"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550610014-8

SILINA, G.F.; GRINBERG, L.L.

Electrolytic refining of beryllium. TSvet. met 33 no. 12:47-53 D '60. (MIRA 13:12)

(Beryllium--Electrometallurgy)

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27404

S/089/61/011/003/005/013
B102/B138

21.2100
21.4000

AUTHORS: Vil'komirskiy, I. Ye., Silina, G. F., Berengard, A. S., Semakin, V. N.

TITLE: Production of high-purity beryllium by the chloride method

PERIODICAL: Atomnaya energiya, v. 11, no. 3, 1961, 233-239

TEXT: Chlorination of beryllium oxide with carbon tetrachloride followed by the electrolysis of the resulting beryllium chloride with NaCl is a well-known method of producing high-purity beryllium. The industrial applicability of this procedure, however, has long been questioned, and only in recent years have prospects appeared to improve. The report describes a successfully tested possibility of producing this reaction on an industrial scale. The starting material was BeO with base-metal impurities not exceeding 0.006%. Briquettes were prepared from roasted oxides with a beryllium content not below 28%. Starch paste or dextrin were used as binding agents. Filtered commercial grade carbon tetrachloride was used for chlorination. Laboratory tests showed that the chlorination rate increases with the rise in temperature 600-700°C, while

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17[illegible]
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Production of high-purity ...

further rise in temperature had no effect. Thermal dissociation of CCl_4 begins at 600°C, and contamination by carbon is observed at 800°C. The optimum temperature range was found to be between 650 and 700°C. The optimum flow rate of CCl_4 was found to be 2.4 kg/min per m^2 of furnace cross section. Nickel and alloys on nickel base in Cl, $BeCl_2$, or CCl_4 atmospheres at temperatures up to 300°C were found to be the most convenient condenser materials. Condensers were therefore prepared from nickel. Fig. 3 gives a diagram of a chlorination furnace that has stood its test in industrial operation (25-30 days run). Both furnaces and condensers are heated in a nitrogen flow. In a pilot run (production of beryllium chloride from pure and commercial beryllium oxide) 25 tons of $BeCl_2$ were produced, and the following averages were obtained: CCl_4 consumption per kg of $BeCl_2$: 1.6 kg; degree of condensation of $BeCl_2$: 97.8%; direct beryllium yield: 85.7%, and extraction up to 96% if the residues are recycled. The mean $BeCl_2$ yield ranged between 86.8 and 88%, and the degree of chlorination was about 94%. Like chlorination, the electrolytic

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Production of high-purity

production of pure beryllium was first studied in laboratory tests, and optimum conditions were established. Chemically pure NaCl was used in beryllium-coated nickel crucibles. The cathode also consisted of beryllium-coated nickel. Electrolysis took place at 330-350°C. The purity of the resulting beryllium, depending on the size of the crystals obtained, was 99.966% (>3mm) and 99.937% (<3mm). Pilot plant tests were conducted in quartz crucibles holding 30 kg of electrolyte. The resulting metal was remelted in vacuum to remove impurities. The chemical analysis showed a relatively high Ni impurity (maximum $4 \cdot 10^{-2}$%), due to cathode corrosion. Experiments with graphic cathodes produced satisfactory results. A diagram of the electrolytic vessel used for producing Be on an industrial scale is shown in Fig. 5. Here the temperature ranged between 320 and 340°C, and the initial cathode current density was 6.5-7.5 a/dm^2 (optimum). The NaCl and $BeCl_2$ concentrations were adjusted by additions every 24 hours and the beryllium content in the electrolyte range from 6 at the beginning to 9.5% at the end of cycle. The metal yield was 2.0-2.2 kg of metal per vessel per day. The crystals depositing on the cathode walls were up to 60 mm

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Production of high-purity

long. The operating parameters of the vessel did not change appreciably over working periods of up to three months. Ye. A. Kamenskaya is mentioned. There are 5 figures, 3 tables, and 17 references, 9 Soviet and 8 non-Soviet. The four references to English-language publications read as follows: The Metal Beryllium. ASEM, Cleveland, Ohio, 19[illegible]; P. Lersham, D. Temple. Extraction and Refining of the Rarer Metals. Lond. Inst. of Mining and Metallurgy, 1957; M. Kelly et al. Second Geneva Conference on Peaceful Uses of Atomic Energy, 1958, Paper No. 7[illegible], Z. Williams, P. Eyre. Nucl. Energy, 3, no. 22 (1958).

SUBMITTED: December 15, 1960

Fig. 3. Industrial furnace for chlorination

Legend: (1) Bunker; (2) throttle valve; (3) graphite lining; (4) thermocouples; (5) graphite heater; (6) furnace jacket; (7) diabase plate; (8) foam firebrick; (9) diabase cement; (10) Dinas brick; (11) quartz brick; (12) thermocouple; (13) contact; (14) clamp device; (15) quartz face; (16) briquette mass; (17) bar; (18) top heating; (19) cap with adapter

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AM4036550 BOOK EXPLOITATION S/

Kaplan, Grigoriy YEremeyevich; Silina, Galina Fedorovna; Ostroushko, YUriy Ivanovich

Electrolysis in the metallurgy of rare earth metals (Elektroliz v metallurgii redkikh metallov), Moscow, Metallurgizdat, 1963, 360 p. illus., biblio, Errata slip inserted. 2,500 copies printed.

TOPIC TAGS: rare metal, electrolysis, rare earth metal, lithium, rubidium, cesium, uranium, tantalum, columbium, zirconium, thorium, beryllium

PURPOSE AND COVERAGE: The book covers work on obtaining pure rare metals and their electrolysis. The theory and practice of obtaining waterless salts of the rare metals and the electrolysis of melts with a liquid cathode (lithium, rubidium, cesium, uranium, and rare-earth metals), with a solid cathode (tantalum, columbium, zirconium, thorium, uranium, and beryllium) are covered in the book. The electrolytic process of obtaining alloys of rare metals is described. The book is intended for a broad audience of engineers and technicians in the metallurgical, metal working, and chemical industries and can also be useful to students in higher educational institutions.

TABLE OF CONTENTS [abridged]:

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550610014-8

S/078/63/008/003/009/020
B117/B186

AUTHORS: Starostin, V. V., Spitsyn, Vikt. I., Silina, G. F.

TITLE: Complexes between beryllium and ethylene diamine tetraacetic acid

PERIODICAL: Zhurnal neorganicheskoy khimii, v. 8, no. 3, 1963, 660-662

TEXT: The solubility of beryllium hydroxide in the presence of the ammonium salt of EDTA, H_4Y, was studied at 20°C for different pH values and complexon concentrations. The solubility was found to depend linearly on EDTA concentration for all pH values investigated. This was explained in terms of the formation of the beryllium complex BeY^{2-} (pH 7-7.5) and the beryllium hydroxycomplex $BeOHY^{3-}$ (pH > 7.5). The Be concentration decreased with increasing pH due to destruction of complexes and precipitation of $Be(OH)_2$. The instability constants of the complexes were calculated from experimental data: at 20°C and $\mu \simeq 0.3$, $pK_{BeY^{2-}} = 10.2$, and $pK_{BeOHY^{3-}} = 5.4$. The beryllium complex has

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550610014-8

SILINA, I. G.

"Cases with Multiple Malignant Tumors in the Large Intestine," Khirurgiya, No. 8, 1948. Mbr., Clinical Surgery, Central Oncology Inst. im. P. A. Gertsen, Min. Public Health RSFSR, -c1948-.

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550610014-8"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550610014-8

SILINA, I. G.: Master Med Sci (diss) -- "The problem of intrapericardial ligature of the vessels in the operation of pneumonectomy". Moscow, 1953. 15 pp (Min Health USSR, Central Inst for the Advanced Training of Physicians), 200 copies (KL, No 4, 1959, 132)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550610014-8"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550610014-8

SILINA, I.G.; TALALAYEVA, A.V.

