KOK, I.P.; OPOL'SKIY, A.F.

Comparative characteristics of nucleotide composition of desoxyribonucleic acid isolated by various methods from insects and mammals. Biokhimiia 25 no.6:1073-1080 N-D '60. (MIRA 14:5)

1. Institute of Zoology, Academy of Sciences of the Ukrainian U.S.S.R., Kiyev.
(NUCLEOTIDES) (DESOXYRIBONUCLEIC ACID)

CPOL'SKIY, A.F. [Opol's'kyi, A.F.]

Study of the possibility of changing the inherited characters in hens by the transfusion of heterogeneous blood. Dop. AN URSR no.2: 261-263 '64. (MIRA 17:5)

1. Institut mikrobiologii AN UkrSSR. Predstavleno akademikom AN UkrSSR V.G.Kas'yanenko [Kas'ianenko, V.H.].

OPOL'SKIY, A.F. [Opol's'kyi, A.F.]

Compatibility of blood in bens. Dop. AN URSR no.3:398-400 '64. (MIRA 17:5)

1. Institut zoologii AN UkrSSR. Predstavleno akademikom AN UkrSSR V.G. Kas'yanenko [Kas'ianenko, V.H.].

KUTASHOV, P.D.; LIVSHITS, B.S.; OPOL'SKIY, Ye.K.; GOLUBTSOV, I.Ye., otv. red.; BALAKIREV, A.F., red.; SHEFER, G.I., tekhn.red.

[Universal ten-level step-by-step automatic telephone exchange with a capacity of 50 to 100 numbers designed for metropolitan and rural use] Universal'naia [sel'skaia i uchrezhdencheskaia] dekadno-shagovaia ATS na 50/100 nomerov; informatsionnyi sbornik. Moskva, Gos.izd-vo lit-ry po voprosam sviazi i radio, 1960. 147 p. (MIRA 13:11)

(Telephone, Automatic)

DERI, I. [Döry, I.]; GERI, I.; SABO, G. [Szabó, G.]; OPOSZKY, P. [Oposzky, P.]

Synthesis of progesterone from erosterin. Med.prom. 13 no.10:14-20 O '59. (MIRA 13:2)

1. Zavod farmatsevticheskikh i khimicheskikh preparatov "Khinoin" (Budapesht) i Institut organicheskoy khimii Tekhnicheskogo universiteta (Budapesht).
(ERGOSTEROL) (PROGESTERONE)

GORCS, J.; OPPE, E.

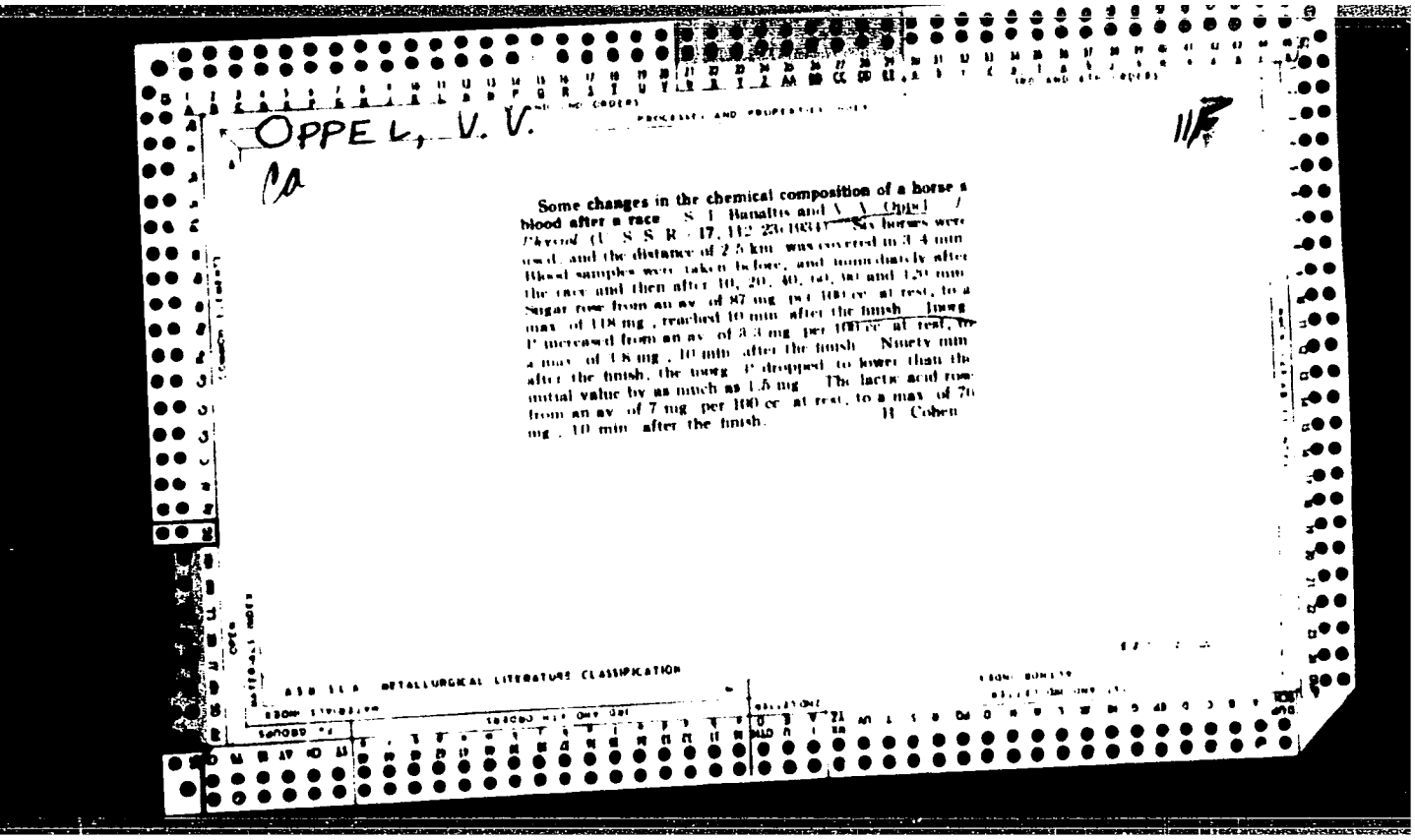
Combined cancer prevention test in gynecology. Magy. noorv. lap. 14 no.7:219-220 July 1961. (CLML 20:11)

1. Doctors. 2. Obstetric and Gynecological Clinic (Director Prof. Dr. Laszlo Lajos), Pacs Medical University.

OPPEAN, A.

A fst method of determining the machineability of metals. p. 44.
(METALURGIA SI CONSTRUCTIA DE MASINI. Vol. 9, no. 6, June 1957, Rumania)

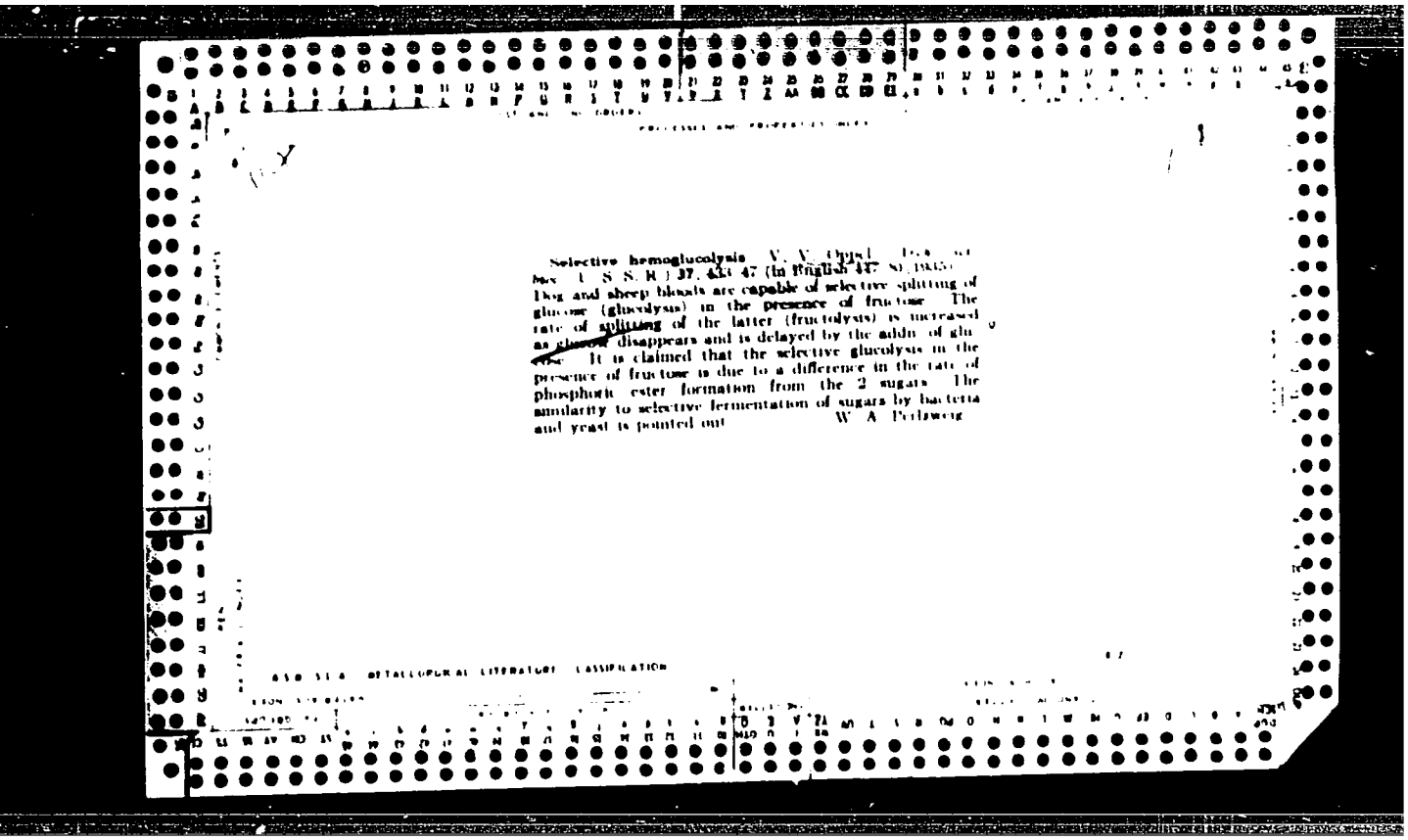
SO: Monthly List of East European Accessions (EEAL) LC. Vol. 6, No. 12, Dec. 1957
Uncl.



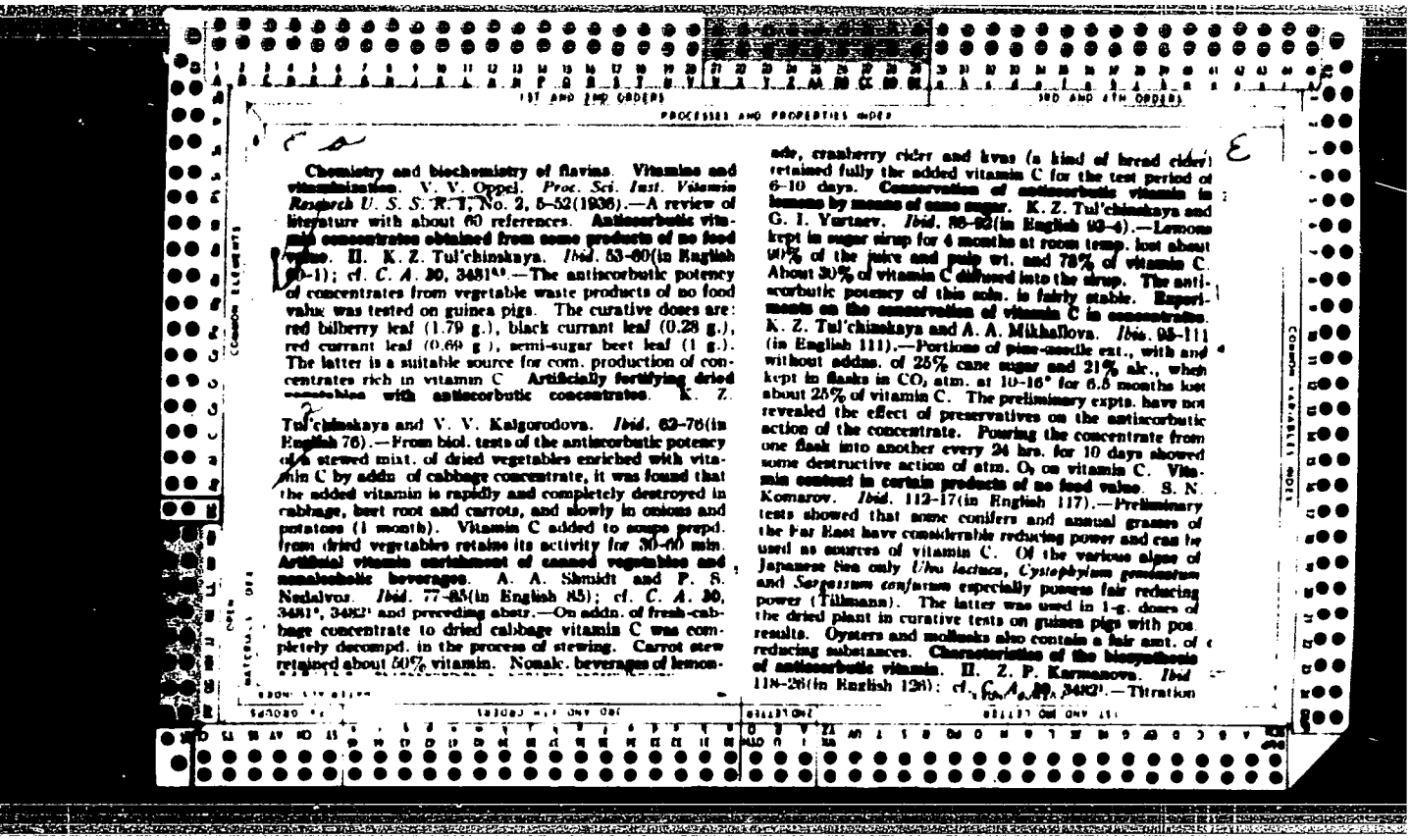
OPPEL, V. V.

CA

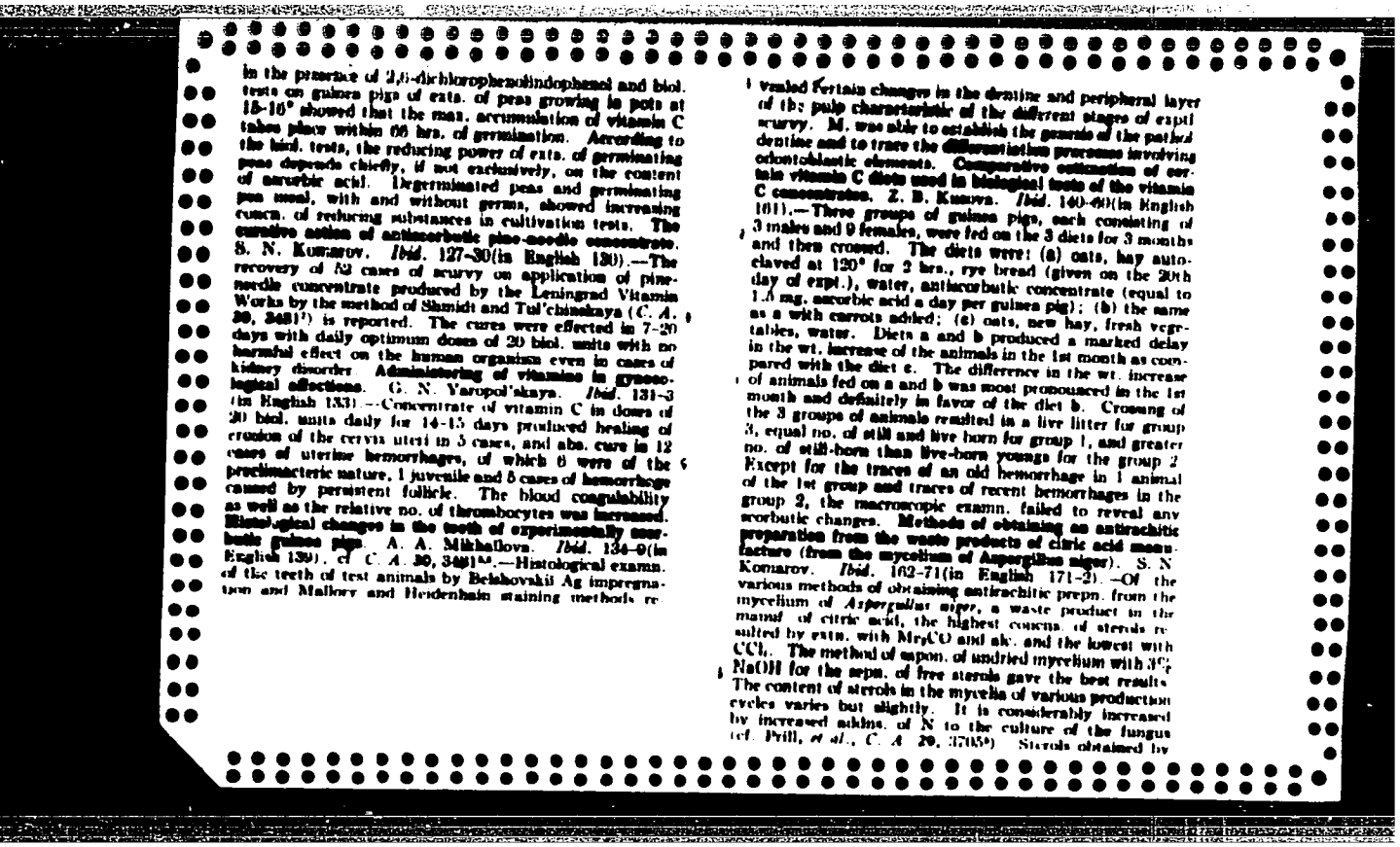
Some changes in the chemical composition of a horse's blood after a race. S. I. Banaitis and V. V. Oppel. Zhurnal (U. S. S. R.) 17, 112-23 (1934). Six horses were raced, and the distance of 2.5 km. was covered in 3.4 min. Blood samples were taken before, and immediately after the race and then after 10, 20, 40, 60, 90 and 120 min. Sugar rose from an av. of 87 mg. per 100 cc. at rest, to a max. of 118 mg., reached 10 min. after the finish. Inorg. P increased from an av. of 3.3 mg. per 100 cc. at rest, to a max. of 4.8 mg., 10 min. after the finish. Ninety min. after the finish, the inorg. P dropped to lower than the initial value by as much as 1.5 mg. The lactic acid rose from an av. of 7 mg. per 100 cc. at rest, to a max. of 70 mg., 10 min. after the finish. H. Cohen



