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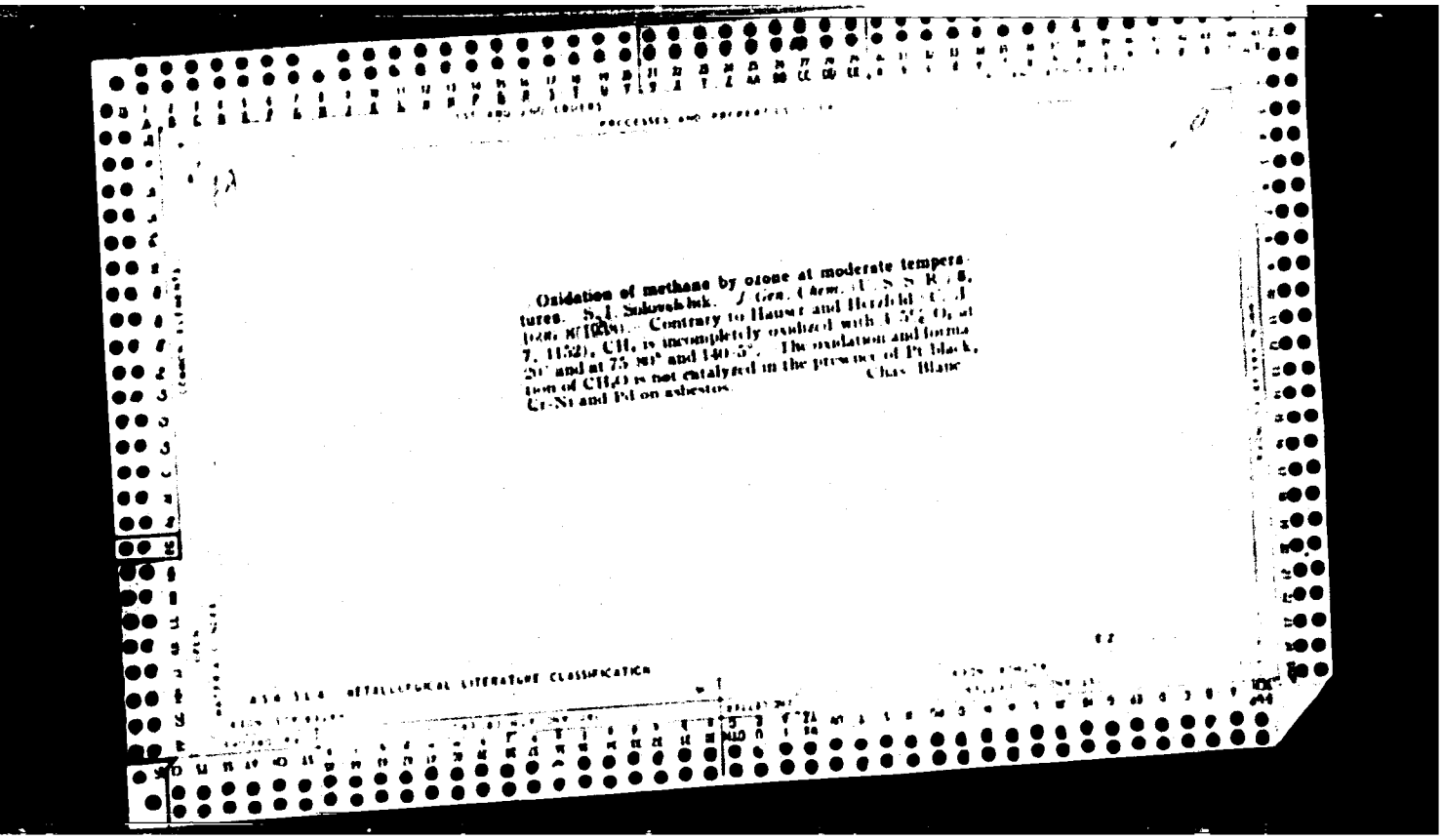
PROCESSES AND PROPERTIES



Oxidation of methane by ozone at moderate temperatures. S. I. Sokolovskik. *J. Gen. Chem.* (U.S.S.R.) 8, 1026-8(1938).—Contrary to Hauser and Herzfeld (C. J. 7, 1152), CH_4 is incompletely oxidized with 4.5% O_3 at 20° and at 75-80° and 140-5°. The oxidation and formation of CH_2O is not catalyzed in the presence of Pt black, Cr-Ni and Pd on asbestos. Chas. Blanc

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

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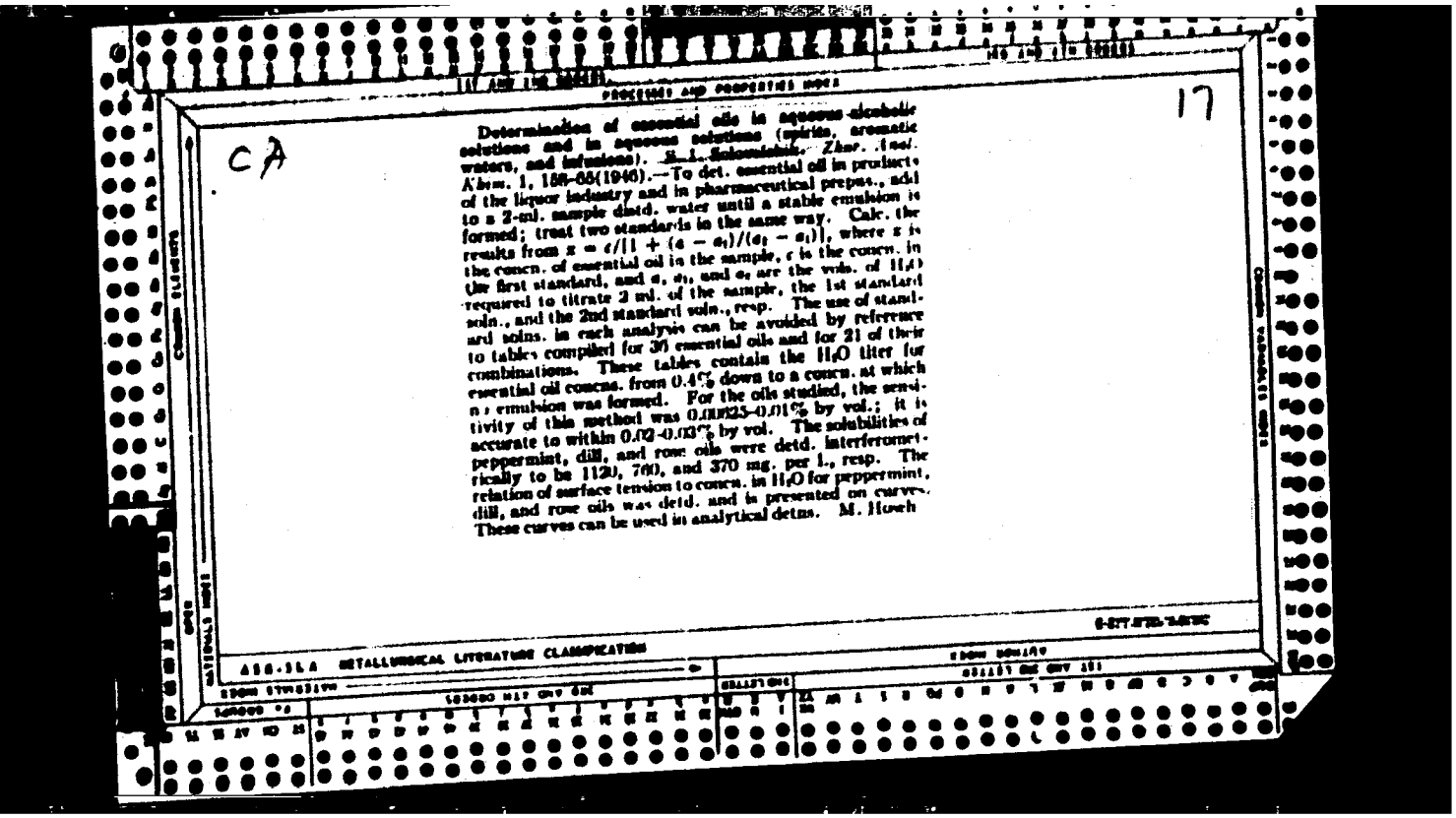

PROCESSES AND PROPERTIES INDEX

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CA

Determination of essential oils in aqueous-alcoholic solutions and in aqueous solutions (spirits, aromatic waters, and infusions). S. I. Solovaishik. *Zhur. Anal. Khim.* 1, 158-65(1946).—To det. essential oil in products of the liquor industry and in pharmaceutical prepns., add to a 2-ml. sample distd. water until a stable emulsion is formed; treat two standards in the same way. Calc. the results from $x = c/[1 + (a - a_1)/(a_2 - a_1)]$, where x is the concn. of essential oil in the sample, c is the concn. in the first standard, and a, a_1, and a_2 are the vols. of H_2O required to titrate 2 ml. of the sample, the 1st standard soln., and the 2nd standard soln., resp. The use of standard solns. in each analysis can be avoided by reference to tables compiled for 30 essential oils and for 21 of their combinations. These tables contain the H_2O titer for essential oil concns. from 0.4% down to a concn. at which no emulsion was formed. For the oils studied, the sensitivity of this method was 0.00625-0.01% by vol.; it is accurate to within 0.02-0.03% by vol. The solubilities of peppermint, dill, and rose oils were detd. interferometrically to be 1120, 760, and 370 mg. per l., resp. The relation of surface tension to concn. in H_2O for peppermint, dill, and rose oils was detd. and is presented on curves. These curves can be used in analytical detns. M. Hosch

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652310007-6

SOLOVEYCHIK, S.I.

Central Sci. Res. Lab., Alcohol Industry, (1946)

Central Pharm. Sci. Res. Inst., (1946)

"Quantitative Analysis of Essential Oils in Aqueous Alcoholic and Aqueous Solutions (Fragrant Spirits, Waters and Infusions)"

Zhur. Analit, Khim., No.3, 1946

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652310007-6"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652310007-6

SOLOVYCHIK, S. I. Cand. Chem. Sci.

Dissertation: "Determination of the Quantitative Content of Essential Oils in Alcohol-Vodka Solutions and Aqueous Solutions." Moscow Inst of Fine Chemical Technology imeni M. V. Lomonosov, 19 May 47.

SO: Vechernyaya Moskva, May, 1947 (Project #17836)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652310007-6"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652310007-6

Soloveychik, Ya. S.

AID P - 5038

Subject : USSR/Engineering

Card 1/1 Pub. 103 - 9/22

Authors : Zagolikhinskaya, E. L. and Ya. S. Soloveychik

Title : Fitting and assemblying internal polishing spindles on anti-friction bearings.

Periodical : Stan. i instr., 4, 28-32, Ap 1956

Abstract : The authors describe the analytical work carried out to establish the most efficient method of putting together the internal polishing spindles in anti-friction bearings. These bearings were installed in the automatic lines at the First State Bearing Works (1 GPZ), the Moscow Plant for Polishing Machines (MSZ) and Bureau-6 for Design of Machine Tools (SKB-6). Eleven formulae, 11 drawings and GOST standard.

Institution : As above

Submitted : No date

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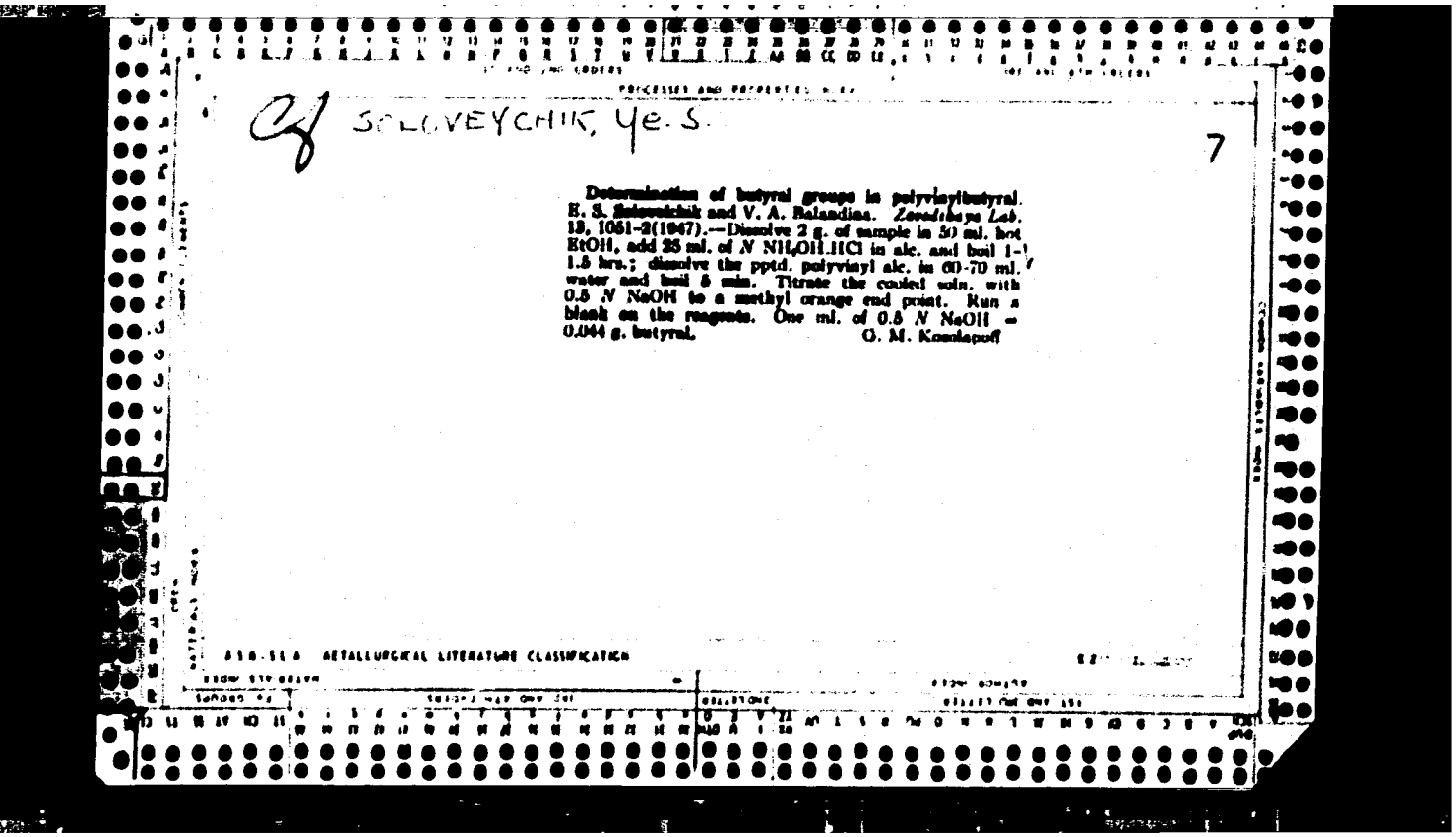

Cf SOLOVEYCHIK, Ye. S.