Pseudotumor of the costal cartilage (Tietze syndrome). Vop. onk. 7 no.2:54-60 '61. (MIRA 14:5)
(RIBS—DISEASES)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550610014-8"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550610014-8

VOLYNTSEV, N.A.; SILINA, I.Kh.

Unit for leaching out ceramics from precision steel castings. Mashinostroitel' no.9:8 S '63. (MIRA 16:10)

(Steel castings)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550610014-8"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550610014-8

SILINA, K.A.

Biological peculiarities of meadow foxtail under forest-tundra conditions. Bot.zhur.40 no.4:592-598 Jl-Ag'55. (MIRA 8:11)

1. Salekhardskaya sel'skokhozyaystvennaya opytnaya stantsiya Instituta polyarnogo zemledeliya
(Russia, Northern--Foxtail)

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550610014-8

S/190/60/002/012/018/019
B017/B078

AUTHORS: Krozer, S., Vaynryb, M., Silina, L.

TITLE: Estimate of the Molecular Weight Distribution of Polycarbonates by the Method of Turbidimetric Titration

PERIODICAL: Vysokomolekulyarnyye soyedineniya, 1960, Vol. 2, No. 12, pp. 1876 - 1881

TEXT: The determination of the physical polydispersity has been described, i.e., the distribution of the molecular weight of polycarbonates by turbidimetric titration. Fig.1 illustrates the dependence of turbidity on the amount of the precipitant for some fractions of polycarbonates. The relative change of turbidity is determined by the change ΔT of intensity of light scatter with an addition of a precipitant volume Δv. The relative turbidity w_r is expressed by the formula: $w_r = \Delta T/T_{max}$ (T_{max} denotes the change of intensity of turbidity during precipitation). Fig.3 illustrates the dependence of turbidity on the volume of the precipitant after various times. Fig.4 shows the distribution of

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Estimate of the Molecular Weight Distribution of Polycarbonates by the Method of Turbidimetric Titration

S/190/60/002/012/018/019
B017/B078

polycarbonates with regard to their molecular weights. Table 1 shows T_{max} for polycarbonates of different molecular weights. T_{max} may be determined with an accuracy of up to 20%. The intrinsic viscosity $[\eta]$ of polycarbonates and the results of turbidimetric titration may be expressed by the formula: $[\eta] = K M^{\alpha}$ (M = molecular weight; α, K = coefficients). Table 2 gives the results of a direct calculation of the coefficient α from viscosity measurements and from results of turbidimetric titration. The conclusion was reached that the size of a polycarbonate aggregate precipitated when adding a precipitant to dilute solutions of the polymer is independent of the molecular weight of the polycarbonates. There are 4 figures, 2 tables, and 30 references: 2 Soviet, 11 US, 3 Belgian, 1 British, 10 German, 1 Italian, and 1 Polish.

ASSOCIATION: Institut plasticheskikh mass g., Varshawa (Institute of Plastic Materials, Warsaw)

SUBMITTED: July 9, 1960

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APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550610014-8"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550610014-8

VASILENKO, S.I.; MEZHAKOV, V.A.; AVRAMENKO, I.I.; ASTAKHOV, A.V., otvetstvennyy red.; SILINA, L.A., red.; ALDANOVA, Ye.I., tekhn. red.

["Shakhter-2" coal cutter-loader] Ugol'nyi kombain "Shakhter-2" Moskva, Ugletekhizdat, 1958. 147 p. (MIRA 11:7)
(Coal mining machinery)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550610014-8"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550610014-8

SOLOV'YEV, Aleksandr Aleksandrovich; BARUZDIN, M.A., otv.red.; SILINA, L.A., red.izd-va; SHKLYAR, S.Ya., tekhn.red.

[Collected problems on mine transportation] Sbornik zadach po rudnichnomu transportu. Izd.2, dop. i perer. Moskva, Gos.nauchno-tekhn.izd-vo lit-ry po gornomu delu, 1961. 299 p. (MIRA 14:12)

(Mine haulage)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550610014-8"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550610014-8

SEREDAVIN, D.G.; KONNOV, F.Ya.; YUSHKEVICH, G.I.; SILINA, L.D.; MOISHYEVA, Ye.I.; BLAGODAROVA, T.N.; BIRYUKOVA, M.S.; SOLOVEY, I.I.; REVIZOVA, V.Ye.; YEVPRYMTSEVA, Z.A.; DAVYDOVA, I.V.; SAVICHEVA, Z.N.; KHAUSTOVA, A.K., tekhn.red.

[Economy of Kuybyshev Province for 1958-1959; statistical collection] Narodnoe khozyaistvo Kuibyshevskoi oblasti za 1958-1959 gody; statisticheskii sbornik. Kuibyshev, 1960. 174 p. (MIRA 14:1)

1. Kuybyshevskaya oblast'. Statisticheskoye upravleniye. 2. Nachal'nik Statisticheskogo upravleniya Kuybyshevskoy oblasti (for Seredavin). 3. Statisticheskoye upravleniye Kuybyshevskoy oblasti (for all, except Khaustova).
(Kuybyshev Province--Statistics)

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550610014-8

T-2

USSR/Human and Animal Physiology - Metabolism.

Abs Jour : Ref Zhur - Biol., No 7, 1958, 31451

Author : Petrun'kina, A.M., Dmitriyeva, S.A., Silina, L.I.

Inst : -

Title : The Content of Codehydrogenase in Human Blood by Weight of Vitamins B_1 and B_2 and the Influence of Some Agents on the Phosphorylization of Vitamin B_1.

Orig Pub : Vopr. med. khimii, 1956, 2, No 6, 399-408.

Abstract : Healthy persons and those phychologically ill with neuroses or organic affliction of the nervous system were observed. Daily weighed doses of vitamins comprised for B_1 4-6 mg, B_2 7.5 mg, nicotinic acid 20-30 mg, P 500 m.e. The continuation of the weighing period was different - from 2 to 28 days and more. Repeated introduction of B_1 caused a lowering of the content of codehydrogenase in the blood. The weight of B_2 contributed to the increase of its content; in addition, an increase was noted of the content in

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PETRUN'KINA, A.M.; DMITRIYEVA, J.A.; SILINA, L.I.

Most efficient combinations of some B vitamins. Pediatriia no.7: 88-92 Jl '57. (MIRA 10:10)

1. Iz gruppy po izucheniyu biokhimii pitaniya (rukovoditel' A.M. Petrun'kina) Institute fiziologii AN SSSR (dir. - akad. K.M.Bykov)
(VITAMINS - B)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550610014-8"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550610014-8

DMITRIYEVA, S.A.; PETRUN'KINA, A.M.; SILINA, L.I.

Optimum ratios of some B vitamins. Trudy Inst. fiziol. 7:552-557 '58. (MIRA 12:3)

1. Gruppa po izucheniyu biokhimii pitaniya (zav. - A.M. Petrun'kina). Instituta fiziologii im. I.P. Pavlova AN SSSR.
(VITAMIN METABOLISM)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550610014-8"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550610014-8

SILINA, L.I.

Total metabolism of phosphorus in some patient groups of the neurological clinic. Trudy Inst. fiziol. 7:558-560 '58. (MIRA 12:3)

1. Gruppa po izucheniyu biokhimii pitaniya (zav. - A.M. Petrun'kina) i Sektor nevrozov i organicheskikh zabolevaniy Nervnoy sistemy (zav. - N. A. Kryshova) Instituta fiziologii im. I. P. Pavlova AN SSSR.
(NERVOUS SYSTEM--DISEASES)
(PHOSPHORUS METABOLISM)

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550610014-8

SILINA, L.I.