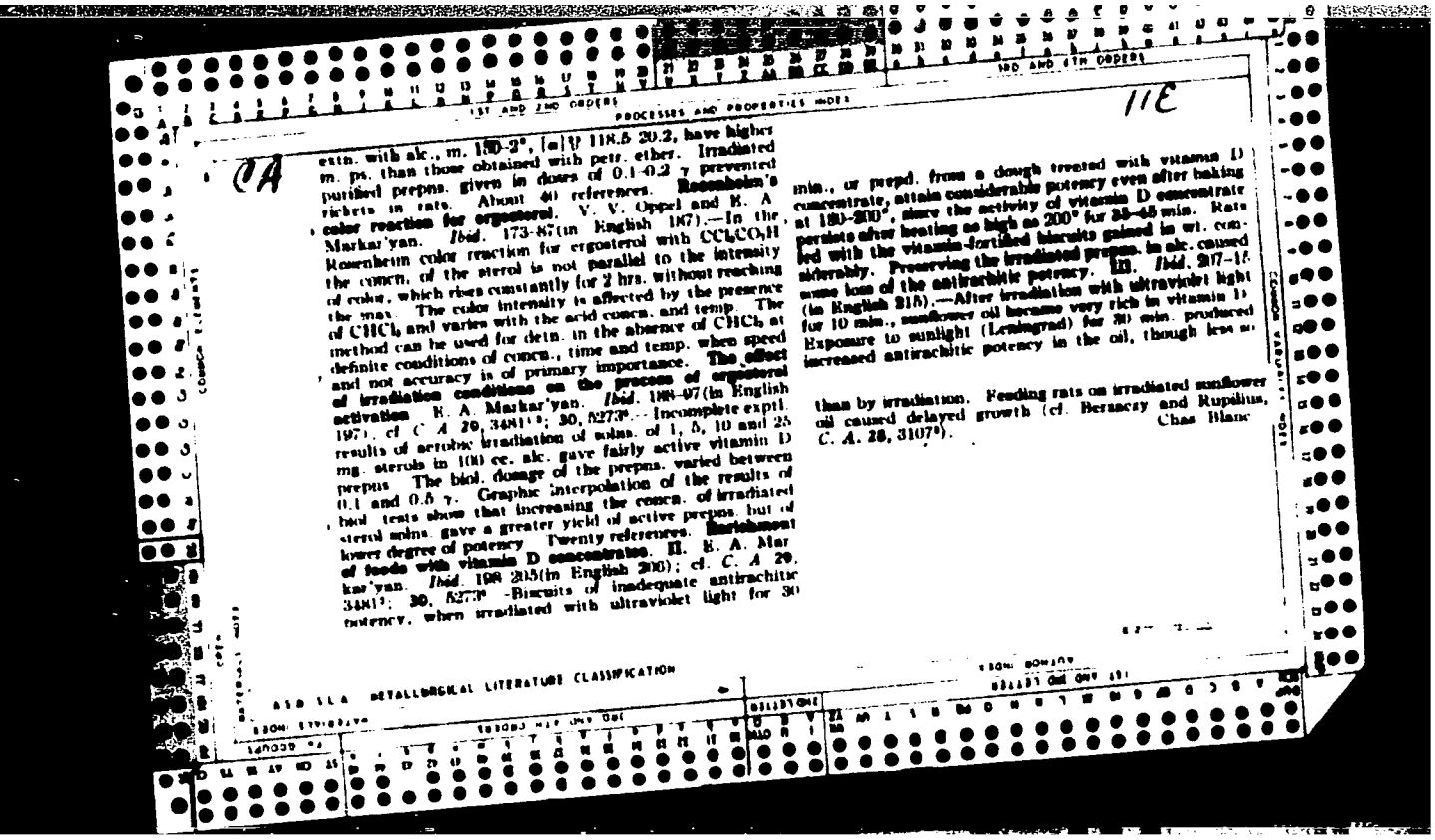
Selective hemoglucolysis V. V. Ognev [illegible] Doklady Akad. Nauk S. S. S. R. 37, 43-47 (in English 47-8) (1942). Dog and sheep bloods are capable of selective splitting of glucose (glucolysis) in the presence of fructose. The rate of splitting of the latter (fructolysis) is increased as glucose disappears and is delayed by the addn. of glu[illegible]. It is claimed that the selective glucolysis in the presence of fructose is due to a difference in the rate of phosphoric ester formation from the 2 sugars. The similarity to selective fermentation of sugars by bacteria and yeast is pointed out. W. A. Perlzweig



Chemistry and biochemistry of flavins. Vitamins and vitaminization. V. V. Oppel. *Proc. Sci. Inst. Vitamin Research U. S. S. R.* 1, No. 2, 5–52(1936).—A review of literature with about 60 references. Antiscorbutic vitamin concentrates obtained from some products of no food value. II. K. Z. Tul'chinskaya. *Ibid.* 53–60(in English 60–1); cf. *C. A.* 30, 3481⁴.—The antiscorbutic potency of concentrates from vegetable waste products of no food value was tested on guinea pigs. The curative doses are: red bilberry leaf (1.79 g.), black currant leaf (0.28 g.), red currant leaf (0.69 g.), semi-sugar beet leaf (1 g.). The latter is a suitable source for com. production of concentrates rich in vitamin C. Artificially fortifying dried vegetables with antiscorbutic concentrates. K. Z. Tul'chinskaya and V. V. Kalgorodova. *Ibid.* 62–76(in English 76).—From biol. tests of the antiscorbutic potency of a stewed mixt. of dried vegetables enriched with vitamin C by addn. of cabbage concentrate, it was found that the added vitamin is rapidly and completely destroyed in cabbage, beet root and carrots, and slowly in onions and potatoes (1 month). Vitamin C added to soups prepd. from dried vegetables retains its activity for 30–60 min. Artificial vitamin enrichment of canned vegetables and nonalcoholic beverages. A. A. Shmidt and P. S. Nedalvos. *Ibid.* 77–85(in English 85); cf. *C. A.* 30, 3481⁸, 3482¹ and preceding abstr.—On addn. of fresh-cabbage concentrate to dried cabbage vitamin C was completely decompd. in the process of stewing. Carrot stew retained about 50% vitamin. Nonalc. beverages of lemonade, cranberry cider and kvas (a kind of bread cider) retained fully the added vitamin C for the test period of 6–10 days. Conservation of antiscorbutic vitamin in lemons by means of cane sugar. K. Z. Tul'chinskaya and G. I. Yartsev. *Ibid.* 86–92(in English 93–4).—Lemons kept in sugar syrup for 6 months at room temp. lost about 50% of the juice and pulp wt. and 78% of vitamin C. About 30% of vitamin C diffused into the syrup. The antiscorbutic potency of this soln. is fairly stable. Experiments on the conservation of vitamin C in concentrates. K. Z. Tul'chinskaya and A. A. Mikhallova. *Ibid.* 93–111 (in English 111).—Portions of pine-needle ext., with and without addns. of 25% cane sugar and 21% air., when kept in flasks in CO_2 atm. at 10–16° for 6.5 months lost about 25% of vitamin C. The preliminary expts. have not revealed the effect of preservatives on the antiscorbutic action of the concentrate. Pouring the concentrate from one flask into another every 24 hrs. for 10 days showed some destructive action of atm. O_2 on vitamin C. Vitamin content in certain products of no food value. S. N. Komarov. *Ibid.* 112–17(in English 117).—Preliminary tests showed that some conifers and annual grasses of the Far East have considerable reducing power and can be used as sources of vitamin C. Of the various algae of Japanese Sea only *Ulva lactuca*, *Cystophyllum gemmatum* and *Sargassum confusum* especially possess fair reducing power (Tillmans). The latter was used in 1-g. doses of the dried plant in curative tests on guinea pigs with positive results. Oysters and mollusks also contain a fair amt. of reducing substances. Characteristics of the biosynthesis of antiscorbutic vitamin. II. Z. P. Karmanova. *Ibid* 118–26(in English 126); cf. *C. A.* 30, 3482².—Titration



in the presence of 2,6-dichlorophenolindophenol and biol. tests on guinea pigs of oats, of peas growing in pots at 15-16° showed that the max. accumulation of vitamin C takes place within 66 hrs. of germination. According to the biol. tests, the reducing power of oats, of germinating peas depends chiefly, if not exclusively, on the content of ascorbic acid. Ungerminated peas and germinating pea meal, with and without germs, showed increasing concn. of reducing substances in cultivation tests. The curative action of antiscorbutic pine-needle concentrate. S. N. Komarov. *Ibid.* 127-30(in English 130).—The recovery of 82 cases of scurvy on application of pine-needle concentrate produced by the Leningrad Vitamin Works by the method of Shmidt and Tul'chinskaya (*C. A.* 30, 3481[1]) is reported. The cures were effected in 7-20 days with daily optimum doses of 20 biol. units with no harmful effect on the human organism even in cases of kidney disorder. Administering of vitamins in gynecological affections. G. N. Varopol'skaya. *Ibid.* 131-3 (in English 133).—Concentrate of vitamin C in doses of 20 biol. units daily for 14-15 days produced healing of erosion of the cervix uteri in 5 cases, and abs. cure in 12 cases of uterine hemorrhages, of which 6 were of the preclimacteric nature, 1 juvenile and 5 cases of hemorrhage caused by persistent follicle. The blood coagulability as well as the relative no. of thrombocytes was increased. Histological changes in the teeth of experimentally scorbutic guinea pigs. A. A. Mikhailova. *Ibid.* 134-9(in English 139). cf. *C. A.* 30, 3481[2].—Histological examn. of the teeth of test animals by Belshovskii Ag impregnation and Mallory and Heidenhain staining methods revealed certain changes in the dentine and peripheral layer of the pulp characteristic of the different stages of expti. scurvy. M. was able to establish the genesis of the pathol. dentine and to trace the differentiation processes involving odontoblastic elements. Comparative estimation of certain vitamin C diets used in biological tests of the vitamin C concentrates. Z. B. Kunova. *Ibid.* 140-60(in English 161).—Three groups of guinea pigs, each consisting of 3 males and 9 females, were fed on the 3 diets for 3 months and then crossed. The diets were: (a) oats, hay autoclaved at 120° for 2 hrs., rye bread (given on the 20th day of expt.), water, antiscorbutic concentrate (equal to 1.5 mg. ascorbic acid a day per guinea pig); (b) the same as a with carrots added; (c) oats, raw hay, fresh vegetables, water. Diets a and b produced a marked delay in the wt. increase of the animals in the 1st month as compared with the diet c. The difference in the wt. increase of animals fed on a and b was most pronounced in the 1st month and definitely in favor of the diet b. Crossing of the 3 groups of animals resulted in a live litter for group 3, equal no. of still and live born for group 1, and greater no. of still-born than live-born young for the group 2. Except for the traces of an old hemorrhage in 1 animal of the 1st group and traces of recent hemorrhages in the group 2, the macroscopic examn. failed to reveal any scorbutic changes. Methods of obtaining an antirachitic preparation from the waste products of citric acid manufacture (from the mycelium of Aspergillus niger). S. N. Komarov. *Ibid.* 162-71(in English 171-2).—Of the various methods of obtaining antirachitic prepn. from the mycelium of *Aspergillus niger*, a waste product in the manuf. of citric acid, the highest concns. of sterols resulted by extn. with $MeyCO$ and alc. and the lowest with CCl_4. The method of sapon. of undried mycelium with 3% NaOH for the sapn. of free sterols gave the best results. The content of sterols in the mycelia of various production cycles varies but slightly. It is considerably increased by increased addns. of N to the culture of the fungus (cf. Prill, *et al.*, *C. A.* 29, 3705[9]). Sterols obtained by



