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by the Committee for Meteorites (B.I. Vronskiy - 1959-1960 and A.V. Zolotov - 1959-1961). The present paper reviews briefly the results obtained by the CIE and compares them with those obtained by other workers. A chart is reproduced showing the marsh and woodland distribution and magnetometric profiles in the neighbourhood of the epicentre. It was found that the marshes were apparently natural formations, unaffected by the fall but there were some arboreal features indicating the effect of the fall on trees. A study was made in 1960 of the felling of trees as a result of the fall of the meteorite. Analysis of these data showed that the height at which the meteorite exploded was 10.5 ± 3.5 km. Magnetometric searches revealed the absence of major magnetic losses. Other studies revealed a region with enhanced concentration of Ni, Co and Mo in the soil and Ce, La, Y and Yb in the wood ash. This region was 2-6 km N.W. of the epicentre. A further series of measurements was concerned with the residual radioactivity in the region. Previous conclusions regarding the increase in radioactivity near the epicentre, as compared with greater distances, were not confirmed. It is suggested that the

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S/210/63/000/001/003/003
E032/E314

AUTHORS: Plekhanov, G.F., Vasil'yev, N.V., Demin, D.V., Zhuravlev, V.K., Zenkin, G.M., Kovalevskiy, A.F., L'vov, Yu.A., Tul'skiy, A.S. (Deceased) and Fast, V.G.

TITLE: Some results of studies of the problem of the Tungusska meteorite

PERIODICAL: Geologiya i geofizika, no. 1, 1963, 111 - 123

TEXT: A Composite Independent Expedition (CIE) was organized in 1959 and a number of scientific workers and engineers from institutions of Tomsk, Moscow, Novosibirsk and other towns participated in it. The aim of this expedition was to carry out a composite study of the region of the fall of the meteorite. Field work was carried out in 1960 together with a Moscow expedition directed by V.A. Koshelev. There was an expedition in the summer of 1961 organized by the Komitet po meteoritam AN SSSR (Committee for Meteorites of the AS USSR) under the direction of K.P. Florenskiy. The CIE was a part of the latter expedition. Parallel field work was carried out during 1959-1961

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ACC NR: AT7000584

pedition is that the Tungus meteorite caused an atmospheric explosion at a height of about 10 km above ground releasing energy of about 10^{23} ergs. The nature of the explosion remains an open question; it may have been thermal, chemical or nuclear.

SUB CODE: 03/ SUBM DATE: 23Feb63/ ORIG REF: 066/ OTH REF: 002

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APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001341200017-6

ACC NR: AT7000584 SOURCE CODE: UR/0000/63/000/000/0003/0021

AUTHOR: Plekhanov, G. F.

ORG: none

TITLE: Preliminary results of a two-year study of the Tungus meteorite problem by an independent, multiple-discipline expedition

SOURCE: Tomsk. Meditsinskiy institut. Trudy, v. 5, 1963. Problema Tungusskogo meteorita (Problem of the Tunguska meteorite); sbornik statey, 3-21

TOPIC TAGS: METEOR OBSERVATION, high altitude explosion, meteorite

ABSTRACT: The program of the Tomsk Medical Institute (Betatron Laboratory) expedition begun in 1959 and its purposes are discussed. The background and a critical review of facts as known in 1959 are given. It includes the summary of witness accounts, geophysical data, night illumination studies and discussion of the immediate area of meteor impact. The objective set forth by the expedition was to compile all facts relating to the Tungus event. The program included study of regions not affected by the meteorite in order to develop control samples. A survey of meteorological and astronomical records of stations in all parts of the world was also made. The second part of the article includes a resume of data obtained by the expedition and a list of new, and confirmation of old facts is given. The conclusion of the work of the ex-

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ACCESSION NR: AR4039246 S/0269/64/000/004/0074/0074

SOURCE: Ref. zh. Astronomiya, Abs. 4.51.495

AUTHOR: Fast, V. G.; Kovalevskiy, A. F.; Plekhanov, G. F.

TITLE: Certain comments on an article by G. M. Idlis and Z. V. Karyagina entitled "The Cometary Nature of the Tunguska Meteorite"

CITED SOURCE: Tr. Tomskogo otd. Geogr. o-va SSSR, Betatron, labor. Tomskogo med. in-ta, v. 5, 1963, 203-211

TOPIC TAGS: Tunguska meteorite, meteorite, astronomy, comet, atmospheric turbidity, geomagnetic effect, solar corpuscular stream, airglow, cometary tail

TRANSLATION: In the article cited in the title (reviewed in RZhAstr., 1962, 7A580) there are a number of unwarranted assumptions and unconvincing computations. The conclusions drawn by the authors therefore cannot be regarded as evidence of the cometary nature of the Tunguska meteorite. The authors have failed to explain the enormous energy of the explosion because

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PLEKHANOV, G., mekhanik

Only one boiler opening per navigation season. Rech. transp. 14 no.5:8 My '55. (MLRA 8:7)

1. Parokhod "Il'ya Kuzin". Irtyshskoye parokhodstvo.
(Boilers, Marine) (Feed water purification)

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VASIL'YEV, N.; DEMIN, D.; YEROKHOVETS, A.; ZHURAVLEV, V.; ZHURAVLEVA, R.; KANDYBA, Yu.; KOLOBKOVA, G.; KRASNOV, V.; KUVSHINNIKOV, V.; MATUSHEVSKIY, V.; PLEKHANOV, G.; SHIKALOV, L.; SUKHOVA, G.M., red.; RUBINOVA, L.Ye., tekhn. red.

[On the trail of the Tunguska catastrophe] Po sledam Tungusskoi katastrofy. Tomsk, Tomskoe knizhnoe izd-vo, 1960. 157 p. (MIRA 16:10)
(Podkamennaya Tuguska Valley--Meteorites)

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APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001341200017-6

PLEKHANOV, F., inzh. (Chelyabinsk)

Steel washers reinforced with bronze. Zhel.dor.transp. 36 no.6:82-83 Je '55. (MIRA 12:4)
(Washers (Mechanical engineering))

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001341200017-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001341200017-6

LAZAREV, P. S., FEDOROV, A. I. (Professors), BUKHTILOV, F.N., PAVLOV, P. I. (Docents, Troitsk Veterinary Institute), Zaslonov, M. S. (Director of the Troitsk Intersovkhoz Veterinary Bacteriological Laboratory) and PLEKHANOV, B. P. (Head Veterinary Doctor of the Bredinsk District, Chelyabinsk, Olbast')

"Cetain characteristics of the course taken by rabies in cattle"

Veterinariya, vol. 39, no. 9, September 62, p. 20

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LAZAREV, P.S., FEDOROV, A.I., prof.; BUKHTILOV, F.N., dotsent; PAVLOV, P.I., dotsent; ZASLONOV, M.S.; PLEKHANOV, B.P.; Prinimali uchastiye: GRIBOVSKIY, G.P., veterinarnyy vrach; RYBAKOVA, A.V., veterinarnyy vrach

Some characteristics of the course of rabies in cattle. Veterinariia 39 no.9:20-22 S '62. (MIRA 16:10)

1. Troitskiy veterinarnyy institut (for Lazarev, Fedorov, Bukhtilov, Pavlov). 2. Direktor Troitskoy mezhsovkhoznoy veterinarno-bakteriologicheskoy laboratorii (for Zaslonov). 3. Glavnyy veterinarnyy vrach Bredinskogo rayona, Chelyabinskoy oblasti (for Plekhanov).

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PLEKHANOV, B.P., veterinarnyy vrach; KABYSH, A.A., dotsent

Feeding cobalt and manganese salts to cattle. Veterinariia 41 no.1:75-77 Ja '64. (MIRA 17:3)

1. Troitskiy veterinarnyy institut (for Kabysh).

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SEROV, Ya.A., kand.tekhn.nauk; OSIPOV, L.D., inzh.; PLEKHANOV, B.L.

Results of industrial tests of the VUBM-1 two-piston combination drill. Gor. zhur. no.6:67-70 Je '63. (MIRA 16:7)

1. Vostochnyy nauchno-issledovatel'skiy gornorudnyy institut, g. Novokuznetsk.

(Boring machinery--Testing)

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PLEKHANOV, A.V.