Amount of free and bound forms of vitamin B_1 in the blood of neurotics and patients with organic lesions of the nervous system. Trudy Inst. fiziol. 7:561-564 '58. (MIRA 12:3)

1. Gruppa po izucheniyi biokhimii pitaniya (zav. - A.M. Petrun'kina) i Sektor nevrozov i organicheskikh zabolevaniy nervnoy sistemy (zav. - N.A. Kryshova). Instituta fiziologii im. I.P. Pavlova AN SSSR.
(NERVOUS SYSTEM--DISEASES) (VITAMINS--B)
(BLOOD--ANALYSIS AND CHEMISTRY)

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550610014-8

BULOVSKAYA, L.N.; DMITRIYEVA, S.A.; PETRUN'KINA, A.M.; SILINA, L.I.

Effect of nicotinic acid in food on the amount of total nicotinic acid in human blood. Trudy Inst.fiziol. 8:515-519 '59. (MIRA 13:5)

1. Gruppa po izucheniyu voprosov biokhimii pitaniya (zaveduyushchaya - A.M. Petrun'kina) Instituta fiziologii im. I.P. Pavlova AN SSSR.
(NICOTINIC ACID) (BLOOD--ANALYSIS AND CHEMISTRY)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550610014-8"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550610014-8

DMITRIYEVA, S.A.; KALLINIKOVA, M.N.; PANOV, N.A.; PETRUN'KINA, A.M.; SILINA, L.I.; TSATSKIS, Ye.N.

Exchange of nitrogen, sulfur, water, and mineral salts in healthy young males under training conditions. Trudy Inst. fiziol.9:425-436 '60. (MIRA 14:3)

1. Gruppa po izucheniya voprosov biokhimii pitaniya (zaveduyushchaya - A.M.Petrun'kina) Instituta fiziologii im. I.P.Pavlova.
(NITROGEN METABOLISM) (SULFUR IN THE BODY)
(WATER IN THE BODY) (MINERALS IN THE BODY)
(PHYSICAL EDUCATION AND TRAINING)

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550610014-8

DMITRIYEVA, S.A.; BUDOVSKAYA, L.N.; SILINA, L.I.; MARICHEVA, L.I.; OSIPOVA, T.A.; SHRAYBER, Ya.L.; PETRUN'KINA, A.M.

Excretion of nicotinic acid derivatives in the urine of patients with neuroses and cyclothym. Zhur.nevr.i psikh. 61 no.10:1520-1524 '61. (MIRA 15:11)

1. Gruppa po izucheniy biokhimii pitaniya Instituta fiziologii AN SSSR imeni I.P.Pavlova i Psikhonevrologicheskaya bol'nitsa Sverdlovskogo rayona, Leningrad.
(NICOTINIC ACID) (MANIC-DEPRESSIVE PSYCHOSES) (NEUROSES)

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550610014-8

PETRUN'KINA, A.M.; DMITRIYEVA, S.A.; SILINA, L.S.

Effect of certain agents on amount and phosphorylation of vitamin B1 in the human organism. Biul.eksp.biol. i med. 43 no.1:62-66 Ja '57.

1. Iz laboratorii biokhimii pitaniya i pishchevareniya Instituta fiziologii imeni I.P.Pavlova AN SSSR, Leningrad. Predstavlena akademiom K.M.Bykovym.

(MENTAL DISORDERS, blood in,
vitamin B complex, eff. of other vitamins from B group (Rus))
(VITAMIN B COMPLEX, in blood,
in ment. disord., eff. of other vitamins from B group (Rus))
(VITAMIN BL, metabolism,
phosphorylation & other metab. processes (Rus))

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550610014-8

IGNAT'YEV, A.N.; SILINA, L.V.

Preparation of patients for pneumoencephalography with aminazine in association with nembutal. Zhur.nevr.i psikh. 61 no.2:251-253 '61. (MIRA 14:6)
(ENCEPHALOGRAPHY) (CHLORPROMAZINE) (PENTOBARBITAL)

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550610014-8

SILINA, N.N.

Pathogenic microflora in rodents and objects of external environment in Vologda Province. Zhur. mikrobiol., epid. i immun. 42 no.11:131-132 N '65. (MIRA 18:12)

1. Vologodskaya oblastnaya sanitarno-epidemiologicheskaya stantsiya. Submitted Jan. 4, 1965.

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550610014-8"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550610014-8

AGAMALOV, Aleksandr Stepanovich; SILINA, M.S., red

[Use of the theory of probability in reliability calculations, a written lecture for third-year students of the All-Union Correspondence Electrotechnical Institute of Communications] Primenenie teorii veroiatnostei v raschetakh nadezhnosti; pis'mennaia lektsiia dlia studentov III kursa VZEIS. Moskva, Red.-izd. otdel VSEIS, 1964. 25 p. (MIRA 18:7)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550610014-8"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550610014-8

POLYKOVSKIY, Andrey Markovich; KOROTKIY, G.G., otv. red.; SILINA, M.Z., red.

[Frequency stabilization in radio relay communication lines] Stabilizatsiia chastoty na radiorelejnykh liniiakh sviazi. Moskva, Red.-izd. otdel Vses. zaochnogo elektrotekhn. in-ta sviazi, 1963. 19 p. (MIRA 18:3)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550610014-8"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550610014-8

TOKAREVICH, K.N.; GOPINA, A.I.; POPOVA, Ye. M.; SILINA, N.I.

Outbreak of swamp fever of the Pomona type as a result of bathing. Trudy Len. inst. epid. i mikrobiol. 25:286-292 '63. (MIRA 17:1)

1. Iz otdela osobo opasnykh infektsiy Leningradskogo instituta epidemiologii i mikrobiologii imeni Pastera, Dorozhnoy sanitarno-epidemiologicheskoy stantsii Oktyabr'skoy zheleznoy dorogi i Dorozhnoy polikliniki g. Petrozavodska.

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550610014-8

SOV/137-58-7-14128

Translation from: Referativnyy zhurnal Metallurgiya 1958, Nr 7, p 22 (USSR)

AUTHORS: Poluboyarinov, D. N., Silina, N. N.

TITLE: Certain Properties of Corundum Ceramics with Additions of ZrO_2, Cr_2O_3, TiO_2 and MgO (Nekotoryye svoystva korundovoy keramiki s dobavkami ZrO_2, Cr_2O_3, TiO_2 i MgO)

PERIODICAL: Tr. Mosk. khim. tekhnol. in-ta im. D. I. Mendeleyeva, 1957, Nr 24, pp 155-163

ABSTRACT: Investigations were made of corundum with additions (A) of 1-20% ZrO_2 or Cr_2O_3, 0.5-5% TiO_2 and 1-5% MgO. The fusion temperature of all these substances except for that with 20% ZrO_2 is no lower than that of pure Al_2O_3 and exceeds 1900°C. A having 10% and more Cr_2O_3 or unstabilized ZrO_2 and even 1% of stabilized ZrO_2 reduces the softening temperature (ST) under load. A of up to 5% Cr_2O_3 raises the ST; A of up to 5% TiO_2 or MgO does not affect the ST. The σ_{bi} of massive refractories with A of up to 5% MgO or up to 10% ZrO_2 increases, as is also the case with A of 20% Cr_2O_3. On A of 20% ZrO_2 or 2-3% TiO_2, the σ_{bi} declines. The best resistance to heat is that of refractory substances with

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SOV/137-58-7-14128

Certain Properties of Corundum Ceramics (cont.)

A of 5% ZrO_2 or 0.5% TiO_2. The minimal sintering temperature (1550°) was revealed by massive refractories with 0.5-1% TiO_2 A.

