease deprived DNK of serological activity. Thus, this last is determined through the polymetric condition of the DNK molecule.

Card : 1/1

-- F.L. Bukh

CHANOVA, K.G.

Effect of polymerism on the antigenic properties of desoxyribonucleic acid preparations [with summary in English]. Biul. eksp. biol. i med. 45 no.2:89-93 F'58. (MIRA 11:5)

1. Iz laboratorii immunologii (zav. - prof. V.S. Gostev) Instituta eksperimental'noy biologii (dir. - prof. I.N. Mayskiy) AN SSSR, Moskva.

(DESOXYRIBONUCLEIC ACID,
eff. of polymerism on antigenic properties (Rus))

CHAMOVA, K. G.: Master Biol Sci (diss) -- "On the problem of the antigen properties and serological activity of desoxyribonucleic acid". Moscow, 1959.

11 pp (Acad Med Sci USSR), 200 copies (KL, No 7, 1959, 123)

CHAMOVA, K.G.

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S/560/61/000/011/007/012
E027/E635

AUTHORS: Zhukov-Verezhnikov, N.N., Mayskiy, I.N.,
Yazdovskiy, V.I., Pekhov, A.P., Gyurdzhian, A.A.
Nefed'yeva, N.P., Kapichnikov, M.M., Podoplelov, I.I.,
Rybakov, N.I., Klemparskaya, N.N., Klimov, V.Yu.,
Novikov, S.N., Novikova, I.S., Petrov, R.V.,
Sushko, N.G., Ugryumov, Ye.P., Fedorova, G.I.,
Zakharov, A.F., Vinogradova, I.N., Chamova, K.G.
and Buyko, Ye.A.

✓

TITLE: The results of the first microbiological and
cytological experiments in Space in Earth satellites

SOURCE: Akademiya nauk SSSR. Iskusstvennyye sputniki Zemli.
no. 11. Moscow, 1961. Rezul'taty nauchnykh
issledovaniy, provedennykh vo vremya poletov vtorogo
i tret'yego kosmicheskikh korabley-sputnikov, 44 - 67

TEXT: The authors report the results of their investigations
of biological objects which had been exposed to space conditions
in satellite vehicles. The first part of the work was devoted
to a study of the survival of cells of differing levels of
organisation under the influence of radiation and other
Card 1/5

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E027/E635

The results of the ---

unfavourable factors, in comparison with control materials which remained in the laboratory over the same period. In experiments with bacteria 2ml. samples of suspensions of Escherichia coli, Aerobacter aerogenes, Staphylococcus aureus and Clostridium butyricum containing 500 million organisms or spores per ml. were sealed in ampoules, and exposed to a space flight of unstated duration; the number of viable individuals after the exposure did not differ significantly from the values for the control samples. A similar experiment was carried out with the T2 phage of E. coli and the 1321 phage of A. aerogenes, which were sent in the second satellite; again, no significant reduction in the titre of the phage preparations could be detected after return from space. Similar results were obtained with preparations of phage sent into space in the fourth and fifth satellites. Two bottles and six tubes of HeLa cells, some of which were saturated with oxygen, were exposed to space flight

Card 2/5

17

S/560/61/000/011/007/012
E027/E635

The results of the . . .

conditions, after it had first been shown that vibration and acceleration did not detach the cells from the glass. The cultures without oxygen appeared normal on return, whereas in those exposed to oxygen most of the cells had degenerated. Subculture showed that 90% of the cells, whether detached from or remaining on the glass, were dead; however, two tubes gave good growth, and the cells which grew up showed no abnormalities of morphology. No antigenic differences could be detected in the cells in anaphylaxis and desensitization experiments in guinea-pigs. In subsequent space flights fibroblast and human amnion cell cultures were studied, with similar results. Pieces of human and rabbit skin were also used. On August 12th 1960 two pieces of skin 2.5 x 3.5 cm. in size and 0.5 mm. thick were taken from a human donor, placed in Hanks solution and sent into space in the second satellite. On recovery they were regrafted on the original site in the donor and became firmly attached after seven days.

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The results of the ---

S/560/61/000/011/007/012
E027/E635

Similar results were obtained with two other donors. An apparatus was devised for making a subculture in space, in order to study the ability of bacteria to multiply under space conditions. In experiments with *Glostridium butylicum* no deviations from the controls were observed. The second part of the work was devoted to a study of possible genetic effects brought about by exposure to space conditions, mainly by looking for the production of auxotrophic mutants and lysogeny in bacteria. The former were detected by inoculation on a layer of minimal medium which was then covered with an overlay of the same medium in order to fix the colonies. When the latter had grown up their position was noted and an overlay of complete medium was then put on, and the colonies which then grew up as a result of the diffusion of essential nutrients were selected as auxotrophic mutants. No such mutants could be found in suspensions of *Escherichia coli* recovered from the second satellite. The experiments on the induction of lysogenic bacteria were carried out on a strain of *E. coli* lysogenized by a λ phage which had been exposed to cosmic

Card 4/5

17

The results of the ---

S/560/61/000/011/007/012
E027/E635

radiation in the fifth satellite. Free phage particles were removed by adding phage antiserum; after the end of the latent period the action of the antiserum was cut short by diluting 1:100, streptomycin was added to inhibit the host organisms, and the mixture was plated out on the indicator strain in order to count the phage particles produced. The results obtained, considered in comparison with control experiments, provided no evidence of induction by cosmic radiation during a space flight of ninety minutes. No difference was observed in the plaque morphology. No changes could be detected in the chemical and physical properties of calf thymus deoxyribonucleic acid recovered after a space flight. The results as a whole indicate that no damage was suffered by isolated cells during a brief exposure to space conditions. There are 6 figures and 10 tables. f

SUBMITTED: May 23, 1961

Card 5/5

GOSTEV, V.S. (Moskva, D-284, Begovaya u., 11, kv. 37); AZLETSKAYA, A.Ye.;
SAAKOV, A.K.; GRIGOR'YAN, D.G.; CHAMOVA, K.G.; ZYKOV, Yu.V.;
PERELAZNYI, A.A.; MAZINA, N.M.; KULAGIN, N.A.; MAKOVEYEVA, G.M.