7

Determination of butyral groups in polyvinylbutyral. E. S. Soloveichik and V. A. Balandina. *Zavodskaya Lab.* 13, 1051-2(1947).—Dissolve 2 g. of sample in 50 ml. hot EtOH, add 25 ml. of *N* $NH_4OH.HCl$ in alc. and boil 1-1.5 hrs.; dissolve the pptd. polyvinyl alc. in 60-70 ml. water and boil 5 min. Titrate the cooled soln. with 0.5 *N* NaOH to a methyl orange end point. Run a blank on the reagents. One ml. of 0.5 *N* NaOH = 0.044 g. butyral. G. M. Kosolapoff

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C A

22

Oxidation of paraffin distillate. A. F. Drabkin and [illegible] Solovetchik (Lensovet Chem. Tech. Inst., Leningrad). *Zhur. Prikl. Khim.* (J. Applied Chem.) 23, 1320-30 (1950). Petroleum paraffin fraction (500 g.) was oxidized in glass app. by air blowing at 20 l. min. at 130-40° in presence of various naphthenic acid salts as catalysts. Mn salt is the best. The initial material contained 21% aromatic hydrocarbons (I), 43% naphthene hydrocarbons, and 34% aliphatics. Raw paraffin cut oxidizes very poorly and yields much tar, so that in 8-10 hrs. the product has the acid no. of barely 3 mg. KOH per g. If I are removed the residuum oxidizes more readily and goes at the rate of 10 acid no. units per hr. The removal of I is done with H_2SO_4 treatment 30 min. at 50°, and the product contains 4-6% residual I which are not very deleterious to the oxidation step. The retardation of oxidation by I is caused largely by accumulation of aromatic acids. For better yields of acids it is best to carry the oxidation stepwise with intermittent leaching of the acids by means of alk. washes. Likewise, gradual addn. of the catalyst is helpful.

G. M. Kosolapoff

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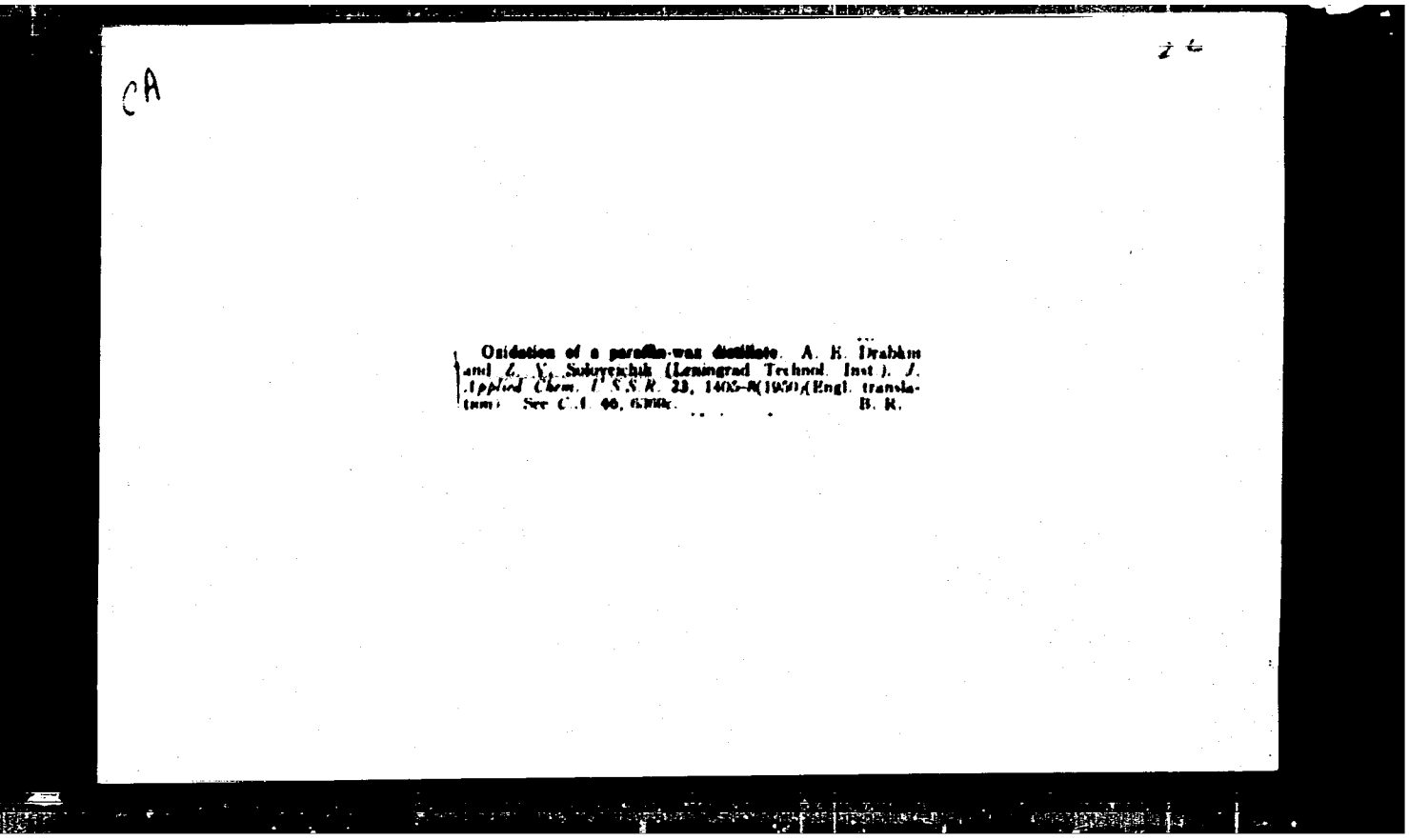

CA

26

Oxidation of a paraffin-wax distillate. A. E. Drabkin and Z. V. Soloveichik (Leningrad Technol. Inst.). *J. Applied Chem. U.S.S.R.* 23, 1405-8(1950)(Engl. translation). See C.A. 46, 6300c. B. R.

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652310007-6"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652310007-6

USSR/Chemistry - Petroleum May 51

"Investigation of the Composition of Fatty Acids From Oxidized Paraffin," A. Ye. Drabkin, Z. V. Soloveychik, Leningrad Tech Inst imeni Lensovet

"Zhur Prik Khim" Vol XXIV, No 5, pp 502-508

Sepd from oxidized Groznyy paraffin: number of individual monobasic acids of normal structure belonging to unbroken series $C_nH_{2n}O_2$, where n = 7 to 23.

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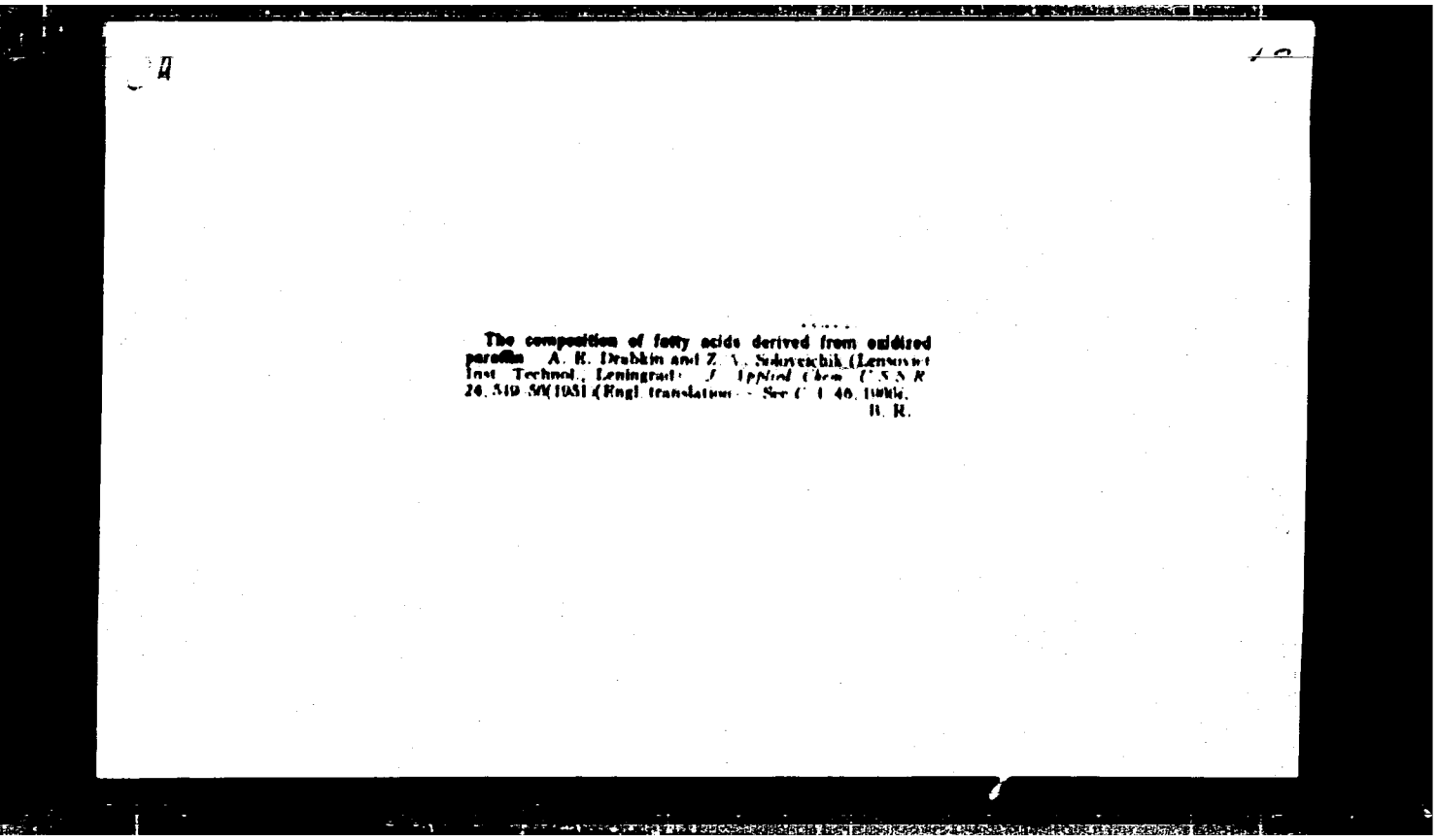

The composition of fatty acids derived from oxidized paraffin. A. E. Drabkin and Z. V. Soloveichik (Lensovet Inst. Technol., Leningrad). *J. Applied Chem. U.S.S.R.* 24, 549-50(1951)(Engl. translation). — See C. A. 46, 1000i.

B. R.

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652310007-6"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652310007-6

PROSKURYAKOV, V.A.; REMBASHEVSKIY, A.G.; SOLOVEYCHIK, Z.V.

Flotation of ores of the Borislav deposit Report No.1. Trudy LTI no.51:122-134 '59. (MIRA 13:8)
(Borislav--Ozocerite) (Flotation)

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652310007-6

CHISTYAKOV, A.N., SOLOVEYCHIK, Z.V.

Separation of elemental sulfur from a spent bog ore by flotation. (MIRA 13:8)
Trudy LTI no.51:145-149 '59.
(Sulfur) (Ore dressing)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652310007-6"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652310007-6

PROSKURYAKOV, V.A.; REMBASHEVSKIY, A.G.; SOLOVEYCHIK, Z.V.

Flotation cleaning of Volga shales. Report No.1: Flotation cleaning of Obshchiy Syrt shales. Trudy VNIIT no.10:5-22 '61. (MIRA 15:3)
(Obshchiy Syrt—Shale)(Flotation)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652310007-6"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652310007-6

PROSKURYAKOV, V.A.; SOLOVEYCHIK, Z.V.; Prinimali uchastiye: TROSTYANSKAYA, A.G.; KUPRIYANCHIK, A.D.

Oxidation of oil shales by atmospheric oxygen. Report No.2: Oxidation of Gdov shales in continuous air feed. Trudy VNIIT no.10:81-90 '61. (MIRA 15:3)

(Gdov--Oil shales)(Oxidation)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652310007-6"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652310007-6

PROSKURYAKOV, V.A.; REMBRASHEVSKIY, A.G.; SOLOVEYCHIK, Z.V.

Flotational enrichment of oil shale. Report No. 2. Shale of the Kashpir field. Trudy VNIIT no. 11:5-19 '62. (MIRA 17:5)

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652310007-6

PROSKURYAKOV, V.A.; REMBASHEVSKIY, A.G.; SOLOVEYCHIK, P.V.