Natural [illegible] of frame [illegible] with [illegible] [illegible]
nauch. [illegible]. Dnepr. [illegible]-stroi. [illegible] no.[illegible]
(MIRA [illegible]

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PLEKHANOV, A.G., tekhnik

A matter of honor for each engineer and track maintenance technician. Put' i put.khoz. 6 no.11:1 '62. (MIRA 16:1)

1. Starshiy dorozhnyy master stantsii Miass I, Yuzhno-Ural'skoy dorogi.
(Railroads—Maintenance and repair)

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nitric acid. It oxidizes easily at 300-400°C forming mixtures of oxides of rare earths at higher temperatures. In another series of experiments, the reaction of oxygen with chlorides of rare earths in an open bath at 580 - 600°C was studied. A graphite vessel was used as electrolyzer and anode, and molybdenum rods were used as cathodes. The electrolyte was a mixture of chlorides of rare earths and potassium chloride (50% $MeCl_3$ and KCl). The amount of lowest oxychlorides formed in all experiments depended on the amount of products in the bath obtained by decomposition of salts under the action of oxygen and moisture. Finally, the misch metal in the potassium chloride melt was anodically dissolved at 650°C in an open and a closed bath. The authors always found oxychlorides of lowest valencies with a ratio equal to that of initial substances. Summary: In the case of interaction between oxygen, chloride melts of rare earths, and misch metal mixtures of low-valency oxychlorides of rare earths were obtained. The summational reaction can be written down: $4MeCl_3 + 3O_2 + 8Me = 6\ Me_2OCl_2$. The formation of oxychlorides on the cathode may be explained by the formation of Me_2OCl_4 soluble in the melt by

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31671
S/631/60/000/001/008/014
B117/B147

54700

AUTHORS: Ivanovskiy, L. Ye., Ilyushchenko, N. G., Zyazev, V. L., Plekhanov, A. F.

TITLE: Oxychlorides of rare earths of lowest valencies

SOURCE: Elektrokhimiya rasplavlennykh solevykh i tverdykh elektrolitov, no. 1, 1960, 55-60

TEXT: The interaction of oxygen and rare earth metals with chloride melts of rare earths was studied. In the first series of experiments, the authors used a misch metal (% by weight: 22.5 La, 53.0 Ce, 4.53 Pr, and 16.3 Nd) obtained by electrolysis, and a chloride mixture (% by weight: 26 La, 53.9 Ce, 4.85 Pr, 11.42 Nd) obtained by chlorination of oxides of rare earths with gaseous chlorine in the presence of carbon. The result was a deposit of oxychlorides of lowest valency: Me_2OCl_2, where Me stands for La, Ce, Pr, and Nd. This mixture is slowly hydrolyzed in water to give hydrates of highest valency. When boiling, decomposition proceeds rather quickly. During heating, the product readily reacts with acids, particularly

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27213
S/081/61/000/014/010/030
B106/B110

S2300

AUTHORS: Ivanovskiy, L. Ye., Ilyushchenko, N. G., Zyazev, V. L., Plekhanov, A. F.

TITLE: Oxychlorides of rare earths of lowest valency

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 14, 1961, 97, abstract 14B15. (Tr. In-ta elektrokhimii. Ural'skiy fil. AN SSSR, no. 1, 1960, 55 - 60)

TEXT: The authors studied the reaction of a mixture of chlorides of rare earths with mishmetal in the presence of O_2. They separated a mixture of oxychlorides of lowest valency, M_2OCl_2 (M = La, Ce, Pr, Nd). They studied some properties of these compounds. In the electrolysis of chloride baths where the possibility of a contact of O_2 of air and moisture with the melt was not excluded, it was shown that the oxidation of the salts apparently yielded oxy cations $M_2OCl_2^{2+}$ which were discharged on the cathode and, thus, were transformed to the oxychlorides of lowest valency, M_2OCl_2. The anodic

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ZAYDMAN, T.N., (Sverdlovsk); KOCHNEV, M.I., (Sverdlovsk); PLEKHANOV, A.F., (Sverdlovsk)

Reaction capacity and thermal transformation of sphalerite. Izv. AN SSSR. Otd. tekh. nauk no.6:168-171 Je '56. (MLRA 9:9)

1. Institut metallurgii Ural'skogo filiala AN SSSR.
(Sphalerite)

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PLEKHANOV, A.F.; PODVAL'NYY, S.I.; ZYAZEV, A.D.; KALUGINA, A.T.

Removing copper from the cobalt oxide production cycle. TSvet. met. 32 no.2:49-52 F '59. (MIRA 12:2)
(Cobalt metallurgy) (Copper)

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24567

S/137/61/000/005/005/060
A006/A106

54700

AUTHORS: Ivanovskiy, L.Ye., Ilyushchenko, N.G., Zyazev, V.L., Plekhanov, A.F.

TITLE: On oxychlorides of rare earths of lower valences

PERIODICAL: Referativnyy zhurnal. Metallurgiya, no. 5, 1961, 16, abstract 5A94 ("Tr. In-ta elektrokhimii. Ural'skiy fil. AN SSSR", 1960, no.1, 55-60)

TEXT: An investigation was made of the interaction of mixtures of rare earth chlorides and "mishmetall" in the presence of O_2. A mixture of low valence oxychlorides, Me_2OCl_2, was singled out where the metals were La, Ce, Pr, Nd. Some of their properties were investigated. It is shown that in electrolysis of chloride bathes, where the possibility of a contact of atmospheric O_2 and moisture with the melt was not excluded, $Me_2OCl_2^{2+}$ oxycations are apparently formed as a result of the oxidation of salts. The discharge of these oxycations on the cathode causes the formation of oxychlorides of lower valence, the Me_2OCl_2. The anodic dissolving of mishmetal was investigated. During the anodic dissolution in the melts 2-valent chlorides of rare earths are formed, whose interaction with O_2 causes also the formation of oxychlorides of the same composition. T. K.

[Abstracter's note: Complete translation]

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PLEKHANOV, A.F.

USSR/ Cosmochemistry. Geochemistry. Hydrochemistry D.

Abs Jour : Referat Zhur - Khimiya, No 4, 1957, 11520

Author : Zaydman T.N., Kochnev M.I., Plekhanov A.F.
Inst : Department of Technical Sciences, Academy of Sciences USSR
Title : On Reactivity and Thermal Transformations of Sphalerite

Orig Pub : Izv. AN SSSR, Otd. tekhn. n., 1956, No 6, 168-171

Abstract : Investigated was the dependence of heating rate of a specimen of sphalerite on the temperature at a constant flow of heat. Chemical composition of specimen (in %): Zn 65.15, S 32.25, Pb 0.42, Fe 0.78. Correlation between rate of heating τ degree/minute and temperature is represented by a graph which is of the nature of sudden changes with a gradual subsidence on increase in temperature to 650°. The curve shows two sharply manifested maxima (at 650 and 950°) and two minima (at 850 and 1020°), after which the curve extends upward. Anomalous progression course of the graph is due to the occurence of a number of thermal transformations assodiated with changes in state of crystal lattice. A correlation has been ascertained between intervals of thermal transformations of ZnS and temperature of critical points of the forming elements.

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S/137/62/000/008/011/065
A006/A101

AUTHORS: Ivanovskiy, L. Ye., Ilyushchenko, N. G., Plekhanov, A. F., Zyazev, V. L.

TITLE: Separating rare-earth metals by fused salt electrolysis

PERIODICAL: Referativnyy zhurnal, Metallurgiya, no. 8, 1962, 27, abstract 8G188 ("Tr. In-ta elektrokhimii, Ural'skiy fil. AN SSSR", 1961, no. 2, 131 - 134)

TEXT: Separation of rare-earth metals was investigated in fused bath electrolysis containing a mixture of rare-earth chlorides. It was found that at all the D_c (0.25 - 1.5 amp/cm^2) and temperatures (850 - 870; 560 - 700°C) investigated, alloys are obtained which are considerably impoverished of La (3 - 5 weight %) and enriched with Ce (up to 80%). The total Pr and Nd amount remains practically constant. The nature of cathodic deposits varies noticeably with temperature. Their salt content varies from 75 to 80% at 560°C and from 30 to 40% at 700°C. There are 11 references.

[Abstracter's note: Complete translation] G. Svodtseva

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IVANOVSKIY, L.Ye.; ILYUSHCHENKO, N.G.; ZYAZEV, V.L.; PLEKHANOV, A.F.

Lower-valence rare earth oxychlorides. Trudy Inst.elektrokhim. UFAN SSSR no.1:55-60 '60. (MIRA 15:2)
(Rare earth chlorides)
(Electrolysis)

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IVANOVSKIY, L.Ye.; ROZANOV, I.G.; KRASIL'NIKOV, [illegible]; PLEKH[illegible], [illegible]

Electrolysis of chloride melts with anodes of [illegible] and [illegible]. Trudy Inst. elektrokhim. [illegible]

[illegible]

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SOV/136-59-2-11/24

Elimination of Copper from the Cobalt-Oxide Production Cycle

precipitation with sodium hypo-sulphite has been established. There are 3 figures and 1 table.

