KONDAKOV, N.P., kand.tekhn.nauk (Novosibrisk); AKULOV, V. Ye., inzh. (Novosibirsk); OPARINA, N.A., tekhnik (Novosibirsk)

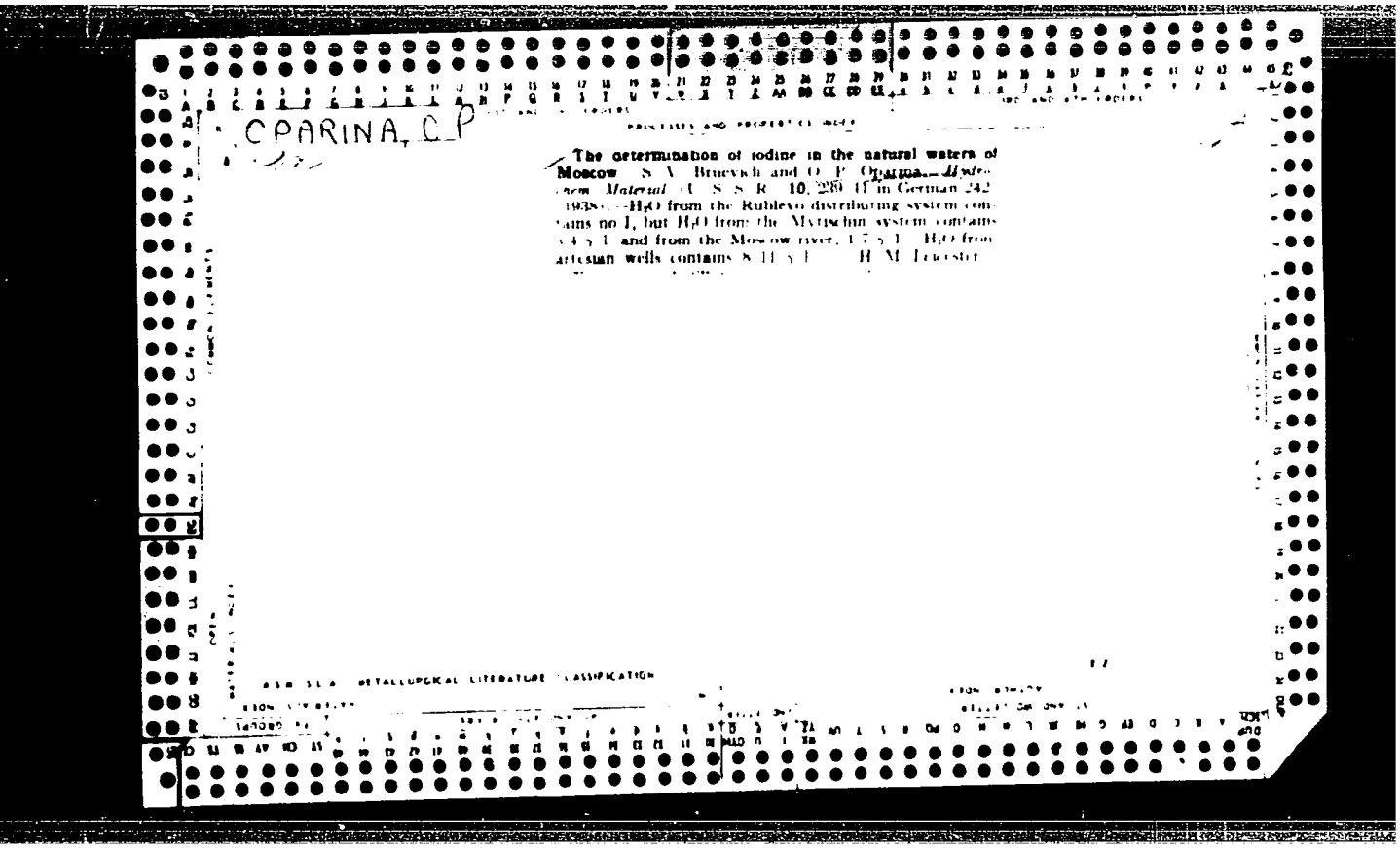
Performance of the R65 rails on the track. Put' i put.khoz. 5 no.2:11 F '61. (MIRA 14:3)
(Railroads—Rails)

KONDAKOV, N.P.; AKULOV, V.Ye.; OPARINA, M.A.

Life of R-65 rails in railroad tracks. [illegible]

1. Novosibirskiy institut inzhenerov zheleznc-dorozhnogo transporta.

(Railroads--Rails)



CPARINA, C P

The determination of iodine in the natural waters of Moscow S V Bruevich and O P Oparina—*Mineral. Raw Material* (U S S R) 10, 250–1 (in German 242–3) 1938.—H_2O from the Rublevo distributing system contains no I, but H_2O from the Mytischin system contains 4.4 γ I and from the Moscow river, 1.7 γ I. H_2O from artesian wells contains 8.1 γ I. H. M. Leicester

METALLURGICAL LITERATURE CLASSIFICATION

OPARINA, O.P.

OPARINA, O.P.; MITYAGINA, O.V.

Determination of soluble oxygen in the presence of ferrous salts. Gidrokhim.mat. no.20:92-97 '53. (MLRA 7:3)

1. Institut obshchey i kommunal'noy gigiyeny Akademii meditsinskikh nauk SSSR Moskva. (Water--Analysis) (Oxygen)

SEMTYURIKHINA, L.N.; OPARINA, Ye.M.; PISAREVSKAYA, Ye.E.

Thickening power of calcium and lithium soaps of acids isolated from oxidized petroleum wax. Trudy VNII NP no.7:359-366 '58. (MIRA 12:10)

(Metallic soaps) (Paraffins)

(Lubrication and lubricants)

OPARINA, Ye.M.; SENTYURIKHINA, L.N.; PISAREVSKAYA, Ye.B.

Effect of unsaponifiables of oxidized petroleum wax on the properties of greases. Trudy VNII NP no.7:367-373 '58.
(MIRA 12:10)

(Lubrication and lubricants) (Paraffins) (Oxidation)

VOLCHINSKAYA, N.I.; SEMTYURIKHINA, L.N.; OPARINA, Ye.M.

Study of the thixotropic qualities of solid oils. Trudy VNII NP no.7:374-378 '58. (MIRA 12:10)
(Lubrication and lubricants)

S/081/60/000/[illegible]

Translation from: Referativnyy zhurnal, Khimiya, 1960, No 3, p 504 # 10[illegible]

AUTHORS: Sentyurikhina, L. N., Oparina, Ye. M.

TITLE: Molybdenum Disulfide, a New Lubricant

PERIODICAL: Tr. Vses. n.-i. in-t po pererabotke nefti i gaza i [illegible] iskusstv. zhidk. topliva, 1958, No. 7, pp. 403-409

TEXT: The purification process is described [illegible] molybdenite of the Vostochno-Kounradskiy deposit, which makes it possible to obtain MoS_2 with a purity of 98.5%. Crushing, sifting, flotation and treatment of molybdenite by chemical reagents (HCl, HF) were used in the purification. In the grinding of pure MoS_2 the best results were obtained with dry grinding in a jet mill and crushing of MoS_2 suspensions in volatile liquids (alcohol, toluene, dichloroethane, water) with the application of ultrasound. Methods were described for applying MoS_2 films on rubbing surfaces by means of binding substances (various organic resins) and solvents.

Card 1/1

66488
SOV/81-59-13-47276

15.6400
24.1800

Translation from: Referativnyy zhurnal. Khimiya, 1959, Nr 13, pp 432 - 433 (USSR)

AUTHORS: Yermilov, A.S., Oparina, Ye.M.

TITLE: The Increase in the Thermal Stability of Silicon Liquids by Means of Ultrasound and Antioxidation Admixtures

PERIODICAL: Tr. Vses. n.-i. in-ta topliva, 1958, Nr 7, pp 409 - 414

ABSTRACT: The action of ultrasound on the thermal stability of silicon liquids (SL) has been investigated. The liquids were irradiated for 1 - 20 minutes at an ultrasonic frequency of 300 kc, an intensity of 40 - 60 w/cm^2, a layer thickness of 49 mm. The thermal stability was studied by the kinetics of the change in the kinematic viscosity at 20°C and the time of gelatinization of SL exposed to ultrasound in dependence on the time of thermostatic regulation at 200°C. It has been shown that non-irradiated SL gelatinize after thermostatic regulation in the course of 90 hours, whereas irradiated SL preserve their fluidity for 120 - 150 hours. For several SL the optimum time of irradiation proved to be 4 minutes, and the stability

Card 1/2

66988

SOV/81-59-13-4[illegible]

The Increase in the Thermal Stability of Silicon Liquids by Means of Ultrasound and Antioxidation Admixtures

of SL increased 1.6 times and more. At the addition of anti-oxidation admixture (aldol- α-naphthylamine) to irradiated SL their thermostability increase still more

G. Margolina

Card 2/2

11.9500

AUTH: Al'shits, I. Ya., Oparina, Ye. V., Tentyurnikova, L. N., Gusenkina, I. N.

TITLE: Experimental use of molybdenum [illegible] as an antifriction

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 1, 1961, 4 K, abstract 1 17M 34 (Tr. 4-y Vses. konferentsii [illegible] mashinakh. M., AN SSSR, v. 4, 1960, 117-17

TEXT: Tests made with MoS_2 (in powder form, and also as a coating film with binding agents) on friction machines and pilot units have shown that at high specific pressures this compound presents certain advantages over other lubricant tested at the same time (graphite, lubricants ЦИАТИМ-[illegible] (TsIATIM-[illegible]), ЦИАТИМ-221 (TsIATIM-221), and others). Positive results were also achieved by using MoS_2 as a protective agent against [illegible] corrosion, and by cold-rolling ribbed pipes from aluminum and te. [Abstracter's note: Complete translation.]

Card 1/1

84/61

S/065/60/000/007/005/008/XX
E194/E484

26.2192

AUTHORS: Sentyurikhina, L.N., Oparina, Ye.M., Rubtsova, Z.S. and Suvorovskaya, N.A.