Flotation enrichment of Savel'yevka shales and technical features of concentrates of Volga shales. Trudy VNIIT no.13:10-21 '64. (MIRA 18:2)

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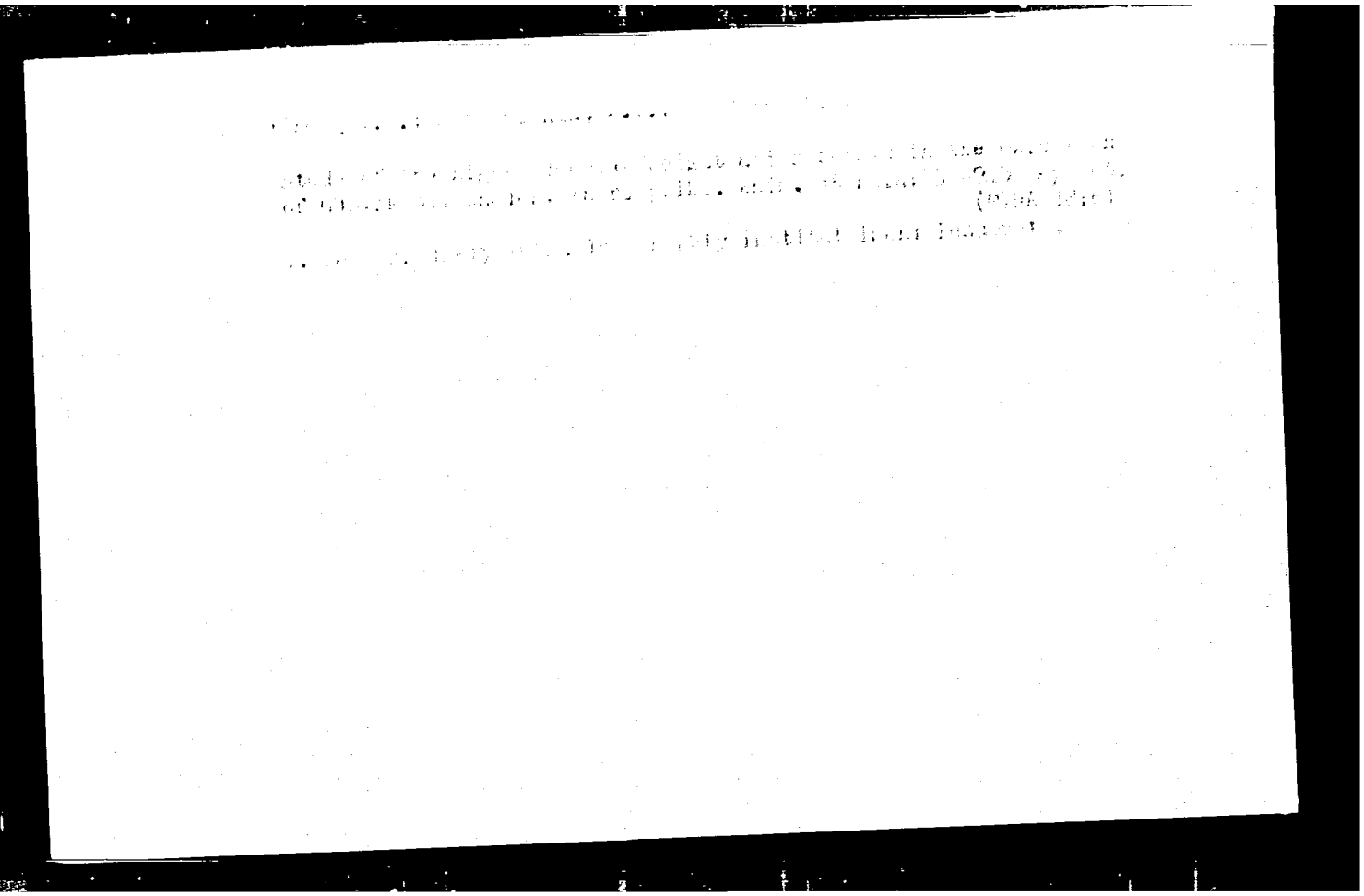

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652310007-6

PROSKURYAKOV, V.A.; SOLOVEYCHIK, Z.V.

Oxidation of the Gdov shale in a n-aqueous alkaline medium.
Zhur.prikl.khim. 38 no.3:632-638 Mr '65. (MIRA 18:11)

1. Leningradskiy tekhnologicheskiy institut imeni Lensoveta.
Submitted April 20, 1964.

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652310007-6"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652310007-6

GAVRILA, I., Prof.; COMES, L., conf.; SERBAN, I., dr.; SOLOVIEV, M., dr.; GHIDALI, M., dr.; PIHVU, C., dr.; IEPUREANU, A., dr.; CUCU, Al., dr.; BUCIU, M., dr.; URCAN, S., dr.; LUCA, E., dr.

Interpretation of blood sedimentation rates in infectious diseases. Med. int., Bucur. 8 no.4:525-532 Aug 56.

1. Lucrare efectuata in Clinica de boli contagioase dir. Cluj.
(INFECTION, blood in
sedimentation rate, determ. & relation to intensity of dis.)
(BLOOD SEDIMENTATION, in various dis.
infect. dis., determ. & relation to intensity of dis.)
(COMMUNICABLE DISEASES, blood in
sedimentation rate, determ. & relation to intensity of dis.)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652310007-6"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652310007-6

GAVRILA, I.; COMES, L.; PIRVU, C.; SOLOVIEV, M.

The role of antibiotics and corticoid preparations in current treatment of diphtheric croup. Stud. cercet. med. intern. 3 no.2:189-195 '62.

(DIPHTHERIA therapy) (LARYNGITIS therapy)
(ANTIBIOTICS therapy) (ADRENAL CORTEX HORMONES therapy)
(IMMUNE SERUMS therapy)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652310007-6"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652310007-6

GAVRILA, I., prof.; MURESIANU, T., dr.; SOLOVIEV, M., dr.; SUCIU, O., dr.; BALABAN, C.

The clinical aspect of Salmonella typhimurium infections. Med. intern. 14 no.6:653-658 Je '62.

1. Lucrare efectuata in Clinica de boli contagioase, I.M.F., Cluj.
(SALMONELLA INFECTIONS) (SALMONELLA TYPHIMURIUM)

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652310007-6

ROMANIA

GAVRILA, I., Professor; IGNA, M., MD; GORGAN, V., MD; SOLOVIEV, M., MD; NEGOMIREANU, T., MD.

Clinic of Contagious Diseases (Clinica de boli contagioase), Cluj; Director: Professor I. Gavrila. - (for all)

Bucharest, Viata Medicala, No 5, 1 Mar 63, pp 313-322.

"The Accidents in Corticotherapy in Infectious Pathology."

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652310007-6

RUMANIA

GAVRILA, I., Prof, and SOLOVIEV, M., Dr. Work performed at the Clinic for Contagious Diseases (Clinica de Boli Contagioase), Cluj.

"Epidemiological and Clinical Remarks on Anthrax in Cluj During the Last 13 Years (1950 to 1962)."

Bucharest, Microbiologia, Parazitologia, Epidemiologia, Vol 8, No 5, Sep-Oct 63, pp 445-449.

Abstract [Authors' English summary modified]: Between 1950 and 1962, 84 cases of anthrax were treated at the Cluj Clinic for Contagious Diseases, of which 12 were children. None of the cases was lethal; all presented cutaneous localization, 8 with malignant edema and 76 with malignant pustulae. Sources of infection were animals or their products in 39 cases, insect bites in 10, other causes in 3 and unidentified in 32 cases. It is pointed out that the morbidity rate has been falling to no cases at all in Cluj during 1962, and that mortality has been brought down to zero from 6% since sulfonamides and especially antibiotics have been associated with serum therapy. Includes 1 table and 7 references, of which 1 Russian and 6 Rumanian.

1/1

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652310007-6

GAVRILA,I., prof.; SOLOVIEV,M., dr.

Epidemiological and clinical considerations on anthrax in Cluj in the past 13 years (1950-1962). Microbiologia (Bucur) 8 no.5:445-449 S-O'63

1. Lucrare efectuata in Clinica de boli contagioase, Cluj; prof. I.Gavrila.

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652310007-6

OSTROVSKAYA, N.N.; SOLOVIEV, N.N.

Electron microscopy of phage lysis of Brucellae. J. hyg. epidem. 6 no.1:24-29 '62.

1. N.F. Gamaleya, Institute of Epidemiology and Microbiology, Academy of Medical Sciences of USSR, Moscow. (BRUCELLA) (BACTERIOPHAGE) (MICROSCOPY ELECTRON)

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652310007-6

SOLOVIEV, O. A.[Solov'yev, O. A.]

Distribution of magnetic anomalies in metalliferrous and nonmetalliferrous formations. Analele geol geogr 15 no.4:59-66 O-D '61.

(Minerals) (Magnetic properties)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652310007-6"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652310007-6

SOLOVINA, V.I

V-10

USSR/Pharmacology. Toxicology. Toxicology.

Abs Jour : Ref Zhur-Biolog., No 6, 1958. 28279.

Author : Solovina V. I.

Inst : Not given

Title : Restoration of the Organism's Life Functions in Acute Intoxication with Carbon Monoxyde.

Orig Pub : Patol. fiziologiya i eksperim. terapiya, 1957, 1, No 1, 12-19

Abstract : Of seventeen dogs intoxicated by CO and for a period of 12 seconds to 4 minutes and 30 seconds in a state of clinical death, in 14 it was possible to induce a rapid restoration of cardiac activity by the application of the V. A. Negovsky method of revivification. Later, however, all the

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SOLOVIYEV, Aleksandr Dmitriyevich, dots. kand.tekhn.nauk; GOLUBKOVA, Ye.S., red.; KOGAN, F.L., tekhn.red.

[Manual on connecting lines of a road to points of triangulation and polygonometry] Posobie po priviazke trassy dorogi k punktam triangulistsii i poligonometrii. Moskva, Nauchno-tekhn.izd-vo avtotransp. lit-ry, 1957. 48 p. (MIRA 11:4)
(Roads--Surveying)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652310007-6"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652310007-6

h2046
S/207/62/000/004/005/006
I054/I242

AUTHORS: Gusov, V.V., Pridantsev, A.I., Soloviyev, A.N. (Moscow)

TITLE: Determination of the coefficient of heat transfer to boiling liquids with a continuously changing heat flux

PERIODICAL: Zhurnal prikladnoy mekhaniki i tekhnicheskoy fiziki, no.4, 1962, 111-114

TEXT: The difficulties in obtaining heat transfer coefficients for boiling liquids, particularly the problem of measuring the temperature of the heating surface are explained. A method to overcome these difficulties is proposed. It is assumed that the heat transfer follows the law $\alpha = Cq^n$ and the effective temperature difference is given by $t_w - t_f = q/\alpha = \frac{1}{C} q^{1-n}$. Since the thermocouple is situated a certain distance under the surface the relation $\Delta t_{w1} = K_1 q^m - K_2 q = \varphi(q)$ is obtained, where Δt_{w1} is the temperature difference between the fluid and the thermocouple junction. The

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652310007-6

SOLOVJEV,M.

So-called eccentric contractions of the gallbladder observed after administration of Jopagnost Spofa. Cesk. rentgen. 18 no.3:181-188 My'64

1. Rentgenove oddeleni Cs. statnich lazni v Karlovych Varech; vedoucí: MUDr. L. Svab.

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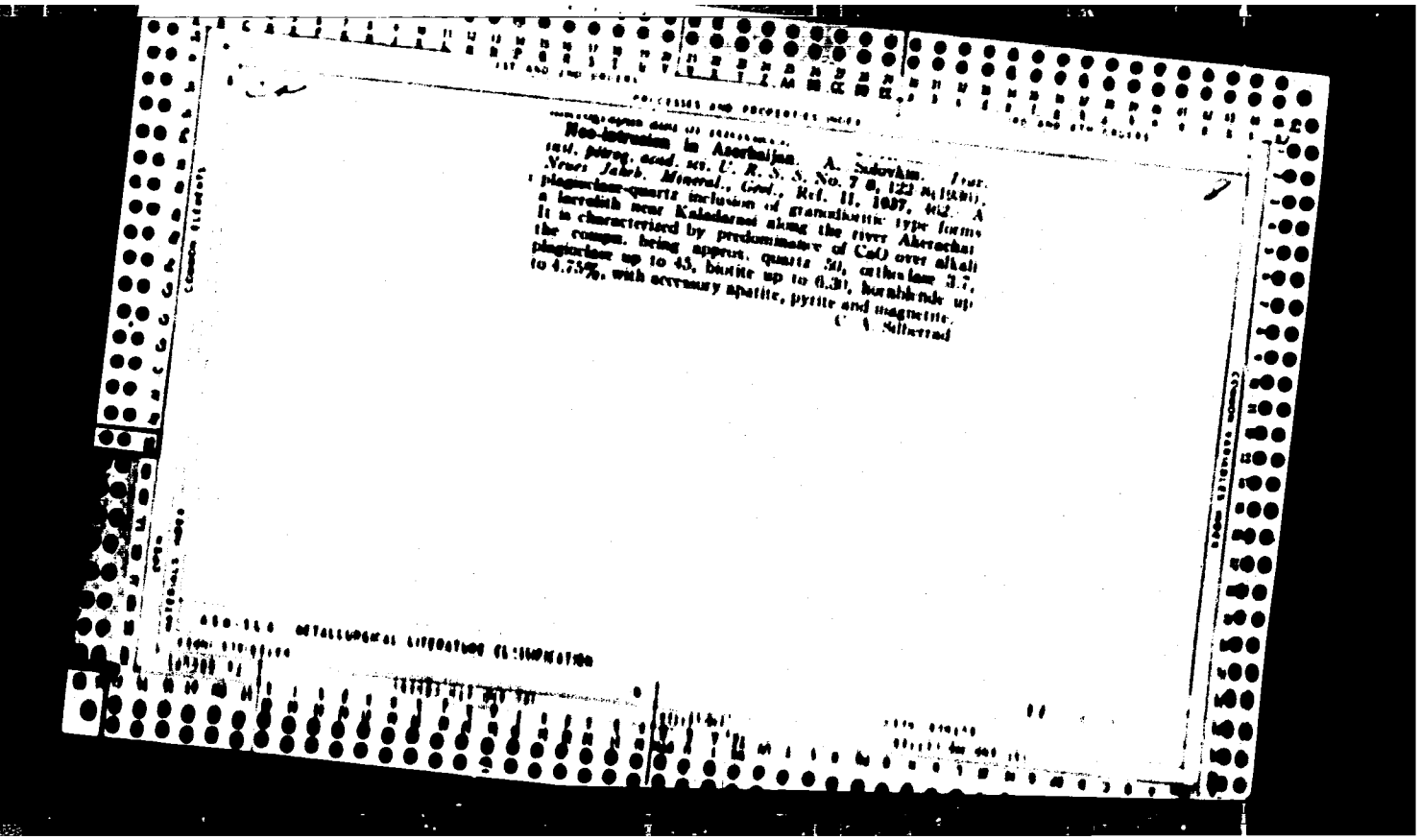
PROCESSES AND PROPERTIES INDEX



Neo-intrusion in Azerbaijan. A. Solovkin. *Trav. inst. pétrog. acad. sci. U. R. S. S.* No. 7 8, 123 8(1936). *Neues Jahrb. Mineral., Geol.*, Ref. II, 1937, 462. A plagioclase-quartz inclusion of granodioritic type forms a lacrolith near Kaladarasi along the river Akerachai. It is characterized by predominance of CaO over alkali the compn. being approx. quartz 50, orthoclase 3.7, plagioclase up to 45, biotite up to 6.30, hornblende up to 4.75%, with accessory apatite, pyrite and magnetite.