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SOV/136-59-2-11/24

Elimination of Copper from the Cobalt-Oxide Production Cycle

the best hyposulphate concentration 10 to 20% (Fig 2) and duration 12 to 15 minutes (Fig 3). On the basis of these satisfactory results production trials on a mechanically-stirred vessel of 4.2 m^3 capacity were organized. In one series iron-free solutions were used, in the other the solutions contained iron. The results (table) were substantially the same in both series but the duration of the subsequent operation of cobalt precipitation by chlorine took 30% longer with the iron-free solutions. The consumption of hyposulphate could be reduced to 4.8 kg/kg copper by increasing the time interval between successive additions to 30 minutes and the cobalt content in the cake was low enough (0.1% max) to make further treatment unnecessary. The yield of copper cake was twice as low as with soda ash. The authors conclude that the possibility of copper

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SOV/136-59-2-11/24

AUTHORS: Plekhanov, A.F., Podval'nyy, S.I., Zyazev, A.S. and Kalugina, A.T.

TITLE: Elimination of Copper from the Cobalt-Oxide Production Cycle (Vyvod medi iz tsikla pri proizvodstve okisi kobal'ta)

PERIODICAL: Tsvetnyye Metally, 1959, Nr 2, pp 49-52 (USSR)

ABSTRACT: The existing method at the Ufaleyskiy Nikelevyy Zavod (Ufaley Nickel Works) for removal of copper from cobalt solutions is to precipitate with soda ash. This gives a copper cake with 0.3 to 0.5% cobalt which has to be reprocessed, leading to deleterious accumulation of copper in the first stage of cobalt-oxide production. The work described had the object of exploring the possibilities of using sodium hyposulphate for the precipitation, giving a copper cake which could be eliminated from the production cycle. Laboratory experiments showed (Fig 1) that 300% (or 7.5 kg per kg copper) of the theoretical amount of hyposulphate was necessary to precipitate all the copper independently of acidity (0.04 to 0.05% Co in the precipitate), that the best temperature for precipitation was 80 to 90°C

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The reactivities and thermal conversions in sphalerite. T. N. Zakhman, M. I. Kosheev, and A. P. Plekhanov. *Izvest. Akad. Nauk S.S.S.R., Otdel. Fekh. Nauk* 1956, No. 6, 166-71.—The relation of the chemical and physical properties of sphalerite is of interest when sphalerite is used as a raw material in the Zn production, and as a semiconductor. Fused sphalerite (Zn 64.15, S 32.25, Pb 0.42, Fe 3.72%) was heated electrically in a fire-clay crucible in a stream of N_2 with the heating current kept carefully uniform. The heating rate of the sample is, therefore, inversely proportional to the heat capacity, and gives information on the energetic state in the crystal lattice (Lyashenko, C.A. 46, 5[illegible]). The heating rate of the sphalerite changes and becomes gently reduced as a general trend when heating up to 650°, with several sharp deviations in narrow temp. intervals, which do not obscure the general trend. Between 650 and 1020° the drop (v values) in the heating rates is greatly accelerated, owing to some process occurring over a wide temp. range. A max. drop is between 640 and 50°. The sharp drop of v to 0 at 1016° represents the sphalerite conversion to wurtzite, usually recorded at 1020°, and presumably somewhat lowered by the impurities in the sphalerite sample used. The variations in the v changes are attributed to a no. of thermal transformations in the components of the system, which are not accompanied by heat effects at const. temp. These transformation points are close to some crit. temp. of the elements and compds. present: 80-90° (Zn transformation at 80°), S rhombic → monoclinic conversion at 95.5°), 120-130° (m.p. monoclinic S), 180-210° (Zn modification at 170-190°), 440-550° (m.p. Zn at 419.4; b.p. S at 444.6°), etc. W. M. Sternberg.

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Power engineering in central Kazakhstan. Trudy Inst.energ. AN Kazakh.SSR 3:42-46 '61. (MIRA 14:12)
(Kazakhstan--Power engineering)

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PLEKHANOV, A.

Teacher's psychological vigilance. Vop. psikhol. 8 no.4:83-88 Jl-Ag '62. (MIRA 16:1)

1. Mokrinskaya shkola, Kstovskiy rayon Gor'kovskoy oblasti. (Teachers, Training of) (Psychology--Study and teaching)

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SHUMSKIY, K.P.; PLEKHAN, R.I., inzh., retsenzent; SALAMATOV, I.I., inzh., red.; YEVSTAF'YEVA, N.P., red. izd-va; UVAROVA, A.F., tekhn. red.

[Vacuum condensers for chemical industries] Vakuumnye kondensatory khimicheskogo mashinostroeniia. Moskva, Gos. nauchno-tekhn. izd-vo mashinostroit. lit-ry, 1961. 334 p. (MIRA 14:9)
(Condensers (Vapors and gases))

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001341200017-6

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PLEKHAN, M. I.

"Some peculiarities concerning peptides"

report presented at the 10th All-Union Conf. on Highly Molecular Compounds, Biologically Active Polymer Compounds, Moscow, 11-13 June 1958. (Vest. Ak Nauk SSSR, 1958, No. 9, pp. 111-113)

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SOV/79-28-11-53/55

Spectrophotometry of the Biuret Complexes as Method of Investigating the Polypeptides and Proteins. XIX. On Some Reactions of the Exchange Cleavage of Copper Biuret Complexes

ASSOCIATION: Nauchno-issledovatel'skaya laboratoriya Ministerstva zdravookhraneniya SSSR
(Scientific Research Laboratory of the Ministry of Health Protection, USSR)

SUBMITTED: October 11, 1957

Card 3/3

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SOV/79-28-11-53/55

Spectrophotometry of the Biuret Complexes as Method of Investigating the Polypeptides and Proteins. XIX. On Some Reactions of the Exchange Cleavage of Copper Biuret Complexes

maximum absorption is. The greater the difference in this wave length of the maximum absorption the higher is the velocity and the completeness with which the displacement of the one component by the other takes place. The stability of these complexes in the above mentioned cleavage reactions directly depends on the composition of the coordination bonds. The best stability is in that complex which contains 4 nitrogen containing groups in the inner coordination sphere, which, however, are not equivalent in this sense. The coordination bonds obtain their best stability from the peptide group. In their substitution in the coordination sphere of the complex by other groups a displacement of the maximum to the side of the long waves takes place which is determined by a quantity characteristic of each group. The glycyl tetrapeptide quantitatively displaces the tripeptides and proteins (among them the insulin) from the biuret complexes. The displacement reaction can be used as a method of determining the copper numbers. There are 10 figures, 3 tables, and 8 references, 3 of which are Soviet.

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APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001341200017-6

AUTHOR: Plekhan, M. I. SOV/79-28-11-53/55

TITLE: Spectrophotometry of the Biuret Complexes as Method of Investigating the Polypeptides and Proteins (Spektrofotometriya biuretovykh kompleksov kak metod issledovaniya polipeptidov i belkov) XIX On Some Reactions of the Exchange Cleavage of Copper Biuret Complexes (XIX O nekotorykh reaktsiyakh obmennogo razlozheniya mednykh biuretovykh kompleksov)

PERIODICAL: Zhurnal obshchey khimii, 1958, Vol 28, Nr 11, pp 3133-3143 (USSR)

ABSTRACT: The direct dependence of the complex properties on the composition of the coordination bonds is also proved in this paper, where the authors investigated the relative stability of the copper biuret complexes in some reactions of the exchange cleavage. These complexes can in this cleavage be quantitatively decomposed by the components forming the biuret complex with maximum absorption on the shortest wave length of the visible spectrum. The position of the maximum absorption can serve as a characteristic feature of the comparative stability of the copper biuret complexes in these reactions: The complex is the more stable the shorter the wave length of the

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PLEKHAN, M.I.

Spectrophotometry of biuret complexs as a means for investigating polypeptides and proteins. Part 19: Some reactions of exchange decomposition of copper biuret complexes. Zhur. ob. khim. 28 no.11: 3133-3143 N '58. (MIRA 12:1)

1.Nauchno-issledovatel'skaya laboratoriya Ministerstva zdravookhraneniya SSSR.

(Biuret) (Copper organic compounds)
(Spectrophotometry)

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PLEKHAN, M.I.

Spectrophotometry of biuret complexes as a method for investigating polypeptides and proteins. Khim.belka no.1:191-244 '61.
(MIRA 15:1)

(Biuret--Spectra) (Peptides) (Proteins)

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PLEKHAN M.I.

USSR

Spectrophotometry of biuret complexes as a method of study of proteins and peptides. XVIII. Biuret reaction of polypeptides with interrupted chain. M. I. Plekhan (1st Moscow Med. Inst.). *Zhur. Obshchei Khimii* [redacted] (1955); cf. *C.A.* 48, 4601f; 49, 3177c.—The biuret complex of $(CH_2CH_2CH_2NHCONHCH_2CONHCH_2CO_2H)_2$ has an absorption max. 560 mμ and contains 2 atoms of Cu per mole. The biuret complex of the analogous hexamethylenebis(ureidoacetyldiglycylglycine) has absorption max. 555 mμ and also contains 2 atoms Cu per mole. The formation of the biuret complex of hexamethylenebis(carbamoylglycylglycine) occurs only to the extent of 8% and the complex has absorption max. 520 mμ. Thus, in substances in which the peptide chain is interrupted by another unit, each peptide fragment forms an individual biuret complex, the character of which depends on the no. of peptide units in the fragment and the nature of the non-peptide link attached to it. Possible configurations of the biuret complexes of these substances are shown. G. M. Kosolapoff

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PLEKHAN, M.I.; MARDASHEV, S.R.; KULAKOVSKAYA

Certain N-derivatives of amino acids and of peptides. Zhur.ob. khim. 25 no.2:371-374 F '55. (MLRA 8:6)

1. 1-y Moskovskiy meditsinskiy institut.
(Amino acids) (Peptides)

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001341200017-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001341200017-6

Plekhan, M.I.