TITLE: Solid Lubricant Coatings

PERIODICAL: Khimiya i tekhnologiya topliv i masel, 1960, No.7, pp 24-29

TEXT: Published work, mostly foreign on solid lubricants is briefly reviewed. The original experimental work described here was concerned with molybdenum disulphide. Solid lubricants have poor protective properties the lubricating film if once damaged may not be easily replaced and they do not extract heat Their service life may be increased by binding them to the metallic surface by appropriate treatment. Very finely divided powders are necessary to secure good adhesion to metals The surface to be treated must also be of good finish and the present tests were made with surface finishes classes 10 to 12, i.e. with average height of roughness of 0.05 to 0.1 microns The usual methods of depositing solid lubricants on metal surfaces are described. The choice of binder is discussed, the most heat resistant resins produced in the USSR being silicones and combinations of silicones with acrylic and

Card 1/3

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S/065/60/000/007/005/008/XX
E194/E484

Solid Lubricant Coatings

epoxide polymers. The hardening treatment used depended on the properties of the binder, the temperatures ranged from 150 to 350 C, depending on the resin used. The choice of solvent for deposition of resin and solid lubricant is important ethanol was used in the tests because it is particularly convenient for use with the molybdenum disulphide which was used Data on the permissible dilution of the resin with ethanol is given in Table 1 Tests were made with suspensions of molybdenum disulphide ranging in concentration from 6 to 37% and the relationship between film thickness and molybdenum disulphide concentration is given in Table 2. Uniform films could not be obtained with molybdenum disulphide concentration below 10%. The adhesion of the solid lubricant coatings to metal surfaces was assessed by adhesiometers of the Deryagin and Orlov systems by a press tool and in other ways However difficulty was experienced in making the assessment because the film could not be removed as a thin sheet Information about resistance of the coating to rubbing was obtained in an instrument in which a shaft rotating at constant speed is pressed against a sheet coated with solid lubricant As soon as the film of solid

Card 2/3

S/065/60/000/007/005/008/XX
E194/E484

Solid Lubricant Coatings

lubricant is worn off there is metal to metal contact and a lamp is lit. The time required to break down is a criterion of mechanical strength of film. Test results with molybdenum disulphide films ranging from 1 to 39 microns thick are given in Tables 3 and 4. Further results obtained in a Timken tester are given in Table 4. It is shown that the quality of the film depends on the nature of the binder, the method of deposition of the film, the conditions of hardening and the thickness of the film. There are 1 figure, 4 tables and 10 references: 4 Soviet (one of them probably translated from English), 4 English and 2 German.

ASSOCIATION: VNII NP

Card 3/3

S/661/61/000/000/041/[illegible]
D202/D301

AUTHORS: Oparina, Ye. N., Rubyanskaya, G. S. and Yermilov, N. S.

TITLE: Investigating thermal stability of polysiloxane fluids

SOURCE: Khimiya i prakticheskoye primeneniye kremneorganicheskikh soyedineniy; trudy konferentsii. no. 4: Doklady, diskussii, resheniye. II Vses. konfer. po khimii i prakt. prim. kremneorg. soyed., Len., 1958. Leningrad, Izd-vo AN SSSR, 1961, 181-184

TEXT: A discussion on a previous report (no. 2, p. 50, this publication) in which Ye. N. Oparina, A. K. Andrianov (Moscow), L. V. Gornets (Moscow), N. N. Sokolov (VEI, Moscow), I. F. Ponomarev, Politekhnicheskiy institut, Novocherkassk (Novocherkassk Polytechnic Institute) and I. A. Zubkov (Moscow) took part. The author defended her opinion that irradiation with ultrasonics has in general a favorable effect on the thermal stability of liquid organosilicon polymers. The opponents concluded that present methods for determining the stability of polysiloxanes ought to be revised and more suitably adapted for definite purposes.

Card 1/1

15 6400

25501 S/065/61/000/007/001/005
E030/E435

AUTHORS. Sentyurikhina, L.N., Malyshev, B.N., Oparina, Ye.M., Rubtsova, Z.S.

TITLE: Solid high temperature high vacuum greases

PERIODICAL Khimiya i tekhnologiya topliv i masel. 1961 No.7, pp.13-16

TEXT. An experimental study has provided the optimum method of applying molybdenum disulphide to metallic surfaces as a lubricant. The films are stable up to decomposition temperatures which depend on the nature and pressure of the gas as follows: inert gas, at atmospheric pressure, up to 1300°C; in air, at atmospheric pressure, 45°C; 800° at 10^{-4} mm Hg, 900° at 10^{-5} mm Hg, 1100° at 10^{-6} mm Hg. The purity of the MoS_2 used was 99.5%. The poor adhesion properties of MoS_2 were best overcome by washing the metal surfaces in alkali to remove oxide films, and then spraying on a solution of MoS_2. The nozzle to metal distance is fairly critical, the optimum being established at about 20 cm. Several types of solvent were tested: 1. those strongly adhering to metal (БМК-5 (BMK-5), Э-41 (E-41)) (nitrocellulose), 2. those with carbonaceous ash on heating (К-2-12-01, Э-116 (E116)).

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Solid high temperature ...

3. thermally stable producing delicate films (K-55, i.e. polymethylphenylsiloxane resin), 4. thermally stable, producing elastic films. All solvents except K 55 gave films stripping completely on heating to 900°C. K-55 gave films, satisfactory according to incision tests for strength. To harden the film after application, it should be heated gently to 600°C, maintained at that temperature for 20 min then heated to 850 to 900°C and maintained at that temperature for 15 min. Tests on a stainless steel rotating cylinder showed the optimum concentration of MoS_2 in the solvent to be 10%. At present such a suspension is manufactured under the name of [illegible] NP-209 (VNII NP-209). There are 2 tables and 5 references: 4 Soviet and 1 non Soviet.

ASSOCIATION VNII NP

Card 2/2

OPARINA, Ye.M.; TUBYANSKAYA, G.S.; KOBZOVA, R.I.

Polyorganosiloxanes as liquid base of high-temperature lubricating greases. Khim. i tekh. topl. i masel 9 no.1: 32-38 Ja '64. (MIRA 17:3)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut po pererabotke nefti i gazov i polucheniyu iskusstvennogo zhidkogo topliva.

ACCESSION NR: AP4009784 S/0065/64/000/001/0032/0038

AUTHOR: Oparina, Ye. M.; Tubyanskaya, G. S.; Kobzova, R. I.

TITLE: Polyorganosiloxanes--liquid base of high temperature greases.

SOURCE: Khimiya i tekhnologiya topliv i masel, no. 1, 1964, 32-38

TOPIC TAGS: polyorganosiloxane, high temperature grease, polymethylsiloxane, polymethylphenylsiloxane, polyethylsiloxane, polymethylchlorophenylsiloxane, silicone, volatility, lubricity, viscosity temperature function, antiwear property, thermal oxidation stability

ABSTRACT: The physical-chemical properties of polyorganosiloxane liquids were evaluated to determine their suitability as liquid bases for high temperature greases. For operations up to 200C polymethylsiloxanes (PMS-20, PMS-50, PMS-100, PMS-400) are preferable than polyethylsiloxane with respect to physical-chemical, thermooxidative, stability and anti-wear properties, and preferable to polymethylphenylsiloxane with respect to viscosity-temperature and anti-

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ACCESSION NR: AP4009784

wear properties. For greases to be used above 200C, polymethylphenyl, and polymethylchlorophenylsiloxanes are recommended. The thermal stability of the polyorganosiloxanes improves with an increase in number of phenyl groups. Thus polymethylsiloxane starts to decompose at 250C, while polymethylphenylsiloxane FM-1322/300 with a low phenyl content is stable for 520 hours, and PFMS-4 with a high phenyl content, is stable for 2600 hours. Above 350C none of these siloxanes are sufficiently stable for thermal oxidation. The lubricity of polyorganosiloxanes, especially the abrasion stability, is not particularly satisfactory. In this respect polymethyl- and polymethyl chlorophenyl siloxanes are better than polymethylphenylsiloxane. However none of these should be used under high speed or high load operations. "Determination of lubricity was conducted by V. A. Listov and co-workers."Orig. art. has: 3 figures and 3 tables.

ASSOCIATION: None

SUBMITTED: 00	DATE ACQ: 10Feb64	ENCL: 00
SUB CODE: FP	NR REF SOV: 004	OTHER: 010

Card 2/2

KOBZOVA, R.I., TUBYANSKAYA, G.S., GPARINA, Ye.M., LEVKINA, N.K.

Stabilizing polysiloxane using antioxidant additives.
Khim. i tekh. i topl. i masel 9 no.9:53-56 S '64.
(MIRA 17:12)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut po pererabotke nefti i gaza i polucheniyu iskusstvennogo zhidkogo topliva.

L 21032-66 EWP(e)/EWT(m)/EWP(j)/T WW/DJ/GS/RM/WH

ACCESSION NR: AT5020438 UR/0000/65/000/000/0134/0138

AUTHORS: Oparina, Ye. N.; Sentyurikhina, L. N.; Dmitriyeva, V. G.; Pisarevskaya, Ye. E.; Petrova, L. M.

28
20
B+1

TITLE: High temperature lubricants based on dyes

SOURCE: AN SSSR. Nauchnyy sovet po treniyu i smazkam. Teoriya smazochnogo deystviya i novyye materialy (Theory of lubricating action and new materials). Moscow, Izd-vo Nauka, 1965, 134-138

TOPIC TAGS: lubricant, dye based lubricant, lubricant additive/ TsIATIM 221s lubricant, PFMS 4 silicone fluid, ETs 3 centrifuge, FM1322/300 silicone fluid

ABSTRACT: Lubricants based on dyes which are stable up to 350C were investigated. Polymethylphenyl-siloxane liquids with different methyl and phenyl group ratios (E.N. Oparina i dr. Khimiya i tekhnologiya topliv i masel, 1961, No. 1) were used as the dispersion media. It was found from the volumetric mechanical properties that vat dyes blue "K," indigo, dioxyviolanthrone, and dimetoxyviolanthrone have weak thickening properties while the other dyes (pigment "SA" vat dyes blue "N," "O," and isoviolanthrone) form lubricants which are similar in mechanical properties and colloidal stability to silicone lubricants (TsIATIM-221s, for example). To

1/3

determine storage stability and high temperature stability, the lubricants were tested by the KSA method (350 gm load) and on heated centrifuge ETs-3 (at 150C for 5 hours) respectively. It was found that with PFMS-4 fluid the colloidal stability of good thickening dyes was better than that of less effective thickeners and comparable to TsIATIM-221s. Percent weight loss of lubricant based on different fluids (using pigment SA) was found to be 3.0, 4.2, 6.3 and 11.0% at 250C and 0, 17.1, 18.0 and 29.1% at 300C for PFMS-4, copolymer 2/300, copolymer 3, and FM1322/300 fluids respectively. It was also found that the plastic porperties, i.e., effective viscosity and strength of isoviolanthrone-based lubricants (after heat stabilization), were practically unchanged after 1000 hrs at 150C. Indanthrene and isoviolanthrone silicone lubricants were tested in ball bearings at high speeds (D_n = 300 000 mm rev/min) at 150C and 15000 kg/cm^2 and were found inferior to TsIATIM-221 lubricants. At lower speeds (to 10000 mm rev/min) and low loads the above lubricants operated longer than 1500 hours at 200C. Dyes can be used as thickeners in conjunction with graphite and molybdenum disulfide, giving up to 2500 hrs of service at 200C, 100 rpm, and 20000-25000 kg/cm^2 (lubricant NK-50 fails after 8-10 hrs under these conditions). At lesser speeds and loads service of 3000 hrs at 350C can be obtained. Orig. art. has: 4 tables.

