83792
S/124/60/000/008/009/011
A005/A001

3.5000

Translation from: Referativnyy zhurnal, Mekhanika, 1960, No. 8, p. 94, # 10405

AUTHORS: Obukhov, A. M., Chaplygina, A. S., Geophysical Inst., AS USSR

TITLE: The Variation of the Baric Field in the Medial Troposphere

PERIODICAL: Tr. In-ta fiz. atmosf. AN SSSR, 1958, No. 2, pp. 23-49

TEXT: The work was performed in 1951-1952. The theoretical and empirical investigation of the variability of the baric field in the medial troposphere is described. The authors follow Ye. N. Blinova (1943), A. M. Obukhov (1949), and I. A. Kibel' (1950) and use the vorticity transfer equation (besides the heat supply equation) as the basic forecast equation. The solution of these equations is given in a form differing somewhat from that adopted in latter works. Thus the unknown functions $\partial p/\partial t$ and w (where p is the pressure, w is the vertical velocity) are replaced by:

$$\dot{H} = \frac{RT}{g}\frac{\partial \ln p}{\partial t}, \qquad w_1 = \frac{T(z)}{T} w .$$

This makes it possible to obtain linear differential equations for $\dot{H}$ and w_1 with

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practically constant coefficients, when $\xi = \ln (p_0/p)$ is an independent variable. Furthermore, replacing $\Delta \partial \ln p / \partial t$ by $-k^2 \partial \ln p / \partial t$ (where k is determined by the scale of isallobaric source regions), the problem is reduced to ordinary differential equations with the variable ξ (solution for one wave without allowance for dispersion). The solutions for H and w_1 are given in the form of integrals in ξ of the Green function multiplied by the vorticity advection and the temperature advection. Graphs of the Green functions are added (depending only on the altitude). The presented formulae cannot be used immediately for forecasting, but they yield some qualitative conclusions. These concern the estimation of the vertical spread of the influence regions, the ratio of the weights of the individual levels, the dependence of these weights on the disturbance scale and on the stratification, the dependence of the signs of $\dot{H}$ and w_1 on the distribution of the vorticity advection and the temperature advection, and others. A statistical estimation of the disturbance scale in the isallobaric field at various levels is given for choosing the coefficient k. The correlation coefficients and the regression equations between the variations of H and ΔH in time are presented (hereat the Laplace operator was determined by finite differences with 800 km spacing). In the following division, the authors expound

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the results of a statistical investigation of the connection between the actual variations in pressure and "affecting factors" indicated by the theory - the vorticity advection and the temperature advection at various levels. For determining these connections, the variations in pressure observed are correlated (in the diagnostic plan) with the magnitudes of vorticity and temperature transfer for the same period. The regression equations, the correlation coefficients, and other data are presented. Some qualitative conclusions are drawn. Thus it is noticed that the variation in pressure at the various levels is mostly connected with the vorticity advection at the 700 mb level and with the advection OT 500/1,000. The existence of a "compensation level" (at 700 mb altitude) is cleared up, where the influence of the thermal factor is minimized. The last division of the work deals with the specification of the graphic method proposed by N. I. Buleyev for forecasting the charts AT 700. First of all, it is statistically established that the second term of the forecast formula of N. I. Buleyev $\delta H_{700} = a(H, \Delta H)_{700} + b(T, \Delta T)_{700}$ has lower weight than the first term. The proposed specifications of the graphic method of N. I. Buleyev tend along 2 directions: a) the choice of the optimum method of averaging when

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plotting the quasistationary B field, and b) the forecast of the evolution of this field. It is proposed to average accordingly to points located at two concentric circles, whereat the weights for these two groups of points are chosen from the condition of least interdiurnal variations of B. For forecasting the evolution of B, a semiempiric formula is proposed, according to which these variations are caused, on the one hand, by the inertia of the variations of B for the preceding 24 hours, and on the other hand, by the tendency of B to the climatic norm. The weights of these two factors (the tendency of B for the preceding 24 hours and the deviations of B from the climatic norm) are determined in statistical way. A formula for forecasting B is presented. The entire method of plotting the next chart AT 700 according to the proposed specified graphic procedure is described. Comparative data on the successfulness of forecasts with and without the proposed specifications are presented.

S. L. Belousov

Translator's note: This is the full translation of the original Russian abstract.

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CHAPLYGINA, A. S

60-33-3/3

AUTHOR: Chaplygina, A.S.

TITLE: 24-Hour Variations of Thermobaric Fields in the Free Atmosphere (24-chasovyye izmeneniya termobaricheskikh poley v svobodnoy atmosfere)

PERIODICAL: Trudy Geofizicheskogo instituta, Akademii nauk SSSR, 1957, Nr 33 (160), pp. 60-105 (USSR)

ABSTRACT: The article presents the results of a statistical investigation of changes in the thermobaric field at the level of main isobaric surfaces, conducted for the purpose of verifying the relationship proposed in modern theory between changes in the geopotential and the horizontal transfer of a vortex and of heat. The reliability of the proposed relationships is evaluated and the significance of separate prognostic factors (the transfer of heat and vortex at various levels) is explained. There are 14 figures, 24 tables, and 9 references, of which 8 are Russian and 1 American.

AVAILABLE: Library of Congress

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S/169/61/000/011/046/065
D228/D304

AUTHOR: Chaplygina, A.S.

TITLE: Statistical structure of meteorologic element fields in the atmosphere and the extrapolation of the geopotential field in space

PERIODICAL: Referativnyy zhurnal, Geofizika, no. 11, 1961, 38-39 abstract 11B273 (Tr. Tsentr. in-ta prognozov, no. 106, 1960, 139 - 147)

TEXT: On the basis of the analysis of empirical material the author constructed the structural functions of the geopotential field of the 300, 500, 700, 850, and 1000 mb surfaces, for a distance interval of r from 300 to 1800 km. It is established that the structural functions may be approximated to a close function of the type $r^{5/3}$. The derived expressions for the structural functions are then used to make more precise the methods of extrapolation in a plane of the geopotential field fixed at points within a certain rectangular region. The extrapolation is made for points of the outer

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frame surrounding the region under consideration (such an extrapolation is of interest in problems of the numerical prognosis of the geopotential). It is established that the use in the extrapolation of values of the geopotential at points apart from those lying on a straight line gives substantially better results than is possible in the extrapolation of points along one line. This conclusion is confirmed by the comparison of the corresponding coefficients of the correlation between the extrapolated and actual values of the geopotential. The weights for the extrapolated formulas (or for the equations of regression) may be obtained in two ways: both on the basis of the structural function's analysis (when they depend solely on the index of structure 5/3 and on the mutual disposition of the points) and directly from empirical data - by the method of least squares. The testing of this AT-700 (AT-700) height-extrapolation scheme for a frame in one series of units surrounding a rectangular grid of 20-24 points with a spacing of 250 km showed that the use of formulas with weights, calculated on the basis of the structural function, gives better results than in the case when the weights are derived from empirical data. This means of extrapolation

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Statistical structure of ...

also gives better results compared with the use of the artificial condition of the geopotential's invariability at the boundary of the region. [Abstractor's note: Complete translation].

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CHAPLYGINA, A.S.

Statistical analysis of the alternation of atmospheric circulation types. Izv. AN SSSR. Ser. geofiz. no.12:1832-1843 D '61. (MIRA 14:12)

1. Institut geografii AN SSSR.
(Atmosphere)

CHAPLYGINA, A.S., kand. fiz.mat. nauk; YAGLOMA, A.M., doktor fiz.-mat. nauk, red.

[Annotated bibliography of works on the numerical methods of short-range forecasting]Annotirovannaia bibliografiia rabot po probleme chislennykh metodov kratko-srochnogo prognoza. Sost. A.S.Chaplygin. Pod red. A.M. IAgloma. Moskva, Vols.1 - 3. 1962. (MIRA 15:12)

1. Akademiya nauk SSSR. Mezhduvedomstvennyy geofizicheskiy komitet.

(Numerical weather forecasting—Bibliography)

GAL'TSOV, A.P.; CHAPLYGINA, A.S.

Symposium on atmospheric processes on a global scale. Izv. AN SSSR Ser. geog. no.4:158-162 '64 (MIRA 17:8)

CHAPLYGINA, A.S.

Scientific conference on the problem of the "general circulation of the atmosphere of the earth." Izv. AN SSSR. Ser. geog. no.2:158-162 Mr-Ap '65. (MIRA 18:4)

MARMOR, L.; KOYFMAN, S.; CHAPLYGINA, E.

Appeal of the collective of medical personnel of the First Consolidated Hospital of Beltsy to all the medical personnel of the republic. Zdravookhranenie 3 no.1:3-4 Ja-F '60. (MIRA 13:6)

1. Glavnyy vrach 1-y ob"yedinennoy bol'nitsy goroda Bel'tsy (for Marmor). 2. Sekretar' parlynoy organizatsii (for Koyfman). 3. Predsedatel' mestnogo komiteta (for Chaplygina).

(BELTSY--PUBLIC HEALTH)

DIMAKOV, A.I.; SEMENOVA, Ye.V.; CHAPLYGINA, G.F.

Seismic prospecting on the Buzachi Peninsula. Avtoref. nauch. trud. VNIGRI no.17:234-236 '56. (MIRA 11:6)
(Buzachi Peninsula--Prospecting--Geophysical methods)
(Seismic waves)

KABANOV, A.N.; NATRADZE, D.A. (Moskva, Starokonyushennyy pereulok, d.33, kv.25); CHAPLYGINA, L.R.

Combined occlusion of the pulmonary artery and the main bronchus of the injured lung as a method of a functional study in the surgery of the lungs and the pleura. Grud. khir. 6 no.4:77-82 Jl-Ag '64. (MIRA 18:4)

1. Legochnoye khirurgicheskoye otdeleniye (zav. - doktor med.nauk M.I.Perel'man) i laboratoriya fiziologii (zav. T.S.Vinogradova) Instituta eksperimental'noy biologii i meditsiny (dir. - prof. Ye.N. Meshalkin) Sibirskogo otdeleniya AN SSSR, Novosibirsk.

KUROCHKINA, A.G., dotsent; AFANAS'YEVA, V.M.; CHAPLYGINA, M.A.

Characteristics of the incidence of disease among the rural population; according to data concerning visits during 1960. Sbor. trud. Kursk. gos. med. inst. no.16:64-69 '62. (MIRA 17:9)

1. Iz kafedry zdravookhraneniya (zav. - dotsent A.G. Kurochkina) Kurskogo gosudarstvennogo meditsinskogo instituta. 2. Glavnyy vrach Oboyanskogo rayona Kurskoy oblasti (for Afanas'yeva). 3. Rayonnyy epidemiolog Oboyanskogo rayona Kurskoy oblasti (for Chaplygina).