A modified method for the determination of amino acids and peptides. M. I. Plekhan and N. A. Kulakovskaya. *Voprosy Med. Khim.* 1, No. 1, 69-72(1955); *Referat. Zhur. Khim., Biol. Khim.* 1955, No. 10567.—The method of Tsuverkalov for the detn. of amino N was modified by use of an addnl. reagent consisting of 1 ml. of 5% soln. of HCHO, and a 25% soln. of AcOH was substituted by 10% CH_2BrCO_2H. In tests with 10 amino acids and 4 peptides the max. deviation from the theoretical value was ± 3% and the av. deviation ± 1%. Histidine glutathione gave larger deviations.

B. S. Levine

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PLEKHAN, M.I.

USSR/Chemistry - Book review

Card 1/1 Pub. 151 - 42/42

Authors : Reznichenko, M. S.

Title : Structure of gramicidin C

Periodical : Zhur. ob. khim. 24/9, 1694-1695, Sep 1954

Abstract : Critical review is presented of the book by P. G. Ioannisiani, N. I. Gavrilova and M. I. Plekhan, entitled, "Structure of Gramicidin C". The statement that the structure of gramicidin, characterized by the presence of a diketopiperazine heterocycle and free final carboxyl group is discussed. Two USSR references (1949 and 1954).

Institution : Agricultural Institute, Leningrad

Submitted : May 10, 1954

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APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001341200017-6

PLEKHAN, M. I.

USSR.

Structure of gramicidin C. I. Reduction of gramicidin C. P. G. Ibanisiani, N. I. Gavrilov, and M. I. Plekhan. J. Gen. Chem. U.S.S.R. 24, 871-5(1954)(Engl. translation).—See C.A. 49, 4522a. H. L. H.

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APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001341200017-6

PLEKHAN, M. I.

USSR/Chemistry - Biochemistry

Card 1/1 Pub. 151 - 33/38

Authors : Ioanislani, P. G.; Gavrilov, N. I.; and Plekhan, M. I.

Title : The structure of gramicidin C. Part 1.- Reduction of gramicidin C.

Periodical : Zhur. ob. khim. 24/2, 364-369, Feb 1954

Abstract : The existence in gramicidine C of two diketopiperazine and tripeptide fragments, the first one of which contains proline, was established experimentally The peptides found in the products of incomplete gramicidin C hydrolysis are listed. The structural formula for the gramicidin C monomer is presented. Various characteristics of gramicidin C are described. Twelve references: 8-USSR; and 1-French; 3-USA (1939-1953). Tables.

Institution : The M. V. Lomonosov State University, Moscow

Submitted : August 7, 1953

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APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001341200017-6

PLEKHAN, M. I.

The interaction of glyoxal with proteins. S. R. Mardashev and M. I. Plekhan. *Biokhimiya* 19, 571-7(1954).—The interaction between the proteins of rabbit muscle and glyoxal results in the formation of color groupings and colorless compds. which contain free aldehyde groups. Muscle proteins so treated become more resistant to the action of pepsin than after treatment with HCHO. B. S. Levine

Chair Biol. & Organic Chem, 1st Moscow OL Med Inst.

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APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001341200017-6

PLEKHAN, M.I. (Moskva)

Biuret protein reaction. Biokhimiia 19 no.3:381-383 My-Je '54.
(PROTEINS, determination,
biuret reaction)
(UREA, derivatives,
biuret, determ. of proteins with biuret reaction)

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PLOKHN, M.I.

Chemical Abst.
Vol. 48
Apr. 10, 1954
Organic Chemistry

4

Spectrophotometry of biuret complexes as a method of study of proteins and peptides. XVII. Direction of condensation of biuret residues of peptides and proteins. M. I. Plokhin and N. D. Fussnecker (Moscow State Univ.). [redacted] Acad. Sci. 87, 615-18(1953); cf. C.A. 47, 7014d. Formation of biuret complexes of optically active peptides and proteins does not lead to racemization, which fact indicates that the peptide links are enolized in this reaction. The biuret complex formation aids the preservation of optical activity of peptides and proteins under prolonged action of alkali. Optical activity of the peptides does not affect the character of their absorption spectrum as biuret complexes. Active forms of alanine were obtained by the action of papain on the racemic (benzyloxycarbonyl) deriv. in citrate buffer. (*Benzyloxycarbonyl*)-*L-alaninanilide*, m. 159-60°, obtained as described above and hydrolyzed by heating 6 hrs. with concd. HCl, yielded 85.6% *L-alanine*, which gave the (*benzyloxycarbonyl*) *deriv.*, m. 84°, $[\alpha]_D^{18}$ −18°. (*Benzyloxycarbonyl*)-*D-alanine*, m. 82-4° (from H_2O), $[\alpha]_D^{18}$ 18.3°. The peptides were obtained by the usual Bergmann method; the acyl chlorides are poorly stable and the Et_2O soln. must be kept cold; to remove the H_3PO_4 from the (benzyloxycarbonyl)dipeptides the MeOH soln. of the product is treated with 10% Na_2CO_3 until alk., evapd. to dryness in vacuo, and extd. with MeOH, leaving behind Na phosphate. Reduction of the (benzyloxycarbonyl)dipeptides must be done in aq. medium in the presence of a little AcOH. Thus were obtained the (*benzyloxycarbonyl*) *deriv.* of *racemic alanylalanine*, oil, *D-alanyl-D-alanine*, m. 120°; and *L-alanyl-L-alanine*, oil. The tripeptides were also prepd. similarly: *racemic alanylalanylalanine*, decomp. 310°; *L-alanyl-L-alanyl-L-alanine*, decomp. 280°; *L-alanyl-D-alanyl-L-alanine*, decomp. 220°. (Rising, *et al.*, C.A. 43, 1116). G. M. Kondapoff

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Plekhan, M. I.

USSR.

a Spectrophotometry of biuret complexes as a method of study of proteins and peptides. XVI. Comparative activity of copper, nickel, and cobalt in formation of the tripeptide biuret complex (glycyl). M. I. Plekhan and E. N. Volulskaya. *J. Gen. Chem. U*[redacted]57-9(1953) (Engl. translation).—See *C.A.* 47, 7573h. H. L. H.

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APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001341200017-6

PLEKHAN, M.I.; VOLUYSKAYA, E.N.

Spectrophotometry of biuret complexes as a method of study of proteins and peptides. XVI. Comparative activity of copper, nickel, and cobalt in formation of the tripeptide biuret complex (glycyl). Zhur.Obshchey Khim. 23, 343-6 '53. (MLRA 6:3)
(CA 47 no.15:7573 '53)

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001341200017-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001341200017-6

PLEKHAN, M. I.; VOLUYSKAYA, Ye. N.

Biuret Reaction

Spectrophotometry of biuret complexes as a method for investigation of proteins and peptides. Part 12. Comparative activity of copper, nickel, and cobalt during the formation of the biuret complex of tripeptide (glycyl). Zhur. ob. khim. 23, No. 2, 1953.

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

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APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001341200017-6

PLEKHAN, M.I.