N. G.

1. Refractory materials--Properties 2. Refractory materials--Temperature factors 3 Corundum--Properties

Card 2/2

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550610014-8

PROCESSES AND PROPERTIES INDEX

Analysis of thin filter press mud (from sugar refining). N. P. Sikna (Sakhar. Prom., 1950, No. 10, 27—28; Sug. Ind. Abstr., 1950, 22, 242).—The sugar content is determined polarimetrically in 100 or 200 ml.; the content of thick mud is calculated from the CaO content of 10 ml. of thin mud. Losses of sugar are calculated per kg. of CaO, from which (knowing CaO used per 100 kg. of beets) the sugar loss on beets is calculated. P. S. Abup

METALLURGICAL LITERATURE CLASSIFICATION

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550610014-8"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550610014-8

Control on defecation station when unsaturated juice from first carbonation is returned on pre-defecation. N. P. Salina. *Sakharnaya Prom.* 25, No. 1, 24-5(1951).—Many beet sugar factories are returning unsatd. juices to the pre-defecation, which makes the detn. of the amt. of added lime difficult. The detn. of the amt. of CaO in the defecated juice or unfiltered juice from the first carbonation is made by titration of 10 ml. of juice plus 10 ml. *N* HCl with NaOH and phenolphthalein as indicator. The amt. of returned juice can be detd. by the formula, $X = 100(a_2 - a_1)/a_3 - a_1$, where X is the amt. of returned juice per 100 l. of defecated juice; a_1 is alky. of returned defecated juice (% CaO); a_2 is alky. of mixed defecated juice, and a_3 is the amt. of lime (% CaO) used for clarification.

V. E. Baikow

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550610014-8

Journal of the Science
of Food and Agriculture
March 1954
Foods

True supersaturation in crystallisation of second-product massecuite. P. M. Silin and N. P. Silina (*Sakhar. Prom.*, 1953, No. 6, 4—9; *Sug. Ind. Abstr.*, 1953, **15**, 159).—The true coeff. of supersaturation is defined as the ratio apparent : actual saturation coeff. Determinations of these values for laboratory- and factory-made second-product massecuites indicate no appreciable supersaturation; the rate of crystallisation does, therefore, not lag behind that of cooling, and supersaturation is not a limiting factor in the crystallisation of massecuite.

P. S. ARUP.

Moscow Tech. Inst. Food Ind.

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550610014-8"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550610014-8

SILINA, N.P.

Chemical Abst.
Vol. 48
Apr. 10, 1954
Sugar, Starch, and Gums

(2)

Viscosity of massecuites. N. P. Silina (Technol. Inst. Food Ind., Moscow). *Sakharnaya Prom.* 27, No. 8, 10-14 (1953).—Viscosity of a massecuite can be accurately measured if the wt. of crystals does not surpass 55% on the wt. of the massecuite. Low-grade massecuites, which normally have about 45-47% of crystals, have normal viscosity. The size of a crystal has no effect on the viscosity of a massecuite. The viscosity of a whole massecuite is proportional to the viscosity of the mother liquor. Design and speed of a crystallizer have an important effect upon the exhaustion of molasses and the no. of crystals. V. E. Baikow

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550610014-8

SILINA, N.P.

Apr. 10, 1954
Sugar, Starch, and Gums

(2)

Calculations of low-grade massecuite composition. N. P. Silina (Technol. Inst. Food Ind., Moscow). *Sakharnaya Prom.* 27, No. 9, 14-16(1953).—Formulas are given which can be used to det. the compn. and viscosity of molasses at the end of crystn. V. E. Baikov

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550610014-8

SILINA, N.P.

Adsorption of coloring matters on the surface of sugar crystals. N. P. Silina, L. A. Chernova, and T. V. Gudakova (Technol. Inst. Food Ind., Moscow). *Sakharnaya Prom.* 28, No. 4, 43(1954).—Most of the coloring matter on raw sugar crystals can be removed by affination. The color of the crystal is due to the molasses adhering to the crystal.

V. E. Baikow

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550610014-8"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550610014-8

USSR

Distribution of nonsugars in raw sugar and selection of a method for purification. N. P. S[illegible]na (Technol. Inst. Food Ind., Moscow). *Sakhar. Prom.* 29, No. 3, 17-19 (1955).—Most nonsugars are distributed in the molasses film surrounding raw sugar crystals. The max. amt. is removed by the first affination and the following 5 remove only a very small amt. of the remaining impurities. The rate of purification of resulting affined sugars was detd. by electrocond.

V. B. Balkow

CH

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550610014-8"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550610014-8

SILIN,P.M.: SILINA,N.P.

Control of the basic technological processes. Sakh.prom.29 no.5: 12-16 '55. (MLRA 8:11)

1. Moskovskiy tekhnologicheskiy institut pishchevoy promyshlennosti (Sugar industry)

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[illegible] yellow [illegible] and selection

[illegible] Fr. [illegible]

[illegible] 1956

[illegible]

[illegible] Sep [illegible]er, 1956

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550610014-8

SILINA, N.P.

Rapid chromatographic determination of raffinose in fodder molasses. Sakh.prom. 30 no.8:41-44 Ag. '56. (MLRA 9:11)

1. Moskovskiy tekhnologicheskiy institut pishchevoy promyshlennosti.
(Raffinose) (Molasses) (Chromatographic analysis)

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550610014-8

SILINA, N.P.

Chromatographic test for raffinose content in fodder molasses.
Sakh.prom.30 no.10:50-51 O '56. (MLRA 10:1)

1. Moskovskiy tekhnologicheskiy institut pishchevoy promyshlennosti.
(Chromatographic analysis) (Raffinose) (Molasses)

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550610014-8

SILINA, N.P.

Accelerating the method of paper chromatography. Izv. vys. ucheb. zav.; pishch. tekh. no.1:117-121 '58. (MIRA 11:8)

1. Moskovskiy tekhnologicheskiy institut pishchevoy promyshlennosti, Kafedra fizicheskoy i kolloidnoy khimii.
(Paper chromatography)

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550610014-8

SOV-69-58-4-11/18

AUTHORS: Nazarov, V.I., Silina, N.P., Tikhomirova, T.P.

TITLE: Some Experimental Investigations on the Physical Chemistry of Starch (Nekotoryye eksperimental'nyye issledovaniya po fiziko-khimii krakhmala)

PERIODICAL: Kolloidnyy zhurnal, 1958, Vol XX, Nr 4, pp 465-468 (USSR)

ABSTRACT: In the article, the influence of the temperature and electrolyte solutions on starch granules is studied. Starch is a high-molecular carbohydrate the properties of which are connected with the character of its internal structure. Experiments have shown, that at a temperature of 107° C, starch loses its water. If this dry starch is heated at 100° C for several hours, the temperature of paste formation is reduced (see Table). The complete elimination of water at 120° C leads to dextrine formation and other major changes in the internal structure. The influence of the electrolytes plays a great role since starch is an ion exchanging substance. A small quantity of ions connected with starch causes a considerable change in the filtration ability of the substance. The following cation range has been established: $Mg^{2+} > Na^{2+} > Ba^{2+} > Ca^{2+}$. The adsorption capacity of starch has been determined by means of

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SOV-69-58-4-11/18

Some Experimental Investigations on the Physical Chemistry of Starch

methylene blue. The influence of the cations on this property is shown in the following range: $Na^{+} > Mg^{2+} > Ba^{2+} > Ca^{2+}$. For the viscosity of starch the following cation range has been established: $Ba^{2+} > Ca^{2+} > Mg^{2+} > H^{+}$. A linear relationship is observed between the values of the ionic refractions and the paste formation temperature of the starch in the solutions of the respective electrolytes.
There are 3 graphs, 1 table, and 11 references, 6 of which are Soviet and 5 German.

ASSOCIATION: Moskovskiy tekhnologicheskiy institut pishchevoy promyshlennosti , Laboratoriya fizicheskoy i kolloidnoy khimii (Moscow Technological Institute of the Food Industry, Laboratory of Physical and Colloidal Chemistry)

SUBMITTED: April 1, 1957

1. Starches--Chemical properties

Card 2/2

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550610014-8"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550610014-8

SILINA, N.

Measuring the sensitivity to heat of sugar beets and selecting temperature conditions in the diffusion process (from "Zeitschrift fuer die Zuckerindustrie," no.2, 1959). Sakh. prom. 33 no.10:72 O '59. (MIRA 13:3)
(Sugar beets)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550610014-8"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550610014-8

SILIN, Pavel Mikhaylovich; SILINA, Nina Pavlovna; VOYKOVA, A.A., red.; SOKOLOVA, I.A., tekhn.red.