Study of the antigenic properties of human tumors fractions
deprived of soluble proteins. Vop. onk. 8 no.9:18-26 '62.
(MIRA 17:6)

1. Iz laboratorii immunokhimii Instituta eksperimental'noy
biologii AMN SSSR (dir.- prof. I.N. Mayskiy).

KLIMOV, V.Yu.; CHAMOVA, K.G.

Study of the anaphylactogenic properties of deoxyribonucleic acids in tissues. Nauch. inform. Otd. nauch. med. inform. AMN SSSR no.1:13-14 '61 (MIRA 16:11)

1. Institut eksperimental'noy biologii (direktor - prof. I.N. Mayskiy) AMN SSSR, Moskva.

*

MAYBORODA, V.I.; SOLOV'YEVA, G.I.; EGLIT, L.V.; FODIMAN, I.V.; SHILOVA, G.I.;
ZARINA, E.Ya.; CHAMOVA, L.P.; FILICHEVA, T.B.

Highly dispersed pigments for stock dyeing of viscose fibers. Khim.
volok. no.3:60-62 '65. (MIRA 18:7)

1. Vsesoyuznyy nauchno-issledovatel'skiy iskusstvennogo volokna (for Mayboroda, Solov'yeva, Eglit).
2. Nauchno-issledovatel'skiy institut organicheskikh poluproduktov i krasiteley (for Fediman, Shilova).
3. Klinskiy kombinat iskusstvennogo i sinteticheskogo volokna (for Zarina, Chamova, Filicheva).

CHAMOVA, V. N.

1837

USSR/Chemistry - Peroxides

May/Jun 51

"Investigation of Systems With Concentrated Hydrogen Peroxide," B. Z. Makarov, V. N. Chamova, Lab Peroxidic Comps, Acad Sci USSR

"Iz Ak Nauk SSSR, Otdel Khim Nauk," No 3, pp 255-261

By detg soly isotherms in the syst $\text{Na}_2\text{CO}_3\text{-H}_2\text{O}_2\text{-H}_2\text{O}$ at 0, 10, and 20°, examd this ternary system and established existence of 4 stable phases of compn $\text{Na}_2\text{CO}_3\cdot 10\text{H}_2\text{O}$; $\text{Na}_2\text{CO}_3\cdot \text{H}_2\text{O}$. $1\frac{1}{2}\text{H}_2\text{O}_2$; $\text{Na}_2\text{CO}_3\cdot \text{H}_2\text{O}\cdot 2\text{H}_2\text{O}_2$; $\text{Na}_2\text{CO}_3\cdot 2\text{H}_2\text{O}_2$. All obtained comps, active with

LC

1837

USSR/Chemistry -- Peroxides (Contd)

May/Jun 51

respect to oxygen, seem to be typical addn products; They are perhydrates of sodium carbonate rather than percarbonates of sodium. Comps $\text{Na}_2\text{CO}_3\cdot \text{H}_2\text{O}\cdot \text{H}_2\text{O}_2$; $\text{Na}_2\text{CO}_3\cdot \text{H}_2\text{O}\cdot 2\frac{1}{2}\text{H}_2\text{O}_2$; $\text{Na}_2\text{CO}_3\cdot 1\frac{1}{2}\text{H}_2\text{O}_2$; existence of which was indicated in the lit, could not be detected.

(CA 47 no. 21: 10984 '53)

LC

1837

CHAMOVA, V. N.

CATALYSTS

Chemical Abst.
Vol. 48 No. 9
May 10, 1954
Inorganic Chemistry

③ Fuel-Chem
Systems with concentrated hydrogen peroxide. II.
Thermal characteristics and dehydration with hydrogen
peroxide of sodium carbonate compound. S. Z. Makarov
and V. N. Chamova. Bull. Acad. Sci. U.S.S.R., Div.
Chem. Sci. 1952, 689-90 (Engl. translation).—Sci. C.A. 47,
437a. H. L. H.

8-31-54
JHP

CHAMOVA, V. N.

USSR/Chemistry - Peroxides

Jul/Aug 52

"Investigation of Systems Containing Concentrated Hydrogen Peroxide. II. Thermal Characteristics and Dehydration of Perhydrates of Sodium Carbonate," S. Z. Makarov, V. N. Chamova, Lab of Peroxide Comps, Acad Sci USSR

"Iz Ak Nauk SSSR, Otdel Khim Nauk" No 4, pp 632-634

Thermochem curves obtained by heating perhydrates of the compns $\text{Na}_2\text{CO}_3 \cdot \text{H}_2\text{O}$, $1.5 \text{H}_2\text{O}_2$ and $\text{Na}_2\text{CO}_3 \cdot \text{H}_2\text{O} \cdot 2 \text{H}_2\text{O}_2$ and making a differential 229T15

recording by means of a registering pyrometer show 2 successive effects: an endothermic one connected with dehydration and an exothermic one corresponding to evolution of oxygen during the decomposition of the perhydrate. By dehydrating in vacuum, the article states, $\text{Na}_2\text{CO}_3 \cdot 1.5 \text{H}_2\text{O}_2$ and $\text{Na}_2\text{CO}_3 \cdot 2 \text{H}_2\text{O}_2$ can easily be obtained.

229T1

CHAMOVA, V.N.

USSR/Inorganic Chemistry. Complex Compounds.