7

USSR

Reaction of glyoxal with amino acids. M. I. Plekhan and S. R. Mardashev (Sci. Research Lab., Ministry of Health, Moscow). *Sbornik Statei Obshchei Khim.* 2, 1545–53(1953). —Glyoxal (I) reacts with mono-amino acids through but 1 CHO group and 1 NH_2 group. The reaction occurs in 2 steps through formation of a colorless compound of type $HO_2CCHRN{:}CHCHO$ (II), which then passes into the colored cyclic product $HO_2CCRN{:}CHCH(OH)$ (III), which is stable. The colorless intermediate is destroyed by NH_2OH, *p*-phenylenediamine, semicarbazide, with formation of the corresponding I deriv. and liberation of the amino acid. Reaction of 36% aq. I with amino acids proceed best in aq. medium with excess I at about 0°. To 2 g. $H_2NCH_2CO_2H$ in 2 ml. H_2O was added with ice cooling 3 ml. 38% aq. I (neutralized to pH 6 with $CaCO_3$ or Na_2CO_3) and after 45 min. the soln. was treated with 50–70 ml. abs. MeOH and 30–40 ml. abs. Et_2O, yielding 70% II; this was taken up in H_2O, treated with $(CO_2H)_2$ to remove the admixed Ca salt of an org. acid contaminant present in com. I, filtered and again ppted. with Et_2O-MeOH. II ($R = H$), thus obtained is washed with abs. Me_2CO and Et_2O and dried *in vacuo*. To 0.5 g. glycine Cu salt in 6 ml. H_2O was added with cooling 4 ml. 38% I (neutralized as above), cooled 1 hr. longer, then kept 3.5 hrs. at room temp., then treated with MeOH-Et_2O yielding light blue ppt. of the Cu deriv., $C_4H_6O_4NCu_{0.5}.3H_2O$. Heating the aq. soln. of II ($R = H$) on a steam bath until CHO test is neg. gave after addn. of MeOH-Et_2O a ppt. of III ($R = H$), isolated as a monohydrate. II ($R = Me$) prepd. similarly from alanine, isolated as hemihydrate. Heating aq. solns. of II in acid or basic conditions results in formation of III, which was followed spectrophotometrically; the curves of reaction progress are shown. Electrolytic reduction of III resulted in no reduction at the cathode (no color loss) while at the anode the product was oxidized to $H_2NCH_2CO_2H$ and $HCOCO_2H$.

G. M. Kosolapoff

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[illegible], I.; and [illegible], [illegible].

The Reaction of Glyoxal with [illegible] Acids, [illegible], Sbornik [illegible] po obshchey khimii (Collection of [illegible] on General Chemistry), [illegible] II, Moscow-Leningrad, 1953, [illegible] 1[illegible]-1[illegible].

Sci Res Laboratory of the Ministry of Health [illegible]

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PLEKHAN , M. I.

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

Spectrophotometry of biuret complexes as a method of study of proteins and peptides. XV. Application of the biuret reaction with nickel in the study of hydrolysis of gelatin. M. I. Plekhan and E. N. Voluiskaya. *J. Gen. Chem. U.S.S.R.* 22, 2225-35(1952)(Engl. translation).—See *C.A.* 47, 4929f.

H. L. H.

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APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001341200017-6

PLEKHAN, M. I.

Amino Acids

Spectrophotometry of biuret complexes as a method for investigation of proteins and peptides. Part 14. Effect of the amino acid composition of polypeptide on the nature of absorption of light by the biuret complex. Zhur. ob. khim. 22, no. [illegible], 195[illegible].

Monthly List of Russian Accessions, Library of Congress, December 195[illegible], Unclassified.

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PLEKHAN, M. I.

"Spectrophotometry of biuret complexes as a method for investigation of proteins and peptides. Part 14. Effect of the amino acid composition of polypeptide on the nature of absorption of light by the biuret complex." (p. 1623)

SO: Journal of General Chemistry, (Zhurnal Obshchei Khimii), 1955, Vol. 25, No. 9

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PL[illegible], M. I.

"Spectrophotometry [illegible]. XIII. A[illegible] [illegible]
[illegible]."
([illegible] 9)

SO: Journal of General Chemistry (Zhurnal Obshchei Khimii) [illegible], Volume 1, No. [illegible]

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11A

Spectrophotometry of biuret complexes as a method of study of proteins. XII. Spectrophotometric study of formation of copper biuret complex in the presence of a mixture of two peptides with chains of different lengths. M. I. Plekhan (Moscow State Univ.). *Zhur. Obshchei Khim.* (*J. Gen. Chem.*) **21**, 574-9(1951); cf. *C.A.* **45**, 5198g.—Addn. of 0.25 *M* $Cu(OAc)_2$ to a mixt. of 2 ml. 0.05 *M* glycine tripeptide and 2 ml. 0.05 *M* glycine dipeptide in 3 ml. 2 *N* NaOH and 0.5 ml. H_2O in graduated portions (total 1.5 ml.), filtration of pptd. Cu oxide, and examn. of the solns. after the addns. of the Cu salt spectrophotometrically showed that the tripeptide reacts first, giving a violet soln., but the curve has a max. at 550 mμ, instead of 578 mμ normal for the individual tripeptide; apparently the dipeptide also enters the complex to some extent; as the addn. of Cu continues the max. of the curve shifts to 570 mμ, and finally to 610 mμ, giving a very sym. curve, which is at every point much higher than called for by simple arithmetic sum of the absorptions of possible components. Similar examn. of mixed di- and tetrapeptides of glycine gave at first the red color typical of the tetrapeptide complex, followed by participation of the dipeptide, the abs. max. shifts but little from 520 mμ to 530 mμ, but an indication of an inflection at 610-730 mμ is evidently the dipeptide contribution, showing up near the end of the reaction; again the summary curve is not an additive one. A similar mixt. of the tri- and tetrapeptides gives the initial reaction of the tetrapeptide (max. 520 mμ), followed by greater participation of tripeptide with the shift of abs. max. to 530 mμ with appearance of a faint max. about 650-730 mμ. The final curve here is very nearly additive, indicating that the components act independently in this instance. **XIII. Analysis of the spectrophotometric curves of biuret copper complexes of serum albumin, casein and gelatin.** *Ibid.* 579-84.—Numerous spectral curves of mixts. of tri- and tetrapeptides of glycine, serum albumin, gelatin, and casein in the form of their Cu complexes (prepd. by treatment with $Cu(OAc)_2$ in dil. NaOH) are presented and summarized. Regardless of the ratio used, mixts. of tri- and tetrapeptides give curves that are additive in respect to the components, indicating formation of a simple mixt. of the individual biuret complexes. The Cu biuret complexes of the proteins, however, appear to be mixts. of the biuret complexes of tri- and tetrapeptide types in ratio of 90-95% to 10-5%, resp. The abs. max. for the serum albumin complex is at 555 mμ; that of gelatin is at 565 mμ, and that of casein at 590 mμ. Hence, proteins definitely contain some simple tripeptides.

G. M. Kosolapoff

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PL[illegible], M. I.

"Spectrophotometry of biuret complexes as method of studying [illegible]. XI. Spectrophotometric study [illegible] presence of [illegible]." ([illegible])

SO: Journal of General Chemistry (Zhurnal Obshchei Khimii) 1[illegible], Volume [illegible], No. 2

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CA

Spectrophotometry of biuret complexes as a method of protein study. X. Spectrophotometric study of copper biuret complexes of hepta and octapeptides. M. I. Plekhan (Moscow State Univ.). *Zhur. Obshchei Khim.* (J. Gen. Chem.) 21, 312-15(1951); cf. *C.A.* 43, 6249f; 45, 3434g.—The polypeptides were prepd. according to Fischer's method (*C.A.* 1, 51); the replacement of Br by NH_3 in the final step was done by means of concd. aq. NH_3 soln. for 6 days at 25°. The spectrophotometric curves for: glycylglycine, diglycylglycine, analogous tetra-, hexa- and pentapeptides, heptapeptide (leucylpentaglycylglycine), and octapeptide (leucylhexaglycylglycine) in the form of their Cu complexes are reproduced. The dipeptide gives a max. at 670 mμ, tripeptide at 575 mμ, tetrapeptide at 520 mμ, pentapeptide at 505 mμ, hexapeptide at about the same value, heptapeptide at 520 mμ, and octapeptide at 530 mμ. The last 2 have much higher extinction values than the lower derivs. As chain length grows the spectrum departs more and more from that of a protein (casein). The Cu complexes of hepta- and octapeptides have 2 Cu per mole, each bound by normal valences (2) to the enol-O atoms of adjoining amino-acid units, and by either 3 coordinate valences to the 3 N atoms spatially distributed at reasonable distances from the Cu atoms by coiling of the peptide chain, or by 4 such valences. The octapeptide deriv. appears to have 2 Cu atoms with 4-coördinate link systems, while the heptapeptide has 1 Cu atom of each type. **XI. Spectrophotometric study of formation of copper biuret complex in a mixture of di-, tri-, and tetrapeptides.** *Ibid.* 316-21.—The peptides (all glycine types) when mixed and treated with $Cu(OAc)_2$ 1st display the reaction of the tetrapeptide (red); then the tripeptide and last the dipeptide reaction. The summary photometric curve has a max. at 550 mμ and a 2nd lesser max. at 670 mμ. The curve's shape differs much from that of a typical protein. Furthermore, photometry of such a mixed soln. of Cu complexes does not obey arithmetic additivity of extinction of the individual components. The red complex forms so much more readily and rapidly than the violet or blue, that the tetrapeptide, in cases of deficiency of Cu in soln., actually displaces tri- and dipeptides from their already formed complexes. The actual extinction of the mixt. is higher than calcd. (or arithmetic sum) from 560 to 730 mμ, and lower from 480 to 560 mμ.