[Chemical control of beet-sugar manufacture] Khimicheskii kontrol' sveklosakharnogo proizvodstva. Izd.3., perer. i dop. Moskva, Pishchepromizdat, 1960. 266 p.

(MIRA 14:4)

(Sugar manufacture) (Sugar--Analysis and testing)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550610014-8"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550610014-8

NAZAROV, V.I.; SILINA, N.P.

Chromatographic study of the aging of wheat starch and wheat bread jellies. Izv.vys.ucheb.zav. 1:117-121 '61. (MIRA 14:3)

1. Moskovskiy tekhnologicheskiy institut pishchevoy promyshlennosti, Kafedra fizicheskoy i kolloidnoy khimii.
(wheat) (starch)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550610014-8"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550610014-8

SILINA, N.P.; NAZAROV, V.I.

Experience in the chromatographic study of the aging of starch gels. Izv. vys. ucheb. zav.; pishch. tekh. no.4: 37-39 '63. (MIRA 16:11)

1. Moskovskiy tekhnologicheskiy institut pishchevoy promyshlennosti, kafedra fizicheskoy i kolloidnoy khimii.

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550610014-8

SILINA, N.P.; KAYDANOVA, S.N.

Using pressure and ultrasonics in extracting bitumen from rocks. Neftegaz.geol. i geofiz. no.2:34-36 '64. (MIRA 17:4)

1. Vsesoyuznyy neftyanoy nauchno-issledovatel'skiy geologorazvedochnyy institut.

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550610014-8"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550610014-8

SI'INA, N.P.; KAYDANOVA, S.N.

Rapid method for the extraction of bitumen from rocks. Trudy VNIGRI no.227 Geokhim.sbor. no.9:259-262 '64.

(MIRA 18:1)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550610014-8"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550610014-8

ANDREYEV, P.F.; IVANTSOVA, V.V.; POLYAKOVA, N.N.; SILINA, N.P.

Properties and structure of the dispersed organic matter of sedimentray rock. Trudy VNIGRI no.83:171-187 '55.
(Geochemistry) (MIRA 8:10)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550610014-8"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550610014-8

ANDREYEV, P.F.; DVALI, M.F.; SILINA, N.P.

New method of studying scattered organic matter in rocks. Trudy VNIGRI no.123:189-192 '58. (MIRA 11:12)
(Rocks--Analysis) (Petroleum geology)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550610014-8"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550610014-8

BURTSEVA, N.P.; SILINA, N.P.

Technique for separating light bitumen fractions from rocks. trudy VNIGRI no.174:262-270 '61. (MIRA 14:12)
(Bitumen)
(Rocks--Analysis)

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550610014-8

SILINA, N.P.; POKORSKIY, V.N.; SHIRYAYEVA, Ye.I.; USTRAYKH, M.A.

Vapor - liquid equilibrium in the systems toluene - diethylene glycol and o-xylene - diethylene glycol. Trudy VNIIneftekhim no.5:124-132 '62. (MIRA 15:7)

(Toluene) (Xylene)
(Diethylene glycol)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550610014-8"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550610014-8

[illegible], Ye. A.: [illegible]

Vanadium

Some laws of the distribution of vanadium in contemporary marine deposits. Dokl. AN SSSR 86, No. 2, 1952.

9. MONTHLY LIST OF RUSSIAN ACCESSIONS, Library of Congress, December 1952. Uncl.

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550610014-8"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550610014-8

VASIL'YEV, P.I.; LEBOVA, R.G.; PODVAL'NAYA, P.L.; ROZOVSKAYA, G.V.; RYANICHEVA, M.I.; SILINA, O.M.; TITOV, V.I.; TIKHONOVA, N.A. SERGEYEVA, N.A., redaktor izdatel'stva; GORDIYENKO, Ye.B., tekhnicheskiy redaktor

[Methods in chemical analysis of mineral ores] Metody khimicheskogo analiza mineral'nogo syr'ia. Moskva, Gos. nauchno-tekhn. izd-vo lit-ry po geologii i okhrane nedr. No.1. 1955. 77 p. (MLRA 9:7)

1. Moscow. Vsesoyuznyy nauchno-issledovatel'skiy insitut mineral'nogo syr'ya.
(Ores--Analysis)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550610014-8"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550610014-8

SILINA, O. M.

4
1-4E2c

2172. Semi-micro colorimetric determination of vanadium in minerals and ores. O. M. Silina. ~~Sb. Nauch. Tekhn. Inform. Ministerstvo Geol. i Okhrany Nedr~~, 1955, (1), 127–128; *Ref. Zhur., Khim.*, 1956, Abstr. No. 54,766.—The formation of the tungstovanadophosphate complex in H_2SO_4 soln. is used. With a sample wt. of 0·1 to 0·3 g. materials having a high content of SiO_2 can be analysed for contents of V between 0·01 and 3%. The error is ±0·005% of the sample wt. at very low contents, and ±0·1% at 1% of V. Interference by Cr occurs only when its content greatly exceeds that of V.

G. S. SMITH

Chem

RG

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550610014-8

CHUKHAR'KO,Z.; MEL'NIK,B.; SILINA,S.

Ways of reducing the cost of mechanical ventilation of grain. Muk.-elev.prom. 21 no.4:7-8 Ap '55. (MLRA 8:7)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut zerna i produktov yego pererabotki
(Grain--Storage)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550610014-8"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550610014-8

USSR/Farm Animals - Large Horned Cattle. Q-2

Abs Jour : Ref Zhur - Biol., No 18, 1958, 83325

Author : Silina, S.

Inst : Latvian Academy of Agriculture.

Title : Investigating Rumen Fauna in Latvian Brown Breed Cows.

Orig Pub : Tr. Latv. s.-kh. akad., 1957, vyp. 6, 303-312.

Abstract : No abstract.

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APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550610014-8"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550610014-8

SILINA, S.

Technical and economic indices of the use of conveying machinery at grain receiving enterprises. Muk.-elev. prom. 28 no.1:21-22 Ja '62. (MIRA 16:7)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut zerna i produktovyego pererabotki.
(Grain-handling machinery)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550610014-8"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550610014-8

KOLOTILOVA, L.V.; [illegible], T.M.; SHIMA, S.F.

Comparative data on whooping cough incidence in children vaccinated and unvaccinated with antipertussis preparations. Zhur. mikrobiol., epid. i immun. 41 no.4:25-29 Ap '64.

(MIRA 18:4)

1. L'vovskiy institut epidemiologii, mikrobiologii i gigiyeny.

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550610014-8

SILINA, V.I.

Ovarian apoplexy. Akush. i gig. 33 no.2:84-86 Mr-Ap '56. (MIRA 9:7)

1. Iz khirurgicheskogo otdeleniya (zav. V.Beynarovich) Ishimskoy zheleznodorozhnoy bol'nitsy.
(OVARIES, hemorrhage
apoplexy, case reports)
(HEMORRHAGE
ovarian apoplexy, case reports)

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550610014-8

SILINA, V P

FD-2172

USSR/Biology - Antibiotics

Card 1/1 Pub 129-12/20

Author : Sizova, T. P.; Silina, V. P.

Title : The adaptation of fungi of the genus Penicillium Link to the rhizosphere of Ranuculus acer L. and of Achillea millefolium L.

Periodical : Vest. Mos. un., Ser. fizikomat, i yest. nauk, 10, No 2, 92-103, Mar 1955

Abstract : Investigated the adapatation of species of Penicillium to the higher plants mentioned and the content of penicillin and of other antibiotics in representatives of these species. Found that more producers of penicillin are found in the rhizosphere of Ranuculus acer than in that of Achillea millefolium. Twenty-two references, 13 USSR 11 since 1940. Four tables.

Institution : Chair of Lower Plants, Moscow University

Submitted : May 7, 1953

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550610014-8"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550610014-8

SILINA, V.P.; PARIYSKAYA, A.N.