ASSOCIATION: Nauchnyy sovet po treniyu i smazkam, AN SSSR (Scientific Committee on Friction and Lubrication, AN SSSR)

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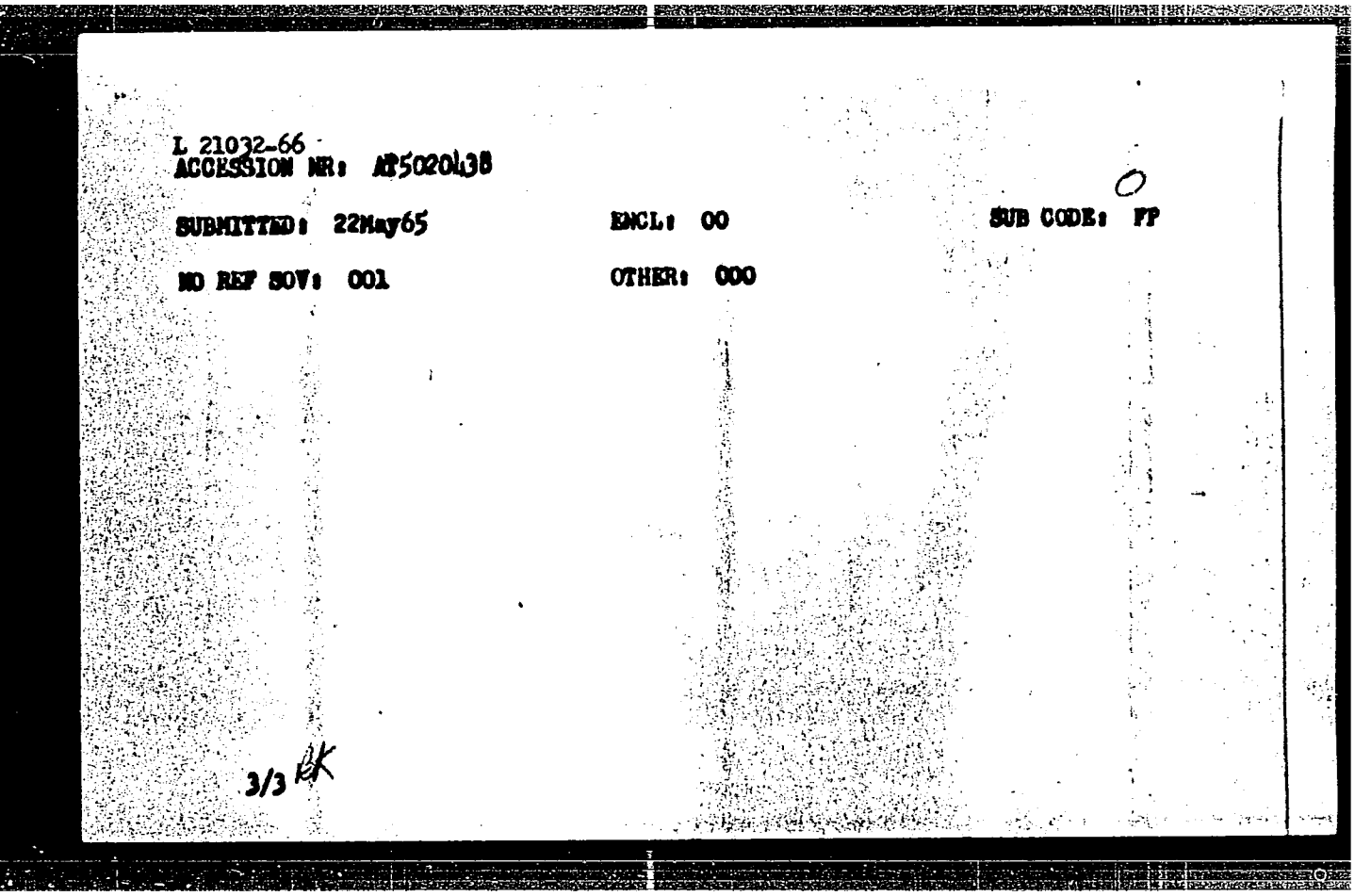


L 21032-66
ACCESSION NR: AP5020438

SUBMITTED: 22May65 ENCL: 00 SUB CODE: FP

NO REF SOV: 001 OTHER: 000

3/3 BK

L 44177-65 EPF(c)/EWT(m)/T Pr-4 DJ

ACCESSION NR: AP5011690 UR/0065/65/000/005/0043/0045

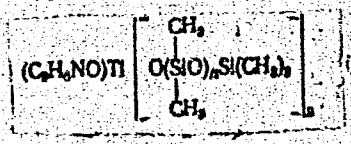
AUTHOR: Andrianov, K. A.; Lavygin, I. A.; Tubyanskaya, G. S.; Kobzova, R. I.; Oparina, Ye. M.

TITLE: New heat-resistant lubricating oils and additives

SOURCE: Khimiya i tekhnologiya topliv i masel, no. 5, 1965, 43-45

TOPIC TAGS: silicone, polydimethylsiloxane, additive, thermal oxidative stability, titanium/PMS 100, PMS 400

ABSTRACT: The effect of the presence of 8-hydroxyquinolyl-substituted titanium atoms in the backbone of polyorganosiloxanes on their thermal-oxidative stability has been studied to determine the suitability of such compounds as high-temperature lubricants. To this end, a number of oligomers of the general formula



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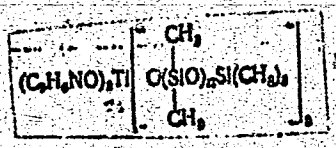
L 44177-65
ACCESSION NR: AP5011690

and various degrees of polymerization were prepared by the condensation of (8-hydroxyquinolyl)tris(butoxy)titanium with α-hydroxy-ω-(trimethylsiloxy)polydimethylsiloxanes. The new oligomers and the conventional polydimethylsiloxanes, PMS-100 and -400, were subjected to comparative friction tests and thermal-oxidative stability determinations. The criterion of thermal stability was the gelation time at 300C. The results, presented in graphic and tabular form, indicated that gelation time was dependent on the (8-hydroxyquinolyl)titanoxane group concentration and was maximum at 0.18—0.30% Ti in the oligomer. The new oligomers equaled the polydimethylsiloxanes in lubricating properties and exceeded them in thermal-oxidative stability. For example, at 0.2—0.3% Ti, this stability surpassed that of PMS-100 by a factor of 23. In addition, it was shown that both oligomers of branched structure (1) and oligomers of the linear structure



(2)

Card 2/3

L 44277-65 2.
ACCESSION NR: AP5011690

are also very effective inhibitors of thermal-oxidative degradation of polydimethylsiloxanes. Orig. art. has: 4 figures, 1 table, and 2 formulas. [SM]

ASSOCIATION: INEOS, VNII NP

SUBMITTED: 00 ENCL: 00 SUB CODE: FP

NO REF SOV: 001 OTHER: 000 ATD PRESS: 3241

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Card 3/3

L 2271-66 EWT(m)/EPF(c)/EWP(j)/T RM/DJ
ACCESSION NR: AP5022227 UR/0191/65/000/009/0035/0037
678.84:678.048.9

AUTHOR: Kobzova, R. I.; Levkina, N. K.; Kudryavtsev, A. S.; Savich, I. A.; Oparina, Ye. M.; Tubyanskaya, G. S.

TITLE: Effect of some complex compounds on the stability of polydimethylsiloxanes to thermal oxidation

SOURCE: Plasticheskiye massy, no. 9, 1965, 35-37

TOPIC TAGS: polydimethylsiloxane, silicone lubricant, antioxidant additive, chelate compound, Schiff base

ABSTRACT: The effect of certain complex compounds of copper, cobalt, nickel, lead, and iron with various Schiff bases on the stability of liquid polydimethylsiloxane polymer PMS-100 to thermal oxidation was investigated. All the compounds studied increased the stability of polydimethylsiloxane, the most effective being N,N'-bis(2-hydroxy-1-naphthylidene)-1,2-diaminoethane, which increased the stability by a factor of 9. The effectiveness of the complex compounds depends to a considerable extent on the nature of the metal and choice of the addend. The effect of metal is displayed most clearly in the case of N-(2-hydroxybenzylidene)-2-aminophenol, which forms a very effective stabilizing compound with

Card 1/2

L 2271-66
ACCESSION NR: AP5022227

copper only; the effect of the addend is most pronounced in the case of complexes containing nickel. It is concluded that the use of chelates as high-temperature antioxidants for silicone oils deserves further investigations. Orig. art. has: 2 tables.

ASSOCIATION: none

SUBMITTED: 00 ENCL: 00 SUB CODE: MT, GC

NO REF SOV: 004 OTHER: 001

Card 2/2

L 13200-66 EWT(m)/EWP(j)/T DJ/RM

ACC NR: AP6003434 (A) SOURCE CODE: UR/0065/66/000/001/0052/0054

AUTHOR: Kobzova, R. I.; Tubyanskaya, G. S.; Oparina, Ye. M.; Levkina, N. K.