G. M. Kosolapoff

1951

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CA

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Spectrophotometry of biuret complexes as a method of study of proteins. IX. Spectrophotometric studies of biuret complexes of polypeptides and protein with nickel and cobalt. M. I. Pickhan and A. M. Kan (Moscow State Univ.). *Zhur. Obshchei Khim.* (J. Gen. Chem.) 20, 2105-10(1950); cf. *C.A.* 43, 6240f. Biuret complexes of peptides (glycylglycine, chloroacetylglycylglycine, diglycylglycine, chloroacetyldiglycylglycine, triglycylglycine, tetraglycylglycine) with Ni form slower than with Cu; casein behaves similarly. Dipeptides give blue complexes, tripeptides orange, tetra- and penta-peptides give yellow, and casein gives orange complexes. The spectrum curves do not show maxima, except for dipeptide curve (max. about 600 mμ), but all show a min. at 640-60 mμ. The curves are reproduced. Ni complexes were formed from $Ni(NO_3)_2$ in dil. NaOH soln. with the amino acid deriv.; after filtration from $Ni(OH)_2$, the solns. were examl. spectrographically. Co complexes were prepd. with $Co(NO_3)_2$ as above. Casein Ni complex resembles those of tripeptides, rather than of longer chain polypeptides both in color and the shape of the absorption curve. The dipeptide curve differs from those of other peptides or casein possibly because the protein does not contain true dipeptide groups. Co complexes of peptides and casein are red-brown and differ only in the degree of absorption. Ni complex of biuret is yellow and has an absorption min. at 600 mμ, while that of Co is red-brown with max. absorption at 480 mμ. The intensity of absorption of Co complex of dipeptide is so much greater than that of Co complexes of free amino acids that it may be used for qual detection of dipeptides in mixts. with amino acids.

G. M. Kosolapoff

1951

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001341200017-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001341200017-6

PLEKHAN, M. I.

M. I. Plekhan and N. I. Gavrilov, Spectrophotometry of "biuret" complexes as a method for the investigation of albumen. V. Obtaining of [illegible] (alanyl-alanyl-tetra-glycine) and its biuretic complex. p. 1843

The method proposed by [illegible] was on the basis of synthesis. An increase of amino-acids in [illegible] was the result of interaction of the hydrochloride of carbo-benzoxy-[illegible] [illegible] and [illegible]. [illegible] were obtained [illegible]-triglycyl-glycine and alanyl-alanyl-tetraglycine. The spectro-photometric curve of the biuretic complex [illegible] differ very little from the curve of [illegible].

Lab. of the Chemistry of Albumen, Moscow State University, [illegible], [illegible]

SO: Journal of General Chemistry (USSR) 18, ([illegible]) [illegible]

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001341200017-6

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Ch

Biuret reaction. M. I. Pickhan and N. I. Gavrilov. *Uspekhi Khim.* 17, 85-95(1948).—Review with 19 references. G. M. Kosolapoff

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001341200017-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001341200017-6

11A

CA

No. 10,

Spectrophotometry in the visible range as a method for investigating proteins and polypeptides. M. I. Plekhan. *Vestnik Moskov. Univ.* 3, 141-56(1948). [illegible] 43 6249. A discussion of data already published. It is concluded that proteins consist of tripeptide units (and a few tetrapeptide units) bound together by 1,4-piperazine groups. The linkages are double bonds between N and C atoms 2 and 5 of the piperazine ring. I. P. D.

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001341200017-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001341200017-6

PLEKHAN, M.I.

[redacted]

Study of the cupric biuret complex of rabbit muscle proteins and their degradation products [with summary in English]. Vop.med.khim. 3 no.2:102-108 Mr-Ap '57. (MLRA 10:7)

1. Laboratoriya Ministerstva zdravookhraneniya SSSR, Moskva.
(MUSCLE PROTEINS
cupric biuret complex of rabbit musc. proteins, spectrophotometry of complexes & their enzymic degradation products (Rus))

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001341200017-6

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25

PLEKHAN M. I.

The optimum conditions of wool scouring. S. S. Rakhlina and M. I. Plekhan. *Sherstyanoe Jelo* 1935, No. 4, 19-23, Nos. 4-5, 17-23.—The fats remaining on the wool after treatment in the successive scouring tanks have lower acetyl values and higher I values; the unsaponifiable matter, the acid value and the sapon. value are unchanged. The supposition that the high-melting fats remain in the wool at the end of the scouring is disproved. Removal of fat from wool is best accomplished with soap-soda solns. producing stable emulsions. The soap forms absorption films on the surface of the fat drops and creates in the soln. a concn. corresponding at least to the satn. limit of the surface layer. Soda forms soaps with the free acids of the wool, maintaining the soap introduced into the tank at optimum dispersion at a definite *p*H value of the medium. The optimum concns. of the scouring liquor are soap equiv. to 0.8-0.9 g. fat acids and soda 3-5 g. per l.

B. V. Shvartzberg

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001341200017-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001341200017-6

NIKOLAYEV, S.I.; IL'IN, A.M.; SKAKUN. G.P.; PLEKHANOV, G.V.; SHUL'GIN, B.M.

Large-scale blasting of blocks at the "magnetitovaia" Mine. Trudy Inst.gor.dela UFAN SSSR no.7:87-94 '63. (MIRA 17:3)

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001341200017-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001341200017-6

PLEKAVICHENE, A.L., mladshiy nauchnyy sotrudnik

Study of the latent time for flexing and blinking reflexes and for a fever reaction in experimental tuberculosis; preliminary report. K izuch.roli nerv.sist.v pat., immun.i lech.tub. no.2: 80-83 '61. (MIRA 15:10)

1. Iz laboratorii eksperimental'noy patologii terapii (zav. - G.S.Kan) Leningradskogo nauchno-issledovatel'skogo instituta tuberkuleza i kafedry obshchey patologii (zav. - prof. P.N. Veselkin) Gosudarstvennogo instituta dlya usovershenstvovaniya vrachey.

(TUBERCULOSIS) (REFLEXES) (FEVER)

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APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001341200017-6

PLEKAVICHENE, A.L., aspirant

Effect of immunization and subsequent superinfection from a Mycobacterium tuberculosis culture on defense exteroceptive conditioned reflexes in rabbits. K izuch.roli nerv.sist.v pat., immun.i lech.tub. no.2:288-297 '61. (MIRA 15:10)

1. Iz laboratorii eksperimental'noy patologii i terapii (zav. - G.S.Kan) Leningradskogo instituta tuberkuleza (dir. - prof. A.D.Semenov) i kafedry obshchey patologii (zav. - prof. P.N. Veselkin) Gosudarstvennogo instituta dlya usovershenstvovaniya vrachey.

(CONDITIONED RESPONSE) (TUBERCULOSIS) (IMMUNITY)

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APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001341200017-6

PLEKARNIAK, Kryspin

ZAJACZKOWSKA, Jadwiga; HERYNG, Kazimierz; KLOTT, Maria; KRAKOWKA, Pawel; LANGE, Jadwiga; PLEKARNIAK, Kryspin; ZYCH, Dobieslaw

Effect of chemotherapy on the indications for pneumothorax treatment and on early complications. Gruzlica 24 no.8:707-718 Aug 56.

1. Z Oddzialow ftyzjatrycznych Instytutu Gruzlicy Kierownik: doc. dr. W. Jaroszewicz. Dyrektor: prof. dr. Janina Misiewicz.
(TUBERCULOSIS, PULMONARY, ther.
chemother., eff. on indic. for artif. pneumothorax & on early compl.)
(PNEUMOTHORAX, ARTIFICIAL
eff. of chemother. on indic. for pneumothorax)

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001341200017-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001341200017-6

PLEKAHNOV, G.F.; VASIL'YEV, N.V.; ZHURAVLEV, V.K.; KOVALEVSKIY, A.F.

Polarization effect caused by the fall of the Tunguska meteorite. Izv. vys. ucheb. zav.; fiz. no.5:177-179 '63. (MIRA 16:12)

1. Nauchno-issledovatel'skiy institut pri Tomskom politekhnicheskom institute imeni S.M.Kirova, Sibirskiy fiziko-tekhnicheskiy institut pri Tomskom gosudarstvennom universitete imeni V.V.Kuybysheva i Tomskiy meditsinskiy institut.

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APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001341200017-6

L 19673-65

ACCESSION NR: AP4045662

2

built in Poland. Several experiments requiring low power have been shifted to MARYLA, thus making it possible to run EWA round the clock on full power (in 1962 utilization was 88 hours per week). EWA has been used for training reactor operators and in work leading to many MSc and PhD degrees. There has been collaboration with foreign reactor centers and with the United Institute for Nuclear Research (Dubna, USSR). Two charts showing utilization of EWA are presented. Orig. art. has: 4 figures.