KSHANOVSKIY, S.A.; CHAPLYGINA, M.N.

Dynamics of erythrocytes sedimentation rate in various phases of development of tuberculous bronchoadenitis and infiltration. Probl. tuberk., Moskva no. 1:70-71 Jan-Feb 52. (CIML 21:5)

1. Of the Oblast Children's Tuberculosis Sanatorium of Kamanets-Podol'sk Oblast (Head Physician--S.A. Kshanovskiy).

1. KSHANOVSKIY, S.: CHAPLYGINA, M.

2. USSR (600)

4. Tuberculosis

7. Exercise therapy in combine treatment of pulmonary tuberculosis in children. Pediatriia no. 5, 1952.

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

1. CHAPLYGINA, M.

2. USSR (600)

4. Medicine - Study and Teaching

7. Raising the qualifications of medical service personnel, Fel'd i akush. no. 4, 1953.

9. Monthly List of Russian Accessions, Library of Congress, APRIL 1953, Uncl.

CHAPLYGINA, M.N.

KSHANOVSKIY, S.A.; CHAPLYGINA, M.N.

Dynamics of blood pressure in the transfusion of an erythrocytic mass and blood plasma in tubercular children. Pediatriia no.2:86 Mr-Ap '54. (MLRA 7:6)

1. Iz Oblastnogo detskogo tuberkuleznogo sanatoriya sela Maliyevtsy Kamenets-Podol'skoy oblasti.
(BLOOD PRESSURE) (BLOOD--TRANSFUSION) (TUBERCULOSIS)

KSHANOVSKIY, S.A.; CHAPLYGINA, M.N.

Transfusion of blood, erythrocytes and blood plasma in treating tuberculosis in children. Pediatriia no.4:82-83 Jl-Ag '55 (MLRA 8:12)

1. Iz oblastnogo detskogo tuberkuleznogo sanatoriya v sele Maliyevtsakh Kamenets-Podol'skoy oblasti.

(TUBERCULOSIS) (BLOOD--TRANSFUSION) (ERYTHROCYTES)

CHAPLYGINA, M.N.

Results of prolonged antibacgerial therapy for children and adolescents with cavernous pulmonary tuberculosis. Sov.med. 23 no.10:88-91 O '59. (MIRA 13:2)

1. Iz Maliyevetskogo oblastnogo detskogo tuberkuleznogo sanatoriya (glavnyy vrach - kand.med.nauk S.A. Kshanovskiy) Khmel'nitskoy oblasti.
(TUBERCULOSIS, PULMONARY in inf. & child.)
(ANTITUBERCULAR AGENTS therapy)

KSHANOVSKIY, S.A. [Kshanovs'kyi, S.A.], kand. med. nauk; CHAPLYGINA, M.M. [Chaplyhina, M.M.]; SHAPOVAL, N.M.

Intracutaneous revaccination of children and juveniles with the BCG vaccine. Ped. Akush. i gin. 24 no.6:15-18 '62. (MIRA 17:4)

1. Ukrainskiy nauchno-issledovatel'skiy institut tuberkuleza i grudnoy khirurgii (direktor - dotsent O.S. Mamolat).

KSHANOVSKIY, S. A.; DVOYRIN, M. S.; SHAPOVAL, N. M.; CHAPLYGINA (Kiyev); ZAMDBORG, L. Ya.; KOVOROTNAYA, N. F.; SOKOLOVA, L. N. (Chernigovskaya oblast')

Frequency and significance of tuberculin reactions with an infiltrate of less than 5 mm. Probl. tub. 40 no.4:24-29 '62. (MIRA 15:6)

1. Iz Ukrainskogo nauchno-issledovatel'skogo instituta tuberkuleza i grudnoy khirurgii imeni akad. F. G. Yanovskogo (dir. - dotsent A. S. Manolat)

(TUBERCULIN—TESTING)

KSHANOVSKIY, S.A., kand.med.nauk; CHAPLYGINA, M.N.; ZHULKEVICH,A.P.; GOLEVA, V.K.

Experience with wide use of intracutaneous BCG revaccination in rural areas of Khmel'nitskiy Province. Probl.tub.41 no.11:7-11 '63. (MIRA 17:9)

1. Iz Ukrainskogo nauchno-issledovatel'skogo instituta tuberkuleza i grudnoy khirurgii (dir. - dotsent A.S.Mamolat) i Khmel'nitskogo oblastnogo otdela zdravookhraneniya (zav.Ye.S.Grigor'yeva).

AUTHORS: Itkina, L.S., Rassonskaya, I.S., Chaplygina, N.M. SOV/78-3-7-37/44

TITLE: On the Solubility and the Composition of the Solid Phases in the System NH_3-UO_3-H_3PO_4-H_2O (O rastvorimosti i sostava tverdykh faz v sistemе NH_3-UO_3-H_3PO_4-H_2O)

PERIODICAL: Zhurnal neorganicheskoy khimii, 1958, Vol. 3, Nr 7, pp 1675-1687 (USSR)

ABSTRACT: Solubility was investigated in the system NH_3-UO_3-H_3PO_4-H_2O at 25°C and a phosphoric acid concentration in the solution of between 15 and 30%. For the purpose of describing the character of the interaction of the components in the quaternary system in which the ions NH_4^+, UO_2^{2+} and PO_4^{3-} exist simultaneously, the method of isoconcentration section was employed. The system was investigated by means of several methods such as physical-chemical analysis, determination of solubility, thermographic determination, as well as by using X-rays and employing the methods of crystal optics. The results obtained showed that with an increase of the ammonia content in the solution the concentration of uranium in the solution is rapidly reduced to a minimum after which it rises up to a maximum in accordance with the simultaneous crystal-

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On the Solubility and the Composition of the Solid Phases in the System NH_3-UO_3-H_3PO_4-H_2O SOV/ 78-3-7-37/44

lization of ammoniumuranyl phosphate and neutral ammonium phosphate. The synthesis of ammonium uranyl phosphate was carried out and the characteristics of the crystals were determined by X-ray analysis, thermographic analysis, and by means of microphotographs. The results obtained were used for the purpose of characterizing and identifying the solid phase formed in the system investigated. The results obtained by thermographical, crystallo-optical and radiographical analysis of the solid phase showed that the solid phase of the system is formed from two solid solutions, one of which contains an equimolar amount of UO_2 and PO_4, the other a variable amount of ammonia. There are 11 figures, 4 tables and 7 references, 6 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: December 12, 1957

Card 2/2

1. Ammonia-phosphoric acid-uranic oxide-water systems--Phase studies
2. Ammonia-phosphoric acid-uranic oxide-water systems--Solubility
3. X-ray analysis--Applications 4. Ammonium uranyl phosphate --Crystallization

S/078/62/007/012/019/022
B144/B180

AUTHORS: Itkina, L. S., Chaplygina, N. M.

TITLE: Solubility in the system Li_2CO_3 - Na_2CO_3 - H_2O at 50 and 100°C

PERIODICAL: Zhurnal neorganicheskoy khimii, v. 7, no. 12, 1962, 2793-2800

TEXT: The solubility and composition of the solid phases of the Li_2CO_3 - Na_2CO_3 - H_2O system were studied at 50 and 100°C. At 100°C equilibrium between the liquid and solid phases was obtained by stirring for 24 hrs. The solubility data obtained at 100°C suggested the formation of three different solid solutions: Li_2CO_3 in systems containing up to 26.8% Na_2CO_3, $Li_2CO_3 \cdot Na_2CO_3$ with 26.8 - 31.18% Na_2CO_3, and $Na_2CO_3 \cdot H_2O$ with 31.18 - 31.47% Na_2CO_3 and 0 - 0.5% Li_2CO_3. The isotherm has three sections: up to 26.8% Na_2CO_3 and in the region of the double-salt formation the Li_2CO_3 concentration is between 0.72 and 0.55% by weight; it drops sharply to

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0.54% by weight in the region of $Na_2CO_3 \cdot H_2O$. The formation of $Li_2CO_3 \cdot Na_2CO_3$ was confirmed by the refractive indices, Debye patterns and thermographic analysis of the solid phases. At 50°C, equilibrium was obtained by dissolving Li_2CO_3 and $Na_2CO_3 \cdot H_2O$ in water and stirring the mixture for 2 days. The isotherm exhibited only two sections corresponding to Li_2CO_3 and $Na_2CO_3 \cdot H_2O$. When the double salt was added, it decomposed up to a content of 31.94% Na_2CO_3 and 0.64% Li_2CO_3; it formed, however, a metastable phase in a system with 32.27% Na_2CO_3 and 0.69% Li_2CO_3. The absence of $Li_2CO_3 \cdot Na_2CO_3$ was confirmed by isothermic evaporation, thermographic and x-ray analyses. It is recommended that the technical separation of these salts should be made at relatively low temperatures. There are 8 figures and 4 tables.

SUBMITTED: January 12, 1962

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ACCESSION NR: AT4040413 S/0000/64/000/000/0099/0109

AUTHOR: Bokshteyn, S. Z; Kishkin, S. T.; Moroz, L. M.; Chaply*gina, V. S.

TITLE: Structure imperfections of metal following recrystallization

SOURCE: Protsessy* diffuzii, struktura i svoystva metallov (Diffusion processes, structure and properties of metals); sbornik statey. Moscow, Izd-vo Mashinostroyeniye, 1964, 99-109

TOPIC TAGS: metal structure, metal diffusion, diffusion permeability, metal recrystallization, iron, tin, tungsten, carbon diffusion

ABSTRACT: Many of the properties and processes occurring in metals depend upon the degree of structural perfection. However, it is not clear how and under what circumstances structural defects arise or disappear. In some cases, it has been possible to achieve a displacement of interstitial impurities into the inner regions of grains by recrystallization, thus increasing the plasticity of the alloys. However, such a beneficial influence of recrystallization has been observed only in individual cases. Therefore, the assumption can be made that in regions where grain boundaries have been located before recrystallization, preservation of the specific state is possible, i.e., there is a possibility

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ACCESSION NR: AT4040413

of "heredity". In the present paper, the authors investigated the heredity of metal structure during recrystallization and grain growth, using autoradiographic and microscopic techniques. The degree of structural perfection was evaluated by diffusion permeability of C^{14}, a higher permeability corresponding to a more defective structure. Using specimens of pure iron and of iron containing diffusionally introduced interstitial additions, such as tin and tungsten, the authors studied the stability and degree of defectiveness of the original grain boundaries during recrystallization in relation to the degree of metal purity and the recrystallization conditions. Iron was annealed at 1250C for 9 hrs., electropolished and etched with 4% picric acid in ethanol to reveal the structure. Tin and tungsten were added in a microfurnace at 700C. Recrystallization was then carried out either at 650C for 45 min., at 700C for 30 min. or at 750C for 1 hr., followed by heating at 600C for 1 hr. in the presence of radioactive carbon. Measurements of hardness and C^{14} distribution demonstrated that diffusion is affected by recrystallization temperature and that the residual effects of previous cold working can remain after application of the common types of recrystallization. The diffusional mobility of atoms was found to increase during the process of recrystallization. Failure of alloys at high temperatures generally proceeds along the grain boundaries, but sometimes it occurs transgranularly. It is possible that, in the latter case, the alloy fails along the boundaries of original

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ACCESSION NR: AT4040413

grains which were metallographically undetectable. The question of the influence of various impurities on the defectiveness of the original grain boundaries thus gains considerable significance. It is very possible that inheritance of defectiveness is linked to a considerable degree to the presence of impurities; therefore, the question arises of the possibility of displacing the impurities from the boundaries to the inner region by recrystallization. The results of the present investigation permit the authors to assume that the detrimental influence of impurities can be reduced by applying suitable recrystallization conditions. Orig. art. has: 7 figures and 1 table.