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11E

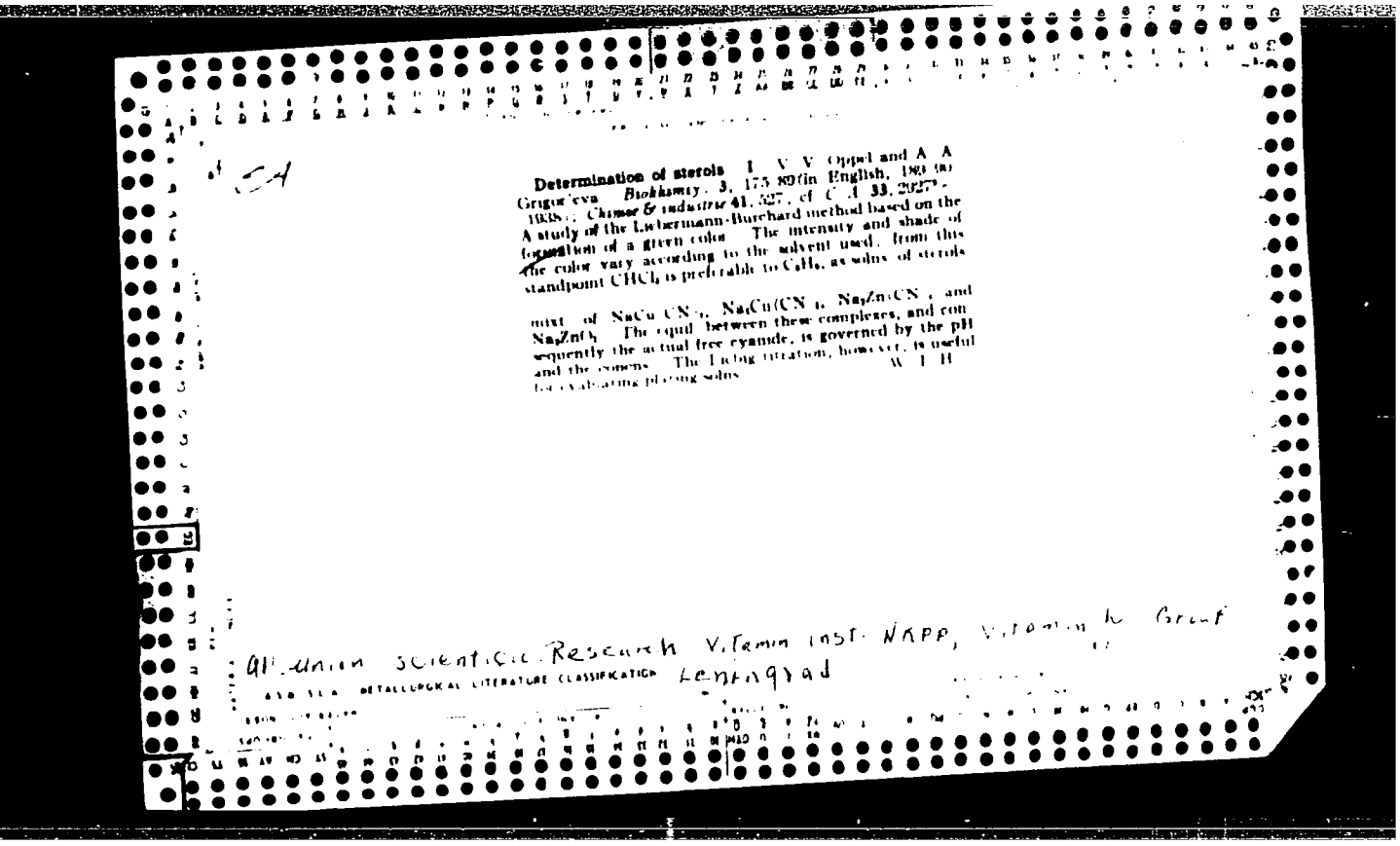
estn. with alc., m. 150-2°, $[\alpha]_D$ 118.5 20.2, have higher m. ps. than those obtained with petr. ether. Irradiated purified prepns. given in doses of 0.1-0.2 γ prevented rickets in rats. About 40 references. **Rosenheim's color reaction for ergosterol.** V. V. Oppel and E. A. Markar'yan. *Ibid.* 173-87(in English 187).—In the Rosenheim color reaction for ergosterol with CCl_3CO_2H the concn. of the sterol is not parallel to the intensity of color, which rises constantly for 2 hrs. without reaching the max. The color intensity is affected by the presence of $CHCl_3$ and varies with the acid concn. and temp. The method can be used for detn. in the absence of $CHCl_3$ at definite conditions of concn., time and temp. when speed and not accuracy is of primary importance. **The effect of irradiation conditions on the process of ergosterol activation.** E. A. Markar'yan. *Ibid.* 188-97(in English 197). cf. *C. A.* 29, 3481[1]; 30, 8273[9].—Incomplete expt. results of aerobic irradiation of solns. of 1, 5, 10 and 25 mg. sterols in 100 cc. alc. gave fairly active vitamin D preps. The biol. dosage of the preps. varied between 0.1 and 0.5 γ. Graphic interpolation of the results of biol. tests shows that increasing the concn. of irradiated sterol solns. gave a greater yield of active preps. but of lower degree of potency. Twenty references. **Enrichment of foods with vitamin D concentrates.** II. E. A. Markar'yan. *Ibid.* 198-205(in English 200); cf. *C. A.* 29, 3481[1]; 30, 8273[9].—Biscuits of inadequate antirachitic potency, when irradiated with ultraviolet light for 30 min., or prepd. from a dough treated with vitamin D concentrate, attain considerable potency even after baking at 180-200°, since the activity of vitamin D concentrate persists after heating as high as 200° for 35-45 min. Rats fed with the vitamin-fortified biscuits gained in wt. considerably. Preserving the irradiated preps. in alc. caused some loss of the antirachitic potency. III. *Ibid.* 207-15(in English 215).—After irradiation with ultraviolet light for 10 min., sunflower oil became very rich in vitamin D. Exposure to sunlight (Leningrad) for 30 min. produced increased antirachitic potency in the oil, though less so than by irradiation. Feeding rats on irradiated sunflower oil caused delayed growth (cf. Bernacky and Rupilius, *C. A.* 28, 3107[9]).

Chas Blanc

EPPEL', V.V., VLADIMIROV, G.E., DEDYULIN, I.M., KUDRYAVTSEV, N.A., & NAYKO, A.A.

Vpliv aklimatizatsiy do visokogirs'kogo klimatu na luzhno-kislotnu rivnovagu v krovi lyudey
(The effect of acclimatization to high mountain climate on the alkali-acid balance in human blood)
Eksperimental'na Meditsina, 2, 54-67, 1937

All-Union Institute of Exper'mental Medicine imeni A.M. Gor'kiy (VIEM)



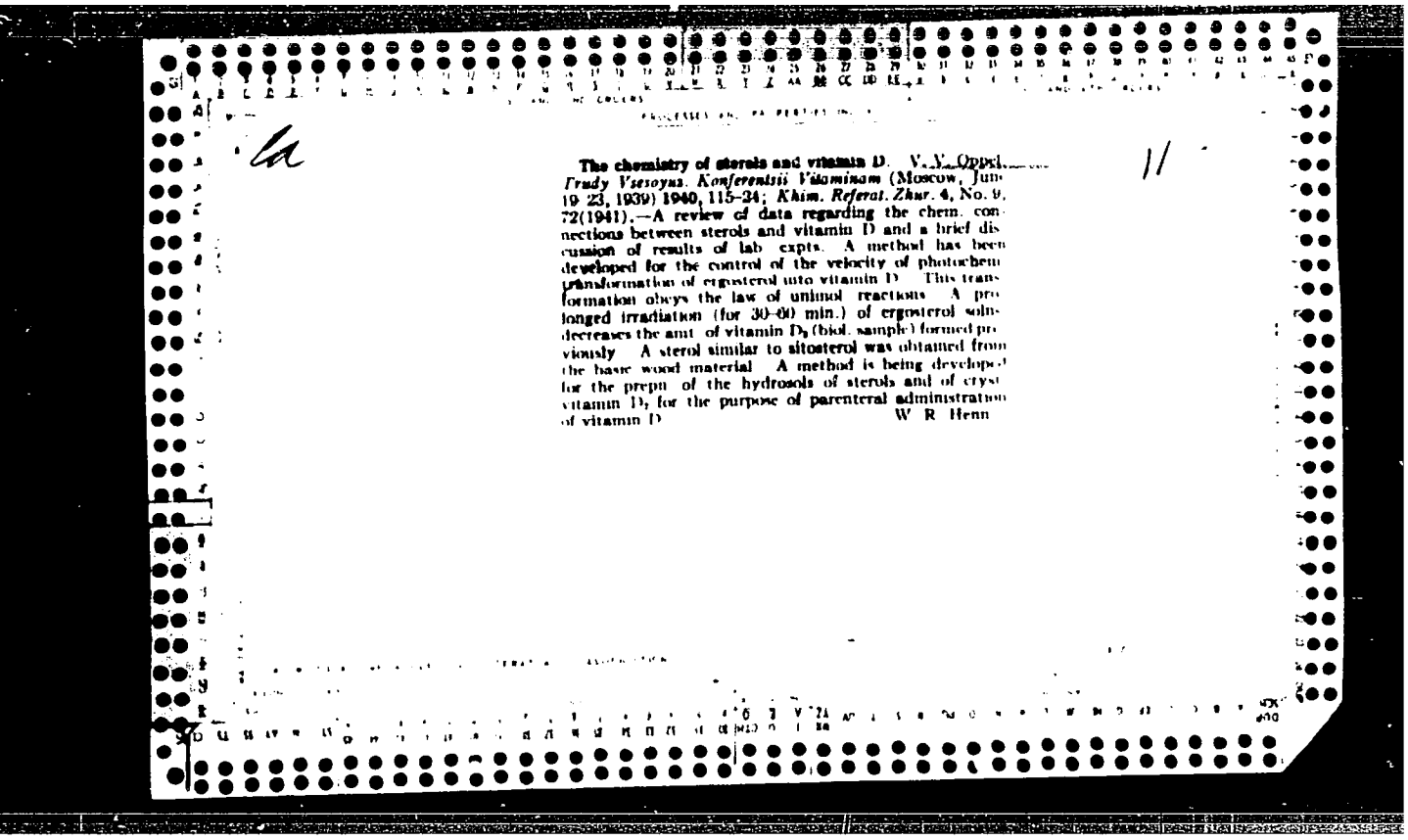
Determination of sterols I. V. V. Oppel and A. A. Grigor'eva. *Biokhimiya*, 3, 175-80 (in English, 180) (1938); *Chimie & industrie* 41, 527; cf. *C. A.* 33, 2027⁹. A study of the Liebermann-Burchard method based on the formation of a green color. The intensity and shade of the color vary according to the solvent used. From this standpoint $CHCl_3$ is preferable to C_6H_6, as solns. of sterols

mixt. of $NaCu(CN)_2$, $Na_2Cu(CN)_3$, $Na_2Zn(CN)_4$, and $Na_2Zn(OH)_4$. The equil. between these complexes, and consequently the actual free cyanide, is governed by the pH and the contents. The Liebig titration, however, is useful for evaluating plating solns.

W. T. H.

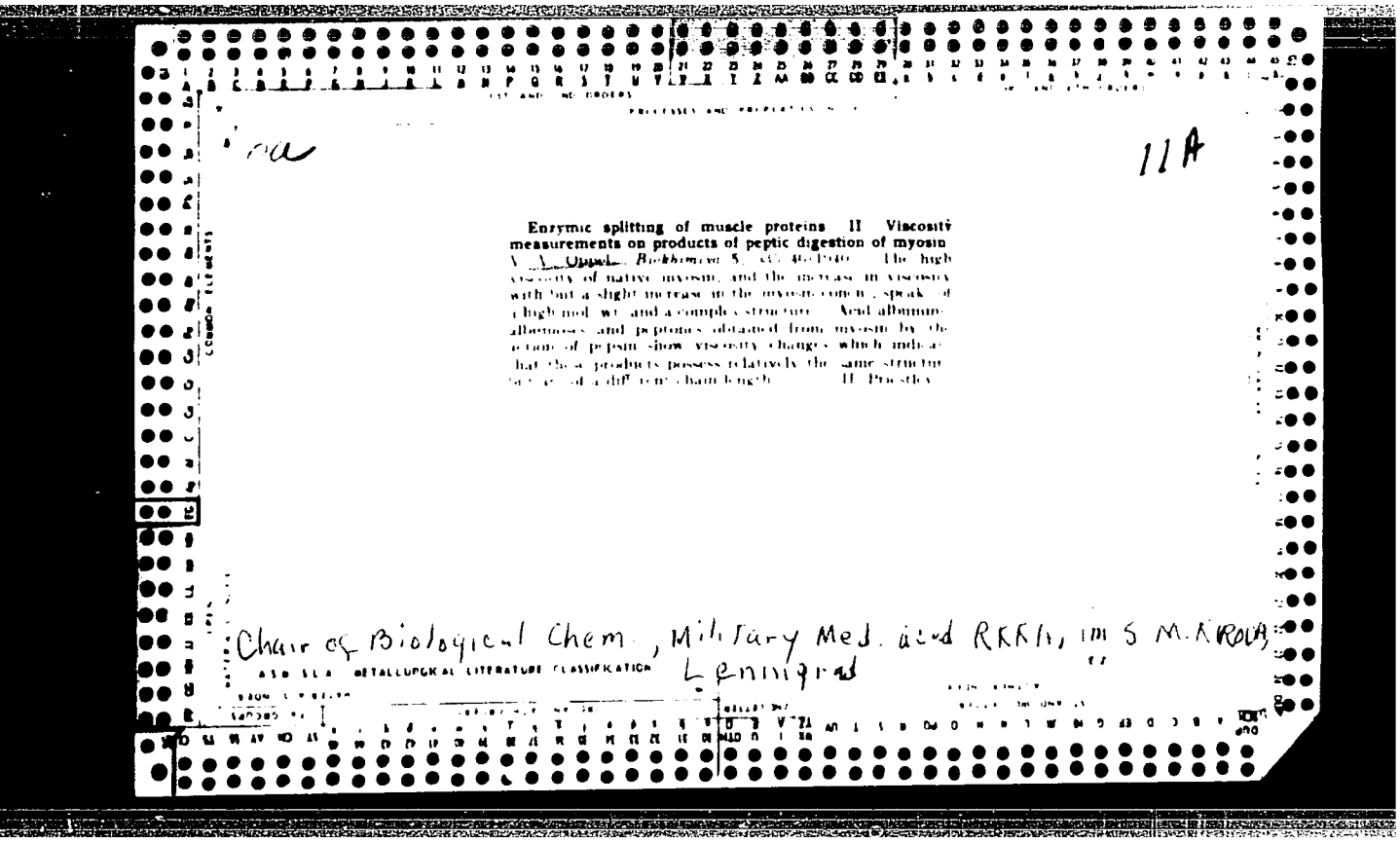
All-Union Scientific Research Vitamin Inst. NKPP, Vitamin K Brief

AND U.S.A. METALLURGICAL LITERATURE CLASSIFICATION Leningrad



The chemistry of sterols and vitamin D. V. V. Oppel. *Trudy Vsesoyuz. Konferentsii Vitaminam* (Moscow, June 19–23, 1939) 1940, 115–24; *Khim. Referat. Zhur.* 4, No. 9, 72(1941).—A review of data regarding the chem. connections between sterols and vitamin D and a brief discussion of results of lab. expts. A method has been developed for the control of the velocity of photochem. transformation of ergosterol into vitamin D. This transformation obeys the law of unimol. reactions. A prolonged irradiation (for 30–60 min.) of ergosterol solns. decreases the amt. of vitamin D_3 (biol. sample) formed previously. A sterol similar to sitosterol was obtained from the basic wood material. A method is being developed for the prepn. of the hydrosols of sterols and of crystal vitamin D_3 for the purpose of parenteral administration of vitamin D.

W. R. Henn

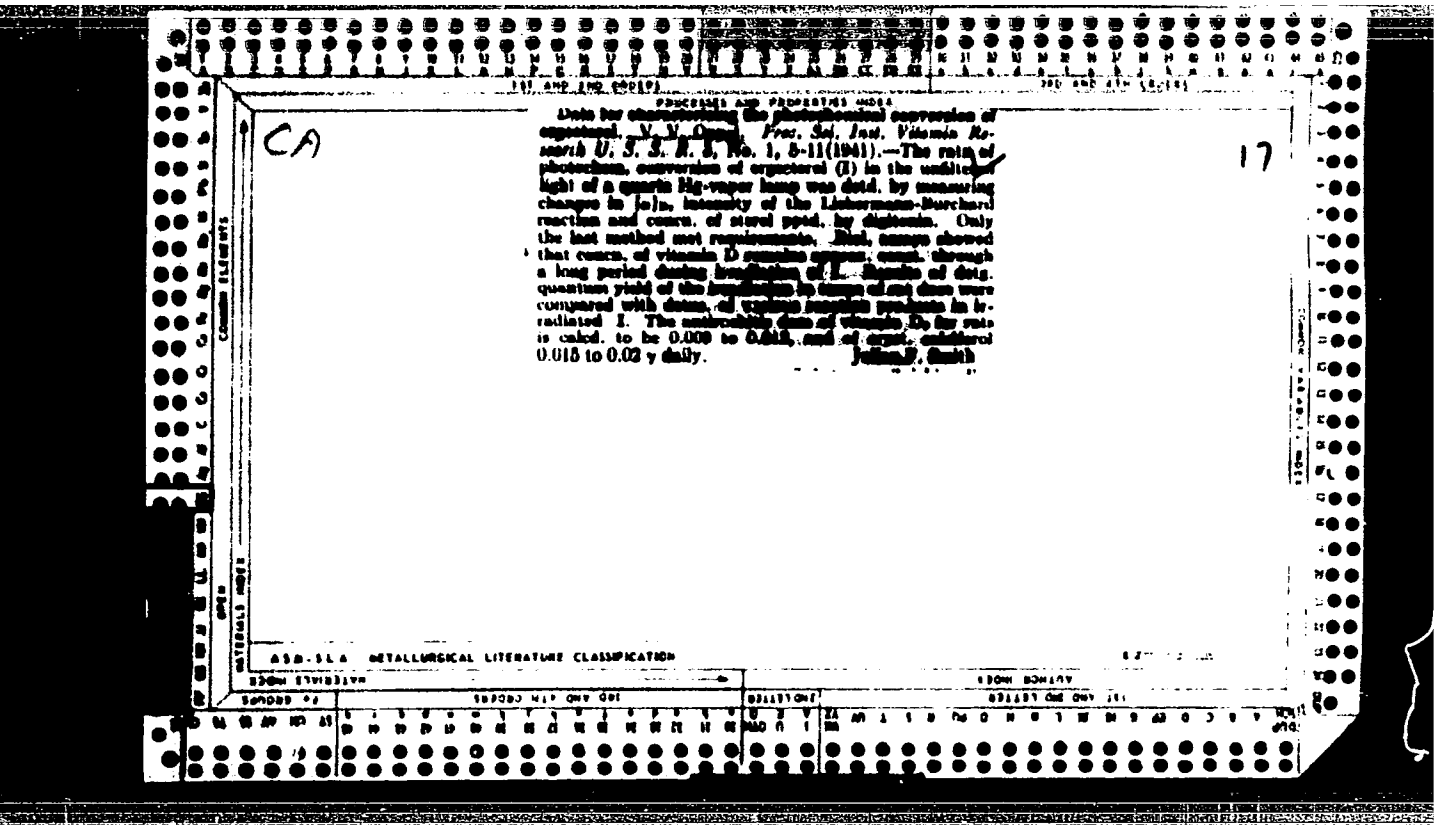


11A

Enzymic splitting of muscle proteins II Viscosity measurements on products of peptic digestion of myosin