ORG: VNII NP

TITLE: Stabilization of polyethylsiloxane fluids by additives

SOURCE: Khimiya i tekhnologiya topliv i masel, no. 1, 1966, 52-54

TOPIC TAGS: silicone lubricant, thermal stability, antioxidant additive

ABSTRACT: The effectiveness of antioxidant additives such as phenyl-1-naphthylamine, Ionol, or dilauryl selenide as oxidation inhibitors for the polyethylsiloxane fluid, lubricant 6 (TUYeU-118-55), has been studied for the purpose of prolonging service life and increasing service temperature of the lubricant. The criterion of thermal-oxidative stability of lubricant specimens with or without additives was gelation time at 200 and 250C. The best results were attained with dilauryl selenide; at 250C addition of 5% of this compound increases the thermal stability of the lubricant by a factor of 25. The effectiveness of the additives tested improves with increasing concentration (5% max) and drops with increasing temperature. In other tests it was found that the same additives do not produce the same effect in individual silicone fluids. For example, oxidation inhibitors of PMS-100 polymethylsiloxane fluid such as cyclopentadiurylcarbonylmanganese, selenophene derivatives, or ferrocene

UDC: 665.521.5:547'28

Card 1/2

L 13200-66

ACC NR: AP6003434

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are ineffective in lubricant 6. Four-ball apparatus tests showed that additives which improve the thermal-oxidative stability of lubricant 6 under static conditions also improve its performance in friction units. Orig. art. has: 3 tables. [BO]

SUB CODE: 11/ SUBM DATE: none/ ORIG REF: 007/ ATD PRESS: 4185

jw

Card 2/2

L 11718-66 EWT(m)/T DJ

ACC NR: AP6004284 (A) SOURCE CODE: UR/0117/66/000/001/0030/0031

AUTHORS: Oparina, Ye. M. (Candidate of technical sciences); Sentyurikhina, L. N. (Candidate of chemical sciences); Markov, V. A.; Rubtsova, Z. S.

ORG: none

TITLE: Dry lubricants with molybdenum disulfide, and the lowering of instrument wear

SOURCE: Mashinostroitel', no. 1, 1966, 30-31

TOPIC TAGS: lubricant, lubricant additive, lubricant component, high temperature lubricant, molybdenum disulfide / NP-229 lubricant

ABSTRACT: This is a comment on a paper previously published by M. S. Beletskiy, I. Ts. Raykhenshteyn, and O. K. Shatalova (Mashinostroitel' No. 7, 1965), in which those authors disputed the claim of Ya. K. Terent'yev that the solid lubricant (developed by him and containing MoS_2) had any wear-resistant properties. The present authors point out that by mixing MoS_2 with a suitable lacquer or resin it is possible to create a thin protective layer on the surface of cutting tools. Attention is drawn to several such lubricants developed by the All-Union Scientific Research Institute for Reprocessing of Petroleum (Vsesoyuznyy nauchno-issledovatel'skiy institut po pererabotke nefti) (in particular, lubricant VNII

UDC: 621.892:661.877

Card 1/2

L 20613-66 EWT(m)/T DJ

ACC NR: AP6010830 (A) SOURCE CODE: UR/0065/66/000/004/0047/0048

52
B

AUTHOR: Kobzova, R. I.; Tubyanskaya, G. S.; Oparina, Ye. M.; Zaytsev, V. A.; Yegorova, A. A.

ORG: VNIINP

TITLE: TsTM: "a new effective stabilizer" for silicone lubricants"

SOURCE: Khimiya i tekhnologiya topliv i masel, no. 4, 1966, 47-48

TOPIC TAGS: lubricant, lubricant additive, silicone lubricant, antioxidant additive

ABSTRACT: A study has been made of the antioxidant effectiveness of cyclopentadienyltricarbonylmanganese (designated TsTM in the source) in silicone lubricants. TsTM was found to surpass existing silicone antioxidants in stabilizing effectiveness and solubility. It is noted that prolonged service of silicone lubricants at 150—200C and above is normally rendered impossible by oxidation and polymerization and that existing antioxidant additives are insufficiently effective. The silicone lubricant used in this study was PMS-100 polydimethylsiloxane fluid (MRTU-6 No. YeU-230-61 specifications). The criterion of antioxidation effectiveness was the gelation time at 250—350C. TsTM was found to be a highly effective stabilizer of the PMS-100 fluid. At 250C the curve TsTM concentration versus effectiveness went through a maximum at 0.5%; at this maximum the gelation time was increased by a factor of 250. The optimum TsTM concentration was dependent on temperature. TsTM

Card 1/2 UDC: 665.521.5:547'28

L 20613-66
ACC NR: AP6010830

was highly soluble (up to 2% at minus 60C) in the PMS-100 fluid—an important advantage. A disadvantage was the unstability of TsTM solutions in PMS-100 on storage in the light; however, in the dark the solutions remained stable and effective for 1 year. Orig. art. has: 1 figure and 1 table. [SM]

SUB CODE: 11/ SUBM DATE: none/ ORIG REF: 006/ OTH REF: 001/ ATD PRESS: 4224

Card 2/2 pdK

L 38217-66 EWT(m)/EWP(j)/T DJ/RM

ACC NR: AP6025463 SOURCE CODE: UR/0080/66/039/007/1638/1641

AUTHOR: Kobzova, R. I.; Oparina, Ye. M.; Levkina, L. K.; Magdesiyeva, N. N.; Yur'yev, Yu. K.

ORG: Moscow State University im. M. V. Lomonosov (Moskovskiy gosudarstvennyy universitet); VNII NP

TITLE: β-Diketones and azomethines of the selenophene series: oxidation inhibitors for silicone fluids

SOURCE: Zhurnal prikladnoy khimii, v. 39, no. 7, 1638-1641

TOPIC TAGS: antioxidant additive, silicone lubricant, selenophene, selenium compound

ABSTRACT: A study has shown β-diketone and azomethine derivatives of selenophene to be effective thermal-oxidation inhibitors for silicone fluids used as lubricating oils and as dispersion media for lubricating greases. Selenophene derivatives were of interest because compounds containing a selenium atom in a ring are more thermally stable than the conventional antioxidant dilauryl selenide. Nine compounds were tested for antioxidant effectiveness (criterion, gelation time) in various silicone fluids at 300C. For polymethyl(chlorophenyl)siloxane (PMKhFS), the most effective antioxidant was (2-selenophenecarbonyl)acetone, and for polymethylsiloxane (PMS-100) and polymethylphenylsiloxane (FM-1322/300), the most effective were N-salicylidene-

Card 1/2 UDC: 546.3-19:66.022.37

L 38217-66

ACC NR: AP6025463 /

(2-selenophene-yl)amine and dipicolinoylbis(2-acetylselenophene). With increasing concentration of the antioxidants (0.5 to 5%), their effectiveness increased. Orig. art. has: 1 table. [SM]

SUB CODE: 11/ SUBM DATE: 21Jan65/ ORIG REF: 007/ OTH REF: 001/ ATD PRESS: 5044

Card 2/2

L 40353-66 EWP(j)/EWT(m)/T IJP(c) RM/WW/DJ
ACC NR: AP6027279 (A) SOURCE CODE: UR/0191/66/000/008/0031/0032

AUTHOR: Kobzova, R. I.; Oparina, Ye. M.; Levkina, N. K.

ORG: none

TITLE: Stabilization of polysiloxanes by cerium complexes

SOURCE: Plasticheskiye massy, no. 8, 1966, 31-32

TOPIC TAGS: ~~silicone~~, antioxidant additive, cerium compound, POLYSILOXANE, OXIDATION INHIBITOR, THERMAL STABILITY

ABSTRACT: A new, highly effective cerium-complex thermal-oxidation inhibitor has been developed for polysiloxanes. The inhibitor increased the thermal stability (criterion, gelation time) of PMS-100 polydimethylsiloxane fluid by a factor of 250 at 250C and of almost 200 at 300C. The additive was soluble in the polysiloxane and did not precipitate on cooling to minus 60C. The inhibitor was a mixture of cerium p-toluate and N,N'-disalicylidene-1,2-propanediamine (forming a complex) taken in 1/18 molar ratio. It was used in doses equivalent to 0.025, 0.05, and 0.075% Ce in the silicone fluid. To ensure solubility, the silicone fluid was added to a toluene solution of the inhibitor, after which the toluene was stripped off to 275C with sparging of air. It is suggested that under these conditions the inhibitor molecule becomes part of the silicone backbone just as was the case with previously studied titanium chelates. Orig. art. has: 3 tables. [SM]

SUB CODE: 11/ SUBM DATE: none/ ORIG REF: 004/ OTH REF: 006/ ATD PRESS: 5152
Card 1/1 UDC: 678.84:678.048.9:546.655-388

L 21032-66 EWP(e)/EWT(m)/EWP(j)/T WW/DJ/GS/RM/WH UR/0000/65/000/000/0134/0138

ACCESSION NR: AT5020438

AUTHORS: Oparina, Ye. M.; Sentyurikhina, L. N.; Dmitriyeva, V. O.; Pisarevskaya, Ye. B.; Petrova, L. N.

TITLE: High temperature lubricants based on dyes

SOURCE: AN SSSR. Nauchnyy sovet po treniyu i smazkam. Teoriya smazochnogo deystviya i novyye materialy (Theory of lubricating action and new materials). Moscow, Izd-vo Nauka, 1965, 134-138

TOPIC TAGS: lubricant, dye based lubricant, lubricant additive/ TsIATIM 221s lubricant, PFMS 4 silicone fluid, ETs 3 centrifuge, FM1322/300 silicone fluid

ABSTRACT: Lubricants based on dyes which are stable up to 350C were investigated. Polymethylphenyl-siloxane liquids with different methyl and phenyl group ratios (E.M. Oparina i dr. Khimiya i tekhnologiya topliv i masel, 1961, No. 1) were used as the dispersion media. It was found from the volumetric mechanical properties that vat dyes blue "K," indigo, dioxyviolanthrone, and dimetoxyviolanthrone have weak thickening properties while the other dyes (pigment "SA" vat dyes blue "N," "O," and isoviolanthrone) form lubricants which are similar in mechanical properties and colloidal stability to silicone lubricants (TsIATIM-221s, for example). To

determine storage stability and high temperature stability, the lubricants were tested by the KSA method (350 gm load) and on heated centrifuge ETs-3 (at 150C for 5 hours) respectively. It was found that with PFMS-4 fluid the colloidal stability of good thickening dyes was better than that of less effective thickeners and comparable to TsIATIM-221s. Percent weight loss of lubricant based on different fluids (using pigment SA) was found to be 3.0, 4.2, 6.3 and 11.0% at 250C and 0, 17.1, 18.0 and 29.1% at 300C for PFMS-4, copolymer 2/300, copolymer 3, and FM1322/300 fluids respectively. It was also found that the plastic properties, i.e., effective viscosity and strength of isoviolanthrone-based lubricants (after heat stabilization), were practically unchanged after 1000 hrs at 150C. Indanthrene and isoviolanthrone silicone lubricants were tested in ball bearings at high speeds (D_n = 300 000 mm rev/min) at 150C and 15000 kg/cm^2 and were found inferior to TsIATIM-221 lubricants. At lower speeds (to 10000 mm rev/min) and low loads the above lubricants operated longer than 1500 hours at 200C. Dyes can be used as thickeners in conjunction with graphite and molybdenum disulfide, giving up to 2500 hrs of service at 200C, 100 rpm, and 20000-25000 kg/cm^2 (lubricant NK-50 fails after 8-10 hrs under these conditions). At lesser speeds and loads service of 3000 hrs at 350C can be obtained. Orig. art. has: 4 tables.