C

Abs Jour : Ref Zhur - Khimiya, No. 8, 1957, 26440.

Author : Vol'nov, I.I., Chamova, V.N.,
Sergeyeva, V.P., Latysheva, Ye.I.

Inst :

Title : Research in Region of Synthesis of Super-
peroxides of Alkali Earth Metals. Report 1.
Interaction of $\text{CaO}_2 \cdot 8\text{H}_2\text{O}$ with Perhydrol
at about 100° .

Orig Pub : Zh. neorgan. khimii, 1956, 1, No. 9,
1937 - 1942.

Abstract : The bibliographic data (Traube W., Schulze W.,
Ber., 1921, 54, 1, 1626; Erlich P., Z. anorgan.
Chem., 1944, 252, 370) referring to the for-
mation of dark-cream colored paramagnetic pro-
ducts containing up to 4.5% of $\text{Ca(O}_2)_2$ at the

Card 1/2

USSR/Inorganic Chemistry. Complex Compounds.

C

Abs Jour : Ref Zhur - Khimiya, No. 8, 1957, 26440.

interaction of $\text{CaO}_2 \cdot 8\text{H}_2\text{O}$ with perhydrol at about 100° were confirmed by separate determination of peroxide and superperoxide oxygen and magnetic measurements. There is on the curves of heating of the preparations an endothermic effect at $280 - 300^\circ$ connected with the dissociation of $\text{Ca}(\text{O}_2)_2$; the paramagnetism, the content of superperoxide oxygen, and the coloration intensity of the preparation decrease simultaneously. The hydration of CaO_2 does not result in a change of color. The authors assume that the cream color of the obtained preparations is caused by the presence of an admixture of $\text{Ca}(\text{O}_2)_2$.

Card 2/2

AUTHOR: Vol'nov, I.I., Latyshev, E.I., and Chamova, V.N. 559

TITLE: Research in the Field of the Synthesis of Alkaline-Earth Metal Superoxides. III. Formation of $\text{Ca}(\text{O}_2)_2$ from $\text{CaO}_2 \cdot 2\text{H}_2\text{O}_2$. (Poiski v Oblasti Sinteza Superoksidov Shchelochnozémel'nykh Metallov. III. Obrazovanie $\text{Ca}(\text{O}_2)_2$ iz $\text{CaO}_2 \cdot 2\text{H}_2\text{O}_2$.)

PERIODICAL: "Zhurnal Neorganicheskoy Khimii" (Journal of Inorganic Chemistry, Vol. II, No. 2, pp. 263-267. (U.S.S.R.)) - 1957

ABSTRACT: Contrary to some theoretical expectations it has been found that $\text{Ca}(\text{O}_2)_2$ can exist in preparations containing relatively large quantities of CaO_2 . $\text{Ca}(\text{O}_2)_2$ in concentrations of the order of 16.5 wt % could be obtained regularly by vacuum-drying $\text{CaO}_2 \cdot \text{H}_2\text{O}_2$ at 50°C at 10 mm Hg. The presence of $\text{Ca}(\text{O}_2)_2$ in such preparations has been established by chemical analysis, from heating curves and from magnetization measurements. On prolonged storage the $\text{Ca}(\text{O}_2)_2$ content decreases.

3 Figures, 3 Tables.

The work was carried out at the Institute of Inorganic Chemistry imeni Kurnakova of the Academy of Sciences of the U.S.S.R.

Received 1 September, 1956.

Card 1/1

CHAMOVA, V. N.

AUTHORS:

Vol'nov, I. I., Chamova, V. N.,
Shatunina, A. N.

78-3-5-6/39

TITLE:

V. The Formation of $\text{Ca}(\text{O}_2)_2$ by Irradiation of $\text{CaO}_2 \cdot 2\text{H}_2\text{O}_2$
With Ultra-Violet Rays (V. Obrazovaniye $\text{Ca}(\text{O}_2)_2$
oblucheniye $\text{CaO}_2 \cdot 2\text{H}_2\text{O}_2$ ultrafioletovymi luchami)

PERIODICAL:

Zhurnal Neorganicheskoy Khimii, 1958, Vol 3, Nr 5,
pp 1095-1097 (USSR)

ABSTRACT:

By irradiation of $\text{CaO}_2 \cdot 2\text{H}_2\text{O}_2$ with ultra-violet light, $\text{Ca}(\text{O}_2)_2$ is obtained, the presence of which can only be verified by chemical analysis. The obtained preparation is lemon-coloured, similar to NaO_2 . The final product is not uniform. The manufacturing process is difficult to reproduce. In some cases the final product contains from 7-8% $\text{Ca}(\text{O}_2)_2$, and in others it has a higher content of from 10-14%. $\text{Ca}(\text{O}_2)_2$ was also obtained by irradiation of $\text{CaO}_2 \cdot 2\text{H}_2\text{O}_2$ in a Fischer pistol consisting of quartz-glass, at a temperature of 25-45°C.

Card 1/2

The Formation of $\text{Ca}(\text{O}_2)_2$ by Irradiation of $\text{CaO}_2 \cdot 2\text{H}_2\text{O}_2$
With Ultra-Violet Rays

78-3-5-6/39

$\text{Ca}(\text{O}_2)_2$ is very unstable.

There are 1 table and 8 references, 5 of which are Soviet.

ASSOCIATION: Institut obshchey i neorganicheskoy khimii im. N. S. Kurnakova Akademii nauk SSSR (Institute of General and Inorganic Chemistry imeni N. S. Kurnakov, AS USSR)

SUBMITTED: May 10, 1957

AVAILABLE: Library of Congress

1. Calcium oxides---Production
2. Calcium oxides---Properties
3. Ultraviolet rays---Applications

Card 2/2

VOL'NOV, I.I.; CHAMOVA, V.N.