ASSOCIATION: Institute of Nuclear Research, Warszawa-Swierk

SUBMITTED: 00 ENCL: 00 SUB CODE: NP

NO REF SOV: 00 OTHER: 000

Card 3/3

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001341200017-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001341200017-6

L 19673-65

ACCESSION NR: AP4045662

other equipment (all Polish-made) make it possible to conduct research on crystal and magnetic neutron structure analysis, neutron-phonon, and neutron-magnon interactions, microdynamics of molecules, fast neutron induced damage in semiconductors, neutron resonance scattering, (n, γ) reactions (including short-lived isotopes), tri-partition of U-235, neutron diffusion, and neutron flux and spectra measurements. Irradiation facilities in the reactor make it possible to conduct activation analysis, to study the chemistry of hot atoms, and to produce radio isotopes widely used in Poland in the physical and chemical sciences, the life sciences, and in industry. EWA is also the object of extensive studies, changes, and improvements, such as mechanical and ion-exchange filters for the first cooling circuit, corrosion studies, automatic control of slow reactivity changes, et cetera. Changes are being introduced to meet the actual and constantly varying requirements of users. The power of the reactor is to be increased to 4 Mw in 1964 and plans have been made to reach 10 Mw by 1966. A flexible and inexpensive zero power reactor MARYLA which uses the same fuel elements as the EWA has been put into operation, in the same reactor hall. This reactor and a similar reactor ANNA (also located at Swierk) were designed and

Card 2/3

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L 19673-65 EWT(m)/EPF(c)/EPF(n)-2/EPR Pr-4/Ps-4/Pu-4 AEDC(b)/SSD/
BSD/AFWL

ACCESSION NR: AP4045662 P/0046/64/009/07-/0511/0522

AUTHOR: Aleksandrowicz, J. (Aleksandrovich, Ye.); Buras, B.; Plejewski, R. (Pleyevski, R.); Siekierski, S. (Sekerski, S.)

TITLE: Six years of utilization of the Polish research reactor "EWA"

SOURCE: Nukleonika, v. 9, no. 7-8, 1964, 511-522

TOPIC TAGS: nuclear reactor, reactor utilization, Poland, EWA

ABSTRACT: The Polish research reactor EWA at Swierk (2Mw, enriched uranium, light water moderated and cooled, with an average thermal neutron flux of 10^{13} neutrons mm^2-sec), received from the USSR, became critical in 1958. The nine horizontal experimental channels and the thermal column are used for research in the fields of solid state, nuclear, and reactor physics. Three triple-axis neutron crystal spectrometers, a cold neutron unit (beryllium filter and a slow chopper with curved slits), three slow choppers, a fast chopper, special apparatus for in-pile irradiation, a pile oscillator, and

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APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001341200017-6

POLAND/Chemical Technology - Chemical Products and Their Application, Part 2. - Chemical-Technological Questions of Nuclear Technology. H-7

Abs Jour : Ref Zhur - Khimiya, No 14, 1958, 47305

Author : Romuald Plejewski
Inst : -
Title : Production of Radioisotopes in Poland.

Orig Pub : Nukleonika, 1957, 2, No 4, 631-640

Abstract : No abstract.

Card 1/1

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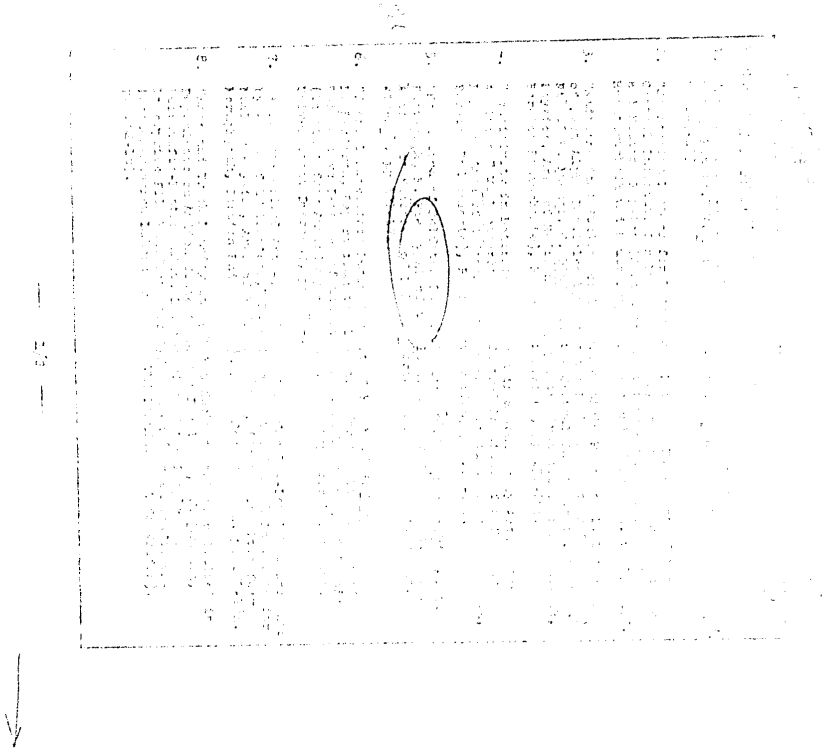
APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001341200017-6

PIEJEWSKI, R.



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APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001341200017-6

S/081/62/000/001/038/067
B168/B101

AUTHORS: Kucharski, M., Plejewski, R.

TITLE: A method of producing carrier-free sulfur S^{35} in the form of $H_2S^{35}O_4$

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 1, 1962, 329, abstract 1K5 ([Referat.] Inst. badan jądrow. PAN, no. 192/XIII, 1960)

TEXT: Radioactive S^{35} is produced on a commercial scale in the form of H_2SO_4. In this case the H_2SO_4 is obtained without carrier by irradiation of a KCl target with a neutron flux (10^{13} neutr/cm^2·sec) for a period of four weeks. The main product is obtained from the reaction $Cl^{35}(n,p)S^{35}$. In addition to S^{35} irradiation produces K^{42}, P^{32}, Cl^{36}, and Cl^{38}; of these the sulfur and phosphorus immediately oxidize and take the form of ions PO_4^{3-} and SO_4^{2-}, whilst the K^{42} and Cl^{38}, which have a very short half-life, virtually disappear. After the irradiated target has been

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APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001341200017-6

G/0025/64/000/001/0038/0040

ACCESSION NR: AP4038571

AUTHOR: Plejewski, R.; Kucharski, M.

TITLE: New method for producing carrier-free H sub 2 S sup 35 O sub 4 on a production scale

SOURCE: Kernenergie, no. 1, 1964, 38-40

TOPIC TAGS: radioisotope, production, H sub 2 S sup 35 O sub 4, carrier-free, separation, neutron, radiation, reactor, KCl

ABSTRACT: S^{35} is obtained by neutron irradiation of KCl in a reactor. Two chromatographic columns are used to separate S^{35} from the irradiated target. The first is charged with Al_2O_3 and serves to separate sulfur from P^{32}, Cl^{36}, Cl^{38}, K^{42}, and the main portion of KCl. The second one is charged with a cation exchanger in H-form to separate sulfur from all cationic impurities including K^+-rosidues, and assures the presence of sulfur as H_2SO_4. The column parameters are selected so that a single application of the two columns suffices. Carrier-free, S^{35}-tagged H_2SO_4 in 10^{-2} - 10^{-3} n HCl is obtained of purity greater than 99%. The specific activity is 35 mc/ml, and the pH is 2-3. The radioisotope may be used for medical

Card 1/2

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APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001341200017-6

ALEKSANDROWICZ, J.; BURAS, B.; PLEJEWSKI, R.; SIEKIERSKI, S.

Six years of utilization of the Polish research reactor Ewa.
Nukleonika 9 no.7/8:511-522 '64

1. Institute of Nuclear Research, Warszawa-Swierk.

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001341200017-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001341200017-6

POLAND/Nuclear Physics -- Installations and Instruments. Methods of Measurement and Research C-2

Abs Jour : Ref Zhur - Fizika, No 9, 1958, No 19771

Author : Flojewski Romuald
Inst : Not Given
Title : Production of Radioactive Isotopes in Poland.

Orig Pub : Nukleonika, 1957, 2, No 4, 631-640

Abstract : In view of the imminent start of the operation of the experimental reactor in Poland, a technology has been developed for the production of many isotopes, namely Co^{60}, Ir^{192}, Tl^{204}, Tm^{170}, Au^{189}, I^{131}, P^{32}, S^{35}, C^{14}, and T.