ASSOCIATION: Nauchnyy sovet po treniyu i smazkam, AN SSSR (Scientific Committee on Friction and Lubrication, AN SSSR)

2/3

ACC NR: AP6035579 SOURCE CODE: UR/0065/66/000/011/0050/0051

AUTHORS: Kobzova, R. I.; Oparina, Ye. M.; Tubyanskaya, G. S.; Sentyurikhina, L. N.

ORG: VNII NP

TITLE: Molybdenum disulfide and graphite--fillers for polyorganosiloxanes

SOURCE: Khimiya i tekhnologiya topliv i masel, no. 11, 1966, 50-51

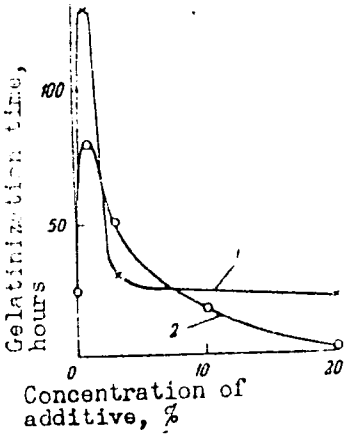
TOPIC TAGS: molybdenum disulfide, organosilicon compound, polymethylsiloxane, polymethylphenylsiloxane, graphite / PMS-100 polymethylsiloxane, FM-1322-300 polymethylphenylsiloxane, PFMS-4 polymethylphenylsiloxane

ABSTRACT: The effects of adding 1 to 20% of molybdenum disulfide upon the thermooxidative stability of organosilicon liquids were investigated. The organosilicon compounds selected for the study were polymethylsiloxane PMS-100, polymethylphenylsiloxane with a small content of phenyl substituent FM-1322/300, and polymethylphenylsiloxane with a high content of phenyl groups PFMS-4. The properties of these materials have been described earlier by Ye. M. Oparina, G. S. Tubyanskaya, and R. I. Kobzova (Khim. i tekhnol. topliv i masel, No. 1, 1964). The gelatinization or solidification rate upon heating in open beakers and the loss of weight prior to gelatinization served as indicators of thermooxidative stability. Heating was conducted at 150, 200, and 250C. At concentrations up to 1% the additives enhanced the thermal

Card 1/2 UDC: 621.892.7:66.092

ACC NR: AP6035579

Fig. 1. Effect of the molybdenum disulfide and graphite concentrations upon the thermooxidative stability of PMS-100 at 250C: 1 - graphite; 2 - MoS_2



stability of these compounds; above that concentration, they rapidly accelerated the oxidation and depolymerization (see Fig. 1). Orig. art. has: 2 tables and 1 figure.

SUB CODE: 07/ SUBM DATE: none/ ORIG REF: 005/ OTH REF: 001

Card 2/2

ACC NR: AP7002727 SOURCE CODE: UR/0065/67/000/001/0023/0026

AUTHOR: Sentyurikhina, L. N.; Tropkina, G. N.; Oparina, Ye. M.; Yevtyukhina, K. M.; Vladimirova, S. L.

ORG: VNII NP

TITLE: Pastes and suspensions of molybdenum disulfide in various dispersion media

SOURCE: Khimiya i tekhnologiya topliv i masel, no. 1, 1967, 23-26

TOPIC TAGS: lubricant, solid lubricant, lubricant filler additive, silicone lubricant, molybdenum disulfide, grease

ABSTRACT: Pastes and suspensions of MoS_2 in oils or synthetic dispersion media (e.g., silicones) are manufactured in various concentrations: pastes which usually contain over 50% MoS_2 and suspensions; highly concentrated (50—20%); medium concentrated (20—1%) and low concentration suspensions with MoS_2 content below 1%. The study reported was mainly devoted to the investigation of the lubricating properties of high and medium concentration suspensions and pastes, as little attention has been given to their study in spite of their wide-spread use. Rheological properties (the so-called strength limit), colloidal stability, antiwear effect, coefficient of friction and the longevity of films were determined. It was found that pastes and suspensions, which can be prepared with MoS_2 and a surfactant in a nonstructured or structured modification (the

Card 1/2 UDC: 621.893

latter having a three-dimensional solid phase network structure), do not differ significantly in their coefficients of friction and longevity of films. (Structuring is achieved by introducing a surfactant, i.e., a soap, usually lithium stearate on heating, when soaps swell in the ambient oil and produce the three-dimensional network). The high strength limit, especially in structured suspensions, is detrimental for the antiwear effect because of a decrease in the mobility of the lubricant. The colloidal stability determined by centrifuging increases with the concentration of MoS_2 and the viscosity of the system. The structural activity of soaps is stronger in low concentration suspensions than in highly concentrated ones. The addition of MoS_2 increases the antiwear effect of lubricating oils, e.g., the introduction of this solid lubricant into TsIATIM-221 grease increases the longevity of its films by 10—12 times under a 8600 kg/cm^2 load. Structured systems with a low content of MoS_2, such as VNII NP-242, VNII NP-220 and nonstructured high MoS_2-content pastes VNII NP-225 and VNII NP-232 are widely used at the present time. Lubricants with low MoS_2 content are usually applied in rolling friction joints; lubricants with high MoS_2 content are used in gliding friction and in threaded joints. Orig. art. has: 3 tables and 4 figures.

SUB CODE: 21/ SUBM DATE: none/ ORIG REF: 009/ OTH REF: 003/ ATD PRESS: 5111

OPAKINA, Z.A., aspirantka

Degree of absorption of sulfuric acid by bur and wool during wet carbonization. Tekst. prom. 25 no.12:59-62 D '65. (MIRA 19:1)

1. Nauchno-issledovatel'skiy tekhnokhimicheskiy institut bytovogo obsluzhivaniya.

OPARKINA, A.V. (Moskva)

Nystatin. Med. sestra 19 no.12:39-40 D '60. (MIRA 13:12)
(MYCOSTATIN)

OPARKINA, Yelizaveta Aleksandrovna; ZHELEZNOVA, L.M., red.; SHADRINA, N.D., tekhn. red.

[Seventh Congress of Soviet Trade Unions] VII s"ezd sovetskikh profsoiuzov. [Moskva] Izd-vo VTsSPS Profizdat, 1958. 69 p. (MIRA 11:7)
(Trade unions--Congresses)

OPARYSHEVA, Ye. F.

Mcb

Enzyme changes in bakers' yeasts in drying and long storage. N. I. Proskuryakov and E. F. Oparysheva (M. V. Lomonosov State Univ., Moscow). *Mikrobiologiya* 25, 600-6(1956).—Activity losses in dried, stored yeasts were assayed in terms of enzyme activities (dehydrase, catalase, peroxidase, invertase, carboxylase, and proteases). Enzyme activities increased on drying; presumably the retarding factor in subsequent yeast activity is decreased permeability of yeast-cell walls, resulting in slower release of enzymes to the medium. In long storage, enzyme activities fall off; in 5 months, in yeast dried to 13.5, 11.5, or 8.3% H_2O, the loss was small for catalase and serious for dehydrase (especially at 13.5% H_2O). Proteolytic activity did not lose all of its initial rise. Julian F. Smith

SHORIN, V.A.; YUDINTSEV, S.D.; KUNRAT, I.A.; GOL'DBERG, L.Ye.; PEVZNER, M.S.; BRAZHNIKOVA, M.G.; LOMAKINA, N.N.; OPARYSHEVA, Ye.F.

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1. Institut po izuskaniyu novykh antibiotikov AMN SSSR.
(ANTIBIOTICS,
actinoidin, pharmacol. (Rus))

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Formation of additional spots in the paper chromatography of antibiotics. Antibiotiki 6 no.7:660-666 Jl '61. (MIRA 15:6)

1. Institut khimii prirodnykh soyedineniy AN SSSR i Vsesoyuznyy nauchno-issledovatel'skiy institut antibiotikov.
(ANTIBIOTICS)
(PAPER CHROMATOGRAPHY)

MAMIOFF, S.M. [deceased]; OPARYSHEVA, Ye.F.; SEFBENIK, M.D.; NAGORNAYA, T.N.; PREOBRAZHENSKAYA, Ye.V.

Isolation, chemical purification and properties of florimycin (viomycin). Antibiotiki 8 no.10:895-900 O '63. (MIRA 17:10

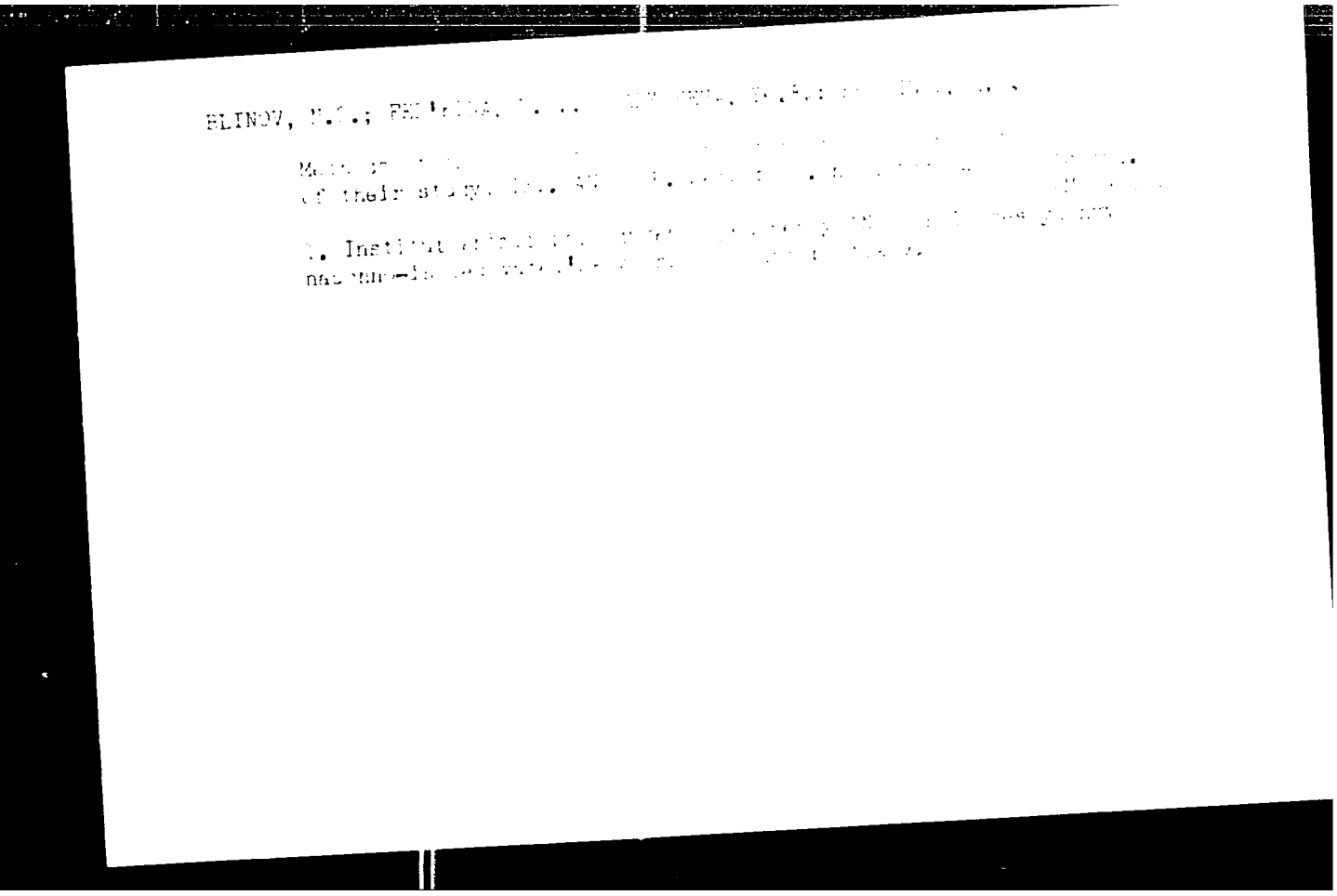
1. Vsesoyuznyy nauchno-issledovatel'skiy institut antibiotikov.