V. L. Uppal. *Biokhimiya* 5, [illegible] (1940). The high viscosity of native myosin, and the increase in viscosity with but a slight increase in the myosin content, speak of a high mol. wt. and a complex structure. Acid albumin, albumoses and peptones obtained from myosin by the action of pepsin show viscosity changes which indicate that these products possess relatively the same structure [illegible] a different chain length. II. Proteolysis

Chair of Biological Chem., Military Med. and RKKh, Im S. M. Kirova, Leningrad



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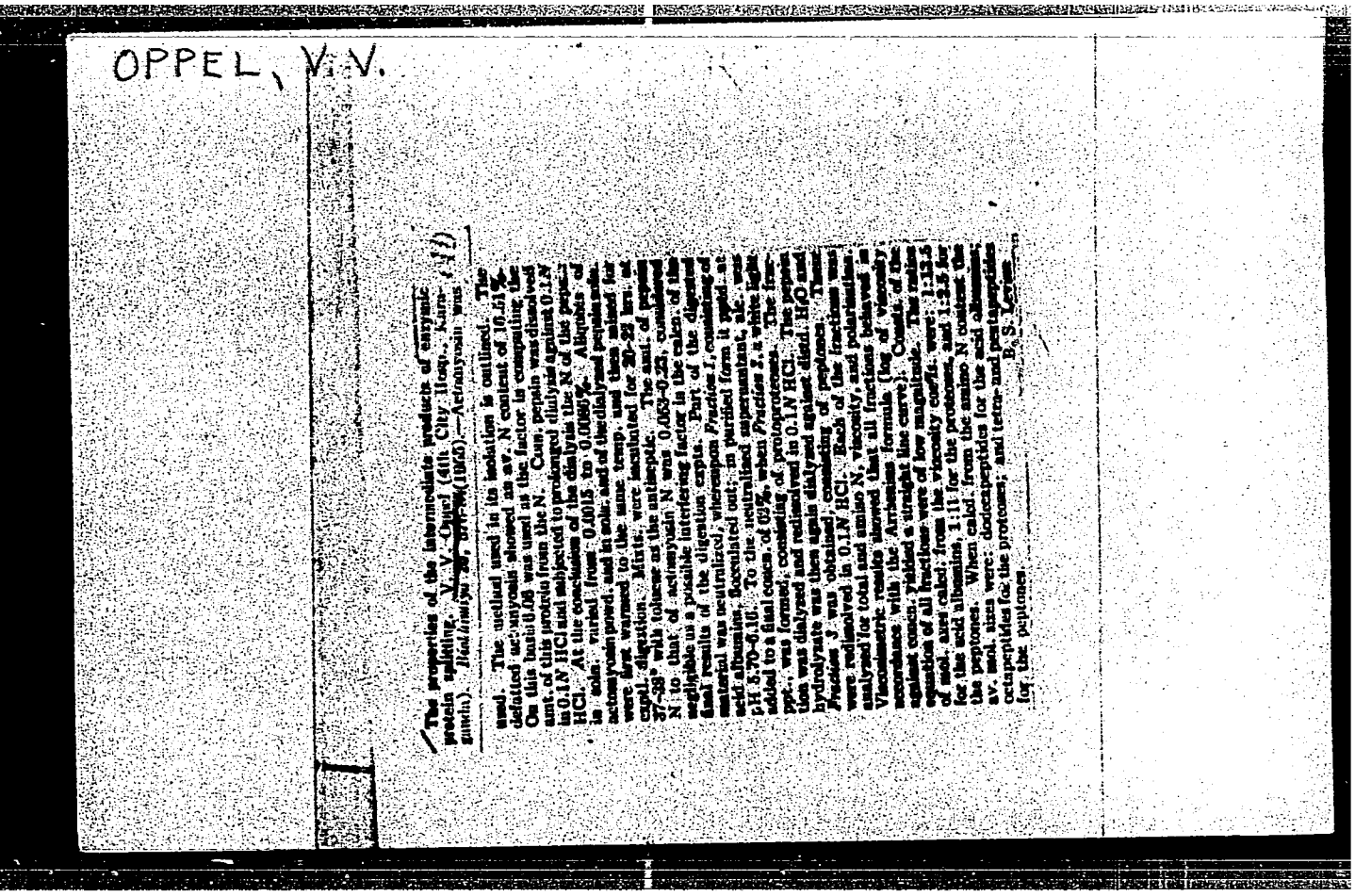
Data for characterizing the photochemical conversion of ergosterol. V. V. Onoprienko. *Proc. Sci. Inst. Vitamin Research U. S. S. R.* 5, No. 1, 5-11(1941).—The rate of photochem. conversion of ergosterol (I) in the undiluted light of a quartz Hg-vapor lamp was detd. by measuring changes in [α]D, intensity of the Liebermann-Burchard reaction and concn. of steryl pptd. by digitonin. Only the last method met requirements. Biol. assays showed that concn. of vitamin D remains approx. const. through a long period during irradiation of I. Results of detg. quantum yield of the reaction by these 3 methods were compared with data of various reaction products in irradiated I. The antirachitic dose of vitamin D, the rate is calcd. to be 0.009 to 0.013, and of ergost. additional 0.015 to 0.02 γ daily.

Julian F. Smith



OPPEL, V. V.

The properties of the intermediate products of enzymic protein splitting. V. V. Oppel (4th City Hosp., Kazan). *Biokhimiya* 30, 577-84(1965).—Actinomycin was used. The method used in its isolation is outlined. The defatted material showed an av. N content of 10.51%. On this basis 0.05 was used as the factor in computing the amt. of this protein from the N. Cum. pepsin was dissolved in 0.1 *N* HCl and subjected to prolonged dialysis against 0.1 *N* HCl. At the conclusion of the dialysis the N of the prepn. in soln. varied from 0.0015 to 0.0080%. Aliquots of actinomycin prepn. used in soln. and of the dialyzed preparation were first warmed to the same temp. and then mixed for cupfl. digestion. Mixts. were incubated for 20–22 hrs. at 37–38° with toluene as the antiseptic. The amt. of pepsin N to that of actinomycin N was 0.053–0.22, owing to the negligible to a possible interfering factor in the calcn. of the final results of the digestion expts. Part of the digested material was neutralized, whereupon *Fraction 1*, consisting of acid-albumins, precipitated out, in purified form, it yield at pH 5.70–6.10. To the neutralized supernatant, the was added to a final concn. of 0.5%, when *Fraction 2*, a white ppt., was formed, consisting of proteoproteoses. The fraction was dialyzed and redissolved in 0.1 *N* HCl. The prepn. hydrolysate was then again dialyzed against distd. H$_2$O and *Fraction 3* was obtained consisting of peptones. Each of the fractions was redissolved in 0.1 *N* HCl. viscosity, and polarization analyzed for total and amino N. Viscometric results showed that all fractions behaved in accordance with the Arrhenius formula (log of viscosity against concn. yielded a straight line curve). Cmax. of the of all fractions were of low magnitude. The ratios of mol. axes calcd. from the viscosity coeffs. were: 1:13.5 for the acid albumins, 1:11 for the proteoses, and 1:3.5 for the peptones. When calcd. from the amino N content the av. mol. sizes were: dodecapeptides for the acid albumins, octapeptides for the proteoses, and tetra- and pentapeptides for the peptones.

B. S. Levine

OPPEL, V. V.

3883. Nature of intermediate products of enzymic breakdown of proteins. Peptic decomposition of haemoglobin. V. V. Oppel *Biokhimiia*, 1956, **21**, 215—226 (Biochem. Lab., 4th City Hosp., Karaganda, U.S.S.R.).—The products of Hb digestion by pepsin have been fractionated with TCA, the larger molecules being pptd. at lower concn. of the reagent. The final products, mostly tripeptides, are particularly rich in phenylalanine and arginine. Each of the isolated intermediate products is susceptible to further breakdown by pepsin. All proteins are hydrolysed by pepsin, the details of the process depending on the amino acid sequence in the peptide chain, pH, temp., etc. The Tiselius and Eriksson-Quensel theory (*Biochem. J.*, 1939, **33**, 1752) of the "explosive" action of pepsin is considered erroneous. (Russian) A. K. GRZYBOWSKI

OPPEL', V.V.

Paper chromatographic study of low-molecular products of hemoglobin decomposition by pepsin [with summary in English]. Biokhimiia 23 no.4:574-583 Jl-Ag '58. (MIRA 12:3)

1. Biochemical Laboratory, the Military-Medical Academy, Leningrad.
(HEMOGLOBIN,
pepsin digestion, paper chromatography of low molecular prod. (Rus))
(PEPSIN,
hemoglobin digestion, paper chromatography of low molecular prod. (Rus))

OPPEL', V.V. (Leningrad)

Evolution of muscle proteins. Usp.sovr.biol. 46 no.3:281-300 N-D '58 (MIRA 11:12)

(PROTEINS)
(MUSCLE)

OPPEL', V.V. (Leningrad).

Vladimir Andreevich Oppel; reminiscences. Vest.khir. 81 no.9: 20-32 S'58 (MIRA 11:11)
(OPPEL', VLADIMIR ANDREEVICH, 1872-1932)

[illegible], Serebrennikova, T. [illegible]

[illegible] of Smooth [illegible]

Doklady Akademii nauk SSSR, 1958, Vol 122, Nr [illegible], pp [illegible] - 2[illegible] (USSR)

The [illegible] mentioned in the title [illegible] particularly with [illegible] of [illegible]. Even the problem whether [illegible] in this case is the same as [illegible] complex of a [illegible] muscle was not yet been solved. In the present paper the authors give the first results of their investigations, which they undertook separately [illegible] time, on the proteins of [illegible] muscles with [illegible]. They resumed the interrupted [illegible] of the first author which he has been dealing with [illegible] 1951. At the same time it was found out, that the "my[illegible]" of [illegible] muscle of the stomach differs from [illegible] "[illegible]" by a higher content of nitrogen-free [illegible] with [illegible], then by a reduced tendency to [illegible] formation, further by a less pronounced viscosity [illegible]

Card 1/4

T [illegible]

[illegible] of the "[illegible]" of the smooth muscle and for [illegible] viscosity index. [illegible] was [illegible] of the proteins. [illegible] from [illegible]. The protein salting-out [illegible] demonstrated by the differences of the extinctions, [illegible] were [illegible] strongly denatured. The resulting curves (Fig. 1) showed many peaks, each of them corresponding to the salting-out of a protein. The technical details are described in reference 12. Extracts from striated and non-striated muscles (dry weight of 0.5 M KCl, 0.01 M KH_2PO_4 + 0.2 M Na_2HPO_4, pH 7.0 - 7.4) were subjected to a fractional analysis at 0°. Altogether 25 - 30 solutions $(NH_4)_2SO_4$ of different concentration (corresponding to 10 - 70 per cent of the saturation of the solution) were used. Figure 1 shows examples of the salting-out of one and the same extract. Proteins from the myogenic and even more from the myofibrillar type remained not salted out. Based on the results the authors came to the following conclusions: 1) By a

Card 2/4

The Structural Proteins of Smooth Muscles

fractionated salting-out with $(NH_4)_2SO_4$ [illegible] to obtain deviating curves. 2) Somatic muscles [illegible] peaks, among them the peak of the actomyosin (peak Nr [illegible] particularly high. 3) The smooth muscles develop [illegible] peaks. From these the peaks a and b have no homologous points among the curve peaks of the somatic muscles. The proteins which cause these peaks are precipitated at [illegible] concentration (16 and 25% of saturation). There are [illegible] figures, 1 table, and 8 references, 1 of which is Soviet.

ASSOCIATION: Institut evolyutsionnoy fiziologii im. I. M. Sechenova Akademii nauk SSSR (Institute of Evolutionary Physiology [illegible] Sechenov, AS USSR)

PRESENTED: April 2nd, 19[illegible], by L.A.Orbeli, Member, Academy of Sciences, USSR

SUBMITTED: June 11, 19[illegible]

Card 3/4

OPPEL', V.V.

Further investigations on the low molecular products of the splitting of hemoglobin pepsin. Vop.med.khim. 5 no.4:265-273 Jl-Ag '59.
(MIRA 12:12)

1. Biokhimicheskaya laboratoriya kafedry fiziologii voyennogo truda Voyenno-meditsinskoy ordena Lenina akademii imeni S.M. Kirova, Leningrad.

(PEPSIN chem.)
(HEMOGLOBIN chem.)

OPPEL', V.V.

Effect of X-rays on hemoglobin solutions. Biokhimiia 24 no.3:441-450 My-Je '59. (MIRA 12:9)

1. Biochemical Laboratory, Chair of Physiology of Military Labor, Military-Medical Academy, Leningrad.

(HEMOGLOBIN,
eff. of gamma rays on hemoglobin solutions (Rus))
(GAMMA RAYS, effects,
on hemoglobin solutions (Rus))

OPPEL', V.V.; SEREBRENIKOVA, T.P.

Contractile proteins of the smooth muscle. Biokhimiia 24 no.4:648-657 Jl-Ag '59. (MIRA 12:11)

1. Institut evolyutsionnoy fiziologii im. I.M.Sechenova Akademii nauk SSSR, Leningrad.
(MUSCLE PROTEINS)

OPPEL', V.V. (Leningrad)

Proteins in different types of muscle tissue in vertebrate animals and the evolution. Ukr.biokhim.zhur. 31 no.1:144-164 '59. (MIRA 12:6)
(PROTEINS IN THE BODY) (MUSCLE)

OPPEL', V.V.; KHLYUSTINA, T.B.

Amphoteric properties of the actinlike protein from the smooth muscle of a dog stomach. Biokhimiia 25 no. 3:532-539 My-Je '60. (MIRA 14:4)

1. Institute of Evolutionary Physiology, Academy of Sciences of the U.S.S.R., Leningrad.
(ACTIN)

OPPEL', V.V.; SEREBRENIKOVA, T.P.

Structural proteins of smooth muscles in warm-blooded animals. Biokhimiia 25 no.6:1035-1042 N-D '60. (MIRA 14:5)

1. Institute of Evolutionary Physiology, Academy of Sciences of the U.S.S.R. Leningrad.
(MUSCLE) (PROTEINS)

OPPEL', V.V. (Leningrad)

Primary structure of the globin component of hemoglobin. Ukr. biokhim. zhur. 32 no.5:742-769 '60. (MIRA 14:1)
(HEMOGLOBIN)

OPIEL, V. V., SEREBRENNIKOVA, T. P., and KHLYUSTINA, T. B. (USSR)

"Some Structural Proteins in the Smooth Muscles of Mammals."

Report presented at the 5th International Biochemistry Congress, Moscow, 10-16 Aug 1961

OPPEL', V.V.

Modification of skin proteins after thermal burns. Vop. med. khim. 7 no.2:172-178 Mr-Ap '61. (MIRA 14:6)

1. Biochemical Laboratory of the Center for Burn Surgery, S.M. Kirov Military Medical Academy, Leningrad.
(BURNS AND SCALDS) (SKIN) (PROTEIN METABOLISM)

OPPEL', V.V.

The neutral fraction of low-molecular pepsin peptides of horse hemoglobin. Biokhimiia 26 no.3:462-467 My-Je '61. (MIRA 14:6)

1. Institute of Evolutionary Physiology, Academy of Sciences of the U.S.S.R., Leningrad.
(HEMOGLOBIN) (PEPTIDES)

OPPEL', V.V.; SEREBRENNIKOVA, T.P.