ASSOCIATION: none

SUBMITTED: 09Dec63 DATE ACQ: 28May64 ENCL: 00

SUB CODE: MM NO REF SOV: 002 OTHER: 000

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L 07382-67 EWT(m)/EWP(t)/ETI IJP(c) JD/JG
ACC NR: AP6027751 (N) SOURCE CODE: UR/0370/66/000/004/0139/0142

AUTHOR: Bokshteyn, S. Z. (Moscow); Kishkin, S. T. (Moscow); Moroz, L. M. (Moscow); Chaplygina, V. S. (Moscow)

ORG: None

34
B

TITLE: Characteristics of carbon diffusion in niobium

SOURCE: AN SSSR. Izvestiya. Metally, no. 4, 1966, 139-142

TOPIC TAGS: carbon, niobium, metal diffusion

ABSTRACT: The nature of carbon diffusion in niobium is studied as a function of structure and surface state. The specimens were melted in a vacuum arc furnace, forged and heat treated at 2000°C for 10 hours to produce a uniform structure and relieve internal stresses. Carbon diffusion was studied by autoradiography combined with microstructural analysis. The niobium specimens were diffusion saturated with radioactive carbon at 900°C for 2 hours. Three types of carbon diffusion measurement in the surface layer were compared: 1. directly after stabilizing annealing in a vacuum at 2000°C for 10 hours; 2. after stabilizing annealing and mechanical destruction of the surface layer by polishing the specimens on glass with abrasive powders of varying granularity and by preparation of a microsection; 3. in the oxidized surface of a microsection. It was found that considerable diffusion of carbon takes place along the

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UDC: 548.526

L 07382-67
ACC NR: AP6027751

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grain boundaries of the niobium regardless of the state of the surface layer. The surface state has a considerable effect on volumetric diffusion. Annealed specimens show practically no volumetric diffusion while specimens with a polished surface show considerable mobility of carbon atoms within the niobium grains. This diffusion is considerably stronger along the subgrain boundaries than in the remainder of the grain volume. Analysis of the experimental results shows that carbon diffusion in niobium consists of three elementary processes: 1. diffusion of carbon in the crystal lattice of niobium; 2. reactive diffusion with the formation of a carbide phase; 3. diffusion of carbon in niobium carbides. The carbide phase is formed chiefly in defect sections of the structure: along the boundaries of grains and subgrains and also in the less perfect sections of the grain volume where diffusion is most intense. Orig. art. has: 1 table.

SUB CODE: 11,07/ SUBM DATE: 09Mar65/ ORIG REF: 006/ OTH REF: 005

Card 2/2 LS

KORABLINA, T.P.; MOLOKANOV, Yu.K.; ROGOZINA, L.P.; CHAPLYGINA, Ye.K.

Efficiency of industrial columns in the rectification of methyl chlorosilanes. Plast.massy no.4:54-56 '64. (MIRA 17:4)

L 53911-65 EWT(1)/EWT(m)/EWP(j)/T/EEC(b)-2 Pc-4/Pr-4/Pi-4 IJP(c) GG/BM
ACCESSION NR: AP5012105 UR/0191/65/000/005/0032/0034
678.84.021.13

AUTHOR: Molokanov, Yu. K.; Chaplygina, Ye. K.

TITLE: Purification of triphenylchlorosilane by zone recrystallization

SOURCE: Plasticheskiye massy, no. 5, 1965, 32-34

TOPIC TAGS: triphenylchlorosilane, organosilicon compound, chlorosilane purification, zone recrystallization, zone melting, impurity distribution

ABSTRACT: Triphenylchlorosilane (TPCS) was purified by multipass zone melting. The apparatus and procedure employed are described (see Fig. 1 of the Enclosure). As the number of passes increased, the content of impurities declined steadily, while the crystallization temperature rose (see Fig. 2 of the Enclosure). The impurity content was determined cryoscopically. Because of the tendency of TPCS to become supercooled during crystallization, the latter was initiated by a crystal seed of TPCS, which eliminated the supercooling completely. The data obtained show that more than ten passes should not be used. Using the data on the distribution of impurities along the length of the sample, the authors found the

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L 53911-65

ACCESSION NR: AP5012105

effective distribution coefficient to be about 0.65. The experiments show that multipass zone recrystallization (zone melting) can be used to obtain TPCS of very high purity. Orig. art. has: 3 figures and 1 table.

ASSOCIATION: None

SUBMITTED: 00 ENCL: 02 SUB CODE: OC, SS

NO REF SOV: 009 OTHER: 002

Card 2/4

CHAPLYGINA, YE. M.

USSR/Minerals - Flotation, Reagents Sep 52

"Effect of Gases on the Flotation of Nonsulfidic Minerals," I. N. Plaksin, Corr Mb Acad Sci USSR; Ye. M. Chaplygina

Iz Ak Nauk SSSR, Otdel Tekh Nauk, No 9, pp 1353-1359

Investigates effects of air and oxygen of floatability of phosphate, quartz, calcite and fluorite. Concludes that investigated gases may be used in flotation of phosphate and fluorite ores as reagents intensifying extraction of these minerals into froth and promoting better selective sepn of minerals from quartz.

PA 248T89

(CA 47 no. 22: 12165- '53)

CHAPLYGINA, YE. M.

USSR/Mining - Mineral Dressing, Flotation 21 Jan 52

"Effect of Gases on Flotation of Non-Sulfide Minerals," I. N. Plaksin, Corr Mem, Acad Sci USSR, Ye. M. Chaplygina

"Dok Ak Nauk SSSR" Vol LXXXII, No 3, pp 451-453

Investigates behavior of phosphorite, quartz, calcite and fluorite during their flotation after preliminary blowing with gases and concludes that adsorption of oxygen, by blowing or from the air, improves floatability of minerals, while nitrogen promotes their depression. Effect of gases is result of their phys adsorption on surface of minerals. Carbonic acid, floating soap and sodium oleate were used as collectors in expts.

211T94

211T94

Metals - Extraction & Refining

CHAPLYGINA, E.M.

Q

2252. Influences of Gases on the Density of Absorbed Layer of Sodium Oleate During Flotation of Certain Non-sulfide Minerals. (Russian.) I. N. Plaksin and E. M. Chaplygina. *Doklady Akademii Nauk SSSR*, v. 91, no. 2, July 11, 1953, 301-303.

Explains the better floatability of investigated minerals. Graphs. 4 ref.

CHAPLYGINA, Ye. M.

Dissertation: "The Effect of Certain Gases on the Flotation of Quartz, Calcite, Fluorite, and Phosphate." Cand Tech Sci, Inst of Mining, Acad Sci USSR, 11 Jun 54. (Vechernyaya Moskva, Moscow, 2 Jun 54)

SO: SUM 318, 23 Dec 1954

CHAPLYGINA, Ye. M.

AUTHORS: Bakakin, V. V., Plaksin, I. N. and Chaplygina, Ye. M. 24-9-13/33

TITLE: On the effect of gases on the flotation properties of fluorite and barite. (O vozdeystvii gazov na flotiruyemost' flyuorita i barita).

PERIODICAL: Izvestiya Akademii Nauk SSSR, Otdeleniye Tekhnicheskikh Nauk, 1957, No.9, pp.96-100 (USSR)

ABSTRACT: In earlier work of the authors (Ref.1), it was found that barite maintains in a stable manner the initial flotation ability in the process of long duration treatment of its surface by nitrogen after preliminarily treating the surface with oxygen. In contrast to this, fluorite is capable of changing the flotation properties of the surface by reducing the flotation activity in the case of inadequate oxygen in the pulp and reaching a flotation effect which is the higher the higher the concentration of the dissolved oxygen in the liquid phase; correspondingly, the quantity of oxygen adsorbed by the fluorite will change. After removing the adsorbed oxygen from the surface of the fluorite by appropriate treatment of the mineral and long duration blowing of nitrogen through the pulp, the fluorite loses to a considerable extent its flotation ability and the collector sticks to the mineral. In this paper

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On the effect of gases on the flotation properties of fluorite and barite. 24-9-13/33

investigations are described which were effected on a precision test set-up inside a hermetically sealed flotation machine and it is stated that these confirm and supplement views expressed earlier by the authors. The tests were carried out on pure fluorite and barite; the mineral charge consisted of 20 g of grain sizes of 0.10 to 0.074 mm with a sodium oleate dosage of 50 g/ton. The flotation was effected in a neutral medium. The information given in this paper explains certain features of the flotation behaviour of fluorite and barite and, particularly, the differing hydration of their surface which is due to the electrostatic energy of interaction of the rigid dipole of the water molecule with the ions of the lattice and is determined by the degree of non-compensated electric charges of the ions and the character of their distribution at the crystal faces. The results described in this paper indicate the possibility of obtaining and utilising structural data for elucidating certain flotation properties of minerals. There are 3 figures and 9 references, 8 of which are Slavic.

Card 2/2

SUBMITTED: May 11, 1957.
AVAILABLE: Library of Congress.

ЧАПЛЫГИНА, Е.М.