BLINOV, N. O.; OPARYSHEVA, Ye. F.; KHOKHLOVA, Yu. M.; YAKUBOV, G. Z.; PUCHNINA, A. V.; FEDKINA, N. G.; KHRYASHCHEVA, K. M.; KHOKHLOV, A. S.

"Classification of antibiotics according to 'chromatographic spectra'."

report submitted for Antibiotics Cong, Prague, 15-1, Jun 64.

Inst for Chemistry of Natural Compounds, Inst of Microbiology, AS USSR, All-Union Res Inst for Antibiotics, Msocow.



BLINOV, M.I.; [illegible]

[illegible]

[illegible]

IWANOWSKA, W.; OPASKA-BURNICKA, A.

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1. Astronomical Observatory, N.Copernicus University, Torun, and Astrophysics Laboratory, Torun, Astronomical Institute, Polish Academy of Sciences. Presented by W.Iwanowska.

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SO: Monthly List of East European Accessions, (EEAL), LC, Vol. 3, No. 12, Dec. 1954, Uncl.

[redacted]

[redacted]

[redacted]

[redacted]

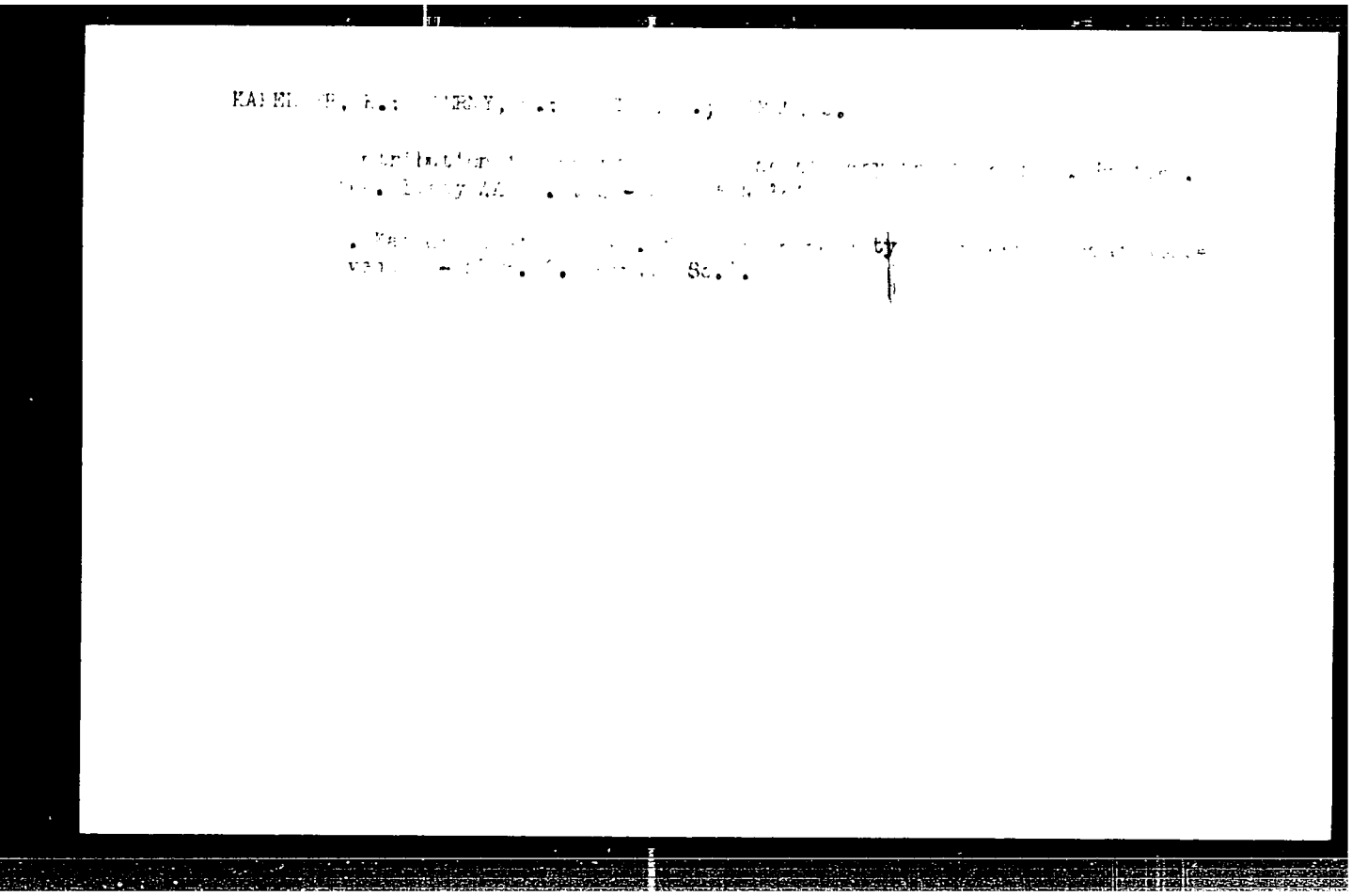
HANASZ-JARZYNSKA, Teresa; OPATOWICZ-CZAPLINSKA, Zofia

A case of circumscribed sclerema. Pediat. pol. 37 no.8:859-862 Ag '62.

1. Z II Kliniki Chorob Dzieci AM w Poznaniu Kierownik: prof. dr med. O. Szczepski.

(SCLERODERMA)

[redacted]



GONCERZEWICZ, Maria; GRATOWICZ-CZAPLINSKA, Zofia

Calcium metabolism study in a case of dysostosis [illegible]
Pediat. Pol. 40 no.7:731-733 [illegible]

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"Defects in Newly Installed Electric Power Equipment." p. 248, Praha, Vol. 3, No. 7, July 1953.

SO: East European Accessions List, Vol. 3, No. 9, September 1954, Lib. of Congress

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SO: Monthly List of the East European Accession, (EEAL), LC. Vol. 4, no. 10, Oct. 1955. Uncl.

OPATRIL, F.

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P. 523. (ELEKTROTECHNIKA.) (Praha, Czechoslavakia) Vol. 7, No. 10, Oct. 19[illegible]

SO: Monthly Index of East European Accession (EEAI) LC. Vol. 7, No. [illegible], May 19[illegible]

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P. 269 (Elektrotechnik) Vol. 12, No. 9, Aug. 1957, Czechoslovakia

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

Ch, All.

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p. 212 (Elektrotechnik, Vol. 12, no. [illegible], Oct. [illegible], Praha, Czechoslovakia

SO: [illegible] (USSR) IC, Vol. 5, No. 1, Jan. 1[illegible]

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Prague, Czechoslovakia

SO: Monthly Index of East European Accessions (EEAI) LC. Vol. 7, no. 4, April 1958

DIATKO, Jiri, Ing.

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1. Vitkovicke zelezarny Klementa Gottwalda National Enterprise, Branch Brno.

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1. Institute of Experimental Botany, Czechoslovak Academy of Sciences, Prague 6 - Dejvice, Na ovicisti 2.

BENE, Karel; OVČINA, Jana

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1. Institute of Experimental Botany, Czechoslovak Academy of Sciences, Praha - Dejvice, Na cvičišti 7.

SEIDLOVA, Frideta; HORAVKA, Dorivoj; CHATRNA, Dana; PRECHUP, Jan

Changes in the anatomical structure of the shoot apex of Senecio vulgaris L. during ontogenis in relation to the formation of leaves and inflorescence. Biologia plantarum 6 no. 3:226-231 '64.

1. Department of Plant Physiology, Institute of Experimental Botany, Czechoslovak Academy of Sciences, Prague 6 - Dejvice, Na cvicisti 2.

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1. Institut biologii ChSAN, biologiya tkaney, Praga.
(WOUNDS AND INJURIES, experimental,
healing, determ., imprint method)

OPATRNA-Fiserova, Jana

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OPATRNY, E.

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CASOPIS; ODDIL PRIRODOVEDNY. Praha, Czechoslovakia. Vol. 127, no. 2, 1958.

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OPATRNY, E.;CLIVA, C.

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CASOPIS; ODDIL PRIRODOVEDNY. Praha, Czechoslovakia. Vol. 127, no. 2, 1958.

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Uncl.

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(PEDIATRICS,
in Czech., role in organiz. of pub. health district system)
(PUBLIC HEALTH,
in Czech., role of pediatrics in district system)

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1. Statni lazne Zeleznice; Ustav pro leceni perinatalnich encefalopatii.
(CEREBRAL PALSY, therapy
methods & results (Cz))

OPATRNY, Evzen

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1. Detske odd. OUNZ v Jicine, prednosta MUDr. J.Rejlek.
(ERYTHEMA in inf & child)

OPATRNY, J.