Physiology of roses and grasses infected with Erysiphe graminis. Biul.Glav.bot.sada no.23:68-76 '55. (MIRA 9:7)

1.Glavnyy botanicheskiy sad Akademii nauk SSSR.
(Grasses--Diseases and pests)(Roses--Diseases and pests)(Mildew)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550610014-8"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550610014-8

SILINA, Ye.

A.I.Kuprin. Rab.i sial. 36 no.9:20 S '60. (MIRA 13:10)
(Kuprin, Aleksandr Ivanovich, 1870-1938)

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550610014-8

SILINA, Ye.I.

(Financing cultural and educational institutions] Finansirovanie kul'turno-prosvetitel'nykh uchrezhdenii. Moskva, Goskul'tprosvetizdat, 1954. 295 p. (MIRA 8:3D)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550610014-8"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550610014-8

USSR / Plant Physiology. Mineral Nutrition. I-2

Abs Jour : Ref Zhur - Bio.., No 22, 1958, No 99925

Author : Kulayeva, O. N.; Silina, Ye. I.; and Kursanov, A. L.
Inst : Instute of Plant Physiology, AS USSR
Title : Ways of Primary Assimilation of Ammoniacal Nitrogen in the Roots of Pumpkin.

Orig Pub : Fiziol. Rasteniy, 4, No 6, 520-528, 1957

Abstract : In the Institute of Physiology, Academy of Sciences USSR, plants were grown in aqueous cultures on complete nutrient mixture, nutrient mixture without P at the beginning of experiment but with a short-time P nutrition at the end of the experiment, and nutrient mixture without P throughout the whole experiment. The method of chromatography of paper was used to investigate the composition of free amino acids in the roots and juice of pumpkin. Upon feeding of plants

Card 1/2

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550610014-8

SILINA, Ye. I.

"Concerning the Technological Properties of Xanthogenates." Cand Tech Sci, Ural Polytechnic Inst, Sverdlovsk, 1954. (RZhKhim, No 8, Apr 55)

SO: Sum. No. 704, 2 Nov 55 - Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (16)

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550610014-8

SOV/137-57-11-20800

Translation from: Referativnyy zhurnal, Metallurgiya, 1957, Nr 11, p 23 (USSR)

AUTHORS: Kakovskiy, I.A., Silina, Ye.I.

TITLE: An Intensive Stirring Reactor to Produce Dry Xanthates (Reaktor intensivnogo peremeshivaniya dlya polucheniya sukhikh ksantogenatov)

PERIODICAL: Obogashcheniye rud, 1956, Nr 6, pp 30-32

ABSTRACT: An experimental reactor (ER) consisting of a hemispherical metal vessel in a metal jacket is built to produce dry xanthates (X). Thanks to the intensive stirring of the reacting mass by means of an inclined anchor-type stirrer, the yield of the crystalline fraction of butyl and ethyl X increases. The design of the ER is adduced. Pilot-plant tests of the ER in the xanthate department of the SUMZ shows the possibility of producing X without mother liquor. This eliminates the laborious and unhealthful operation of filtering and saves raw material. A major advantage in the utilization of the ER is also the possibility of performing all operations (dissolution of the caustic, preparation of the alcoholate, and drying of the X) in a single apparatus. The author believes it to be desirable to build an

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SOV/137-57-11-20800

An Intensive Stirring Reactor to Produce Dry Xanthates

industrial R for ~ 500 kg of finished product to obtain a more precise design for a large equipment and to shed light upon a number of economic indices.

M. L.

Card 2/2

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Silina, Ye. I.

137-1958-3-4530

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 3, p 8 (USSR)

AUTHORS: Kakovskiy, I. A., Silina, Ye. I.

TITLE: Substitutes for Cresyl Aerofloats (Zameniteli krezilovykh aeroflotov)

PERIODICAL: Byul. tsvetn. metallurgii, 1957, Nr 14, pp 9-15

ABSTRACT: On the basis of a comparative qualitative evaluation of the chemical activity of aromatic (highly poisonous) and aliphatic (considerably less poisonous) dithiophosphates (D), which demonstrated the similarity in the chemical activity of cresyl and of the higher alcoholic D's, the kinetic properties of D's were studied and it was established that cresyl D's may be replaced by higher, alcoholic (butyl or isoamyl) D's. Isoamyl D exhibits somewhat greater collective and frothing properties than cresyl D. The prevalence of frothing or collecting properties is a function of the grade of industrial D present, i.e., of the amount of free isoamyl alcohol. Industrial butyl and isoamyl D's may be employed as frothers in any flotation process at their corresponding grade designations instead of those of the cresyl D's. However, the employment of a frother in the role of a collector

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137-1958-3-4530

Substitutes for Cresyl Aerofloats

may be advised only in those instances when, owing to the technological regimen, small amounts (5-20 g/t) of high grade (25, 31) collectors are required. They are best used in the form of a dry salt in conjunction with alcohol.

A. Sh.

Card 2/2

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KAKOVSKIY, I.A., doktor tekhn. i khim. nauk, prof.; SILINA, Ye.I., inzh.

Interaction of ion producing collectors with surface minerals. [Trudy] Mekhanobr no.96:53-74 '58. (MIRA 11:9)
(Flotation) (Chemical reactions)

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550610014-8

MOLOCHNIKOVA, F.E.; SILINA, Ye.I.

The thichening of sulfide pulp by means of the AMF flocculator. Gor. zhur. no. 1:75-76 Ja '61. (MIRA 14:1)

1. Institut Uralmekhanobr, Sverdlovsk.
(Ore dressing--Equipment and supplies)

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550610014-8

KAKOVSKIY, I.A.; GREBNEV, A.N.; SILINA, Ye.I.

Connection between the floatability of mineral particles of various sizes, their structure and the consumption of collectors. TSvet. met. 34 no.8:7-17 Ag '61. (MIRA 14:9)
(Flotation--Equipment and supplies)

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550610014-8

TYURENKOVA, G.N.; SILINA, Ye.I.; POSTOVSKIY, I.Ya.

Some N-substituted benzimidazoles and their flotation properties. Zhur.prikl.khim. 34 no.10:2327-2331 O '61. (MIRA 14:11)

1. Ural'skiy filial AN SSSR i institut "Uralmekhanobr".
(Benzimidazole) (Flotation)

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KAKOVSKIY, I.A.; SILINA, Ye.I.; GREBNEV, A.N.

Field of using high activity flotation reagent-collectors. Report no.1. Izv.vys.ucheb.zav.; tsvet.met. 5 no.3:42-48 '62. (MIRA 15:11)

1. Ural'skiy politekhnicheskiy institut, kafedra metallurgii blagorodnykh i redkikh metallov.
(Flotation--Equipment and supplies)

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550610014-8

KAKOVSKIY, I.A.; GREBNEV, A.N.; SILINA, Ye.I.

Range of application of high activity flotation collector-reagents. Report no.2. Izv. vys. ucheb. zav.; tsvet. met. 5 no.4:33-45 '62. (MIRA 16:5)

1. Ural'skiy politekhnicheskiy institut, kafedra metallurgii blagorodnykh i redkikh metallov.
(Flotation--Equipment and supplies)

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SILINA, Ye.I.; ZLOKAZOVA, T.M.; ZOLOTAREVA, M.G. Prinimali uchastiye: YEVTYUTOV, A.A.; LEVINA, P.I.; CHEMODANOV, V.S.; SVECHNIKOVA, L.I.; KRIVONISHCHENKO, V.V.

Experimental factory testing of polyacrylamide flocculent as a substitute for meal in the production of alumina. TSvet. met. 37 no.12:44-46 D '64 (MIRA 18:2)

1. Ural'skiy alyuminiyevyy zavod (for Yevtyutov, Levina, Chemodanov). 2. Ural'skiy nauchno-issledovatel'skiy i proyektnyy institut obogashcheniya i mekhanicheskoy obrabotki poleznykh iskopayemykh (for Svechnikova, Krivonishchenko).