C. A. Silberrad

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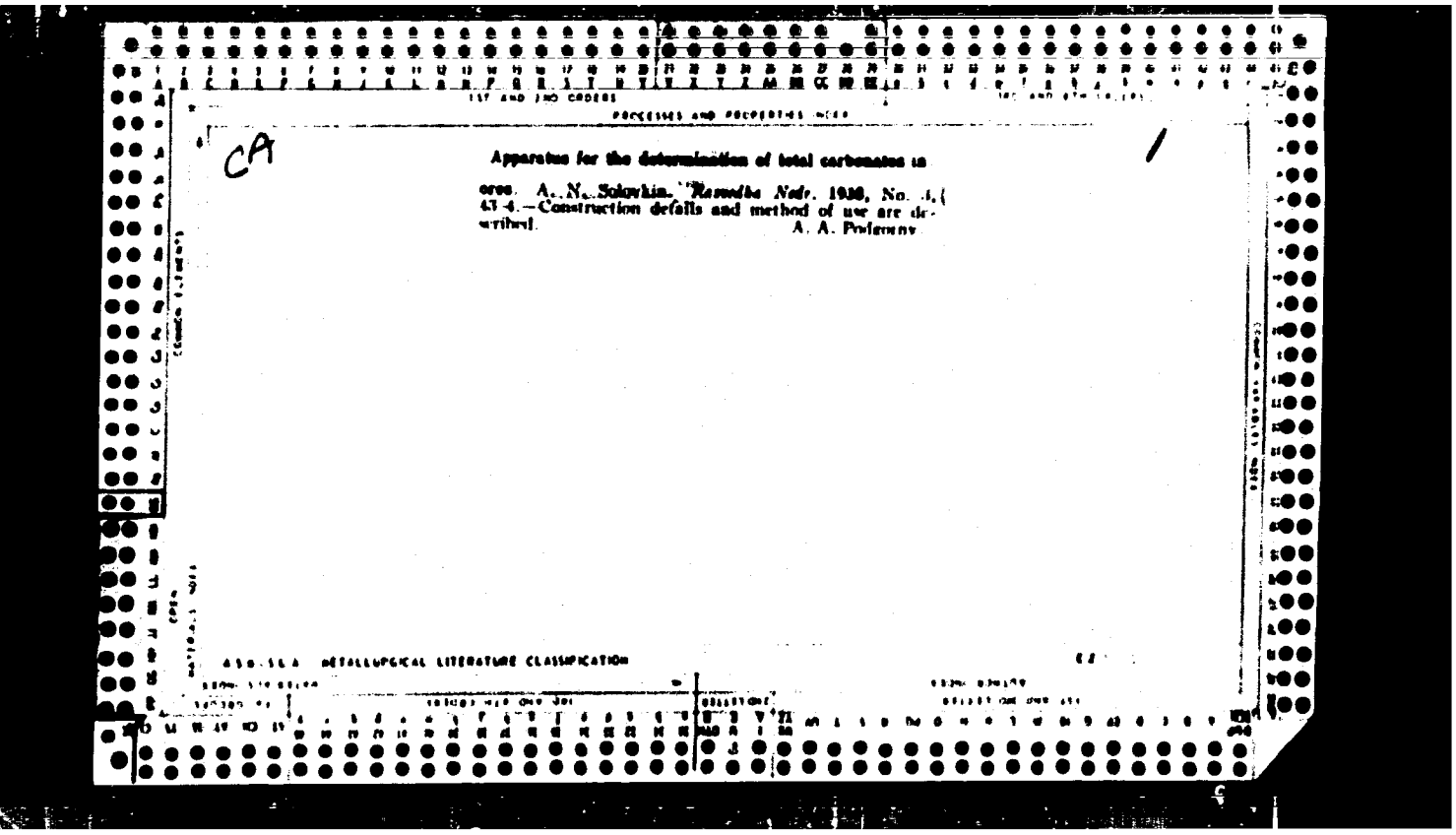

1ST AND 2ND ORDERS

PROCESSES AND PROPERTIES INDEX

CA

1

Apparatus for the determination of total carbonates in ores. A. N. Solovkin. *Razvedka Nedr.* 1938, No. 3, 43-4.—Construction details and method of use are described. A. A. Podgorny.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

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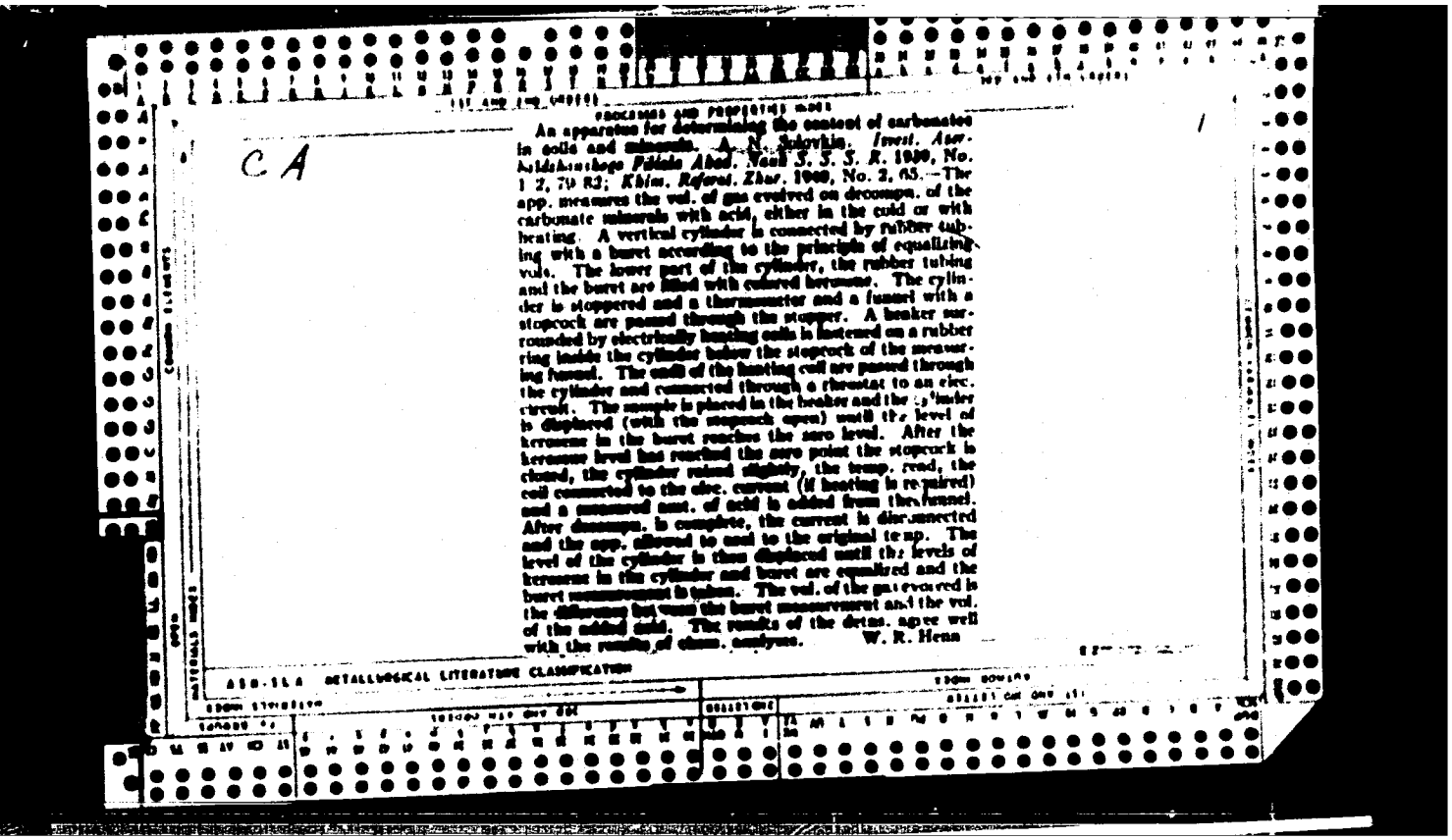

CA

PROCESSES AND PROPERTIES INDEX

An apparatus for determining the content of carbonates in soils and minerals. A. N. Solovkin. *Izvest. Azerbaidzhanskogo Filiala Akad. Nauk S. S. S. R.* 1939, No. 1-2, 79-82; *Khim. Referat. Zhur.* 1940, No. 2, 65.—The app. measures the vol. of gas evolved on decompn. of the carbonate minerals with acid, either in the cold or with heating. A vertical cylinder is connected by rubber tubing with a buret according to the principle of equalizing vols. The lower part of the cylinder, the rubber tubing and the buret are filled with colored kerosene. The cylinder is stoppered and a thermometer and a funnel with a stopcock are passed through the stopper. A beaker surrounded by electrically heating coils is fastened on a rubber ring inside the cylinder below the stopcock of the measuring funnel. The ends of the heating coil are passed through the cylinder and connected through a rheostat to an elec. circuit. The sample is placed in the beaker and the cylinder is displaced (with the stopcock open) until the level of kerosene in the buret reaches the zero level. After the kerosene level has reached the zero point the stopcock is closed, the cylinder raised slightly, the temp. read, the coil connected to the elec. current (if heating is required) and a measured amt. of acid is added from the funnel. After decompn. is complete, the current is disconnected and the app. allowed to cool to the original temp. The level of the cylinder is then displaced until the levels of kerosene in the cylinder and buret are equalized and the buret measurement is taken. The vol. of the gas evolved is the difference between the buret measurement and the vol. of the added acid. The results of the detns. agree well with the results of chem. analyses. W. R. Henn

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652310007-6"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652310007-6

SOLOVKIN, A. N.

"On the Age of the Intrusions of the North-Eastern Part of the Little Caucasus" Dok. AN, 43, No. 5, 1944; "New Data on the Occurrence of Ores in the Intrusion of the Little Caucasus (Azerbayozhan SSR)," ibid., 48, No. 8, 1945; "Analcime Rocks in the Little Caucasus (Azerbaydzhan SSR)," 49, No. 1, 1945; "Quartz in the Jurassic Deposits of the Southern Slope of the Main Caucasian Range (Azerbaydzhan SSR)," ibid., 55, No. 2, 1948; "Intrusions in the Area between the Terter and Kyurok-Char Rivers in Azerbaydzhan SSR," ibid.; "The So-Called 'Quartz Porphyry' of the Little Caucasus (Azerbaydzhan SSR), ibid., No. 8, 1948; "Cretaceous Volcanism and the Stratigraphy of the Cretaceous Period in the Eastern Transcaucasus," Iz. Ak. Nauk SSSR, Ser. Geol., 2, 1949.

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652310007-6

SOLOVKIN, A. N.

USSR/Geology 1945

"Analcime Rocks in the Little Caucasus (Azerbaijan SSR)," A. N. Solovkin, 2 pp

"CR Acad Sci" Vol XLIX, No 1

Recent investigations in the eastern foothills of the Little Caucasus, showing presence of analcime rocks and aiding prediction of the position of teschenite facies in the folded zones of Transcaucasia.

4T60

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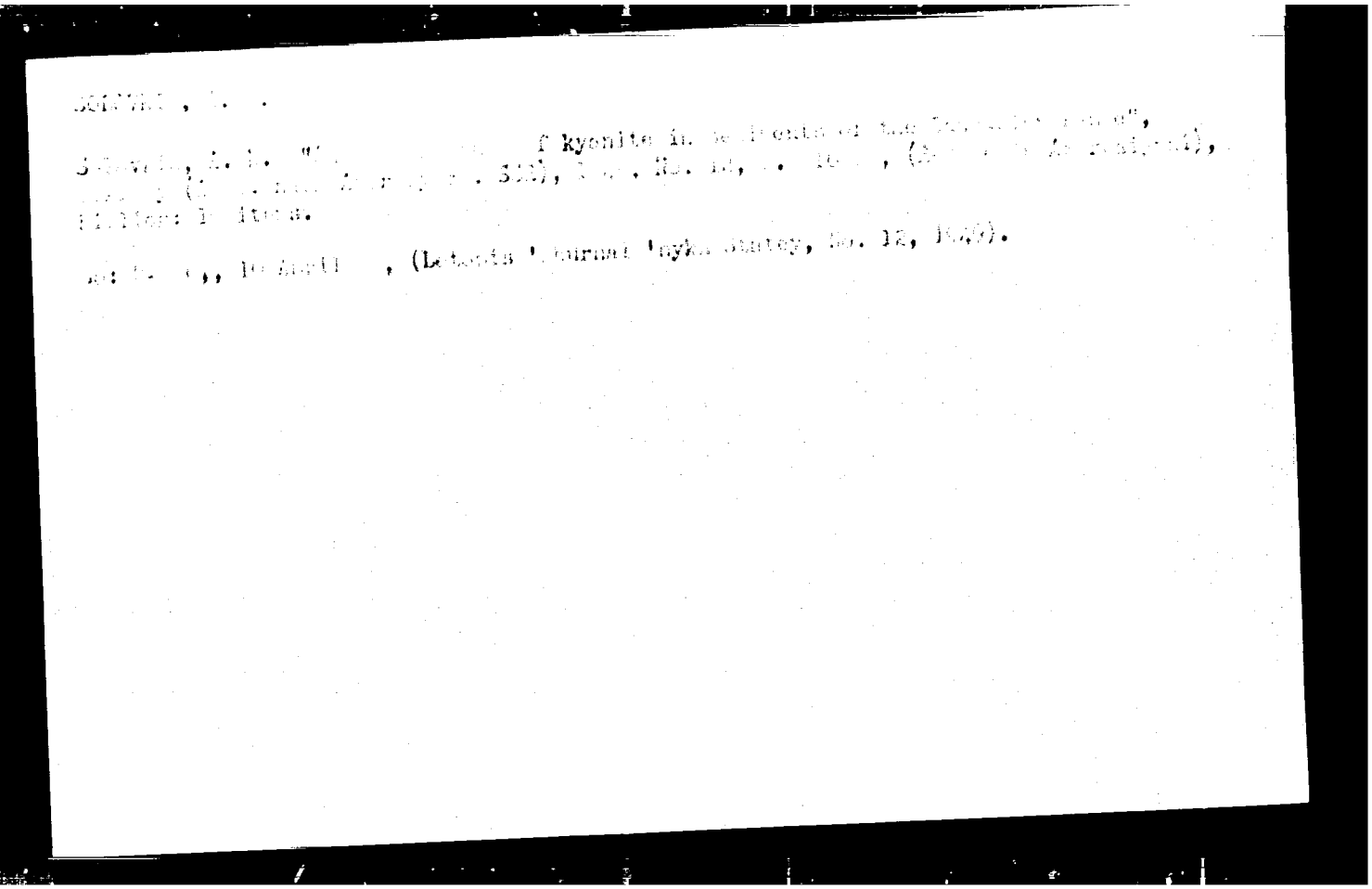

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PA 62T55

SOLOVKIN, A. N.

Apr 1948

USSR/Geology
Quartz

"Quartz in the Jurassic Deposits of the Southern Slope of the Main Caucasian Range (Azerbaydzhan SSR)," A. N. Solovkin, 4 pp

"Dok Akad Nauk SSSR, Nova Ser" Vol LX, No 2

Presents one part of the work of studying the petrography of the southeastern part of Greater Caucasia as source on formation of the stratigraphy of Apsheron. No mineralogical description of the Mesozoic layers. Describes the role of quartz in complex deposits of southern slopes of the Caucasus range. Submitted by Academician D. S. Belyankin, 14 Feb 1948.