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p. 254 (Automobil) Vol. 1, No. 8, Aug. 1957, Czechoslovakia

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

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1. Klinika chorob vnitrnich lekarske fakulty Karlovy University v Plzni (prednosta prof. dr. K. Bobek); Ustredni rentgenove odd. fakultni nemocnice v Plzni (vedouci MUDr. Z. Chudacek, CSc.) a I. chirurgicka klinika lekarske fakulty Karlovy University v Plzni (prednosta doc. dr. J. Spinka).

OPATRNY, K. - Normalisace - Vol. 4, no. 2, Feb. 1955.

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SO: Monthly List of East European Accessions, (EEAL), LC. Vol. 4, No. 9, Sept. 1955
Uncl.

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1. Iz terapevticheskoy kliniki (zav. - prof. K. Bobek) meditsinskogo fakul'teta Karlova universiteta i terapevticheskogo otdeleniya rayonnoy bol'nitsy (zav. - doktor TSvechke) v g. Pil'zene.

(ALDOSTERONE,
aldosteronism, primary, diag. & surg. (Rus))

CANDOVA, Jirina

BOBEK - continued CZECHOSLOVAKIA

MD

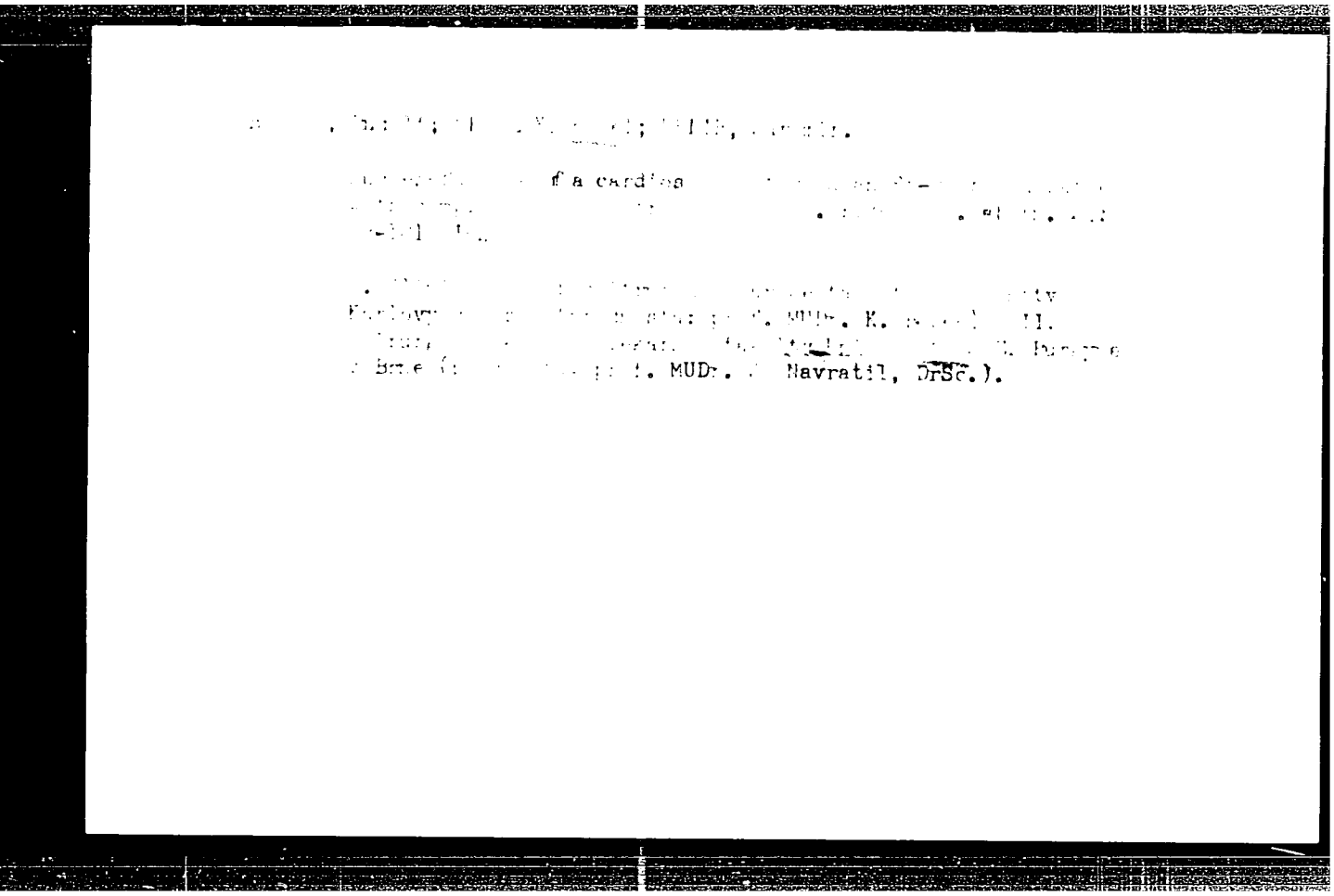
Same as above

Prague, Prakticky Lekar, No. 19, 1962, pp 817-820,820-826

"Contribution to Diagnostics of Benign Endocrinal Tumors", Part I and II.

OPATRNY, Karel, MD, same
RACEK, Frantisek, MD, same

2/3



OPATRNY, Karel; BARCAL, Rudolf

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OPATSKIY, L. V. 9068

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XB 9068

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1. Chlen-korrespondent AN Ukrainskoy SSR (for Feygin).
(Food industry)

FEYGIN, Ya.G., doktor ekon.nauk; VILENSKIY, M.A., kand.ekon.nauk; OMAROVSKIY, A.G., kand.ekon.nauk; LIVSHITS, R.S., doktor ekon.nauk; CHUGUNOV, B.I., kand.ekon.nauk; SHOKIN, N.A., kand.ekon.nauk; IOFFE, Ya.A.; VARANKIN, V.V., kand.ekon.nauk; ROZENFEL'D, Sh.L., kand.ekon.nauk; KORNEYEV, A.M., doktor ekon.nauk; OPATSKIY, L.V., doktor ekon.nauk; VASIL'YEV, N.V., doktor ekon.nauk; RUDENKO, N.A., kand.ekon.nauk; BYSTROZOROV, A.S., kand.geogr.nauk; POPOVA, Ye.I., kand.ekon.nauk; KRUTIKOV, I.P., kand.geogr.nauk; BAKOVETSKAYA, V.S., red.izd-va; SHEVCHENKO, G.N., tekhn.red.

[Special features and factors in the distribution of branches of the national economy of the U.S.S.R.] Osobennosti i faktory razmeshcheniia otraslei narodnogo khoziaistva SSSR. Moskva, 1960. 692 p. (MIRA 14:3)

1. Akademiya nauk SSSR. Institut ekonomiki.
(Economic zoning)

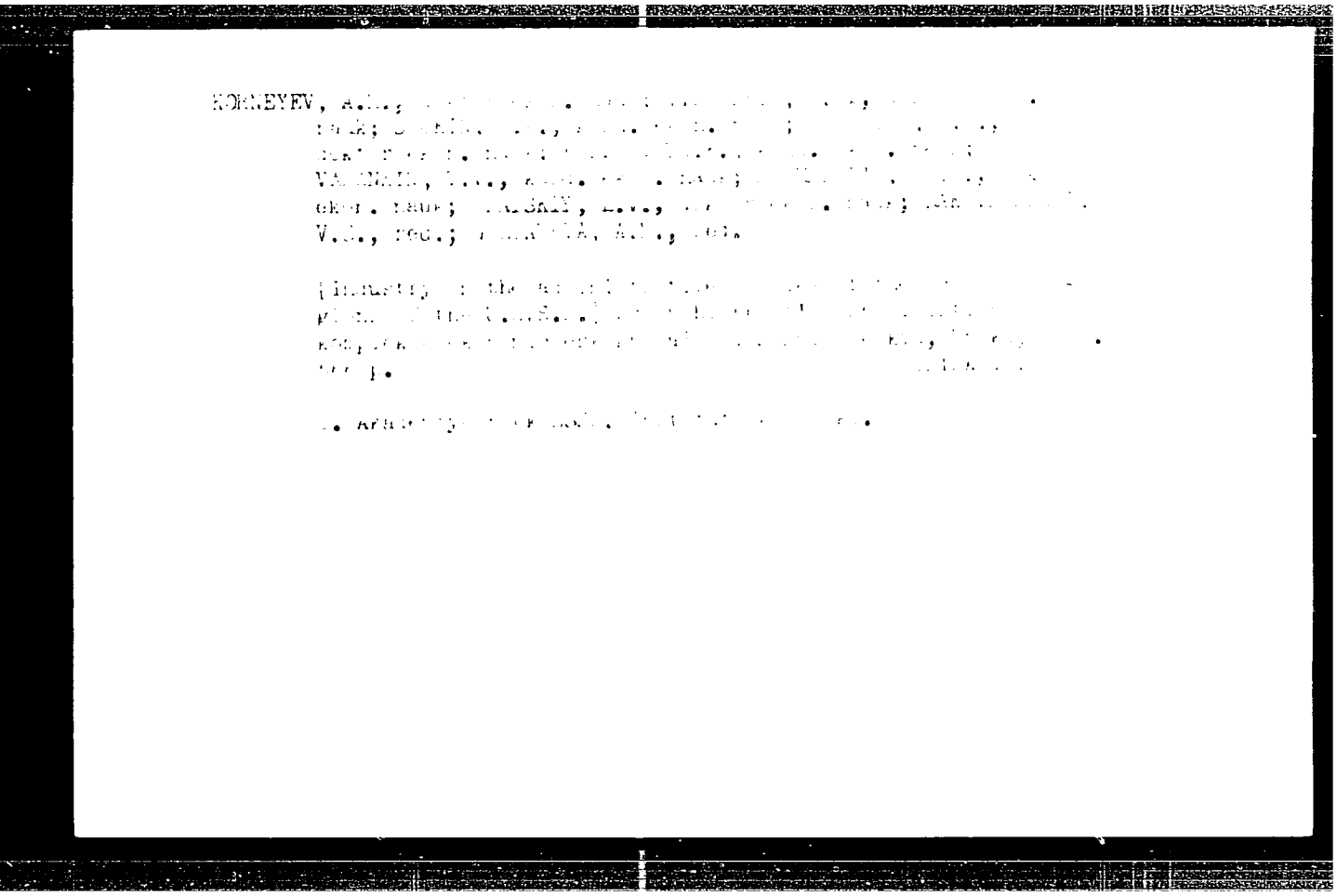
OPATSKIY, L.V., red.; GUSEYNOV, G.T., akad.,red.; NADIROV,A.A.,kand. geogr.nauk,red.