Structural proteins of transversostriated muscles in animals of the chordate type. Biokhimiia 26 no.4:608-614 Jl-Ag '61. (MIRA 15:6)

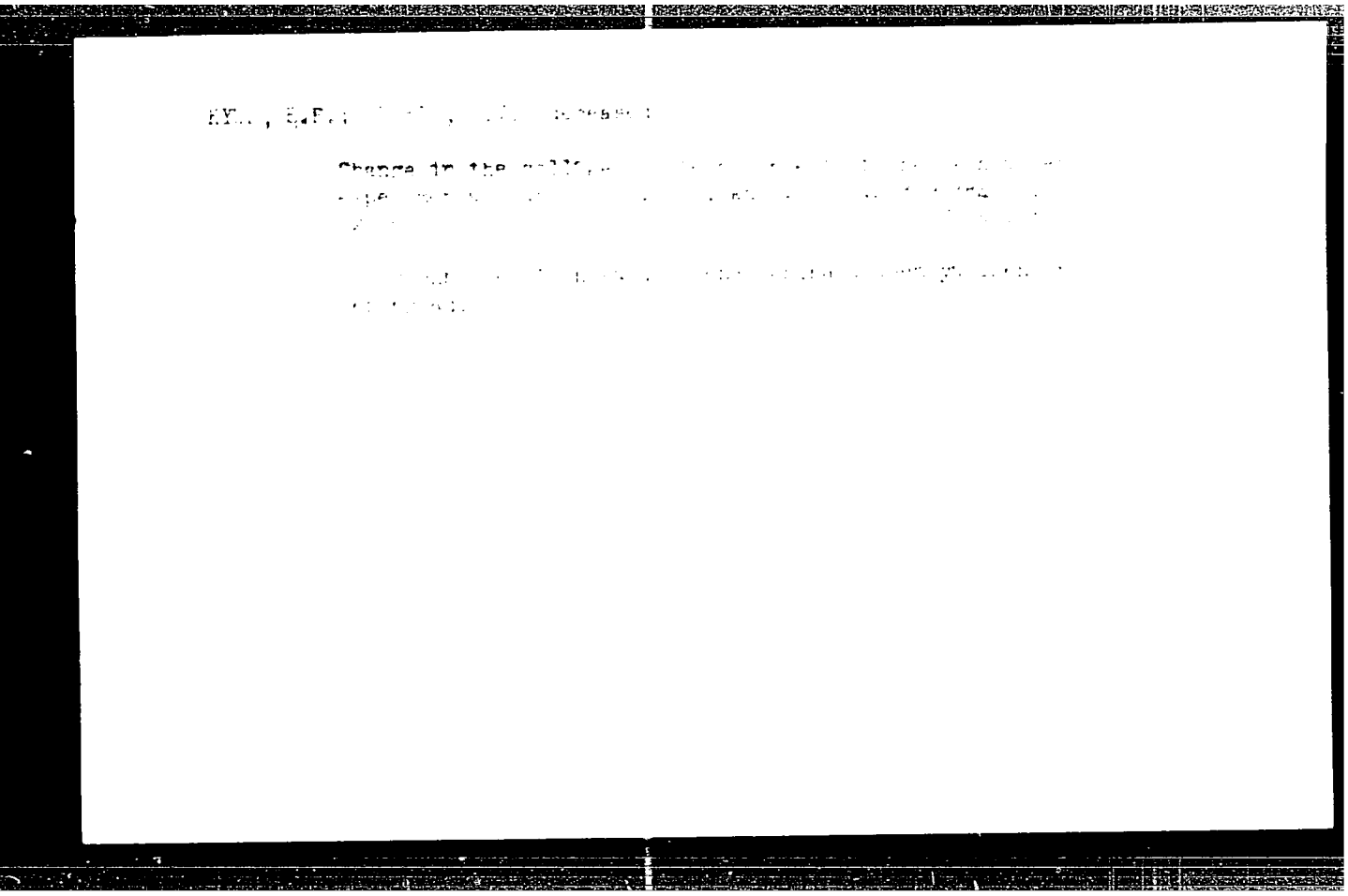
1. Institute of Evolutionary Physiology, Academy of Sciences of the USSR, Leningrad.

(MUSCLES) (PROTEINS)

OPPEL', V.V.; KHLYUSTINA, T.B.

Smooth muscle protein salted out at 25% $(NH_4)_2SO_4$ saturation. Biokhimiia 26 no.6:1051-1058 N-D '61. (MIRA 15:6)

1. Instituta of Evolutionary Physiology, Academy of Sciences of the U.S.S.R., Leningrad.
(PROTEINS) (SALTING-OUT) (MUSCLE)



ARONOVICH, Gedaliy Davydovich, prof.; OPPEL', Varvara Vladimirovna; TRET'YAKOVA, Valentina Aleksandrovna; SHVAREV, A.I., red.; BUGROVA, T.I., tekhn. red.

[Home care for patients with vascular lesions of the brain] Pomoshch' na domu bol'nym s sosudistymi porazheniiami golovnogo mozga. Leningrad, Medgiz, 1963. 47 p. (MIRA 17:1)

OPPELN-BRONIKOWSKI, Karol

Surface temperature during surgery and value of its measurement during the course of anesthesia. Polski tygod.lek.15 no.10:342-346 7 Mr '60.

1. Z II Kliniki Chirurgicznej A.M. w Gdansku; kierownik: prof. dr. Kazimierz Debicki.
(ANESTHESIA GENERAL)
(BODY TEMPERATURE)

OPPELN-BRONIKOWSKI, Karol

Use of a rubber suit in controlled hypothermia. Pol. przegl. chir. 35 no.4 303-306 '63.

1. Z II Kliniki Chirurgicznej AM w Gdansku Kierownik: prof. dr K. Debicki.

(HYPOTHERMIA, INDUCED)
(EQUIPMENT AND SUPPLIES)

OPPELN-BRONIKOWSKI, Karol; JEKA, Kazimierz

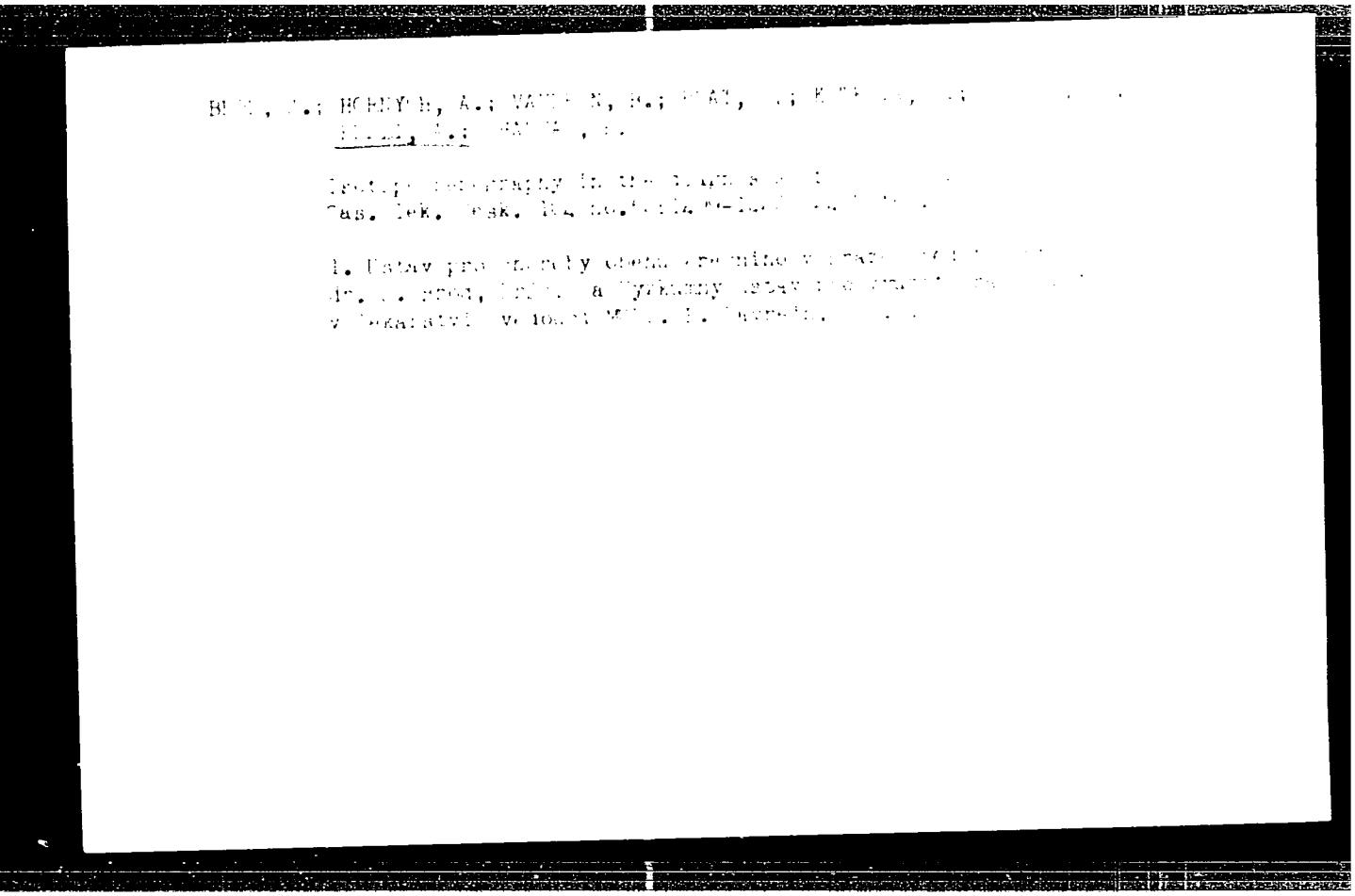
Universal apparatus for inhalation anesthesia. Polski przegl. chir. 35 no.3:187-191 '63.

1. Z II Kliniki Chirurgicznej AM w Gdansku Kierownik: prof. dr K. Debicki.
(ANESTHESIA, INHALATION) (EQUIPMENT AND SUPPLIES)

BROI , J.; HORNYCH, A.; VAVREIN, B.; PRAT, V.; KOSTKOVA, B.; IEVDAR, R.; OPPELT, A.; CHARVAT, F.

Isotope renography in the diagnosis of chronic pyelonephritis.
Rev. Czech. med. 11 no.4:213-231 '65.

1. Institute of Cardiovascular Research, Prague (Director: Prof. M. Brod, M.D., D.Sc.).



Nuclear Medicine

CZECHOSLOVAKIA UDC 616.24-031.82-008.4-072.7-073.916:546.295.02

WIDIMSKY, J.; OPPELT, A.; STANEK, V.; BLAHA, V.; RUSCZIK, I.; Research Institute for Radioisotope Application in Medicine (Vyzkumny Ustav pro Vyuziti Radioisotopu v Lekarstvi) Prague - Krc, Director (Reditel) Dr B. VAVREJN; Research Institute for Blood Circulation Diseases (Ustav pro Choroby Obehu Krevniho), Director (Reditel) Prof Dr J. BROD.

"Examination of the Regional Pulmonary Ventilation by Means of Radioactive Xenon^{133}."

Prague, Casopis Lekaru Ceskych, Vol 105, No 26, 24 Jun 66, pp 695 - 698

Abstract [Authors' English summary modified]: A method for the determination of regional pulmonary ventilation using radioactive Xenon^{133} is described. In 14 subjects with a normal heart and lungs the regional ventilation of the left upper and right lower pulmonary area was examined. In 11 subjects the examination was made in a sitting and in a recumbent position. The ventilation of the upper portions of the lungs in the sitting position is worse than of the lower parts; in the recumbent position the difference disappears. 6 Figures, 1 Table, 7 Western, 1 Czech reference. (Ms. rec. Nov 65).

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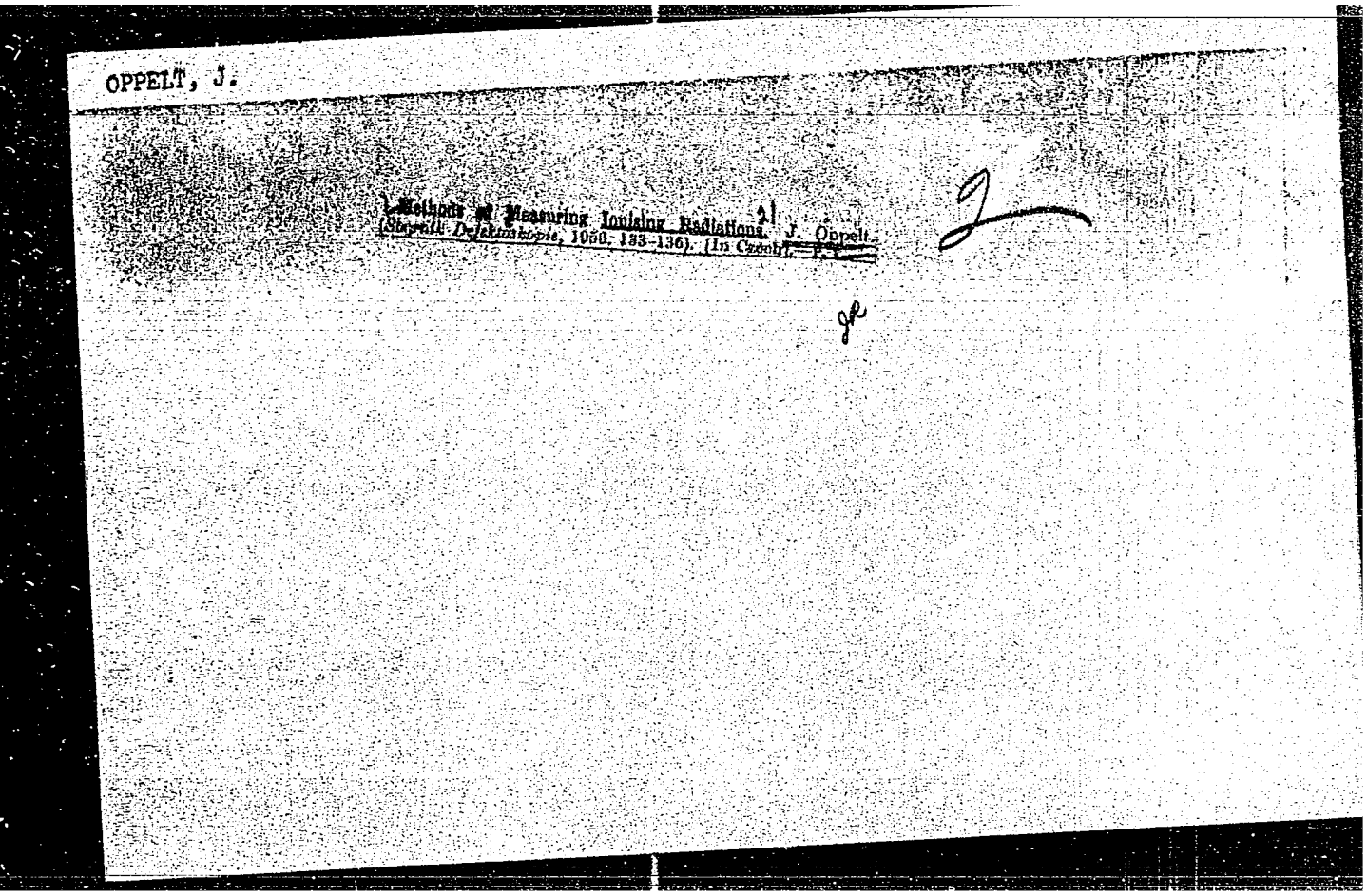


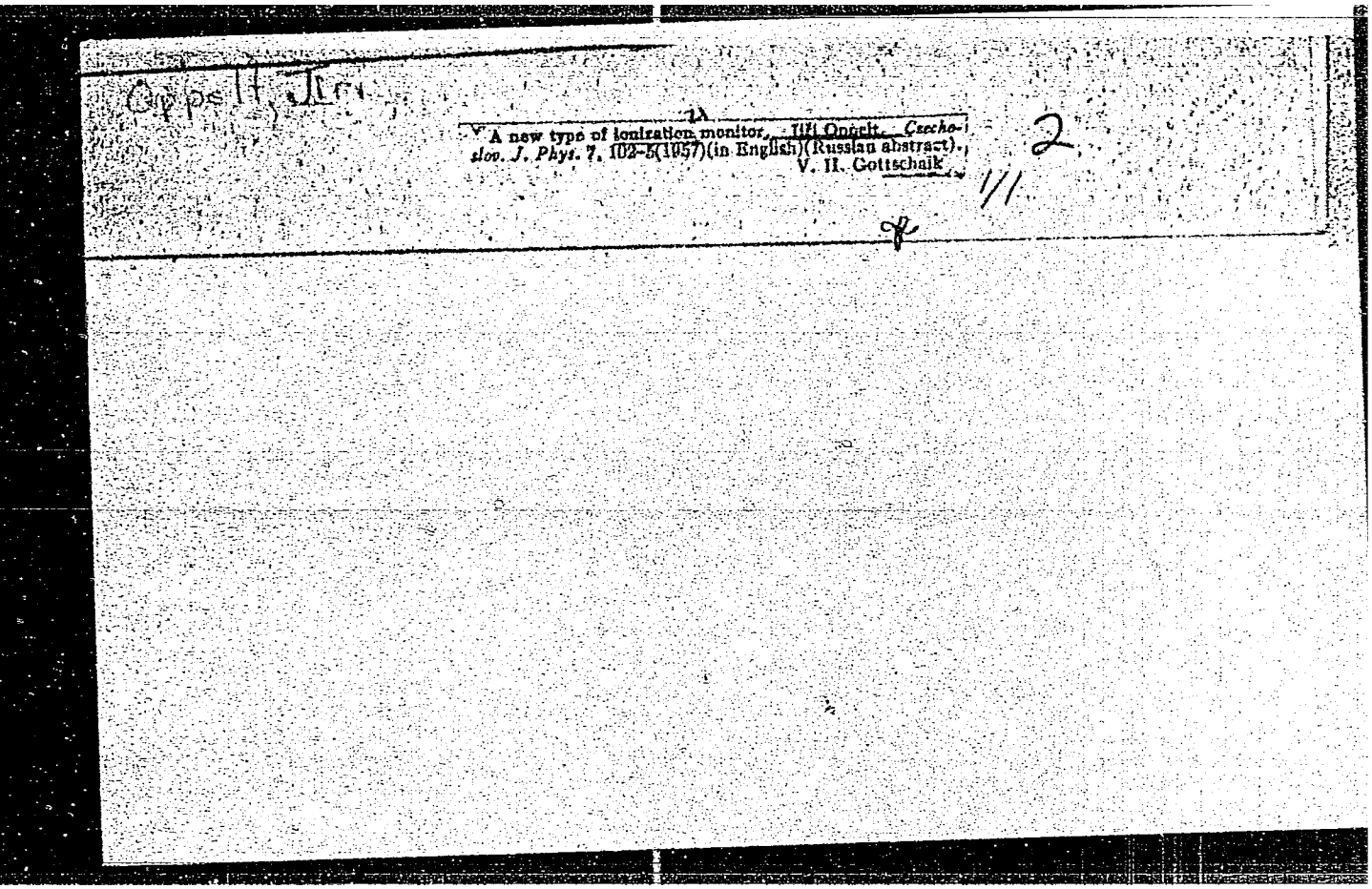
OPPELT, J.