Influence of surface on formation process of $\text{Ca}(\text{O}_2)_2$ from

$\text{CaO} \cdot 2\text{H}_2\text{O}$. Part 6. Zhur. neorg. khim. 3 no.5:1098-1099 My '58.

(MIRA 11:6)

1. Institut obshchey i neorganicheskey khimii im. N.S. Kurnakova
Akademii nauk SSSR.

(Calcium superoxide)

AUTHORS: Makarov, S. Z., Chamova, V. N. SOV/62-58-9-2/26

TITLE: Research on Systems ^{Containing} Concentrated Hydrogen Peroxide
(Izucheniye sistem s kontsentrirrovannoy perekis'yu vodoroda)
Communication 14: Isotherms of the Solubility of the
Ternary System $K_2CO_3-H_2O_2-H_2O$ (Soobshcheniye 14. Izotermy
rastvorimosti troynoy sistemy $K_2CO_3-H_2O_2-H_2O$)

PERIODICAL: Izvestiya Akademii nauk SSSR. Otdeleniye khimicheskikh nauk,
1958, Nr 9, pp 1025 - 1030 (USSR)

ABSTRACT: In the previously reported work the authors investigated
the $Na_2CO_3-H_2O_2-H_2O$ system and showed that in the resulting
interaction of the sodium carbonate with the aqueous
solution of hydrogen peroxide only perhydrates are formed,
and no percarbonates. The work of Kazanetskiy (Ref 3) does
not satisfactorily confirm the assumed structure of the
alkali metal-carbonate perhydrates. The authors of this
paper succeeded in determining the stable solid phases
 $K_2CO_3 \cdot 6H_2O$, $K_2CO_3 \cdot 4H_2O$ and $K_2CO_3 \cdot 3H_2O_2$, present in the

Card 1/3

Containing

Research on Systems \wedge Concentrated Hydrogen Peroxide. SOV/62-58-9-2/26
Communication 14: Isotherms of the Solubility of the Ternary System
 $K_2CO_3-H_2O_2-H_2O$

system $K_2CO_3-H_2O_2-H_2O$ by using the solubility method at 3 temperatures (0° , 20° , and -10°). The phase $K_2CO_3 \cdot 4H_2O$ is a new and previously unknown hydrate of potassium carbonate. The equilibrium data permit the areas of stable concentration of K_2CO_3 and H_2O_2 in solution to be defined more precisely. Within these areas $K_2CO_3 \cdot 3H_2O_2$ can be removed from solution without a separation of the liquid phase taking place. The hydrate of potassium carbonate $K_2CO_3 \cdot \frac{3}{2}H_2O$ appears to be a metastable phase in the solution (under the influence of hydrogen peroxide it is transformed to the stable form $K_2CO_3 \cdot 3H_2O_2$). For the newly-discovered hydrate $K_2CO_3 \cdot 4H_2O$ a rapid increase in solubility (depending on the concentration of hydrogen peroxide; in the liquid phase from 15.00 to 38.24% at 0°) was found to be

Card 2/3

Containing

Research on Systems: Concentrated Hydrogen Peroxide. SOV/62-58-9-2/26
Communication 14: Isotherms of the Solubility of the Ternary System
 $K_2CO_3-H_2O_2-H_2O$

characteristic. There are 3 figures, 3 tables, and 3 references,
2 of which are Soviet.

ASSOCIATION: Institut obshchey i neorganicheskoy khimii im. N.S. Kurnakova
Akademii nauk SSSR (Institute of General and Inorganic
Chemistry imeni N.S. Kurnakov, AS USSR)

SUBMITTED: March 21, 1957

Card 3/3

5(2)

SOV/78-4-2-2/40

AUTHORS:

Vol'nov, I. I., Chamova, V. N., Sergeyeva, V. P.

TITLE:

New Data on the Formation of Superperoxides of Calcium and Strontium (Novyye dannyye po obrazovaniyu nadperekisey kal'tsiya i strontsiya)

PERIODICAL:

Zhurnal neorganicheskoy khimii, 1959, Vol 4, Nr 2, pp 253-256 (USSR)

ABSTRACT:

The optimum conditions for the production of $\text{Ca}(\text{O}_2)_2$ and $\text{Sr}(\text{O}_2)_2$ from $\text{CaO}_2 \cdot 2\text{H}_2\text{O}_2$ and $\text{SrO}_2 \cdot 2\text{H}_2\text{O}_2$ were determined. The percentage of the $\text{Ca}(\text{O}_2)_2$ and $\text{Sr}(\text{O}_2)_2$ content in the decomposition products of $\text{CaO}_2 \cdot 2\text{H}_2\text{O}_2$ and $\text{SrO}_2 \cdot 2\text{H}_2\text{O}_2$ depends on the temperature, time and surface area. A temperature of 50°C , a duration of 100 minutes, a surface area of 1800 cm^2 , and a pressure of 10 mm Hg are recommended for the production of $\text{Ca}(\text{O}_2)_2$ and $\text{Sr}(\text{O}_2)_2$. One gram initial sample of $\text{MeO}_2 \cdot 2\text{H}_2\text{O}_2$ is distributed on the surface of 1800 cm^2 . On the decomposition of $\text{CaO}_2 \cdot 2\text{H}_2\text{O}_2$ the analyses of the solid phases formed show