[Materials of the scientific session of the Academy of Sciences of the Azerbaijan S.S.R. dedicated to the future development and distribution of the food industry] Materialy nauchnoi sessii, posviashchennoi perspektivnomu razvitiiu i razmeshcheniiu pishchevoi promyshlennosti (28-30 noiabria 1961 g.) (MIRA 17:7)

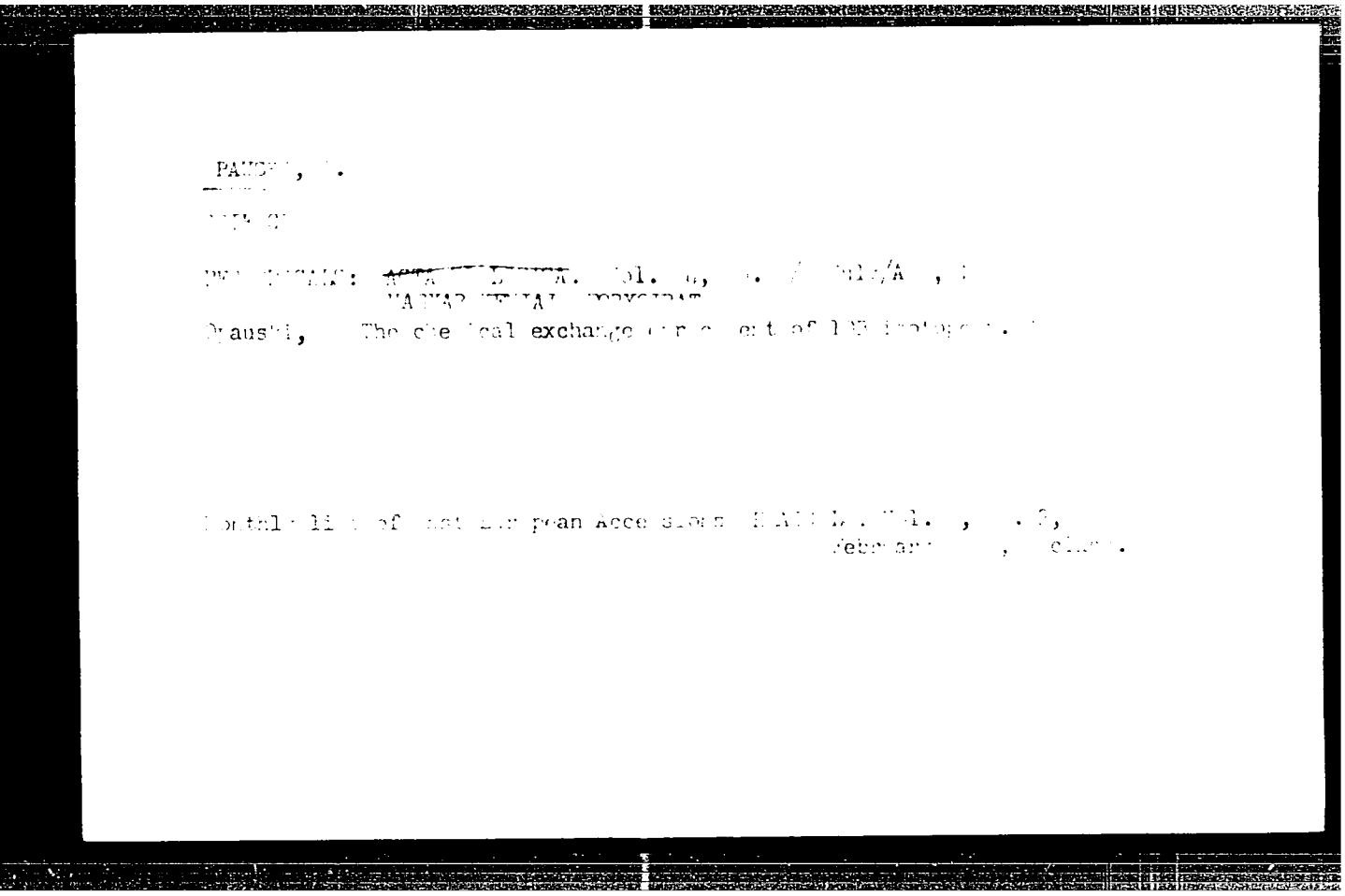
1. Akademiya nauk Azerbaidzhanskoy SSR, Baku. Institut ekonomiki. 2. Sekretar' otdeleniya obshchestvennykh nauk AN Azerb.SSR (for Guseynov). 3. Zaveduyushchiy otdelom Razmeshcheniya sotsialisticheskogo proizvodstva Instituta ekonomiki AN Azerb.SSR (for Nadirov).

OPATSKIY, L.

Important condition for improving the living standards of the Soviet people. Vop. ekon. no.11:56-65 N '62. (MIRA 15:11)
(Food industry)



KORNEYEV, A.



KISS, Istvan; OPAUSZKY, Istvan; MATUS, Lajos; TORKO, Janos

On the separation of boron isotopes. Koz fiz kozl MTA 7 no.6:391-398 '59. (EEAI 9:8)

1. Magkemiai Laboratorium I., Kozponti Fizikai Kutato Intezet, Magyar Tudomanyos Akademia.
(Boron) (Isotopes)

S/089/61/010/001/[illegible]
B006/B067

21,3000
11.2221

AUTHORS: Kishsh, I., Opalski, I., Matush, L.

TITLE: Data on the Separation of Boron Isotopes in the Form of Volatile Compounds

PERIODICAL: Atomnaya energiya, 1960, Vol. 10, No. 1, pp. [illegible]

TEXT: Besides many other possibilities of separating stable [illegible] isotopes there is a method that takes advantage of the fact that [illegible] compounds containing heavy isotopes are more volatile than similar compounds containing light isotopes. There is no universal theory available for this phenomenon. Such a theory still requires a great amount of experimental material. This "Letter to the Editor" presents a comparison of the practical effectiveness of various oxygen-containing [illegible] compounds which are used for isotope enrichment, and deals [illegible] difference in character and degree of volatility of boron [illegible] pounds. The following systems have been studied: anisole - BF_3, [illegible] ether - BF_3, acetic acid - BF_3, ethyl acetate - BF_3, and triethyl [illegible]

Card 1/4

Data on the Separation of Boron Isotopes in the Form of Volatile Compounds

S/089/60/[illegible]
B006/B063

The experiments were partly made at 20°C by the counterflow method (liquid complex - BF_3-gas) and partly by a method described in Ref. 4. The isotopic composition of the fraction obtained was determined by the method of neutron absorption. Experimental equipment and technique are described in Ref. 6. Results are given in Table 1. Enrichment was determined from the formula:

$A = (B^{11}/B^{10})_{\text{in the column head}}/(B^{11}/B^{10})_{\text{in the column vat}}$

Table 1:

Compound	t°C	A
$C_6H_5OCH_3.BF_3$	20	2.0
$(C_2H_5)\ O.BF_3$	60	2.4
$2H_2O.BF_3$	80	1.9
$CH_3OH\cdot BF_3$	92	1.7
$CH_3COOH\cdot BF_3$	96	1.9

Table 2:

Compound	Pressure, mm Hg	t°C	A
$B(OCH_3)_3$	740	56	1.0725
$B(OC_2H_5)_3$	740	56	1.0420
$B(OC_4H_9)_3$	20	128	1.0170

Card 2/4

S/089/60/010/001/013/020
B006/B063

Tab. 3

Комплексное соединение Compound	Коэффициент разделения A
$(CH_3)_2O \cdot BF_3$	1,025
$(C_2H_5)_2O \cdot BF_3$	1,027
$C_6H_5OH \cdot BF_3$	1,027
$C_6H_5OCH_3 \cdot BF_3$	1,030
$(C_4H_9)_2S \cdot BF_3$	1,033
$(CH_3)_2S \cdot BF_3$	1,036
$(C_2H_5)_2S \cdot BF_3$	~1,040

Card 4/4

KISHSH, Ishtvan; OPAUSKI, Ishtvan; MATUSH, Layosh

Research on the separation of boron isotopes. Rocz chemii 34 no.2: 385-389 '60. (EEAI 10:1)

1. TSentral'nyy nauchno-issledovatel'skiy institut fiziki Vengerskoy Akademii naui, Budapest.
(Boron) (Isotope separation)

KISS, I., MATUS, L., and OPAUSKY, I.

"On the relation between isotope effects in vapor pressure and molecular structure."

CHEMISTRY (PHYSICAL), SOCIETY OF (French) - 12th Annual Meeting - Paris, France, 4-8 Jun 62

Central Institute of Physics Research, Budapest

OPAUSZKY, I.; ZMBOV, K.F.

The use of graphite-coated tungsten filaments for isotopic analysis of uranium by a mass spectrometer. Bul Inst Nucl 14 no.1:17-20 Ja '63.

1. Department of Physical Chemistry of the Boris Kidric Institute of Nuclear Sciences. 2. Permanent address: Central Research Institute of Physics, Budapest, Hungary (for Opauszky).

ACC NR: AP6022017 SOURCE CODE: UR/0120/66/000/003/0158/0160

AUTHOR: Matuan, L.; Opauski, I.; Kish, I.

ORG: Central Institute of Physics Studies, Budapest (Tsentral'nyy institut fizicheskikh issledovaniy)

TITLE: Improvement of the MI-1305 mass spectrometer for the isotopic analysis of natural carbon and oxygen

SOURCE: Pribory i tekhnika eksperimenta, no. 3, 1966, 158-160

TOPIC TAGS: mass spectrometer, mass spectroscopy

ABSTRACT: High-accuracy measurements of the C^{13}/C^{12} and O^{18}/O^{16} ratios are required both in studies of the origin of CO_2 and in determination of the paleotemperature. For this purpose the following improvements and modifications have been made on the MI-1305 mass-spectrometer: (1) a new gas release system was developed; (2) the ion receiver was redesigned so as to make spacings between slots, through which two ion beams to be compared are transmitted; (3) a sensitive recording unit was added for the compensating comparison of ion currents; and (4) a precise control of both the accelerating ion current and the magnet feed current was introduced. Several hundred measurements were conducted with the modified mass-spectrometer system to determine the C^{13}/C^{12} ratio. The comparative measurement accuracy was 0.02—0.03%. Orig. art. has: 2 figures.

SUB CODE: 07,18/SUBM DATE: 12Jun65/ ORIG REF: 001/ OTH REF: 004

Card 1/1 UDC: 621.384.6