62T55

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652310007-6

FA 77T30

SOLOVKIN, A. N.

Apr 1948

USSR/Geology
Tectonics
Petrology

"Instrusions in the Area Between the Terter and Kyurok-Char Rivers in Azerbaydzhan SSR," A. N. Solovkin, 2½ pp

"Dok Ak Nauk SSSR" Vol LX, No 3

Composition and characteristics of subject intrusions which were studied by author during 1945. Submitted by Acad D. S. Belyankin 14 Feb 1948.

77T30

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652310007-6"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652310007-6

PA 78T23

SOLOVKIN, A. N.

USSR/Geological Prospecting
Quartz

Jun 1948

"The So-Called 'Quartz Porphyry' of the Little Caucasus (Azerbaydzhan SSR)," A. N. Solovkin, 3 pp

"Dok Ak Nauk SSSR" Vol LX, No 8

Region encompasses about 15% of territory that falls under the classification of the Mesozoic complex of the Shakhdagskiy and Murovdatskiy ranges. Briefly describes some characteristics of this quartz porphyry. Submitted by Acad D. S. Belyankin 19 Apr 1948.

78T23

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652310007-6

SOLOVKIN, A. N.

Solovkin, A. N. - "Relics of ancient river valleys in the region of the southeastern Caucasus", Doklady (Akad. nauk Azerbaydzh. SSR), 1949, No. 2, p. 51-54, (Resume in Azerbaijani).

SO: U-4110, 17 July 53, (Letopis 'Zhurnal 'nykh Statey, No. 19, 1949).

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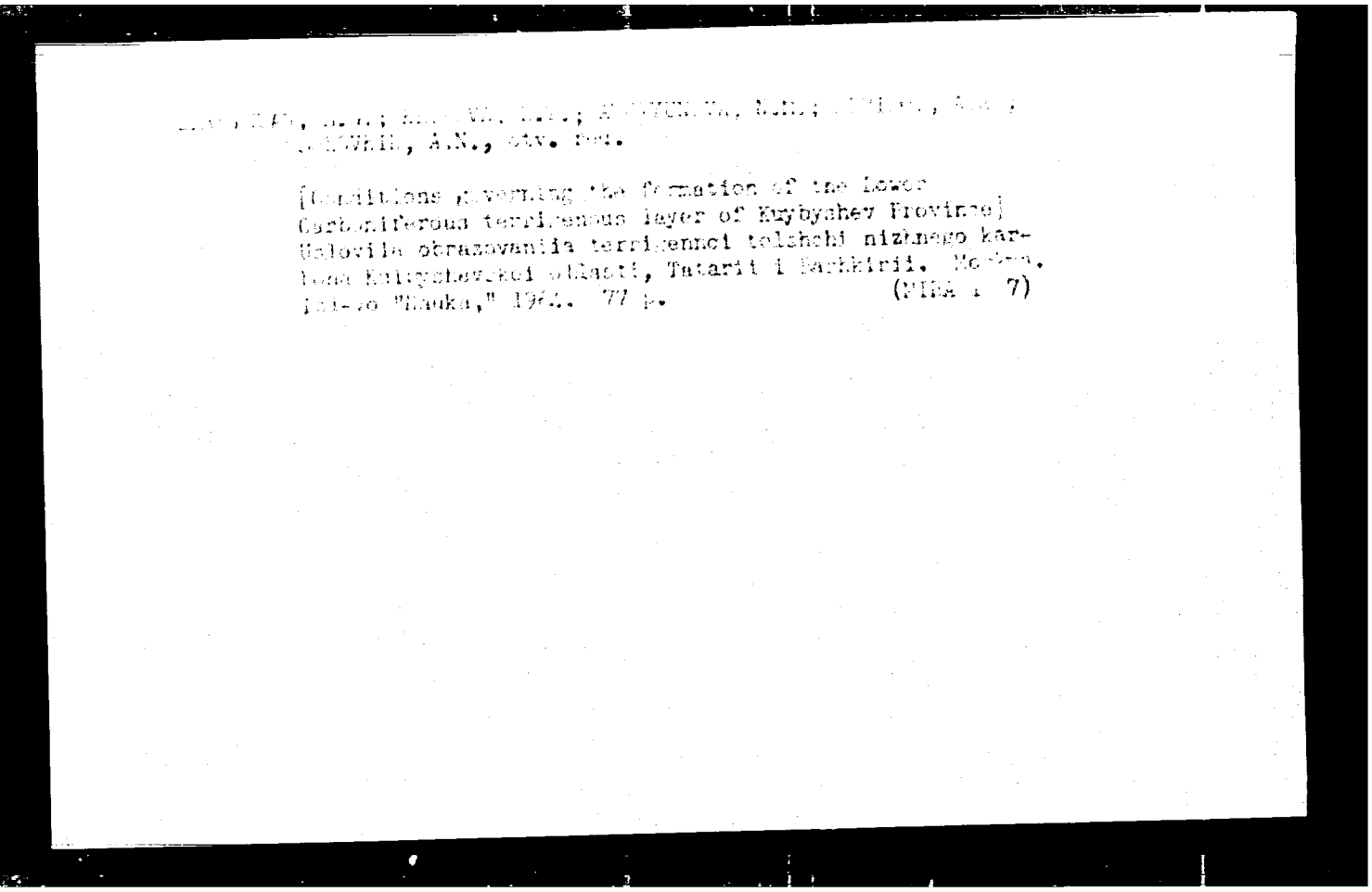

[illegible], A.N., otv. red.

[Conditions governing the formation of the Lower Carboniferous terrigenous layer of Kuybyshev Province] Usloviia obrazovaniia terrigennoi tolshchi nizhnego karbona Kuibyshevskoi oblasti, Tatarii i Bashkirii. Moskva, Izd-vo "Nauka," 1964. 77 p. (MIRA 17:7)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652310007-6"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652310007-6

SULTANOV, A.D.; SOLOVKIN, A.N.; SEIDOV, A.G.; SULEYMANOV, D.M.

"Study of sedimentary rocks" by G.I.Teodorovich. Reviewed by A.D.Sultanov and others. Izv. AN SSSR. Ser. geol. 25 no.2:109-111 F '60. (MIRA 13:10)

(Rocks, Sedimentary)
(Teodorovich, G.I.)

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652310007-6

Solovkin A. S.

4

Reactions in solution between zirconium nitrate and iodates of the alkali metals. I. M. I. Konarev and A. S. Solovkin, *J. Gen. Chem. U.S.S.R.* 24, 1109-12(1954) (Engl. translation).—See *C.A.* 49, 1463*h*. B. M. R.

11 (7)

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652310007-6

SOLOVKIN, A. S.

Reactions in solution between zirconium nitrate and iodates of the alkali metals. I. M. I. Konarev and A. S. Solovkin. *Zhur. Obshchel Khim.* 24, 1113-15(1954). [illegible] in an aq. soln. contg. HNO_3 (Zr concn. 0.695 g./l.) alkali iodates ppt. hydrated Zr hydroxyiodates with 1 to 3 iodate groups on one Zr atom. (The tetraiodate formed thus was unstable.) The freshly formed ppt. was washed with 3*N* HNO_3, with alc., and with ether, and air-dried. Compn. of ppt. depends upon concns. of HNO_3 and KIO_3 in the soln. With low acidity, variation in KIO_3 concn. has little effect: thus at pH 2-3, $Zr(OH)_3IO_3.4H_2O$ was pptd. from solns. contg. 0.0097-0.161 moles/l. of KIO_3; in higher HNO_3 concns. (as 5*N*) by varying the KIO_3 concn., ppts. with 1 to 3 iodate groups were obtained. Analysis of the isolated triiodate gives the formula $ZrOH(IO_3)_3.4H_2O$; the diiodate could not be isolated, although present in ppts.

M. M. Anderson

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652310007-6

SOLOVKIN A S

70

ON THE REACTIONS IN SOLUTION BETWEEN ZIRCONIUM NITRATE AND THE ALKALI METAL IODATES. II. ON THE COMPOSITION OF THE PRECIPITATE OF ZIRCONIUM IODATE SETTLING FROM THE SOLUTION CONTAINING POTASSIUM IODATE. M. I. Konarev and A. S. Solovkin. Zhur. Obshchei Khim. 24(86), 1279-83(1954) (Russ. (in Russian).

The composition of freshly precipitated $Zr(IO_3)_4$ was not established. After prolonged standing in the mother solution the precipitate reacts with KIO_3 and iodic acid to form the hexaiodate and nonaiodate, and it is converted from the amorphous to the crystalline form. The nonaiodate is formed at high concentration of iodate ions. A mixture of the two iodates is more often found, however than the single species of either. (J.S.R.)

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SOLOVKIN, A.S.

Reactions in solution between zirconium nitrate and iodates of the alkali metals. III. The effect of the alkali metals on the composition of the zirconium iodate, and the precipitation reaction. M. I. Konarev and A. S. Solovkin. *J. Gen. Chem. U.S.S.R.* 24, 1803–7 (1954) (Engl. translation).—See *C.A.* 49, 6761h.

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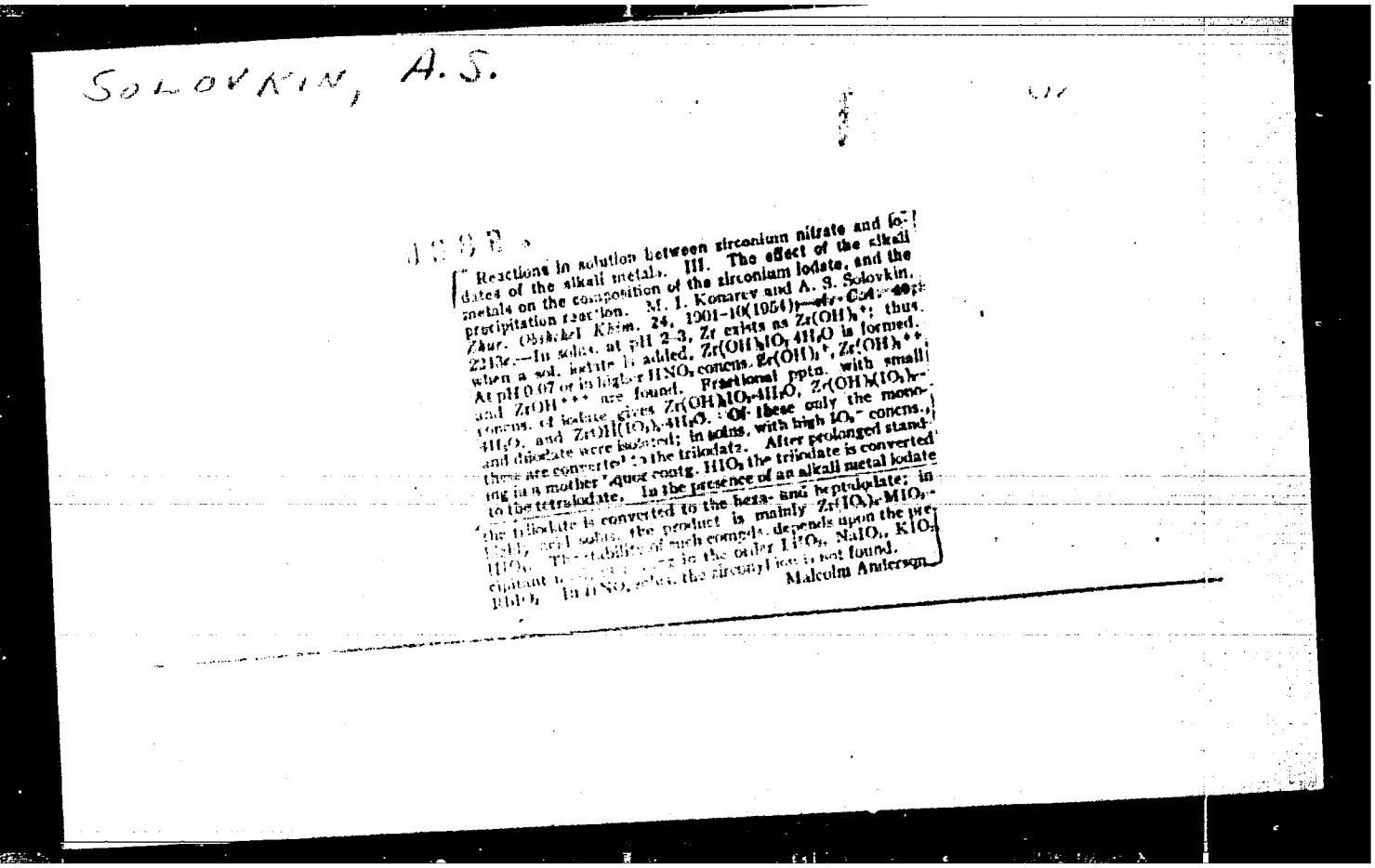

SOLOVKIN, A.S.

Reactions in solution between zirconium nitrate and iodates of the alkali metals. III. The effect of the alkali metals on the composition of the zirconium iodate, and the precipitation reaction. M. I. Konarev and A. S. Solovkin. Zhur. Obshchei Khim. 24, 1901-10(1954); cf. CA 49, 2213e.—In solns. at pH 2-3, Zr exists as $Zr(OH)_3^+$; thus, when a sol. iodate is added, $Zr(OH)_3IO_3 \cdot 4H_2O$ is formed. At pH 0.07 or in higher HNO_3 concns. $Zr(OH)_3^+$, $Zr(OH)_3^{++}$ and $ZrOH^{+++}$ are found. Fractional pptn. with small concns. of iodate gives $Zr(OH)_3IO_3 \cdot 4H_2O$, $Zr(OH)_3(IO_3)_2 \cdot 4H_2O$, and $ZrOH(IO_3)_3 \cdot 4H_2O$. Of these only the mono- and diiodate were isolated; in solns. with high IO_3^- concns., these are converted to the triiodate. After prolonged standing in a mother liquor contg. HIO_3 the triiodate is converted to the tetraiodate. In the presence of an alkali metal iodate the triiodate is converted to the hexa- and heptaiodate; in highly acid solns. the product is mainly $Zr(IO_3)_4 \cdot MIO_3 \cdot HIO_3$. The stability of such compds. depends upon the precipitant [illegible] in the order $LiIO_3$, $NaIO_3$, KIO_3, $RbIO_3$. In HNO_3 solns. the zirconyl ion is not found.

Malcolm Anderson

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C.

USSR/Inorganic Chemistry - Complex Compounds

Abs Jour : Referat Zhur - Khimiya, No 2, 1957, 4088

Author : Konarev, M.I., Panteleyeva, A.N., Repina, V.V., Solovkin, A.S.