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SOV/78-4-2-2/40

New Data on the Formation of Superperoxides of Calcium and Strontium

that with an increase of the percentage of $\text{Ca}(\text{O}_2)_2$ content the $\text{Ca}(\text{OH})_2$ content rises and the CaO_2 content drops. This dependence is caused by the occurrence of a secondary reaction between $\text{Ca}(\text{O}_2)_2$ and steam, or by the participation of hydroxyl radicals in the reaction. The transformation of $\text{CaO}_2 \cdot 2\text{H}_2\text{O}_2$ into $\text{Ca}(\text{O}_2)_2$ mixed with solid siccatives (silica-gel, P_2O_5 , anhydrous CaO_2 , alkali hydroxides) or liquid rectifiers (absolute ethyl alcohol, CCl_4 , dioxane, diethyl phthalate) was investigated. The $\text{Ca}(\text{O}_2)_2$ content of the solid products is 40 weight %. On drying in a vacuum KO_2 and NaO_2 - containing products are formed from a mixture of $\text{CaO}_2 \cdot 2\text{H}_2\text{O}_2$ and KOH or NaOH . Samples with 40 weight % $\text{Ca}(\text{O}_2)_2$ can be stored in hermetically closed vessels. With an extension of the surface area, on which the preparations are distributed, the $\text{Ca}(\text{O}_2)_2$ and $\text{Sr}(\text{O}_2)_2$ content of the reaction products in-

Card 2/3

SOV/78-4-2-2/40
New Data on the Formation of Superperoxides of Calcium and Strontium

creases. There are 3 figures, 3 tables, and 4 Soviet references.

ASSOCIATION: Institut obshchey i neorganicheskoy khimii im. N. S. Kurnakova Akademii nauk SSSR (Institute of General and Inorganic Chemistry imeni N. S. Kurnakov of the Academy of Sciences, USSR)

SUBMITTED: November 3, 1957

Card 3/3

VOL'NOV, I.I.; CHAMOVA, V.N.

Mechanism of the transformation of $\text{CaO}_2 \cdot 2\text{H}_2\text{O}_2$ into $\text{Ca}(\text{O}_2)_2$.
Zhur. neorg. khim. 5 no.3:522-523 Mr '60. (MIRA 14:6)

1. Institut obshchey i neorganicheskoy khimii im. N. S. Kurnakova
Akademii nauk SSSR, Laboratoriya perekisnykh soyedineniy.
(Calcium superoxide)
(Calcium peroxide)

20944

S/062/61/000/003/011/013
B117/B208

11.1190

AUTHORS: Vol'nov, I. I., Tsentsiper, A. B., and Chamova, V. N.

TITLE: Synthesis of tagged hydrogen peroxide from vapors of heavy oxygen water in a glow discharge

PERIODICAL: Izvestiya Akademii nauk SSSR. Otdeleniye khimicheskikh nauk, no. 3, 1961, 531

TEXT: The authors of the present "Letter to the Editor" report the realization of the $H_2O_2^*$ synthesis from H_2O^* -vapors containing 1.75 ± 0.01 atom% O^{18} in a glow discharge. They were extracted from the discharge gap and frozen out in a trap cooled by liquid nitrogen. The device used has been previously described (Ref. 1: A. I. Gorbanev, A. B. Tsentsiper, Izv. CO AN SSSR 1958, no. 5, 45). The glassy substance frozen out in the trap contained 28.4 wt% $H_2O_2^*$ after melting. The O^{18} content of this peroxide was 1.82 ± 0.01 atom% (mean value obtained from 35 mass-spectroscopic determinations of five samples). The concentration coefficient is 1.04. The method applied by the authors for preparing

Card 1/2

Synthesis of tagged hydrogen...

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S/062/61/000/003/011/013
B117/B208

H₂O₂^{*} is, according to their opinion, more convenient than that described in publications, since in this way a sufficiently concentrated and pure H₂O₂^{*} may be obtained directly. [Abstracter's note: This is a full translation from the original]. There is 1 Soviet-bloc reference.

ASSOCIATION: Institut obshchey i neorganicheskoy khimii im. N. S. Kurnakova Akademii nauk SSSR (Institute of General and Inorganic Chemistry imeni N. S. Kurnakov, Academy of Sciences USSR)

SUBMITTED: January 11, 1961

Card 2/2

S/192/62/003/002/003/004
D267/D301

AUTHORS: Chamova, V.N. and Gol'der, G.A.

TITLE: X-ray investigation of the potassium carbonate peroxyhydrate $K_2CO_3 \cdot 3H_2O_2$

PERIODICAL: Zhurnal strukturnoy khimii, v. 3, no. 2, 1962, 215 - 216

TEXT: One of the authors (Ref.2: Makarov, S.Z., Chamova, V.N., Izv. Akad. Nauk SSSR, Otd. khim. nauk, v. 9, 1958, 1025) discovered a stable solid phase of the above composition. X-ray analysis of this substance was carried out by the powder and monocrystal method, and the crystal was found to belong to the orthorhombic system. The parameters of the elementary cell are : a = 5.50, b = 8.04, c = 17.8 Å. The density of the peroxyhydrate was measured (d = 2.02). There are four molecules in the elementary cell, and the calculated density is d = 2.01

Card 1/2

X-ray investigation ...

S/192/62/003/002/003/004
D267/Q301

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 23, 1961

Card 2/2

ACCESSION NR: AP4039620

S/0076/64/038/005/1182/1187

AUTHORS: Vol'nov, I.I. (Moscow); Tsentsiper, A.B. (Moscow); Chamova, V.N. (Moscow); Laty'sheva, Ye.I. (Moscow); Kuznetsova, Z.I. (Moscow)

TITLE: Synthesis of oxygen-labeled hydrogen peroxide from dissociated heavy oxygen water in the glow discharge

SOURCE: Zhurnal fizicheskoy khimii, v. 38, no. 5, 1964, 1182-1187

TOPIC TAGS: oxygen labeled hydrogen peroxide, hydrogen peroxide synthesis, heavy oxygen water, glow discharge, heavy oxygen water vapor, labeled peroxide synthesis parameter, oxygen isotope, deuterium labeled oxygen peroxide, oxygen isotope content