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GRECHKO, V.V., MASLOVA, R.N., SHKARENKOVA, L.S., SILINA, Ye.I. [deceased], JARSHAVSKIY, Ya.M.

Effect of heavy water on the properties of DNA and proteins. Dokl. AN SSSR 152 no.3:[illegible] S '63. (MIRA 16:12)

1. Institut radiatsionnoy i fiziko-khimicheskoy biologii AN SSSR. Pretstavleno akademikom V.A.Engel'gardtom.

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550610014-8

SILINA, Ye.M.

New representatives of the genus Podomazites from lower Cretaceous sediments in the northern part of the Trans-Ural region. Trudy Gor.-geol. inst. ng. 28:34-35 '57. (MIRA 11:10)
(Ural Mountain ragion--Araucariaceae, Fossil)

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SILINA, Ye.N.; KURBEZHEKOVA, A.N.

Permian deposits on the eastern slope of the Urals.
Dokl. AN SSSR 146 no.4:887-889 O '62. (MIRA 15:11)

1. Chelyabinskaya geologicheskaya ekspeditsiya.
Predstavleno akademikom D.V. Nalivkinym.
(Ural Mountains--Geology, Stratigraphic)

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[illegible]

[illegible]

AUTHORS: [illegible], [illegible] K., [illegible], [illegible] D.

TITLE: Lead Corner in the Ternary System Pb-Bi-Mg Equilibrium Diagram

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Tsvetnaya metallurgiya, [illegible], Nr [illegible], pp [illegible] (USSR)

ABSTRACT: Bismuth is eliminated from lead by the combined action of calcium and magnesium, each of the latter unable to achieve this aim alone. A study of the ternary equilibrium diagram of the Pb-Mg-Bi system is of great importance, yet data on this subject are scant and contradictory. This article deals with the lead corner of this ternary system, and covers three cross sections of Pb-[illegible]% Bi-[illegible]% Mg triangle. In the cross section Pb I and Pb II, the Bi-Mg ratio is constant, [illegible] and [illegible], respectively. Cross section Pb-Mg_3Bi_2 is posed binary with

[illegible] a Bi-Mg ratio of about [illegible]. Figures [illegible], [illegible], and [illegible] show

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Lead Corner in the Ternary System [illegible]
Pb-Bi-Mg Equilibrium Diagram SOV [illegible] 1-12/27

[illegible] radial cross sections Pb-I, Pb-II, and Pb-Mg_3Bi_2. In Figures 1 and 2 two areas of primary crystallization are [illegible] that of [illegible] solution (solid solution on lead base) and of chemical compound Mg_3Bi_2, which are limited by two liquidus lines. The solidus comprises two areas corresponding to the end of primary crystallization [illegible] and binary eutectic [illegible] + Mg_3Bi_2 and the straight line of ternary eutectic [illegible] + Mg_3Bi_2 + Mg_2Pb (at [illegible]). Figure 3 shows two branches of primary crystallization that of solid solution and of chemical compound Mg_3Bi_2. The solidus is represented by a horizontal straight line corresponding to the end of crystallization of binary eutectic [illegible] + Mg_3Bi_2 at 294°. Figure 4 shows the lead corner of this system plotted according to thermal microscopic and radiographic analyses. It is assumed that [illegible] does not

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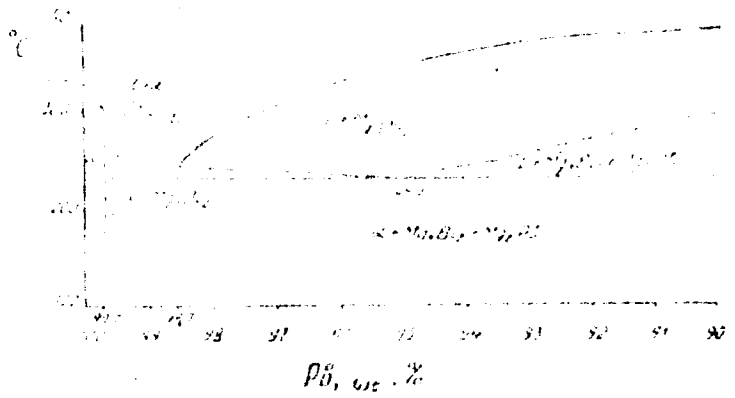

Fig. 1. Polythermal radial cross section Pb-I at constant ratio Bi:Mg = 1:3.

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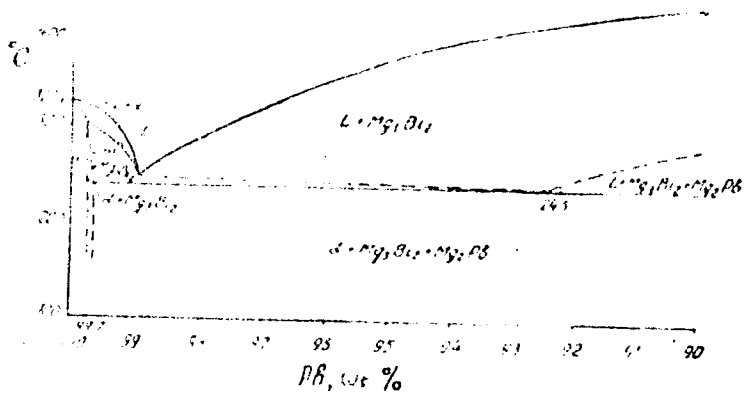

Fig. 1. Polythermal radial cross section Pb-II at [illegible] ratio Bi:Mg = 1:1.

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Pb-Bi-Mg Equilibrium Diagram

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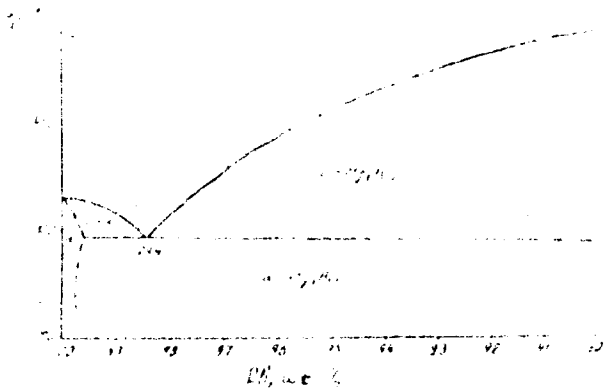

Fig. 3. Quasibinary cross section Pb - Mg_3Bi_2 at at constant ratio Bi:Mg $\approx$ 5:1.

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[illegible]

[illegible]

change with temperature. The dotted line indicates the solubility, and is taken from Fig. 1, and 2. It applies to cast, nonannealed alloys, as used in practice. Microhardness of α-solution increases with the Bi-Mg content. Above saturation point (99.7 Pb) hardness hardly changes. Radiograms showed that lattice parameter increased at a very small rate (hundredths and thousandths of one per cent) with Bi-Mg content increase, since the atomic diameters of elements composing the alloys are very close to each other. The phase which crystallizes at 327° while retaining the lead lattice is a ternary solution of Bi and Mg in Pb. In their conclusions the authors note that the above data coincide with the few available in literature. There are 7 figures; and 6 references, 3 Soviet, 1 German, 2 U.S. The U.S. references are: I. O. Betterton, I. Lebedeff, Trans. AIME 121, 203 (1936); T. R. A. Davey, J. Metals, Nr 3, 341-950 (1956).