Methods of Measuring Ionizing Radiations. J. Oppelt.
[Sborník Dělnické tělovýchovy, 1950, 133-136). [In Czech]

OPPELT, J.

An apparatus for measuring dispersed radiation without using exce[illegible] units. p.82.
(Sdelka Vynalezu, Vol. 6, No. 4, Apr. 1957, Praha, Czechoslovakia)

SO: Monthly List of East European Accessions (EAI) LC, Vol. 6, No. 9, Sept. 1957, Incl.



A new type of ionization monitor, Jiří Ongelt, Czechoslov. J. Phys. 7, 102-5(1957)(in English)(Russian abstract).
V. H. Gottschalk

OPPELT, J.

Measuring the concentration of solutions by means of radioisotopes.

P. 22 (Chemicky Prumysl) Vol. 7, No. 1, Jan. 1957, Czechoslovakia

SO: MONTHLY INDEX OF EAST EUROPEAN ACCESSIONS (EEAI) LC. - VOL. 7, NO. 1, JAN. 1958

OPPELT, J.
FRYNTA, Z.

"Univel dynamic electrometer."

JADERNA ENERGIE. Praha, Czechoslovakia, Vol. 4, October 1958.

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

Distr: 4E3d/4E3c

Noncontact measurements by radioisotopes. II. Back-scattering methods. Jiří Oppelt (Výzkumný ústav radiol., Prague). *Jaderná energie* 4, 178–84(1958); cf. *ibid.* 148–54.—Equations are derived for back-scattering in a homogeneous material, and in a material composed of 2 layers, the top one thin, e.g. a protective coating, the bottom one "infinitely" thick. To a good approximation, $V_r = kV_0(1 - e^{-\xi\rho})$ for a homogeneous material, where V_r and V_0 are the scattered and incident intensity, k and ξ are consts. (but k depends on the av. at. no. of the material), and ρ is the mass thickness of the material. The equations are confirmed by measurements with Al, Cu, paper, Al-coated Cu, Cu-coated Al, Al-coated Pb, and Al-coated C, by using Ru^{106}, Tl^{204}, Pr^{140}, or Sr^{90} as radiation sources. The method makes it possible to measure the thickness of a known material if less than "infinite," the d. or homogeneity of an "infinitely thick" material, the thickness or d. for each layer of a 2-layered material, changes in distance between the source and the material, e.g. the measurement of liquid level in a vessel when the source is in the lid, and the compn. of the material.

H. Newcombe

OPPELT J.

Distr: 4E3c/4E3d 19

Noncontact measurements with radioisotopes. III. Resolving power of measurements. J[I] Oppelt (Radiol. Research Inst., Prague). *Jaderná Energie* 4, 377-80(1958); cf. *C.A.* 53, 1942b.—The fluctuations in the output of a radiation detector, due to the statistical nature of radioactive decay, are discussed. The 2 types of instruments, those measuring separate pulses and those measuring a smoothed-out ionization current, are related to the time const. The action of a pulse discriminator is described. The applicability of these instruments to transmission or reflection measurements on static or dynamic systems (such as flowing streams) is considered. In dynamic systems, instrument response must be fast. The resolution coeff. is defined to indicate the extent to which variations of the system variable can be distinguished from random fluctuations of radioactive decay and of instrumental errors. Resolution can be improved by good utilization of the radiation flux, by using a strong source, an efficient detector, and a large time const. For comparing different instruments, the "quality factor," independent of the source strength and the time const., is used; it can be improved by suppressing instrumental errors and by better utilization of the radiation flux. The theory was verified experimentally. H. Newcomb—

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1-RS
2

OPPELT, Jiri

Non-contact gauging by radioisotopes. Part 1: Penetration gauging. Jaderna energie 4 no.6:148-154 Je '58.

1. Vyzkumny ustav radiologicky, Praha.

OPPELT, Jiri

Non-contact measurement with radioisotopes. Part 2: Back scatter methods. Jaderna energie 4 no.7:178-184 Jl '58.

1. Vyzkumny ustav radiologicky, Praha.

Z/011/62/019/004/002/00
E075/E335

AUTHOR: Oppelt, J.

TITLE: Use of radio-isotopes in measuring, control and automation

PERIODICAL: Chemie a chemicka technologie; Prehled technicke a hospodarske literatury, v.19, no. 4, 1962, 155. Abstract Ch 62-2113 (Symposium of the First All-State Conference on Nuclear Engineering, January 26-30, 1.62. Part II, 116 - 117)

TEXT: Radio-isotopes are used basically, regardless of the field of application, in one of the following two ways:
a) the radioactive substance is present in the substance or body under investigation, either freely dispersed or in the form of a closed radiator;
b) the substance, material or object under investigation interacts with the radiation of a closed radio-isotope, which is outside the object under investigation.
The first category comprises indicator and activation methods

Card 1/9

Use of radio-isotopes .... Z/011/62/019/004/0[illegible]/[illegible]
E073/E335

used in tracer and analytical techniques (work with open radiators); closed radiators are, for instance, inside viscosimeter bodies, in turbine blades, etc. The second category includes contactless measurement of the thickness by the gamma-radiation and reflection method, measurement of the density of fluids, homogeneity, etc. The paper gives several application groups (measurement of weight per unit of area, measurement of coating layers, radiometric defectoscopy, measurement of the pressure of gases and vapours, levels and flow speeds). 6 figures.
Abstracter's note: This is a complete translation.

Card 2/2

OPPELT, J.

Radioisotope indicator of the level of butylaldehyde in separators. p. 187

JADERNA ENERGIE. (Ministerstvo energetiky) Praha, Czechoslovakia, Vol. 5, no. 5 May 1959

Monthly List of East European Accessions (EEAI), LC, Vol. 8, No. 7, July 1959 Uncl.

81382

Z/038/60/000/03/05/00

21.7100

AUTHOR: Oppelt, Jiří

TITLE: A Radioisotopic Densometer

PERIODICAL: Jaderná energie, 1960, No. 3, pp. 96 - 97

TEXT The article describes a radioisotopic densometer developed by the Ústav pro výzkum výrobu a využití radioisotopů (Institute for Research, Production and Utilization of Radioisotopes) in Prague for the Stupavská cementareň n.p. (Stupava Cement Plant, National Enterprise) according to principles and conclusions described in several 1958 issues of this periodical (Ref. 1). The densometer was developed for continuous measuring and registering cement slurry density, so the latter can be maintained at a proper level, i.e. about 1,270 g/liter, the densometer having a scale ranging from 1,200 to 1,300 g/liter. In order to utilize as large a portion of the radiation flux as possible, an ionization chamber was selected for detector in an arrangement shown in Figure 1. The slurry is pumped through a pipe with 100 mm internal diameter into a widened section P_k, which on its other end narrows down to the original diameter. A tube T reaches up to the middle of the section P_k, into which a brass bar is inserted with the radiation source Z screwed into its lower end. The radiation within the section P_k is absorbed in dependence on the density of the slurry and enters the ionization chamber

Card 1/4

81382

Z/038/60/000/03/05/007

A Radioisotopic Densometer

Pi containing a collecting electrode S shaped like a hollow cylinder. The ionization current is extracted by the cable K. The current, corresponding to a density of 1,250 g/liter is compensated by the current of another chamber containing a collecting electrode with a SIC-type strontium radiation source. This source is a metal strip with an activity of 20 mc, wound around the collecting electrode. The source of radiation is a radioisotope of cesium-137 with an activity of 0.525 gramequivalent Ra. Both chambers are installed in a cubicle adjacent to the slurry mixer building at the exit of the slurry pipe leading to the plant. A coaxial cable transmits the differential current to an amplifier installed at the slurry mixer building with indicating instruments placed so that they can be well seen from the water feed control point. Figure 2 shows the wiring diagram of the equipment. The casing of the main chamber K_1 is grounded. In order to create an electric field between the casing and the collecting electrode, it is necessary that the collecting electrode have a potential, relative to the ground and, therefore, the entire amplifier has a +70 v potential, relative to the ground. The casing of the compensation chamber has a polarity, relative to the collecting electrode that is reversed as against the polarity of the main chamber. By a proper shielding of the strontium source it can be achieved that at a slurry density of 1,250 g/liter the current flows only through both chambers, while no

Card 2/4

current flows through the resistance R. The potentiometer P serves for fine adjustment of the currents (the current of the compensation chamber is not quite saturated). If the density of the slurry changes, the balance is upset and current flows through the resistance and the pointer of the indicating instrument M_1 swerves to the right or to the left. If the deviation exceeds $\pm$ 2%, a polarized relay connects a signalling device and the registering instrument M_2. The amplifier is a dynamic electrometer with a variable condenser C. The alternating component obtained with a frequency of 400 cps is amplified and rectified by a rotary rectifier, mounted on the axle of a synchronous electric motor SM, which also actuates the rotor of the capacitor. The sensitivity of the instrument is regulated by negative feedback connected to the rotor. In order to make the operation of the instrument as simple as possible, and especially to eliminate zeroing and frequent calibration checks, a strong ionization current is used, secured by a strong radiation source, good utilization of the radiation flux and a large ionization space in the chamber. For a normal density of the slurry, the current is about $2 \cdot 10^{-8}$ a. A 1% change of the current will therefore cause a 4 v change of the voltage on a $2 \cdot 10^{10}$ ohm input resistance. The range of the scale corresponds to a deviation of $\pm$ 4% from the normal value of 1,250 g/liter of the slurry density. Both chambers are airtight to eliminate the influence of atmospheric and temperature changes. The instrument is switched on automatically,

81382

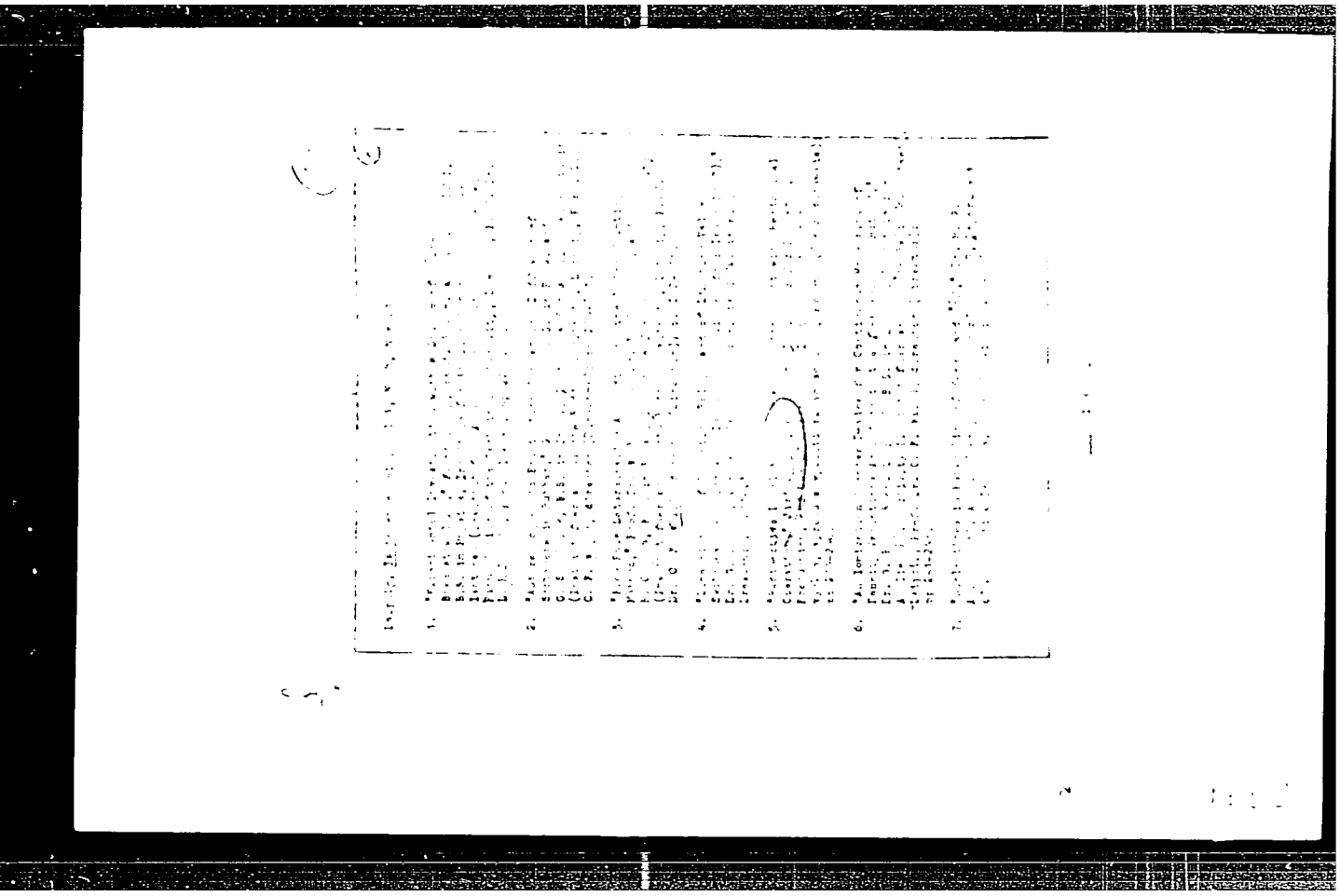
A Radioisotopic Densometer

Z/038/60/000/03/05/007

simultaneously with the switching on of the slurry pump. The densometer has met all expectations during operational tests and 10 such instruments, in an improved version, will be installed in Czechoslovak cement plants during 1960. There are 2 diagrams and 1 Czech reference.

ASSOCIATION: Ústav pro výzkum, výrobu a využití radioosotopů (Institute for Research, Production and Utilization of Radioisotopes), Prague

Card 4/4



S/194/62/000/004/022/105
D222/D309

AUTHORS: Oppelt, Jiří and Hladík, Jaroslav

TITLE: Apparatus for contact-free quality control using the method of comparison with a standard under ionising radiation (patent)

PERIODICAL: Referativnyy zhurnal, Avtomatika i radioelektronika, no. 4, 1962, abstract 4-2-59 I (Chekhosl. pat., kl. 21g, 18/01, 42k, 46/07, no. 96354, 15.08.60)

TEXT: A new method is proposed for generating the alternating input signal for an ionization chamber. The equipment consists of a rotating ionization chamber, a radiation source and a standard object. The ionization chamber has at its center a stationary collector which is the axis of rotation of a cylindrical screen to which the radiation source is attached. The radiation, going directly into the chamber, is screened. The radiation directed outside the chamber is alternatively reflected either from the object tested, or from the standard, and falls on the collector electrode.

Card 1/2

Apparatus for contact-free ... S/194/62/000/004/022/105
D222/D309

The ionization current arising has a half-wave form, the [illegible] of which depends on the properties of the tested or the standard object. The indicator connected to the output of an AC amplifier is calibrated directly in units of the controlled variable and indicates the derivation between the properties of the object and the standard. 2 figures. [Abstracter's note: Complete translation.]

Card 2/2

OPPELT, Jiri, inz.

Radioisotope sets for industrial measurement and control. Automatizace 6 no.1:16-17 Ja '63.