ABSTRACT: The equipment for this efficient laboratory synthesis is figured. The discharge tube was fed with a 1150-1800 volt, 0.1-0.5 amp. current. The oxygen-labeled water vapor was fed at the rate of 0.03-1.84 mol/hour, the vapor pressure was 0.43-0.53 mm Hg. The dissociated water vapor was removed from the discharge area, cooled, etc. and the yield determined by titration. This was a function of the parameter $U \cdot v$, where U is the discharge force (kva), v the rate

Card

1/3

ACCESSION NR: AP4039620

of adding the water vapor and p the pressure of the vapor entering the discharge tube. The isotope content of oxygen in the starter water and the peroxide was determined by mass spectrometry. Both the water remaining in the vaporizer and that formed upon decomposition of the synthesized $H_2O_2^{18}$ were found to differ little from the starter water. The gases collected during the process were found to consist of hydrogen, thus confirming the reaction



The authors also synthesized $D_2O_2^{18}$ by subjecting a mixture of D_2O and H_2O^{18} to the discharge. The so obtained peroxide contained 26% active oxygen, somewhat enriched from the starter material. The advantages of this method are a high degree of purity of the peroxide; the entire heavy oxygen contained in the initial water passes into the peroxide; the latter is somewhat enriched in O^{18} ; solutions of the oxygen labeled peroxide ranging from 1-50% may be obtained, depending upon the energy supply for the discharge and the rate of supply of the water vapor. Yields for 5-7% solutions were 1 g/hour on a 100% $H_2O_2^{18}$ basis. Using the same equipment, the peroxide may be concentrated to 90% weight. Orig. art. has: 2 figures and 1 table.

Card 2/3

ACCESSION NR. AP4039620

ASSOCIATION: Akademiya nauk SSSR (Academy of Sciences, SSSR); Institut obshchey i neorganicheskoy khimii im. N. S. Kurnakova (Institute of General and Inorganic Chemistry).

SUBMITTED: 30May63

ENCL: 00

SUB CODE: X

NO REF SOV: 006

OTHER: 001

3/3

Card

L 43204-65 EFP(c)/EPR/EBJ(j)/EAT(m)/EMP(b)/EMP(t) Pr-h/Ps-h/Peb DIAAP/IJP(c)

JD
ACCESSION NR: AP5006695

S/0076/65/039/002/0452/0453

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28

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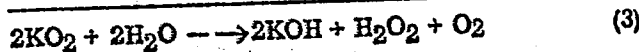
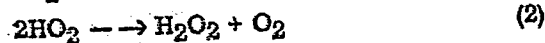
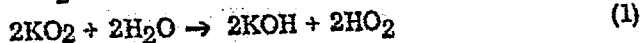
AUTHOR: Vol'nov, I. I.; Chamova, V. N.; Latysheva, Ye. I.

TITLE: Induced exchange of oxygen between KO sub 2 and water containing oxygen-18 //

SOURCE: Zhurnal fizicheskoy khimii, v. 39, no. 2, 1965, 452-453

TOPIC TAGS: heavy oxygen, hydrogen peroxide, potassium hydroxide, molecular oxygen, potassium superperoxide, superperoxide radical, oxygen exchange

ABSTRACT: While conducting the hydrolysis of KO_2 in H_2O^{18} with 1.76 at. % O^{18} , it was discovered that the KOH produced contained less O^{18} (1.37 at. %) than the initial water. To explain this fact, the authors investigated the mechanism of the intermediate reactions in the hydrolysis of KO_2 :



Card

1/2

L 43204-65

ACCESSION NR: AP5006695

They suggested that the heavy oxygen was distributed between the KOH, H₂O₂ and O₂. This was confirmed by direct measurement of the isotope composition of both the molecular oxygen and the H₂O₂ produced in the 2nd reaction. The resulting isotope balance indicated that there is a very slow exchange, in alkaline medium, between the oxygen of the water and the active oxygen of the superperoxide radical. Orig. art. has: 1 table and 3 formulas.

ASSOCIATION: Institut obshchey i neorganicheskoy khimii im. N. S. Kurnakova, Akademiya nauk SSSR (Institute of General and Inorganic Chemistry, Academy of Sciences, SSSR)

SUBMITTED: 30Jun64

ENCL: 00

SUB CODE: IC

NO REF SOV: 003

OTHER: 005

Card

2/2

CHAMPLEWSKI, J.

Designing of concrete mixes based on nomograms and experiments. p. 365.
Vol 12, no. 11, Nov. 1955. INZYNIERIA I BUDOWNICTWO. Warsaw, Poland.

So: Eastern European Accession. Vol 5, no. 4, April 1956

I 63307-65 EWA(d)/ENP(t)/ENP(z)/ENP(b) JD

ACCESSION NR: AP5020844

CZ/0034/64/000/009/0641/0644 JD 19B

AUTHOR: Hyspecka, Ludmila (Engineer); Mazanec, Karel (Engineer, Doctor of sciences); Chamrad, Antonin (Engineer)

TITLE: Investigation of the CSN 15223 steel structure stability after long-term annealing

SOURCE: Hutnicke listy, no. 9, 1964, 641-644

TOPIC TAGS: steel, metal heat treatment, metal test, annealing, cyclic strength, plasticity/CSN 15223 steel

Abstract [Authors' English summary]: The steel investigated came from bores from material after process heat treatment, or was heated in the laboratory. As a result of the heat treatment carbide phases were formed; these were investigated metallographically, microchemically, and by X-ray analysis; mechanical properties and structural stability were also tested. Annealing does not reduce strength of the steel or its plasticity. There was an increase of Mo content in the carbide; the steel is suitable for working conditions needed for the manufacture of boiler drums. Orig. art.