Title : On the Influence of the Nature of the Acid on the Composition of Freshly-Precipitated Zirconium Iodates

Orig Pub : Zh. reorgan. khimii, 1956, 1, No 3, 392-399

Abstract : A continuation (see RZhKhim, 1955, 5483, 23536, 26023) of the investigation of Zr iodates. From nitric-, hydrochloric-, and perchloric acid solutions Zr was precipitated as $Zr(OH)_3(IO_3)$ (I), $Zr(OH)_2(IO_3)_2$ and $Zr(OH)(IO_3)_3$ (II). Fractional precipitation of individual hydroxy-iodates is possible. The authors attribute the formation of precipitates of varying composition (from I to II) to the presence, in the solutions, of the ions $Zr(OH)^{3+}$, $Zr(OH)_2^{2+}$ and $Zr(OH)_3^{+}$, with which IO_3^-

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[illegible] possess speci- [illegible] and less acidic solutions, resulting precipitates are found to contain mixtures of I with basic sulfates, which are converted to I in the presence of large excess of the precipitating agent, while on increase of the concentration of the acid to [illegible] only I is found in the precipitate. From more acidic solutions are precipitated the iodates $Zr(SO_4)_2 \cdot H_2SO_4 + 4IO_3^- + 2KIO_3 \rightarrow ZrIO_3)_4 \cdot 2KIO_3 + 2H^+ + 3SO_4^{2-}$ and $Zr(SO_4)_2 \cdot H_2SO_4 + 4IO_3^- + 2KIO_3 + KIO_3 \cdot 2HIO_3 \rightarrow Zr(IO_3)_4 \cdot 3KIO_3 \cdot 2HIO_3 + 2H^+ + 3SO_4^{2-}$. The occurence of ions ZrO^{2+} and Zr^{4+} in the solutions under study was not detected.

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652310007-6

Solovkin, A.S.

78-3-18/35

AUTHOR: Solovkin, A. S.

TITLE: Determination of the Hydrolysis Constants and the Complex-Formation Constants of Zr^{4+} with Nitrate and Chlorine Ions by the Extraction Method. (Opredeleniye Konstant Gidroliza i Konstant Kompleksoobrazovaniya Zr^{4+} s Nitrat- i Khlor-ionami Metodami Ekstraktsii.)

PERIODICAL: Zhurnal Neorganicheskoy Khimii, 1957, Vol.II, Nr.3, pp. 611-622. (USSR)

ABSTRACT: In this investigation extraction with tributylphosphate from nitric acid solutions with an ionic strength of four was used for studying complex-formation of zirconium with the nitrate ion. The metal was extracted in the form of the complex $Zr(NO_3)_4$.tributylphosphate. For the reaction constants of complex-formation between zirconium nitrate and chloride and tributylphosphate were found to be (0.65±0.1) and $(2\pm0.2).10^4$, respectively, the value for reaction constant for complex-formation with tenoyl-trifluoroacetene being $(1.2\pm0.2).10^9$. Complex-formation constants for $Zr(NO_3)^{3+}$, $Zr(NO_3)_2^{2+}$, $Zr(NO_3)^{+}_3$ and $Zr(NO_3)_4$ were found to be equal to 2.2±0.05, 1.3±0.05

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652310007-6

SOLOVKIN, A.S.

78-1-40/43

AUTHORS: Povitskiy, N. S., Solovkin, A. S., Shilin, I. V.

TITLE: Extraction of Perchloric Acid With Tributyl Phosphate (TBPh) (Ekstraktsiya khlornoy kislоty tributilfosfatom)

PERIODICAL: Zhurnal Neorganicheskoy Khimii, 1958, Vol. 3, Nr 1, pp.222-224 (USSR)

ABSTRACT: The second author proved (reference 1) that with zirconium--extraction from perchloric acid containing solutions $HClO_4$ passes over in analyzable quantities. Their complex-formation with TBPh was worth investigating in view of their application for the maintenance of a constant ionic density. Perchloric acid was extracted from water by TBPh solution in benzene or petroleum. The phases were equal with all tests (23 ml). The equilibrium was attained within 10 to 15 minutes. In tests on the distribution of perchloric acid between water and 3,67 mol TBPh it was found that with increasing concentration of $HClO_4$ in the initial solution the quantity passing over into $TBPh^4$ increases also (table 1). With the mixture of the phases

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Extraction of Perchloric Acid With Tributyl Phosphate (TBPh)

an exothermic reaction takes place which is most intensely in the case of stronger acid solutions (table 1, test 6). It was tried to compute the equilibrium constant of the reaction of complex-formation of $HClO_4$ with TBPh (K_1), from the obtained results. It is shown in table 1 that K_1 is variable within vast limits. This is apparently achieved by the ionic density of the solution which fluctuates under the influence of the changes of concentration of the acid. With a constant ionic density K_1 remains sufficiently constant $(6,7 \pm 0,5).10^{-2}$. In this case the equilibrium constant of the reaction of complex formation of HNO_3 with TBPh(K_2) amounts to $0,16 \pm 0,01$ (table 2). The K_2-value is neither changed by using solutions which are diluted by benzene or petroleum, if the ionic density of the solution is preserved (~ 3) (table 3, 4). The value of K_2 increases with diluting the TBPh-solutions up to $0,22 \pm 0,02$ (little different from references 3 to 6). It is noticeable that the TBPh-dilution with petroleum lead to the formation of a third phase after the extraction if the HNO_3-content in the initial solution was small, compared with that of $HClO_4$ (table 4, test 1). The light organic phase ($d^{25°} = 0,750$) is formed of almost pure petroleum with only a small admixture

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78-1-40/43

Extraction of Perchloric Acid With Tributyl Phosphate (TBPh)

of TBPh and contains no $HClO_4$. The heavy organic phase ($d^{25°}$ = = 1,001) is a solution of $HClO_4$.TBPh in TBPh. The third phase appears also with the mixtures of 0,49 n $HClO_4$ with 0,25 mol TBPh in petroleum. The heavy organic phase dissolves in petroleum after $HClO_4$ was re-extracted in water. It is not formed with the TBPh-dilution with benzene. There are 4 tables, and 7 references, 4 of which are Slavic.

SUBMITTED: May 22, 1957

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652310007-6

SOLOVKIN, A.S.

78-1-41/43

AUTHORS: Shevchenko, V. B. , Shilin, I. V. , Solovkin, A. S.

TITLE: Extraction of Perchloric Acid and Uranyl Perchlorate With Tributyl Phosphate (Ekstraktsiya khlornoy kisloty i perkhlorata uranila tributilfosfatom)

PERIODICAL: Zhurnal Neorganicheskoy Khimii, 1958, Vol. 3, Nr 1, pp.225-230 (USSR)

ABSTRACT: It is generally maintained in literature that the perchlorate-ion has no inclination to form complexes with the elements of the actinide series (reference 1). Perchloric acid and its soluble salts are therefore often used for the maintenance of the ionic density when the investigation of the nature of the compounds existing in aqueous solutions is required (e.g. extraction in tributyl phosphate). The transition of $HClO_4$ into the organic phase is usually neglected. The authors proved however (reference 4) that the value of the equilibrium-constant of the reaction of $HClO_4$ with TBPh (K_1) can be compared with that of HNO_3 with TBPh. The investigation of

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652310007-6

Extraction of Perchloric Acid and Uranyl Perchlorate With Tributyl Phosphate

the distribution of $HClO_4$ between its aqueous solution and the TBPh is continued in the present paper. Experimental part. The methods for $HClO_4$ were previously described (reference 4). The tests were carried out with a constant ionic strength of the aqueous phase (0,1 to 3). The solutions were produced in such a way that - after the extraction of the uranyl perchlorate - the $HClO_4$-content in the aqueous phase is approximately constant and equal to the prescribed ionic density. The TBPh-concentration being in equilibrium in the organic phase $(TBPh)_o$ was determined by taking account of the changes of the phase-volumina. Since a number of conditions of the uranium-extraction from perchloric acid solutions which were not described previously, was clarified meanwhile, the original aim of the paper was modified and the tests were continued for clarifying the following questions: 1) The influence of μ on $K_{pUO_2(ClO_4)_2}$ between water and TBPh. 2) Influence of the concentration of the same compound on TBPh with constant ionic density of the aqueous phase. 3) Influence of the salting out on $K_{pUO_2(ClO_4)}$ ($LiClO_4$ and $NaClO_4$). 4) Influence of the diluters which are added to TBPh on

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Extraction of Perchloric Acid and Uranyl Perchlorate With Tributyl Phosphate

$K_{pUO_2(ClO_4)}$. The test results are given in tables 1 to 3.

They show above all that U(VL) is extracted to a considerable extent from perchloric acid solutions by TBPh though the values of the coefficients of distribution here, with equal other test conditions were much smaller than with an extraction from nitric acid solutions. Nevertheless uranium passes completely over into the organic phase (table 2) at high TBPh-concentrations in the organic phase, or when a salting out-salt is present in the aqueous phase (e.g. $NaClO_4$) after a single shaking. It became evident by further tests that the graphical method of the determination of the composition of the complex compound extracted by TBPh cannot be applied in the case of perchloric acid solutions. Hence, it does not follow that the mechanism of extraction of $HClO_4$ and of $UO_2(ClO_4)_2$ differs substantially from that of the nitric acid solutions by TBPh. It can apparently be expected that $HClO_4$ and uranyl perchlorate pass over into the organic phase which contains TBPh, as solvents $HClO_4$-yTBPh and $UO_2(ClO_4)_2$--xTBPh. There are 1 figure, 3 tables, and 12 references,

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78-1-41/43

Extraction of Perchloric Acid and Uranyl Perchlorate With Tributyl Phosphate

8 of which are Slavic.

SUBMITTED: May 22, 1957

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652310007-6

SOV/78-3-8-38/48

AUTHORS: Shevchenko. V. B., Solovkin, A. S., Shilin, I. V.

TITLE: About the Extraction of the Uranyl Perchlorate by Means of Tributyl Phosphate (K ekstraktsii perkhlorata uranila tributilfosfatom)

PERIODICAL: Zhurnal neorganicheskoy khimii, 1958, Vol. 3, Nr. 8, pp. 1965-1967 (USSR)

ABSTRACT: The distribution of uranyl perchlorate between water and a solution of 1,2 mol. of tributyl phosphate (TBP) in CCl_4 was studied as a function of the concentration of the salt in aqueous solution (Table 1). It was shown that $K_{PuO_2(ClO_4)_2}$ increases with a rise of the uranyl concentration in the solution. When uranyl perchlorate is extracted by means of tributyl phosphate an increase of the water contents occurs in the organic phase. In virtue of the experiments it is assumed that uranyl perchlorate is extracted by tributyl phosphate in the form of the following compound: $UO_2(ClO_4)_2 \cdot 2H_2O \cdot 2TBP$.

Card 1/2 There are 1 figure, 1 table, and 4 references, 2 of which are

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SOV/78-3-8-38/48

About the Extraction of the Uranyl Perchlorate by Means of Tributyl Phosphate

Soviet.

SUBMITTED: February 28, 1958

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652310007-6

SOV/78-3-9-16/38

AUTHORS: Shevchenko, V. B., Povitskiy, N. S., Solovkin, A. S., Shilin, I. V., Lunichkina, K. P., Tsvetkova, Z. N.

TITLE: The Extraction of Nitric Acid With Tributyl Phosphate (Ekstraktsiya azotnoy kisloty tributilfosfat)

PERIODICAL: Zhurnal neorganicheskoy khimii, 1958, Vol 3, Nr 9, pp 2109-2112 (USSR)

ABSTRACT: The distribution of nitric acid between the aqueous and the organic phase containing tributyl phosphate in dependence on the aqueous phase and the nature of the solvent of tributyl phosphate was investigated. From the results may be concluded that K_p considerably depends on the nature of the solvents of tributyl phosphate. The influence of the nature of the solvents on the distribution of nitric acid between water and tributyl phosphate was investigated in the case of an ionic strength of the solution of 1, 0,5 and 3. The maximum value of K_p in nitric acid solution with the ionic strength of 3 is obtained if toluene is used as solvent for tributyl phosphate. The change of K_p by the nature of the solvent in the case of an

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SEVCENKO, V.B. [Shevchenko, V.B.]; POVICKIJ, N.S. [Povitskiy, N.S.]; SOLOVKIN, A.S.; KORTUS, J. [translator]

Some peculiarities in processing the burnt out fuel elements from the first atomic power plant in the Soviet Union. Jaderna energie 4 no.11:342-344 N '58.

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652310007-6"

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PHASE I BOOK EXPLOITATION SOV/5084

International Conference on the Peaceful Uses of Atomic Energy. 2d, Geneva, 1958.

Doklady sovetskikh uchenykh. [t.4] Khimiya radioelementov i radiatsionnykh prevrashcheniy (Reports of Soviet Scientists. v. 4.: Chemistry of Radioelements and Radiation Transformations) Moscow, Atomizdat, 1959. 323 p. 8,000 copies printed. (Series: Its: Trudy)

Ed. (Title page): A. P. Vinogradov, Academician; Ed.: V. I. Labaznov; Tech. Ed.: Ye. I. Mazel'.

PURPOSE: This collection of articles is intended for scientists and engineers interested in the applications of radioactive materials in science and industry.

COVERAGE: The book contains 26 separate studies concerning various aspects of the chemistry of certain radioactive elements and the processes of radiation effect on matter. These reports discuss present-day methods of reprocessing irradiated nuclear fuel, research in the chemistry of mercury, thorium, uranium, plutonium, and americium, problems related to the sorption and bury-

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ing of radioactive wastes, the radiolysis of aqueous solutions and of organic compounds, the mechanism of polymer chain grafting, and the effect of radiation on natural and synthetic rubbers. V. N. Prusakov edited the present volume. Most of the reports are accompanied by references. Contributors to individual investigations are mentioned in annotations to the Table of Contents.

TABLE OF CONTENTS:

Vinogradov, A. P. Meteorites and the Earth's Crust (The Geochemistry of Isotopes) (Report No. 2523) 5

Shevchenko, V. B., N. S. Povitskiy, and A. S. Solovkin. Some Special Problems in the Reprocessing of Irradiated Heat-Producing Elements of the First Atomic Electric Power Plant of the USSR (Report No. 2182) 28
[The following personalities are mentioned as having taken part in this investigation: E. M. Indikov, K. P. Lunichkina, Ye. V. Ukraintsev, Z. N. Tsvetkova, and V. V. Chubukov.]