AUTHORS: Plaksin, I. N. and Chaplygina, Ye. M. (Moscow) 24-10-22/26

TITLE: Influence of oxygen on the flotation behaviour of fluorite and barite. (Vliyaniye kisloroda na flotiruyemost' flyuorita i barita)

PERIODICAL: Izvestiya Akademii Nauk SSSR, Otdeleniye Tekhnicheskikh Nauk, 1957, No.10, pp.107-109 (USSR)

ABSTRACT: In earlier work an intensification of the flotation of fluorite, quartz, calcite and phosphate was observed in cases in which the mineral was treated with a quantity of oxygen which was optimum in the given case. Change of the density and of the bond strength of the collector at the surface of the minerals as a function of the gaseous medium resulted in a reversible change of the flotation behaviour of non-sulphide minerals (Refs.1 and 2). The experiments described in this paper relate to further work concerning the ability of the mineral surface to adsorb gases and from the non-sulphide group of minerals the inert mineral barite was chosen. The subjects of the investigation were fluorite of Kalanguy origin and barite from the Bakal deposits, the chemical compositions of which are given in a Table, p.107. The results are plotted in the graphs, Figs.1-3 and the following

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Influence of oxygen on the flotation behaviour of fluorite and barite.

conclusions are arrived at: change of the flotation behaviour of some non-sulphide minerals as a result of the effect of dissolved gases does not appear to comply with a definite law and the character may differ for various mineral surfaces; study of the flotation behaviour of fluorite and barite in various gaseous media indicates that the change of the oxygen concentration in the pulp within wide limits, under atmospheric pressure is considerably more effective for fluorite than it is for barite; a reversible change of the flotation behaviour of the mineral surfaces of fluorite was detected as a result of the successive effect of oxygen-nitrogen-oxygen in the pulp with a constant concentration of the accumulation agent and, in contrast to this, the initial hydrophobisation of the barite surface does not change appreciably and proves sufficiently stable in the case of further action of gases on it; a possibility was established of flotation of fluorite in aqueous solutions with very low contents of the dissolved oxygen under conditions of collectorless flotation, thereby activation of the barite surface with oxygen is possible under these

Influence of oxygen on the flotation behaviour of fluorite and barite. 24-10-22/26

conditions only in presence of an accumulator agent. There are 3 figures and 3 Slavic references.

SUBMITTED: May 11, 1957.

AVAILABLE: Library of Congress.

Card 3/3

CHAPLYGINA, Ye. M.

AUTHORS: Bakakin, V. V., Plaksin, I. N., Corresponding Member of the AN SSSR, Chaplygina, Ye. M. 20-4-27/51

TITLE: Note of the Influence of Gases on the Floatability of Some Non-Sulfidic Minerals as Dependent on the Crystal Structure (Vliyaniye gazov na flotiruyemost' nekotorykh nesul'fidnykh mineralov v zavisimosti ot ikh kristallicheskoy struktury)

PERIODICAL: Doklady AN SSSR, 1957, Vol. 116, Nr 4, pp. 625-628 (USSR)

ABSTRACT: The Study of the influence of gases on the floatability of non-sulfidic minerals made possible the determination of several adsorption and floatation properties of fluorite and baryte, which are caused by the effect of gases. A prolonged treatment with nitrogen has no essential effect on baryte, which first was subjected to a treatment with oxygen. The floatation activity decreases on a oxygen lack. The mineral was prepared and floatated for the experiments in a current of argon and of nitrogen. Nitrogen free from oxygen was employed for the experiments. The experiments showed, that because of the floatation on a normal concentration of oxygen 44% of fluorite pass into the concentrate. Further properties are enumerated. The floatation activity of baryte depends only little on the concentration of oxygen in the solution, if only oxygen was adsorbed previously on the surface. On the contrary, the floatation properties of fluorite

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depend strongly on the oxygen content in the pulpa (pul'pa). The properties discussed here are probably caused by the peculiarities of the crystal structure. In this way the differences inthe ability to hydrate of fluorite and baryte may be explained above all. The degree of the increase of the hydrophobia because of the physical adsorption of gases from the solution in general depends on the field strength of the surface field. This dependence also holds inversely; The lesser the field strength, the more the field is screened by the adsorbed molecules. The irreversability of the influence of oxygen on the floatation of baryte is probably connected with a particularly strong binding of a proportion of the oxygen molecules in certain centres of the surface of the baryte. In the case of oxygen a chemical adsorption is added without doubt. The chemically adsorbed oxygen ions or oxygen molecules activate the surface of the adsorbent in their turn.

Note of the Influence of Gases on the Floatability of Some non-Sulfidic Minerals as Dependent on the Crystal Structure 20-4-27/51

There are 2 figures, and 10 references, 8 of which are Slavic.

SUBMITTED: May 20, 1957

AVAILABLE: Library of Congress

Card 3/3

CHAPLYGINA, Ye. M.

AUTHORS: Plaksin, I. N., Corresponding Member, 20-119-4-35/60
Academy of Sciences, USSR; Chaplygina, Ye. M.

TITLE: The Influence of Oxygen and Nitrogen on the Separation of Titanium and Zirconium Minerals by Flotation (Vliyaniye kisloroda i azota na flotatsionnoye razdeleniye titanovykh i tsirkoniyevykh mineralov)

PERIODICAL: Doklady Akademii Nauk SSSR, 1958, Vol. 119, Nr 4, pp. 756-757 (USSR)

ABSTRACT: The separation of alluvial deposits of the mentioned kind is rather difficult and is carried out at home and abroad according to complicated and slow schemes. These methods are expensive, only to a small extent effective and selective, and demand complicated apparatus. Soviet researchers have succeeded now in solving the problem of how a collective flotation concentrate may be obtained. A scheme of the selective separation of the products of the last mentioned process could, however, not yet be obtained (references 1, 2). The authors began the flotation

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with oxygen and nitrogen gas after previously blowing through with air in the study of the gas influence on the flotation properties of the mineral surface of rutile, ilmenite, and zirconium in the laboratory. This was carried out in a soda (200-400 g/T of soda) medium Oleic acid served as collector (1500 g/T). It was found that the air and oxygen activate the titanium- and zirconium minerals (table 1). It was found furthermore that oxygen can be removed by blowing through with nitrogen. Thus a selective flotation became possible which led to the precipitation of zirconium into the foamy product. The titanium minerals remained in the non-foamy product. The consumption of reagents is small here. A reagent-depressor can be substituted by blowing through with nitrogen. The isolation of the zirconium concentrate amounted to 68%, with an extraction of 80%. The TiO_2 content in it amounted to approximatively 2%. This method has hitherto been unknown. The different flotability of the zirconium- and titanium minerals in a nitrogen atmosphere is explained by the difference

The Influence of Oxygen and Nitrogen on the Separation of Titanium and Zirconium Minerals by Flotation 20-119-4-35/60

of their crystalline structure, the stress intensity of the sureface field as well as by an hydration capacity of their surface (reference 3). There are 1 table and 3 Soviet references.

SUBMITTED: December 19, 1957

Card 3/3

SOV/24-58-6-13/35

AUTHORS: Bakakin, V.V., Plaksin, I.N. and Chaplygina, Ye.M.

TITLE: Action of Oxygen and Nitrogen on the Separation of Titanium and Zirconium Minerals by Selective Flotation and the Role of their Crystal Structure (Vozdeystviye kisloroda i azota na razdeleniye selektivnoy flotatsiyey mineralov titana i tsirkona i rol'ikh kristallicheskoy struktury)

PERIODICAL: Izvestiya Akademii Nauk, SSSR, Otdeleniye Tekhnicheskikh Nauk, 1958, Nr 6, pp 84-90 (USSR)

ABSTRACT: It has recently been shown that flotation is the most effective way of beneficiating titanium-zirconium sands but difficulties arise in separating the useful products of the collective flotation. The first part of the work described in this article was carried out under laboratory conditions by Ye.M. Chalpygina supervised by I.N. Plaksin and dealt with the effects of oxygen and nitrogen on flotation in a soda liquid using oleic acid as the collector. Tests were made with the pure minerals, their mixtures, collective gravity concentrate and pulps. Results obtained (Table) showed that treatment with air or oxygen was about equally effective in increasing

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Action of Oxygen and Nitrogen on the Separation of Titanium and Zirconium Minerals by Selective Flotation and the Role of their Crystal Structure

flotation of rutile and zircon, the relative effects with ilmenite being somewhat less since its flotation was appreciable without gas treatment. Treatment with nitrogen had no effect on zircon flotation but suppressed that of the other two minerals. This depressive effect could not be removed by aeration or oxygenation without the introduction of fresh portions of oleic acid and soda (1.5 kg/tonne and 250 g/tonne, respectively). On the basis of these results it was found possible to achieve a high degree of separation of titanium minerals from zirconium: a saleable zirconium concentrate containing 66% ZrO_2 with a recovery of 80% was obtained cheaply and simply, the titanium losses in it being 2%. The authors have previously (Ref 2,3) attempted to explain differences in flotation behaviour of fluorite and baryte in terms of the fine crystal structure and they now extend their discussion to zircon, rutile and ilmenite. To find the differences in the surface layers of these minerals the authors analysed the crystal structures and determined

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Action of Oxygen and Nitrogen on the Separation of Titanium and Zirconium Minerals by Selective Flotation and the Role of their Crystal Structure

the most probable cleavage planes. They show the corresponding surfaces for ilmenite (Fig 1), rutile (Fig 2) and zircon (Fig 3) with indications of the ionic distribution and the values of the uncompensated electric charges. The flotation experimental results are explicable on the assumption that the strength of binding of oxygen adsorbed on the mineral surface depends firstly on the oxygen concentration in the pulp and, secondly, on the activity of the adsorbent (particularly the value of the uncompensated charge). The authors examine the factors producing differences between ideal and real crystal surfaces in general and for the three minerals. They admit that because of the complexity of effects involved their views on structural factors are not the only ones possible but claim that they enable a

Action of Oxygen and Nitrogen on the Separation of Titanium and Zirconium Minerals by Selective Flotation and the Role of their Crystal Structure

selection to be made of the more important factors in the influence of gases on flotation so that a complete theory of the process can be formulated.

There are 3 figures, and 10 Soviet references

SUBMITTED: March 17, 1958

Card 4/4

SOV/24-58-7-33/36

AUTHOR: Chaplygina, Ye.M. (Moscow)

TITLE: Use of High-speed Cinematography for Laboratory Studies of the Flotation Process (O primenenii skorostnoy kinos"yemki dlya laboratornykh issledovaniy flotatsionnogo protsessa)

PERIODICAL: Izvestiya Akademii nauk SSSR, Otdeleniye tekhnicheskikh nauk, 1958, Nr 7, pp 149-150 + 2 plates (USSR)

ABSTRACT: The author describes her use of high-speed (900, 1500 and 2000 frames/sec) to study the effect of oxygen adsorption on flotation of fluorite with various particle sizes (0.40-0.30, 0.30-0.15 and 0.15-0.074 mm). At first the air leaving the capillary was photographed but in the main experiments the region was raised to that in which the bubbles become spherical. The vessel was filled with water or weak sodium oleate solution, the meeting of the descending mineral particles and the ascending gas being photographed. The films obtained showed the same effects as were observed by Spedden and Hannan (Ref 1). Figure 1 shows that grains in a pulp untreated with oxygen and collecting agent fail to adhere to air bubbles. Each grain

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Use of High-speed Cinematography for Laboratory Studies of the Flotation Process

in pulps treated with oleate adheres directly to the air bubbles (Figure 2). When the pulp has been subjected to the action of oxygen, treatment with oleate produces adhesion in the form of flocs, sometimes giving a long chain of mineralised bubbles (Figures 3,4,5 and 6). The use of high-speed cinematography, the author maintains, has provided an explanation for the increased recovery of some non-sulphide materials into the froth when the pulp is treated with oxygen. It could be applied to the elucidation of the mechanism of many practically and theoretically important flotation problems. There are 6 figures and 3 references, all English.