has 2 figures, 3 graphs, and 7 tables.
Card 1/2

L 63307-65

ACCESSION NR: AP5020844

ASSOCIATION: Vitkovické železárny Klementa Gottwalda (Vitkovice Klement Gottwald
Iron Works)

REMITTED: 00

ENCL: 00

SUB CODE: M1, A5

EO REF SOV: 000

OTHER: 003

JPRS

dm
Card 2/2

L 34155-66 EWP(w)/T/EWP(t)/ETI IJP(c) JD

SOURCE CODE: CZ/0034/66/000/003/0182/0187

ACC NR: AF6026099

AUTHOR: Chmrad, Antonin (Engineer); Mazanec, Karel (Professor; Engineer; Doctor of sciences) 32
B

ORG: Klement Gottwald Vitkovice Iron Works, Ostrava (VZKG)

TITLE: Effect of the open hearth furnace manufacturing process of high strength steels on their inclination to undergo delayed fracture

SOURCE: Hutnicke listy, no. 3, 1966, 182-187

TOPIC TAGS: material fracture, industrial furnace, steel industry, martensite steel/
30ChN2MA martensite steel

ABSTRACT: Formation of delayed fracture in martensitic steel was investigated on a model. The cracking was found to occur mainly on grain boundaries. Strengthening of the grain boundaries, by means of alloying elements, substantially decreases the tendency of the steels to undergo delayed fracture. Czechoslovak steel 30ChN2MA was strengthened by addition of Fe-Ti, and the tendency of fracturing was eliminated. Oxygen increases the tendency to fracturing. The importance of investigating primary production technology of metals when attempting to improve properties of steels is discussed. Orig. art. has: 11 figures and 2 tables. [Based on authors' Eng. abst.]
[JPRS: 36, 646]

SUB CODE: 11, 13, 05 / SUBM DATE: none / ORIG REF: 006 / OTH REF: 013

UDC: 669.15-194.55

SKVORCOV, S.A. [Skvortsov, S.A.]; CHAMRAD, B. [translator]

Pressure water power reactors in the Soviet Union. Jaderna
energie 4 no.11:321-330 N '58.

L 18525-66 EWT(m)/ETC(f)/EPF(n)-2/EWG(m) WW

ACC NR: AP6010225

SOURCE CODE: CZ/0038/65/000/004/0113/0113

AUTHOR: Chamrad, Bretislav; Chytil, Zdenek

ORG: Institute of Nuclear Research, CSAV, Rez (Ustav jaderneho vyzkumu CSAV)

TITLE: Project of the zero power heavy water reactor TR-0. 2. Fuel element assembly support

SOURCE: Jaderna energie, no. 4, 1965, 143

TOPIC TAGS: heavy water, nuclear reactor, reactor fuel element, remote control system, servomotor

ABSTRACT: INR Report No. 1153/64, Patent No. 114,428, published in Jaderna Energie only as Czech and English summaries (modified): The report consists of the design and principal calculations for the fuel element assembly support of the zero power heavy water reactor TR-0 to be built at the INR. The proposed facility will permit carrying out automatically a continuous fuel lattice spacing in the range of 180 to 300 mm by remote control and from 300 mm up with high accuracy by manual setting. It consists of 18

Card 1/2

L 18525-66
ACC NR: AP6010225

movable beams driven by a special mechanism and a corresponding number of trucks which are moved on the beams in a similar manner. Both moving systems are driven by electric servomotors by means of a gear. [JPRS]

SUB CODE: 18, 09 / SUBM DATE: none

Card 2/3 UDC: 621.039.5TR-0: 621.039.5(437): 621.039.524.46: 621.039.519.4

L 47360-66 JK

ACC NR: AP602817 (A) SOURCE CODE: CZ/0078/66/000/006/0014/0014

AUTHOR: Chamrad, Bretislav (Engineer; Prague)

ORG: none

TITLE: A dismountable fuel element for nuclear reactor. CZ Pat. No. PV 189-65, Class 21

SOURCE: Vynalezky, no. 6, 1966, 14

TOPIC TAGS: reactor fuel element, nuclear reactor

ABSTRACT: A dismountable fuel element for a nuclear reactor composed of several interconnected fuel rod bundles has been introduced. The bundle of rods is suspended by means of a support grid, a ring joint, safety collars, and a sleeve. A protective tube attached to the grid holds another bundle of rods suspended underneath by a similar suspension system. [KP]

SUB CODE: 18/ SUBM DATE: 03Jan65/

Card 1/1 *mt*

ACC NR: AP7002326

SOURCE CODE: CZ/0038/66/000/005/0161/0165

AUTHOR: Chochlovsky, Igor--Kholdlovski, I.; Riha, Karol--Rzhiga, K.; Panyr, Milos;
Vorisek, Miroslav--Vorzhishok, M.; Chammrad, Broislav--Khamrad, B.ORG: [Chochlovsky; Riha; Panyr] Chemoprojekt, Prague; [Vorisek; Chammrad] Instituto
of Nuclear Research, CSAV, Rez (Ustav jadorného výzkumu CSAV)TITLE: TR-0 heavy water zero-power reactor of Nuclear Research Institute of
Czechoslovakian Academy of Sciences

SOURCE: Jaderna energie, no. 5, 1966, 161-165

TOPIC TAGS: research reactor, heavy water

ABSTRACT: The zero-power heavy water reactor TR-0, a pulsed neutron source and an exponential heavy water system, is described. This reactor has rod-shaped fuel elements of natural uranium. The active zone has a diameter of 3500 mm and a height up to 4000 mm. Its auxiliary layout was selected so that long-term studies on heavy water reactor lattices could be carried out. The principles of the long-term experimental program are outlined. The engineering solutions with respect to the reactor vessel and its system for the automatic adjustment of the lattice support and to the reactor circuits are described. The principal circuits considered are the heavy water circuit and the inert gas circuit in which dry air is used. A brief description is given of the construction work. This article was presented by F. Klik. Orig. art. has: 2 figures and 6 tables. [NA]

SUB CODE: 18 / SUBM DATE: 14Oct65

Card 1/1

UDC: 621.039.5TR-0 621.039.524.46 621.039.5(437)

CHAMRAD, V.