Vdovenko, V. M., and M. P. Koval'skaya. Separation of Uranium and Plutonium From Fission Products by Extraction With a Mixture of Dibutyl Ether and Carbon Tetrachloride (Report No. 2216) 34

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652310007-6

SHEVCHENKO, V.B.; SOLOVKIN, A.S.; SHILIN, I.V.; KIRILLOV, L.M.; RODIONOV, A.V.; BALANDINA, V.V.

Effect of the nature of the diluent on the extraction of uranyl nitrate by tributylphosphate. Radiokhimiia 1 no.3:257-269 '59. (MIRA 12:10)

(Uranyl nitrate) (Butyl phosphate)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652310007-6"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652310007-6

SOV/78-4-6-40/44

5(4)
AUTHORS: Solovkin, A. S., Povitskiy, N. S., Shilin, I. V.

TITLE: On the Influence of the Nitrates of Barium, Nickel, Cobalt, and Copper on the Extraction of Nitric Acid in Tributyl Phosphate (TBP) (O vliyanii nitratov bariya, nikelya, kobal'ta i medi na ekstraktsiyu azotnoy kisloty v tributilfosfat (TBP))

PERIODICAL: Zhurnal neorganicheskoy khimii, 1959, Vol 4, Nr 6, pp 1454 - 1456 (USSR)

ABSTRACT: The distribution of nitric acid between the aqueous and inorganic phase of the solution of TBP in kerosene was investigated in the presence of barium-, nickel-, cobalt-, and copper nitrates in the case of an ionic strength of the aqueous phase of 1 and 1.5. The results are summarized in a table and given in figures 1 and 2. The nitric acid extraction in the organic phase increases with the rise of the ionic strength in the solution. A low distribution coefficient of the nitric acid is obtained by the use of barium nitrate as salting-out compound. The same effect is obtained by cobalt-, nickel-, and copper nitrates as salting-out compounds in the case of the nitric

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On the Influence of the Nitrates of Barium, Nickel, Cobalt, and Copper on the Extraction of Nitric Acid in Tributyl Phosphate (TBP)

SOV/78-4-6-40/44

acid extraction in the tributyl phosphate- and kerosene phase. The extraction of the nitric acid in the organic phase TBP-kerosene in the case of the use of salting-out compounds does not go under the ideal distribution law. Yu. F. Zhdanov and Z. A. Smyk assisted in the experiments. There are 2 figures, 1 table, and 4 references, 1 of which is Soviet.

SUBMITTED: March 25, 1958

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652310007-6

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SOV/78-4-11-47/50

5(2)
AUTHOR: Solovkin, A. S.

TITLE: Zirconium Iodates Precipitated From Solutions and Containing Less Than One Chlorine Atom to One Zirconium Atom

PERIODICAL: Zhurnal neorganicheskoy khimii, 1959, Vol 4, Nr 11, pp 2642-2644 (USSR)

ABSTRACT: Publications do not contain any data on iodates containing less than one iodate ion to one zirconium atom. The data on the composition of zirconium sulphates, -chlorides and -nitrates (Ref 1), however, suggest that the zirconium iodates form such precipitations. The preparation and analysis of zirconium-iodate precipitations are described in references 2, 3. The present paper reports on precipitation of iodates from zirconium-chloride solutions containing 0.92 and 0.35 chlorine atoms to one Zr-atom. Such solutions can be obtained by repeated evaporation of $ZrCl_2$-solutions while hydrochloric acid volatilizes. These solutions poor in chlorine are stable for months as had also been stated by I. Ya. Bashilov (Ref 8). The Zr-iodates were precipitated by means of KJO_3 from solutions containing 0.105 and 0.21 mols of Zr. In the solutions with a ratio of Cl^- : Zr = 0.92 and 0.35,

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the equilibrium was established after three days (Table 1). Table 2 gives an analysis of air-dry precipitations. The ratio of JO_3^- : Zr depended on the concentration of the KJO_3 used for precipitation, on the concentration of Zr, and on the ratio of Cl^- : Zr. The precipitates had no constant composition. Under the conditions described, Zr evidently forms polymeric ions representing an uninterrupted series with the general formula $Zr_n(OH)_m^{+4n-m}$. The average charge of these ions varies in dependence on the Zr- and Cl-concentration within wide limits but is mostly smaller than 1. In solutions with a ratio of Cl^- : Zr = 0.35, Zr occurs as a hydroxide, in agreement with references 11, 12. There are 2 tables and 12 references, 5 of which are Soviet.

SUBMITTED: November 4, 1958

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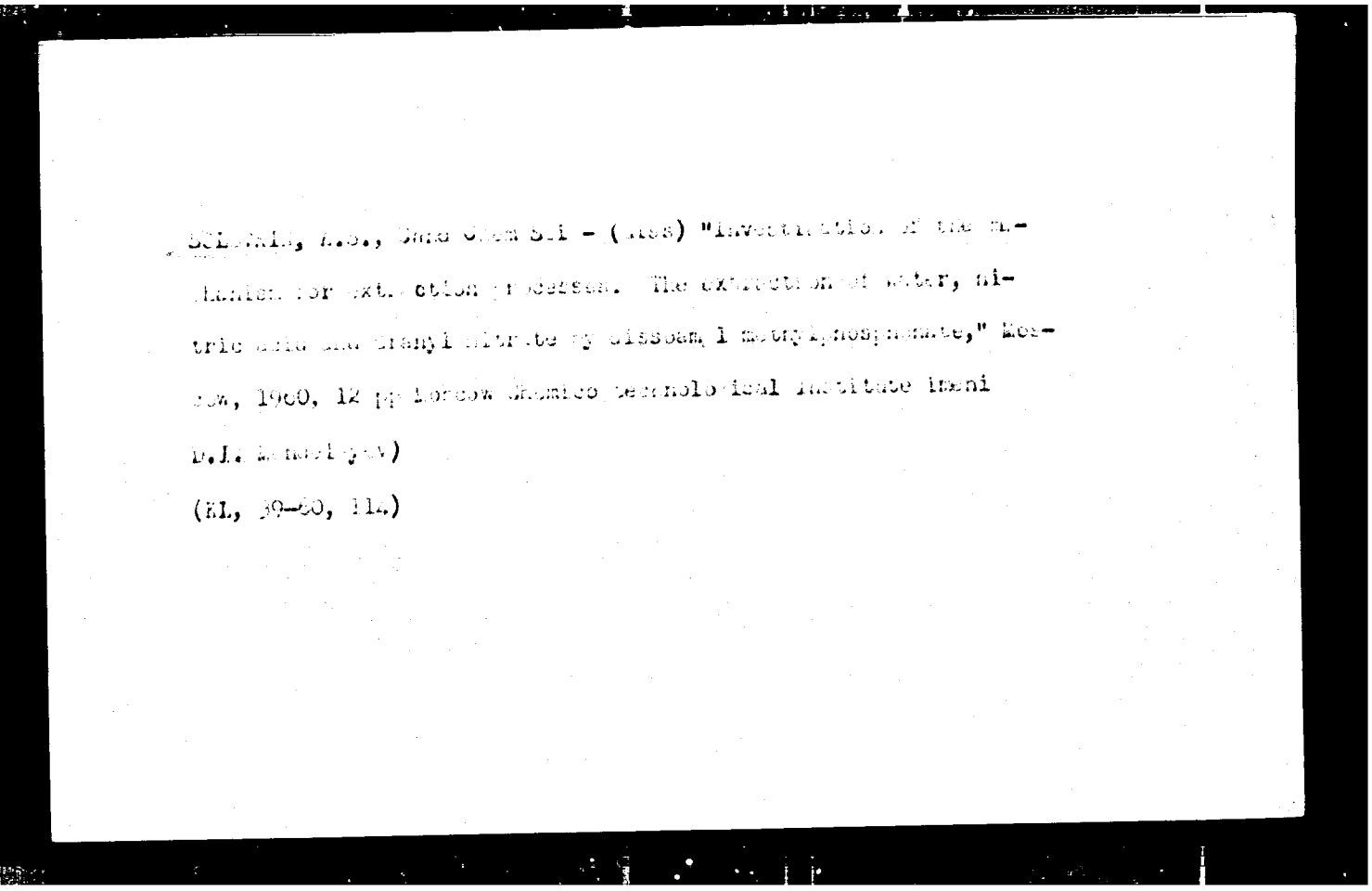

SOLOVKIN, A.S., Chem Chem Sci - (diss) "Investigation of the mechanism for extraction processes. The extraction of water, nitric acid and uranyl nitrate by dissoamyl methylphosphonate," Moscow, 1960, 12 pp Moscow Chemico Technological Institute imeni D.I. Mendeleyev)

(KL, 39-60, 114)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652310007-6"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652310007-6

SOLOVKIN, A.S.

[Extraction of electrolytes from nitrate solutions with neutral organophosphorus solvents. Calculation of distribution curves] Ekstraktsiia elektrolitov neitral'nym fosfororganicheskimi rastvoriteliami iz azotnokislykh rastvorov. Raschet krivykh raspredeleniia. Moskva, Glav. upr. po ispol'zovaniiu atomnoi energii, 1960. 23 p.
(MIRA 17:1)

(Nitrates) (Extraction (Chemistry)) (Solvents)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652310007-6"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652310007-6

SHEVCHENKO, V.B.; SOLOVKIN, A.S.; SHILIN, I.V.; KIRILLOV, L.M.; RODIONOV, A.V.; BALANDINA, V.V.

Effect of hydrocarbons of the aliphatic and aromatic series on the extraction of U(VI), Au(IV), Zr(IV), and Ce(III) with tri-n-butyl-phosphate from nitric acid solutions. Radiokhimiia 2 no.3:281-290 '60. (MIRA 13:10)

(Hydrocarbons) (Extraction (Chemistry))
(Butyl phosphate)

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~~5 (2)~~

AUTHOR: Solovkin, A. S.

TITLE: On the Ferrocyanides of Zirconium

PERIODICAL: Zhurnal neorganicheskoy khimii, 1960, Vol 5, Nr 1, pp 73 - 79 (USSR)

ABSTRACT: The author investigated the reaction of zirconium nitrate and zirconium chloride with potassium ferrocyanide by the solubility method and by the measurement of light adsorption. Experimental data (Table 1, Fig 1) reveal that the beginning of the precipitate formation depends on the hydrogen ion concentration, and precipitate with varying composition separate (Tables 2,3). Pure $Zr[Fe(CN)_6].6H_2O$ was obtained from acid solutions only. The light extinction curve of the solutions (Fig 2) does not point to any compound with constant composition. The forming precipitates are initially white, but turn yellow to green under the action of light in consequence of the formation of free iron ions, which are co-precipitated with the zirconium ferrocyanides. These results confirm the already

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On the Ferrocyanides of Zirconium

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known tendency of Zr to hydrolysis and to the formation of difficultly soluble compounds which are dependent on the hydrogen ion concentration as to their composition. There are 2 figures, 3 tables, and 22 references, 9 of which are Soviet.

SUBMITTED: August 18, 1958

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APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652310007-6"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652310007-6

SOLOVKIN, A.S.

Extraction of nitric acid with the diisoamyl ester of methylphosphinic acid. Zhur.neorg.khim. 5 no.6:1345-1357 Je '60. (MIRA 13:7)
(Nitric acid)
(Extraction (Chemistry))
(Phosphinic acid)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652310007-6"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652310007-6

SOLOVKIN, A. S.

Extraction of sulfuric acid with diisoamyl methylphosphonate. (MIRA 13:9)
Zhur. neorg. khim. 5 no.8:1857-1860 Ag '60.
(Sulfuric acid) (Phosphonic acid)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652310007-6"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652310007-6

SOLOVKIN, A.S.; KONAREV, M.I.; ADAYEV, D.P.

Extraction of uranyl nitrate with diisoamyl methylphosphonate. Zhur. neorg. khim. 5 no.8:1861-1867 Ag '60. (MIRA 13:9)
(Uranyl nitrate) (Phosphonic acid)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652310007-6"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652310007-6

S/078/60/005/009/015/017
B015/B064

AUTHORS: Solovkin, A. S., Povitskiy, N. S., Lunichkina, K. P.

TITLE: Formation of the Third Phase in the System $UO_2(NO_3)_2$ - HNO_3 - H_2O - Tri-n-butyl Phosphate - "Kerosene"

PERIODICAL: Zhurnal neorganicheskoy khimii, 1960, Vol. 5, No. 9, pp. 2115-2118

TEXT: The formation of a third phase of the system mentioned in the title was investigated. The uranium content was gravimetrically determined, and the tributyl phosphate content in the organic phase (after separation) was colorimetrically measured with a СФ-2М (SF-2) spectrophotometer. All experiments were conducted at room temperature. It was found that the formation of a third phase was independent of the concentration of uranyl nitrate (at sufficiently high acidity) (Table 1). A decrease of acidity below a certain point leads, also in the presence of large amounts of uranyl nitrate, to the vanishing of the third phase (Table 2). Absorption spectra (recorded by L. V. Lipis) showed that uranium appeared in the organic phase as neutral, non-ionized molecules $UO_2(NO_3)_2$ solvated with

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652310007-6

SOLOVKIN, A.S.

Effect of desalting agents on the distribution of uranyl nitrate between the aqueous solution and diisoamyl methylphosphinate. Zhur.neorg.khim. 5 no.9:2119-2131 S '60. (MIRA 13:11)
(Uranyl nitrate) (Phosphinic acid)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652310007-6"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652310007-6

SHEVCHENKO, V.B.; REYARD, E.V.; SOLOVKIN, A.S.

Extraction of trihydorxyglutaric acid into tri-n-butyl phosphate.
Zhur. neorg. khim. 5 no.10:2350-2353 O '60. (MIRA 13:10)
(Glutaric acid) (Butyl phosphate)

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652310007-6

SHEVCHENKO, V. B.; SOLOVKIN, A. S.; KIRILLOV, L. M.; IVANTSOV, A. I.

Effect of saturated monoatomic alcohols and ethers on the extraction of U IV, Pu IV, Zr IV, Ce III, and Nb V with tri-n-butyl phosphate from nitric acid solutions. Radiokhimia 3 no.4:35-6 '61. (MIRA 14:7)
(Extraction(Chemistry))
(Solvents)

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652310007-6

S/078/61/006/002/015/017
B017/B054

AUTHORS: Tsvetkova, Z. N., Solovkin, A. S., Povitskiy, N. S., Davydov, I. P.

TITLE: Mechanism of Extraction of Zirconium Nitrate by Means of Tri-n-butyl Phosphate From High-acidity Solutions

PERIODICAL: Zhurnal neorganicheskoy khimii, 1961, Vol. 6, No. 2, pp. 489 - 492

TEXT: The distribution of many heavy metals between nitric acid solutions and tri-n-butyl phosphate (TBP) takes place according to the equation:

$M^{x+} + xNO_3^- + nTBP \rightleftharpoons M(NO_3)_x TBP$, $M^{x+} = UO_2^{2+}, NpO_2^{2+}, PuO_2^{2+}, Np^{4+}, Pu^{4+}, Pr^{3+}$.