SUBMITTED: September 25, 1957

CHAPLYGINA, Ye.N.

Evaluating the conditions for the passage of floods through combined hydroelectric power stations. Nauch.dokl.vys.shkoly; energ. no.4:5-10 '58. (MIRA 12:5)

1. Rekomendovana kafedroy gidroenergetiki Moskovskogo energeticheskogo instituta im. Molotova.
(Hydroelectric power stations)
(Floods)

SOV/180-59-1-15/29

AUTHORS: Plaskin, I.N., Tyurnikova, V.I. and Chaplygina, Ye.M. (Moscow)

TITLE: Influence of Oxygen on the Attachment and Distribution of Tridecylate on the Surface of Fluorite in Flotation (Vliyaniye kisloroda na zakrepleniye i raspredeleniye tridetsilata na poverkhnosti flyuorita pri flotatsii)

PERIODICAL: Izvestiya Akademii nauk SSSR, Otdeleniye tekhnicheskikh nauk, Metallurgiya i toplivo, 1959, Nr 1, pp 78-81 (USSR)

ABSTRACT: Two of the authors have experimentally shown the different effects of gases on the flotation of some sulphide and non-sulphide minerals and ores (Ref 1) and established (Ref 2) that oxygen can increase the density of the adsorbed layer and the firmness of its attachment. The investigation now reported had the aim of elucidating the specific influence of oxygen on the reaction of minerals with reagents by studying the adsorption of the collector radiometrically and its distribution by the microauto-radiographic method. The collector was sodium tridecylate (or tridecylic acid) containing radioactive C^{14} as a tracer. Preliminary experiments showed the behaviour of these reagents to be the same as that of sodium oleate (not available with a tracer). The apparatus used was a

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Influence of Oxygen on the Attachment and Distribution of Tridecylate on the Surface of Fluorite in Flotation

modification of one previously described (Ref 5). Zabaykal'skiy (Zabaykal) fluorite ground to -74 +44 microns was used. 20g samples with a solid/liquid ratio were treated for 2 minutes with the reagent (100 g/tonne of tridecylic acid, 200 of soda) and flotated for 4-10 minutes. An average sample of the washed product was taken and the absorption of reagent was determined radiometrically and by autoradiography. Fig 1 shows the influence of the oxygen content of the pulp on the recovery (curve E) and the absorption of reagent (curve e); both rise with increasing oxygen content: Table 1 gives further details. From the microautoradiograms the non-uniformity of reagent distribution on grain surfaces at various pulp oxygen contents was determined. The results (Table 2) show that this effect too, depends on the oxygen content. Figs 2, 3 and 4 show the increasing

Influence of Oxygen on the Attachment and Distribution of Tridecylate on the Surface of Fluorite in Flotation

quantity of reagent and its more uniform distribution on particle surfaces, as the oxygen-content rises from 0.1 to 8.3 to 38.8 mg/litre, respectively.

Card 3/3 There are 4 figures, 2 tables and 6 references (5 Soviet, 1 English).

SUBMITTED: January 22, 1958

PLAKSIN, Igor' Nikolayevich; CHAPLYGINA, Yevgeniya Mikhaylovna; MAKARENKO, M.G., red. izd-va; BOLLAD, A.N., tekhn. red. YEPIFANOVA, L.V., tekhn. red.

[Flotation of nonsulfide minerals using gases]Flotatsionnoe obogashchenie nesul'fidnykh mineralov s primeneniem gazov. Moskva, Izd-vo Akad. nauk SSSR, 1962. 134 p. (MIRA 16:1)
(Flotation)

PLAKSIN, I.N.; SOLNYSHKIN, V.I.; CHAPLYGINA, Ye.M.

Effect of oxygen on oleic acid. Dokl. AN SSSR 153 no.6: 1350-1352 D '63. (MIRA 17:1)

1. Institut gornogo dela im. A.A. Skochinskogo. 2. Chlen-korrespondent AN SSSR (for Plaksin).

CHAPLYGINA, Ye.M.

Seminar on physical and chemical problems of mineral concentration.
TSvet. met. 38 no.6:83-85 Je '65. (MIRA 18:10)

CHAPLYGINA, Ye. N.

CHAPLYGINA, Ye. N. -- "Use of the Power of Floods." Sub 19 Dec 52, Moscow Order of Lenin Power Engineering Inst imeni V. M. Molotov (Dissertation for the Degree of Candidate in Technical Science)

SO: Vechernaya Moskva, January-December 1952

CHAPLYGINA, Ye. N.

124-11-12715

Translation from: Referativnyy Zhurnal, Mekhanika, 1957, Nr 11, p. 55 (USSR)

AUTHOR: Chaplygina, Ye. N.

TITLE: An Analytical Expression for the Investigation of the Line of Constant Opening of Propeller-Type and Radial-Axial - Type Turbines. (Analiticheskoye vyrazheniye dlya issledovaniya linii postoyannogo otkrytiya propellernykh i radial'no-osevykh turbin)

PERIODICAL: Tr. Mosk. Energ. in-ta, 1956, Nr 19, pp 353-359

ABSTRACT: A methodology is proposed for the construction of the runaway characteristic on the basis of the determination of the customary universal turbine characteristic. Bearing in mind that, for a constant inlet opening, the relationship $N = f(H)$, for $n = \text{const.}$, is a straight line which intersects the pressure axis at a point corresponding to the idling condition, one can transfer the lines of constant inlet opening into the field of the inverse characteristic.

Utilizing the laws of similarity and introducing the Morozov-Moody coefficient, the A. finds the expression

$$N_1' = An_1' - B(n_1')^3$$

Card 1/2 (cont.)

An analytical expression for the investigation of the line of constant opening of propeller-type and radial-axial-type turbines. (Continued)

which, when the constant coefficients are known, permits the construction of the corresponding curve $N_1' = f(n_1')$. Experiments performed on the K 70 runner with a straight, axial draft tube show good agreement with the analytically obtained curve.

From two points, namely, the idling regimen and another arbitrary point, it is possible to determine the constants A and B and, upon exploration of the equation derived here to its maximum, an equation is obtained from which the runaway rpm for any given inlet opening, the magnitude of the pressure head for idling, and the equation of the curve of constant inelt-opening for the operational characteristic of a propeller turbine can be found.

(I. I. Orlov)

Card 2/2

CHAPLYGINA, Ye.N.

Graphic and analytical method for calculating the production of two hydroelectric power stations subjected to yearly cascade regulation. Nauch. dokl. vys. shkoly; energ. no.2:79-88 '58. (Hydroelectric power stations) (MIRA 11:11)

CHAPLYGINA, Z. A.

PA 160T50

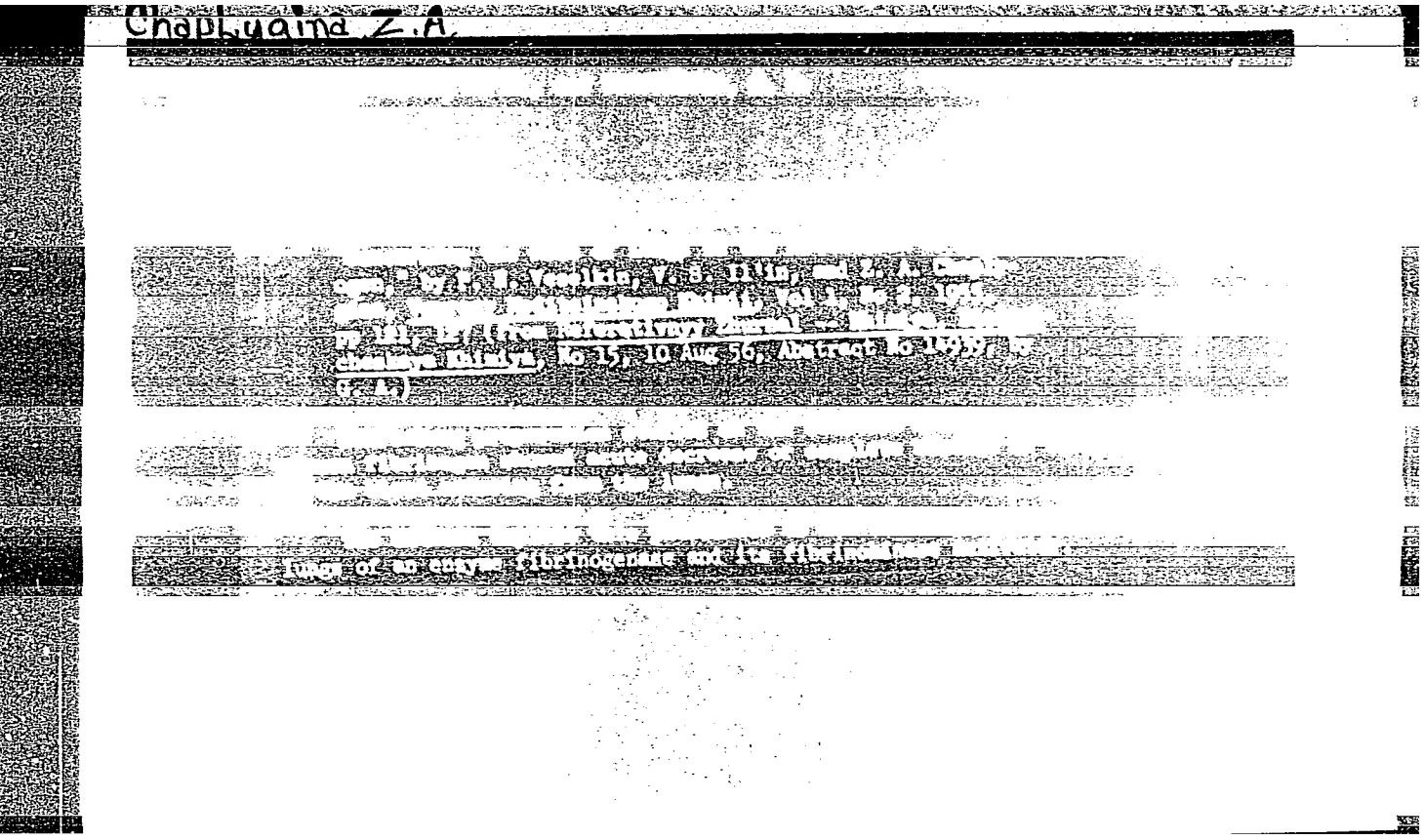
USSR/Medicine - Blood, Coagulation 11 May 50
Hemophilia, Experimental