"The PID electronic controller."

Automatisace. Praha, Czechoslovakia. Vol. 2, no. 3, Mar. 1959.

Monthly list of East European Accessions (EEAI), LC, Vol. 8, No. 6, Jun 59, Unclass

CHAMRAD, Valentin, inz.; SEDLAK, Jan, inz.; SEMIDUBSKY, Zdenek,
inz.

Characteristic computer values. Automatizace 7 no. 7:188
Jl '64.

GIZINSKA, Hanna; KOWALCZEWSKA, Malgorzata; CHAMSKA, Krystyna

Behavior of total lipids and phospholipids in the blood serum following a fatty meal in normal and obese subjects. Pol. arch. med. wewnet. 33 no.11:1253-1259 '63.

1. Z Zakladu Patofizjologii Klinicznej II Katedry Chorob Wewnetrznych i Studium Doskonalenia Lekarzy w AM w Warszawie. Kierownik: prof. dr med. E. Ruzylo.

*

CHAMSKA, Krystyna; GIZINSKA, Hanna; KOWALCZEWSKA, Malgorzata

Serum turbidity in obesity. Pol. tyg. lek. 19 no.12:421-423 16 Mr
'64.

1. Z Zakladu Patofizjologii Klinicznej II Katedry Chorob Wewnetrznych
Studii Doksztalcania Lekarzy w Akademii Medycznej w Warszawie i z
Osrodka Naukowo-Leczniczego Katedry w Kudowie-Adroju (kierownik: prof.
dr. med. E. Ruzyllo).

CHAMSKA, Krystyna; SZOSTAK, Wiktor B.

Spontaneous daily fluctuation of the cholesterol and total lipid level in the blood serum. Pol. tyg. lek. 20 no.12:417-418
22 Mr '65

1. Z Zakładu Patofizjologii Klinicznej II Katedry Chorob Wewnętrznych Studium Doskonalenia Lekarzy w Akademii Medycznej w Warszawie (Kierownik: prof. dr. med. E. Ruzyllo).

CHAMSKI, R.; JANKE, B.

"Problems of Standardization, Its Importance, Competency, and Present Situation in the Field of Drainage," P. 81. (WIADOMOSCI, Vol. 22, No. 2, Feb. 1954. Warszawa, Poland)

SO: Monthly List of East European Accessions, (EEAL), LC, Vol. 4, No. 1, Jan. 1955 Uncl.

L 18887-63

EWT(1)/BDS

AFFTC

GW

P/0034/63/000/004/0172/0175

54
53

ACCESSION NR: AP3001766

AUTHOR: Magiello, Zygmunt (Graduate Engineer); Chamski, Roman (Graduate Engineer)

TITLE: Underwater acoustic probe with flat efficiency characteristic in wide frequency range

SOURCE: Pomiary, automatyka, kontrola, no. 4, 1963, 172-175

TOPIC TAGS: sound detection, underwater acoustic probe, acoustic probe, seignette crystal

ABSTRACT: The authors discuss the selection of the type and technical characteristics of an underwater acoustic probe having a flat efficiency characteristic in a frequency range of 50 cycles to 100 kilocycles. The microphone for work in a liquid medium must be stable and insensitive to temperature changes. The microphone they used is of a piezoelectric type, made of Seignette salt crystal. The construction of the mechanical-acoustical arrangement is shown in Fig. 1 of Enclosure 1. Its representation in terms of electrical equivalents is given on Fig. 2 of Enclosure 2. The electric circuit of the probe is described in detail, it is very simple. The block diagram of the microphone-amplifier-cable arrangement is shown in Fig. 3 of Enclosure 3, and the general view is represented in Card 1/8

L 18887-63

ACCESSION NR: AP3001766

Fig. 4 of Enclosure 4. At frequencies of about 1 keyles, the microphone efficiency S sub k is 20 microvolts per microbar. Over the entire frequency range of 50 cy to 100 key, the deviation from this efficiency is plus or minus 1.5 decibel. The efficiency characteristic is flat. The noise level at the input to the electron circuit is about 12 microvolts. The measurement range is 0.5 to 10,000 microbars. The temperature range is 10 to 30C. Two types of batteries may be used: of 67.5 V and of 1.5 V. The probe can be in use for about 20 hrs without battery change. The microphone diameter is 12 mm; the total length of the circuit is 400 mm. The probe can be used in many underwater and even gaseous-media applications. Orig. art. has: 7 figures and 7 equations.

ASSOCIATION: Zaklad Elektrotechniki Morskiej Politechniki Gdan'skiej (Marine Electrical Engineering Department, Gdansk Polytechnic Institute)

SUBMITTED: 00

DATE ACQ: 28May63

ENCL: 04

SUB CODE: RA, SD

NO REF SOV: 000

OTHER: 000

Card 2/8

CHAMUKHA, M. D.

"Winter Lamb Bearing of Sheep." Cand Agr Sci, All-Union Sci-Res
Inst of Hybridization and Acclimitization of Animals, Askaniya-Nova,
1952. (RZhBiol, No 6, Nov 54)

Survey of Scientific and Technical Dissertations Defended at USSR
Higher Educational Institutions (11)

SO: Sum. No.521, 2 Jun 55

KOSA, M., inz.; CHAMUTI, A.

Ultramicrotome using thermal expansion for moving the specimen. *Jema mech opt* 8 no.7:197-199 J1 '63.

1. Slovenska akademja vied, Bratislava.