The extraction of Am^{3+}, Th^{4+}, Cr^{4+} and the rare earths from highly concentrated nitric acid solutions does not take place according to the above equation. The extraction coefficient grows with rising acidity of

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652310007-6

Mechanism of Extraction of Zirconium Nitrate by Means of Tri-n-butyl Phosphate From High-acidity Solutions

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B017/B054

the solution. To explain the extraction mechanism of zirconium nitrate with tributyl phosphate from high-acidity solutions, the authors studied the effect of the hydrogen ion concentration on the extraction coefficient. The extractions were conducted by the method described by A. S. Solovkin (Ref. 3). Carbon tetrachloride was used as solvent for tributyl phosphate. The zirconium concentrations were determined with the aid of the radioactive isotope Zr^{95}. Results are given in Figs. 1 and 2. The authors discussed the possibilities of increasing α_{Zr} by changing the hydrogen ion concentrations. It is assumed that the extraction of $Zr(NO_3)_4$ with the organic phase occurs as $Zr(NO_3)_4 \cdot 4(HNO_3) \cdot TBP$ and $Zr(NO_3)_4 \cdot 2(HNO_3) \cdot TBP$. Fig. 2 shows α_{Zr} as a function of concentration. The presence of zirconium acido complexes in the aqueous phase hardly influences the extraction coefficient. There are 2 figures, 2 tables, and 8 references: 6 Soviet and 2 US.

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652310007-6

Mechanism of Extraction of Zirconium Nitrate by Means of Tri-n-butyl Phosphate From High-acidity Solutions

S/078/61/006/002/015/017
B017/B054

SUBMITTED: January 20, 1960

Legend to Figs. 1 and 2: a) water, b) organic, c) TBP

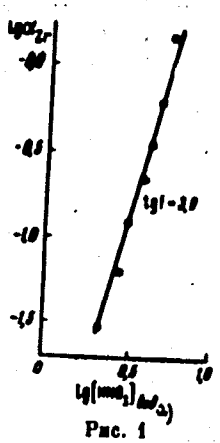

Рис. 1

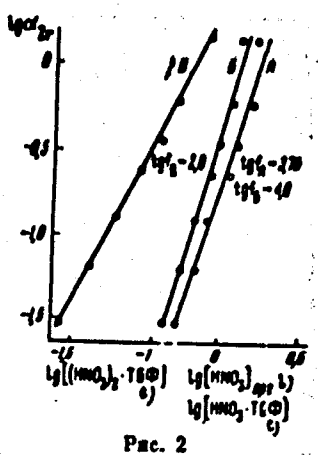

Рис. 2

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652310007-6

GOLOVKIN, A.S.

Hydration and activity coefficients of ions. Zhur.fiz.khim. 35 no.9:2123-2124 '61. (MIRA 14:10)
(Electrolyte solutions)
(Hydration)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652310007-6"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652310007-6

SOLOVKIN, A.S.; TSVETKOVA, Z.N.; POVITSKIY, N.S.

Study of complex formation of zirconium with α- and β-aminopropionic acids in nitric acid solutions by a method involving extraction. Zhur.neorg.khim. 7 no.4:937-939 Ap '62. (MIRA 15:4)
(Zirconium compounds) (Propionic acid)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652310007-6"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652310007-6

S/074/62/031/011/001/001
A057/A126

AUTHORS: Solovkin, A.S., Tsvetkova, Z.N.

TITLE: The chemistry of aqueous solutions of zirconium salts (Does there exist a zirconyl ion?)

PERIODICAL: Uspekhi khimii, v. 31, no. 11, 1962, 1,394 - 1,416

TEXT: A systematic survey of literature data referring to the chemistry of zirconium in aqueous solutions is given. In a subsequent discussion of the properties of aqueous and acidic solutions of zirconium salts (generally chlorides and nitrates) it is shown that the theory assuming the existence of a zirconyl ion is erroneous. The existence of zirconium trichloride cannot be explained, for instance, by this theory. The inaccuracy of the assumption of zirconyl and dizirconyl ions can be proved by the results given in several publications, by X-ray investigations of crystalline zirconium chloride and bromide samples and their solutions. Processes occurring during aging, or during heating of zirconium-salt solutions are explained by the authors according to the theory of Tomas cited by L. Pokras in J. Chem. Educ., v. 33, nos. 4, 5, 6 (1956).

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The chemistry of aqueous solutions of ....

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A057/A126

i.e., by hydrolysis and formation of hydroxyl, and/or oxide bridges (with simultaneous proton evolution) in the first stage of condensation ("olation"), and further dissociation (accompanied by proton evolution) ("oxolation"). In solutions containing 1 — 2M $HClO_4$, at 25°C and a zirconium concentration of about 10^{-4} to 0.02M the olation process occurs stepwise ending with the formation of the trimer $[Zr_3(OH)_4]^{8+}$ and tetramer $[Zr_4(OH)_8]^{8+}$. The latter is the prevailing form of zirconium in its aqueous dichloride solutions at a 2M concentration. A transformation to the oxo-forms occurs in the absence of strong complexing agents. In solutions containing strong complexing agents there exists, apparently, only the monomolecular form of zirconium. The process does not end with the formation of the trimer and tetramer in weakly acidic solutions, but occurs continuously until polymers with a high molecular weight are forming. A change of the charge of the complex ions may occur in hydrochloric, nitric acid solutions, or after addition of neutral salts with the same anion. An inversion of the sign of the charge happens often in hydrosols of zirconium oxide, thus resulting in an "identification" of nonexisting zirconium complexes. The specific chemical behavior of zirconium and of processes which occur in solutions and in the solid phase have to be also considered in the preparative chemistry of

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The chemistry of aqueous solutions of ....

zirconium compounds. Hence, the authenticity of analytical formulas for so many zirconium compounds with unusual composition (especially sulfates) have to be considered cautiously. Several data from articles published after subject paper was concluded, are presented as an addition. These data are in good agreement with the conclusions presented in the present paper.

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APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652310007-6"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652310007-6

SOLOVKIN, A.S.

Extraction of electrolytes from nitric acid solutions by neutral organophosphorus solvents. Calculation of distribution curves. (MIRA 15:9)
Khimiya; teoriya, prim., app. no.2:47-57 '62.
(Electrolytes) (Extraction (Chemistry))
(Phosphorus organic compounds)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652310007-6"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652310007-6

LUNICHKINA, K.P.; POVITSKIY, N.S.; SOLOVKIN, A.S.

Three-phase demixing in the system $UO_2(NO_3)_3$ HNO_3 - H_2O - diisoamyl ester of methylphosphinic acid - "kerosine" in the presence of oxalic acid. Zhur. neorg. khim. 7 no.8: 2019-2020 Ag '62. (MIRA 16:6)

(Uranyl nitrate) (Systems(Chemistry))

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652310007-6"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652310007-6

SOLOVKIN, A.S.; TSVETKOVA, Z.N.

Chemistry of the aqueous solutions of zirconium salts (does a zirconyl ion exist?). Usp.khim. 31 no.11:1394-1416 N '62. (MIRA 15:12)

(Zirconium salts) (Zirconyl ion)

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SOLOVKIN, A.S.

Determination of the surface density values of the arrangement of water molecules in the first coordination layer of ions from data on the activity coefficients. Zhur.fiz.khim. 36 no.10:2219-2222 O '62. (MIRA 17:4)

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652310007-6

INDIKOV, E.M.; SOLOVKIN, A.S.; TETERIN, E.G.; SHESTERIKOV, N.N.

Demixing in the system HCl - H_2O - tri-n-butyl phosphate - diluent. Zhur.neorg.khim. 8 no.9:2187-2189 S '63. (MIRA 16:10)

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SOLOVKIN, A.S.

Determination of the ion activity coefficients in electrolyte mixtures. Zhur.fiz.khim. 37 no.2:447-449 F '63. (MIRA 16:5)
(Activity coefficients) (Electrolyte solutions)

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SOLOVKIN, A.S.

Calculation of the extraction constants of strong and weak electrolytes. Zhur. neorg. khim. 9 no.3:746-753 Mr '64.
(MIRA 17:3)

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652310007-6

SOLOV'EV, A.

Activity coefficients, complete hydration numbers, and transport numbers of ions in aqueous solutions of 1,1-halides. Elektrokhimiia 1 no.8:988-990 Ag '65. (MIRA 18:9)

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INDIKOV, E.M.; IONOV, V.I.; SOLOVKIN, A.S.; TETERIN, Z.G.; [illegible], N.N.

Demixing in the system $HClO_2$ - H_2O - tri-n-butyl phosphate - diluent. Zhur.neorg.khim. 10 no.11:2569-2571 N '65. (MIRA 18:12)

1. Submitted December 16, 1964.

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INDIKOV, E.M.; SOLOVKIN, A.S.; TERPRIN, E.N.; SHESTAKOV, N.N.

Demixing in the system sulfuric acid-water-tri-(i-butyl phosphate-diluent. Zhur. neorg. khim. 9 no.12:2786-2788 D '64. (MIRA 18:3)

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ZAYDEL', Khristina Eduardovna, starshaya prepodavatel'nitsa
NEGNEVITSKIY, Iosif Borisovich, kand.tekhn.nauk, dotsent
SOLOVKIN, Eduard Leonidovich, aspirant

Device for testing the cores of self-saturating magnetic amplifers. Izv. vys. ucheb. zav.; elektromekh. 4 no.3:146-156 '61. (MIRA 14:7)

1. Kafedra obshchey elektrotekhniki Moskvskogo energeticheskogo instituta (for Zaydel', Solovkin). 2. Kafedra teoreticheskikh osnov elektrotekhniki Moskovskogo energeticheskogo instituta (for Negnevitskiy).
(Magnetic amplifiers)
(Cores(Electricity)—Testing)

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S/103/63/024/002/014/020
D201/D308

AUTHORS: Zaydel', Kh.E., Negnevitskiy, I.B., Solovkin, E.L. and Tsareva, M.K. (Moscow)

TITLE: Dynamic demagnetization curves of cores of self-saturating magnetic amplifiers

PERIODICAL: Avtomatika i telemekhanika, v. 24, no. 2, 1963, 248-254

TEXT: The authors show that the dynamic demagnetization curve, as used in the Roberts method of control of magnetic amplifiers, makes it possible to calculate, with an accuracy sufficient for practical purposes, the input-output characteristic of a self-saturating magnetic amplifier and may be thus used for the amplifier design, control and core selection. The principle of the dynamic demagnetization curves has been used at the Moskovskiy energeticheskiy institut (Moscow Institute of Power Engineering) in the design of special equipment for the analysis of tape and toroidal cores of various dimensions and at various frequencies. The results obtained

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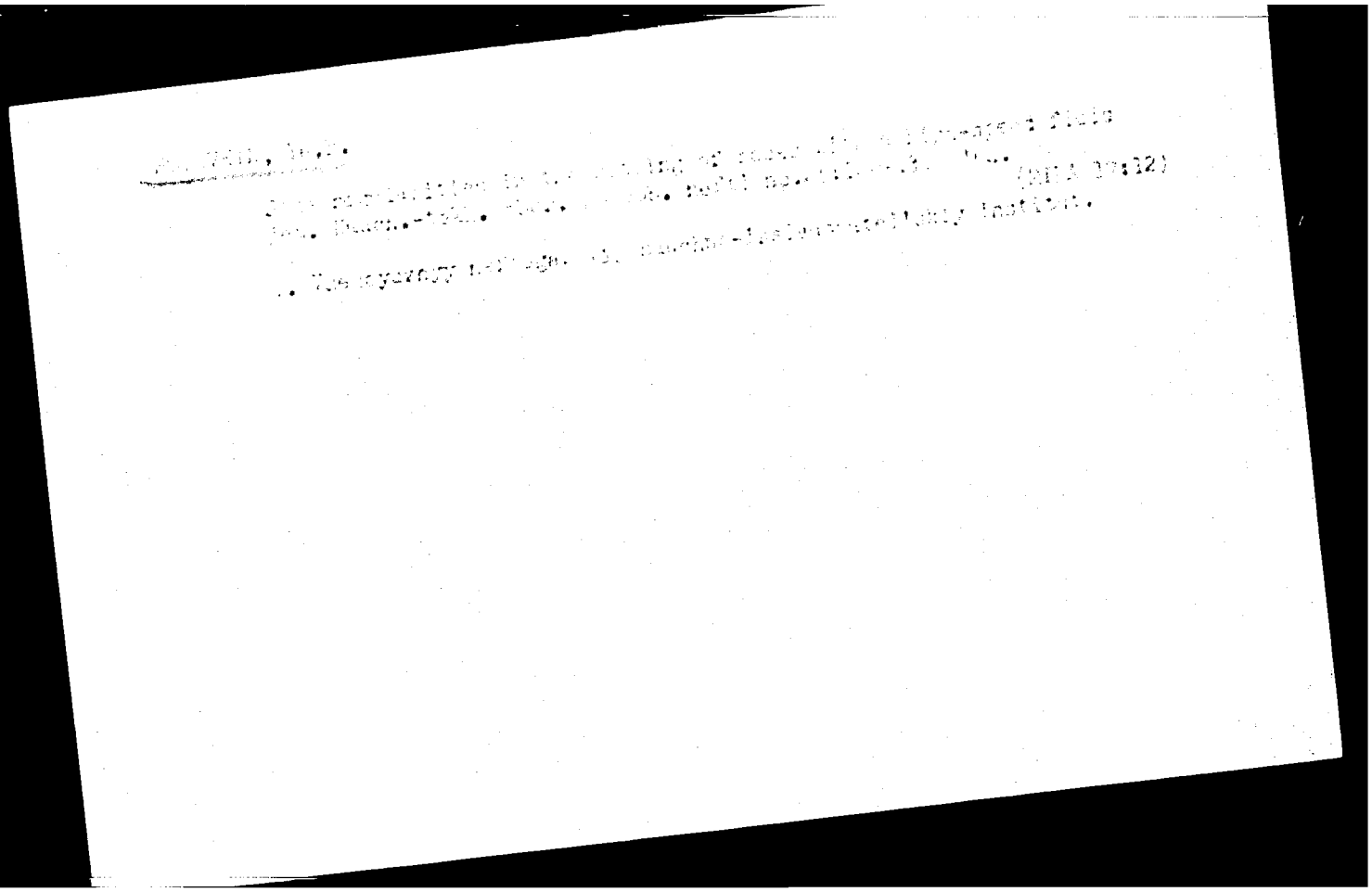

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