L 56028-65 EWT(m) IJP(c)
ACCESSION NR: AP5018392 UR/0038/65/000/002/0059/0062

AUTHOR: Oppelt, Jiri

TITLE: Dependence of the current of an ionization chamber on the modulation frequency of the intensity of radiation

SOURCE: Jaderna energie, no. 2, 1965, 59-62

TOPIC TAGS: ion chamber, ionization, radioactivity

ABSTRACT: A mathematical treatment is given of the dependence of the current in an ionization chamber on the frequency of modulation of a radiation source. According to the equations derived, when the period of the modulation is long compared to the collection time of the ions, the amplitude of the ionization current has the same course as that of the radiation intensity with its amplitude of oscillation equal to half the current without modulation. The equation predicts that at periods short compared to the collection time (high frequency modulation) the alternating current component is zero. The equation also predicts that when the ratio of collection time to period of modulation is a whole number (1, 2, 3, ---) the alternating component is zero, with maxima at values between. This points

Card 1/2

L 56028-65
ACCESSION NR: AP5018392

up the necessity of using a stable modulation frequency in order to have a stable value of ionization current, when such a method of measurement is used. Orig. art. has: 8 figures, 1 graph, 7 formulas.

ASSOCIATION: Ustav pro vyzkum, vyrobu a vyuziti radioizotopu, Prague (Institute for Research, Production and Application of Radioisotopes)

SUBMITTED: 00 ENCL: 00 SUB CODE: NP

NR REF SOV: 000 OTHER: 000 NA

Gerd 2/2

L 30068-66

ACC NR: AP6020603 SOURCE CODE: CZ/0038/65/000/010/0382/0384

AUTHOR: Oppelt, Jiri

ORG: Institute for Research, Production and Applications of Radioisotopes, Prague (Ustav pro vyzkum, vyrobu a vyuziti radioizotopu); Tesla Research Works, Premysleni (Vyzkumny zavod Tesla)

TITLE: Flowmeters using radioisotopes

SOURCE: Jaderna energie, no. 10, 1965, 382-384

TOPIC TAGS: radioisotope, flow meter, radiation source, nuclear physics apparatus, pipeline

ABSTRACT: Two basic applications of radioisotopes are discussed: direct injection of a measured amount of the isotope, and the application where the isotope is not in direct contact with the flowing medium. Rotation of a wheel carrying a radiation source, rotameters carrying a radioisotope, and a damper changing its position according to the flow rate are evaluated. The author selected the rotameter method as the most suitable one, and describes an apparatus that he designed for use in pipelines where direct reading rotameters cannot be used. Co60 was used as the radiation source. A source located behind the rotameter body, partially screened by it was considered to be the best solution of the problem. This paper was presented by Z. Hyrs. Orig. art. has: 7 figures. [JPRS]

SUB CODE: 18, 14, 20 / SUBM DATE: none

Card 1/1

UDC: 681.121: 621.039.85:62

Obstetrics and Gynecology

CZECHOSLOVAKIA UDC 618.1-089:616.153.963

NOVOTNY, A.; DVORAK, V.; OPPLT, J.; Gynecological Clinic Medical Faculty of Hygiene, Charles University (Gynekologicko-porodnicka Klinika Lekarsko fakulty Hygienicke KU), Prague, Head (Prednosta) Prof Dr J. PADOVEC; Institute for Clinical Biochemistry (Ustav pro Klinickou Biochemii), FN [Abbreviation not explained], Prague 10, Head (Prednosta) Dr J. OPPLT.

"Dyslipoproteinaemia After Surgical Castration in Women."

Prague, Casopis Lekaru Ceskych, Vol 105, No 21, 27 May 66, pp 569 - 573

Abstract [Authors' English summary modified]: Changes in the electrophoretic fractions of plasma lipoproteins were investigated in 50 patients after 3 basic types of gynecological operations. In women from whom both ovaries were removed, after a short drop a rapid rise of the total lipoprotein blood level occurs; this is due mainly to a rise in grossly dispersed lipoprotein fractions. This type of dyslipoproteinaemia is important in the development of early postoperative complications, particularly thromboembolic ones, and for the development of atherosclerosis. Castration should be resorted to only where necessary and followed by hormonal substitutions. 1 Figure, 1 Table, 12 Western, 9 Czech references. (Ms. rec. Feb 66).

1/1

OPPELT, M.

Journal of Applied Chemistry
Vol. 4 Feb. 1954
Industrial Inorganic Chemistry

New ways of making iron. M. Oppelt (*Hutnik* [*Prague*], 1953, 3, No. 5, 101–102; *J. Iron Steel Inst.*, 1953, **175**, 220).—Possible methods of making iron from ores containing >50% of SiO_2, without concentrating them, are discussed. The ores are low in Al_2O_3 and CaO, so that the semi-acid process with a CaO/SiO_2 ratio of unity (as at Corby) is unsuitable. Proposals in the literature relating to working with acid slags of given η and composition are critically discussed, particularly as to their desulphurising efficiency. It is considered that the Linz (Austria) method of desulphurising by blowing O_2 on the surface of the Fe is the most promising.

R. B. CLARKE.

OPELT, M.

3

(b)

Treatment of Pig Iron after Tapping to Recover Vanadium. F. Hradek and [redacted] (*Hutnicke Listy*, 1954, 9, (6), 327–333). [In Czech.] [redacted]scription is given of a series of works experiments in which oxygen or oxygen-enriched air was blown into the iron in the runner on its way from the blast-furnace, to obtain a vanadium-rich slag. Better results were obtained by blowing oxygen or air under the surface of the iron in the tundish. The relation between the residual vanadium content, after the removal of the vanadium-rich slag, and the content of silicon and manganese is shown.

M 83

Oppelt, M.

H -13

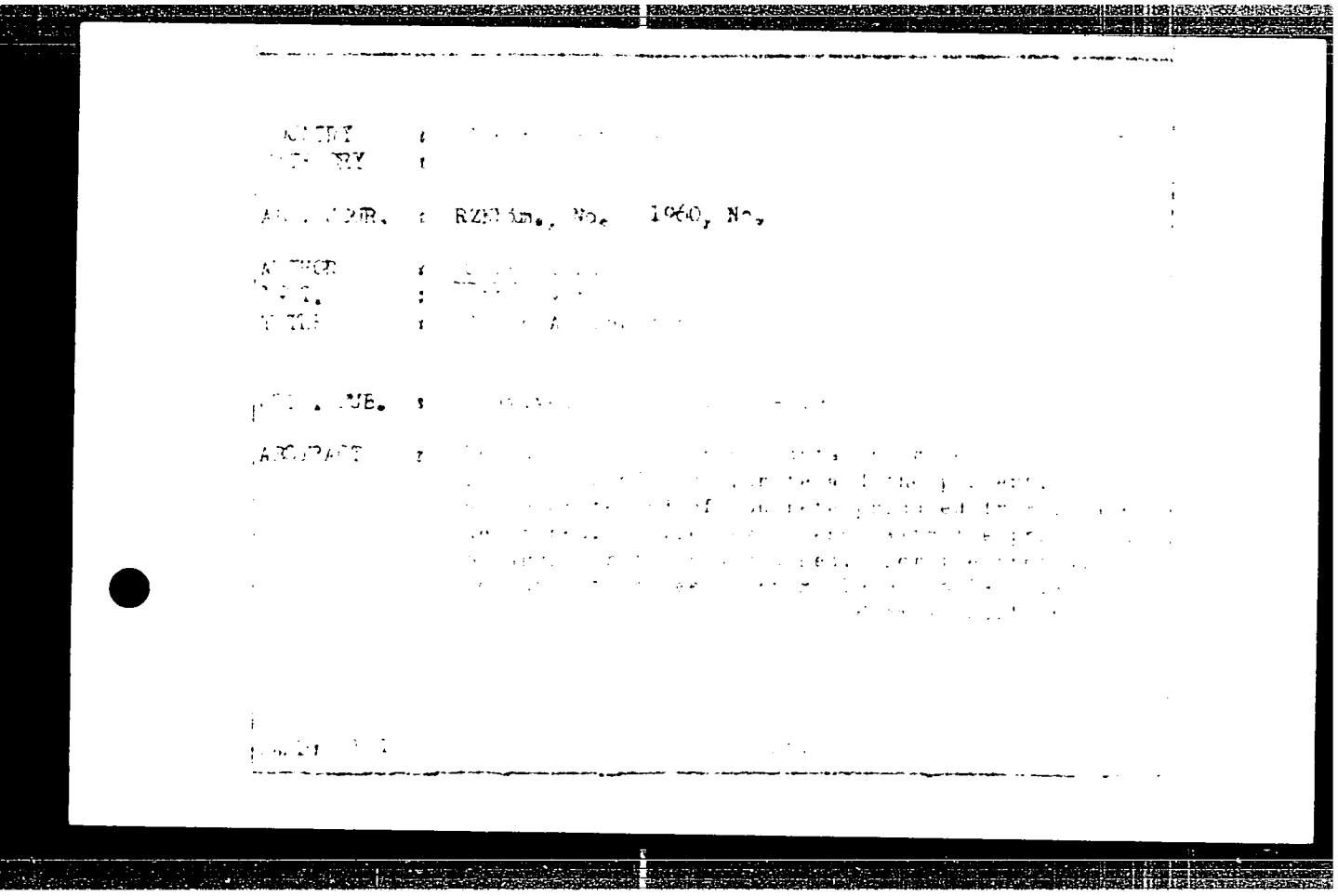
Country : CZECHOSLOVAKIA
Category : Chemical Technology. Ceramics. Binding Materials. Concrete
Abs. Jour : Ref Zhur-Khimiya, No 14, 1959, No 50476

Author : Oppelt, M.
Institute : -
Title : Czechoslovakian "Agloporite"

Orig Pub. : Stavivo, 1958, 36, No 7, 264

Abstract : Experiments of calcining "agloporite" (AP) (used as a balast in the manufacture of light concretes) were conducted on a laboratory installation. An inert material/mineral obtained in the mining of coal was used as a raw material. The calcination process was controlled by measuring temperature of generated gases under the agglomeration grid. A complete combustion of coal in a layer of the inert material (of 30 cm in thickness) was reached

Card: 1/2



[illegible] XX, D. ?.

Dodent, [illegible]

De[illegible]t. Hygiene, [illegible]

"Prophylactic [illegible]

Health," Sov. Zdrav., [illegible]

"Qualitative Index [illegible]

Sov. Zdrav., No. 4, [illegible]

"[illegible]

[illegible]," S[illegible]

OPPENGEIM, D. G.

Principles of the regimen of treatment and rest in sanatoriums and health resorts
Moskva, Medgiz, 1954. 158 p. (Biblioteka prakticheskogo vracha)

OPPENGEYM, David Grigor'yevich, kandidat meditsinskikh nauk; ZHUKOV, G.I., redaktor; SACHEVA, A.I., tekhnicheskiy redaktor

[Rest homes as institutions for preventive treatment] Doma otdykha - profilakticheskie uchrezhdeniia. Moskva, Gos. izd-vo med. lit-ry, 1956. 38 p. (Biblioteka vracha-organizatora. Lektsii po organizatsii zdravookhraneniia dlia vrachei. Organizatsiia kurortno-sanatornoi pomoshchi i domov otdykha, lektsiia 3) (MLRA 9:7)
(SANATORIUMS)

OPPENGEYM, David Grigor'yevich.

[Organizing the work of sanatoriums] Organizatsiia raboty sanatoriia. Moskva, Medgiz, 1956. 52 p. (MIRA 9:5)
(SANATORIUMS)

OPPENGEYM, D.G.

[Forty years of Soviet health resorts] Sorok let sovetskikh kurortov. Moskva, Medgiz, 1957. 114 p. (MIRA 11:5)
(HEALTH RESORTS, WATERING PLACES, ETC.)

OPPENGEYM, D.G.

[Rest homes] Doma otdykha. Moskva, Medgiz, 1957. 201 p. (MIRA 11:1)
(LABOR REST HOMES)

OPPENGEYM, D.G.

Collective farm sanatoria and rest homes. Vop.kur.,fizioter. i lech.fiz.kul't. 23 no.5:447-454 S-O '58 (MIRA 11:11)

1. Iz TSentral'nogo instituta kurortologii (dir. - kand.med.nauk G.N. Pospelova).
(SANATORIUMS)
(MEDICINE, RURAL)

OPPENGEYM, D.G.

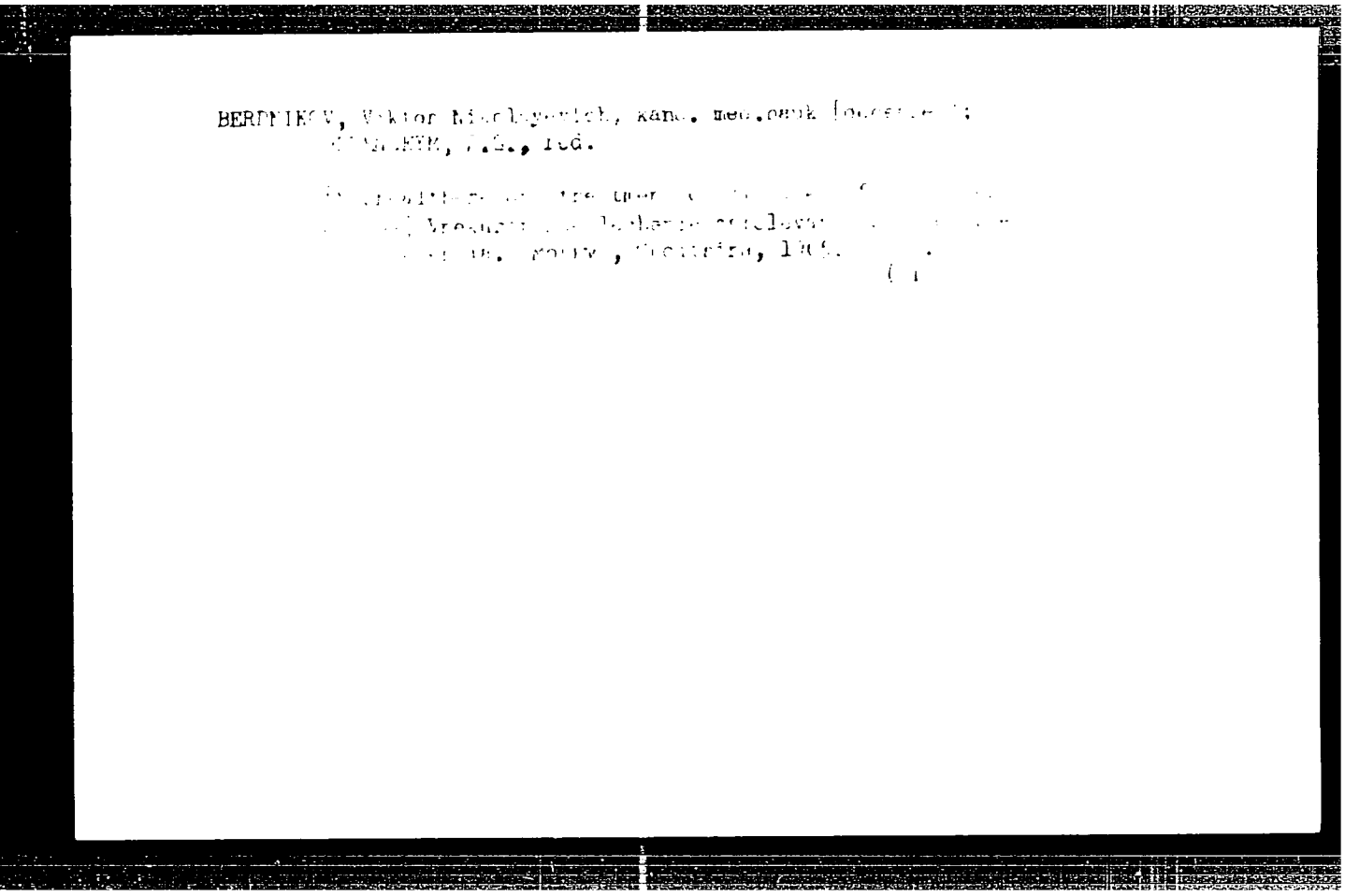
' Ambulatory treatment of patients at health resorts. Vop. kur., fizioter. i lech. fiz. kul't. 24 no. 4:374-377 Jl-Ag '59.
(MIRA 13:8)
(HEALTH RESORTS, WATERING PLACES, ETC.)

BATKIS, Grigoriy Abramovich [deceased]; LEKAREV, Leonid Grigor'yevich; OPPENGEYM, D.G., red.; ZUYEVA, N.K., tekhn. red.

[Theory and organization of the Soviet public health system] Teoriia i organizatsiia sovetskogo zdravookhraneniia. Moskva, Gos. izd-vo med. lit-ry Medgiz, 1961. 349 p. (MIRA 14:8)
(PUBLIC HEALTH)

OPPENGEYM, D.G.; NEYMAN, M.I., red.; PETROVA, N.K., tekhn. red.