"Dry Preparations of Fibrinogenase and Experimental Hemophilia," Z. A. Chaplygina, Leningrad Sci Res Inst of Blood Transfusion, and Leningrad State Stomatol Inst, 4 pp

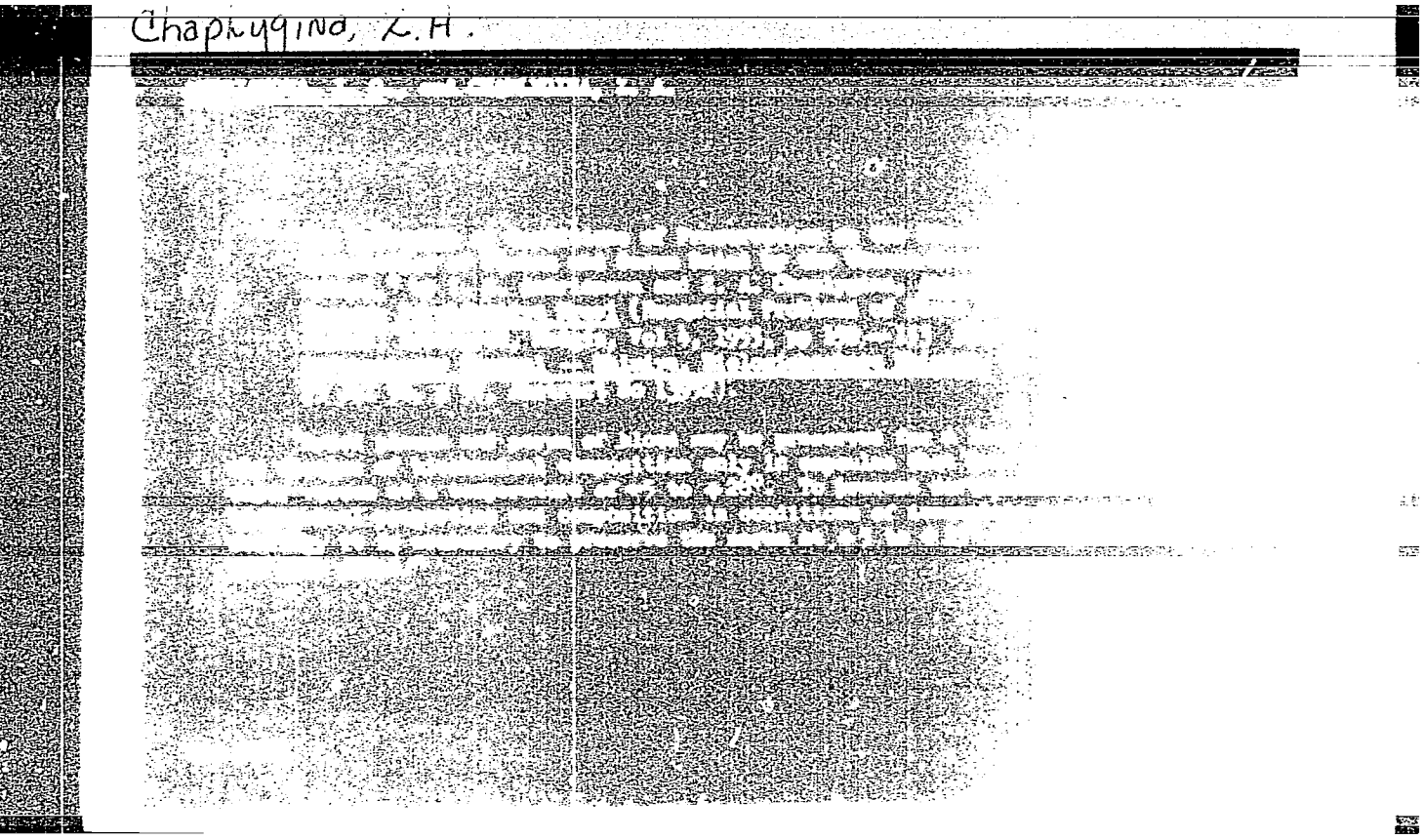
"Dok Ak Nauk SSSR" Vol LXXII, No 2

Conducts series of five tests in vitro on fibrogenase, dried by freezing vacuum method, showing speed of fibrinolysis of enzyme is unchanged by drying. Finds injection of preparation in guinea pigs results in varying degrees of new form of experimental hemophilia, "afibrinogenemia." Includes table. Submitted 7 Mar 50.

160T50



Chaplygina, L.H.



CHAPLYGINA, Z. A., PETROV, I. R. and BOGOMOLOVA, L. G.

"New Colloid Blood Substitutes," Aktual'nyye Voprosy Perelivaniya Krovi, Leningrad, 1952.

ANDRIANOVA, I.G., starshiy nauchnyy sotrudnik; CHAPLYGINA, Z.A., starshiy nauchnyy sotrudnik

Influence of the conditions of preservation on the biochemical composition of plasma and serum dried by the vacuum-freezin method. Akt. vop.perel.krovi no.4:152-153 '55. (MIRA 13:1)
(BLOOD--COLLECTION AND PRESERVATION)

CHAPLYGINA, Z.A., starshiy nauchnyy sotrudnik

Study of the action of the fibrinogenase in the blood on the total organism. Akt.vop.perel.krovi no.4:182-183 '55. (MIRA 13:1)

1. Laboratoriya sukhikh preparatov krovi Leningradskogo instituta perelivaniya krovi (zav. laboratoriyey - doktor med.nauk L.G. Bogomolova) i kafedra biokhimii Leningradskogo stomatologicheskogo instituta (zav. - prof. V.S. Il'in).
(ENZYMES) (FIBRINOGEN)

BOGOMOLOVA, L.G., doktor med.nauk; ZALKIND, Ye.S., prof.; PYLAYEVA, A.V., nauchnyy sotrudnik; CHAPLYGINA, Z.A., starshiy nauchnyy sotrudnik

Use of dry blood preparations in the treatment of some skin ulcers. Akt.vop.perel.krovi no.4:165-167 '55. (MIRA 13:1)

1. Laboratoriya sukhikh preparatov krovi Leningradskogo instituta perelivaniya krovi (zav. laboratoriyey - doktor med.nauk L.G. Bogomolova).
(BLOOD AS FOOD OR MEDICINE) (SKIN--DISEASES)

YUR'YEV, V.A.; CHAPLYGINA, Z.A.

Utilization of ionexchanging resins in the preparation of therapeutic protein hydrolysates. Vop.med. khim. 2 no.3:175-178 My-Je '56. (MIRA 9:10)

1. Kafedra biokhimii Leningradskogo pediatricheskogo meditsinskogo instituta i laboratoriya krovozameniteley Leningradskogo instituta perelivaniya krovi.

(PROTEINS,
hydrolysates, prep. with ion exchange resins (Rus))
(ION EXCHANGE RESINS,
in prep. of protein hydrolysates (Rus))

CHAPLYGINA, Z.A.

Studies of the action of fibrinogenase in the blood of a normal organism. Trudy Vses. ob-va fiziol., biokhim. i farm. 3:115-116 '56
(MLRA 10:4)

1. Kafedra biologicheskoy khimii Leningradskogo meditsinskogo stomatologicheskogo instituta (zaveduyushchiy kafedroy professor V.S. Il'in) i laboratoriya po issledovaniyu sukhikh preparatov Leningradskogo instituta perelivaniya krovi (zaveduyushchiy laboratoriyey dotsent L.G. Bogomolova). Leningrad.
(FIBRINOGENASE)

CHAPLYGINA, Z. A.

IL'IN, V.S.; VOL'FSON, T.I.; CHAPLYGINA, Z.A.; KRAYZMER, K.F.

Effect of the nervous system on the activity of blood fibrinogenase. Trudy Vses. ob-va fiziol., biokhim. i farm. 3:117-118 '56
(MLRA 10:4)

1. Kafedra biologicheskoy khimii Leningradskogo meditsinskogo stomatologicheskogo instituta; zaveduyushchiy kafedroy professor V.S. Il'in. Leningrad.
(FIBRINOGENASE) (NERVOUS SYSTEM)

FILATOV, A.N., professor (Leningrad, ul.Nekrasova, d.60, kv. 131); DEPP, M.Ye.; CHAPLYGINA, Z.A.

Use of parenteral protein infusion in surgery [with summary in English, p.157] Vest.khir. 77 no.6:3-11 Je '56. (MLRA 9:8)

1. Chlen-korrespondent AMN SSSR (for Filatov). 2. Iz khirurgicheskoy kliniki Leningradskogo ordena Trudovogo Krasnogo Znameni nauchno-issledovatel'skogo instituta perelivaniia krovi (dir. - odts. A.D. Belyakov).