Card : 1/1

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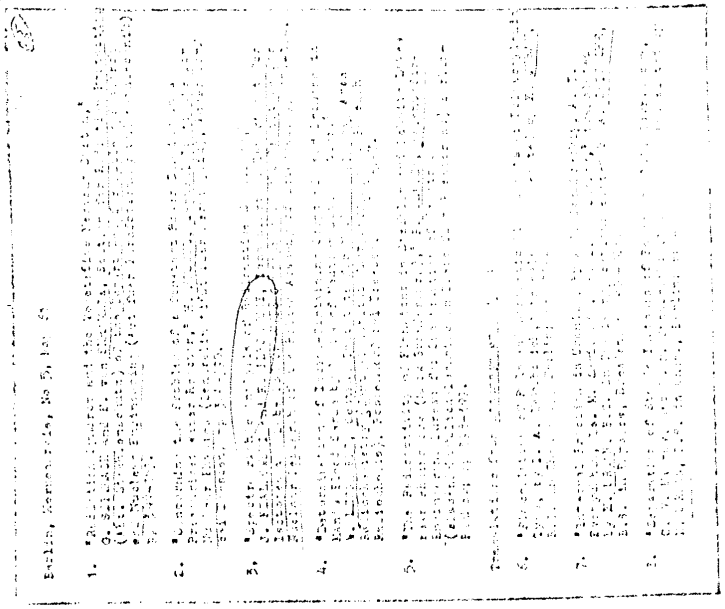
PLEVEWSKI, R.



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Pleines, E.W.

3

M.A. YOUTZ
2 copies

V 19281* The Engineering Properties of Synthetic Resin Adhesives and the Strength of the Bonds They Produce With Aluminum. According to Recent Foreign Information, Kunsthara-Klebstoffe und Aluminium-Klebverbindungen. Die mechanisch-technologischen Eigenschaften von Kunsthara-Klebstoffen und die Festigkeit von Aluminium-Klebverbindungen im Lichte neuer ausländischer Erkenntnisse. (German.) E. W. Pleines, Aluminium (Budapest), v. 32, no. 5, May 1956, p. 257-266.

Deals with strength of bonded light-metal joints under static and cyclic stressing, and the behavior of bonded aircraft components under cyclic stressing. In static strength tests, large bonded structures behaved better than rivetted ones. Tables, graphs, diagrams. 9 ref.

metal matter

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APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001341200017-6

PLEINEROVA-HLADKA, N.

"A survey of some opinions on the theory and systematics of metasomatic processes in the petrogenesis."

VESTNIK, ustredni ustav geologicky, Prague, Czechoslovakia, Vol. 34, No. 3, 1959.

Monthly List of East European Accessions (EEAI), LC, Vol. 8, No. 8, August 1959.
Uncl.

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APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001341200017-6

COUNTRY : Czechoslovakia D
CATEGORY :

ABS. JOUR. : RZKhim., no. 1959, No. 85780

AUTHOR : Pleinerova-Hladka, H.; Suk, M.
INST. : Central Institute of Geology
TITLE : A Review of Some Opinions Concerning the Theory and Systematics of Metasomatic Processes in Petrogenesis.
ORIG. PUB. : Vestn. Ustred. ustavu geol., 1958, 33, No 3, 200-214
ABSTRACT : No abstract.

CARD:

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PLEINER, RADOMIR

TECHNOLOGY

PLEINER, RADOMIR Zaklady slovanskeho zelezarskeho hutnictvi v ceskych zemich; vyvoj prime vyroby zeleza z rud od doby halstatske do 12. veku. Praha, Nakl. Ceskoslovenske akademie ved, 1958. 335 p. (Cesjiskivenska akademie ved. Monumenta archaeologica, 6)

Monthly List of East European Accessions (EEAI) LC VOL. 8, No.2

May 1959, Unclass

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001341200017-6

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PLEINER, RADOMIR

TECHNOLOGY

PLEINER, RADOMIR. Zaklady slovanskeho elezarskeho hutnictvi v ceskych zemich; vyvoj prime vyroby zeleza z rud od doby halstatske do 12. veku. Praha, Nakl. Ceskoslovenske akademie ved. 1956. 339 p. (ceskoslovenska akademie ved. Monumenta archaeologica, 6)

Monthly List of East European Accessions (EEAI), LC, Vol. 6, no. 5, May 1959, Unclass.

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001341200017-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001341200017-6

PLEINER, Radomir, dr; RADWAN, Mieczyslaw, doc.

Polish-Czechoslovak experiments in iron smelting in kilns from the Roman period. Kwart hist nauki i tech 7 no.3:307-320 '62.

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001341200017-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001341200017-6

RADWAN, Mieczyslaw; PLEINER, Radomir

Experiment iron smeltirgs .. kilns of the Gory Swietokrzyskie type. Kwart hist nauki i tech 7 no.4:589-590 '62.

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001341200017-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001341200017-6

1ST AND 2ND ORDERS

PROCESSES AND PROPERTIES INDEX

3RD AND 4TH ORDERS

15

Investigations on the seed-preserving influence of copper sulfate-mercuric chloride mixtures. D. Rávy and I. Fleidell. *Kísérlet. Közlemények* 32, 299-304(1929). The addn. of $HgCl_2$ (equiv. to 0.3-2.8% Hg) increased the influence of $CuSO_4$ in lengthening the period during which germination is possible. The insecticidal and germicidal action will be investigated later. S. S. de Finály

COMMON ELEMENTS

OPEN

MATERIALS INDEX

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001341200017-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001341200017-6

BARBORIK, M.; HANSLIAN, L.; NAVRATIL, J.; KRC, C.; Techn. spoluprace PLEICHINGEROVA, O.

Survey of health conditions among workers employed in the production of superphosphates. Prac. lek. 14 no.2:75-81 Mr '62.

1. I interni klinika UP v Olomouci, prednosta prof. MUDr. P. Lukl - ordinariat pro choroby z povolani Krajska hygienicko-epidemiologicka stanice Ostrava, pracoviste Olomouc, odbor hygieny prace, vedouci MUDr. P. Pachner Otorinolaryngologicka klinika UP v Olomouci, prednosta doc. MUDr. J. Chvojka Ustredni rtg ustav FN v Olomouci, prednosta MUDr. J. Doubravsky.

7 (PHOSPHATES toxicol) (OCCUPATIONAL DISEASES etiol) (DUST)

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ILLEGIBLE

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APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001341200017-6

HANSLIAN, L.; PLEICHINGEROVA, O.

Cyanogen chloride a hygienic problem. Cesk. hyg. 9 no.7:414-420 Ag '64.

1. Okresni hygienicko-epidemiologicka stanice, Olomouc.

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001341200017-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001341200017-6

PLEIC, Stipe, inz., major geodetske sluzbe

Third Congress of Geodetic Engineers and Geometers of Yugoslavia; Portoroz, October 24-27, 1962. Hidrograf god.33-34 '62.

Basis and contents of the new nautical chart. 199-207

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001341200017-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001341200017-6

FIEIC, Szipe, dipl. inz., major geodetske sluzbe

Construction of coast charts. Hiergraf god:154-185 [illegible]

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001341200017-6

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PLEIC, Stipe

Base and content of the new nautical chart. Geod list 17 no. 4/6: 128-159 Ap-Je '63.

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PLEGUNOV, V. P.

G. K. BORESKOV, Ukr Khim Zhur, 1935, 10, 446-449

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PLEDHAN, A. I.

Pledhan, A. I.; Man, A. N.

"Spectrophotometry of Biuret Complexes as a Method of Investigation of Proteins. IX. Spectrophoto-metric Studies of Biuret Complexes of Polypeptides and of Protein with Nickel and Cobalt." (p. 2105)

SO: Journal of General Chemistry, (Zhurnal Obshchei Khimii), 1950, Vol. 20, No. 12.

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Plecity-Czyzewska, Zofia

KUS, Henryk; KEDRA, Henryk; PLECITY-CZYZEWSKA, Zofia.

Methods of ascending phlebography of the lower extremity. Polski tygod. lek. 10 no.51:1633-1637 19 Dec 55.

1. Z III Kliniki Chirurgicznej Akademii Medycznej we Wroclawiu; kierownik: doc. dr. Zdzislaw Jezioro i z Kliniki Radiologicznej Akademii Medycznej we Wroclawiu; kierownik: doc. dr. Zbigniew Kubrakiewicz. Wroclaw, pl. Grunwaldzki 82 m. 5.

(ANGIOGRAPHY,
phlebography, ascending of leg (Pol))
(LEG, blood supply,
phlebography, ascending (Pol))

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S/194/62/000/012/099/101
D271/D308

AUTHORS: Seidl, Rudolf and Plecitý, Václav

TITLE: Criterion forming circuit for register impulsing

PERIODICAL: Referativnyy zhurnal, Avtomatika i radioelektronika, no. 12, 1962, 20, abstract 12-8-39 1 (Czech. pat., cl. 21a3, 32/20, no. 98135, Jan. 15, 1961)

TEXT: An automatic exchange circuit is patented, intended for control of register impulsing. It consists of two relay sets, the first of which counts received pulse trains and the other counts pulse trains sent from the register via the appropriate contacts of both sets. Relay contacts of the first set, dependent on the number of received digits, are switched in such a manner that a galvanic connection is established between the input and the contact signifying the number of received digits. Depending on the number of digits sent out, relay contacts of the second set form a galvanic connection between the output and the contacts which record how many of the received digits still remain to be transmitted

Card 1/2

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