[Treatment and rest at health resorts in the Soviet Union] Lechenie i otdykh na kurortakh Sovetskogo Soiuza. Moskva, Medgiz, 1962. 261 p. (MIRA 15:9)
(HEALTH RESORTS, WATERING-PLACES, ETC.)



BERDNIKOV, Viktor Nikolayevich, kand. med. nauk [illegible];
[illegible], F.S., red.

[illegible]

28734
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B103/B104

15.8063

AUTHORS: Topchiyev, A. V., Academician, Krentsel', B. A., Kal', V. V., and Oppengeym, V. L.

TITLE: Polymerization of heptene-1 by means of the catalytic system $Al(iso\text{-}C_4H_9)_3 + TiCl_4$

PERIODICAL: Akademiya nauk SSSR. Doklady, v. 140, no. 3, 1961, 614-616

TEXT: The authors studied the mechanism of polymerization of linear α- olefins by combined organometallic catalysts, as well as the relations between the structure of the initial hydrocarbon and the properties of the resulting polymer. Heptene-1 served as object, $Al(i\text{-}C_4H_9)_3 + TiCl_4$ as catalyst. The monomer was prepared by pyrolysis of heptyl acetate at 540 - 550°C. Preliminary tests showed that the highest conversion of the monomer was reached at an equimolar quantitative ratio of the catalyst components, and at approximately 60°C. The course of temperature of the intrinsic viscosity of polyheptene revealed: Above 60°C some destruction of the polymer set in under the action of the catalyst. As a result, the

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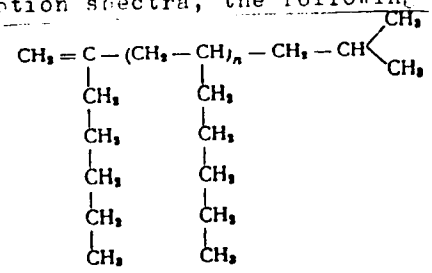
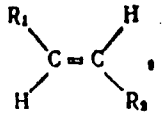
intrinsic viscosity which depends on the ratio of the catalyst components dropped. The peak value of the intrinsic viscosity in Decalin was reached at an $AlR_3/TiCl_4$ ratio between 1.5 and 2.5. The polyheptene produced under optimum conditions is a viscous, glassy substance with a molecular weight of approximately 3500, and a melting point of -40°C. An X-ray structural analysis showed that polyheptene was completely amorphous. On account of the infrared absorption spectra, the following structure is assumed:



$(n = 30 + 35)$.

Still, the absorption band at 972 cm^{-1} points to a possible double bond in the middle of the polymer chain:

Polymerization of heptene-1...



This problem requires further investigation. There are 3 figures and 4 references: 1 Soviet and 3 non-Soviet. The three references to English language publications read as follows: F. P. Reding, J. Polym. Sci., 21, 547 (1956); E. Badin, J. Am. Chem. Soc., 80, 24 (1958); T. W. Campbell, A. C. Haven jr., J. Appl. Polym. Sci., 1, No. 1 (1959).

ASSOCIATION: Institut neftekhimicheskogo sinteza Akademii nauk SSSR (Institute of Petrochemical Synthesis of the Academy of Sciences USSR)

SUBMITTED: May 29, 1961

Card 3/3

32837

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B106/B101

51190 1407

AUTHORS: Bakalo, L. A., Krentsel' B. A., Oppengeym, V. D., and Topchiyev, A. V. Academician

TITLE: The structure of the $FeCl_3$/propylene oxide catalyst and the mechanism of stereospecific polymerization of some epoxy compounds

PERIODICAL: Akademiya nauk SSSR Doklady, v. 142 no. 2, 1962, 347-350

TEXT: The polymerization of organic oxides on a catalyst from anhydrous ferric chloride and propylene oxide takes a stereospecific course which is usually attributed to the heterogeneity of the catalytic system (Ref. 3: C. C. Price, M. Osgan. J Am. Chem Soc. 78, 4789 (1956)). In a previous study (Ref. 6: L. A. Bakalo, B. A. Krentsel', A. V. Topchiyev. Vysokomolek. soyed. 4 (1962)), however, the authors found that the polymerization of epichlorohydrin and divinyl monoxide on the catalyst mentioned also takes a stereospecific course, although the system monomer - catalyst is perfectly homogeneous. The structure of the catalyst has now been

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The structure of the $FeCl_3$/propylene ...

investigated to clarify the mechanism of stereospecific polymerization The catalyst was prepared, according to Ref 2 (see below), from sublimed $FeCl_3$ and propylene oxide in dry CCl_4. Its composition in % was: Fe 15.06; C 37.33; H 6.56; Cl 21.26. To seperate the organic part the catalyst was dissolved in acetone, and the iron was precipitated with sodium hydroxide. The resulting suspension was diluted with water and extracted with ether. The extract was rinsed with water, soda solution, and again with water, and dried over Na_2SO_4. After evaporating the ether, the residue was fractionated (20 - 30 theoretical plates)in a vacuum of 1.5 mm Hg. Three fractions (b. p. 45.5 - 46.5°C 46.5 - 47.5°C, and 47.5 - 49.0°C, respectively) were collected and subjected to elementary analysis, as was the residue. The molecular weight of the catalyst was determined according to Rast, and the content of mobile hydrogen in the organic portion of the catalyst according to Tserevitinov, with ethyl magnesium iodide. It has been proved by nephrite-test and on the basis of infrared spectra that the organic portion contains chlorine. Thus, the empirical molecular formula of the catalyst was found to be $ClFe(C_6H_{12}O_2Cl)_2$. The structure of the organic portion of the catalyst was

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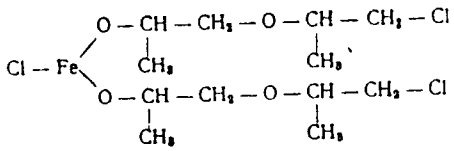
The structure of the $FeCl_3$/propylene...

clarified by infrared spectroscopy (UR-14 (IKS-14) spectrophotometer in the frequency range of 1800 - 640 cm^{-1}). In this connection, the arrangement of the epoxy ring opening with subsequent development of the ether bond was ascertained. It has been proved that the opening of the epoxy ring during the reaction of ferric chloride with propylene oxide takes place at the primary carbon atom, the configuration at the secondary carbon atom being maintained. These results provided the following structural formula for the catalyst in question:



It is of interest that also the organic portion of the catalyst from anhydrous ferric chloride and epichlorohydrin shows the same arrangement of ether bonds. This result and the previously (Ref. 6) shown homogeneous character of the system indicate that the opening of the oxygen-containing ring at the primary carbon atom, in which the configuration at the

asymmetric carbon atom during polymerization is maintained, is the cause for the stereospecificity of polymerization of the α-oxides of olefins. Previous orientation of the monomer, as assumed by Price and collaborators (Ref. 3), is therefore not required in this case. There are 1 figure, 1 table, and 8 references: 2 Soviet and 6 non-Soviet. The four most recent references to English-language publications read as follows: Ref. 2: A. B. Borkovec, US pat. 2861962 (1958); R. O. Colclough, G. Gee, ". C. E. Higginson et al., J. Polymer Sci., 34, 171 (1959); I. Ishida, Bull. Chem. Soc., Japan, 33, 731 (1960); S. Misushima, T. Shimanouchi et al., J. Chem. Phys., 26, 970 (1957).

ASSOCIATION: Institut neftekhimicheskogo sinteza Akademii nauk SSSR (Institute of Petrochemical Synthesis of the Academy of Sciences USSR)

SUBMITTED: October 6, 1961

Card 4/4

VDOVIN, V.M., NAMETKIN, N.S , FINKEL'SHTEYN, Ye.Sh.; OPPENGEYM, V.D.

Conversion of vinylbenzyl derivatives of silicon in the presence of alkylation catalysts. Izv. AN SSSR. Ser.khim. no.3:458-464 Mr '64. (MIRA 17:4)

1. Institut neftekhimicheskogo sinteza im. A.V.Topchiyeva AN SSSR.

L 33269-66 EWP(j)/EWT(m) RM

ACC NR: AR6016192 SOURCE CODE: UR/0058/65/000/011/D025/D025

AUTHOR: Oppengeym, V. D.; Finkel'shteyn, Ye. Sh.

TITLE: Some features of infrared and ultraviolet absorption spectra of 3-4-benzo-1-silicocyclopentane and its derivatives

SOURCE: Ref. zh. Fizika, Abs. 11D190

REF SOURCE: Tr. Komis. po spektroskopii. AN SSSR, t. 3, vyp. 1, 1964, 99-107

TOPIC TAGS: uv absorption, absorption spectrum, organic silicate

ABSTRACT: The authors investigate the ir and uv absorption spectra of 3-4-benzo-1-sylicocyclopentane and its derivatives. They observed a sharp increase in the intensity of the absorption band in the region 1569 - 1580 cm^{-1}, which is credited to the benzene ring. Both the position of the maximum band and its intensity vary with the character of the substitute at the Si atom. The presence of the bathochromic shift of the absorption band 2200 - 2700 Å of the spectrum of 3-4-benzo-1-silicocyclopentane and its derivative by ~25 Å, is observed. A hypothesis is advanced that the obtained similarities of the spectra are connected with disturbance of the electron cloud of the benzene ring as the latter interacts with the silicon atoms. [Translation of abstract]

SUB CODE: 20, 07/

Card 1/1

ACCESSION NR: AP4040604 S/0204/64/004/003/0487/0493

AUTHOR: Znamenskaya, E. N.; Nametkin, N. S.; Pritula, N. A.; Oppengeym, V. D.; Cherny*sheva, T. I.

TITLE: Synthesis and properties of 1-silyl-4-(vinylsilyl)benzenes

SOURCE: Neftekhimiya, v. 4, no. 3, 1964, 487-493

TOPIC TAGS: organosilicon polymer, phenylene bridge, heat transfer agent, lubricating oil

ABSTRACT: Two new 1-silyl-4-(vinlysilyl)benzenes, 1-(diethylsilyl)-4-(diethylvinylsilyl)benzene (I) and 1-(methylphenylsilyl)-4-(methylphenylvinylsilyl)benzene (II), have been synthesized, their physical constants determined, and their polymerization studied. Organosilicon compounds with phenyl groups in the backbone were of interest as thermally stable substances suitable for such applications as lubricating oils and heat-transfer agents. Synthesis was carried out in two steps: 1) condensation of p-bromophenylmagnesium bromide with the appropriate dialkyl- or diaryl-chlorosilane to form the

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ACCESSION NR: AP4040604

1-bromo-4-(dialkyl)- or 1-bromo-4-(diarylsilyl)-benzene and 2) reaction of the Grignard reagent from the latter with the appropriate alkyl- or aryl-chlorovinylsilane to form I or II in 28.4 and 35.0% yields, respectively. Polymerization of II (taken as an example) at 300C in the presence of Pt on C or at 280C without a catalyst formed straight-chain soluble polymers with $-SiC_6H_4SiCH_2CH-$ repeat units in the backbone in 82.3 and 68.4% yield and softening at 142—150C and 87—93C, respectively. The structure of the polymers was confirmed by IR spectroscopy. This work was done at the Institute of Petrochemical Synthesis, Academy of Sciences SSSR. Orig. art. has: 8 formulas, 2 tables, and 3 figures.

ASSOCIATION: Institut neftekhimicheskogo sinteza AN SSSR im. A. V. Topchiyeva (Institute of Petrochemical Synthesis, AN SSSR)

SUBMITTED: 10Sep63 DATE ACQ: 06Jul64 ENCL: 00

SUB CODE: OC,GC NO REF SOV: 006 OTHER: 007

Card 2/2

L 11298-65 EPA(s)-2/EWT(m)/EPF(c)/EPR/EWP(j)/T Pc-4/Pr-4/Ps-4/Pt-10 [illegible]

DJ/RM

ACCESSION NR: AP4044556 S/0204/64/004/004/0650/0657

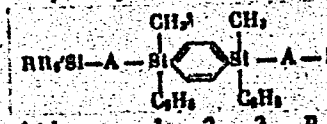
AUTHOR: Nametkin, N. S.; Cherny*sheva, T. I.; Pritula, N. A.; Oppengeym, V. D.; Nechitaylo, N. A. 7. (B)

TITLE: Synthesis of organosilicon compounds with phenylenecarbon and phenylenesiloxane groups and their thermoanalysis

SOURCE: Neftekhimiya, v. 4, no. 4, 1964, 650-657

TOPIC TAGS: silphenylene, p bis(methyphenylsilyl)benzene, silphenylene structure, silphenylene thermal transformation, silphenylene synthesis

ABSTRACT: A number of silphenylenes of the type



where A is O or $(CH_2)_n$ with n = 1, 2, 3, R and R' are CH_3, or A is $(CH_2)_n$ and R' is C_6H_5, have been prepared from p-bis(methylphenylsilyl)benzenes in which silicon atoms are linked with bromine, vinyl

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L 11298-65
ACCESSION NR: AP4044556

radicals or hydrogen atoms. The study was conducted because silphenylenes were expected to exhibit high thermal stability, and because of their possible use as lubricants, heat-transfer agents and fluids for vacuum diffusion pumps. The structure of the compounds was confirmed by IR spectral analysis. The thermal conversions of the silphenylenes were studied in air with the Kurkakov pyrometer equipped with automatic recording. The results of derivative thermogravimetric analysis are given in Table 1 of the Enclosure. Orig. art. has: 5 figures and 1 table.

ASSOCIATION: Institut neftekhimicheskogo sinteza im. A. V. Topchiyeva AN SSSR (Institute of Petrochemical Synthesis, AN SSSR)

SUBMITTED: 09Dec63 ATD PRESS: 3104 ENCL: 01

SUB CODE: GC, OC NO REF SOV: 004 OTHER: 007

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L 11298-65
ACCESSION NR: AP4044556 ENCLOSURE: 01

Table 1. Conversions of silphenylenes from data of derivative thermogravimetric analysis

Compound	Temperature, °C			
	Melting	First Exothermic effect	Second Exothermic effect	Endothermic effect
$[(CH_3)_2Si-(CH_2)_2-Si(CH_3)(C_6H_5)]_2C_6H_4$	—	260—360	445—595	—
$[(CH_3)_2Si-(CH_2)_2-Si(CH_3)(C_6H_5)]_2C_6H_4$	62	218—337	462—530	—
$[(CH_3)_2Si-(CH_2)_2-Si(CH_3)(C_6H_5)]_2C_6H_4$	60	205—335	462—550	—
$[(CH_3)_2C_6H_4Si-(CH_2)_2-Si(CH_3)(C_6H_5)]_2C_6H_4$	—	240—375	540—600	—
$[(CH_3)_2Si-O-Si(CH_3)(C_6H_5)]_2C_6H_4$	—	—	—	360—415

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ACCESSION NR: AP4012090 S/0020/64/154/002/0383/0386

AUTHORS: Nametkin, N.S. (Corresponding member); Vdovin, V.M.; Pinkel'shteyn, Ye. Sh.; Arkhipova, T.N.; Oppengeym, V.D.

TITLE: Synthesis of 3,4-benzosilicocyclopentanes

SOURCE: AN SSSR. Doklady*, v. 154, no. 2, 1964, 383-386

TOPIC TAGS: 3,4-benzosilicocyclopentane, infra-red spectrum, ultraviolet spectrum, chloromethylbenzyldichlorsilane cyclization, 3,4-benzosilicocyclopentane synthesis, silicon containing indane

ABSTRACT: The silicon-containing analog of indane, 3,4-benzosilicocyclopentane and some of its derivatives were synthesized and characterized by their IR and u.v. spectra and physical properties. Chloromethylbenzyldichlorsilane was cyclized with $AlCl_3$ in benzene

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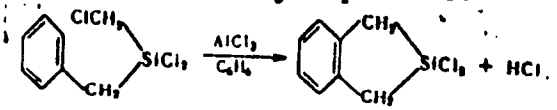
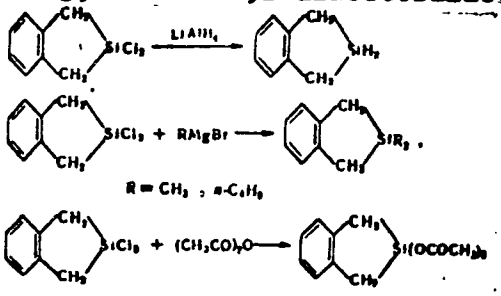
ACCESSION NR: AP4012090

to the 3,4-benzo-1,1-dichlorosilicocyclopentane:



The latter was reduced with $LiAlH_4$ to 3,4-benzo-1,1-dihydrosilicocyclopentane, alkylated with RMgBr to the corresponding 1,1-dimethyl- and 1,1-dibutyl-derivatives, and reacted with acetic anhydride to form the 3,4-benzo-1,1-diacetosilicocyclopentane.



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