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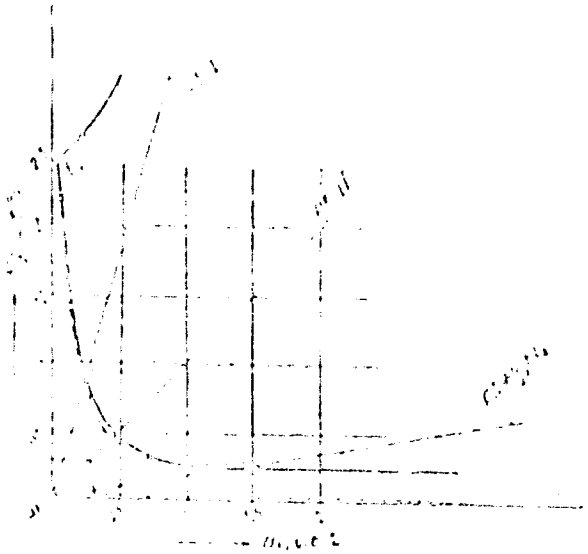

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[illegible]

[illegible]

ORGANIZATION: Kazakh Mining Metallurgical Institute. Chair of General Metallurgy and Metallurgical Furnaces (Kazakhskiy gornometallurgicheskiy institut. Kafedra obshchey metallurgii i metalurgicheskikh pechey)

SUBMITTED: October 10, 1959

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SILINA, Yu.P.

Systematics and morphology of chironomids of the genus Limnochironomus Kieff. Trudy Gidrobiol. ob-va 9:121-128 '59.
(MIRA 12:9)

1. Kafedra zoologii bespozvonochnykh Moskovskogo gosudarstvennogo universiteta.
(Chironomidae)

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28

Role of pectinous substances in sugar manufacture. P. M. Silin and Z. A. Silina. *J. Sugar Ind.* (U. S. S. R.) 5, 606-11(1931); *Sugar Abstracts (in Facts About Sugar)* 27, 440.— The solv. of the pectinous substances of the sugar beet was studied by treating dried beet pulp with distd. H_2O for various lengths of time at different temps. The increase in solv. is very small and gradual, and is little affected by temp. differences up to about 80°, but at this temp. the amt. of pectinous substances passing into soln. increases very rapidly; the amt. dissolved in 2 hrs. at 90° may be more than 30 times as much as at 80° for the same length of time. The effect of H-ion concn. on solv. of pectins was studied, dried beet pulp being used. The p_H of the soln. was adjusted by buffer solns. of NaH_2PO_4 for the acid side and NaOH for the alk. side. Soln. of pectin is min. at p_H 5.2, where the amt. of sol. pectin is 0.044%. On the acid side this increases to 0.418% at p_H 2.5 and on the alk. side to 0.644% at p_H 12.1. With technologists at the Ramon factory, the authors studied the movement of pectins in a 12-cell diffusion battery. The pectin content of the diffuser water (last cell) was 0.0015% on juice, this gradually rose to 0.097% in the juice from the 3rd cell and then jumped to 0.115% in the 2nd cell. The final concn. was 0.13%. A factory scale expt. was made to det. the effect of temp. during the diffusion process. In one series the diffuser temps. were maintained between 52.8° and 75.0° (av. 70.4°) and in another series between 52.8° and 85.1° (av. 76.5°). Under these conditions the diffusion juices contained, resp., 0.116 and 0.239% of sol. pectinous substances; *i.e.*, with an av. difference of 6.1° in diffusion temp., the amt. of pectinous substance was a trifle more than doubled. This difference in pectin content amounts to about 0.14% on beets, and it is assumed that if left in the juice the sucrose in the molasses would be increased by 0.15% on beets. The effect of defeco-carbonation on the pectinous substances was studied, a soln. of pectins obtained by digesting dry beet pulp being used. After defeco-carbonation the soln. still contained 76.1% of the original pectins; so the purifying effect of the process as regards these substances is only about 24%. G. G.

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Characteristic effects of defecation and first carbonation. P. M. Silin and *L.* A. Silina. *Trans. Central Sci. Research Inst. Sugar Ind.* (U. S. S. R.) No. 13, 38-50 (1933); *Sugar Abstracts* (in *Facts About Sugar*) 29, 165. The results of a shortened time of defecation at 85-90° and of a longer time at a lower temp. are equivalent, but when the time allowed for defecation is shortened, it is necessary to watch closely the drop in alky. during the evapn. and sugar boiling. If this drop is abnormally great, or if foaming occurs, either the time of defecation should be lengthened or the temp. of defecation raised. Addn. of lime "in the cold" results in restraining the increase of color during defecation and tends to raise the purity. The lower limit of alky. in the first carbonation is 0.08% CaO. Control of juice purification "according to purity coeff." is insufficient, because the range of error in purity detns. is rather wide; for this control it is necessary also to det. color and content of lime salts. G. G.

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1ST AND 2ND ORDERS

PROCESSES AND PROPERTIES INDEX

28

Crystallization and molasses formation. P. M. Sdin and Z. A. Sdina. *Trudy Voronezh. Khim. Tekhnol. Inst.* 1, 3-21(1938), cf. C. 1, 34, 1602. A brief review of crystn. theories and data obtained in crystn. of supersatd. solns. of molasses from six different plants at const. temp. (40°) indicates that crystn. comprises two steps: diffusion of sugar to the surface of the crystal through a stationary layer of the mother liquor adhering to it and its conversion into crystals. The velocity of the first step is proportional to the difference of concns. in the surrounding soln. and at the surface of the crystal, that of the second to the square of excess concn. (supersatn.) at the crystal face. The velocity of crystn. is given by the formula $K = (82.3 \times 10^{8} \times T/\eta^{1.5})(\Delta c + 0.005 \times 0.1 \times \Delta c + 0.0025)$ mg. sq. in. min., in which η is the viscosity of the satd. sugar soln. at abs. temp. in centipoises and Δc is excess supersatn. which is approx. proportional to concn. in excess of that at satn. For low quality molasses K is proportional to excess supersatn. resulting from dissolving addnl. sugar at elevated temp., but not by concg. the molasses. It is independent of the crystal size except where the crystals are very small, and the rate of stirring within 1 r. p. m. per 1.5-4.0 min. The standard concn. of dry matter corresponding to 4000 centipoises, permitting centrifuging of molasses, corresponds to 82.0° Brix at 40°, 79.6° at 30° and 84.1° at 50°. The quality of tech. molasses can be detd. on the basis of this concn. by exptl. crystn., which is diagrammatically illustrated. J. G. Tolpin

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28

Performance of a diffusion battery. P. M. Sidin and Z. A. Salina. *Trudy Voronezh Khim.-Tekhnol. Inst.* 2, 3-31(1938).—An equation is derived for the amt. of sugar extd., depending upon the av. temp., diffusion period, pumping and length of the beet shavings. This equation was verified in expts. with 5 or 7 diffusor batteries at 70° with shavings from 11.1 to 24 m. long, and the tabulated results show that regardless of the no. of diffusors, the losses continuously decrease, approaching 0 with increase of the no. of cycles of the battery. Plant-scale expts. are reported showing general agreement with the lab. data. While the performance of an ordinary diffusion battery is close to that of a continuous counter-current diffusion app., the characteristics of the tail part of the battery greatly affect the sugar loss. Diagrams were constructed permitting rapid detn. of the loss of sugar and some factors evaluated affecting the losses under plant conditions. J. G. Tolpin

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1ST AND 2ND ORDERS

PROCESSES AND PROPERTIES INDEX

Optimal pH for preliminary clarification and saturation. P. M. Silin, Z. A. Silina and E. P. Strukova. *Trudy Voronezh Khim.-Tekhnol. Inst.* 3:4, 19:31 (1939). An exptl. study was carried out showing that different colloidal and cryst. insol. Ca compds. present in the solns. handled in the sugar industry possess close optimal coagulation points at the following pH: $CaCO_3$, 11.19; $Ca(COO)_2$, 11.33; Ca tartrate, 11.42; Ca citrate, 11.59; $CaSO_4$, 11.30; proteins combined with CaO, 10.49; Ca galacturonate, 11.11; Ca salts of products of alk. decompn. of invert sugar, 10.98. The pptn. is hampered because at pH less than 11, insufficient CaO is present and hydrolysis of Ca salts of weak acids occurs. Above pH 11, the Ca salts are peptized by alkali and sucrose-forming gels difficult of filtration and sols increasing the color and raising the content of Ca salts in soln. The work is being continued. J. G. Tolpin

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

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