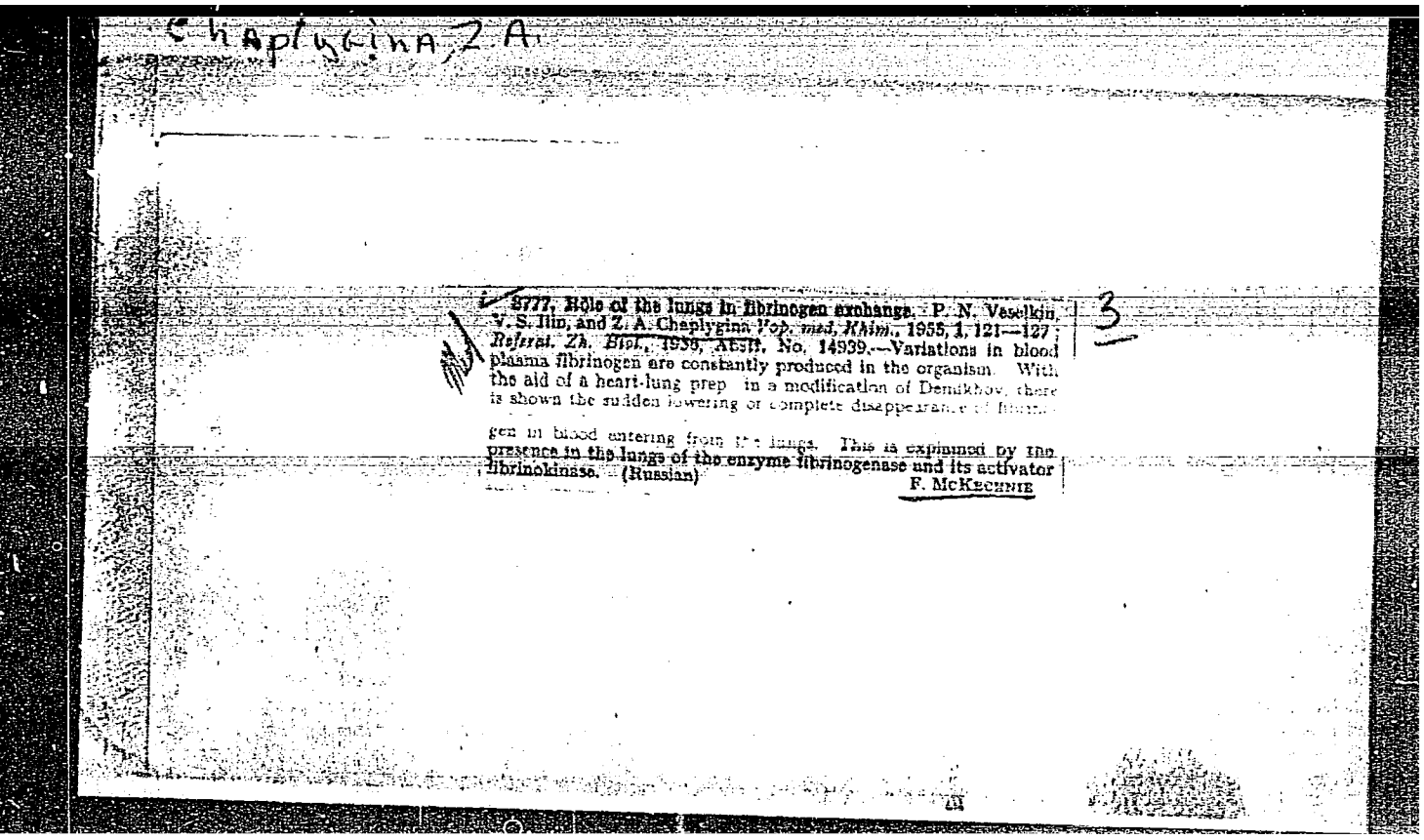
(INFUSION, PARENTERAL,
protein hydrolysates in surg.(Rus))
(PROTEINS,
hydrolysates, parenteral infusion in surg. (Rus))
(SURGERY, OPERATIVE,
perenteral infusion of protein hydrolytes in (Rus))

CHAPLYGINA, Z. A.

"Amino-Acid Composition of Protein Hydrolysates Used for Therapeutic Purposes," by Z. A. Chaplygina and T. V. Znamenskaya, Leningrad Order of the Red Banner of Labor Scientific Research Institute of Blood Transfusion (director, Docent A. D. Belyakov; scientific director, Prof A. N. Filatov, Corresponding Member, Academy of Medical Sciences USSR), Problemy Gematologii i Perelivaniya Krovi, Vol 2, No 2, Mar/Apr 57, pp 41-46

The qualitative amino-acid composition of protein hydrolysates recommended by the Leningrad Institute of Blood Transfusion for parenteral feeding of patients was studied by means of paper chromatography. The solution thus analyzed was subjected to iontophoresis in a three-chamber apparatus, for subsequent separation into three fractions: alkaline (diamino acids), neutral (monoamino acids), and acid (dicarboxylic amino acids). Each fraction was analyzed by means of chromatograms. It was found that the protein hydrolysates L-103, aminokrovin, aminol, aminorastin, etc., are identical qualitatively and contain all the essential amino acids. (U)

SUM. 1360



Chaplygina, Z. A.

3777. Role of the lungs in fibrinogen exchange. P. N. Veselkin, V. S. Ilin, and Z. A. Cheplygina. *Vop. med. Khim.*, 1955, 1, 121—127; *Referat. Zh. Biol.*, 1956, Abstr. No. 14939.—Variations in blood plasma fibrinogen are constantly produced in the organism. With the aid of a heart-lung prep in a modification of Demikhov, there is shown the sudden lowering or complete disappearance of fibrinogen in blood entering from the lungs. This is explained by the presence in the lungs of the enzyme fibrinogenase and its activator fibrinokinase. (Russian)

F. McKechnie

3

CHAPLYGINA, Z.A.

USSR/Human and Animal Physiology - (Normal and Pathological). T-4
Blood. Blood Coagulation.

Abs Jour : Ref Zhur - Biol., No 11, 1958, 50730

Author : Chaplygina, Z.A.

Inst : The All-Union Society of Physiologists, Biochemists and Pharmacologists.

Title : Tests Studying the Activity of Fibrinogenase Preparations in the Blood of Intact Organisms.

Orig Pub : Tr. Vses. o-va fiziol., biokhim. i farmakologov, 1956, 3, 115-116.

Abstract : The effects of fibrinogenase preparations (I) in vivi were studied. In 40 tests, 2.5-5 ml of a solution containing active human plasma globuline were injected with a syringe into the heart of guinea pigs, and in 10 tests globulins were injected after they were inactivated by heating

Card 1/3

USSR/Human and Animal Physiology - (Normal and Pathological). T-4
Blood. Blood Coagulation.

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(30 min at 58° [C]). In 21 tests, 5-10 min after I was injected, the blood lost its coagulatinn (C) ability. Adding active thrombin did not produce C. In such blood, fibrinogen (II) was not found to be present. C resulted when the blood from a normal guinea pig was added, yet after a certain period of time the blood clot disappeared, afact which evidences the fibrinolytic activity of the blood of the test animal. In 7 tests, experimentally induced hemophilia lasted for 30-60 min. In the majority of the remaining tests it lasted for 10-15 min. Later, II reappeared in the blood, and coagulability was gradually restored. An injection of I resulted only in a decrease of the II content in 12 tests, as well as in a great delay of C. In 7 tests, however, it did not produce any change of C time at all. After I was inactivated by heating, an injection of I did not affect C time.

Card 2/3

USSR/Human and Animal Physiology. Blood. V

Abs Jour: Ref. Zhur-Biol., No 6, 1958, 26816.

Author : V.S. Il'in, T.I. Vol'fson, Z.A. Chaplygina and K.F. Krayzmer

Inst :

Title : The Influence of the Nervous System on the Activity of Blood Fibrinogenase.

Orig Pub: Tr. Vses. obshestva fiziol., biokhim. i farmakologov, 1956, 3, 117-118.

Abstract: Active fibrinogenase was not detected in the blood of 30 healthy individuals, but was found in the blood of 22 out of 40 surgical patients on the day preceding a serious operation. In these same patients the active enzyme was found in only five cases a day after the operation. Analogous data was obtained

Card : 1/3

USSR/Human and Animal Physiology. Blood. V

Abs Jour: Ref. Zhur-Biol., No 6, 1958, 26816.

in relation to 54 stomatological patients prior to operation. Active fibrinogenase was detected in the blood of cats put to death rapidly by means of suffocation, although the degree of activation of the enzyme was less than in the blood of humans experiencing sudden death. Activation of fibrinogenase in the blood of cats killed in the same way but in a state of profound amytal narcosis was noted in only 20% of the experiments. Activation of fibrinogenase was not detected in these experiments in the blood of previously decerebrated cats. These data are indicative of the considerable importance of the central nervous system in the activation of fibrinogenase in the blood. In 13 out of

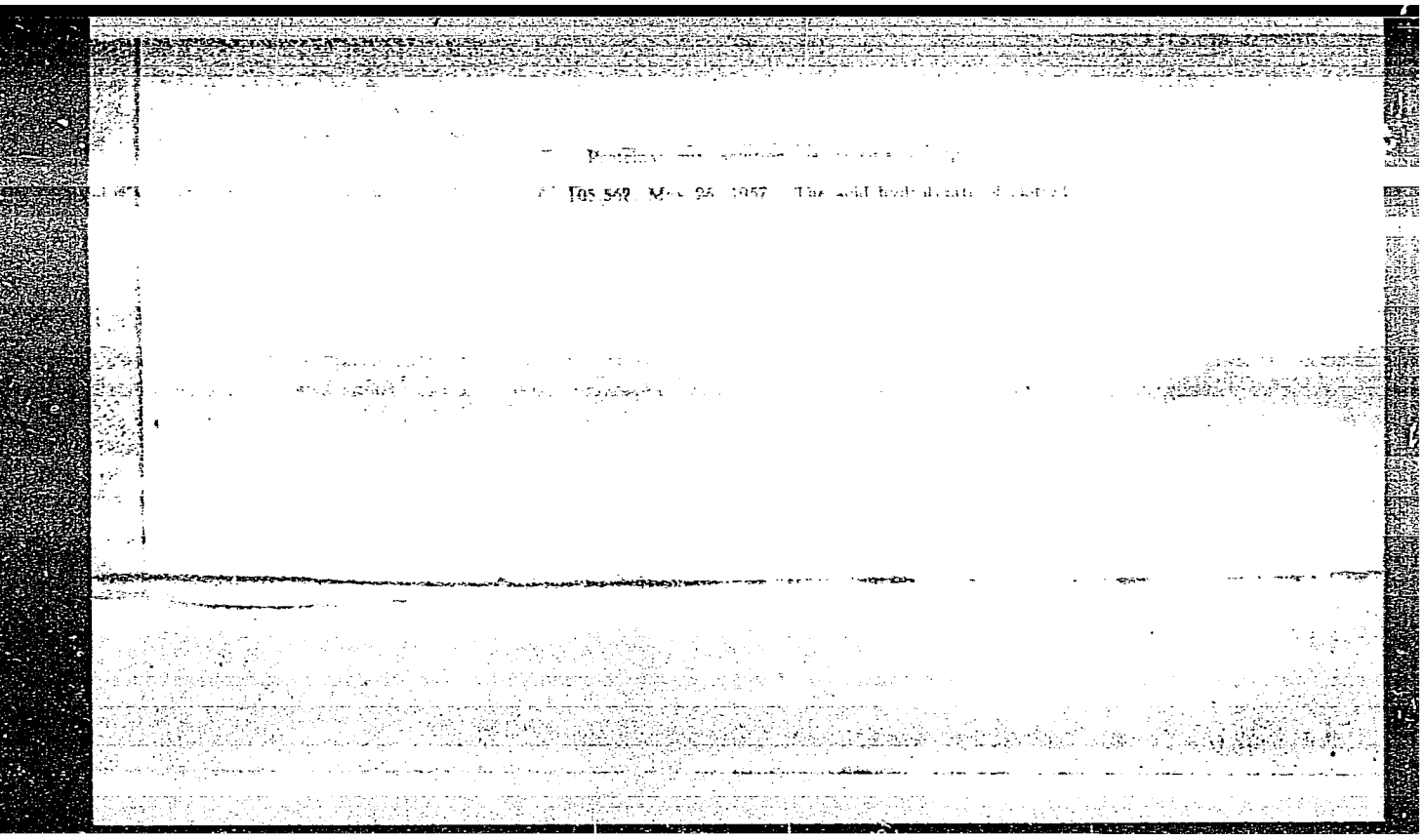
Card : 2/3

USSR/Human and Animal Physiology . Blood. V

Abs Jour: Ref. Zhur-Biol., No 6, 1958, 26816.

16 experiments, injecting adrenalin intravenously into cats resulted in the activation of fibrinogenase in the blood. It is possible that adrenalin manifests an activating influence through the nervous system.

Card : 3/3



CHAPLYGINA, Z.A.

USSR/Pharmacology - Toxicology, Aminoacid Compounds. U-7

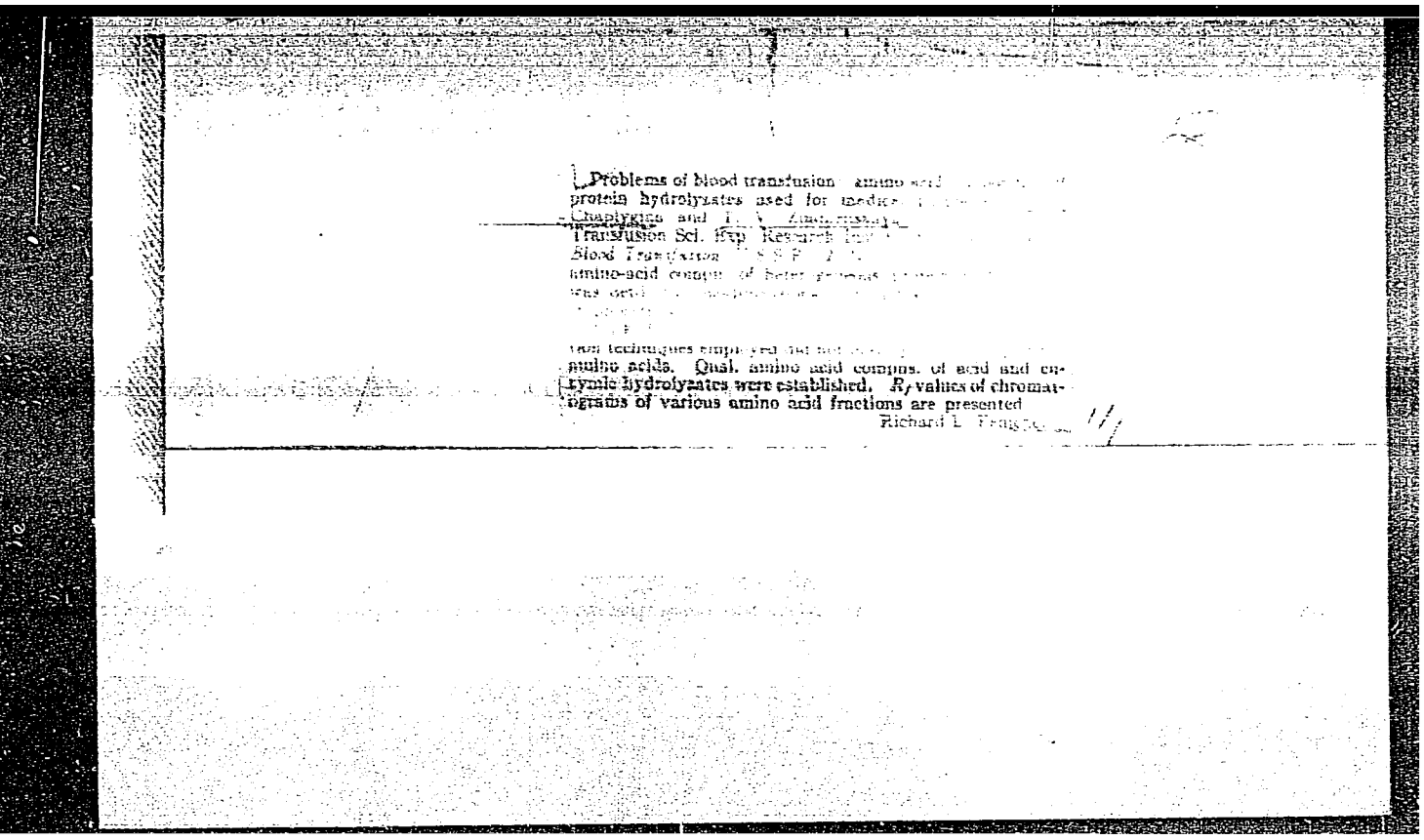
Abs Jour : Ref Zhur - Biol., No 3, 1958, 13059

Author : Chaplygina, Z.A., Znamenskaya, T.B.
Inst :
Title : The Aminoacid Composition of Protein Hydrolysates Used in Therapy.

Orig Pub : Probl. gemat. i perelivaniya krovi, 1957, 2, No 2, 41-46, 64.

Abstract : No abstract.

Card 1/1



Problems of blood transfusion amino acid
protein hydrolysates used for medic
Chaplygina and
Transfusion Sci. Rep. Research
Blood Transfusion
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[illegible] techniques employed
amino acids. Qual. amino acid compns. of acid and enzymic hydrolysates were established. R_f values of chromatograms of various amino acid fractions are presented
Richard L. Franc

USSR/Human and Animal Physiology. Metabolism. Nutrition. T-2

Abs Jour: Ref Zhur-Biol., No 12, 1958, 55283.

Author : Chaplygina, Z. A.

* Inst :

Title : The Effectiveness of Protein Hydrolyzates in Parenteral Nutrition.

Orig Pub: Probl. gematol. i perelivaniya krovi, 1957, 2, No 5, 43-47, 64.

Abstract: No abstract.

* Iz Leningradskogo ordena Trudovogo Krasnogo Znameni nauchno-issledovatel'skogo instituta perelivaniya krovi.

Card : 1/1

11

USSR/Human and Animal Physiology - Blood. T-4

Abs Jour : Ref Zhur - Biol., No 7, 1958, 31619

Author : Filatov, A.N., Chaplygina, Z.A., Depp, M.Ye., Grebenshchikova, L.A., Abramov, V.S., Blinova, A.I., Povergo, N.S.

* Inst : -

Title : Comparative Study of Some Solutions of Heterogenous Protein (Solution L-103 and Belen'kiy Protein).

Orig Pub : Klinich. meditsina, 1957, 35, No 7, 47-53.

Abstract : No abstract.

* Iz Leningradskogo ordena Trudovogo Krasnogo Znameni Nauchno-issledovatel'skogo instituta perelivaniya krovi.

Card 1/1

BUTYAGIN, V.N.; CHAPLYGINA, Z.A.

Production of L-103 hydrolysin in dry form. Probl. gemat. i perel. krovi 4 no.5:41-44 My '59. (MIRA 12:7)

1. Iz Leningradskogo ordena Trudovogo Krasnogo Znameni Instituta perelivaniya krovi (dir. - dotsent A.D. Belyakov, nauchnyy rukovoditel' - chlen-korrespondent AMN SSSR prof. A.N. Filatov)
(AMINO ACID, MIXTURE, preparation of, L-103 hydrolysin, dry prep. (Rus))

CHAPLYGINA, Z.A., starshiy nauchnyy sotrudnik

Combined use of hydrolysates and colloidal synthetic plasma substitutes. Akt.vop.perel.krovi no.7:282-287 '59. (MIRA 13:1)

1. Laboratoriya sukhikh preparatov krovi i krovozameniteley Leningradskogo instituta perelivaniya krovi (zav. laboratoriyey - prof. L.G. Bogomolova).

(BLOOD PLASMA SUBSTITUTES)

CHAPLYGINA, Z.A., starshiy nauchnyy sotrudnik

Further improvement in the technology of obtaining protein hydrolysates. Akt.vop.perel.krovi no.7:287-289 '59. (MIRA 13:1)

1. Laboratoriya sukhikh preparatov krovi i krovozameniteley Leningradskogo instituta perelivaniya krovi (zav. laboratoriyey - prof. L.G. Bogomolova).

(BLOOD PLASMA SUBSTITUTES)

BOGOMOLOVA, L.G.; CHAPLYGINA, Z.A.

Synthetic colloid plasma substitute solution from polyvinyl alcohol. Probl. gemat. i perel. krovi 5 no. 5:24-31 My '60. (MIRA 14:1)
(BLOOD PLASMA SUBSTITUTES) (VINYL ALCOHOL)

CHAPLYGINA, Z.A.

Radioisotope study of assimilation by the animal organism of nitrogen products of protein hydrolysates. Probl. gemat. i perel. krovi 5 no. 8:35-41 Ag '60. (MIRA 14:1)
(NITROGEN METABOLISM) (BLOOD PLASMA SUBSTITUTES)

CHAPLYGINA, Z.A.

New data on a study of the assimilation of protein hydrolysates. Probl. gemat i perel. krovi 6 no.2:39-42 '61. (MIRA 14:2)
(PROTEINS)

PETROV, Ioakim Romanovichprof.; FILATOV, Antonin Nikolayevich, zasl. deyatel' nauki, prof.; Prinimali uchastiye: BOGOMOLOVA, L.G., prof.; BONDINA, V.A., st. naychnyy sotr.; DEPP, M.Ye.; CHAPLYGINA, Z.A.; SEMENOVA, Ye.A.; SARKISOV, M.A., red.; ONOSHKO, N.G., tekhn. red.

[Plasma substituing solutions] Plazmozameshchaiushchie rastvory. Izd. 2. Leningrad, Medgiz, 1963. 246 p. (MIRA 16:7)

1. Deystvitel'nyy chlen AMN SSSR (for Petrov). 2. Chlen-korrespondent AMN SSSR (for Filatov). 3. Zaveduyushchiy nauchnoy bibliotekoy Leningradskogo instituta perelivaniya krovi (for Semenova).

(BLOOD PLASMA SUBSTITUTES)

CHAPLYGINA, Z.A.; TEODOROVICH, V.P.

Histochemical and functional study of the reticuloendothelial system of experimental animals following infusion of a polyvinyl blood substitute solution. Probl. gemat. i perel. krovi 10 no.2:48-52 F '64. (MIRA 19:1)

1. Leningradskiy nauchno-issledovatel'skiy institut perelivaniya krovi (dir. - dotsent A.D. Belyakov).